MICROSCAN

LVS® 7510 Integrated System

Operations Manual

Version 20.1.0

M-7510-Integrated-20.1.0-A-0 P/N 84-9310017-02 Rev A

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GS1 Solution Partner

Disclaimer

The information and specifications described in this manual are subject to change without notice.

Latest Manual Version

For the latest version of this manual, see the Download Center on our web site at: **www.microscan.com**.

Technical Support

For technical support, e-mail: **helpdesk@microscan.com**.

Warranty

For current warranty information, see: **www.microscan.com/warranty**.

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Safety Instructions

This unit has been carefully designed to provide years of safe, reliable performance. However, as with all electrical equipment, there are some basic precautions that you should follow to avoid personal injury or damage to the system:

- Before using the system, carefully read all the installation and operating instructions.
- Observe all warning instruction labels on the system.
- To protect your system from overheating, make sure no openings on the system are blocked.
- Never insert anything into the openings of the system.
- Do not use the system near water or spill liquid into it.
- All components used to create your system are UL and CE approved. All circuits were designed to incorporate maximum safety. However, any equipment using electrical voltages may cause personal injury if improperly handled.
- Do not attempt to work on the system with the main power lines connected.
- Ensure that the AC power source matches the ratings listed for the system. If unsure, check with your dealer or local utility provider.
- Do not place the AC power cord where it can be stepped on. If the AC power cord becomes damaged or frayed, replace it immediately.
- Avoid looking directly into any system lights. If you need to examine the lights, or look at any component near the lights, be sure to first turn off the lights. If the lights cannot be turned off, then wear polarized sunglasses while examining the lights.
- To avoid damaging the system, turn off and unplug the system before cleaning.
- If the system ever needs repair, consult Microscan or your Microscan Distributor.

Important Information

- Due to continual product improvements, the product you receive may differ from the content outlined in this guide. If you have questions about your product that are not covered in this guide, please contact your Microscan representative or Microscan headquarters at +1-800-762-1149 or helpdesk@microscan.com.
- The LVS-7510 External System arrives to your site packaged in specially designed shipping cartons. Do not discard the shipping cartons in case you must ship or store the system for any reason. Failure to use these cartons when returning your product to Microscan will void warranty.

Introduction

The LVS-7510 Integrated System offers 100% print quality inspection and barcode verification for Thermal and Thermal Transfer Printers. LVS-7510 features include:

- Barcode Validation (Reading of 1D and 2D codes)
- Barcode Verification (Grading of 1D and 2D codes to ISO/IEC Standards)
- Master-to-Label Comparison (Blemish Detection)
- Optical Character Recognition (OCR)
- Optical Character Verification (OCV)
- Number Validation
- Data and Code Matching

The LVS-7510 is a modular system, which means that you can check the print quality for *any* of the aforementioned areas, or for *all* of the areas. The features are listed below.

Important:

- The maximum system speed is 10 inches per second.
- The LVS-7510 uses a monochrome camera to capture images, which makes images appear in black and white. Some images in this guide were captured with a color camera, so you will notice some images with color.

Barcode Validation

The LVS-7510 decodes 1D (linear) and 2D (two-dimensional) codes (including ECC-200 Data Matrix, GS1 Data Matrix, Composite, QR Code, GS1 QR Code, PDF-417 and Micro PDF) and determines if the code is “readable.” No attempt is made to grade the codes according to any standard.

Barcode Verification

The LVS-7510 verifies (decodes and grades) 1D (linear) and 2D (two-dimensional) codes including ECC-200 Data Matrix, Composite, QR Code, PDF-417 and Micro PDF symbologies according to the internationally accepted rules of the applicable symbology specifications and ISO 15415 and 15416.

The LVS-7510 displays a “real-time” graph indicating the overall ISO grade, which allows the operator to see trends in print quality for several hundred labels that were just inspected. When an error is detected, the “real-time” graph changes color. The system can also be programmed to “stop the press” when an error occurs (the appropriate hardware must be purchased for this feature).

Master-to-Label Comparison (Blemish Detection)

The Master-to-Label Comparison module, also referred to as blemish detection, identifies and tracks potential print errors such as die cut errors, broken letters, skews, smears, spots, voids, wrinkles, missing copy, and other print quality defects. The Master-to-Label Comparison module also includes an “ignore area” function which accounts for variable image data within a pattern-matching zone and does not report them as blemishes. All inspection is completed at thermal printer speed. Minimum point size is based on your system’s resolution.

The LVS-7510 uses red light (660 nm) to detect blemishes; thus, color blemishes in the red spectrum may not be properly detected.

IMPORTANT: The LVS-7510 is designed to inspect labels, record and display the results, and supply optional signals to the printer or other external system. The LVS-7510 cannot “stop”, “score out void” or “reprint” labels; these are functions that are the responsibility of the printer. Be sure your printer has these necessary capabilities and interface connections to utilize the output capabilities of the LVS-7510.

Optical Character Recognition (OCR)

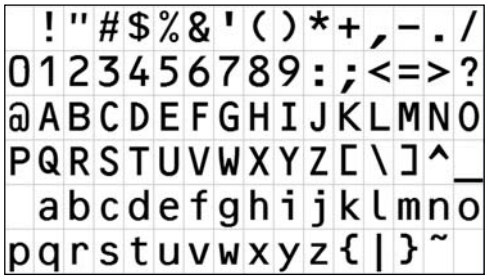
Unlike the OCV Module, this module “reads” characters and reports the data content. This data is typically variable and the content remains unknown until it is read. It is important to note that the system can be trained to know what to expect for every character position. In other words, the software can be programmed on what characters to expect: alpha, numeric, or special characters. Many fonts are used in the printing industry. The LVS-7510 is designed to learn new fonts as necessary. Refer to the “OCR and OCV Guidelines” section below for more information.

Optical Character Verification (OCV)

The OCV module verifies human readable characters at unparalleled speeds at font sizes as low as four points (one point is defined as approximately 1/72nd of an inch or .35 mm). The LVS-7510 OCV module ensures that a string of sequential alpha-numeric characters is verified against a known field or database. In other words, you program the software to detect what characters should appear and the software reports if the characters actually appeared. The software will also return a percentage score as to how well the character(s) matched to the trained character(s). Refer to the “OCR and OCV Guidelines” section below for more information.

OCR and OCV Guidelines:

- Characters must not touch or overlap
- All uppercase letters in any font are allowed
- Lowercase letters, uppercase letters, and some special characters are allowed in OCR-B MT font (6 to 14 points). Shown to the right are the letters, numbers, and special characters supported by OCR-B MT font (6 to 14 points)
- Monospaced fonts, like OCR-B, are preferred and perform better in the LVS-7510
- Do not attempt to re-learn any of the supplied OCR-B MT fonts



Number Validation

Verifies the expected order of any numerical series, detects duplicates and sequence errors, and matches variable numbers with external data files.

Data and Code Matching

Verifies encoded data that represents human readable information and ensures synchronicity of multiple fields within a label.

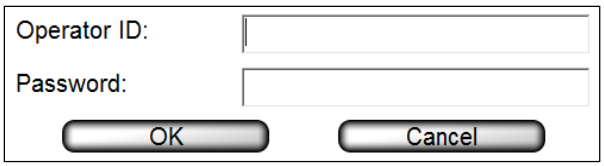
Log In

Follow the steps below to log in to the LVS-7510.

1. Start the LVS-7510 software. The **Welcome** screen appears (see below).

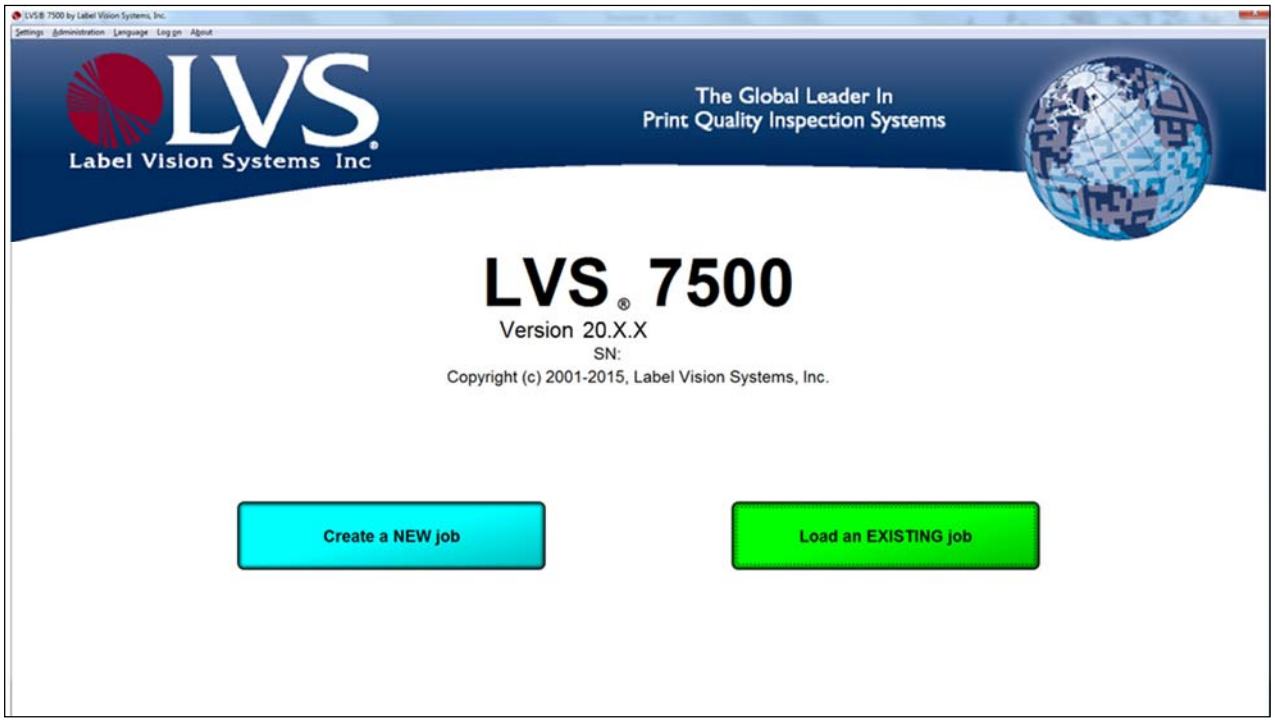
   Users with the "Automatic Login" feature enabled bypass the screen below and automatically access the screen where they are able to create a new job or load an existing job (as shown in step 3 below). Refer to "Appendix F: Automatic Login" for more information on using the "Automatic Login" feature.

2. Click the **Log In** button. The Login box appears (see below). Enter the **Operator ID** and **Password**, and click **OK**.
   - When using the LVS-7510 for the first time, enter **Admin** in the **Operator ID** field and **Admin** in the **Password** field.
   - Each password must consist of the following:
     - At least 8 characters
     - At least 1 letter from A to Z
     - At least 1 number from 0 to 9



3. Click the **Create a NEW job** button to create a new job. Refer to the “Create a New Job” section for complete instructions on creating a new job.

   Click the **Load an EXISTING job** button to load an existing job. Refer to the “Load an Existing Job” section for complete instructions on loading an existing job.



Welcome Screen Overview

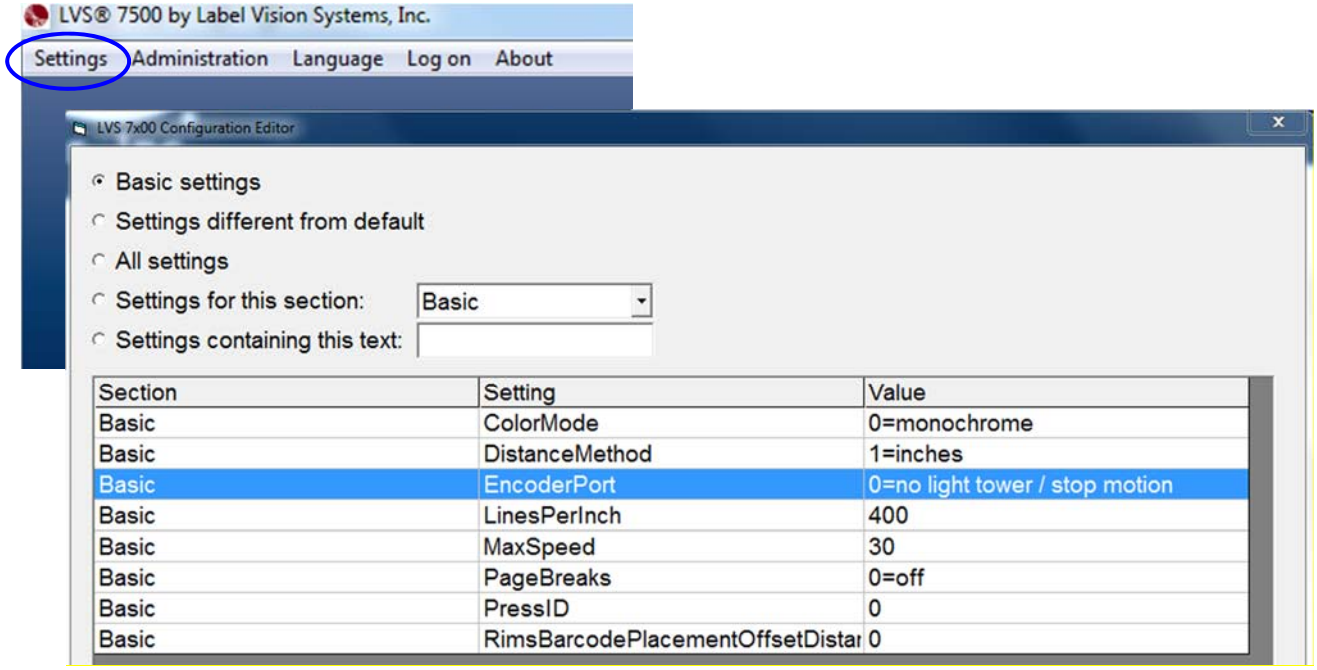
When starting the LVS-7510 software, the **Welcome** screen appears (see below). This screen allows you to log in to the LVS-7510 (as described in the previous section) and access the following menu bar functions:

- Settings
- Administration
- Log On
- About

Refer to the following sections for more information about each menu bar function.

Settings

The **Settings** menu bar feature opens the LVS-7510 Configuration Editor which allows you to configure the basic and advanced features and functionality of the LVS-7510. A user must be assigned administrator rights to access the “Settings” menu bar.



The LVS-7510 Configuration Editor offers the following options:

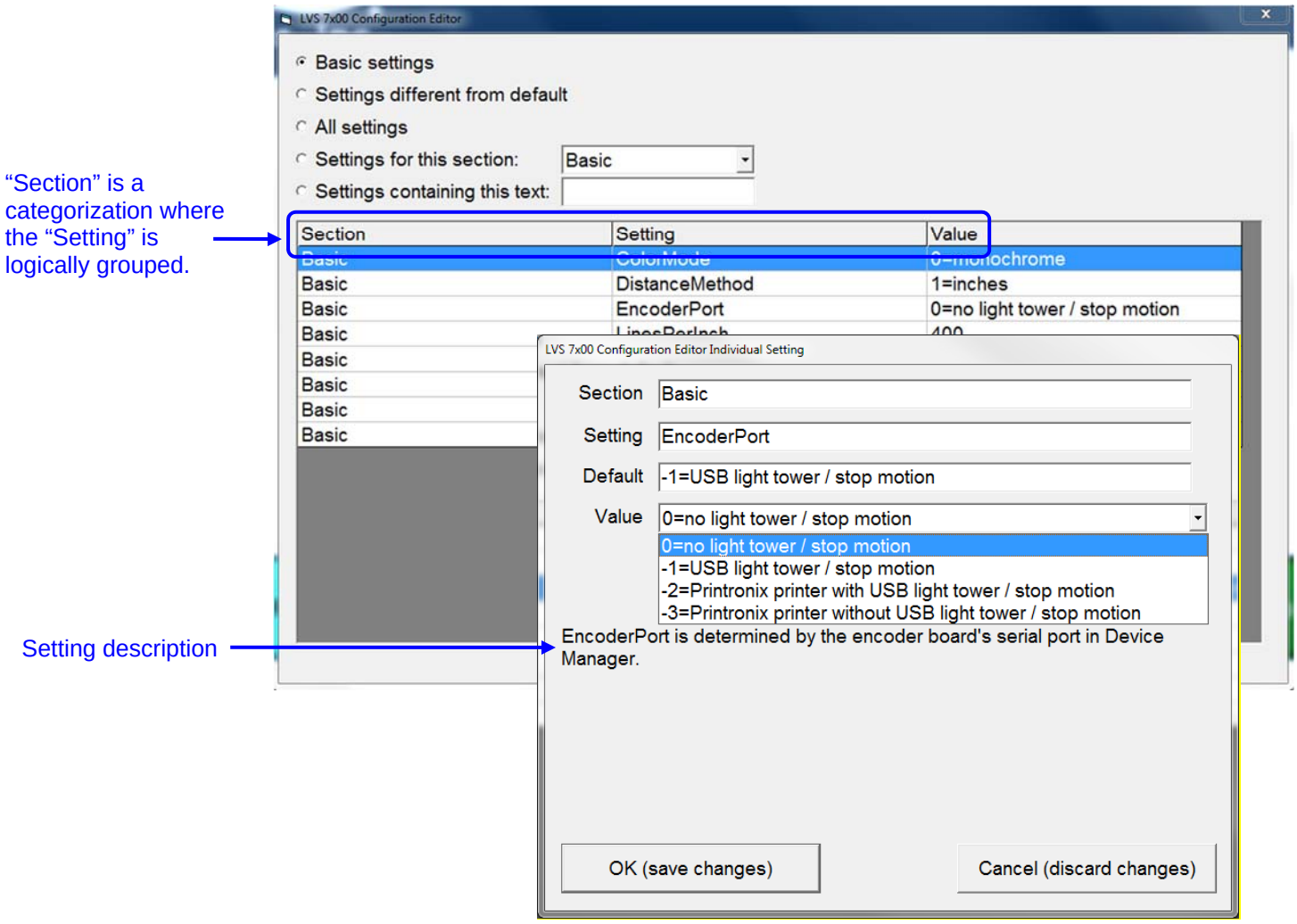
Option	**Description**
Basic settings	Select this option to display the settings considered to be basic to LVS-7510 configuration.
Settings different from default	Select this option to display any values that have been modified to a value other than the default value.
All settings	Select this option to display all settings listed alphabetically by “Section.”
Settings for this section	Click the drop-down box to display all settings for the selected section.
Settings containing this text	Enter a text string to search for settings containing the entered text. For example, typing “camera” in the text field will display all settings containing the word “camera.”

Each setting is grouped by “Section,” “Setting,” and “Value.”

Double-click a setting row. The “LVS-7510 Configuration Editor Individual Setting” window appears which provides the Section, Setting, Default, Value, and Setting Description.

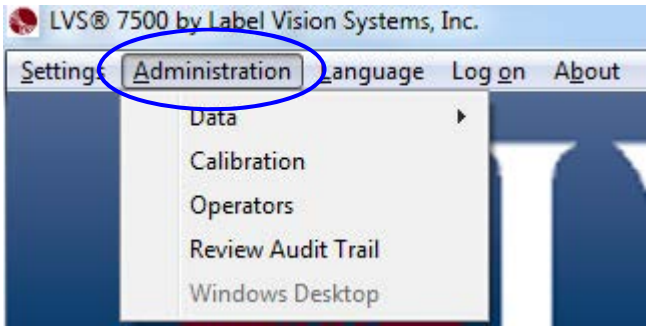
The only editable field is the “Value” field. All other fields cannot be edited.

Click “OK (save changes)” to save your changes or “Cancel (discard changes)” to discard any changes made on the screen.


"Section" is a categorization where the "Setting" is logically grouped.
Setting description
LVS 7x00 Configuration Editor
Basic settings
Settings different from default
All settings
Settings for this section:
Basic
Settings containing this text:
Section
Setting
Value
Basic
ColorMode
0=monochrome
Basic
DistanceMethod
1=inches
Basic
EncoderPort
0=no light tower / stop motion
Basic
Basic
Basic
Basic
Basic
LVS 7x00 Configuration Editor Individual Setting
Section
Basic
Setting
EncoderPort
Default
-1=USB light tower / stop motion
Value
0=no light tower / stop motion
0=no light tower / stop motion
-1=USB light tower / stop motion
-2=Printronix printer with USB light tower / stop motion
-3=Printronix printer without USB light tower / stop motion
EncoderPort is determined by the encoder board's serial port in Device Manager.
OK (save changes)
Cancel (discard changes)

Administration

The **Administration** menu bar feature allows you to choose from the following options:



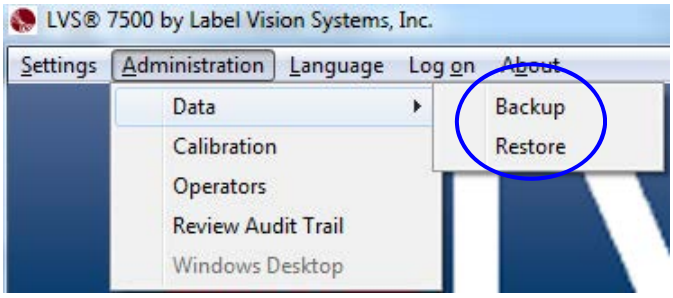
Option	Description
Data	Backup or restore jobs.
Calibration	Calibrate the LVS-7510.
Operators	Select operator permissions.
Review Audit Trail	Review an audit trail of all activity performed on the LVS-7510.
Windows® Desktop	Access the Windows® desktop (operator must have access rights to perform this feature).

Refer to the following sections for more information about each feature.

Data

The **Data** feature allows you to backup or restore jobs. All jobs are saved in the following directories:

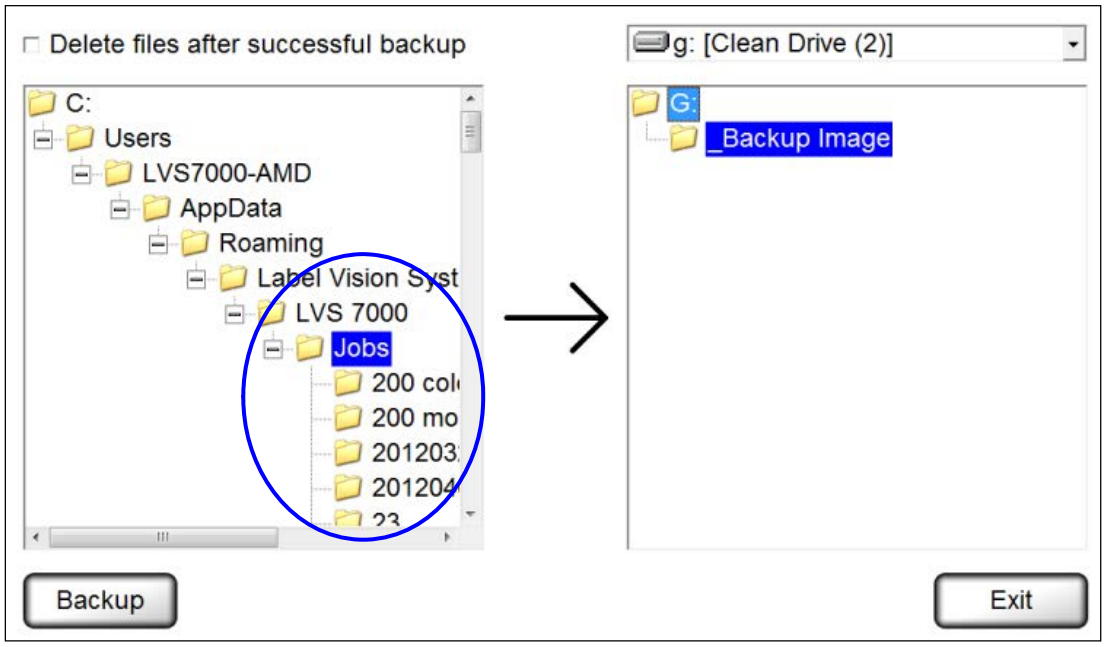
- For new installations of software version 20.1.X on Windows® 7 Professional and Windows® 8.1 Professional operating systems: C:\LvsData\LVS 7500\Jobs
- For systems that are upgrading from a previous software version to version 20.1.X or higher:
  - **Windows® XP**: C:\Program Files\Label Vision Systems\LVS 7500\Jobs
  - **Windows® 7**: C:\Users\[User Login Name]\AppData\Roaming\Label Vision Systems\LVS 7500\Jobs



Data Backup

To backup (copy) jobs from the “Jobs” directory to a different folder, drive or network location, follow the steps below.

1. Select **Administration** | **Data** | **Backup**. The following screen appears.

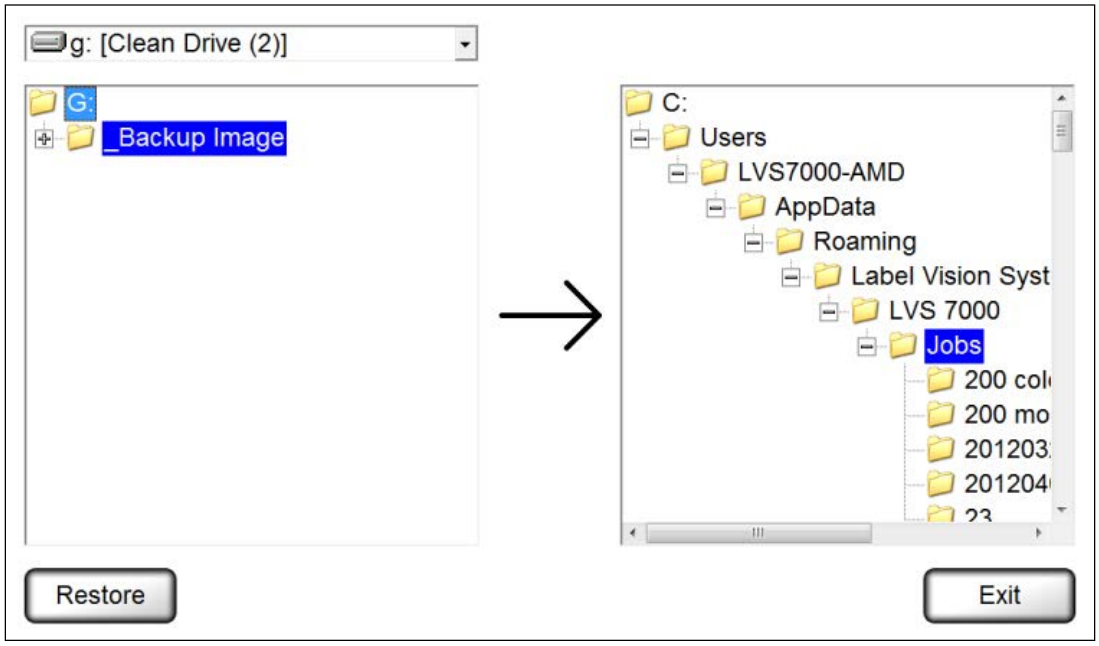


2. On the left side, select the folders within the “Jobs” folder that you want to backup. Multiple folders can be selected at one time by pressing and holding the **CTRL** keyboard button, and then clicking each folder.
3. On the right side, select the folder where the files should be saved.
4. If you want to delete the files after backup, click the **Delete files after successful backup** checkbox.
5. Click **Backup**.

Data Restore

To restore (copy) jobs from a folder, drive or network location to the “Jobs” directory, follow the steps below.

1. Select **Administration** | **Data** | **Restore** from the menu bar. The following screen appears.



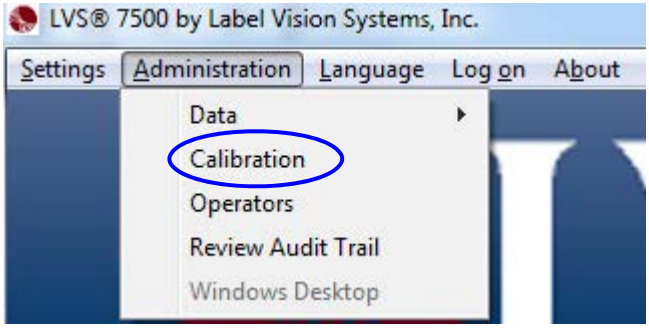
2. On the left side, select the folder(s) you want to restore. Multiple folders can be selected at one time by pressing and holding the **CTRL** keyboard button, and then clicking each folder.
3. On the right side, select the “Jobs” directory.
4. Click **Restore**.

Calibration

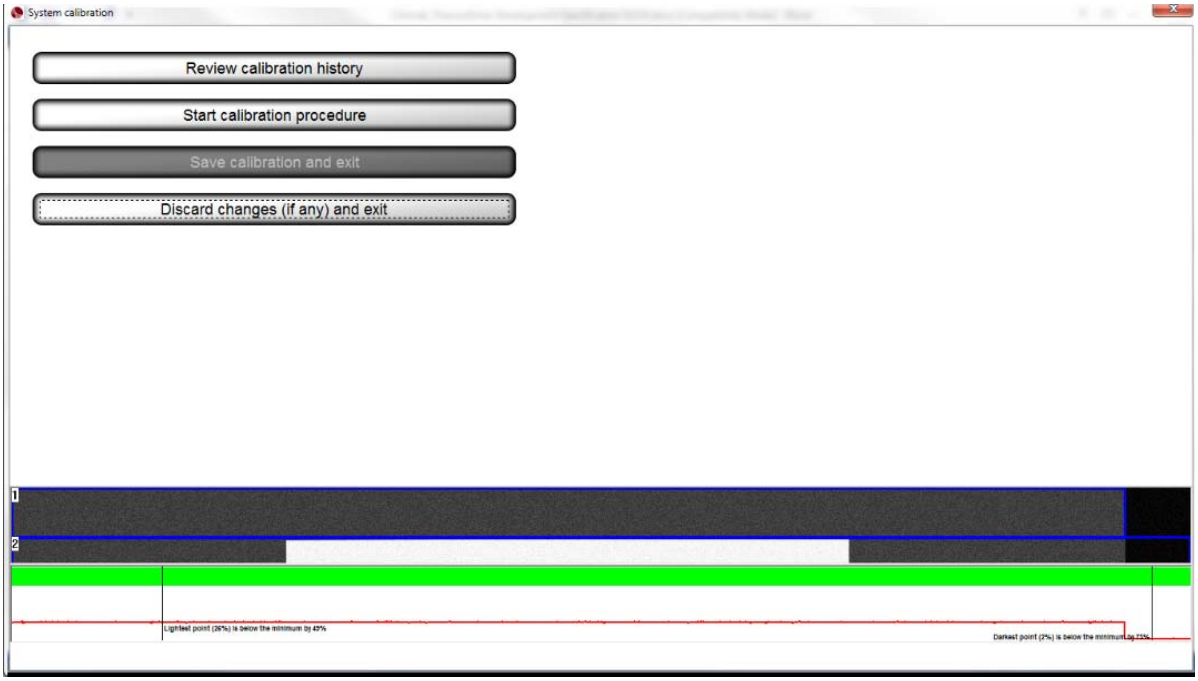
The **Calibration** feature allows you to calibrate the LVS-7510. Calibration is required to keep the LVS-7510 in a standard imaging configuration.

To calibrate the LVS-7510, you need an Microscan Calibration Card in perfect condition with all of the calibration information filled out on the card.

1. Select **Administration**, and then **Calibration** from the menu bar.

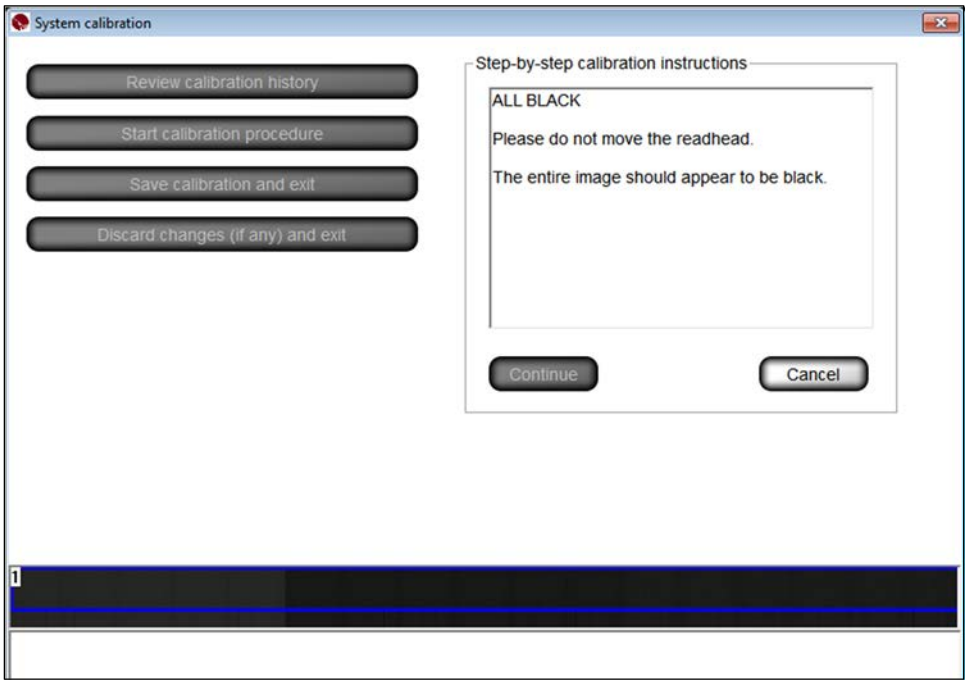


2. Click the **Start calibration procedure** button. The following screen appears.

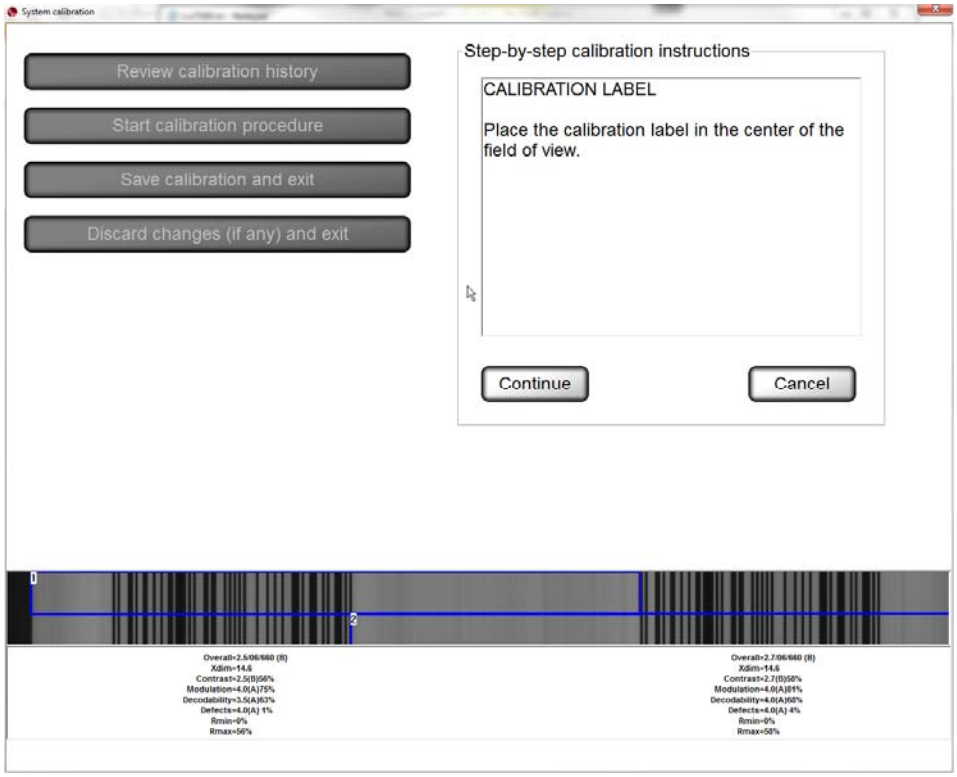


3. Place the white portion on the calibration card in the field of view. The entire image should appear white. Click **Continue**. The following page appears.

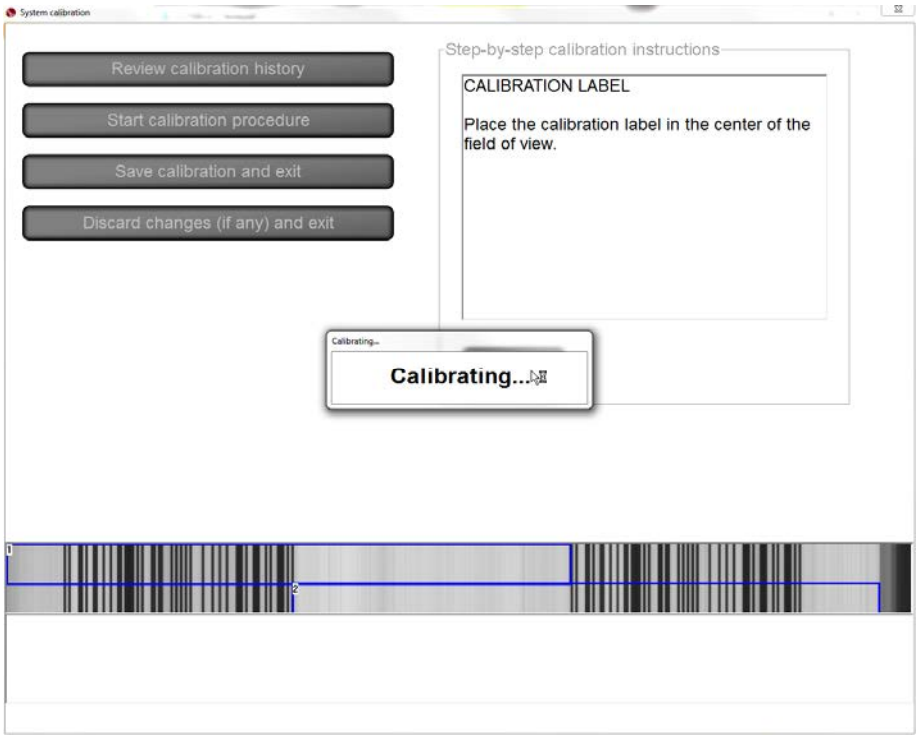
   Note: Step-by-step calibration instructions are also listed on the right side of the screen.



4. Place the Microscan calibration card under the camera so that as many barcodes are within the field of view as possible. The system displays the ANSII parameters of all the decoded barcodes that the camera detects (see below).



5. Click **Continue** to calibrate. The following page appears.



6. Calibration is complete. The ANSI values of the barcodes now match the recorded values on the card within a few points (+/- 8%).

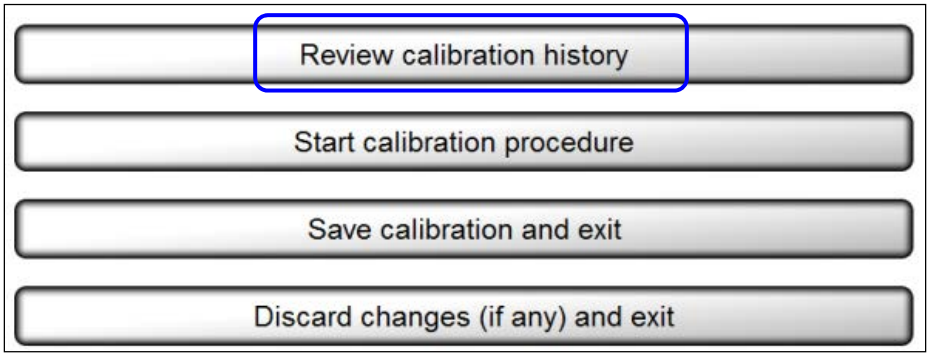
   If calibration fails, repeat the calibration process. Be sure to inspect the calibration card carefully for damages and impurities. If the problem still persists, contact Label Vision Systems for technical assistance.

7. Click the **Save calibration and exit** button to save the calibration results and return to the **Welcome** screen. After saving the calibration results, the system automatically saves the Operator ID in the calibration history log (see the section entitled “Review Calibration History” for more information).

   Click the **Discard changes (if any) and exit** to discard the calibration results and return to the **Welcome** screen.

Review Calibration History

1. Click **Review calibration history**.



2. The CSV file viewer page appears (see below), which is time stamped, provides the operator ID, and displays the “before” and “after” calibration image readings. The fields are not user editable in the Microscan viewer; they are printable if desired.

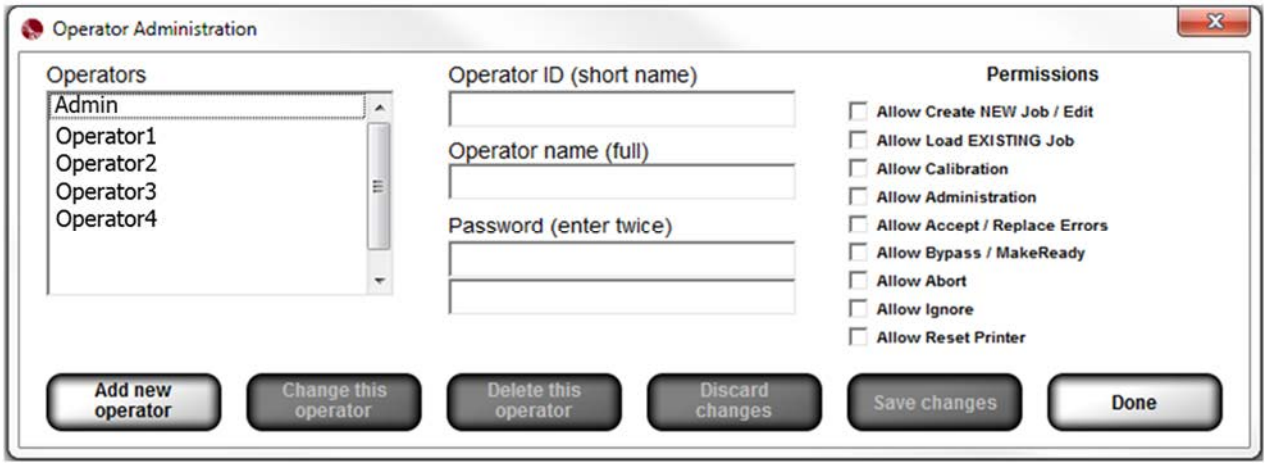
Time	Operator	Target Rmax	Target Rmin	Actual Rmax	Actual Rmin
10-Aug-2009 08:41:25	Admin (Administrator)	89	5	87.5	2.5

Operators

The **Operators** feature allows you to establish operator permissions.

1. Select **Administration**, and then **Operators** from the menu bar.

2. The following screen allows you to setup operators and operator permissions.



The buttons at the bottom of the screen are described below:

Option	Description
Add new operator	Click the **Add new operator** button to add a new operator, and then complete the following fields: • **Operator ID** (short name) • **Operator name** (full name) • **Password**. Each password must consist of the following: o At least 8 characters o At least 1 letter from A to Z o At least 1 number from 0 to 9 • Select the desired permissions • Click **Save changes** to save your changes or **Discard changes** to discard and not save your changes
Change this operator	Allows you to make changes to an operator's permissions. • Select the operator's name from the Operators list • Click the **Change this operator** button • Make any necessary changes

Option	Description
	• Click the **Save Changes** button to save your changes or the **Discard Changes** button to not save your changes
Delete this operator	Select the operator's name from the Operators list, and then click the **Delete this operator** button.
Discard changes	Click this button to discard any changes made to any operator details.
Save changes	Click this button to save changes made to any operator details.
Done	Click this button after all changes are complete.

Permissions

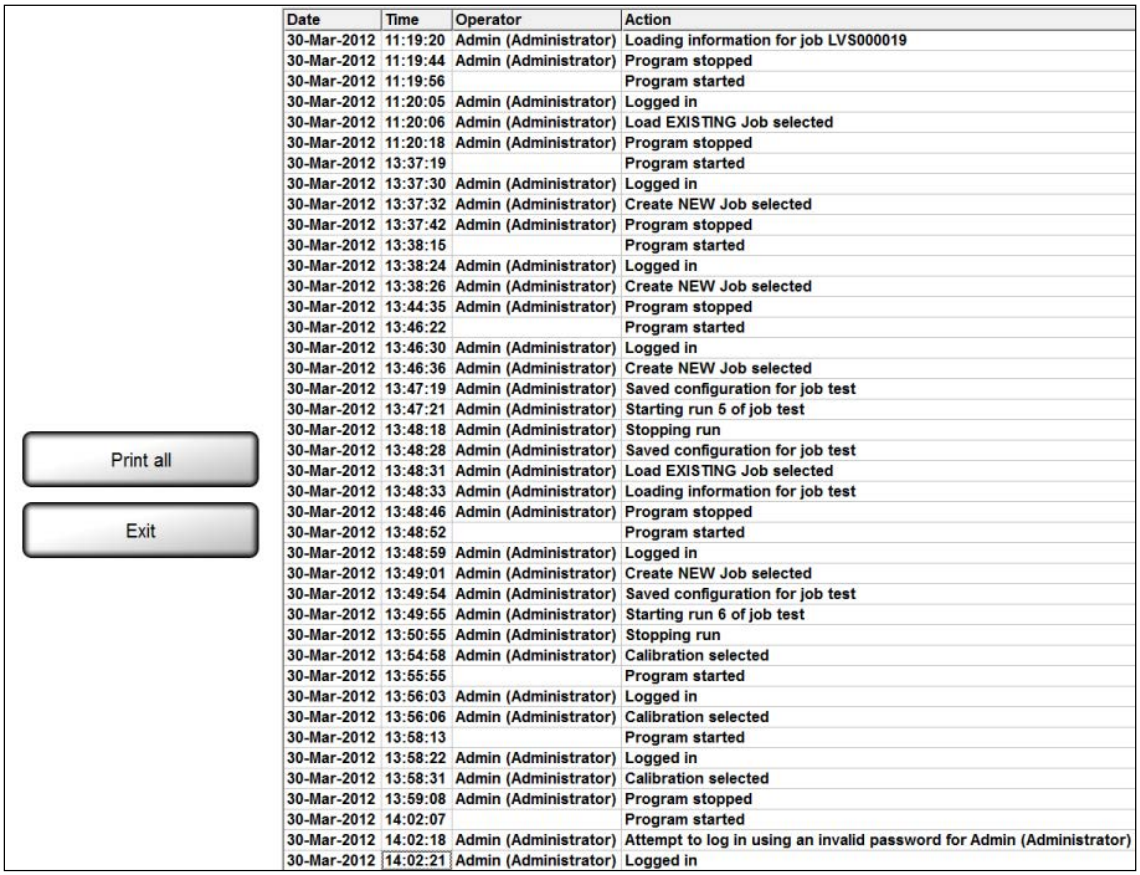
Operator permissions are described in the table below.

Permission	Description
Allow Create NEW Job / Edit	Allows the operator to create, edit and delete a job.
Allow Load EXISTING Job	Allows the operator to load and execute existing jobs. Existing jobs cannot be edited.
Allow Calibration	Allows the operator to perform calibration.
Allow Administration	Allows the operator access to the "Administration" menu bar feature where operators and operator permissions are set up. See the "Administration" section for more information.
Allow Accept / Replace Errors	Allows the operator to accept or replace errors.
Allow Bypass / MakeReady	Allows the operator to use the "Bypass" and "MakeReady" buttons on the "Operate Screen: Running the Job."
Allow Abort	Allows the operator to stop running the job after three consecutive errors of the same type are detected (except Foreground and Background errors). For more information, refer to Appendix F: Operating Modes > Error Messages > Printing Stopped Error Message. The "Allow Abort" permission is applicable only when the LVS-7510 is in Design or Production mode (see "Appendix F: Operating Modes" for more information on Design and Production modes).
Allow Ignore	Allows the operator to ignore a failed label and continue printing the next label in the job after three consecutive errors of the same type are detected (except Foreground and Background errors). For more information, refer to Appendix F: Operating Modes > Error Messages > Printing Stopped Error Message. The "Allow Ignore" permission is applicable only when the LVS-7510 is in Design or Production mode (see "Appendix F: Operating Modes" for more information on Design and Production modes).
Allow Reset Printer	Allows the operator to reset the printer. Refer to the "Reset Printer" section in this appendix for more information. The "Allow Reset Printer" permission is applicable only when the LVS-7510 is in Design or Production mode (see "Appendix F: Operating Modes" for more information on Design and Production modes).

Review Audit Trail

The **Review Audit Trail** feature allows you to monitor user activity.

- Click **Print all** to print the audit trail report.
- Click **Exit** to exit the audit trail report and return to the Welcome screen.



Date	Time	Operator	Action
30-Mar-2012	11:19:20	Admin (Administrator)	Loading information for job LVS000019
30-Mar-2012	11:19:44	Admin (Administrator)	Program stopped
30-Mar-2012	11:19:56		Program started
30-Mar-2012	11:20:05	Admin (Administrator)	Logged in
30-Mar-2012	11:20:06	Admin (Administrator)	Load EXISTING Job selected
30-Mar-2012	11:20:18	Admin (Administrator)	Program stopped
30-Mar-2012	13:37:19		Program started
30-Mar-2012	13:37:30	Admin (Administrator)	Logged in
30-Mar-2012	13:37:32	Admin (Administrator)	Create NEW Job selected
30-Mar-2012	13:37:42	Admin (Administrator)	Program stopped
30-Mar-2012	13:38:15		Program started
30-Mar-2012	13:38:24	Admin (Administrator)	Logged in
30-Mar-2012	13:38:26	Admin (Administrator)	Create NEW Job selected
30-Mar-2012	13:44:35	Admin (Administrator)	Program stopped
30-Mar-2012	13:46:22		Program started
30-Mar-2012	13:46:30	Admin (Administrator)	Logged in
30-Mar-2012	13:46:36	Admin (Administrator)	Create NEW Job selected
30-Mar-2012	13:47:19	Admin (Administrator)	Saved configuration for job test
30-Mar-2012	13:47:21	Admin (Administrator)	Starting run 5 of job test
30-Mar-2012	13:48:18	Admin (Administrator)	Stopping run
30-Mar-2012	13:48:28	Admin (Administrator)	Saved configuration for job test
30-Mar-2012	13:48:31	Admin (Administrator)	Load EXISTING Job selected
30-Mar-2012	13:48:33	Admin (Administrator)	Loading information for job test
30-Mar-2012	13:48:46	Admin (Administrator)	Program stopped
30-Mar-2012	13:48:52		Program started
30-Mar-2012	13:48:59	Admin (Administrator)	Logged in
30-Mar-2012	13:49:01	Admin (Administrator)	Create NEW Job selected
30-Mar-2012	13:49:54	Admin (Administrator)	Saved configuration for job test
30-Mar-2012	13:49:55	Admin (Administrator)	Starting run 6 of job test
30-Mar-2012	13:50:55	Admin (Administrator)	Stopping run
30-Mar-2012	13:54:58	Admin (Administrator)	Calibration selected
30-Mar-2012	13:55:55		Program started
30-Mar-2012	13:56:03	Admin (Administrator)	Logged in
30-Mar-2012	13:56:06	Admin (Administrator)	Calibration selected
30-Mar-2012	13:58:13		Program started
30-Mar-2012	13:58:22	Admin (Administrator)	Logged in
30-Mar-2012	13:58:31	Admin (Administrator)	Calibration selected
30-Mar-2012	13:59:08	Admin (Administrator)	Program stopped
30-Mar-2012	14:02:07		Program started
30-Mar-2012	14:02:18	Admin (Administrator)	Attempt to log in using an invalid password for Admin (Administrator)
30-Mar-2012	14:02:21	Admin (Administrator)	Logged in

Windows Desktop

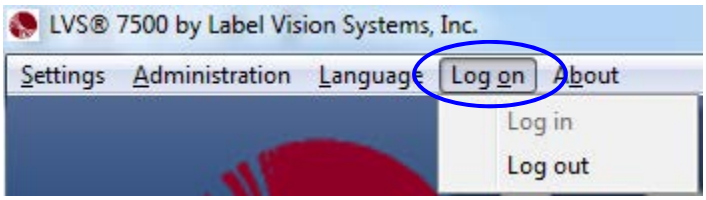
When enabled, Windows® desktop allows a user who has been granted permission rights to access the Windows® desktop from the LVS-7510 system.

Accessing the Windows® desktop from the LVS-7510 is normally disabled due to CFR-21 part 11.

For further information, please contact Label Vision Systems about CFR-21 part 11.

Log On

The **Log On** menu bar feature allows you to log in or log out of the LVS-7510.



About

The **About** menu bar feature allows you to view the LVS-7510 software version and Microscan contact information.

Create a New Job

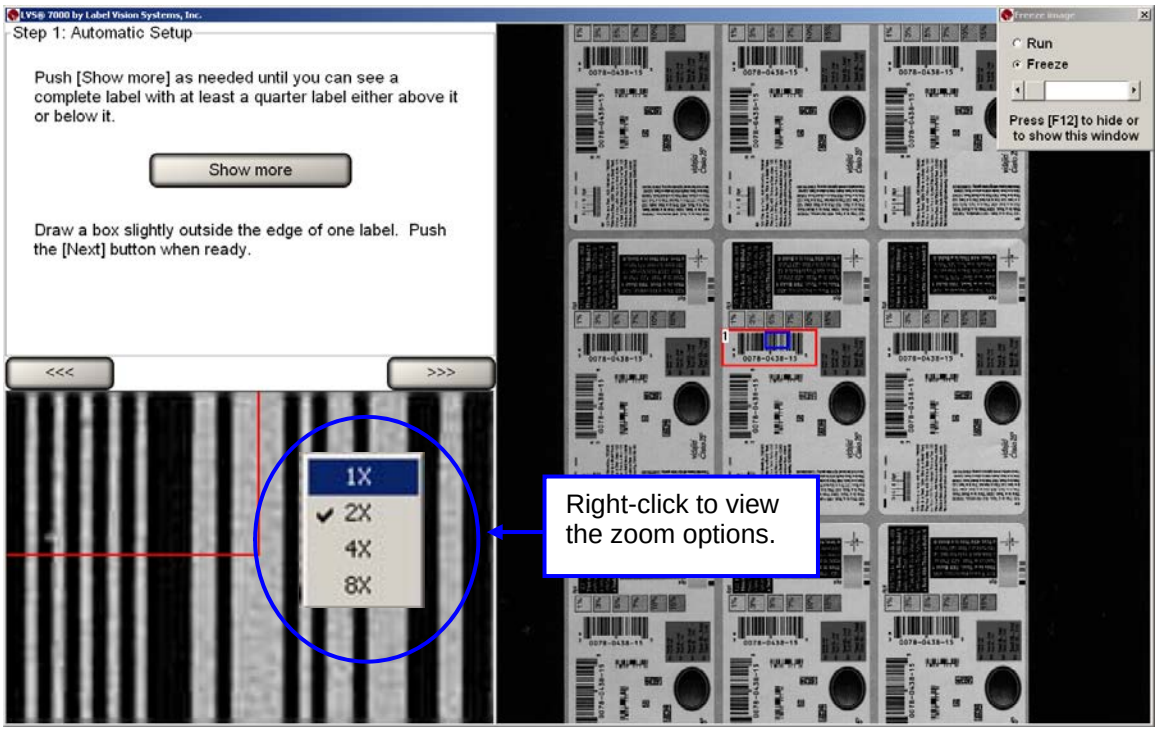
Two setup options are available when creating a new job:

- **Automatic Setup** - Utilizing a box drawn around one label, the LVS-7510 External System finds all labels across the roll and automatically draws blemish and barcode sectors with the default setting stored for the corresponding sector types. After this automated process is complete, the system will be at the “Step 7: Save Job to Disk” screen where the user is able to enter a job name and description.
- **Manual Setup** – Guides the user through each step in creating a new job. The user must manually create sectors around blemishes and barcode sectors.

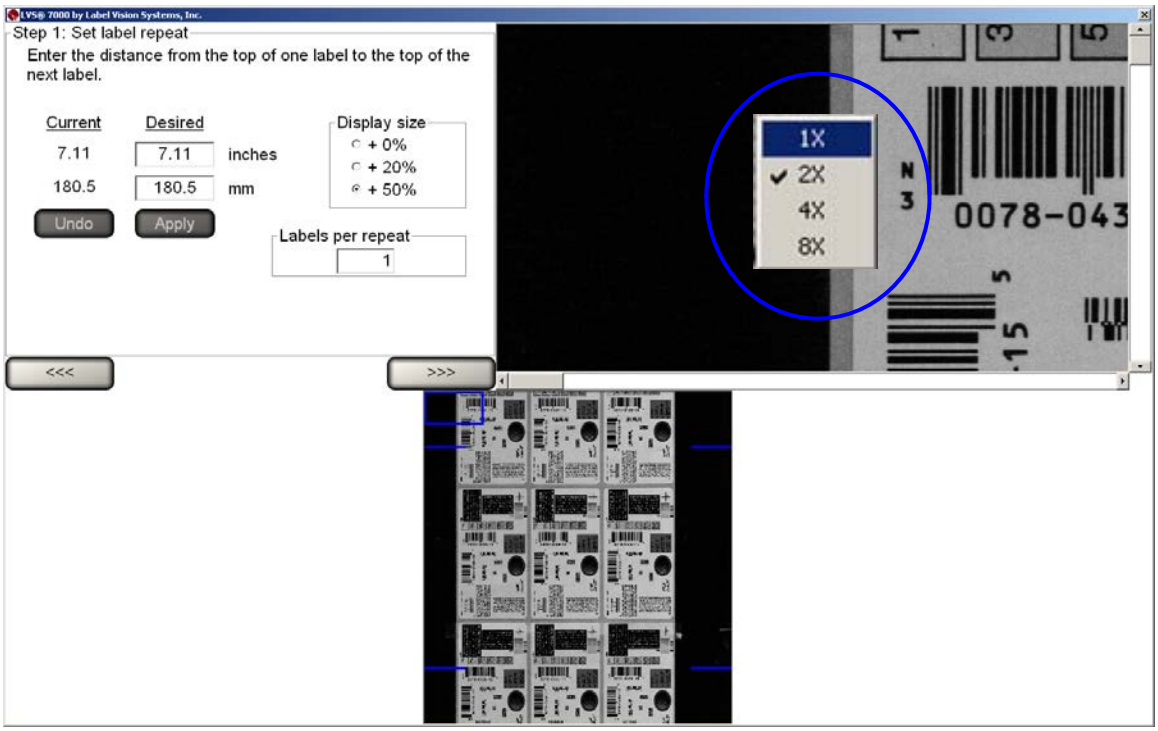
Each option is described below.

> **IMPORTANT:** In both Automatic Setup and Manual Setup modes, images can be zoomed and magnified by right-clicking in the full resolution image window and selecting either 1X, 2X, 4X or 8X. See examples below.

Automatic Setup:



Manual Setup:



Automatic Setup

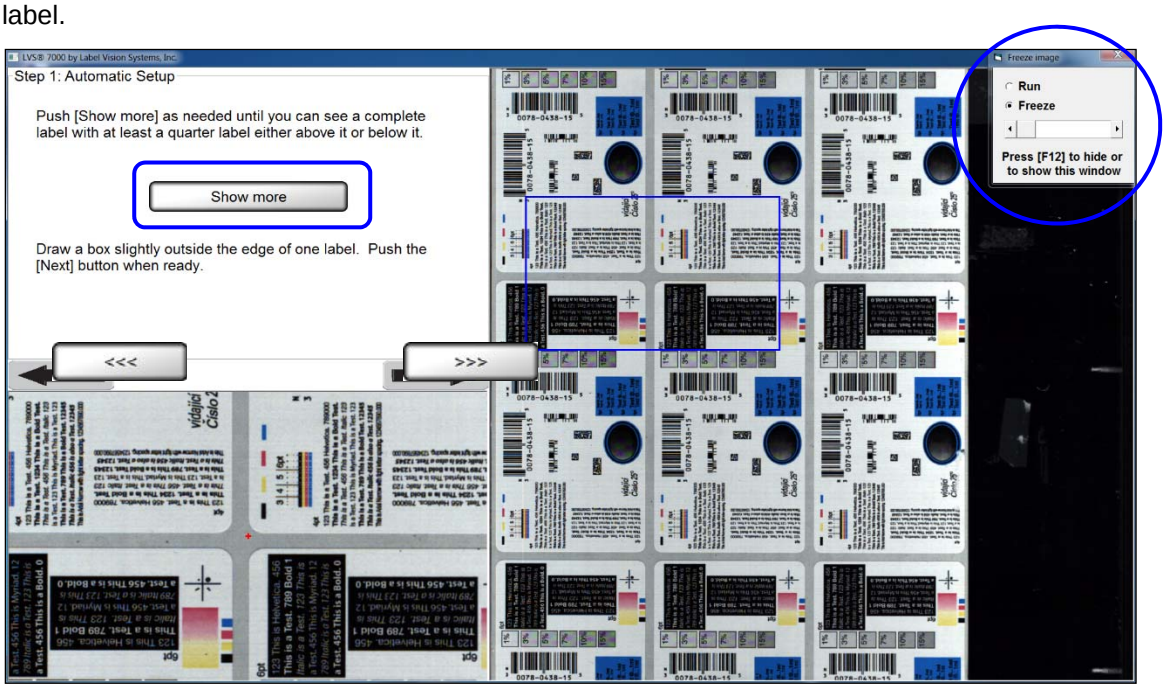
Follow the steps below to use the Automatic Setup feature.

1. Click the **Create a NEW Job** button on the **Welcome** Screen (see below).

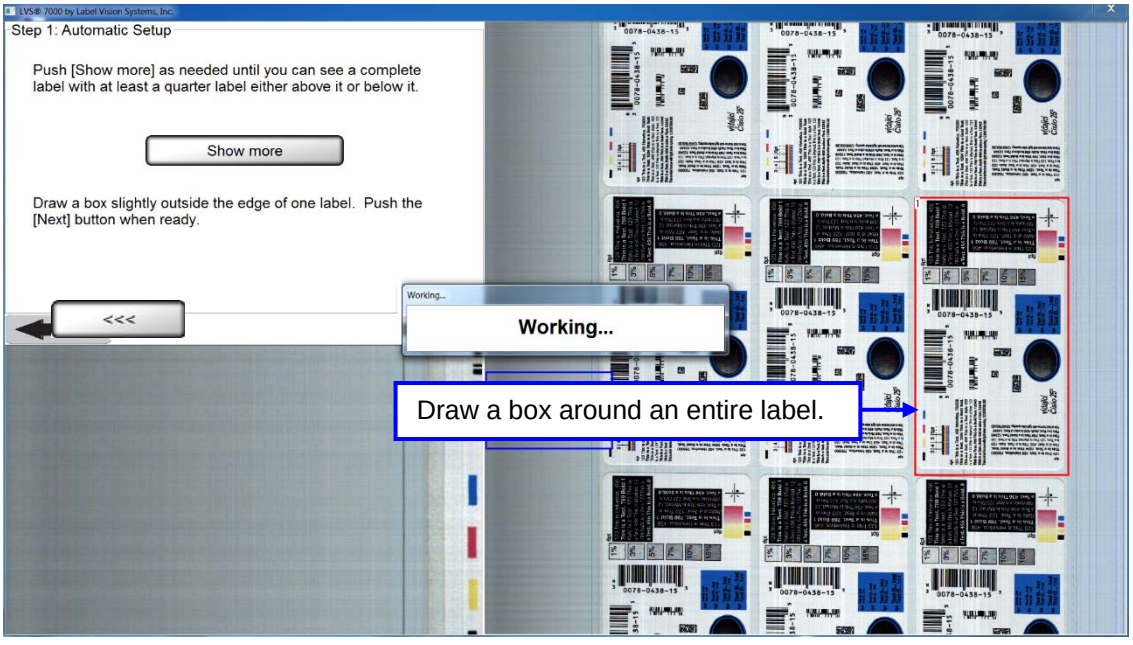
2. Select **Yes** when asked, “Do you want to use the automatic setup feature?”

Step 1: Set Label Dimensions

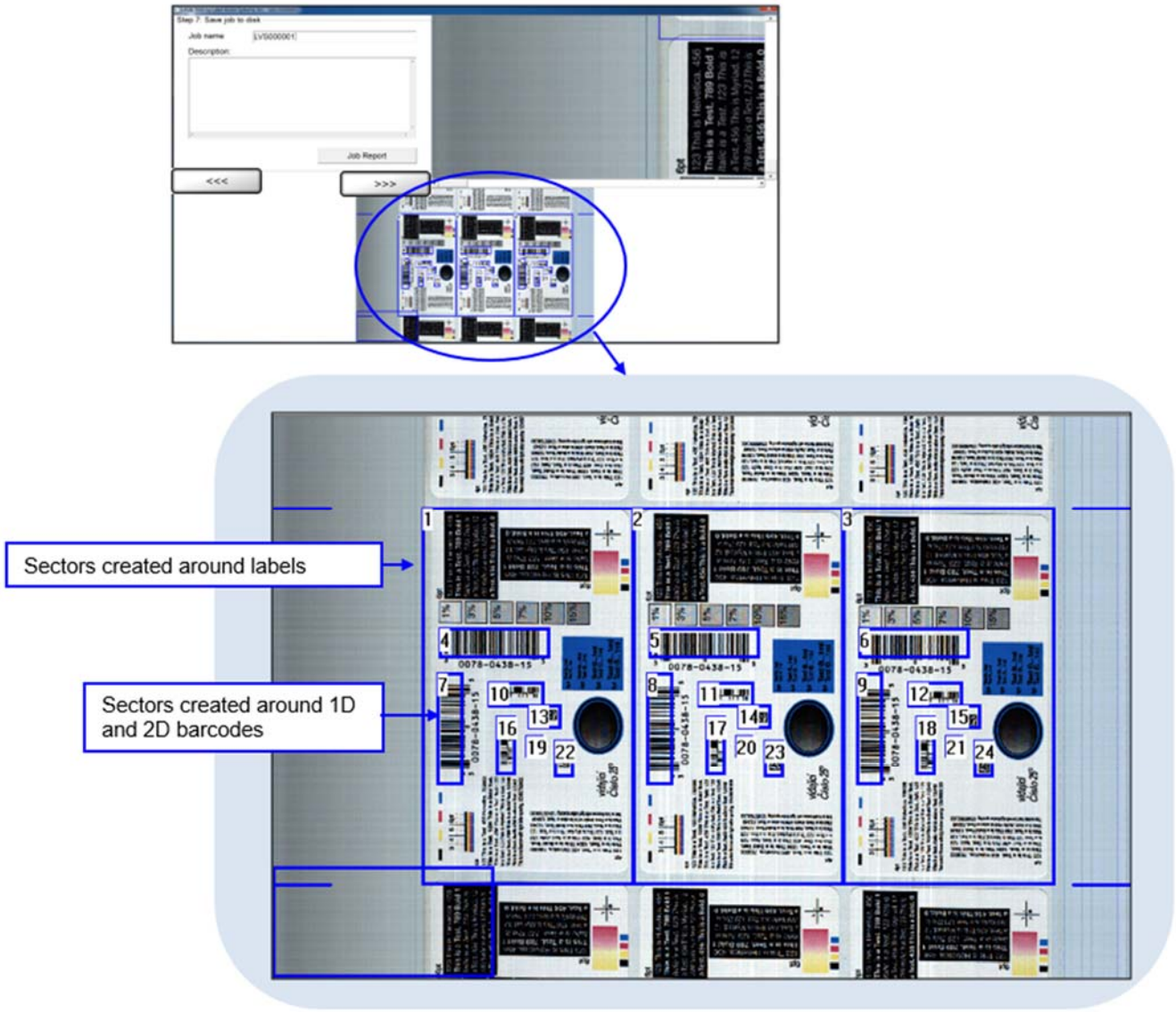
1. Run the roll of labels and stop when reaching the desired label(s). Note that pressing the F12 button on your keyboard allows you to run or freeze images.
2. Click Show more until you can see a complete label with at least a quarter label either above or below the label.



3. Draw a sector around an entire label and then click the **right arrow** button. A “Working” message appears indicating the system is analyzing the label.



4. The LVS-7510 External System automatically detects and creates blemish sectors around any other labels across the roll, and also detects and creates sectors around any 1D or 2D barcodes in each label.



5. Enter the name of the job in the **Job name** field.
6. *Optional:* Enter a job description in the **Description** field.
7. Click **Job Report** to view, print or save the Job Report, which shows the settings for all created sectors. See the section entitled “LVS-7510 Job Report” for more information.
8. Click the **right arrow** button.

Manual Setup

Follow the steps below to use the Manual Setup feature.

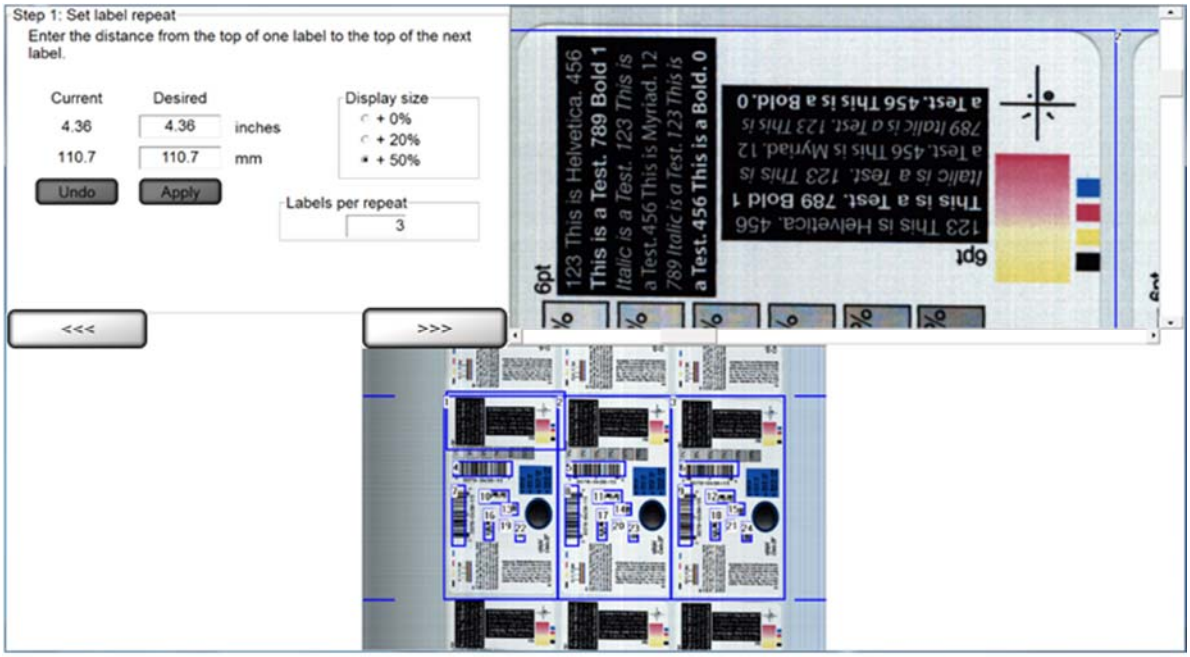
Step 1: Set Label Repeat

Note: Setting label repeat and synchronization must be performed while the roll is moving. It is recommended that the roll moves slowly so that waste and uninspected material in minimized.

The LVS-7510 External System uses an encoder to understand when a label is ready to be inspected. In order for this to happen, the operator must choose a label repeat. To do this, follow the steps below:

1. Click the **Create a NEW Job** button on the **Welcome** screen.

2. Select **No** when asked, “Do you want to use the automatic setup feature?” The **Step 1: Set label repeat** screen appears (see below).



3. In the **Desired** column, enter the desired value into the inches or millimeter (mm) fields.
4. Click the **Apply** button, or click the **Undo** button to clear the values entered into the **Desired** column.
5. You may choose to change the **Display Size**. Options include:
   - 0% (Normal) – **This setting must be used for Integrated Printronix and Zebra models.**
   - 20% (Normal + 20%)
   - 50% (Normal + 50%) (Default size)
6. In the **Labels per repeat** field, enter the labels per repeat, which is the amount of labels in one gate. This field is critical for allowing Global Copy capability in Manual setup. See the **Global Copy** section for more information.
7. Click the **right arrow** button.

Step 2: Synchronize

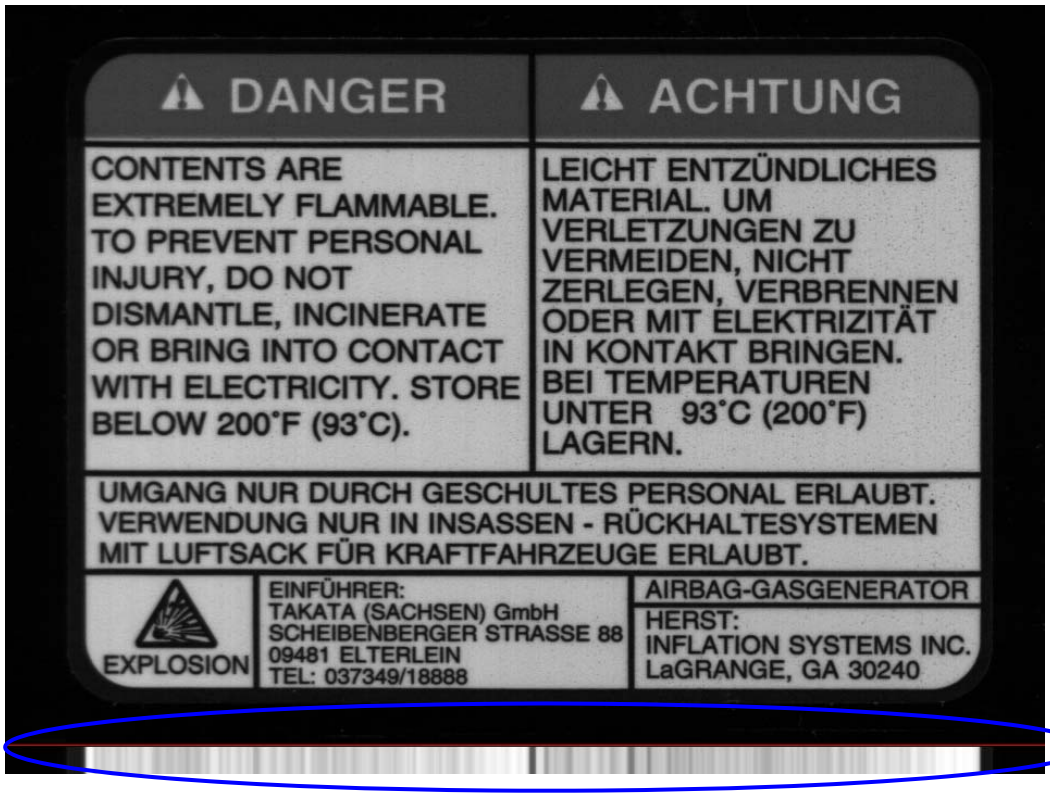
Synchronization Overview

Synchronization of the LVS-7510 External System takes the image and electronically creates a repeating pattern for locking. This process emulates the effect generated by a traditional Photo Optic trigger. The principal is simple enough to understand with some pictorial illustrations. The LVS-7510 External System takes the image and averages all pixels going across in rows, then performs the same averaging for all pixels going down in columns (see example below).

If we were to average all the pixels going across in rows, it would look like a strip added to the right of the picture below.

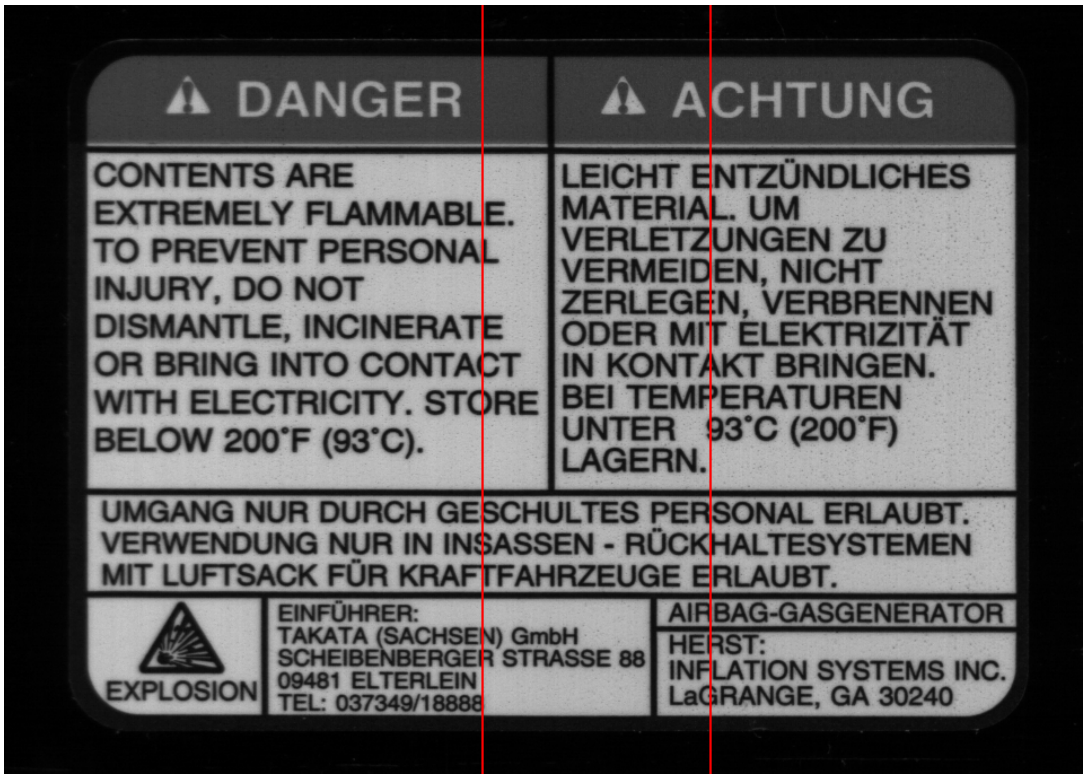
As you can see there are portions of this image attached to the right (after the red line) that look similar. These portions are the where the text goes across the label. The part we are most interested in seeing are the portions that had the black lines going across the image. The image below shows three definite sharp black lines that are unequally spaced apart. This is good as they cannot be mistaken for one another. The black line closest to the top also has a large darker portion above it since the label had a darker border around the words “Danger” and “Achtung”. Solid lines are good to utilize, especially when unevenly spaced.

Now following the same principal going down in columns from top to bottom we get a picture that looks like this (see below).



This example has much less definition through the whole image when looking at the average across the bottom of the label (below the red line). The large vertical black line that was through the center has made itself the most obviously defined dark line on the lighter background. Also the spaces between the print through the center of the label have made the average to the left of the center black line very light in contrast.

Since the smaller the synchronization portion of an image is, the faster it is to process, we can make a guess at the best area to use as a synchronization slice, which is the smallest portion of the image possible to hold good image registration. Below is the image of where we would want to designate as our “sync slice”.



When we average just the portions between the lines, we can process and lock in the repeat much faster than doing the entire image. Keeping it as small as possible is the best rule of thumb, though sometimes it may need to be large in order to accomplish the goal.

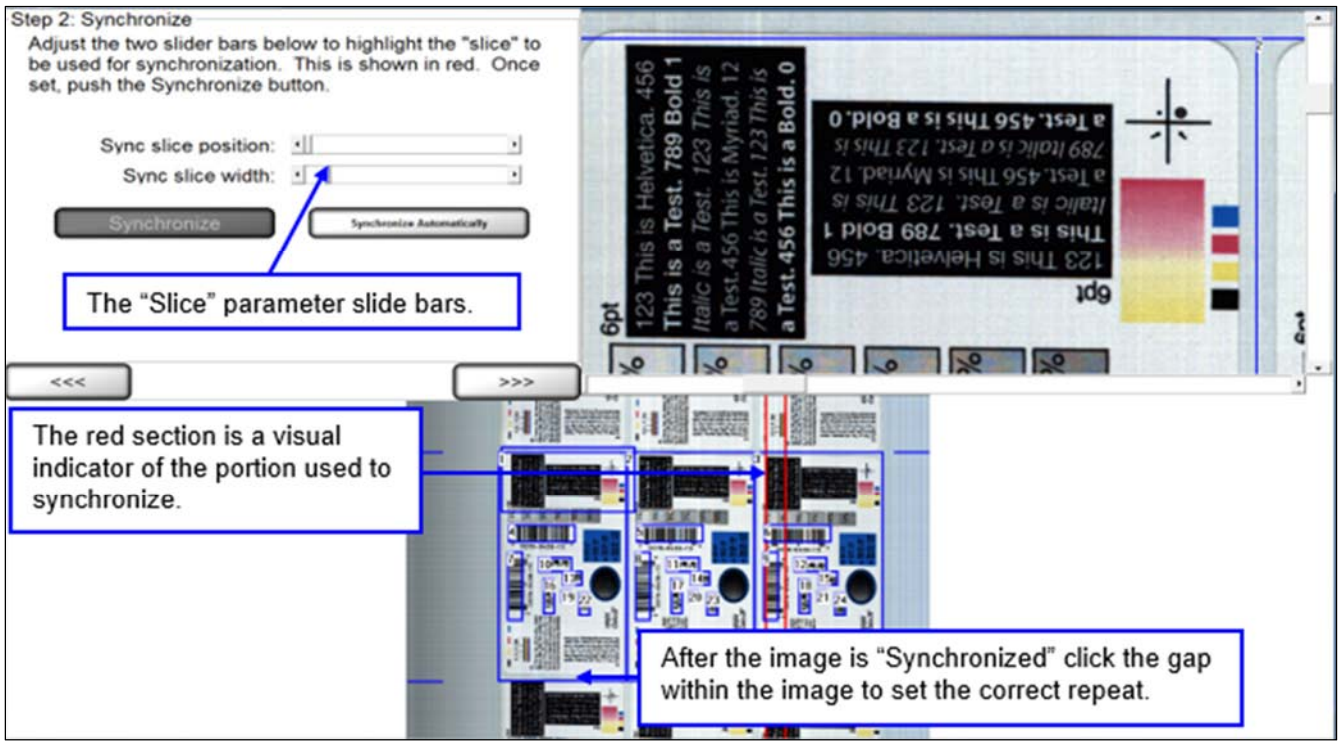
As another rule of thumb, if your label has variable data on it, that area should be avoided if possible. If it cannot be avoided you will need to do the inverse, and make the slice as wide as possible to distribute the variation into the average.

Synchronization

1. In order to manually synchronize the system, the operator must adjust the two slide bars. The “slice” is a portion of the label that has the best representation of the labels static (unchanging) portion. To change the Width of the “slice” use the “Sync slice width” slide bar. The minimum size is 128 pixels, and the max is ¼ of the cameras field of view. Next move the “Sync slice position” slide bar to the desired location. Then, press “Synchronize.”

   The system can also perform the above steps automatically to find the best sync position and width. Click the “Synchronize Automatically” button. The sync slice will be automatically positioned and sized.

   There is no limit to the number of times that manual and automatic sync can be performed.
2. To perfectly center the label in the display, point and left-click the mouse in the center of the label gap shown on the display. The large (full resolution) or the small (full field of view) image can be used. For very small repeats, the larger image is easier to pinpoint the gap location.
3. Click the **right arrow** button.

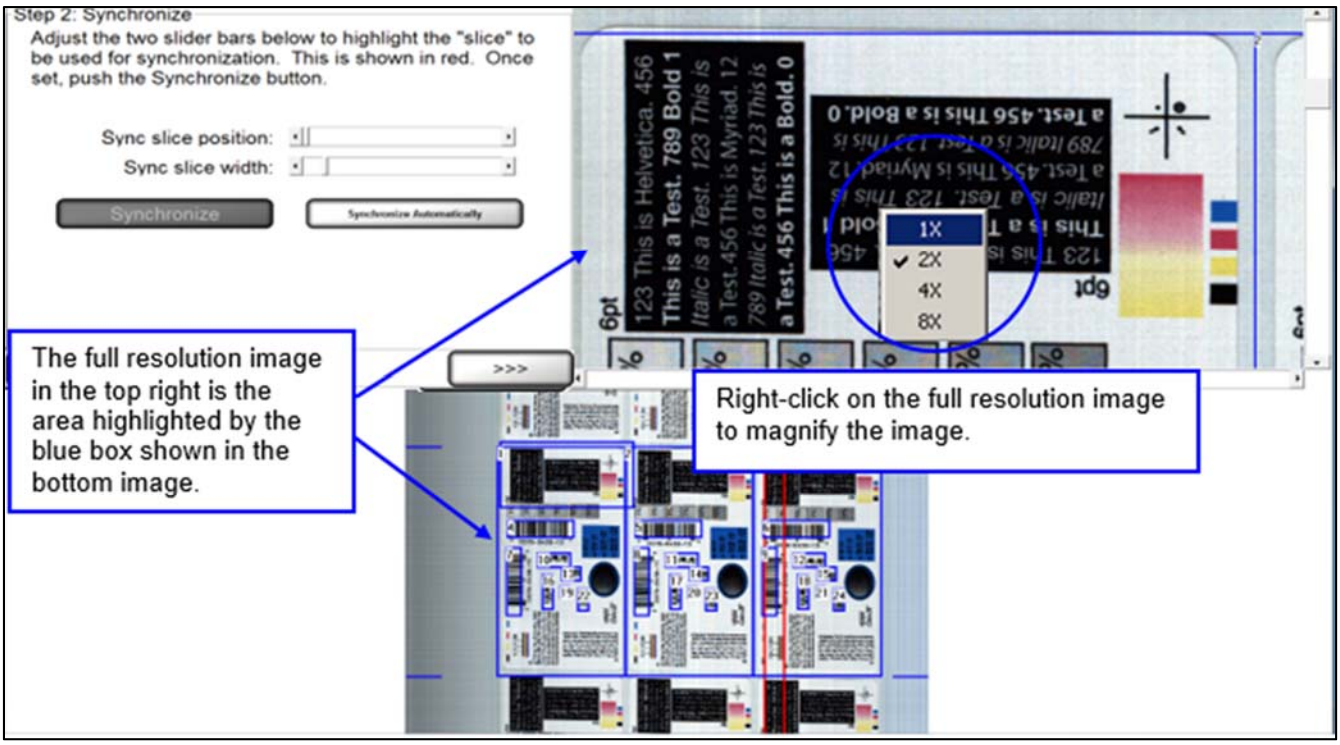


Screen Overview

Two areas on the screen show an image:

The top right image is the full resolution image that has not been altered. The slide bar to the right and below this image will allow the operator to view other parts of the image. Right-click on the full resolution image to zoom in on the image. Zoom options include 1X, 2X, 4X and 8X.

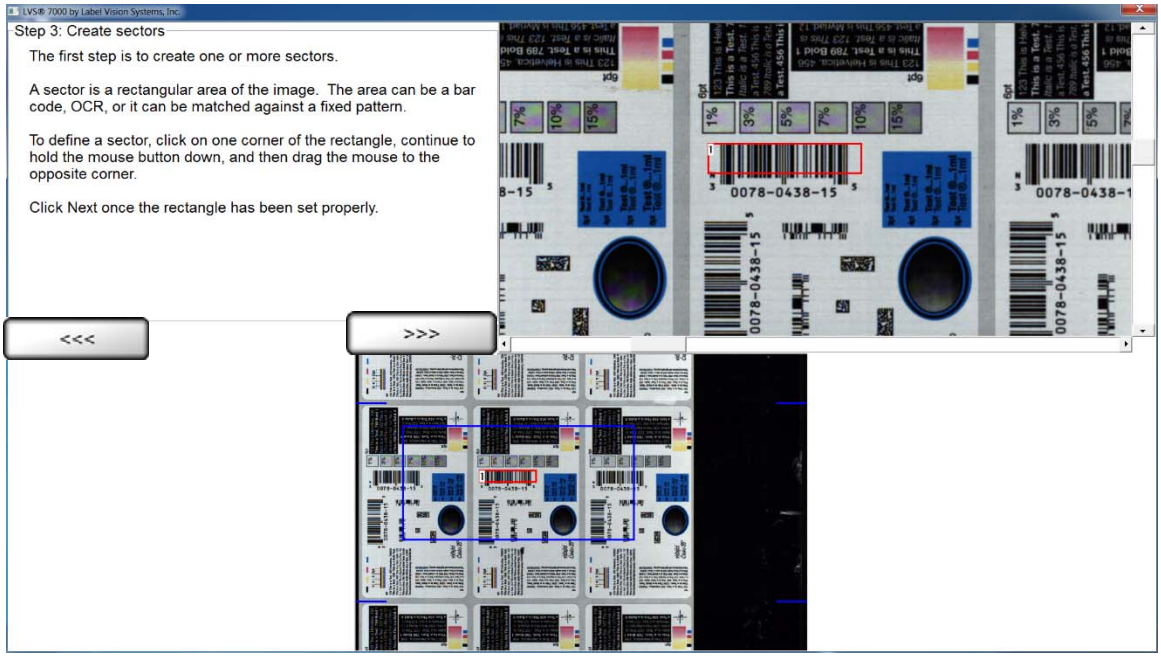
The bottom image is an altered resolution image that has been shrunk in order to show the camera's entire field of view.



Step 3: Create Sectors

A sector is defined as an area of interest that is to be analyzed. This step prompts the operator to establish this sector. The software will not process anything located outside the sector.

An image must be present to draw a sector. An image can only be created by the camera looking at a *moving* roll. This is because a line scan camera cannot see a stationary image; it must be a moving image. Once a correctly synchronized image is acquired, the operator may stop the roll and work with the still image.



The above image is an example of a sector being drawn around a barcode.

Draw a Sector

1. Click on one corner of the area you wish to inspect and drag the mouse while holding down the left-click button. This action will cause the software to draw a “red” box.
2. After you are satisfied with the sector position and size, click the **right arrow** button. The box location will not be stored until the **right arrow** button has been selected.

Note: The operator may draw a sector in either image.

Edit a Sector

1. Using your mouse, click within the desired sector that is located within a blue box; the sector bounding box then turns red.
2. Click the **right arrow** button to edit the sector.
3. You will be directed to Step 3 where you define the sector type.
4. After you are satisfied with the sector, click the **right arrow** button. The box location will not be stored until the **right arrow** button has been selected.

Copy an Entire Sector

1. Using your mouse, click within the desired sector that is located within a blue box; the sector bounding box then turns red.
2. Right-click inside the desired sector; the sector bounding box turns green.
3. Drag and drop the selected sector to the desired location; this copies the parameters of the selected sector.
4. After you are satisfied with the sector, click the **right arrow** button. The sector location will not be stored until the **right arrow** button has been selected.

Note: If you decide not to copy a sector and would like to exit the copying function, simply move the cursor back to the original sector.

Copy Multiple Sectors

Use the smallest sector when precisely aligning copied sectors. This allows you to view the sector's location more precisely in the full resolution image screen.

1. Using your mouse, click within the desired sector that is located within a blue box; the sector bounding box then turns red.
2. Press the **Ctrl** button on your keyboard while using your mouse to select the additional sectors. Each selected sector is highlighted in a red box.
3. Right-click on any sector; this causes a green box to appear around each sector.
4. Drag and drop the selected sectors to the desired location.
5. After you are satisfied with the sector, click the **right arrow** button. The sector location will not be stored until the **right arrow** button has been selected.

Note: If you decide not to copy a sector and would like to exit the copying function, simply move the cursor back to the original sector.

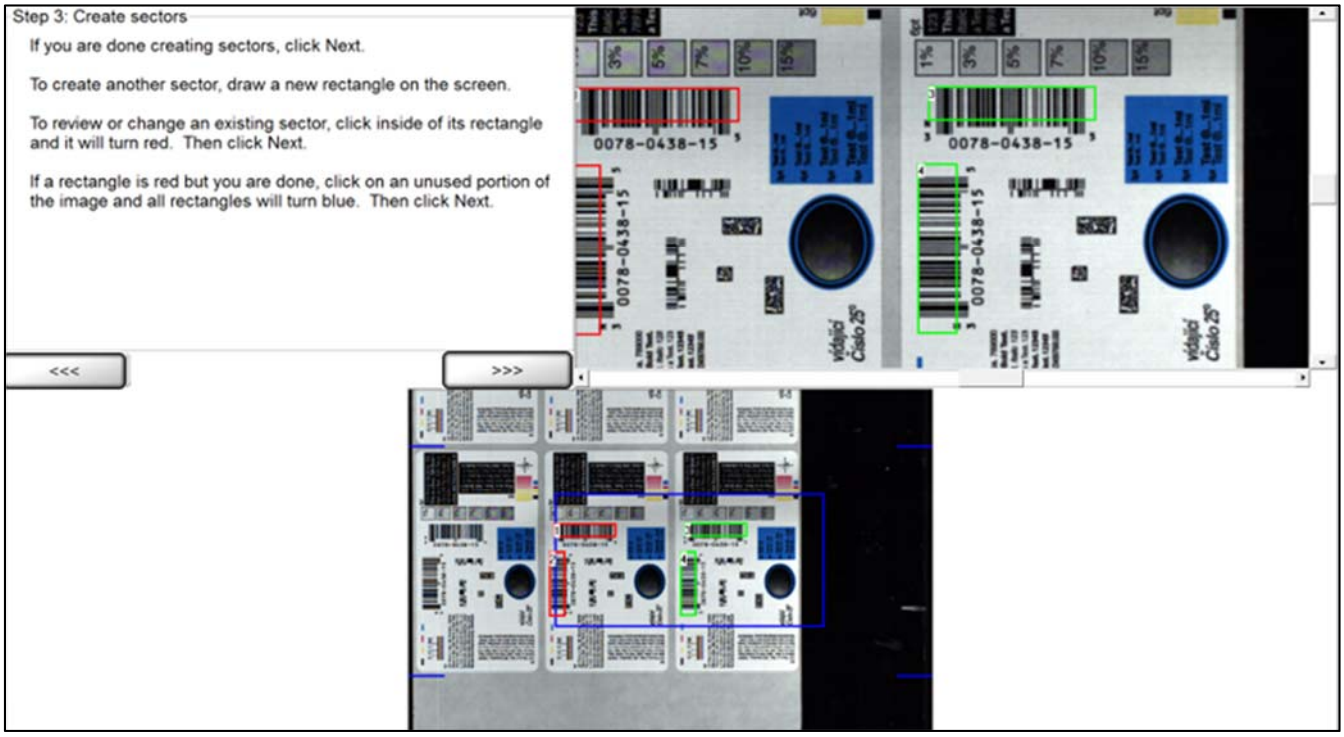
Shortcuts for Highlighting Multiple Sectors

- [Ctrl] + G: Selects all sectors
- [Ctrl] + Left-Click: Individually selects multiple sectors
- [Shift] + Left-Click: Highlights a range of sectors

Moving Sector(s) with Arrow Keys

Highlight the desired sectors and use one of the actions below.

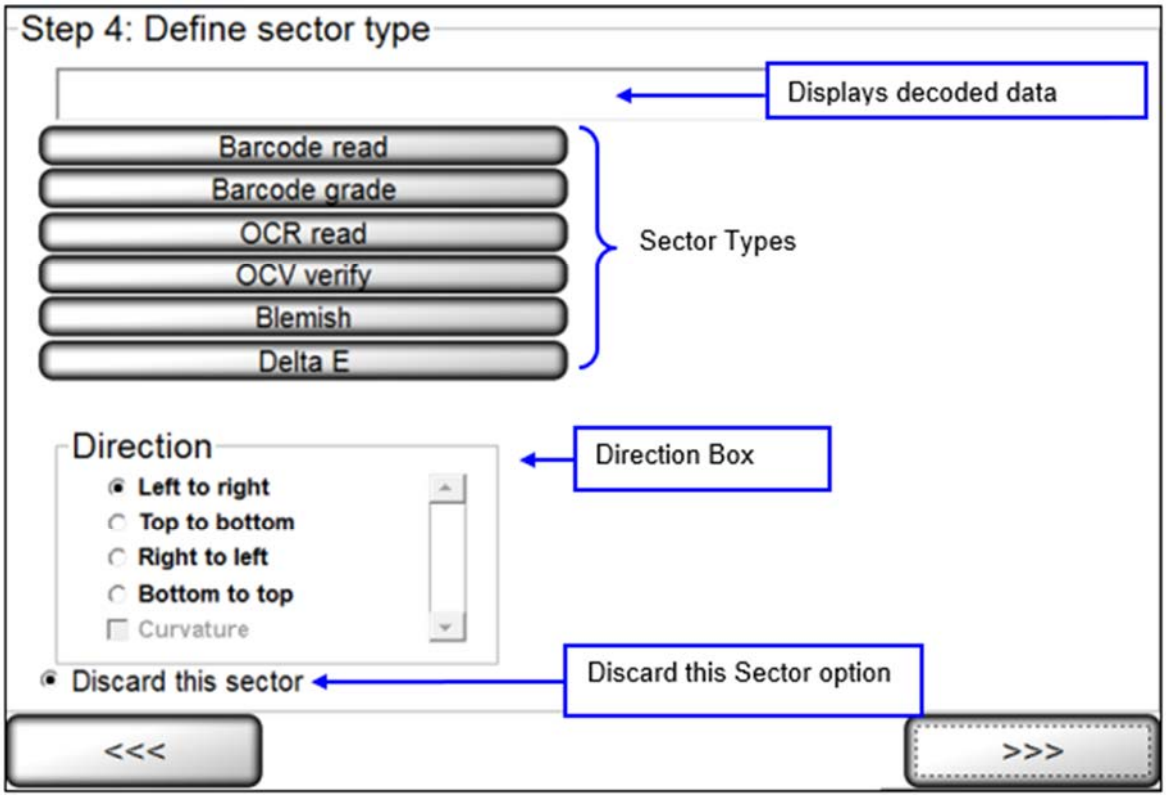
- Arrow keys only: Moves sector(s) by 1 pixel
- [Alt] + Arrow Keys: Moves sector(s) by 5 pixels
- [Shift] + Arrow Keys: Moves sector(s) by 25 pixels
- [Ctrl] + Arrow Keys: Resizes sector(s) in arrow direction



Multiple sectors can be copied and moved to other labels. This is helpful when an operator has to check the same information on different labels within a repeat.

Step 4: Define Sector Type

This step allows you to select the desired sector type that your software is capable of analyzing.



The following sector types are available:

- Barcode read
- Barcode grade
- OCR read
- OCV verify
- Blemish

If a sector is deactivated, please contact your Microscan sales representative to activate the desired sector type.

Note: The field located above the sector type list pre-populates with the string that the system is returning for the sector type. For example, if selecting the **Barcode read** sector type, the field populates with the decoded string.

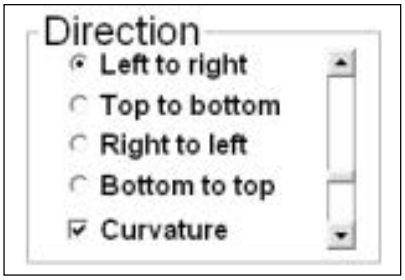
Direction Box

The box labeled **Direction** is applicable when using the OCR or OCV features; it tells the system the orientation in which to read the characters across the screen. Five types of directions are available:

> **IMPORTANT:** The LVS-7510 External System does not distinguish between touching/overlapping characters; thus, characters must not touch or overlap. The LVS-7510 External System reads and/or verifies uppercase characters only.

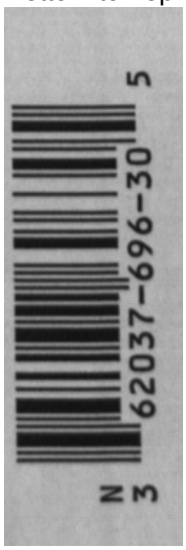
Direction	Description
Left to right	Reads characters from left to right. Typically, this is the desired direction.
Top to bottom	Reads characters from top to bottom.
Right to left	Reads characters from right to left.
Bottom to Top	Reads characters from bottom to top.

Direction Examples



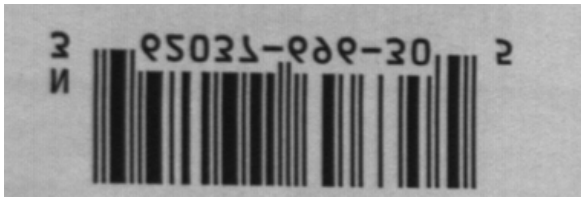
Top to Bottom:

Bottom to Top:



Left to Right:

Right to Left:



Discard This Sector

If you have incorrectly drawn a sector, click the **Discard this Sector** button and then select the **right arrow** button. The sector is deleted. Sectors can also be removed by hitting the delete key while a sector(s) is active.

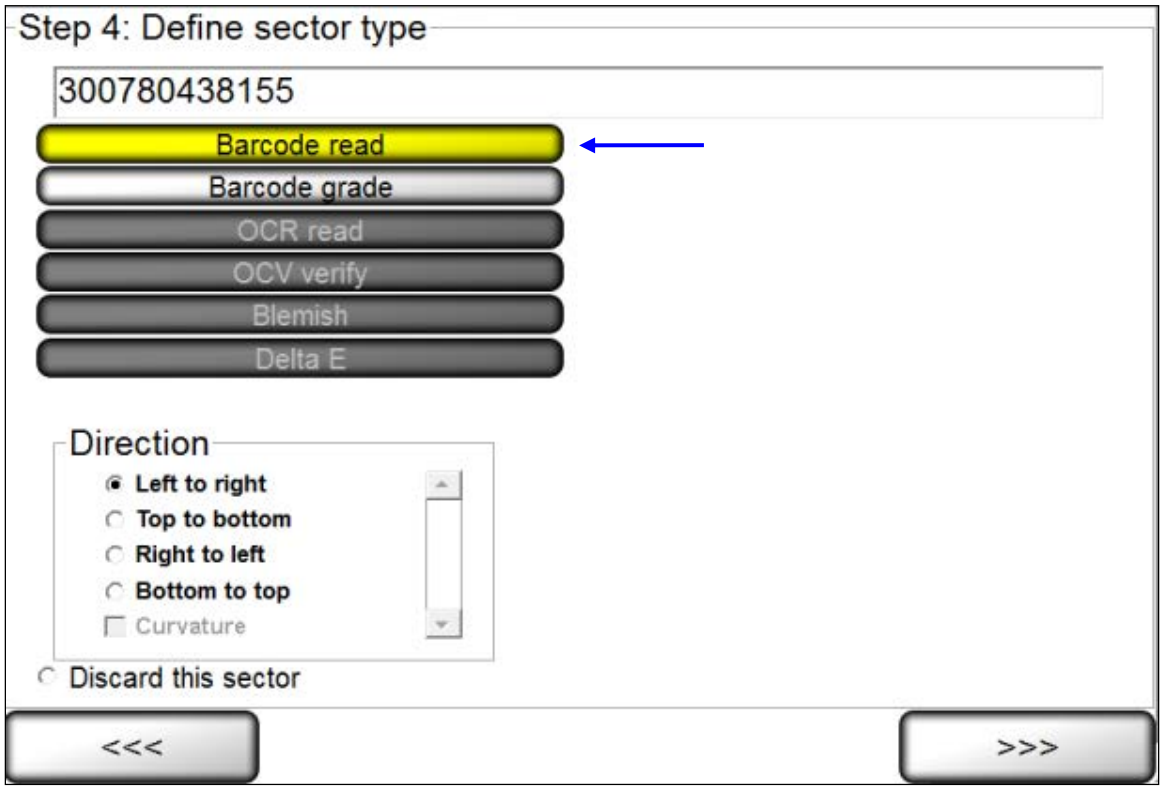
Sector Types

The following is a list of sector types with a description on how to set up a job using that specific sector type.

Sector Type 1: Barcode read

This sector is used to validate a 1D or 2D barcode label. The LVS-7510 External System inspects the barcode image to determine if it is "readable."

1. Select **Barcode read**.

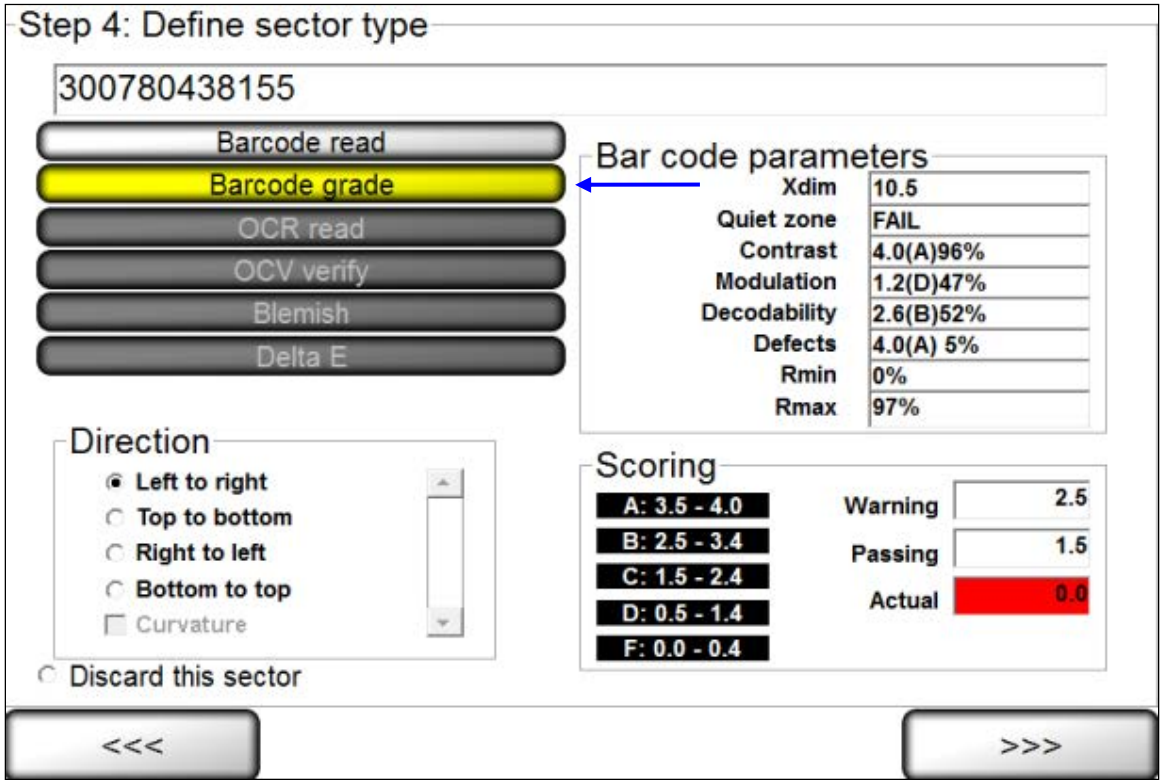


2. Select the desired direction. The encoded data is shown in the top right corner of the screen.
3. Click the **right arrow** button.

Sector Type 2: Barcode grade

This sector is used when you want to grade the 1D or 2D barcode image according to ISO/IEC standards.

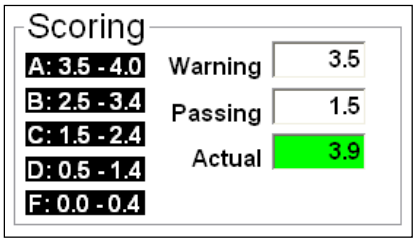
1. Select **Barcode grade**.



2. Select the desired direction.
3. Choose an acceptable grade in the **Scoring** box (see below).
4. Click the **right arrow** button.

Scoring Box

The Scoring box allows you to choose an acceptable grade from 0.0 to 4.0.



The following fields appear in the Scoring box:

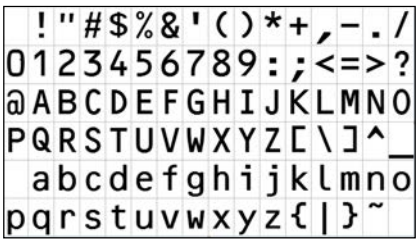
Warning	Indicates an early warning of diminishing quality in the barcode image. The operator must take action to improve the grade score quality.
Passing	Represents what ISO/IEC grade is considered to “pass” and is user-defined to one decimal place.
Actual	Represents what grade is being detected using the setup barcode label.

Sector Type 3: OCR Read

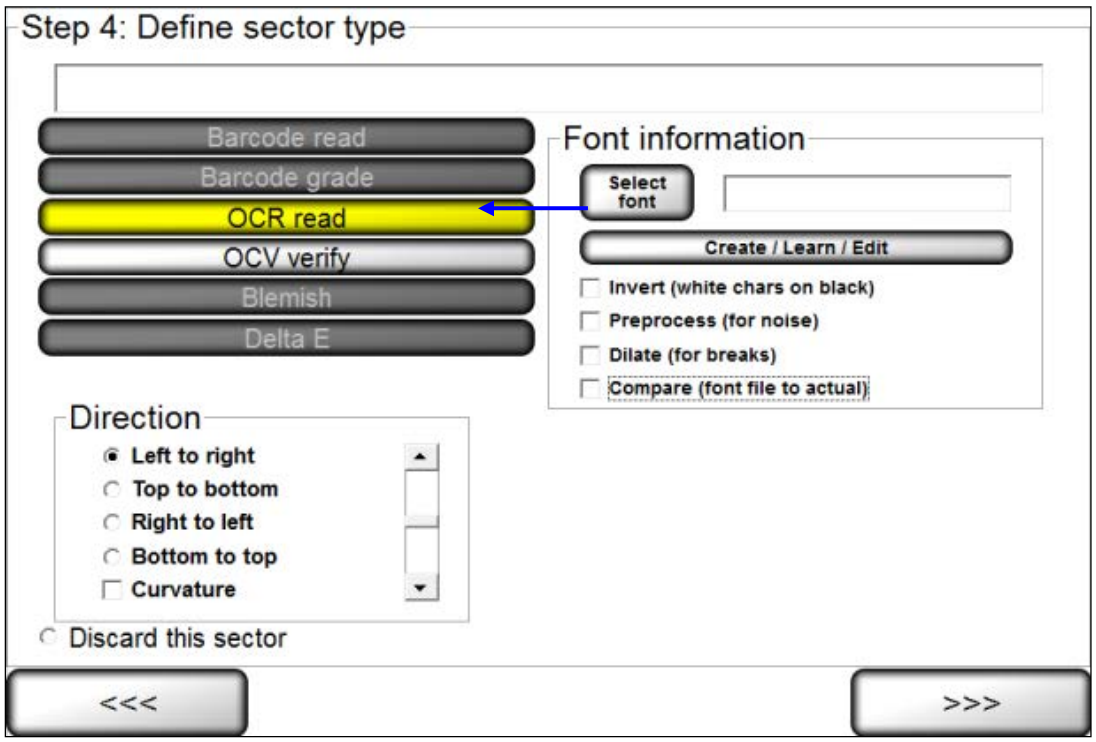
This sector type is used to “read” the human readable characters located within the drawn sector.

OCR and OCV Guidelines:

- Characters must not touch or overlap
- All uppercase letters in any font are allowed
- Lowercase letters, uppercase letters, and some special characters are allowed in OCR-B MT font (6 to 14 points). Shown to the right are the letters, numbers, and special characters supported by OCR-B MT font (6 to 14 points)
- Monospaced fonts, like OCR-B, are preferred and perform better in the LVS-7510
- Do not attempt to re-learn any of the supplied OCR-B MT fonts

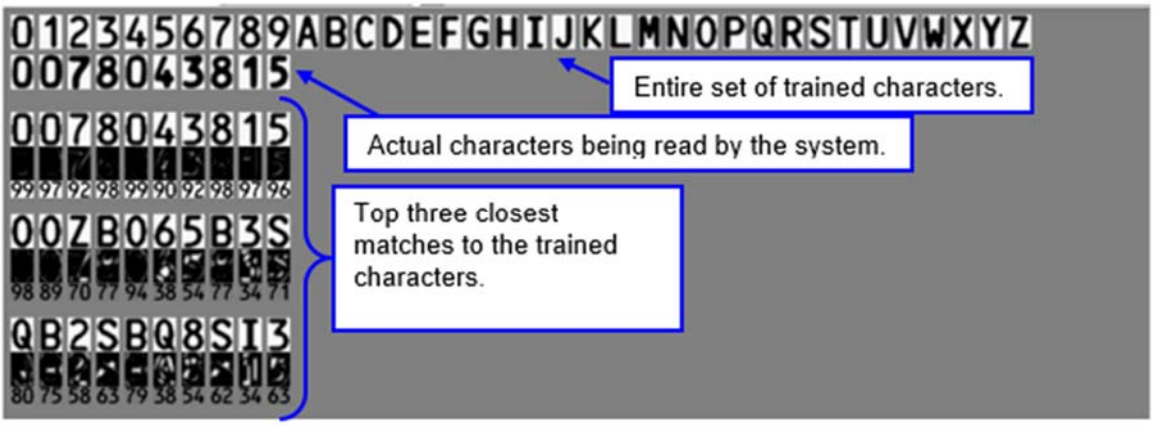


1. Select OCR (read).



2. Select the desired direction.
3. Follow the steps below:
   a. Select the desired font by choosing one of the options below:
      - To choose a specific font, click the **Select font** button and select the desired font.
      - To create, train and edit fonts, click the **Create/Learn/Edit** button. See the section below for more information.
   b. Additional options include:
      - **Invert (white chars on black)** tells the sector to look for white characters on a dark background.
      - **PreProcess (for noise)** reduces noise and background contrast variances.
      - **Dilate (for breaks)** joins characters using a blurring and joining technique; it makes the characters bold and darker. This option is useful for Dot Matrix-type printing.

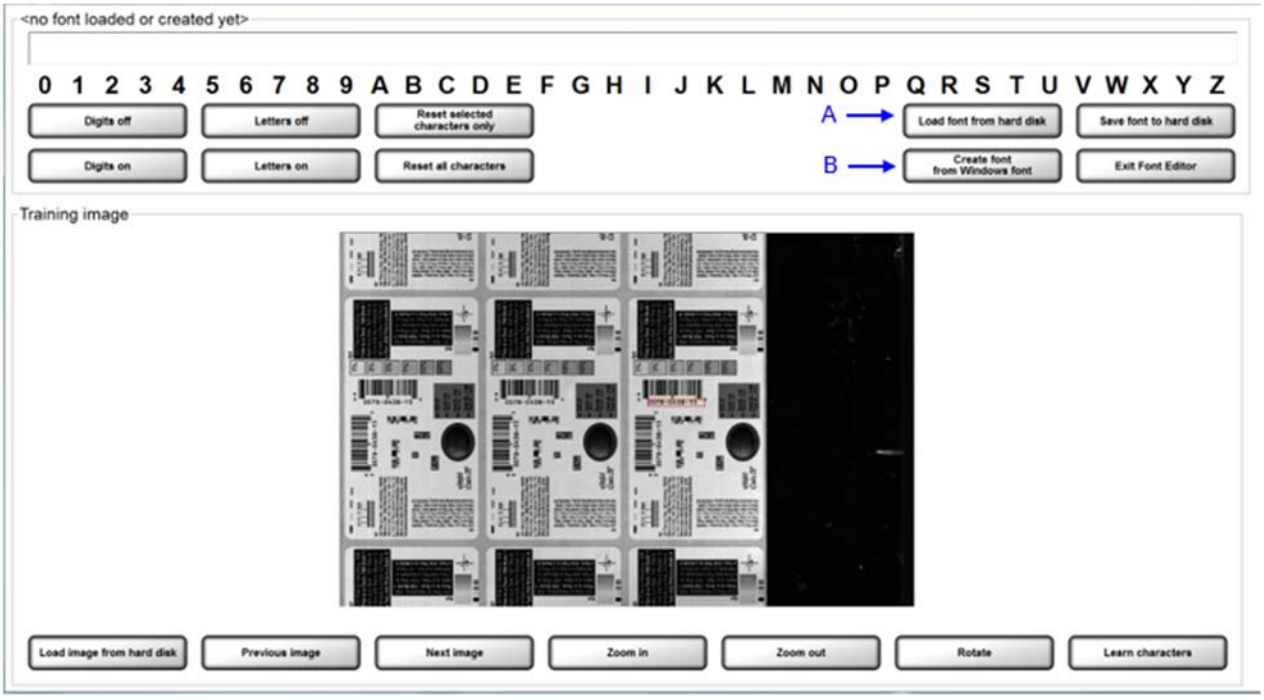
- **Compare (font file to actual)** displays an Actual vs. Font File image in the lower half of the screen. The image shows the font file across the top of the image and the actual characters within the sector down the left side. Differences between a font file and an actual character are highlighted in white over black in the center of the screen. Each character is matched against the font file and given a score. The character with the highest score is then used as the result.



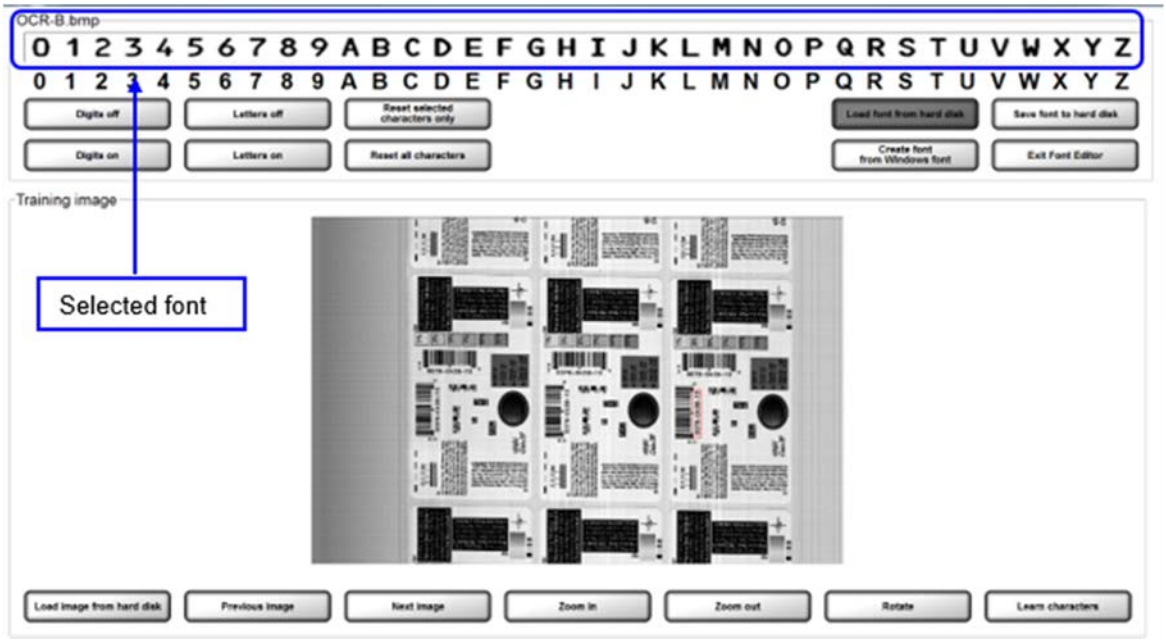
4. Click the **right arrow** button**.**

Create / Learn / Edit Fonts

1. Click the “Create/Learn/Edit” button. The Font Editor page appears.



2. The desired font must be loaded or created.
   - To load a font from a specific location, click the “Load font from hard disk” button (see “A” in the above screenshot). Locate the desired font, and then click “Open”.
   - To create a font using a Windows font, click the “Create font from Windows font” button (see “B” in the above screenshot). Select the desired font and then click “Ok”.
3. The selected font appears in the top text field (see below).



4. Use the buttons at the bottom of the screen to capture the desired image view. Buttons include:

Button	Description
Load image from hard disk	Click to load an image stored on a hard disk.
Previous Image	Click to view the previous image.
Next Image	Click to view the next image.
Zoom In	Click to view a magnified image of the label.
Zoom Out	Click to return to the original image view.
Rotate	Click to rotate the image. The image rotates each time the button is clicked.
Learn Characters	Used when training letters or numbers. This button is described in more detail in the following sections. An image must be in normal orientation (from left to right, and right side up) to be used for training (see example below). Use the **Rotate** button to rotate the image to the desired view. 

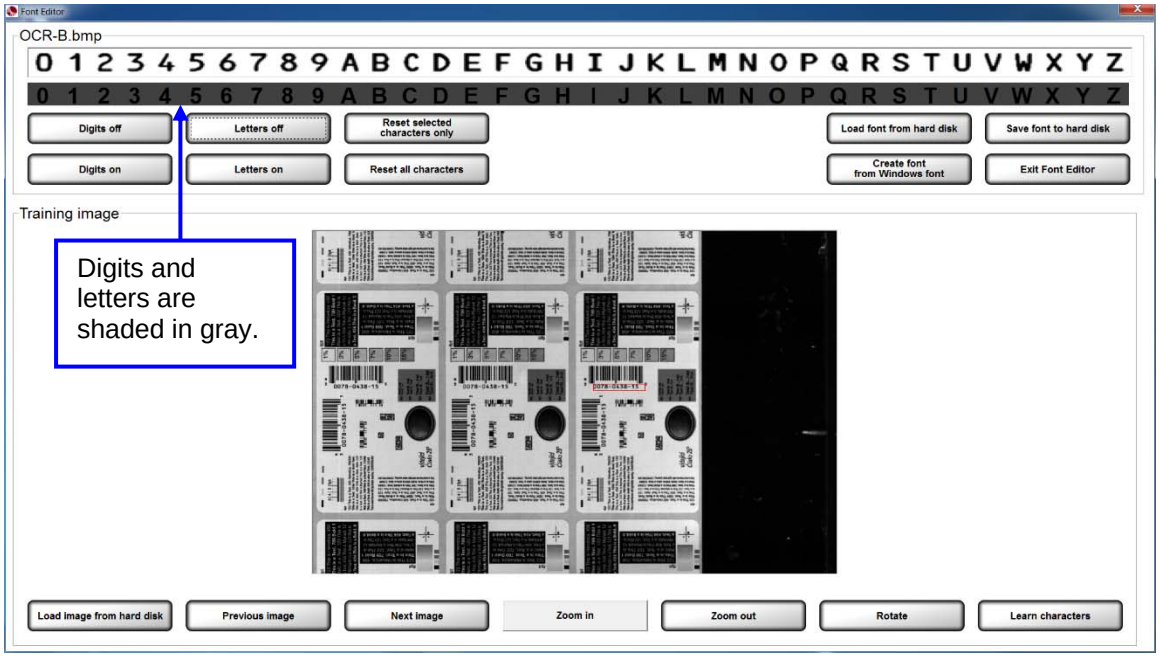
5. Click the “Exit Font Editor” button in the top right corner of the screen to discard changes.
6. An entire alphanumeric string (0-9 and A-Z), or specific digits or letters, can be trained. Read the sections below for further information.

Train an Entire Alphanumeric String:

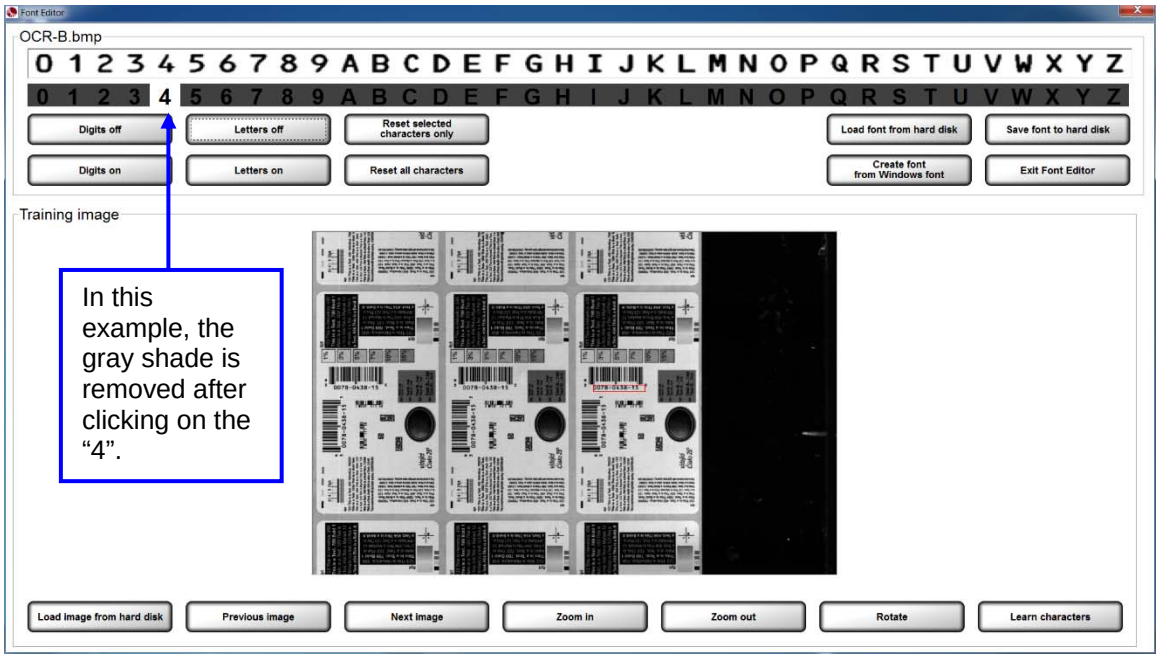
- An image comprised of an entire alphanumeric string (0-9 and A-Z) must be present in the training image view.
- Use the left click button on your mouse to draw a box around the alphanumeric string in the training image view.
- Click the “Learn characters” button. The trained alphanumeric string appears in the top field.
- When all changes are complete, click the “Save font to hard disk” button. In the window, save the font to the desired folder.

Train Specific Digits or Letters:

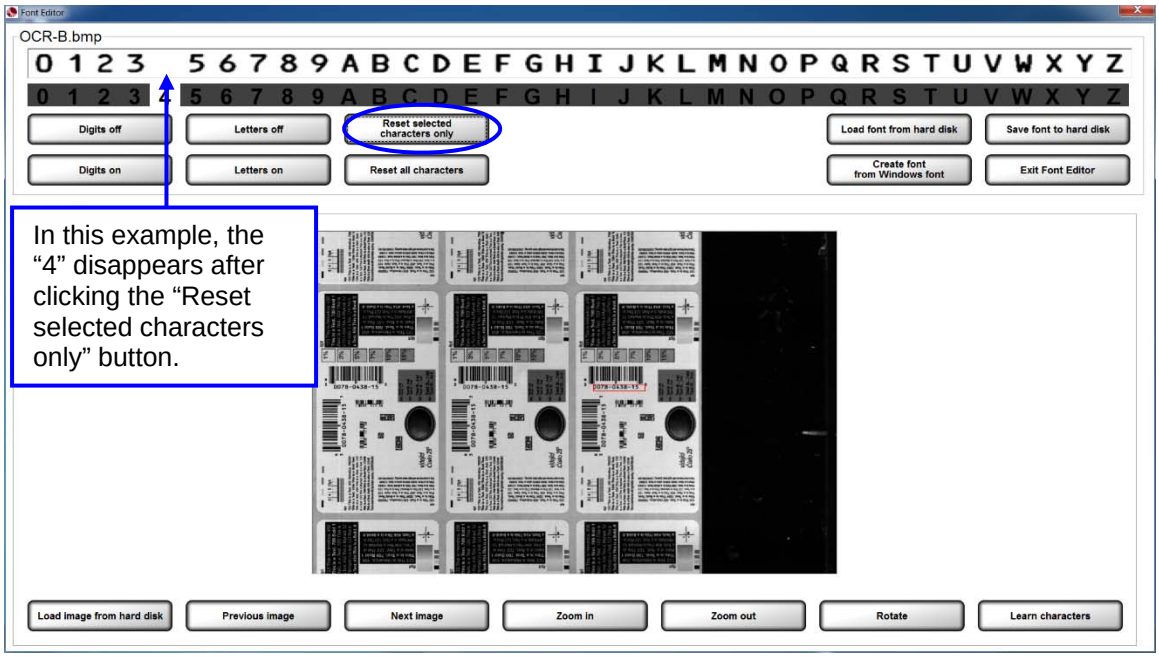
- All digits and letters must be shaded in gray. Do this by selecting the “Digits off” button and “Letters off” button; this shades all digits and letters (see below).



- Click on the desired digit or letter; the gray shade is removed from the selected digit or letter. See example below.



- Click the "Reset selected characters only" button. The character disappears (see below).

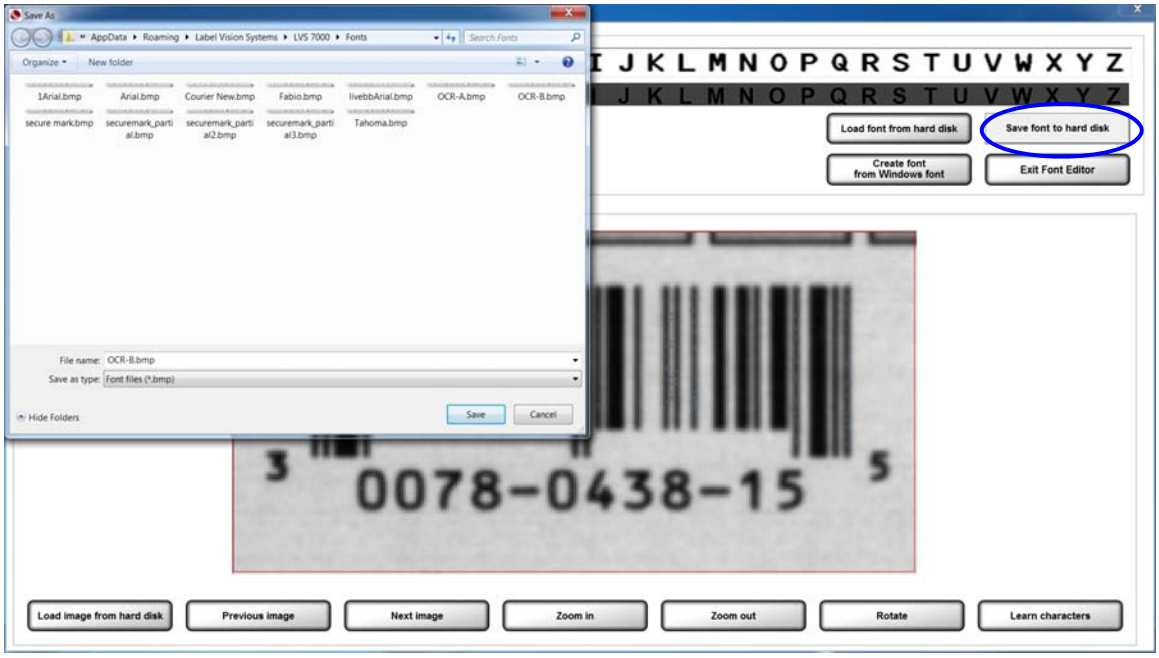


Note: If you do not select this button, the software averages the character in the top text field with the character in the training image.

- Use the left click button on your mouse to draw a box around the letter or digit in the training image view (see below). Note that the training image in the screenshot below appears larger after clicking the “Zoom In” button.

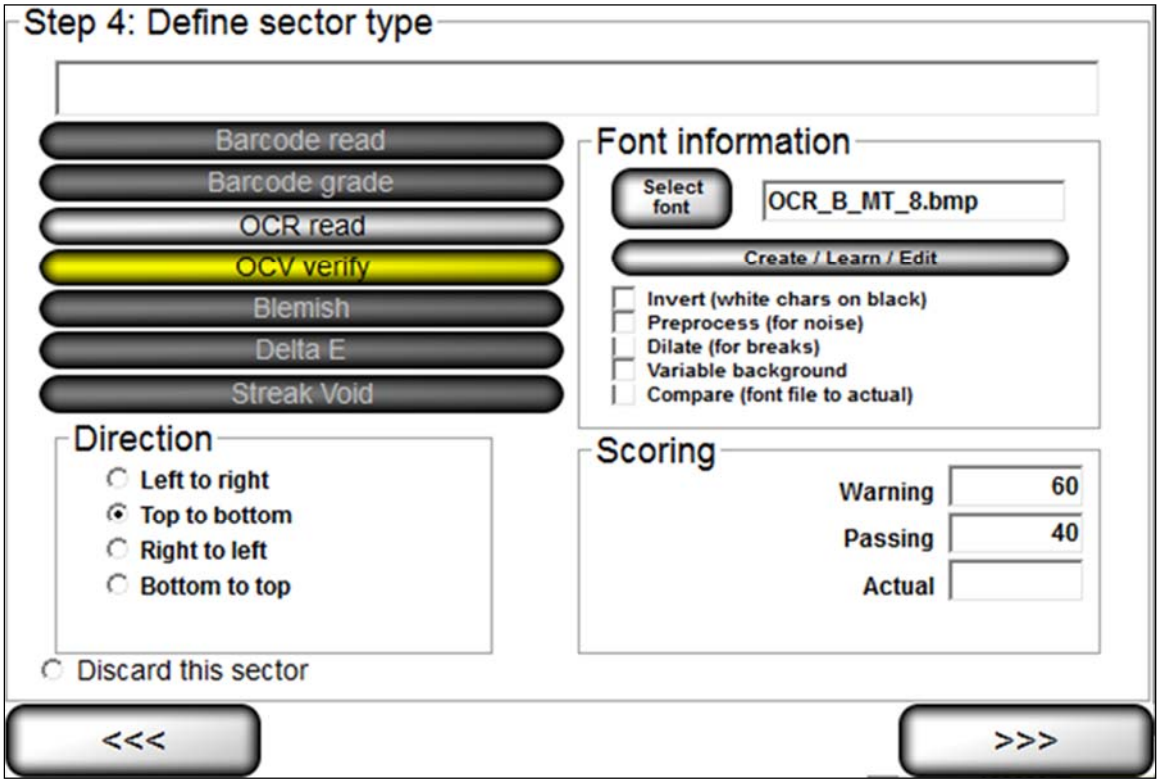
- Click the “Learn characters” button. The trained character appears in the top field (see below).

- When all changes are complete, click the “Save font to hard disk” button. In the window, save the font to the desired folder (see below).



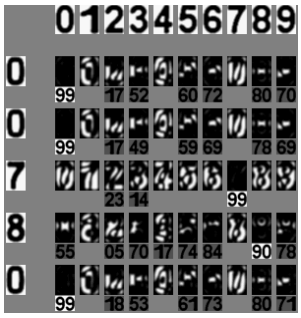
Sector Type 4: OCV Verify

The OCV (Optical Character Verification) sector type is used to score the print quality of the human readable characters within a drawn sector.



1. Select OCV verify.
2. Select the desired direction.
3. Follow the steps below:
   a. Select the desired font by choosing one of the options below:
      - To choose a specific font, click the **Select font** button and select the desired font.
      - To create, train and edit fonts, click the **Create/Learn/Edit** button. See the section above entitled “Create / Learn / Edit Fonts” for more information.

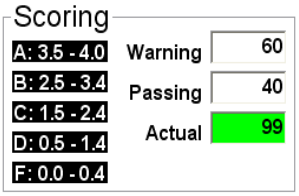
   b. Additional options include:
      - **Invert (white chars on black)** tells the sector to look for white characters on a dark background.
      - **PreProcess (for noise)** reduces noise and background contrast variances.
      - **Dilate (for breaks)** joins characters using a blurring and joining technique; it makes the characters bold and darker. This option is useful for Dot Matrix-type printing.
      - **Compare (font file to actual)** displays an Actual vs. Font File image in the lower half of the screen. The image shows the font file across the top of the image and the actual characters within the sector down the left side. Differences between a font file and an actual character are highlighted in white over black in the center of the screen. Each character is matched against the font file and given a score. The character with the highest score is then used as the result.



4. Determine a score (see **Scoring Box** below for additional information).

   Scoring Box

   The OCV Scoring box allows you to choose an acceptable score ranging from 0 to 99.



   Three scores are available:

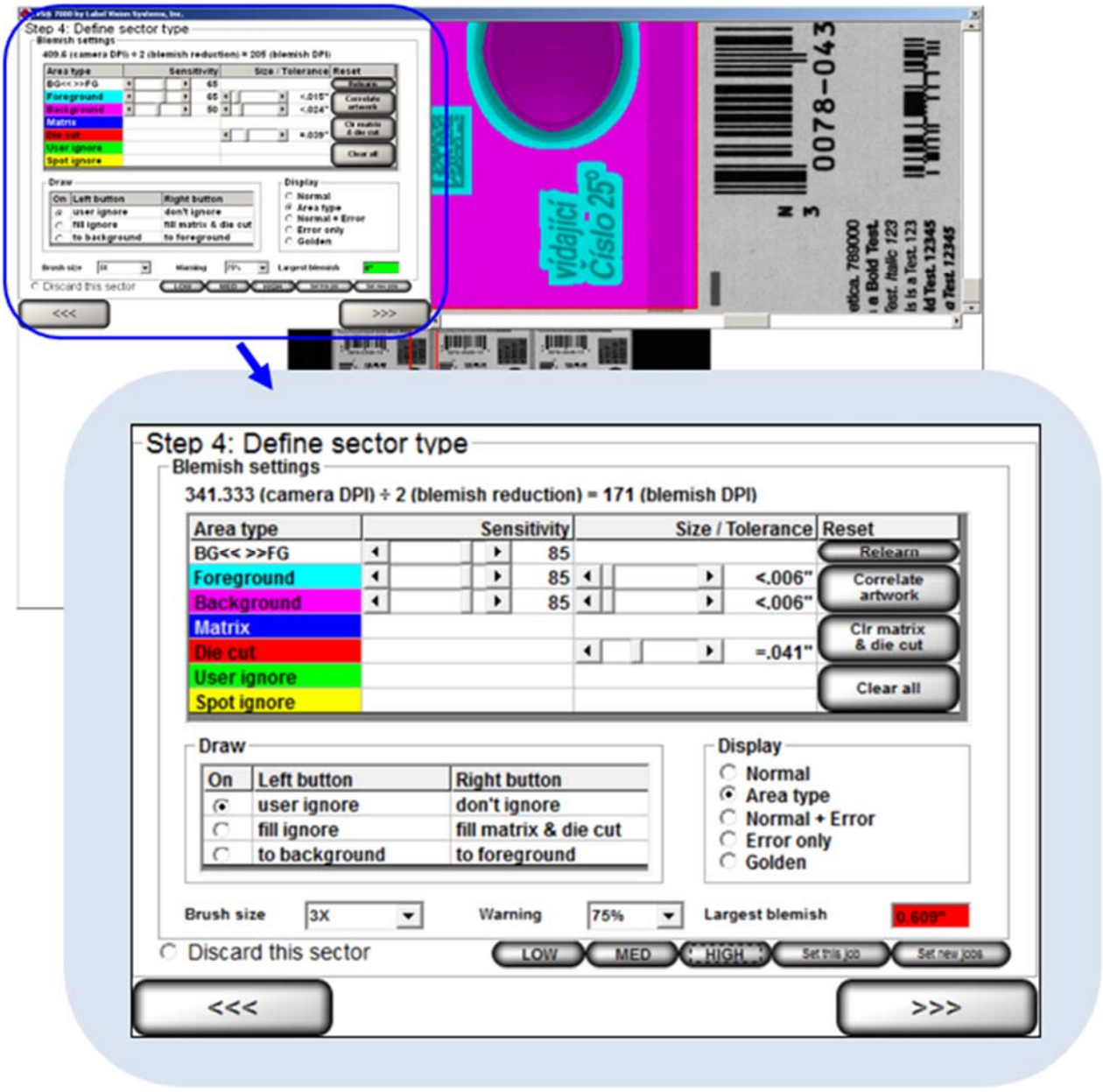
Score	Description
Passing	The **Passing** number is a threshold setting. All “Actual” scores greater than the “Passing” score is said to pass inspection (and vice versa). If the “Actual” score is less than the “Passing” score, then the inspection has failed and alarms can be set to alert the operator.
Actual	The **Actual** number represents a percentage of confidence. A 95 would indicate that there is a good chance that the characters within the drawn sector are correct. A 20 would indicate that there is a better chance that the characters do not match what was intended.
Warning	Indicates an early warning of diminishing print quality. The operator must take action to improve the grade score quality.

5. Click the **right arrow** button.

Sector Type 5: Blemish

To use the Blemish sector type, follow the steps below.

1. Select **Blemish** on the **Step 4: Define Sector Type** screen; the following screen appears.



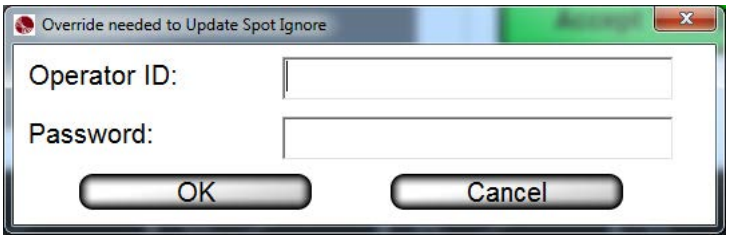
2. The software automatically learns the first image it sees after the first sector has been drawn. If the image is not the correct one, or you would like to put a different image into the field of view, click the **Relearn** button and the software will accept the next image it sees within that sector. This saved image is called the "Golden image". The entire process of understanding blemishes is done by comparing the "Golden image" to the Job image.

Note: Ctrl+L is a keyboard shortcut for the **Relearn** button. After pressing **Ctrl+L**, the system will accept the next image it sees within each Blemish sector and saves the image as the Golden image. This shortcut is available only when the system is in Run mode.

After pressing Ctrl+L, a popup message will appear for users without administrative rights. The user must enter an administrator user name and password for the command to take effect. The golden image that is recorded is the image after the authorized user name and password is entered.

3. Within the Blemish Settings box (see above), adjust the following fields as needed:

Field	Description
BG<< >>FG << Background >> Foreground	Separates the Foreground from the Background. Increasing this number will define more print as Foreground and less as Background. Decreasing this number will define more of the label as Background and less as Foreground. A sensitivity of 0 will call everything Background and 100 will call everything Foreground.
Foreground Sensitivity	The Foreground Sensitivity setting is the system's allowable deviation in print color contrast after converting to gray scale. A sensitivity of **0 will accept all variations** from the original pixel's gray scale value, while **100 will allow no variation** of the gray scale values. In other words, a setting of 0 will pass everything that is defined as Foreground print and a setting of 100 will pass nothing. The operator will need to adjust this setting to find an acceptable value that does not cause false errors in the print. Foreground is shown in the light blue color when the Display is set to Area type. Label sections can be sent to the background or foreground through the Draw tool.
Background Sensitivity	The Background Sensitivity works the same way as Foreground but it is meant to find contrast differences in the label's background. Background is shown in the light purple color when the Display is set to Area type.
Size/Tolerance	These settings allow the user to increase or decrease the size of detected Blemishes. It is important to test the software so that a user understands what size Blemishes are acceptable.
Preset Configuration Settings	The Preset Configuration Settings buttons allow a user to adjust the following six blemish settings and to apply the settings to a particular job or to all new jobs created (based on administrator rights). See the "Preset Configuration Settings" section for more information on using the Preset Configuration Settings buttons. 1. BG<< >>FG sensitivity 2. Foreground sensitivity 3. Background sensitivity 4. Foreground Size/Tolerance 5. Background Size/Tolerance 6. Die Cut Size Tolerance 
Matrix	Matrix detects the roll section between labels to insure the waste material is removed. Matrix is shown in Blue when the Display is set to Area type.

Field	Description
Die cut tolerance	This setting changes the size of the Red line that wraps around each label when using “fill here” under the Draw section. This area measures the movement of the outside edge of the label compared to the printing within for die movement.
User ignore	This option is enabled in the Draw section and allows the user to draw green ignore areas within the Blemish sector. This tool is useful when there is incrementing data or differences between each label.
Spot ignore	Ignore areas appear in yellow when the “Update Spot Ignore” button is used in the Operate Screen. Only operators granted the **Allow Accept / Replace Errors** permission are allowed to use the Spot ignore feature. When an operator without Administrator permissions clicks the “Update Spot Ignore” button, the following message appears:  The operator must enter an Administrator’s Operator ID and Password to continue, or the Spot ignore feature cannot be used. See the **Permissions** section, within the **Operators** section, for more information on permissions.
Brush Size	Allows the user to change how large or small the brush stroke will be when ignoring an area.
Warning	Select the warning percentage. If the current blemish is less than the Blemish Size / Tolerance setting and if the ratio of the current blemish size to the Blemish Size / Tolerance setting is greater than the warning percentage, then the inspection passes but a warning is flagged. For example, suppose you decide that a .25” blemish is considered an error. If the warning percentage is 75%, then a blemish of .25” x 75% = .1875” or larger is a warning. Blemish sizes less than .1875" is acceptable and passes the inspection. Blemish sizes .25” and greater will flag an error.
Largest blemish	Shows the largest blemish in inches
Discard this sector	Click this button to delete the sector. After this button is clicked, the “Step 4: Define Sector Type” screen appears allowing you to select another sector. Sectors can also be removed by pressing the “Delete” keyboard button while a sector(s) is active.
Relearn Button	The Relearn Button will re-train the Golden image with the image that is present. **Note: Ctrl+L** is a keyboard shortcut for the **Relearn** button. After pressing **Ctrl+L**, the system will accept the next image it sees within each Blemish sector and saves the image as the Golden image. This shortcut is available only when the system is in Run mode. After pressing Ctrl+L, a popup message will appear for users without administrative rights. The user must enter an administrator user name and password for the command to take effect. The golden image that is recorded is the image after the authorized user name and password is entered.

Field	Description
Clr matrix & die cut	Click this button to clear all matrix and die cut filled sections.
Clear all	Click this button to **Clear all** ignored and auto filled sections within a chosen sector.

4. The options in the **Display** box are shown below:

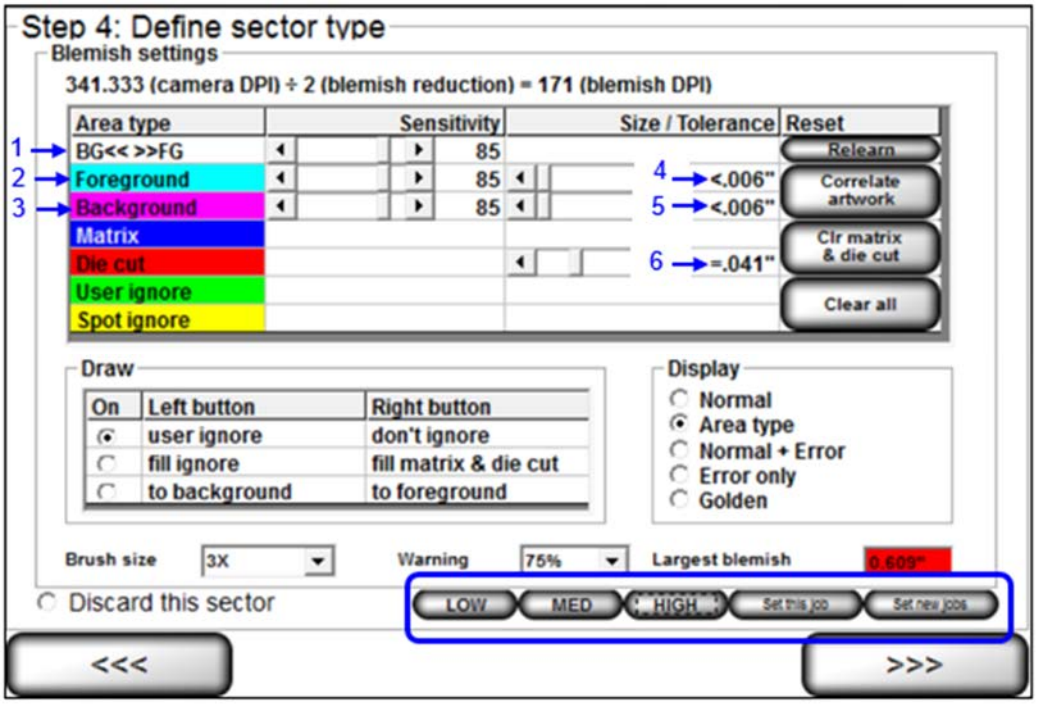
Field	Description
Normal	Shows the Actual image only.
Area Type	This view shows the label using the color codes for each blemish feature.
Normal + Error	This view allows the user to see errors as they occur. The user usually uses this screen to find the errors, and then goes to the Normal+Ignore screen to draw the ignore sections.
Error Only	This is a tool for the operator to use in order to understand what the software views as a difference between the Golden image and the Actual image. When this option is selected, the image will turn black and errors will be highlighted in white.
Golden	Shows an overlay of the Golden Image over the Actual Image.

5. Click the **Global copy** button to replicate the setting changes in the same sector across all labels. See the "Global Copy" section for more information.
6. Click the **right arrow** button.

Preset Configuration Settings

The preset configuration settings allow a user to adjust the following six blemish settings on the “Step 4: Define sector type (Blemish settings)” screen:

1. BG<< >>FG sensitivity
2. Foreground sensitivity
3. Background sensitivity
4. Foreground Size/Tolerance
5. Background Size/Tolerance
6. Die Cut Size Tolerance



The functionality of the preset configuration settings vary based on user permissions.

- Users with administrator rights can configure the preset configuration settings and apply the settings to a particular job or to all new jobs created. See the “Permissions” section for more information on administrator permissions (“Welcome Screen Overview” section > “Administration” section > “Operators” section > “Permissions” section).
- Users without administrator rights cannot configure preset configuration settings and can only select the “Low,” “Medium,” and “High” preset buttons to adjust the blemish settings on the “Step 4: Define sector type (Blemish settings)” screen.

See the sections below for more information on configuring and using the preset configuration settings.

Note: The preset configuration settings buttons are enabled in the “Settings” menu > [Preset] section > UseFeature setting:

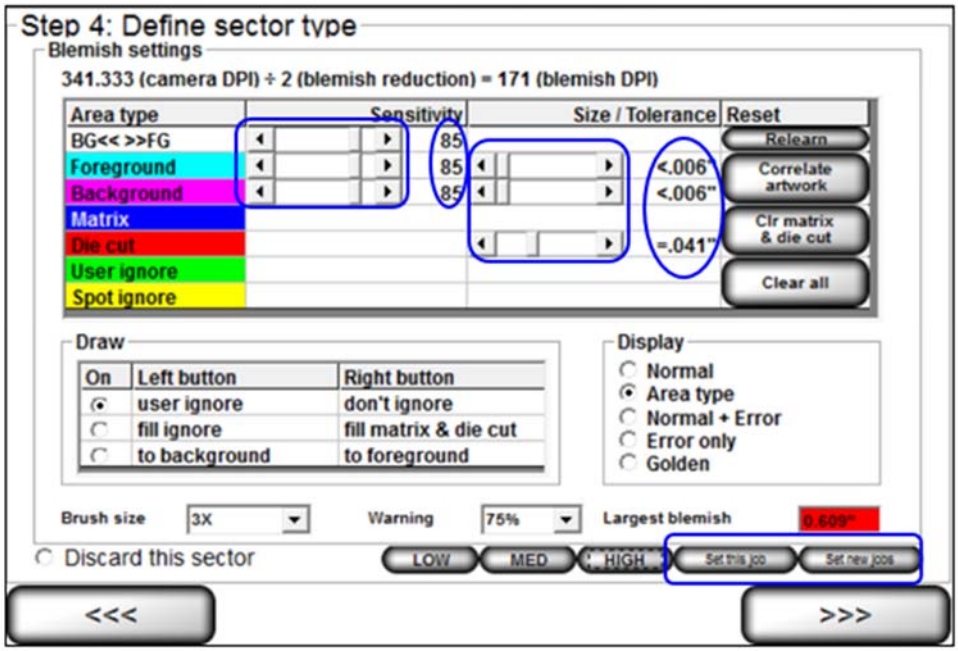
Section	Setting	Value
Preset	UseFeature	0

- **UseFeature=0** (default) – Disables the preset configuration settings buttons
- **UseFeature=1** – Enables the preset configuration settings buttons

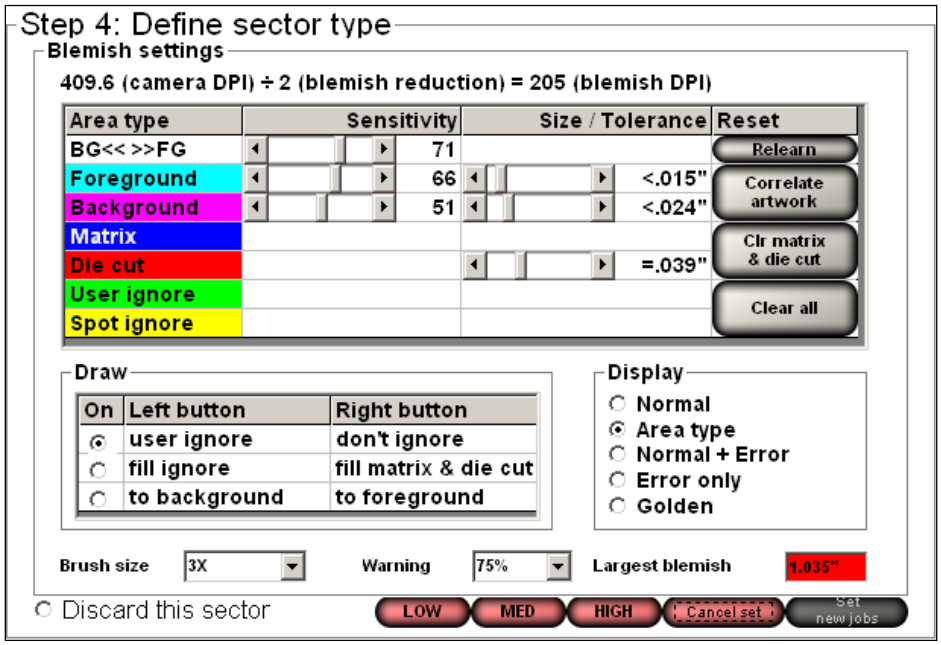
Configure the Preset Settings:

Follow the steps below to configure the blemish settings for the low, medium and high preset configuration settings. **Only users with administrator rights can configure the preset configuration settings.**

1. Use the slider bar to adjust the sensitivity or size/tolerance settings for the foreground, background, and die cut settings.



2. When settings are complete, click either the “Set this job” button to apply the settings to only that job, or click the “Set new jobs” button to apply the settings to all new jobs created. These buttons appear only to users with administrator rights.
3. The preset buttons (Low, Medium, High) turn red.



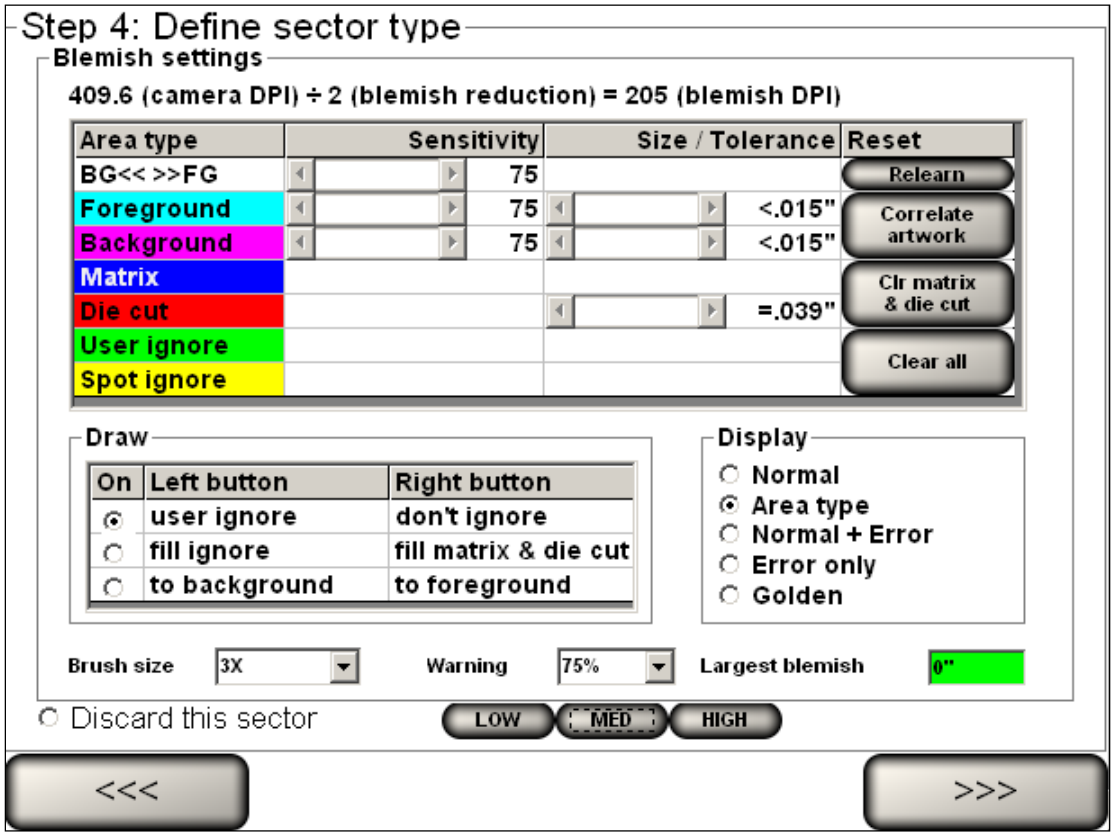
- Click “Low” to apply the blemish settings to the low preset configuration setting.
- Click “Med” to apply the blemish settings to the medium preset configuration setting.
- Click “High” to apply the blemish settings to the high preset configuration setting.
- Click the “Cancel set” button to cancel the blemish configuration settings.

4. Follow the above steps to set the configuration settings for each of the present configuration buttons (Low, Medium and High).

Use the Preset Settings:

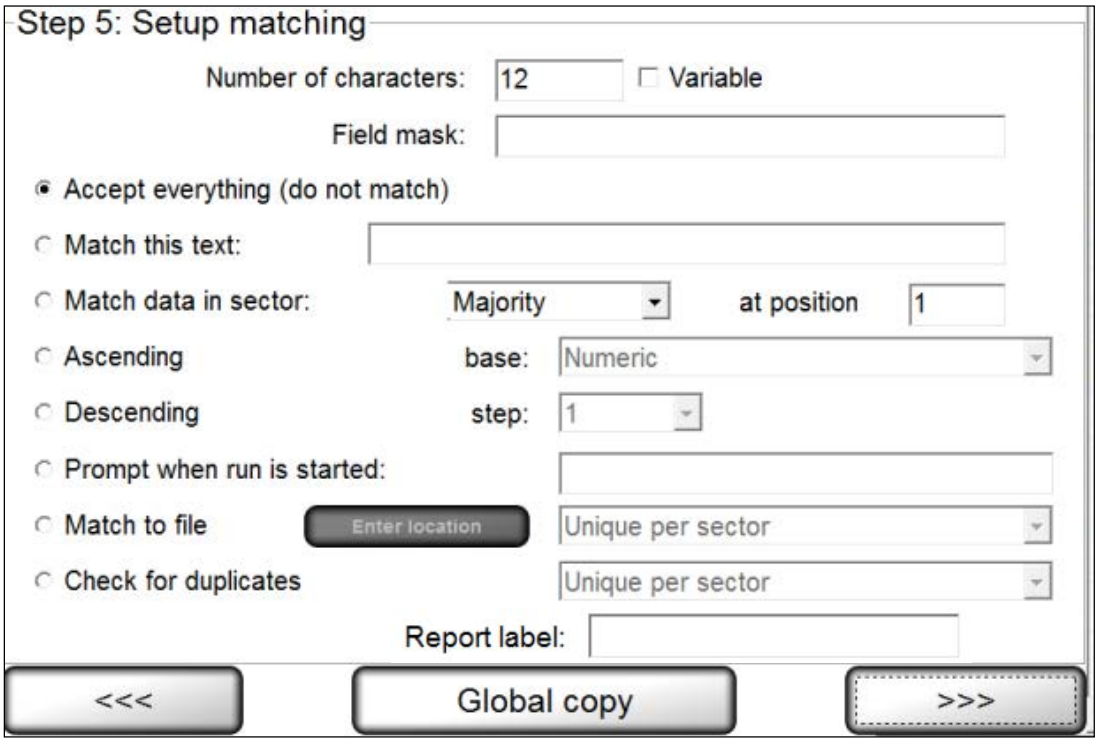
Users without administrator rights can select the “Low,” “Medium,” and “High” preset buttons to view the image(s) on the “Step 4: Define sector type (Blemish settings)” screen.

- Click “Low” to adjust the blemish settings to the “Low” configuration settings as defined by a user with administrator rights.
- Click “Med” to adjust the blemish settings to the “Medium” configuration settings as defined by a user with administrator rights.
- Click “High” to adjust the blemish settings to the “High” configuration settings as defined by a user with administrator rights.



Step 5: Setup Matching

Step 5: Setup Matching is used to set up sequential, matching or incremental information checking. This step does not apply to Blemish modules.



Complete the applicable fields and then click the **right arrow** button. Each field description is listed in the table below. The software reverts back to STEP 1 prompting you to set up another sector if desired. If another sector is not required, click the **right arrow** button and proceed with the next step.

Field	Description
Number of characters	Ensure the number of characters is correct for the string length or a “Wrong Length” error will constantly be encountered.
Field Mask	Teaches the sector what type of character to expect for each position within a string. There are three possibilities for each character: numeric (#), alphabetic (@), and alpha/numeric (*). Special characters can also be used by typing the exact character in the position where it will be present. The following informational format is to be used: Sample: = (AB)8C23 = (@@)*@## @ means 'A' to 'Z' * means 'A' to 'Z' or '0' to '9' # means '0' to '9' ( ) means ' (' and ') ' - Any characters that are not @ * # are assumed to be special characters. **IMPORTANT!** Do not include a space inside the mask. Also, OCR/OCV can handle up to 39 characters and an error will occur if there are more than 39 characters in the field mask box.
Accept everything (do not match)	If sequential or matching checking is not required, click the **Accept everything (do not match)** option and leave all other

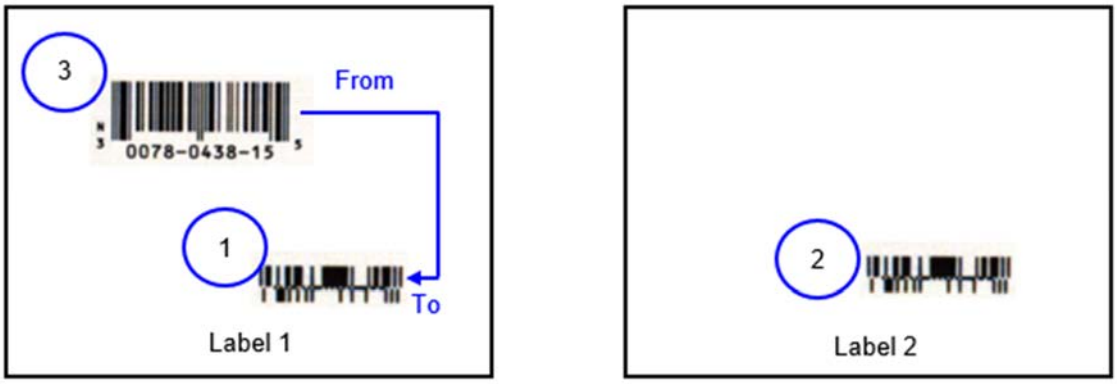
Field	Description
	options on this page alone. This option will be grayed out when using OCV.
Match this text	To match a static (unchanging) number, select **Match this text** and enter the desired string into the text box.
Match data in sector	If you are using multiple sectors, you may wish to match the data in one sector to the data in another sector. To accomplish this, select **Match data in sector** and choose the desired sector from the drop-down list of previously trained sectors. The **Majority** feature looks at all sectors that are set to majority, takes the most popular result, and then matches the sectors to that popular result. The **At Position** feature tells the software where to start reading data within a sector. Take the string A1234 as an example, if you change **at position** to 3 then the software will only read 234. The **Global copy** feature will copy the logically located sector as compared to the original "From" and "To" sectors' positional relationship. Refer to the diagram below in the "Global Copy Diagram" section.
Ascending or Descending	When checking sequential data, you must select **Ascending** or **Descending**. • If the numbers are incrementing by a different amount, you can select the amount to increment in the **Step** list box. • If the sequence is a combination of alpha and numeric, then select the **Base** numbering system.
Prompt When Run is Started	When selected, this feature allows a "Match this text" string to be entered by the operator at the time of starting a run, allowing the "Match To" text to be changed without allowing job editing to that operator's permissions. When this option is selected the system will prompt at run time for the "Match to" string. Enter the string in the available text field. Note that each sector is labeled accordingly.
Match to File	This feature compares the data decoded within a sector to the data on a file created by the user. Options include: • Duplicates allowed – The system allows for repeated data within the same sector and/or file. • Unique per sector – The system does not allow any repeated data within the same sector and/or column within a file. • Unique per job – The system does not allow any repeated data within the same sector and/or file. See the **Match to File** section below for additional details about this feature. Click **Enter Location** to select the location of the file being matched.
Check for Duplicates	Checks data for any duplicates. Options include: • Unique per sector – The system does not allow any repeated data within the same sector.

Field	Description
	• Unique per job – The system does not allow any repeated data within the same sector or job/roll.
Report Label	Use this field to enter a report label, such as a name for the sector. The name entered in this field appears on the Summary Report and acts as a unique user-defined identifier of that particular sector. This field is not available for Blemish sectors.
Global Copy	Click the **Global copy** button to replicate the setting changes in the same sector across all labels.

Global Copy Diagram

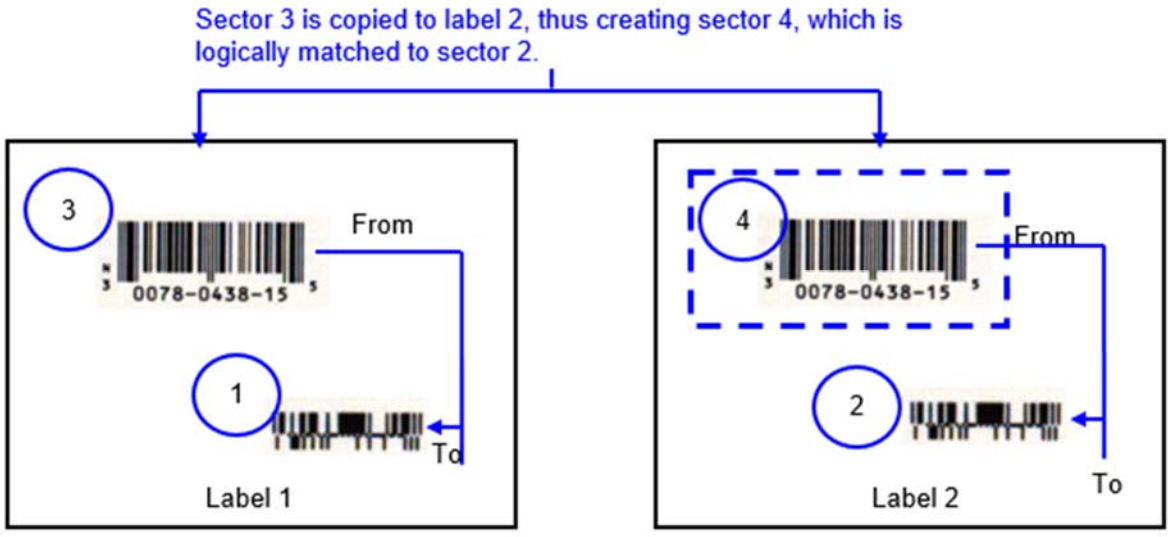
Labels BEFORE Global Copy

- In Label 1 below, sector 3 is matched to sector 1.
- In Label 2 below, there are no sectors matched to sector 2.



Labels AFTER Global Copy

- After sector 3 is copied to Label 2, sector 4 is created and matched to sector 2, which is the logically located sector as compared to the “From” and “To” sectors’ relationship in Label 1.



Match to File

This feature compares the data decoded within a sector to the data on a file created by the user. Note that the format of the file must be a comma-separated values (CSV) file.

Any number of sectors can be set to use “match to file”. If all “Match to file” sectors are marked as “Duplicates allowed”, the system will not be able to relocate within the data file if stopped during a run. This means the LVS-7510 External System is not able to automatically find its place within a run on a job if stopped and restarted. If this occurs, you must access your file and make the first number in the file be the first expected number in the camera’s field of view after pressing the run button. The associated hash files within the job heading must be deleted so they can be recompiled at run time.

IMPORTANT: The “Match to file” feature has associated processing overhead; thus, it is recommended to review all your options and use the “Match to file” feature as a last resort.

You must create the file to “Match To” on a **per job basis**. Tools are not provided in the LVS-7510 External System software to accomplish this.

The format of the file must be as follows:

- The format of the file must be a comma-separated values (CSV) file.
- The order in which the data is stored is matched to the sector number in lowest to highest order that has been selected to “Match to file”.
- Headers are not allowed.

Example 1:

In the sample below, the LVS-7510 External System would expect to have two sectors per repeat that are “Matching to File”. The file would show that it expects only 11 repeats of the label. Neither sector is expected to have duplicates. Due to the processing overhead of “Matching to File”, the second sector could be set to perform a sequential check instead of “Matching to File”.

01111110, 11111110
01111117, 11111111
01111120, 11111112
01111142, 11111113
01111137, 11111114
01111101, 11111115
01111129, 11111116
01111138, 11111117
01111199, 11111118
01111172, 11111119
01111122, 11111120

Example 2:

In this sample, the LVS-7510 External System would expect to have two sectors per label repeat that are “Matching to File”. As with the above sector, only 11 repeats of the label are expected; however, this sector has duplicates. The LVS-7510 External System has processing penalties for “Matching to File”. Thus, with this example, it would be more cost effective to match only the first sector to a file, as the second sector can be set to a fixed match string without the extra processing required.

01111110, 11111110
01111117, 11111110

01111120, 11111110
01111142, 11111110
01111137, 11111110
01111101, 11111110
01111129, 11111110
01111138, 11111110
01111199, 11111110
01111172, 11111110
01111122, 11111110

Step 6: Alarm Matrix

The “Step 6: Alarm Matrix” screen has two different modes:

- The **“Alarm Matrix: Error Condition View”** (Figure 1) is the default configuration and displays error-specific I/O information. If using this configuration, see the “Alarm Matrix: Error Condition View” section below.

  This view is configured in the “Settings” menu > [Alarm matrix] section > UsePassFailMethod=0 (default setting) (Figure 3).
- The **“Alarm Matrix: Pass/Fail View”** (Figure 2) is I/O based on the pass or fail status of the entire inspection. If using this configuration, see the “Error Condition: Pass/Fail View” section below.

  This view is configured in the “Settings” menu > [Alarm matrix] section > UsePassFailMethod=1 (Figure 3).

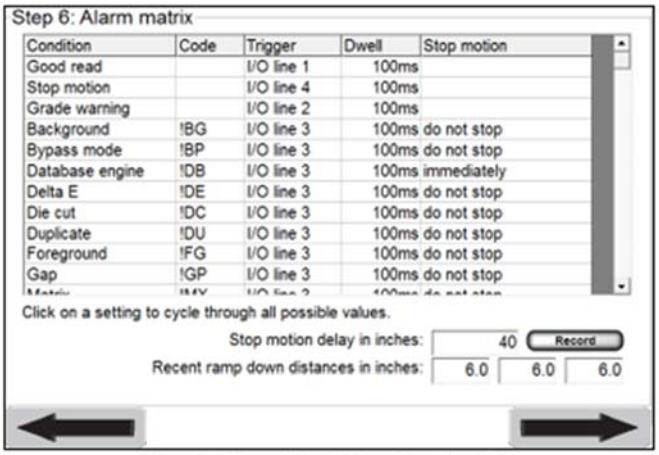


Figure 1: Alarm Matrix: Error Condition View

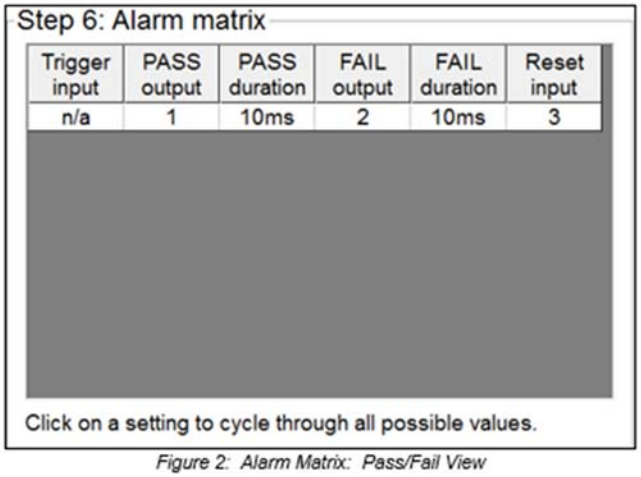


Figure 2: Alarm Matrix: Pass/Fail View

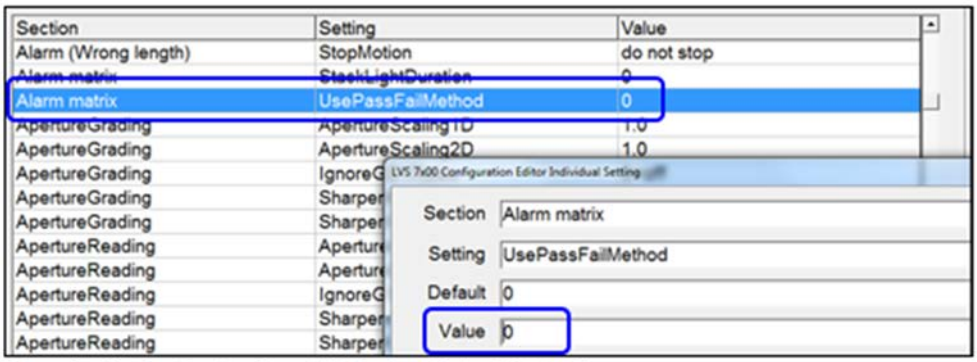
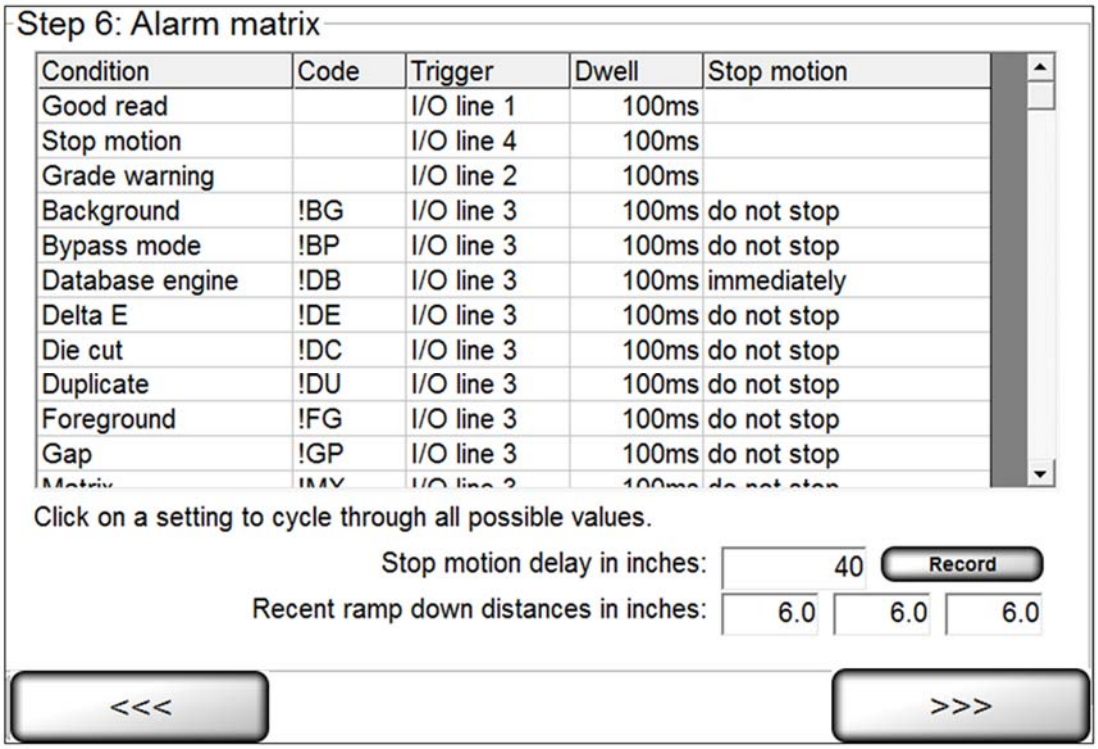


Figure 3: Configuring the Alarm Matrix views in the “Settings” menu

Alarm Matrix: Error Condition View

After all sectors have been established, you are prompted to determine an error condition. See the section below entitled “Error Conditions” for more information.



Depending on the supplied hardware, the following relay outputs can be triggered by any of the listed error conditions:

Line 1	Connected to the green light indicating a “good read.” It is not connected to a relay
Line 2	Connected to the yellow light. It is not connected to a relay
Line 3	Connected to the red light and a relay
Line 4	Connected to the Stop Motion relay

The 5 columns on this screen are listed below:

Column	Description
Condition	Lists the various error conditions that the system can detect.
Code	Lists the abbreviation of the error conditions detected by the system and used throughout the final reports. See the Troubleshooting section for more information on error codes.
Trigger	Lists any of the 4 Input/Output lines. Any listed error condition can be trained to activate any I/O line by clicking on the appropriate row box; this will change the path to another line. You can also choose “None”.
Dwell	Lists the duration of the output signal. You can choose from “10 ms” to “hold”.
Stop Motion	States when to activate the “Stop Motion” error condition. You can choose to stop immediately or to not stop at all. Or, you can choose to stop after a certain number of errors occur contiguously (from 1 to 10 errors in a row).

Column	Description
Stop Motion Delay in Inches	This is a set distance that the LVS-7510 will output the stop motion signal. It has a minimum of 4" beyond where the readhead is looking. This is used for precision placement of found errors and may increase if a high processing workload is present.

Error Code Definitions

Note: With the exception of "Good Read" and "Grade Warning," all error conditions listed below can be made to trigger the Stop Motion Relay immediately, or after a predetermined number of consecutive errors.

Error Code		Definition
N/A	Good Read	When the system is triggered, the camera takes a picture of the label. The system reads all sectors within the image and compares to the associated sector data in the data file. Any sectors that match are a Good Read. The system logs to the report the data read from each sector with no error codes attached.
N/A	Stop Motion	This output is used as a special output that is sent at a fixed distance beyond the located error. It is used for machines that have accurate error placement capabilities.
N/A	Grade Warning	This output is used most commonly for the yellow light. It is triggered in conjunction with !QU (quality errors). When something fall into the quality warning zone this output is activated.
!BG	Background	This is a blemish error. The background is defined in the blemish sector setup. This means it is in the background portion of the sector.
!DC	Die Cut	Die Cut checks the print as compared to the outside edge of the label to track how much it moves.
!DU	Duplicate	!DU appears when the character string has been read before in the job that you are running. The Check for Duplicates option in the Matching screen will enable this error.
!FG	Foreground	This is a blemish error. The foreground (!FG) is defined in the blemish sector setup. This means it is in the foreground portion of the sector.
!GP	Gap	When the system is triggered, the camera takes a picture of the label. The system does not read any of the sectors within that image. The system does not continue to increment the next expected record within the data file. The system logs to the report the !GP error code to the associated data.
!MX	Matrix	Matrix searches the areas between labels for unstripped waste.
MM!	Mismatch	When the system is triggered, the camera takes a picture of the label. The system reads all sectors within the image and compares to the associated Job/Sector data in the data file. One or more sectors do not match to what the Job/Sector settings dictate that it should be. The system logs to the report the data read from each sector attaching the MM! error code to the associated sector's data. Mismatch only applies when comparing the data to a match source. If running a Sequential type match, then a Mismatch error will be reported as a Sequence error.
!NA	Not Assessed	The incoming data is not being assessed due to a separate error.

Error Code		Definition
!NS	Not Synced	The system has lost synchronization, and is therefore not processing any data outside of looking for a re-sync lock. It will auto log this run portion as “requested to splice”
!NR	No Read	When the system is triggered, the camera takes a picture of the label. The system does not read/decode one or more sectors within the image. The system compares to the associated Job/Sector data in the data file. The system logs to the report the data read from each sector attaching the !NR error code to the associated sectors' data.
!QU	Quality	When the system is triggered, the camera takes a picture of the label. The system reads all sectors within the image. The system compares to the associated Job/Sector settings in the data file. If one or more characters/barcodes within a sector are found to be outside the pre-determined acceptable quality threshold, then the repeat is marked as an error and displayed in red in the log file. The actual score is appended to the end of the read data.
!RG	Range	The associated data file is loaded the system then reads the first and last record in the sequential data file. The system stores these values. When the system is triggered the camera takes a picture of the label. The system reads all sectors within the image. The system compares to the associated record in the data file. Not only did the record not match the data file, but it was also out of the range of numbers that the data file contains. The system logs to the report the data read from each sector attaching the !RG error code to the associated sector's data.
!CD	Check Digit	On 1D barcode sectors only, a MOD ***10*** check digit algorithm can be activated. The MOD 10 algorithm uses a simple checksum formula to validate numbers encoded in a variety of 1D barcode symbologies. MOD 10 is intended to protect against mistyping errors and scanning errors.
!SQ	Sequence	When the system is triggered, the camera takes a picture of the label. The system reads all sectors within the image. The system compares to the associated Job/Sector in the data file. One or more sectors are found to be out of numerical sequence as compared to the associated record in the data file. The system logs to the report the data read from each sector attaching the !SQ error code to the associated sector's data. Sequence only applies when comparing the data to a known sequence of numbers. If running a Mismatch type match, then an error in Sequence will be reported as a Mismatch error.
!WL	Wrong Length	When the system is triggered, the camera takes a picture of the label. The system reads all sectors within the image. The system compares to the associated Job/Sector data in the data file. One or more sectors do not match to the specified length of the character string that the Job/Sector settings dictate that it should be. The system logs to the report the data read from each sector attaching the !WL error code to the associated sector's data.

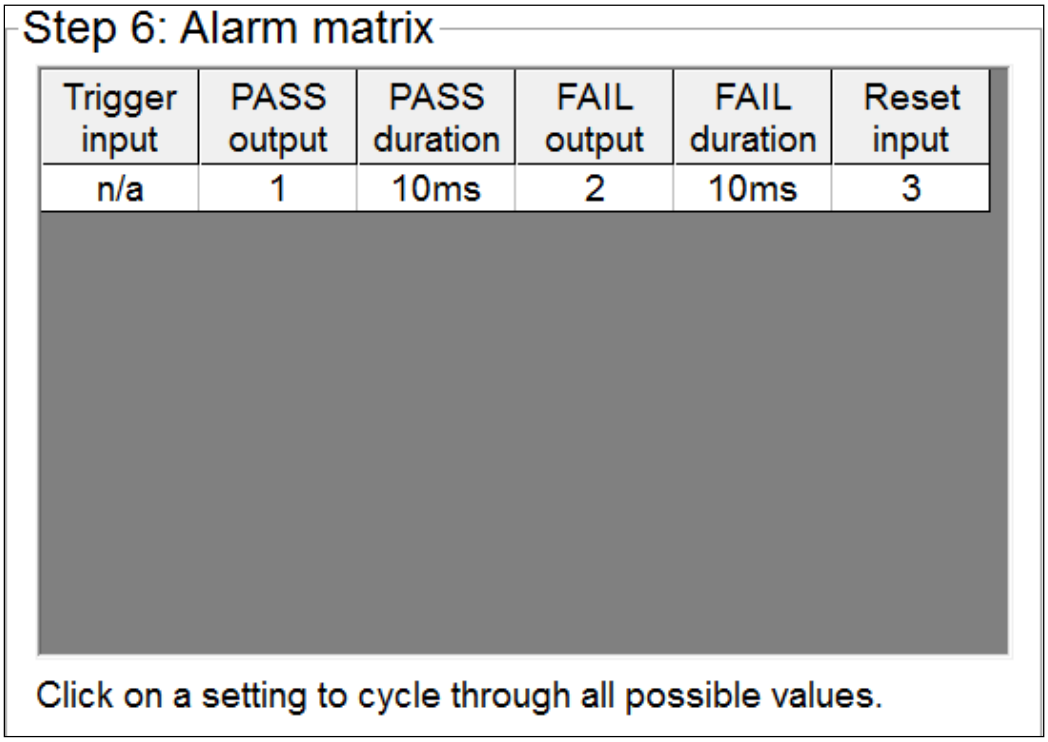
Common Causes for Error Conditions

Error Condition	Possible Cause
Mismatch	The data read did not match to what was expected to be read. This can be caused by poor quality of print causing the system to identify one or more characters as good quality, yet still incorrect. It could also be caused by a character being gone. Either not printed, or somehow has gone outside the sector borders within the image.
No Read	The data within a sector was not read at all. This can be caused by missing print, poor contrast of print, or the expected data was outside of the sector borders within the image.
Quality	The character(s) within a string do not qualify to the standard entered into the OCV Threshold, or the barcode grade is not above the minimal passing score allowed. This can be caused by missing character portions, bad line definition of characters, or stretched/skewed characters, or any of the ISO/ANSI barcode grading parameters being below the acceptable level entered in the “PASS if ACTUAL >=” sector setting parameters.
Sequence	The data does not match to the previous number +/- one. This is most often caused be a miscommunication that causes one or more numbers within a sequence to be skipped or repeated, an unconnected RS-232 cable, or user error on starting number.
Range	The read number is larger or smaller than the file covers. This is usually caused by the incorrect data file being loaded to compare to.
GAP	No data was discernible in any sector. Most common causes are blank media coming through the line, or an erroneous triggering mechanism.
Wrong Length	For barcode reading the code has too many/few characters encoded. This could be from the incorrect code being printed, or the trained in length for the job was incorrectly set. For OCR/OCV characters the same conditions apply, with the addition of the possibility of characters being broken or touching. If a broken character is seen then one character will become two. If two characters are touching they will become one combined character. Also be sure that no characters are touching the sector box. The system will ignore any characters that touch the sector box.
Not Assessed	Rewinder/Printer is going faster than what the Camera and PC can handle. LinesperInch or Camera MaxSpeed may be incorrectly set in the “Settings” menu (these settings must be changed by an Microscan representative only).
Duplicate	Character string has previously been seen in this job.

Alarm Matrix: Pass/Fail View

The Alarm Matrix Pass/Fail view displays the pass/fail status of the entire inspection. Click on a setting to cycle through all possible values. Each setting is described in the table below.

The Alarm Matrix Pass/Fail view is configured in the “Settings” menu > [Alarm matrix] section > UsePassFailMethod=1.



Setting	Description
Trigger input	This feature is currently unavailable.
PASS output	If the inspection passes, it will output on the specified I/O line for the specified duration.
PASS duration	The dwell time of the PASS output.
FAIL output	If any sector in the inspection fails for any reason, it will output a FAIL output on the specified channel for the specified duration.
FAIL duration	The dwell time of the FAIL output.
Reset input	If a pulse is detected on this channel, all outputs are deactivated.

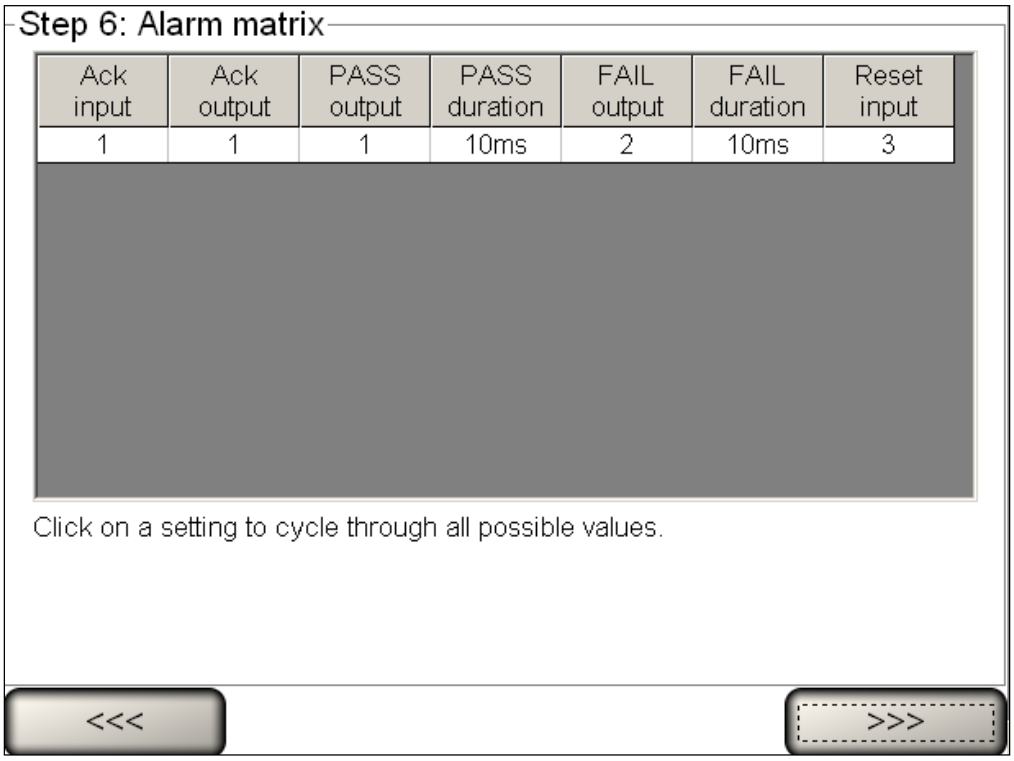
Below is a graphical representation of the Alarm Matrix Pass/Fail view settings:

	Repeat 1	**Repeat 2**	**Repeat 3**	**Repeat 4**	**Repeat 5**	**Repeat 6**	**Repeat 7**
Overall Inspection Results for Repeat Number	PASS	FAIL	PASS	PASS	PASS	FAIL	PASS
PASS Output	On	Off	On	On	On	Off	On
FAIL Output	Off	On	Off	Off	Off	On	Off

Within the Alarm Matrix Pass/Fail view, additional functionality is available when the following settings are enabled in the “Settings” menu:

- UseAcknowledgementIO=1
- UsePassFailMethod=1

When the above settings are enabled, the Alarm Matrix appears as shown below.



Each column is described in the table on the next page.

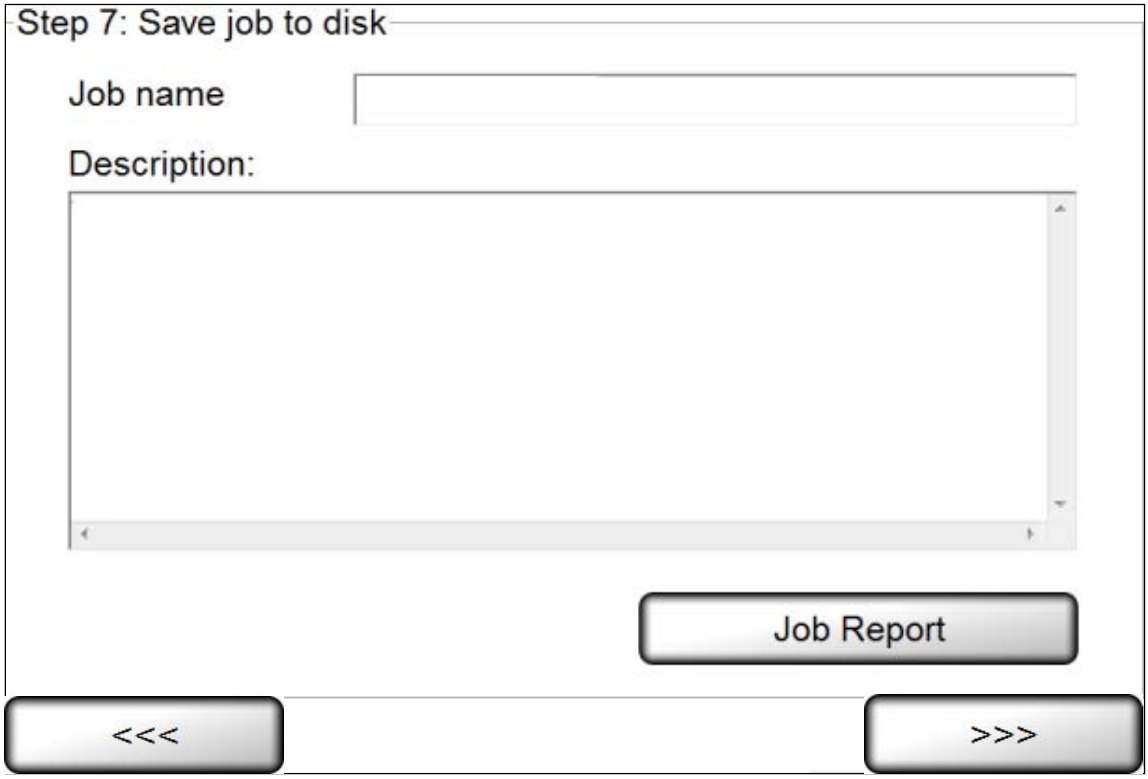
Setting	Description
Ack Input	This input is a request for the LVS-7510 to indicate the Ack Output channel and current run status.
Ack Output	This output is activated as long as the following conditions are met: • The Ack Input is active • The printer is printing • The LVS-7510 is actively inspecting (that is, the "Start New Run" button has been clicked on the "Operate: Running the Job" screen)
PASS Output	If the inspection passes, it will output on the specified I/O line for the specified duration.
PASS Duration	The dwell time of the PASS output.
FAIL Output	If any sector in the inspection fails for any reason, it will trigger a FAIL output on the specified channel for the specified duration. The PASS Output will be deactivated automatically once a fail is triggered. Additionally, once a fail has been triggered, every subsequent inspection will trigger a FAIL Output until reset is triggered. Even if the subsequent inspection passes, only the FAIL Output will be triggered until a Reset Input signal is detected.
FAIL Duration	The dwell time of the FAIL output.
Reset Input	If a pulse is detected on this channel, all outputs are deactivated and the Pass Output is enabled again.

Below is a graphical representation of the Alarm Matrix Pass/Fail view settings when "UsePassFailMethod=1" and "UseAcknowledgementIO=1" are set in the "Settings" menu.

	Repeat 1	**Repeat 2**	**Repeat 3**	**Repeat 4**	**Repeat 5**	**Repeat 6**	**Repeat 7**
Overall Inspection Results for Repeat Number	PASS	FAIL	PASS	PASS	PASS	FAIL	PASS
PASS Output	On	Off	Off	On	On	Off	Off
FAIL Output	Off	On	On	Off	Off	On	On
Reset Input	Off	Off	Off	On	Off	Off	Off

Step 7: Save Job to Disk

1. Enter a job name in the **Job Name** field; this saves the current setup.

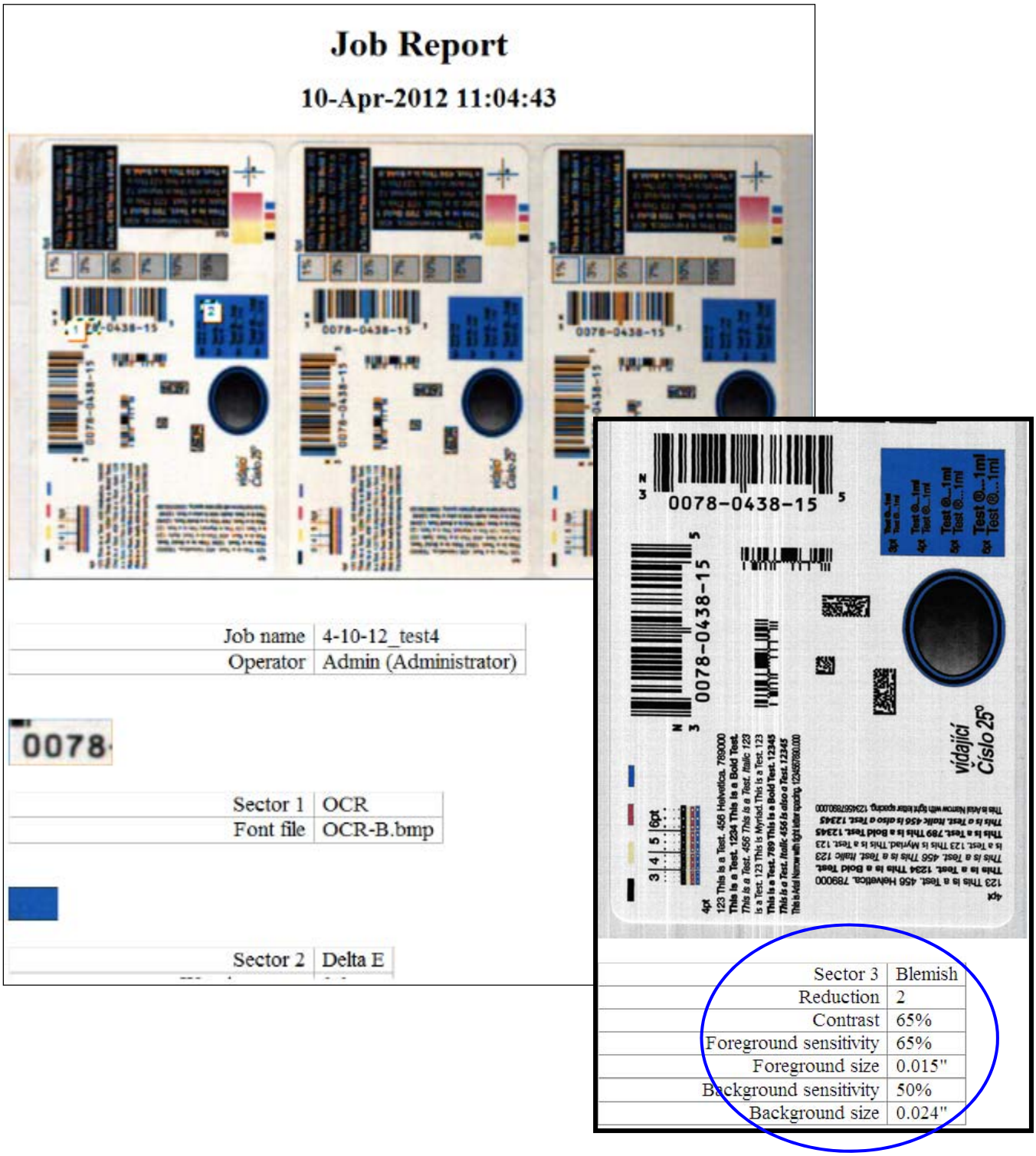


2. If desired, enter a description or additional job details in the **Description** field.
3. If desired, click the **Job Report** button to generate an LVS-7510 Job Report which shows the settings for all created sectors. See the next section entitled “LVS-7510 Job Report” for more information on the Job Report.
4. Click **Next**. The **Ready to Run** screen appears. See the section **Operate Screen: Ready to Run** for more information on this step.

LVS-7510 Job Report

The LVS-7510 Job Report shows the settings for all created sectors.

The LVS-7510 Job Report appears only in Internet Explorer or Firefox web browsers; no other web browser is supported.



Job Report

10-Apr-2012 11:04:43

Job name	4-10-12_test4
Operator	Admin (Administrator)

0078

Sector 1	OCR
Font file	OCR-B.bmp

Sector 2	Delta E

Sector 3	Blemish
Reduction	2
Contrast	65%
Foreground sensitivity	65%
Foreground size	0.015"
Background sensitivity	50%
Background size	0.024"

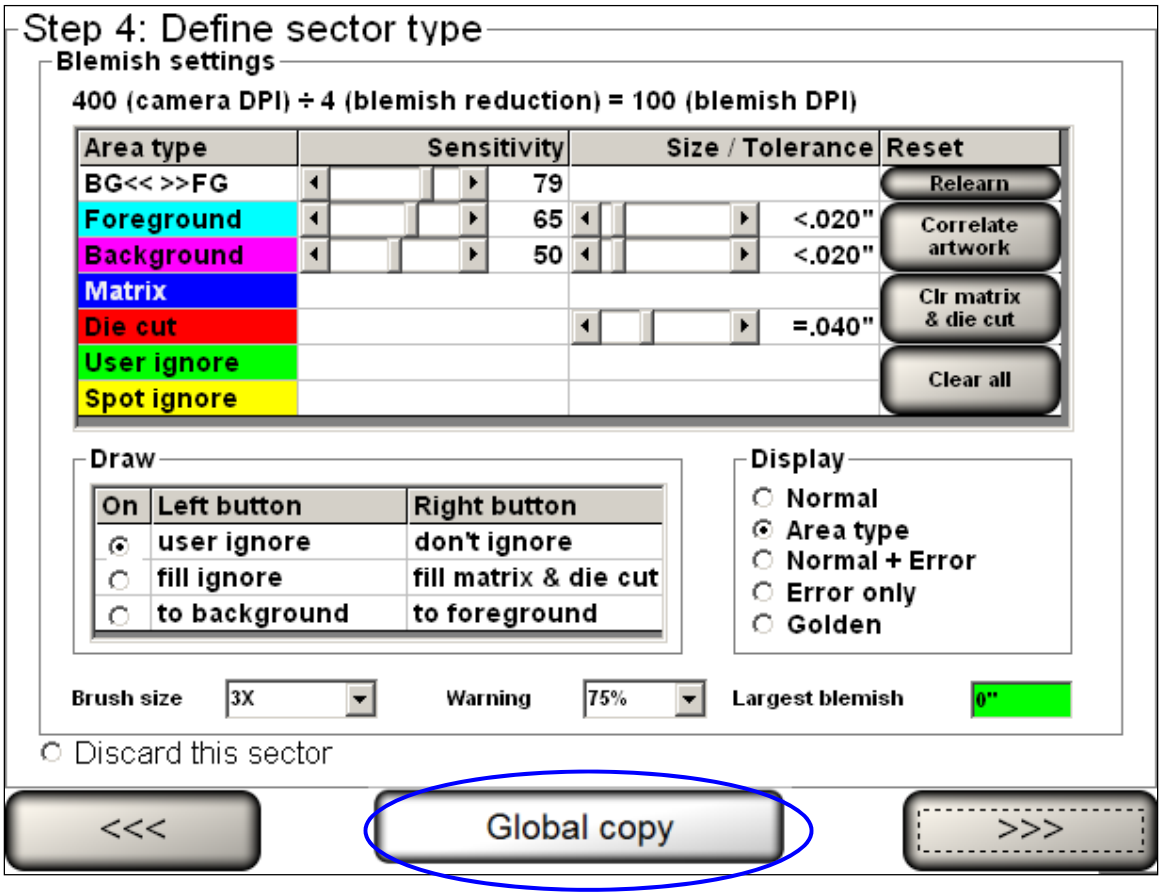
Global Copy

The Global Copy feature allows you to replicate the setting changes in the same sector across all labels. Global copy works with Automatic or Manual setup.

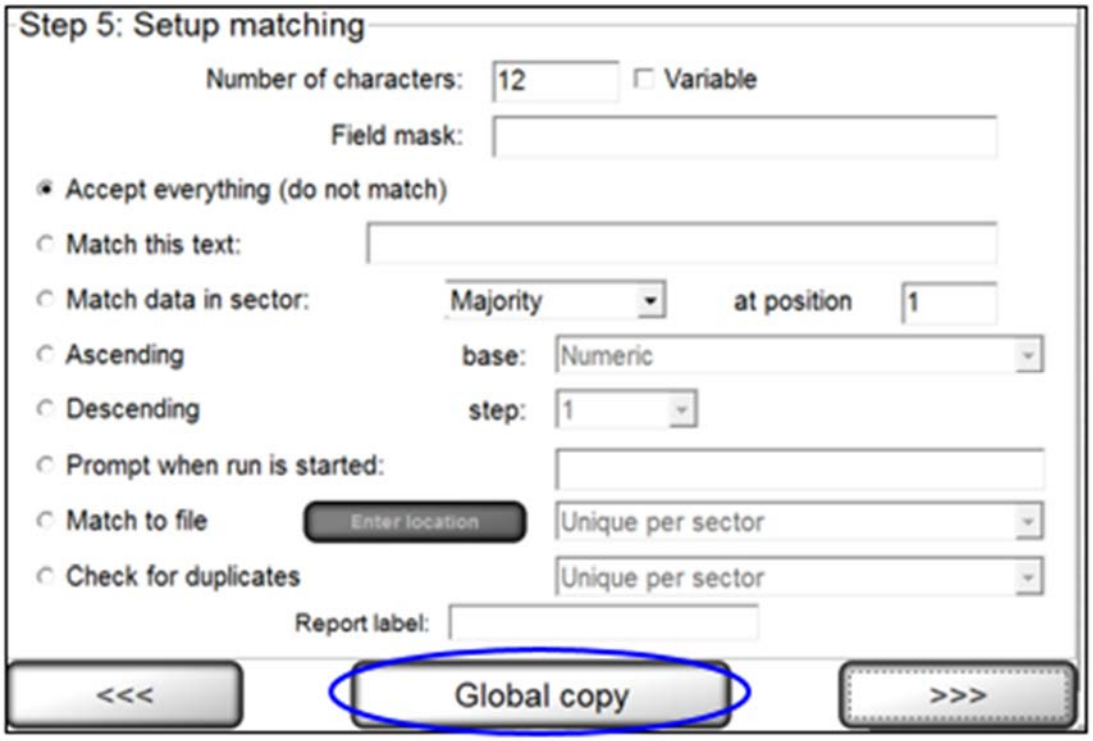
Location of Global Copy button

The “Global Copy” button is visible on the following screens:

- When using the **Blemish** sector type, the **Global copy** button is visible on the “Step 4: Define Sector Type” screen (see below).



- For all sector types other than **Blemish**, the **Global copy** button is visible on the "Step 5: Setup Matching" screen (see below).



Global Copy Requirements

The Global copy button appears only if:

- There is more than one label per repeat.
- There are at least two sectors.
- There is at least one pair of comparable sectors (same sectors in different lanes)
- The user is on the final step of setting up the sector type.

To define comparable sectors (the same sectors in different lanes), the sectors must:

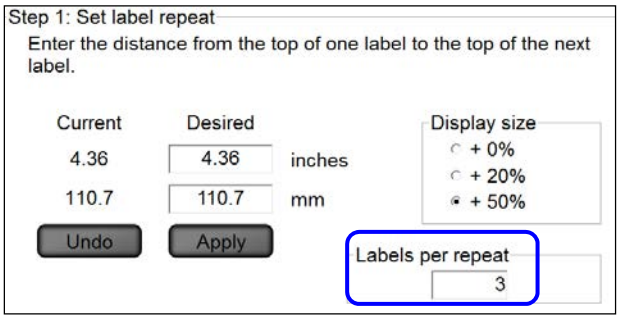
- Have the same sector type (such as Barcode Read, etc)
- Have the same width (within 20 pixels)
- Have the same height (within 20 pixels)
- Have the same distance from the top of the label (within 20 pixels).

Note: A simple solution to meet the above requirements is to copy and paste the first sector to the second sector. See the "Copy an Entire Sector" section (within the "Step 3: Create Sectors" section) for steps on copying sectors.

Use Global Copy to Add Sectors to All Labels Across the Screen

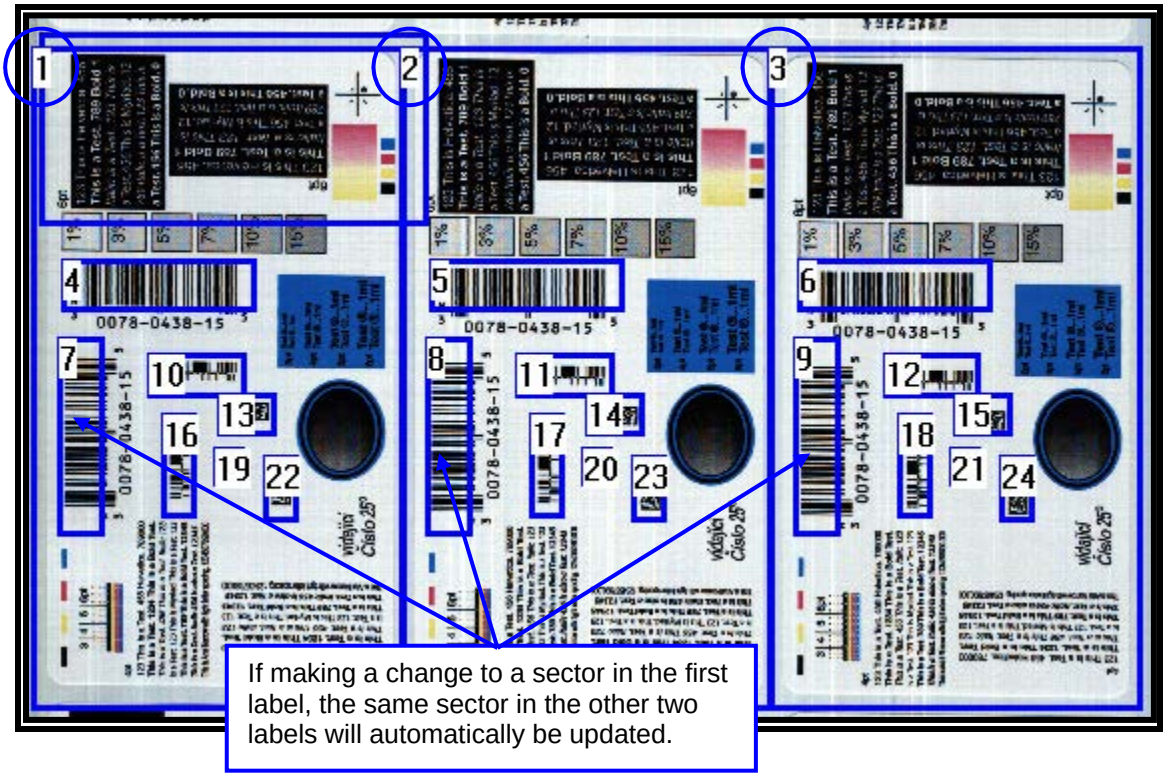
1. Create a sector in the left-most lane.
2. Click the **Global Copy** button.
3. A new sector is created with matching parameters of the first sector.

The LVS-7510 External System only creates the number of labels defined in the “Labels per repeat” field on the “Step 1: Set label repeat” screen (see below).



Use Global Copy to Edit Sectors

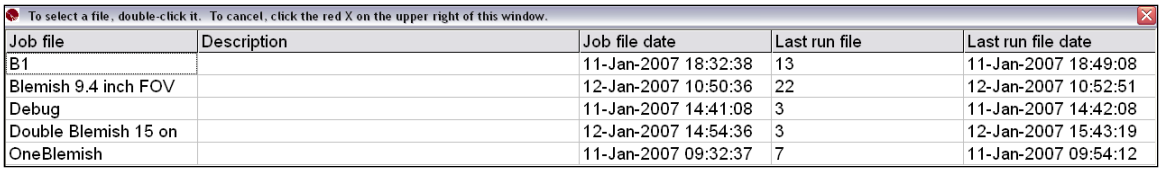
The example below displays three blemish sectors (1, 2 and 3). The Global copy feature allows you to make the same change to all three sectors without making the changes to each sector individually,



Load an Existing Job

1. To load an existing job, click **Load an Existing Job** on the Welcome screen.

2. A list of existing jobs appears. Each column is described in the table below.



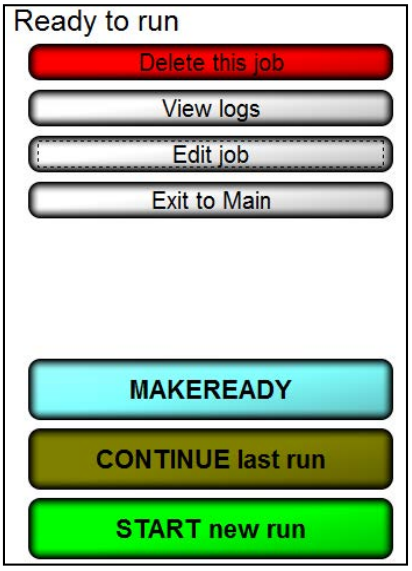
Job file	Description	Job file date	Last run file	Last run file date
B1		11-Jan-2007 18:32:38	13	11-Jan-2007 18:49:08
Blemish 9.4 inch FOV		12-Jan-2007 10:50:36	22	12-Jan-2007 10:52:51
Debug		11-Jan-2007 14:41:08	3	11-Jan-2007 14:42:08
Double Blemish 15 on		12-Jan-2007 14:54:36	3	12-Jan-2007 15:43:19
OneBlemish		11-Jan-2007 09:32:37	7	11-Jan-2007 09:54:12

Column	Description
Job file	List of the job file names.
Description	Description of each job file.
Job file date	The date the job file was created.
Last run file	Highest run number in the existing job.
Last run file date	Last run file date for the job.

3. Choose the job you want by double-clicking the job name.
4. You can sort by any column by clicking on the column header.
5. The **Ready to Run** screen appears with the same job parameters that were originally set for that job.
6. See the next section entitled **Operate Screen: Ready to Run** for further steps.

Operate Screen: Ready to Run

Each button on the **Operate Screen** (**Ready to Run)** is described in the table below.



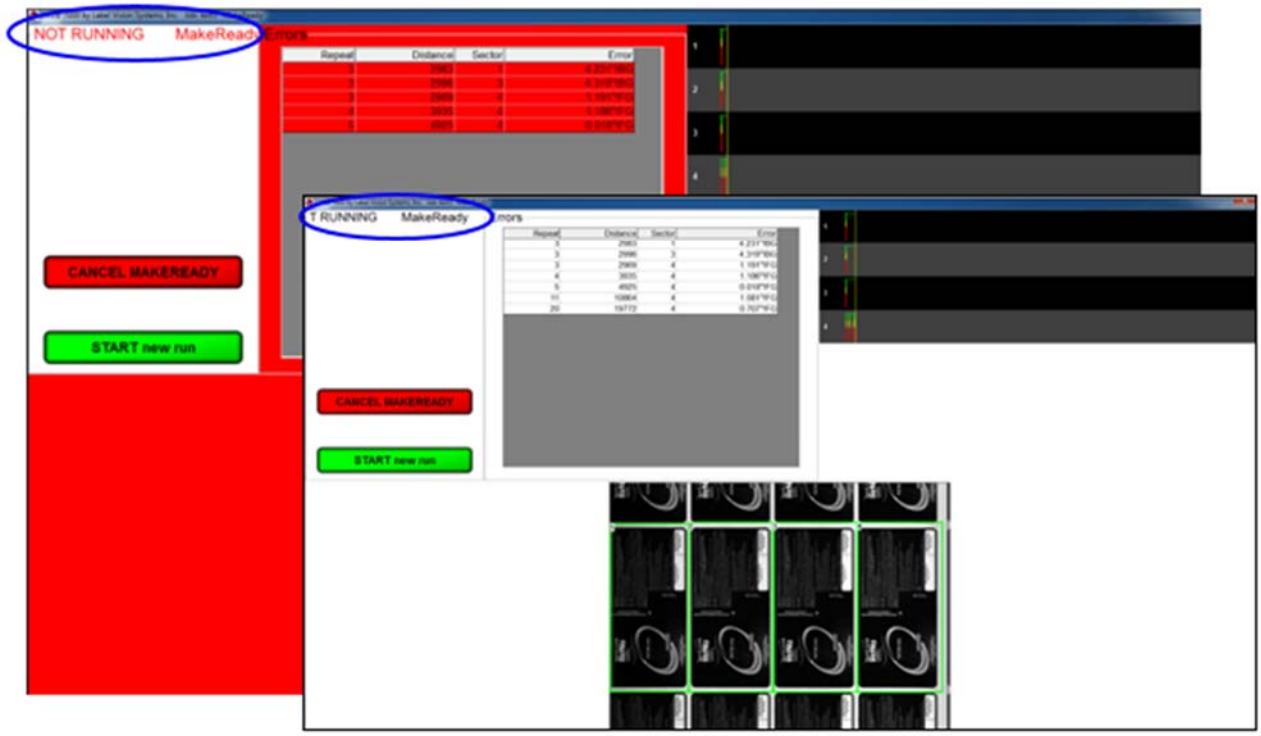
Button	Description
Delete This Job	Click to delete the job. Only operators who are granted the **Allow Create NEW Job** permission is allowed to delete a job. Refer to the **Permissions** section, within the **Operators** section, for more information on permissions.
View Logs	A Report Log is created for every job. Click this button to view all previous Reports. (See the Reports chapter for more information on reports.)
Edit Job	Click to change the current job settings. If a password was used, you must enter the correct password for the job. Only operators who are granted the **Allow Create NEW Job** permission is allowed to edit a job. Refer to the **Permissions** section, within the **Operators** section, for more information on permissions.
Exit to Main	Click to change to a previously set up job; this will bring you back to the Welcome Screen where you may select **Load a Job**.
Make Ready	Make Ready operates exactly as if the system were running normally with the exception that no data is stored and no I/O is triggered. See the section below titled “Make Ready Mode” for more information.
Continue Last Run	Select this option if you desire to append to the most recent run’s CSV file.
Start New Run	Click to begin a new run and new CSV file.

Make Ready Mode

Clicking the “MakeReady” button allows an operator to:

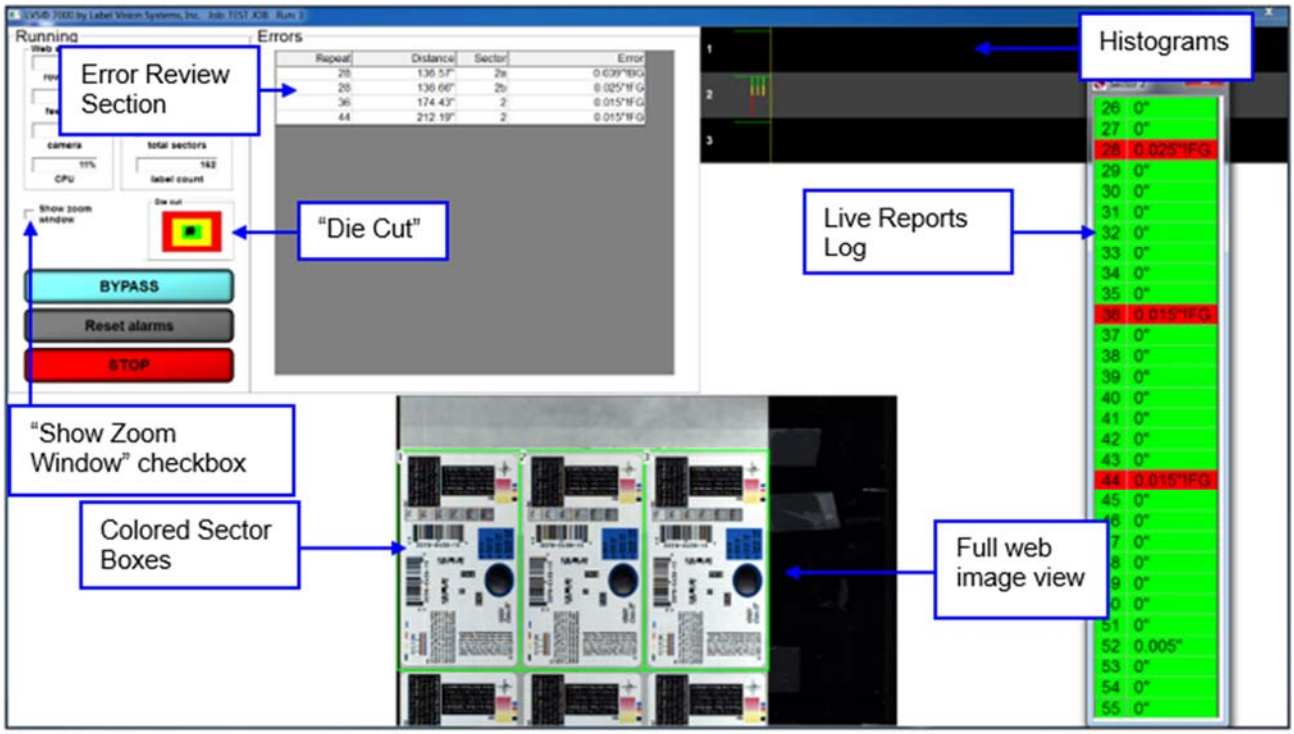
- Simulate how inspections will perform
- Simulate how the job created will work in live setting
- Test any changes made
- Test the system without triggering any output signals that might affect the rewinder/thermal printer

After clicking the “MakeReady” button, the screen flashes between red and white (see below) and the words “NOT RUNNING / Make Ready” scroll across the top, left corner of the screen indicating the system is in MakeReady mode.



Operate Screen: Running the Job

The **Operate Screen (Running the Job)** is typically what you monitor at all times. The features on this screen are described in the table below:

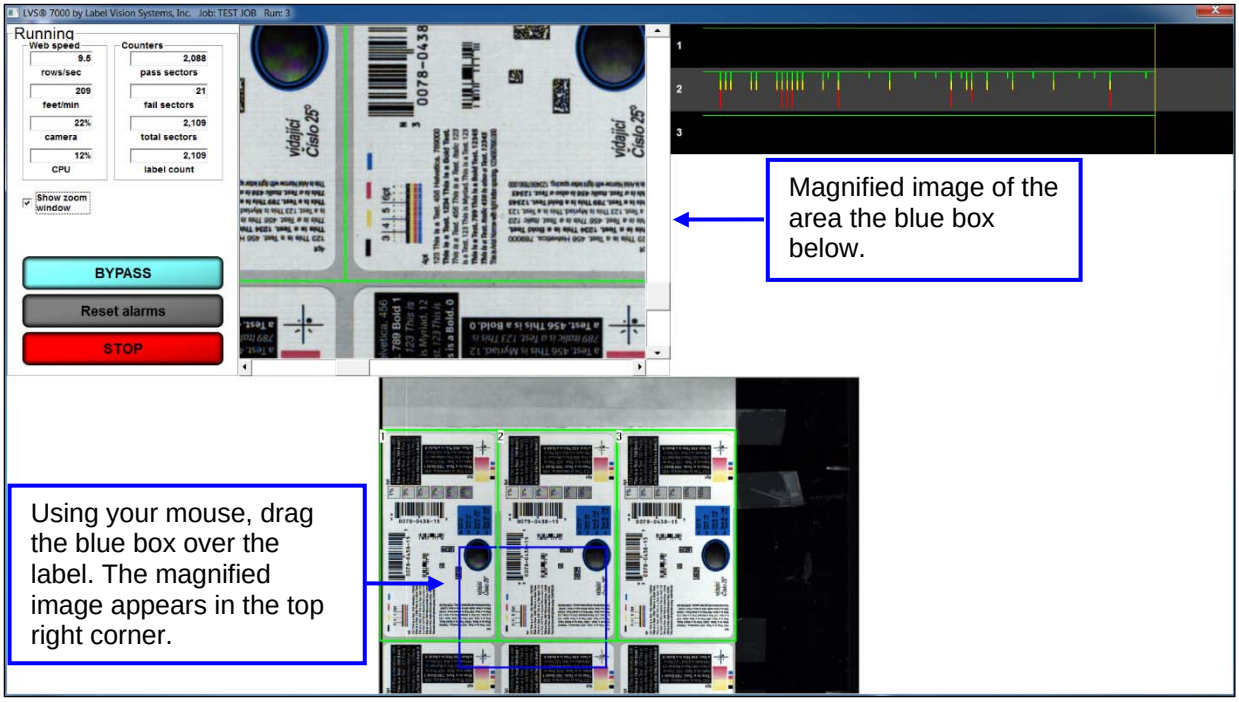


Field	Description
Web Speed	This gives the operator how many rows per second are being analyzed, as well as how many inches per second the printer is traveling. This calculation is based upon the Label Repeat data entered in Step 1.
Counters	There are two conditions being counted: All "passed" sectors and all "failed" sectors. These two conditions are totaled at the bottom of this column.
Camera	Shows a percentage of the Camera Speed. A warning message will pop-up if the speed is too high.
CPU	Shows the CPU Usage. A warning message appears if the CPU usage is too high.
Die Cut	The Die Cut is tracked for movement from the original position; this is in the green center. Movement is visually depicted by the moving black dot away from dead center. Movement in the yellow is ok as it is inside the set allowable movement. Movement out to the red zone will cause a !DC (Die Cut) error.
Reset Alarms	On the Alarm matrix, there is a "hold" function if/when an error occurs; this is indicated by the term "Hold" appearing in the "Dwell" column on the Alarm matrix. The **Reset Alarms** button releases the error condition and is visible only when the "Hold" function is activated in the Alarm matrix.
Stop	Press the **Stop** button to stop the inspection.
Error Display	This is a very helpful feature for the operator to analyze only the errors as they happen. Or, the operator may choose to study one error condition at a time. This feature is activated by clicking on the error. This causes the software to show an image of the next error as superimposed thumbnail images. The process of

Field	Description
	showing this error image can be performed while the system is in the Operate condition. A series of error images are stored in the log file of each job. Thumbnails of the actual errors can be viewed "offline". See the **Error Display** section below for more information.
Full Web Image	The image at the bottom of the Operate Screen is the entire field of view and will update up to 10 images per second as the printer is running.
Live Reports Log	A log will appear overlaid onto the Operate Screen when the operator clicks inside a sector. This log represents what the software sees inside this sector. • A green box indicates a good read. • A red box indicates an error condition has occurred. This log can be moved to any position on the Operate Screen by left click and hold at the very top of the log screen. To get a *freeze frame* of this box click on any other non-sector part of the image. This will cause the box to stop updating. To resume the update, just click in the desired sector. Close by clicking the red X (Close) box in the top right corner.
Histograms	At the top of the Operate Screen is a section for displaying a histogram for every error condition the software is trained to analyze. It is color coded. • Green is "good' • Red is "bad" Each sector "Type" will have its own graph. All sectors of a given type will be displayed within the graph designated for that "Type".

Show Zoom Window

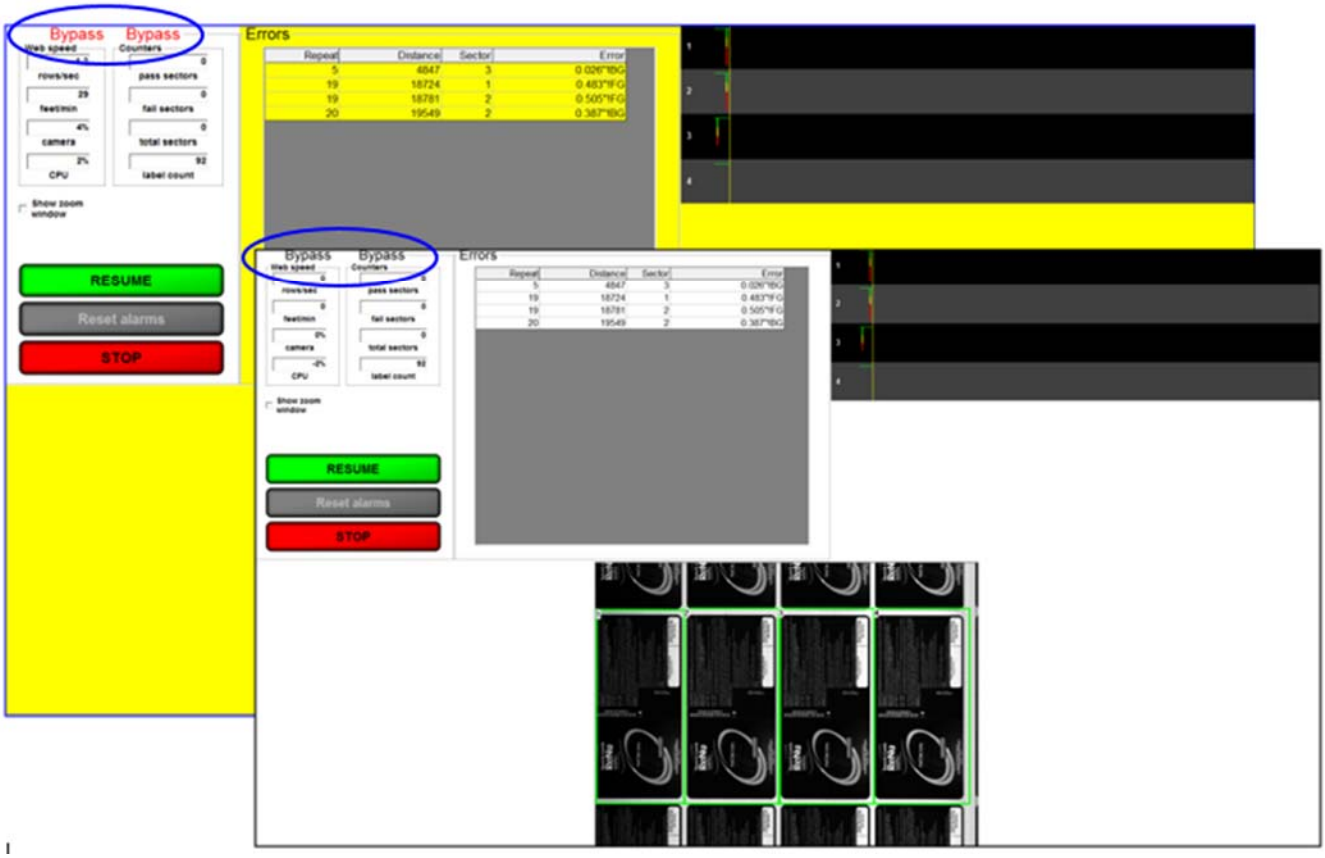
Check the “Show Zoom Window” box to view a magnified image of the label. After checking this box, a blue box appears in the full web image view. Use your mouse to move the blue box over any portion of the label, and then a magnified image appears in the top right corner of the screen.



Bypass Button

Click the “Bypass” button to suspend any outputs (such as the stop motion signal) from the LVS-7510.

The screen flashes between yellow and white when activated in the settings (ShowStatusAlert =1), and the word “Bypass” scrolls across the top, left corner of the screen indicating the system is in Bypass mode . All repeats during Bypass appear in pink in the Reports\QC File Viewer.



IMPORTANT: The **DontProcessDuringBypass** setting (within the [System] section) in the LVS7500.ini file allows you to configure the LVS-7510 to process or not process sectors during bypass.

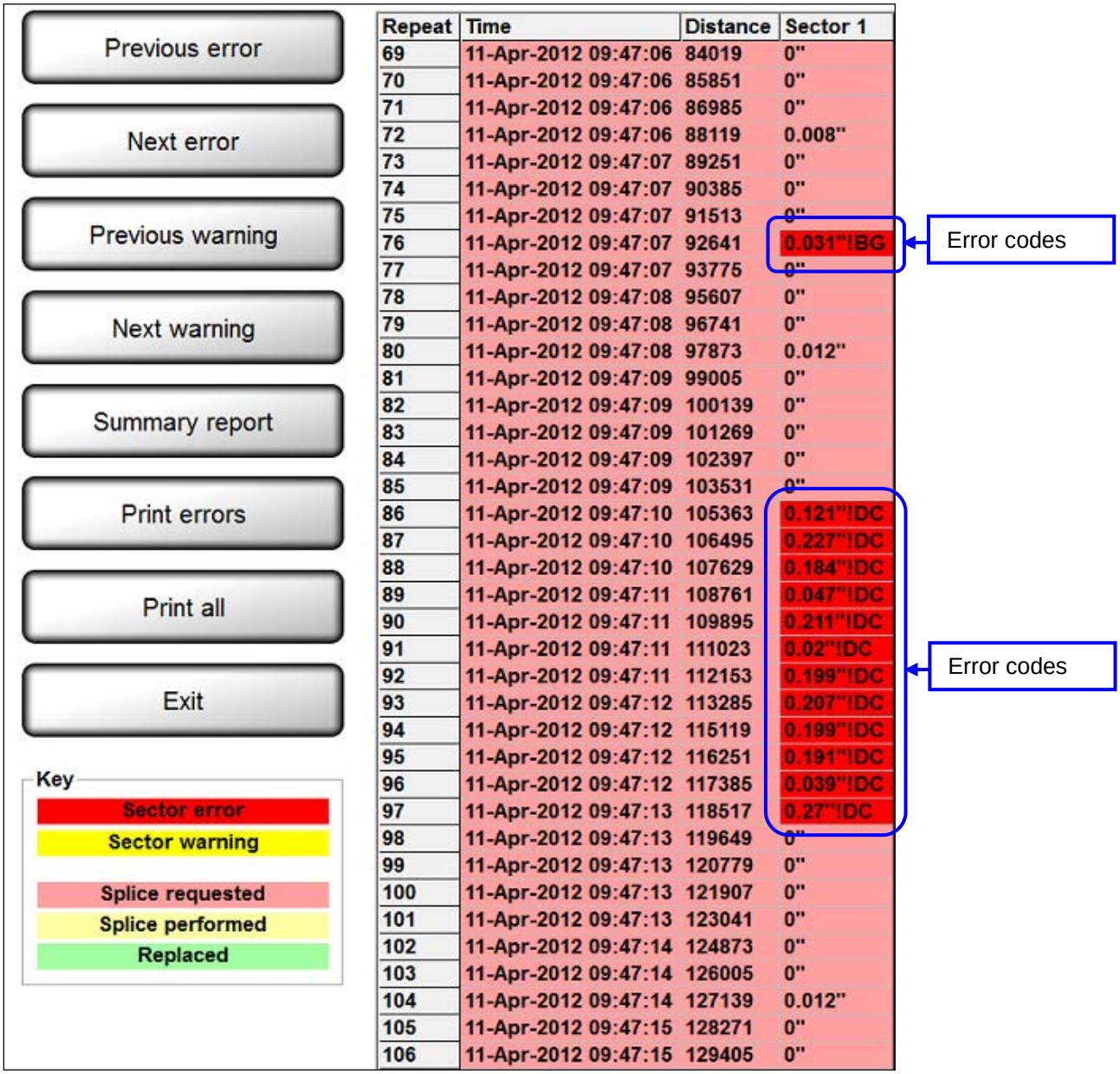
Example LVS7500.ini file

```
[System]

A5Follows=34
AddMissingTriggers=0
AutoBreakRoll=0
CameraToError=54
ConsecutiveReadLines=5
CpuUtilizationWarning=75
DontProcessDuringBypass=0
ePedigree=0
Gap=Off
```

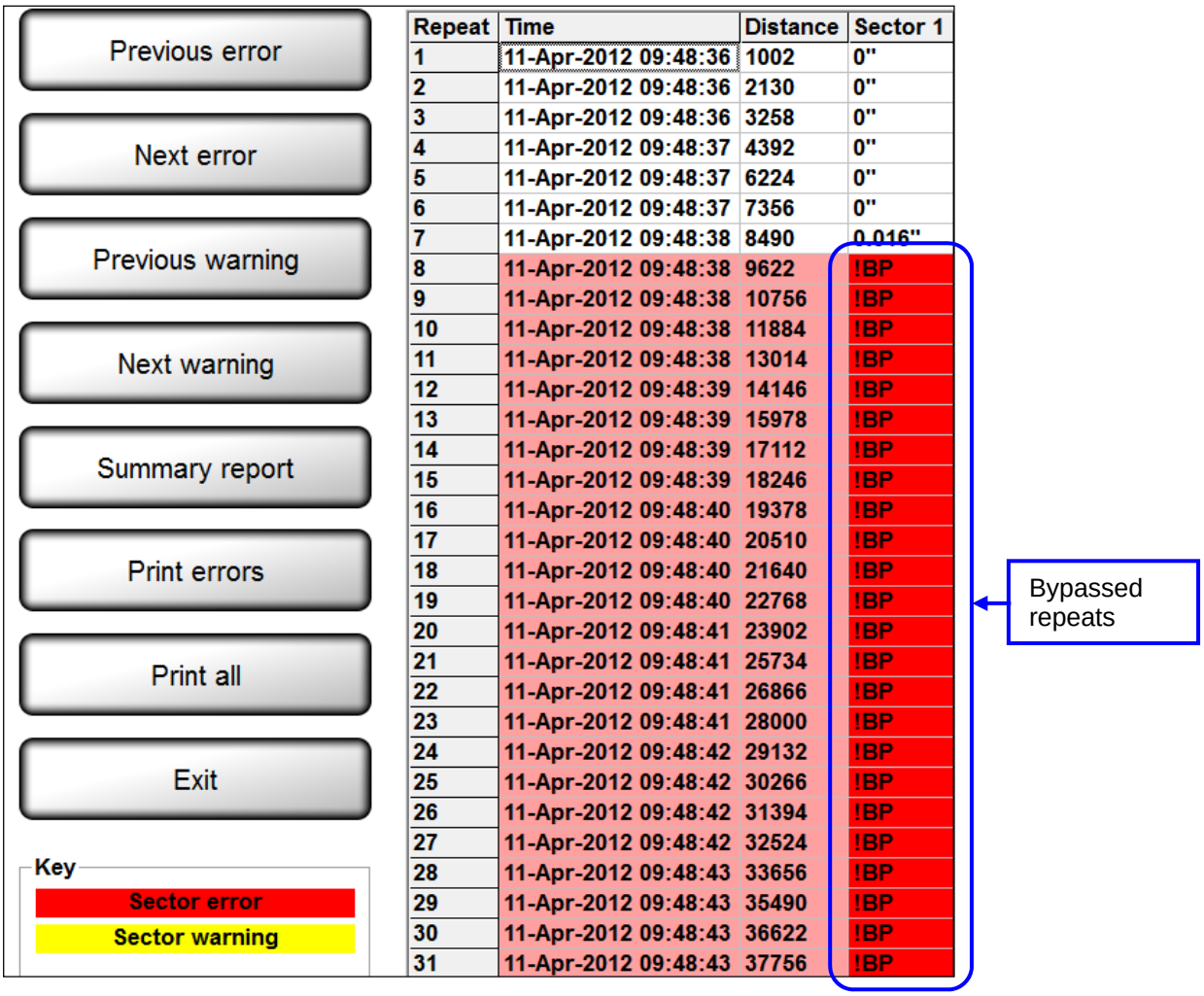
See examples on next two pages.

- **DontProcessDuringBypass=0** indicates the LVS-7510 **will** process sectors during bypass and will highlight all errors in the Reports\QC File Viewer.



Repeat	Time	Distance	Sector 1
69	11-Apr-2012 09:47:06	84019	0"
70	11-Apr-2012 09:47:06	85851	0"
71	11-Apr-2012 09:47:06	86985	0"
72	11-Apr-2012 09:47:06	88119	0.008"
73	11-Apr-2012 09:47:07	89251	0"
74	11-Apr-2012 09:47:07	90385	0"
75	11-Apr-2012 09:47:07	91513	0"
76	11-Apr-2012 09:47:07	92641	0.031"!BG
77	11-Apr-2012 09:47:07	93775	0"
78	11-Apr-2012 09:47:08	95607	0"
79	11-Apr-2012 09:47:08	96741	0"
80	11-Apr-2012 09:47:08	97873	0.012"
81	11-Apr-2012 09:47:09	99005	0"
82	11-Apr-2012 09:47:09	100139	0"
83	11-Apr-2012 09:47:09	101269	0"
84	11-Apr-2012 09:47:09	102397	0"
85	11-Apr-2012 09:47:09	103531	0"
86	11-Apr-2012 09:47:10	105363	0.121"!DC
87	11-Apr-2012 09:47:10	106495	0.227"!DC
88	11-Apr-2012 09:47:10	107629	0.184"!DC
89	11-Apr-2012 09:47:11	108761	0.047"!DC
90	11-Apr-2012 09:47:11	109895	0.211"!DC
91	11-Apr-2012 09:47:11	111023	0.02"!DC
92	11-Apr-2012 09:47:11	112153	0.199"!DC
93	11-Apr-2012 09:47:12	113285	0.207"!DC
94	11-Apr-2012 09:47:12	115119	0.199"!DC
95	11-Apr-2012 09:47:12	116251	0.191"!DC
96	11-Apr-2012 09:47:12	117385	0.039"!DC
97	11-Apr-2012 09:47:13	118517	0.27"!DC
98	11-Apr-2012 09:47:13	119649	0"
99	11-Apr-2012 09:47:13	120779	0"
100	11-Apr-2012 09:47:13	121907	0"
101	11-Apr-2012 09:47:13	123041	0"
102	11-Apr-2012 09:47:14	124873	0"
103	11-Apr-2012 09:47:14	126005	0"
104	11-Apr-2012 09:47:14	127139	0.012"
105	11-Apr-2012 09:47:15	128271	0"
106	11-Apr-2012 09:47:15	129405	0"

- **DontProcessDuringBypass=1** indicates the LVS-7510 **will not** process sectors during bypass and will not check for errors.
  All bypassed repeats in the Reports/QC File Viewer appear with an !BP error code.

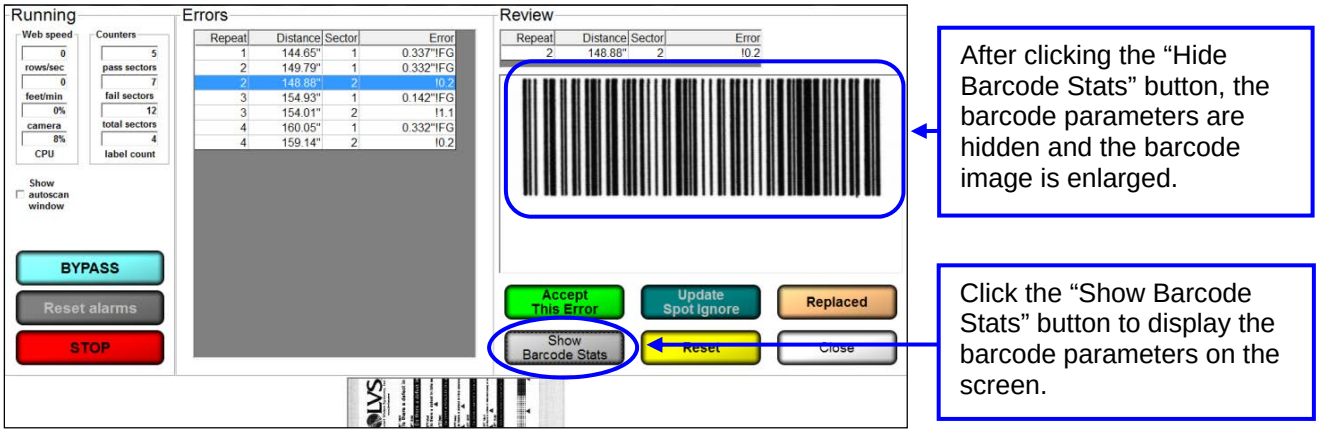


Error Display

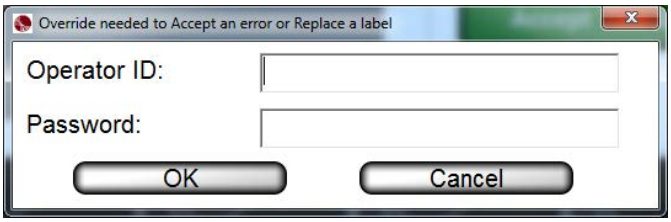
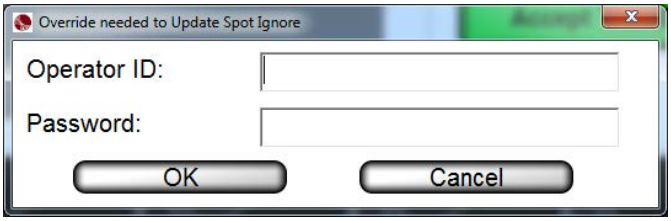
The Error Display log can be accessed on the Operate screen while you are running the job or after you stop the job. Click on an error to view the barcode image and barcode parameters.

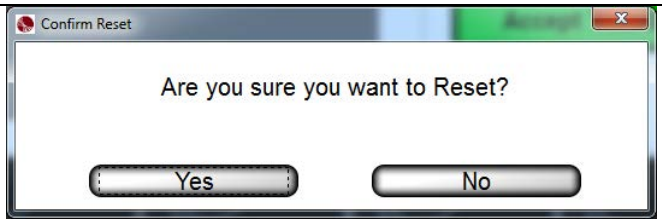
To hide the barcode parameters, click the “Hide Barcode Stats” button; this removes the barcode parameters from the screen and enlarges the barcode image.

Note: After clicking the “Hide Barcode Stats” button, the name changes to “Show Barcode Stats.” Click this button to display the barcode parameters on the screen.



Additional error display options include:

Button	Description
Accept This Error	Click this button to approve the error; the error is marked as OK in the error log file and removed from the errors list. The button is active when the job is in run mode. Only operators granted the **Allow Accept / Replace Errors** permission are allowed to accept the error. The following message appears for operators without permission to accept the error (see screenshot below). An authorized Operator ID and Password must be entered or the operator will not be allowed to approve the error. See the **Permissions** section, within the **Operators** section, for more information on permissions. 
Update Spot Ignore	Draws an ignore box around the error so that it will not appear again and every instance of the error will be removed from the errors list. The log file will also show an OK for every instance of this error. The ignore area is yellow if you edit the blemish sector. In the “Settings” menu, when **RelearnAuthorization=0**, any operator granted the “Allow Accept/Replace Errors” permission can use this feature. When **RelearnAuthorization=1**, the operator must have “Allow Administration” rights to use this feature. The following message appears for operators without permission to use the “Update Spot Ignore” feature (see screenshot below). An administrator’s Operator ID and Password must be entered or the operator will not be allowed to ignore the areas. See the **Permissions** section, within the **Operators** section, for more information on permissions. 
Reset	Places previously accepted and replaced errors back into the errors list and restores their original error codes in the log file. This feature also removes all spot ignore updates. The button is active when the job is in run mode. After clicking the “Reset” button, the following message appears. Click **Yes** to reset or **No** to cancel.

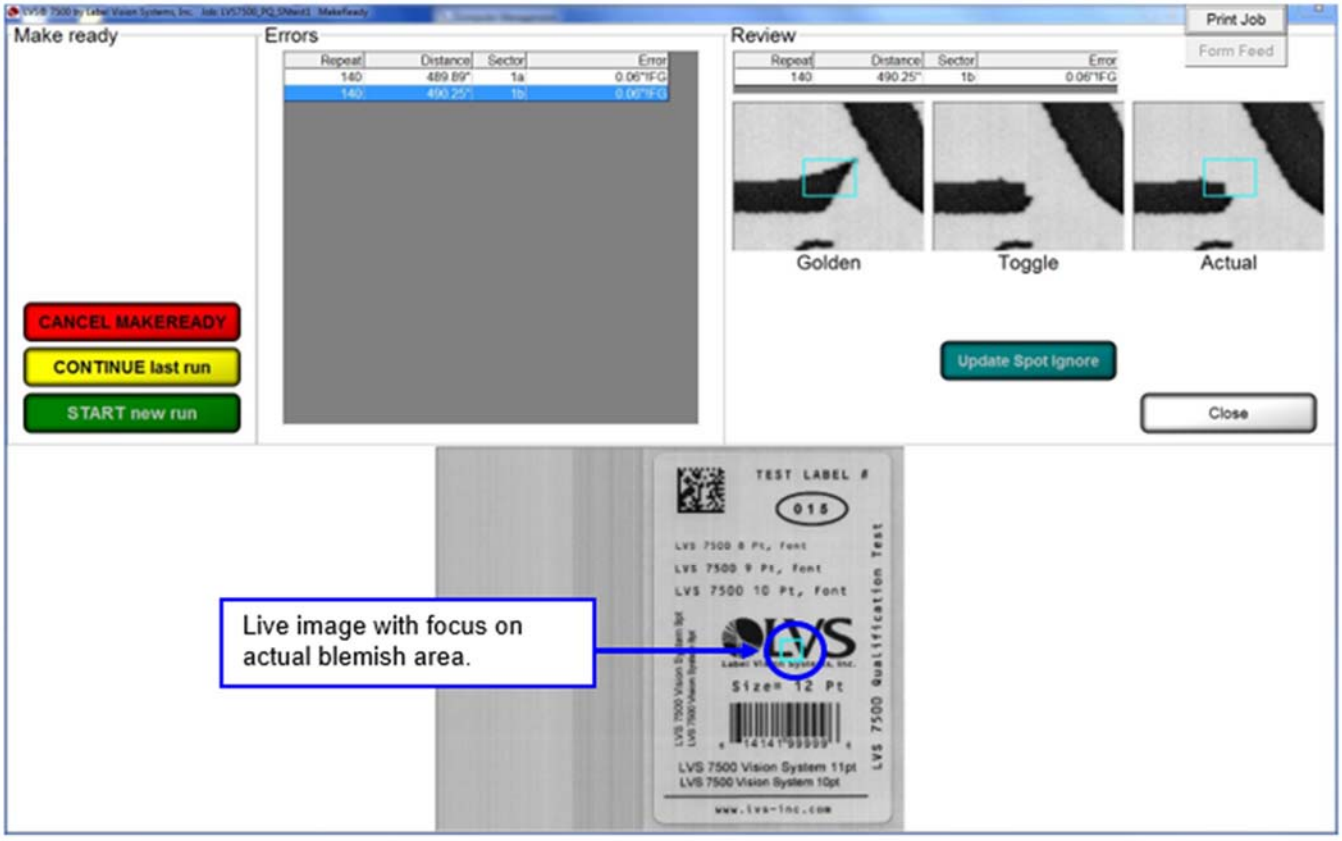
Button	Description
	
Replaced	Click this button when a label with detected errors is replaced with a known good label. This action marks the label as !RP (replaced) in the error log file and is removed from the errors list. The button is active when the job is in run mode. Only operators granted the **Allow Accept / Replace Errors** permission are allowed to use this feature. See the **Permissions** section, within the **Operators** section, for more information on permissions.
Hide Barcode Stats	Click this button to hide the barcode parameters on the screen and enlarge the barcode image. After clicking this button, the button name changes to “Show Barcode Stats.” Click this button for the barcode parameters to appear on the screen. The settings for this button are controlled in the “Settings” menu > [System] section > ShowRuntimeGradeStats. • ShowRuntimeGradeStats=0 (default) – Disables the “Hide Barcode Stats” button. • ShowRuntimeGradeStats=1 – Enables the “Hide Barcode Stats” button.
Close	Click the “Close” button to close the error display window and return to the “Running the Job” screen.

Blemish Error Display

When viewing a blemish error, three views are available on the screen:

- **Golden** – Displays the golden image
- **Toggle** – Toggles between the golden image and actual image
- **Actual** – Displays the actual blemish image

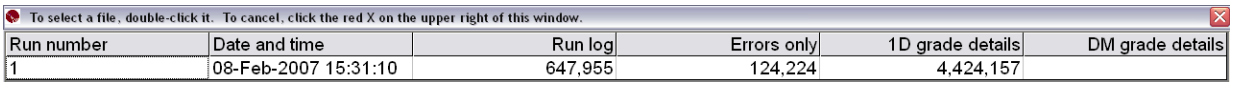
Only a single image of the error is displayed when viewing other types of errors. For example, a No Read error on a barcode would only show an image of the barcode so that you can examine the problem.



Reports / QC File Viewer

The Reports Screen is used to view the report logs created for each job.

Each line of data starts with the run number followed by a date/time stamp, decoded string, error code (if any), and other data associated with the image being inspected. See the “Error Code Definitions” section for a full list of error codes.



Run number	Date and time	Run log	Errors only	1D grade details	DM grade details
1	08-Feb-2007 15:31:10	647,955	124,224	4,424,157	

The report type is displayed in the column header (such as Errors only, 1D grade details, etc.). To view a particular report, click on the desired run located under the corresponding header.

The “Run log” column allows you to view data for all sectors for that particular run. All ANSI/ISO parameters are reported under 1D, 2D grade details.

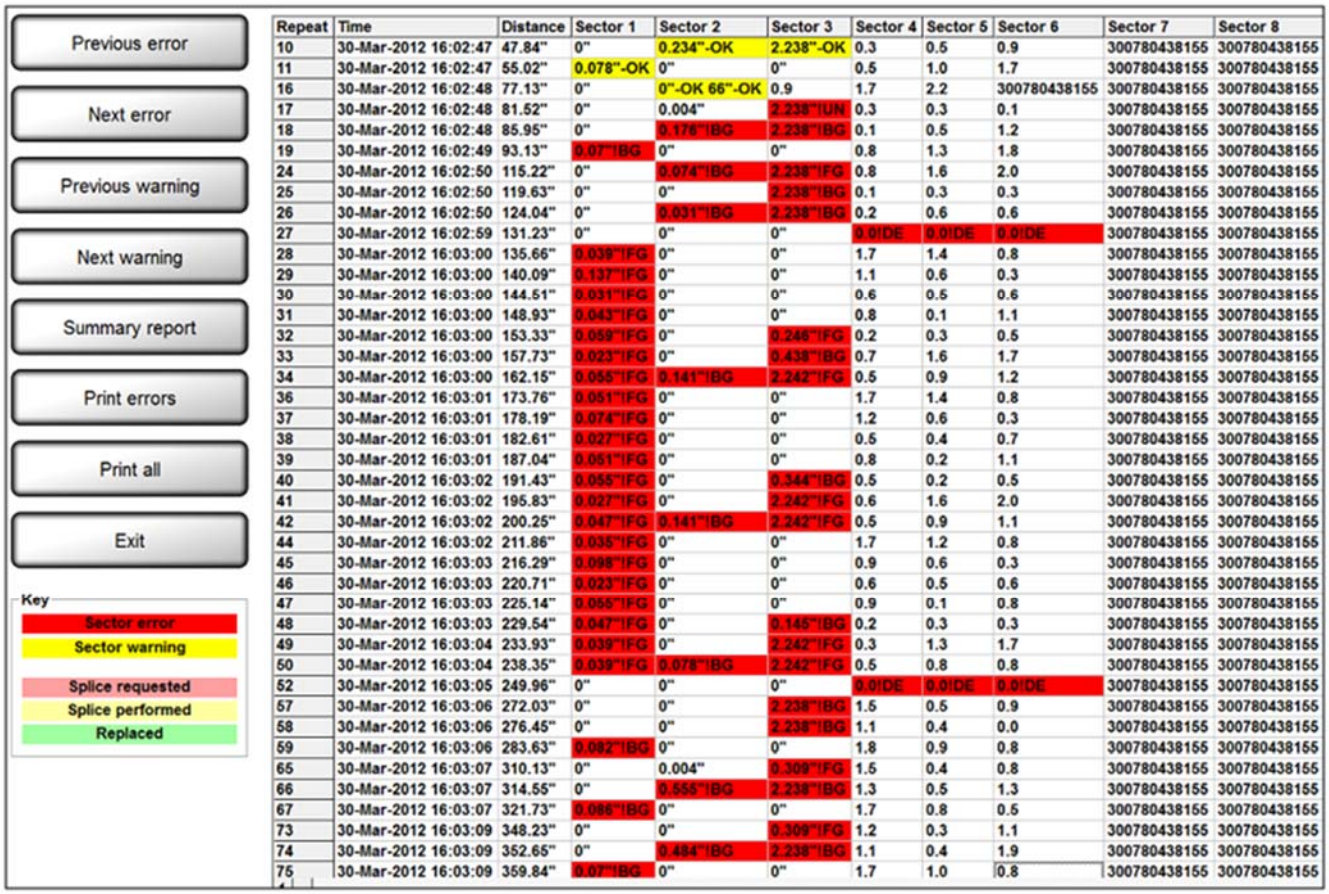
The data is stored in a .csv (comma separated values) format. This format is a text file where fields are delimited by commas and records are delimited by a <CR><LF> pair. It is a standard interchange format for taking raw data and populating a database or spreadsheet. By default these files are stored in the following directories:

- For new installations of software version 20.1.X on Windows® 7 Professional and Windows® 8.1 Professional operating systems: C:\LvsData\LVS 7500\Jobs
- For systems that are upgrading from a previous software version to version 20.1.X or higher:
    - **Windows® XP:** C:\Program Files\Label Vision Systems\LVS 7500\Jobs
    - **Windows® 7:** C:\Users\[User Login Name]\AppData\Roaming\Label Vision Systems\LVS 7500\Jobs

The operator may choose to print a report for an entire run or print a report of errors only.

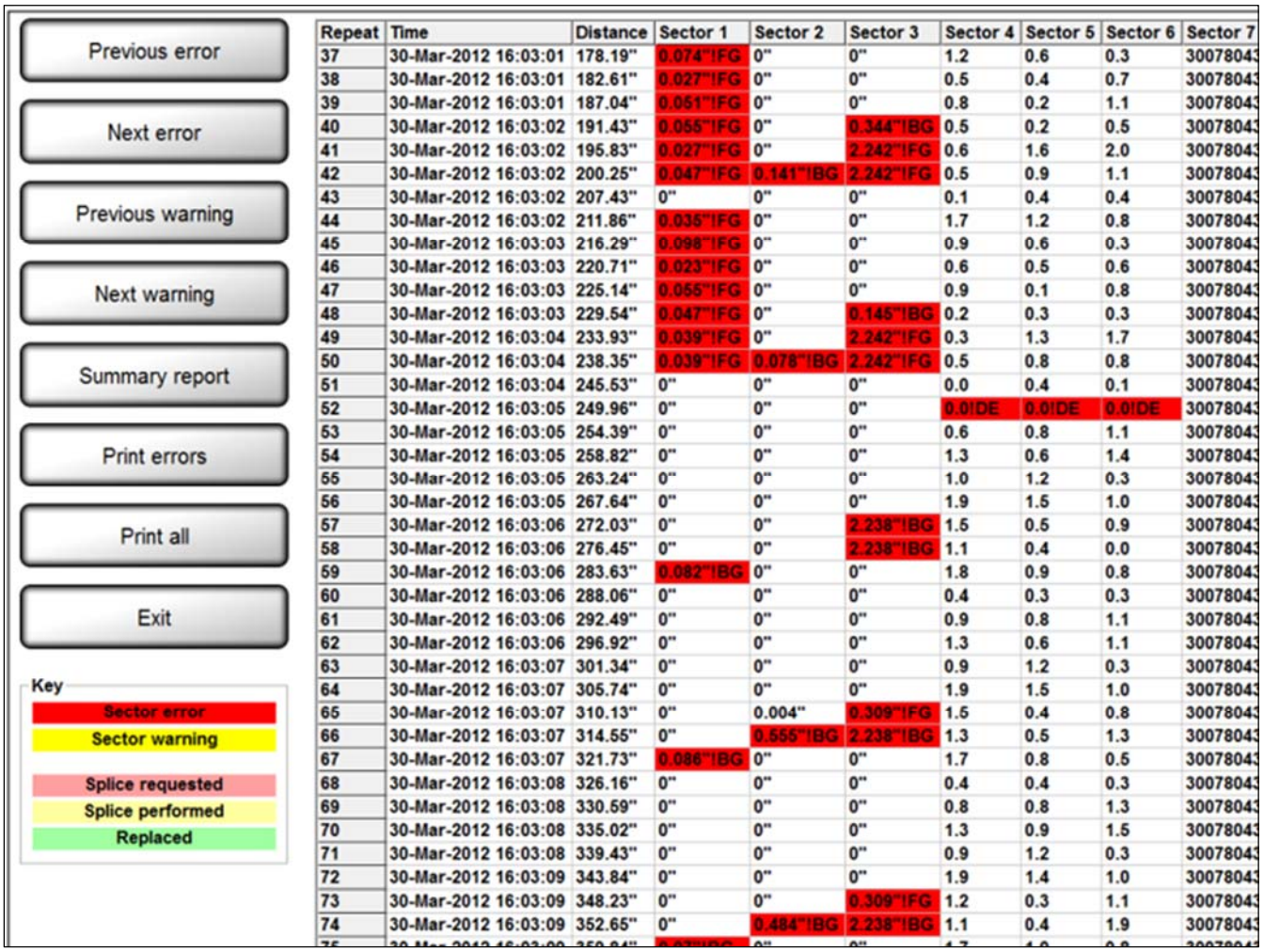
Sample Reports

Errors Only Report



Repeat	Time	Distance	Sector 1	Sector 2	Sector 3	Sector 4	Sector 5	Sector 6	Sector 7	Sector 8
10	30-Mar-2012 16:02:47	47.84"	0"	0.234"-OK	2.238"-OK	0.3	0.5	0.9	300780438155	300780438155
11	30-Mar-2012 16:02:47	55.02"	0.078"-OK	0"	0"	0.5	1.0	1.7	300780438155	300780438155
16	30-Mar-2012 16:02:48	77.13"	0"	0"-OK 66"-OK	0.9	1.7	2.2	300780438155	300780438155	300780438155
17	30-Mar-2012 16:02:48	81.52"	0"	0.004"	2.238"!UN	0.3	0.3	0.1	300780438155	300780438155
18	30-Mar-2012 16:02:48	85.95"	0"	0.176"!BG	2.238"!BG	0.1	0.5	1.2	300780438155	300780438155
19	30-Mar-2012 16:02:49	93.13"	0.07"!BG	0"	0"	0.8	1.3	1.8	300780438155	300780438155
24	30-Mar-2012 16:02:50	115.22"	0"	0.074"!BG	2.238"!FG	0.8	1.6	2.0	300780438155	300780438155
25	30-Mar-2012 16:02:50	119.63"	0"	0"	2.238"!BG	0.1	0.3	0.3	300780438155	300780438155
26	30-Mar-2012 16:02:50	124.04"	0"	0.031"!BG	2.238"!BG	0.2	0.6	0.6	300780438155	300780438155
27	30-Mar-2012 16:02:59	131.23"	0"	0"	0"	0.0!DE	0.0!DE	0.0!DE	300780438155	300780438155
28	30-Mar-2012 16:03:00	135.66"	0.039"!FG	0"	0"	1.7	1.4	0.8	300780438155	300780438155
29	30-Mar-2012 16:03:00	140.09"	0.137"!FG	0"	0"	1.1	0.6	0.3	300780438155	300780438155
30	30-Mar-2012 16:03:00	144.51"	0.031"!FG	0"	0"	0.6	0.5	0.6	300780438155	300780438155
31	30-Mar-2012 16:03:00	148.93"	0.043"!FG	0"	0"	0.8	0.1	1.1	300780438155	300780438155
32	30-Mar-2012 16:03:00	153.33"	0.059"!FG	0"	0.246"!FG	0.2	0.3	0.5	300780438155	300780438155
33	30-Mar-2012 16:03:00	157.73"	0.023"!FG	0"	0.438"!BG	0.7	1.6	1.7	300780438155	300780438155
34	30-Mar-2012 16:03:00	162.15"	0.055"!FG	0.141"!BG	2.242"!FG	0.5	0.9	1.2	300780438155	300780438155
36	30-Mar-2012 16:03:01	173.76"	0.051"!FG	0"	0"	1.7	1.4	0.8	300780438155	300780438155
37	30-Mar-2012 16:03:01	178.19"	0.074"!FG	0"	0"	1.2	0.6	0.3	300780438155	300780438155
38	30-Mar-2012 16:03:01	182.61"	0.027"!FG	0"	0"	0.5	0.4	0.7	300780438155	300780438155
39	30-Mar-2012 16:03:01	187.04"	0.051"!FG	0"	0"	0.8	0.2	1.1	300780438155	300780438155
40	30-Mar-2012 16:03:02	191.43"	0.055"!FG	0"	0.344"!BG	0.5	0.2	0.5	300780438155	300780438155
41	30-Mar-2012 16:03:02	195.83"	0.027"!FG	0"	2.242"!FG	0.6	1.6	2.0	300780438155	300780438155
42	30-Mar-2012 16:03:02	200.25"	0.047"!FG	0.141"!BG	2.242"!FG	0.5	0.9	1.1	300780438155	300780438155
44	30-Mar-2012 16:03:02	211.86"	0.035"!FG	0"	0"	1.7	1.2	0.8	300780438155	300780438155
45	30-Mar-2012 16:03:03	216.29"	0.098"!FG	0"	0"	0.9	0.6	0.3	300780438155	300780438155
46	30-Mar-2012 16:03:03	220.71"	0.023"!FG	0"	0"	0.6	0.5	0.6	300780438155	300780438155
47	30-Mar-2012 16:03:03	225.14"	0.055"!FG	0"	0"	0.9	0.1	0.8	300780438155	300780438155
48	30-Mar-2012 16:03:03	229.54"	0.047"!FG	0"	0.145"!BG	0.2	0.3	0.3	300780438155	300780438155
49	30-Mar-2012 16:03:04	233.93"	0.039"!FG	0"	2.242"!FG	0.3	1.3	1.7	300780438155	300780438155
50	30-Mar-2012 16:03:04	238.35"	0.039"!FG	0.078"!BG	2.242"!FG	0.5	0.8	0.8	300780438155	300780438155
52	30-Mar-2012 16:03:05	249.96"	0"	0"	0"	0.0!DE	0.0!DE	0.0!DE	300780438155	300780438155
57	30-Mar-2012 16:03:06	272.03"	0"	0"	2.238"!BG	1.5	0.5	0.9	300780438155	300780438155
58	30-Mar-2012 16:03:06	276.45"	0"	0"	2.238"!BG	1.1	0.4	0.0	300780438155	300780438155
59	30-Mar-2012 16:03:06	283.63"	0.082"!BG	0"	0"	1.8	0.9	0.8	300780438155	300780438155
65	30-Mar-2012 16:03:07	310.13"	0"	0.004"	0.309"!FG	1.5	0.4	0.8	300780438155	300780438155
66	30-Mar-2012 16:03:07	314.55"	0"	0.555"!BG	2.238"!BG	1.3	0.5	1.3	300780438155	300780438155
67	30-Mar-2012 16:03:07	321.73"	0.086"!BG	0"	0"	1.7	0.8	0.5	300780438155	300780438155
73	30-Mar-2012 16:03:09	348.23"	0"	0"	0.309"!FG	1.2	0.3	1.1	300780438155	300780438155
74	30-Mar-2012 16:03:09	352.65"	0"	0.484"!BG	2.238"!BG	1.1	0.4	1.9	300780438155	300780438155
75	30-Mar-2012 16:03:09	359.84"	0.07"!BG	0"	0"	1.7	1.0	0.8	300780438155	300780438155

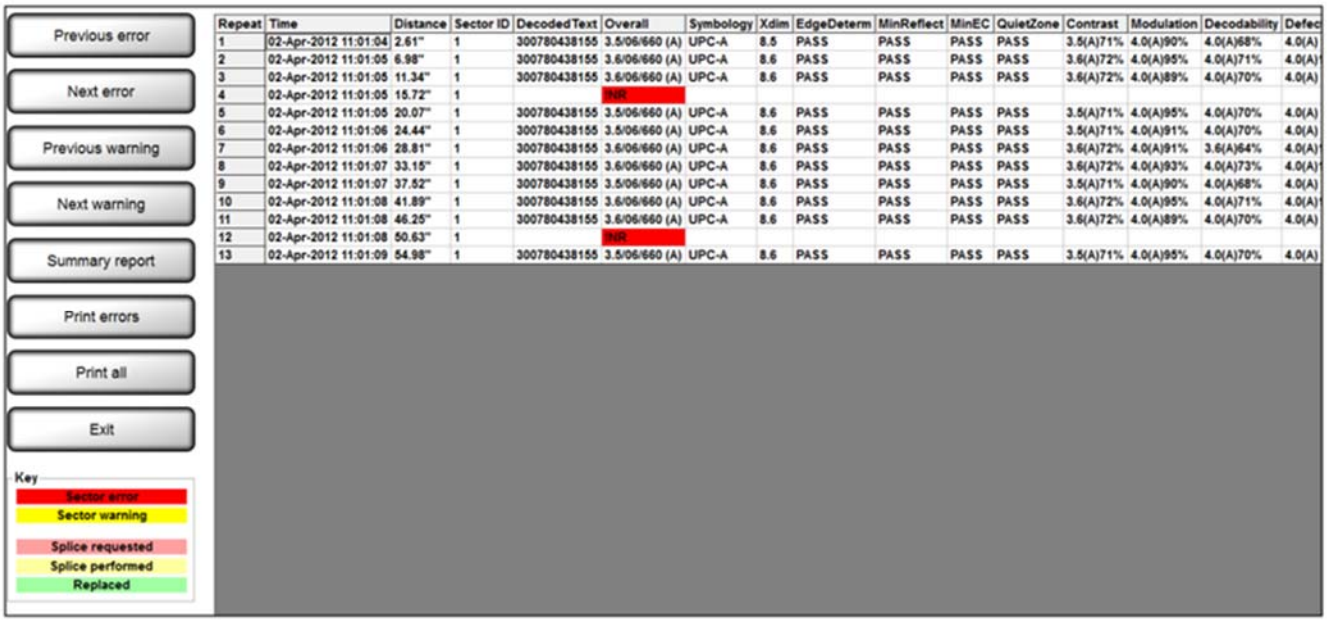
Run Log



Repeat	Time	Distance	Sector 1	Sector 2	Sector 3	Sector 4	Sector 5	Sector 6	Sector 7
37	30-Mar-2012 16:03:01	178.19"	0.074"!FG	0"	0"	1.2	0.6	0.3	3007804
38	30-Mar-2012 16:03:01	182.61"	0.027"!FG	0"	0"	0.5	0.4	0.7	3007804
39	30-Mar-2012 16:03:01	187.04"	0.051"!FG	0"	0"	0.8	0.2	1.1	3007804
40	30-Mar-2012 16:03:02	191.43"	0.055"!FG	0"	0.344"!BG	0.5	0.2	0.5	3007804
41	30-Mar-2012 16:03:02	195.83"	0.027"!FG	0"	2.242"!FG	0.6	1.6	2.0	3007804
42	30-Mar-2012 16:03:02	200.25"	0.047"!FG	0.141"!BG	2.242"!FG	0.5	0.9	1.1	3007804
43	30-Mar-2012 16:03:02	207.43"	0"	0"	0"	0.1	0.4	0.4	3007804
44	30-Mar-2012 16:03:02	211.86"	0.035"!FG	0"	0"	1.7	1.2	0.8	3007804
45	30-Mar-2012 16:03:03	216.29"	0.098"!FG	0"	0"	0.9	0.6	0.3	3007804
46	30-Mar-2012 16:03:03	220.71"	0.023"!FG	0"	0"	0.6	0.5	0.6	3007804
47	30-Mar-2012 16:03:03	225.14"	0.055"!FG	0"	0"	0.9	0.1	0.8	3007804
48	30-Mar-2012 16:03:03	229.54"	0.047"!FG	0"	0.145"!BG	0.2	0.3	0.3	3007804
49	30-Mar-2012 16:03:04	233.93"	0.039"!FG	0"	2.242"!FG	0.3	1.3	1.7	3007804
50	30-Mar-2012 16:03:04	238.35"	0.039"!FG	0.078"!BG	2.242"!FG	0.5	0.8	0.8	3007804
51	30-Mar-2012 16:03:04	245.53"	0"	0"	0"	0.0	0.4	0.1	3007804
52	30-Mar-2012 16:03:05	249.96"	0"	0"	0"	0.0!DE	0.0!DE	0.0!DE	3007804
53	30-Mar-2012 16:03:05	254.39"	0"	0"	0"	0.6	0.8	1.1	3007804
54	30-Mar-2012 16:03:05	258.82"	0"	0"	0"	1.3	0.6	1.4	3007804
55	30-Mar-2012 16:03:05	263.24"	0"	0"	0"	1.0	1.2	0.3	3007804
56	30-Mar-2012 16:03:05	267.64"	0"	0"	0"	1.9	1.5	1.0	3007804
57	30-Mar-2012 16:03:06	272.03"	0"	0"	2.238"!BG	1.5	0.5	0.9	3007804
58	30-Mar-2012 16:03:06	276.45"	0"	0"	2.238"!BG	1.1	0.4	0.0	3007804
59	30-Mar-2012 16:03:06	283.63"	0.082"!BG	0"	0"	1.8	0.9	0.8	3007804
60	30-Mar-2012 16:03:06	288.06"	0"	0"	0"	0.4	0.3	0.3	3007804
61	30-Mar-2012 16:03:06	292.49"	0"	0"	0"	0.9	0.8	1.1	3007804
62	30-Mar-2012 16:03:06	296.92"	0"	0"	0"	1.3	0.6	1.1	3007804
63	30-Mar-2012 16:03:07	301.34"	0"	0"	0"	0.9	1.2	0.3	3007804
64	30-Mar-2012 16:03:07	305.74"	0"	0"	0"	1.9	1.5	1.0	3007804
65	30-Mar-2012 16:03:07	310.13"	0"	0.004"	0.309"!FG	1.5	0.4	0.8	3007804
66	30-Mar-2012 16:03:07	314.55"	0"	0.555"!BG	2.238"!BG	1.3	0.5	1.3	3007804
67	30-Mar-2012 16:03:07	321.73"	0.086"!BG	0"	0"	1.7	0.8	0.5	3007804
68	30-Mar-2012 16:03:08	326.16"	0"	0"	0"	0.4	0.4	0.3	3007804
69	30-Mar-2012 16:03:08	330.59"	0"	0"	0"	0.8	0.8	1.3	3007804
70	30-Mar-2012 16:03:08	335.02"	0"	0"	0"	1.3	0.9	1.5	3007804
71	30-Mar-2012 16:03:08	339.43"	0"	0"	0"	0.9	1.2	0.3	3007804
72	30-Mar-2012 16:03:09	343.84"	0"	0"	0"	1.9	1.4	1.0	3007804
73	30-Mar-2012 16:03:09	348.23"	0"	0"	0.309"!FG	1.2	0.3	1.1	3007804
74	30-Mar-2012 16:03:09	352.65"	0"	0.484"!BG	2.238"!BG	1.1	0.4	1.9	3007804

1D Grade Details

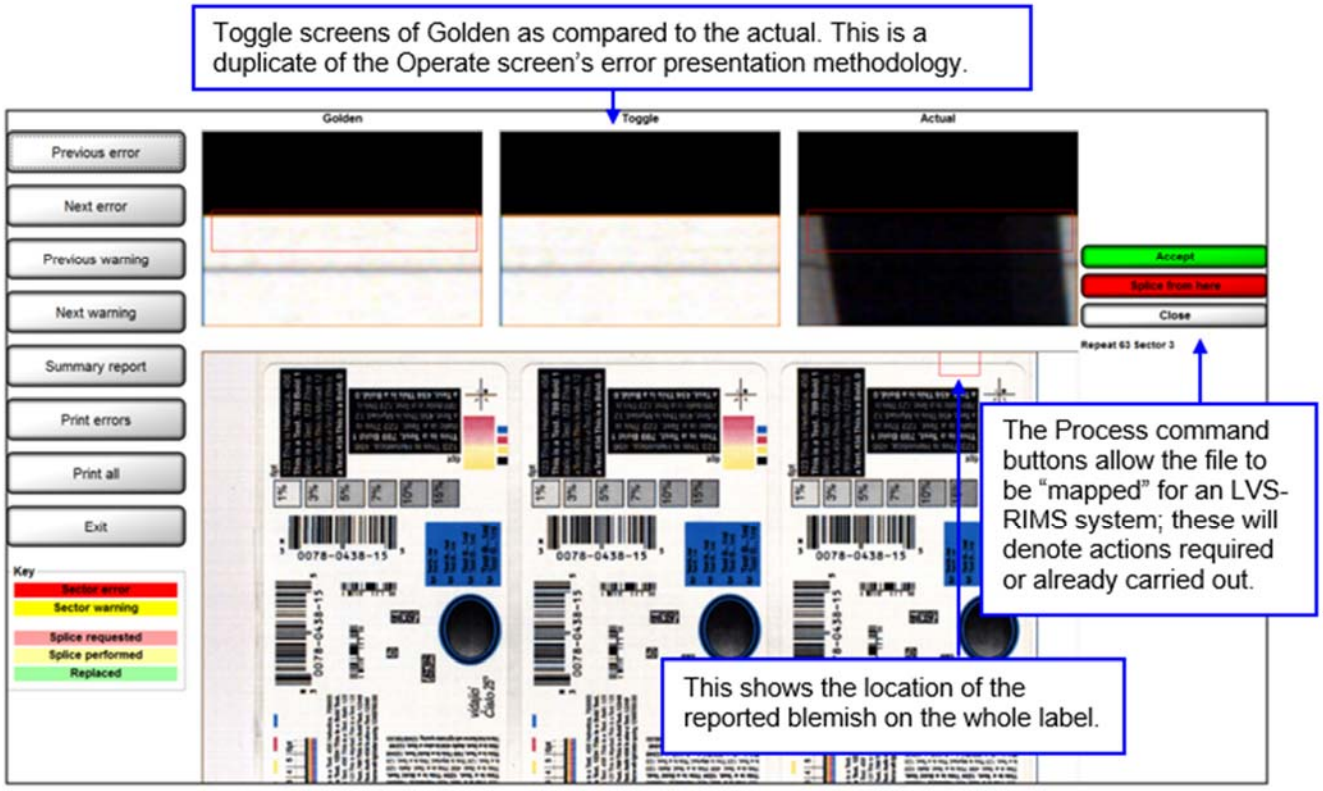
View 1D grade details by double-clicking on a job in the 1D grading column.



Repeat	Time	Distance	Sector ID	DecodedText	Overall	Symbology	Xdim	EdgeDeterm	MinReflect	MinEC	QuietZone	Contrast	Modulation	Decodability	Defec
1	02-Apr-2012 11:01:04	2.61"	1	300780438155	3.5/06/660 (A)	UPC-A	8.5	PASS	PASS	PASS	PASS	3.5(A)71%	4.0(A)90%	4.0(A)68%	4.0(A)
2	02-Apr-2012 11:01:05	6.98"	1	300780438155	3.6/06/660 (A)	UPC-A	8.6	PASS	PASS	PASS	PASS	3.6(A)72%	4.0(A)95%	4.0(A)71%	4.0(A)
3	02-Apr-2012 11:01:05	11.34"	1	300780438155	3.6/06/660 (A)	UPC-A	8.6	PASS	PASS	PASS	PASS	3.6(A)72%	4.0(A)89%	4.0(A)70%	4.0(A)
4	02-Apr-2012 11:01:05	15.72"	1		fail										
5	02-Apr-2012 11:01:05	20.07"	1	300780438155	3.5/06/660 (A)	UPC-A	8.6	PASS	PASS	PASS	PASS	3.5(A)71%	4.0(A)95%	4.0(A)70%	4.0(A)
6	02-Apr-2012 11:01:06	24.44"	1	300780438155	3.5/06/660 (A)	UPC-A	8.6	PASS	PASS	PASS	PASS	3.5(A)71%	4.0(A)91%	4.0(A)70%	4.0(A)
7	02-Apr-2012 11:01:06	28.81"	1	300780438155	3.6/06/660 (A)	UPC-A	8.6	PASS	PASS	PASS	PASS	3.6(A)72%	4.0(A)91%	3.6(A)64%	4.0(A)
8	02-Apr-2012 11:01:07	33.15"	1	300780438155	3.6/06/660 (A)	UPC-A	8.6	PASS	PASS	PASS	PASS	3.6(A)72%	4.0(A)93%	4.0(A)73%	4.0(A)
9	02-Apr-2012 11:01:07	37.52"	1	300780438155	3.5/06/660 (A)	UPC-A	8.6	PASS	PASS	PASS	PASS	3.5(A)71%	4.0(A)90%	4.0(A)68%	4.0(A)
10	02-Apr-2012 11:01:08	41.89"	1	300780438155	3.6/06/660 (A)	UPC-A	8.6	PASS	PASS	PASS	PASS	3.6(A)72%	4.0(A)95%	4.0(A)71%	4.0(A)
11	02-Apr-2012 11:01:08	46.25"	1	300780438155	3.6/06/660 (A)	UPC-A	8.6	PASS	PASS	PASS	PASS	3.6(A)72%	4.0(A)89%	4.0(A)70%	4.0(A)
12	02-Apr-2012 11:01:08	50.63"	1		fail										
13	02-Apr-2012 11:01:09	54.98"	1	300780438155	3.5/06/660 (A)	UPC-A	8.6	PASS	PASS	PASS	PASS	3.5(A)71%	4.0(A)95%	4.0(A)70%	4.0(A)

Run Log with Images

Blemish, barcode, and OCR/OCV error images can be viewed by clicking on the red blemish cell in the log file. An error display screen will then pop-up. If the error is a blemish, the Golden Image will show on the Left; a Toggle between Golden and Actual in the center; and the Actual Blemish image is on the right.



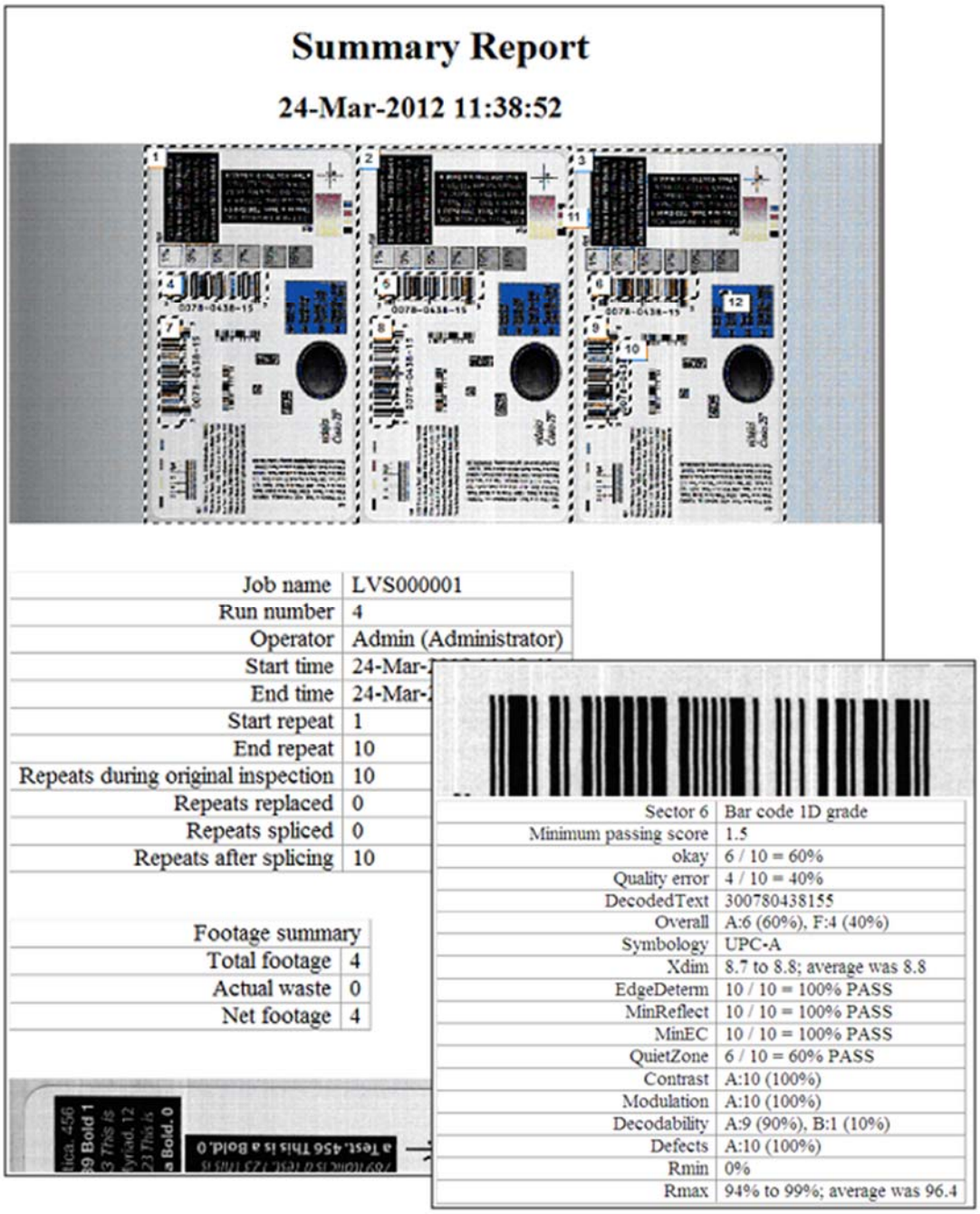
Button Definitions

Button	Description
Previous Error	Moves upward from the current file location to the next error.
Next Error	Moves downward from the current file location to the next error.
Previous Warning	Moves upward from the current file location to the next warning.
Next Warning	Moves downward from the current file location to the next warning.
Summary Report	Click to view the Summary Report.
Print errors	Click to print the errors only.
Print All	Click to print all information for the run.
Exit	Click to close the QC File Viewer and return to the LVS-7510.

Summary Report

The LVS-7510 Summary Report can be accessed by clicking on the **Summary Report** button when viewing a log file. The report gives a summation of the entire job and each sector's settings and parameters. It also shows example images where sectors were drawn.

The LVS-7510 Summary Report appears only in Internet Explorer or Firefox web browsers; no other web browser is supported.



Summary Report

24-Mar-2012 11:38:52

Job name	LVS000001
Run number	4
Operator	Admin (Administrator)
Start time	24-Mar-
End time	24-Mar-
Start repeat	1
End repeat	10
Repeats during original inspection	10
Repeats replaced	0
Repeats spliced	0
Repeats after splicing	10

Footage summary	
Total footage	4
Actual waste	0
Net footage	4

Sector 6	Bar code 1D grade
Minimum passing score	1.5
okay	6 / 10 = 60%
Quality error	4 / 10 = 40%
DecodedText	300780438155
Overall	A:6 (60%), F:4 (40%)
Symbology	UPC-A
Xdim	8.7 to 8.8; average was 8.8
EdgeDeterm	10 / 10 = 100% PASS
MinReflect	10 / 10 = 100% PASS
MinEC	10 / 10 = 100% PASS
QuietZone	6 / 10 = 60% PASS
Contrast	A:10 (100%)
Modulation	A:10 (100%)
Decodability	A:9 (90%), B:1 (10%)
Defects	A:10 (100%)
Rmin	0%
Rmax	94% to 99%; average was 96.4

Preventive Maintenance

SENSOR INSTRUCTIONS

Weekly cleaning of the sensor is recommended to maintain optimum performance. To maintain a clean and clear appearance, spray a soft, lint-free, non-abrasive towel or cloth with a commercially available household glass cleaner, such as Windex®, Glassex®, VISS®, and Mr. Muscle® and gently clean the outside of the sensor glass.

DO NOT directly spray the sensor glass with glass cleaner; always spray a towel or cloth with glass cleaner and then gently wipe the sensor glass.

DO NOT use an industrial-strength glass cleaner.

RUBBER ROLLER INSTRUCTIONS

The rubber roller may need cleaning periodically, as it is important to keep the roller free of debris, adhesive buildup and other surface materials.

Locate the following supplies:

- Dishwashing liquid
- 1 cup of water
- Lint-free cloth

WARNING: *Use only dishwashing liquid to clean the rubber roller. Do not clean the roller with alcohol, window cleaner or petroleum-based products, as this causes the rubber to crack.*

Mix a few drops of dishwashing liquid into a cup of water and place a lint-free cloth into the solution until the cloth is saturated. Ring out the cloth so that no water drips from the cloth. Wipe down the rubber roller surface, removing any debris. As you wipe, turn the roller to clean the entire surface. Then, rinse out the cloth and wipe down the rubber surface again to remove any dishwashing liquid from the roller. Allow the roller to dry before using.

CALIBRATION CARD INSTRUCTIONS

Replace the Calibrated Conformance Standard Test Card every two years.

If you have any questions or concerns about the performance of the LVS-7510 External System, please call your local Microscan distributor or Microscan technical support:

+1-800-762-1149 | +1-425-203-4841 | helpdesk@microscan.com

Troubleshooting

Problem Description	Possible Causes
System will not acquire images	• The roll of labels is not moving. • Encoder is not in contact with moving roll of labels. • Encoder cable is not plugged in or is damaged. • The Readhead has lost power. • The Readhead to LVS-7510 interface cables are not plugged in or are damaged.
System is acquiring every other label	The label repeat is set too large.
Image has uneven lighting	• An LED may have burned out in the sensor. • The sensor may have a label stuck to it

For Error Condition issues, refer to the “Step 6: Alarm Matrix” section and review the following topics:

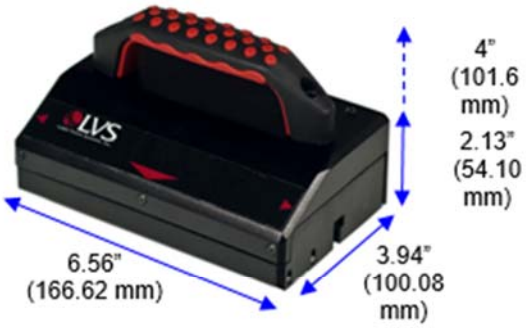
- Error Code Definitions
- Common Causes for Error Conditions

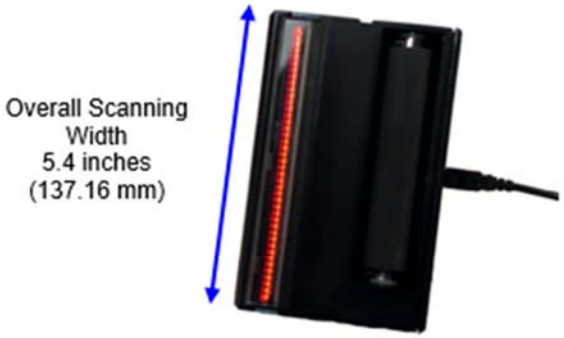
Physical Properties

The LVS-7510 is available with a 5.4” (137 mm) or 8.5” (216 mm) readhead.

LVS-7510 5.4” (137 mm):

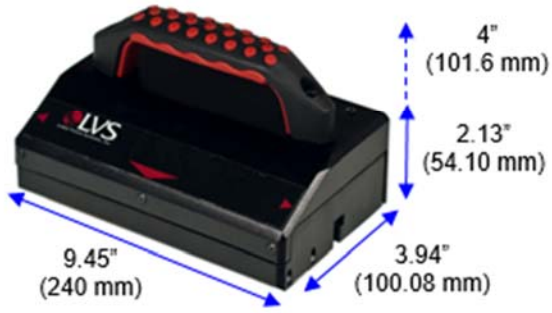
- Height: 4 inches 101.6 mm
- Length: 3.94 inches 100.08 mm
- Width: 6.56 inches 166.62 mm
- Weight: 2.3 pounds 1.04 kg
- Maximum readable label width: 5.4 inches (137 mm)
- Maximum width of web: 5.7 inches (145 mm)





LVS-7510 8.5” (216 mm):

- Height: 4 inches 101.6 mm
- Length: 3.94 inches 100.08 mm
- Width: 9.45 inches 240 mm
- Weight: 3.1 pounds 1.41 kg
- Maximum readable label width: 8.5 inches (216 mm)
- Maximum width of web: 9 inches (229 mm)



Functional Characteristics

The characteristics listed below apply to the LVS-7510 5.4" (137 mm) and 8.5" (216 mm) readheads.

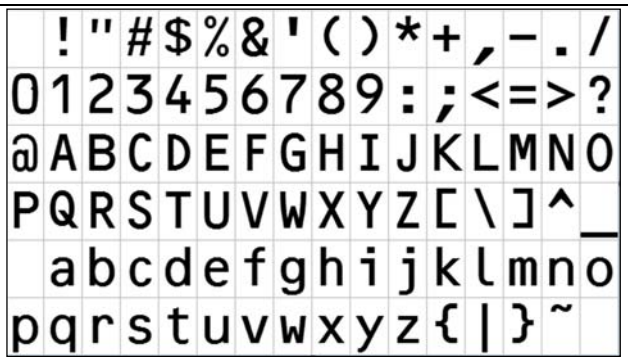
Line Scan Camera:	400 DPI. Floating Sensor Head
Light Source:	Red Light. 660 nm
Inputs / Outputs:	USB 2.0 port. 5-Volt Power Supply
Maximum System Speed:	12 inches (300 mm) per second

ISO Verification

Verify:	Any combination of linear, matrix or stacked codes to ISO print quality standards including: ▪ Linear (1D) Verifier Conformance (ISO/IEC 15416) ▪ 2-Dimensional (2D) Verifier Conformance (ISO/IEC 15415)
Orientation & Number:	Any orientation and number of codes on a label.
Read and Analyze:	1D and 2D to published International specifications, with an overall ISO (ANSI) grade.
Minimum Linear (1D) Narrow Bar Width:	▪ Read only: 6.3 Mils (.0063") (.160 mm) ▪ Verification: 8.8 Mils (.0088") (.223 mm)
Minimum 2D Cell Size:	▪ Read only: 10.0 Mils (.0100") (.254 mm) ▪ Verification: 12.5 Mils (.0125") (.317 mm)
Reporting:	Detailed data to be reported is in .csv format for extraction by the end user. Immediate reporting is available for viewing via the monitor and Light Tower if utilized.

Optical Character Verification (OCV)

Minimum Human Readable:	.083 inches / 2.12 mm / 6 Printer Points
Data:	Verifies variable and fixed data ascending, descending or from a file.
Read or Verify:	Sequential string of alphanumeric characters (numbers 0 to 9 and letters A to Z) against known field or database. Guidelines: • Characters must not touch or overlap • All uppercase letters in any font are allowed • Lowercase letters, uppercase letters, and some special characters are allowed in OCR-B MT font (6 to 14 points). Shown to the right are the letters, numbers, and special characters supported by OCR-B MT font (6 to 14 points) • Monospaced fonts, like OCR-B, are preferred and perform better in the LVS-7510 • Do not attempt to re-learn any of the supplied OCR-B MT fonts

Blemish Detection

Print faults:	Detects skew, smear, print registration, die-cut errors, edge determination and missing information.
Variable Data:	Allows user specified variable data within a pattern matching zone.
Red Light (660 nm):	The LVS-7510 uses red light (660 nm) to detect blemishes; thus, color blemishes in the red spectrum may not be properly detected.
Minimum point size:	Blemish Inspection: 5 Mils / .005 inches / .126 mm Missing Period: 5 Mils / .005 inches / .126 mm

Number Validation

- Any numerical order requirements such as ascending, descending, or algorithmic series to ensure the numbers are in the expected order
- Use external data file for the validation of random number sequence
- Detects duplicate numbers

Matching

- Matches decoded data from a barcode to human readable text of that barcode
- Matches multiple fields of data within the label area being inspected

Supported Symbologies

Below are a few of the symbologies supported by the LVS-7510. Contact Microscan for a full list of supported symbologies.

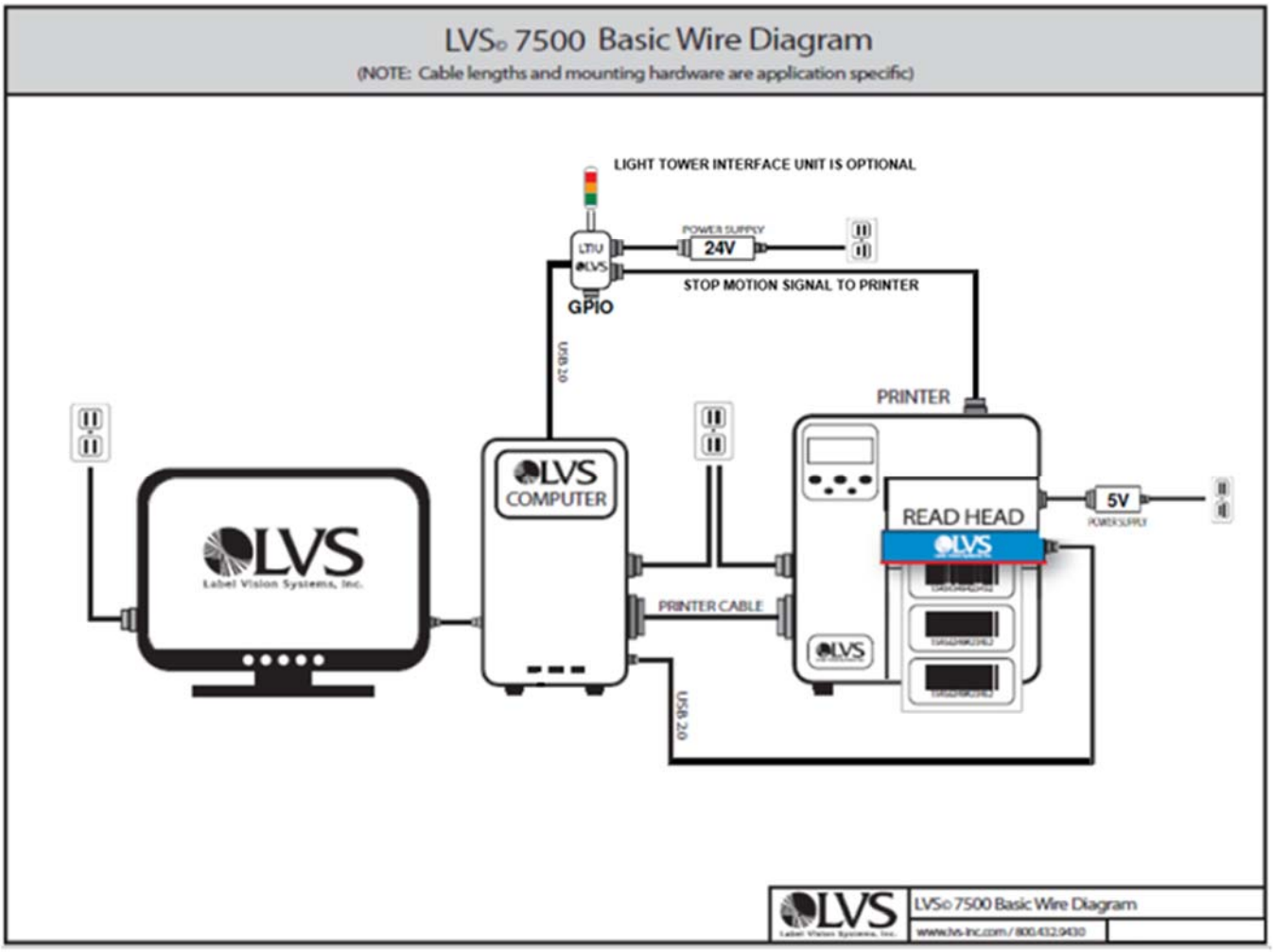
Aztec
Codabar
Code 128
Code 39
Code 93
Data Matrix
DataBar expanded
EAN-13
EAN-13 (2-digit supplemental) Stacked
EAN-13 (5-digit supplemental)
EAN-8
ECC-200 Data Matrix
GS1-128
GS1 Databar Limited
GS1 Databar
GS1 Databar-14
GS1 Data Matrix
Interleaved 2 of 5 (ITF)
Laetus Pharmacode
Micro QR Code
MicroPDF417
PDF417
QR Code
UPC-A
UPC-A (2-digit supplemental)
UPC-A (5-digit supplemental)
UPC-E
UPC-E (2-digit supplemental)
UPC-E (5-digit supplemental)
All applicable GS1 composite components

International Standards

- ISO/IEC 15415
- ISO/IEC 15416
- ISO/IEC 15426 – 1 and 2
- All supported ISO/IEC symbology specifications

Mechanical Diagrams

LVS-7510 Basic Wire Diagram



LVS-7510 Stop Motion and Light Tower Printer Interface

The purpose of the Alarm Matrix is to effectively connect to the Stop-Motion/Light Tower Unit.

Line 1 (D0) is hard wired to the GREEN Light. All sections listed under the Trigger Column that show “Line 1” will turn on the GREEN light on the light tower.

Line 2 (D1) Is hard wired to the YELLOW light. All sections listed under the Trigger column that show “Line 2” will turn on the YELLOW light on the light tower.

Line 3 (D2) is hard wired to the RED light. All sections listed under the Trigger columns that show “Line 3” will turn on the RED light on the light tower. There is also a relay (K2) connected to this line and can be accessed via connector CN6 located inside the Stop-Motion/Light Tower Unit.

The Pin outs for CN6 are as follows:

- CN6-1 USB 5VDC source
- CN6-2 Normally open relay contact (N.O.)
- CN6-3 Common relay contact
- CN6-4 Normally closed relay contact (N.C.)
- CN6-5 Signal Ground

When an active-high or active-low signal is required for an external device, jumper CN6-5 (ground) to the CN6-3 (common relay contact). Then choose to use a 5VDC signal or a 24VDC signal by placing a jumper across the 3-pin X1 header located on the Stop Motion/Light Tower circuit board. One side is connected to 5VDC through a resistor and the other side is connected to a 24VDC through a resistor.

Line 4 (D4) is the STOP MOTION signal and is hard wired to a relay (K1) All sections listed under the Trigger columns that show “Line 4” will activate relay K1 and can be accessed via connector CN5 located inside the Stop-Motion/Light Tower Unit.

The Pin outs for CN5 are as follows:

- CN5-1 USB 5VDC source
- CN5-2 Normally open relay contact (N.O.)
- CN5-3 Common relay contact
- CN5-4 Normally closed relay contact (N.C.)
- CN5-5 Signal Ground

The Stop-Motion signal (Line 4) can be used to “pause” a printer when an error is detected.

The STOP MOTION signal can also be delayed by a certain distance. This allows the operator to activate an ink jet printer or some other device on down the printing process line. Or it can make the printer or rewinder automatically stop at their inspection/splicing table.

Note: The LVS-7510 External System does not stop the printer / rewinder. It simply gives the operator access to normally open and normally closed contacts to work in conjunction with the device being controlled. Every system is different. Please check with the manufacturer of the device on specific instructions to cause the PAUSE function to work.

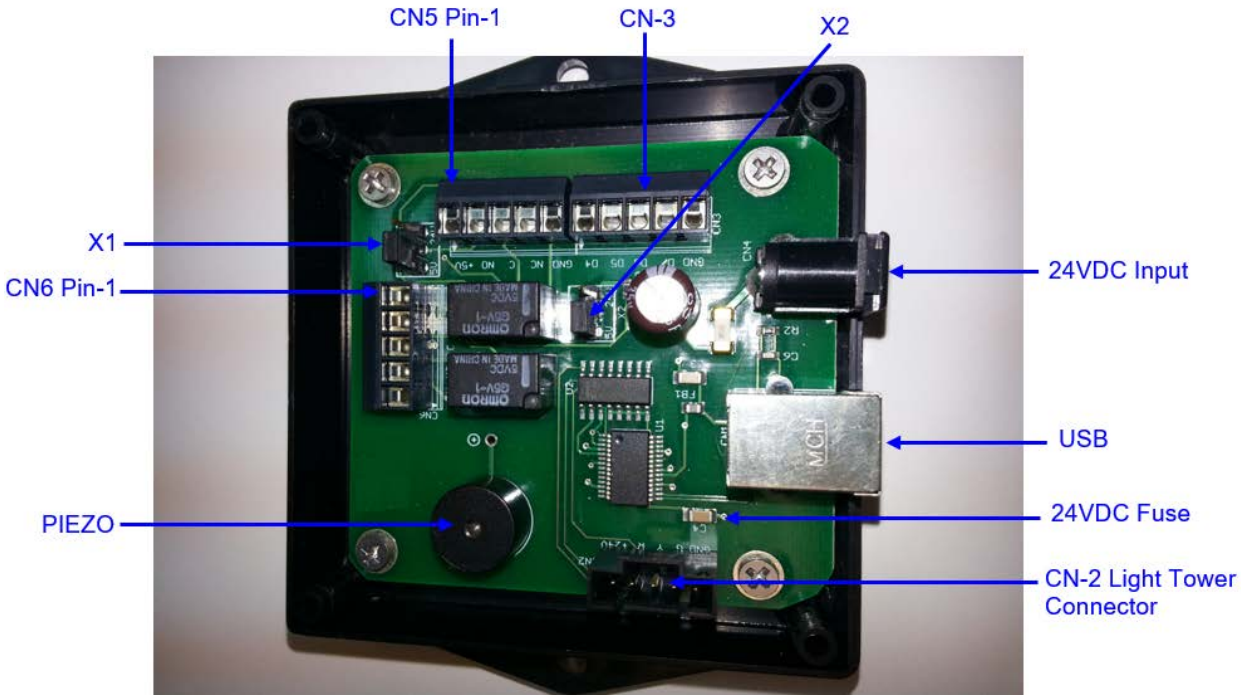
When an active-high or active-low signal is required for an external device, jumper CN5-5 (ground) to the CN5-3 (common relay contact). Then choose to use a 5VDC signal or a 24VDC signal by placing a jumper across the 3-pin X2 header located on the Stop Motion/Light Tower circuit board. One side is connected to 5VDC through a resistor and the other side is connected to a 24VDC through a resistor.

Line 5 (D3) – The Audible Alarm, located inside the Stop Motion/Light Tower Unit, is programmed to follow the RED light (Line 3). When the audible alarm is not required, the operator will have to change the INI settings. There is no access to Line 5 through the Alarm Matrix.

CN5 Stop Motion Relay Output (Active Low)		
Pin Assignment	**Wire Color**	**Directions**
1 – USB 5VDC		Not used
2 – Normally open relay contact	RED	Active-Low +5VDC Signal
3 – Common relay contact	BLACK	Jumper to Pin 5 (Ground)
4 – Normally closed relay contact	WHITE	Not used

CN5 Stop Motion Relay Output (Active High)		
Pin Assignment	**Wire Color**	**Directions**
1 – USB 5VDC		Connect a 1K resistor (1/2 watt) from Pin 1 to Pin 4
2 – Normally open relay contact	RED	Not used
3 – Common relay contact	BLACK	Jumper to Pin 5 (Ground)

CN5 Stop Motion Relay Output (Relay Contacts Only)		
Pin Assignment	**Wire Color**	**Directions**
1 – USB 5VDC		Not used
2 – Normally open relay contact	RED	
3 – Common relay contact	BLACK	
4 – Normally closed relay contact	WHITE	



Appendix A: LVS7500.CFG File

The LVS-7510 uses the LVS7500.cfg file to configure variable/default values when the program loads. The file is located in the following directory:

- For new installations of software version 20.1.X on Windows® 7 Professional and Windows® 8.1 Professional operating systems: C:\LvsData\LVS 7500
- For systems that are upgrading from a previous software version to version 20.1.X or higher:
  - **Windows® XP**: C:\Program Files\Label Vision Systems\LVS7500\LVS7500.cfg
  - **Windows® 7**: C:\Users\[User Login Name]\ AppData\Roaming\Label Vision Systems\LVS 7500\LVS7500.cfg

Below are sample LVS7500.cfg descriptions:

[Alarm (Background)]

Setting=Signal Duration
Default=100ms
Value=100ms
Choice=10ms
Choice=20ms
Choice=100ms
Choice=200ms
Choice=500ms
Choice=1 second
Choice=5 seconds
Choice=hold
Help=This specifies the signal duration. Use "hold" to require a manual reset.

Setting=Signal Output Line
Default=I/O line 3
Value=I/O line 3
Choice=I/O line 1
Choice=I/O line 2
Choice=I/O line 3
Choice=I/O line 4
Choice=I/O line 5
Choice=I/O line 6
Choice=I/O line 7
Choice=I/O line 8
Help=This sets the I/O line to activate for this error condition.
Help=The default value is I/O line 3, which corresponds to the red light.

Setting=StopMotion
Default=do not stop
Value=do not stop
Choice=do not stop
Choice=immediately
Choice=after 2 in a row
Choice=after 3 in a row
Choice=after 4 in a row
Choice=after 5 in a row
Choice=after 6 in a row
Choice=after 7 in a row

Choice=after 8 in a row
Choice=after 9 in a row
Choice=after 10 in a row
Help=This specifies if this error condition should also trigger activation of the stop motion signal.

[Alarm (Bypass mode)]

Setting=Signal Duration
Default=100ms
Value=100ms
Choice=10ms
Choice=20ms
Choice=100ms
Choice=200ms
Choice=500ms
Choice=1 second
Choice=5 seconds
Choice=hold
Help=This specifies the signal duration. Use "hold" to require a manual reset.

Setting=Signal Output Line
Default=I/O line 3
Value=I/O line 3
Choice=I/O line 1
Choice=I/O line 2
Choice=I/O line 3
Choice=I/O line 4
Choice=I/O line 5
Choice=I/O line 6
Choice=I/O line 7
Choice=I/O line 8
Help=This sets the I/O line to activate for this error condition.
Help=The default value is I/O line 3, which corresponds to the red light.

Setting=StopMotion
Default=do not stop
Value=do not stop
Choice=do not stop
Choice=immediately
Choice=after 2 in a row
Choice=after 3 in a row
Choice=after 4 in a row
Choice=after 5 in a row
Choice=after 6 in a row
Choice=after 7 in a row
Choice=after 8 in a row
Choice=after 9 in a row
Choice=after 10 in a row
Help=This specifies if this error condition should also trigger activation of the stop motion signal.

[Alarm (Check digit)]

Setting=Signal Duration
Default=100ms

Value=100ms
Choice=10ms
Choice=20ms
Choice=100ms
Choice=200ms
Choice=500ms
Choice=1 second
Choice=5 seconds
Choice=hold
Help=This specifies the signal duration. Use "hold" to require a manual reset.

Setting=Signal Output Line
Default=I/O line 3
Value=I/O line 3
Choice=I/O line 1
Choice=I/O line 2
Choice=I/O line 3
Choice=I/O line 4
Choice=I/O line 5
Choice=I/O line 6
Choice=I/O line 7
Choice=I/O line 8
Help=This sets the I/O line to activate for this error condition.
Help=The default value is I/O line 3, which corresponds to the red light.

Setting=StopMotion
Default=do not stop
Value=do not stop
Choice=do not stop
Choice=immediately
Choice=after 2 in a row
Choice=after 3 in a row
Choice=after 4 in a row
Choice=after 5 in a row
Choice=after 6 in a row
Choice=after 7 in a row
Choice=after 8 in a row
Choice=after 9 in a row
Choice=after 10 in a row
Help=This specifies if this error condition should also trigger activation of the stop motion signal.

[Alarm (Database engine)]

Setting=Signal Duration
Default=100ms
Value=100ms
Choice=10ms
Choice=20ms
Choice=100ms
Choice=200ms
Choice=500ms
Choice=1 second
Choice=5 seconds
Choice=hold

Help=This specifies the signal duration. Use "hold" to require a manual reset.

Setting=Signal Output Line
Default=I/O line 3
Value=I/O line 3
Choice=I/O line 1
Choice=I/O line 2
Choice=I/O line 3
Choice=I/O line 4
Choice=I/O line 5
Choice=I/O line 6
Choice=I/O line 7
Choice=I/O line 8
Help=This sets the I/O line to activate for this error condition.
Help=The default value is I/O line 3, which corresponds to the red light.

Setting=StopMotion
Default=immediately
Value=immediately
Choice=do not stop
Choice=immediately
Choice=after 2 in a row
Choice=after 3 in a row
Choice=after 4 in a row
Choice=after 5 in a row
Choice=after 6 in a row
Choice=after 7 in a row
Choice=after 8 in a row
Choice=after 9 in a row
Choice=after 10 in a row
Help=This specifies if this error condition should also trigger activation of the stop motion signal.

[Alarm (Delta E)]

Setting=Signal Duration
Default=100ms
Value=100ms
Choice=10ms
Choice=20ms
Choice=100ms
Choice=200ms
Choice=500ms
Choice=1 second
Choice=5 seconds
Choice=hold
Help=This specifies the signal duration. Use "hold" to require a manual reset.

Setting=Signal Output Line
Default=I/O line 3
Value=I/O line 3
Choice=I/O line 1
Choice=I/O line 2
Choice=I/O line 3
Choice=I/O line 4

Choice=I/O line 5
Choice=I/O line 6
Choice=I/O line 7
Choice=I/O line 8
Help=This sets the I/O line to activate for this error condition.
Help=The default value is I/O line 3, which corresponds to the red light.

Setting=StopMotion
Default=do not stop
Value=do not stop
Choice=do not stop
Choice=immediately
Choice=after 2 in a row
Choice=after 3 in a row
Choice=after 4 in a row
Choice=after 5 in a row
Choice=after 6 in a row
Choice=after 7 in a row
Choice=after 8 in a row
Choice=after 9 in a row
Choice=after 10 in a row
Help=This specifies if this error condition should also trigger activation of the stop motion signal.

[Alarm (Die cut)]

Setting=Signal Duration
Default=100ms
Value=100ms
Choice=10ms
Choice=20ms
Choice=100ms
Choice=200ms
Choice=500ms
Choice=1 second
Choice=5 seconds
Choice=hold
Help=This specifies the signal duration. Use "hold" to require a manual reset.

Setting=Signal Output Line
Default=I/O line 3
Value=I/O line 3
Choice=I/O line 1
Choice=I/O line 2
Choice=I/O line 3
Choice=I/O line 4
Choice=I/O line 5
Choice=I/O line 6
Choice=I/O line 7
Choice=I/O line 8
Help=This sets the I/O line to activate for this error condition.
Help=The default value is I/O line 3, which corresponds to the red light.

Setting=StopMotion
Default=do not stop

Value=do not stop
Choice=do not stop
Choice=immediately
Choice=after 2 in a row
Choice=after 3 in a row
Choice=after 4 in a row
Choice=after 5 in a row
Choice=after 6 in a row
Choice=after 7 in a row
Choice=after 8 in a row
Choice=after 9 in a row
Choice=after 10 in a row
Help=This specifies if this error condition should also trigger activation of the stop motion signal.

[Alarm (Duplicate)]

Setting=Signal Duration
Default=100ms
Value=100ms
Choice=10ms
Choice=20ms
Choice=100ms
Choice=200ms
Choice=500ms
Choice=1 second
Choice=5 seconds
Choice=hold
Help=This specifies the signal duration. Use "hold" to require a manual reset.

Setting=Signal Output Line
Default=I/O line 3
Value=I/O line 3
Choice=I/O line 1
Choice=I/O line 2
Choice=I/O line 3
Choice=I/O line 4
Choice=I/O line 5
Choice=I/O line 6
Choice=I/O line 7
Choice=I/O line 8
Help=This sets the I/O line to activate for this error condition.
Help=The default value is I/O line 3, which corresponds to the red light.

Setting=StopMotion
Default=do not stop
Value=do not stop
Choice=do not stop
Choice=immediately
Choice=after 2 in a row
Choice=after 3 in a row
Choice=after 4 in a row
Choice=after 5 in a row
Choice=after 6 in a row
Choice=after 7 in a row

Choice=after 8 in a row
Choice=after 9 in a row
Choice=after 10 in a row
Help=This specifies if this error condition should also trigger activation of the stop motion signal.

[Alarm (Foreground)]

Setting=Signal Duration
Default=100ms
Value=100ms
Choice=10ms
Choice=20ms
Choice=100ms
Choice=200ms
Choice=500ms
Choice=1 second
Choice=5 seconds
Choice=hold
Help=This specifies the signal duration. Use "hold" to require a manual reset.

Setting=Signal Output Line
Default=I/O line 3
Value=I/O line 3
Choice=I/O line 1
Choice=I/O line 2
Choice=I/O line 3
Choice=I/O line 4
Choice=I/O line 5
Choice=I/O line 6
Choice=I/O line 7
Choice=I/O line 8
Help=This sets the I/O line to activate for this error condition.
Help=The default value is I/O line 3, which corresponds to the red light.

Setting=StopMotion
Default=do not stop
Value=do not stop
Choice=do not stop
Choice=immediately
Choice=after 2 in a row
Choice=after 3 in a row
Choice=after 4 in a row
Choice=after 5 in a row
Choice=after 6 in a row
Choice=after 7 in a row
Choice=after 8 in a row
Choice=after 9 in a row
Choice=after 10 in a row
Help=This specifies if this error condition should also trigger activation of the stop motion signal.

[Alarm (Gap)]

Setting=Signal Duration
Default=100ms

Value=100ms
Choice=10ms
Choice=20ms
Choice=100ms
Choice=200ms
Choice=500ms
Choice=1 second
Choice=5 seconds
Choice=hold
Help=This specifies the signal duration. Use "hold" to require a manual reset.

Setting=Signal Output Line
Default=I/O line 3
Value=I/O line 3
Choice=I/O line 1
Choice=I/O line 2
Choice=I/O line 3
Choice=I/O line 4
Choice=I/O line 5
Choice=I/O line 6
Choice=I/O line 7
Choice=I/O line 8
Help=This sets the I/O line to activate for this error condition.
Help=The default value is I/O line 3, which corresponds to the red light.

Setting=StopMotion
Default=do not stop
Value=do not stop
Choice=do not stop
Choice=immediately
Choice=after 2 in a row
Choice=after 3 in a row
Choice=after 4 in a row
Choice=after 5 in a row
Choice=after 6 in a row
Choice=after 7 in a row
Choice=after 8 in a row
Choice=after 9 in a row
Choice=after 10 in a row
Help=This specifies if this error condition should also trigger activation of the stop motion signal.

[Alarm (Good read)]

Setting=Signal Duration
Default=100ms
Value=100ms
Choice=10ms
Choice=20ms
Choice=100ms
Choice=200ms
Choice=500ms
Choice=1 second
Choice=5 seconds
Help=This specifies the signal duration.

Setting=Signal Output Line
Default=I/O line 1
Value=I/O line 1
Choice=I/O line 1
Choice=I/O line 2
Choice=I/O line 3
Choice=I/O line 4
Choice=I/O line 5
Choice=I/O line 6
Choice=I/O line 7
Choice=I/O line 8
Help=This sets the I/O line to activate for this condition.
Help=The default value is I/O line 1, which corresponds to the green light.

Setting=StopMotion
Default=
Value=
Choice=
Help=Stop motion does not apply to this condition.

[Alarm (Grade warning)]

Setting=Signal Duration
Default=100ms
Value=100ms
Choice=10ms
Choice=20ms
Choice=100ms
Choice=200ms
Choice=500ms
Choice=1 second
Choice=5 seconds
Help=This specifies the signal duration.

Setting=Signal Output Line
Default=I/O line 2
Value=I/O line 2
Choice=I/O line 1
Choice=I/O line 2
Choice=I/O line 3
Choice=I/O line 4
Choice=I/O line 5
Choice=I/O line 6
Choice=I/O line 7
Choice=I/O line 8
Help=This sets the I/O line to activate for this error condition.
Help=The default value is I/O line 2, which corresponds to the yellow light.

Setting=StopMotion
Default=
Value=
Choice=

Help=Stop motion does not apply to this condition.

[Alarm (Matrix)]

Setting=Signal Duration
Default=100ms
Value=100ms
Choice=10ms
Choice=20ms
Choice=100ms
Choice=200ms
Choice=500ms
Choice=1 second
Choice=5 seconds
Choice=hold
Help=This specifies the signal duration. Use "hold" to require a manual reset.

Setting=Signal Output Line
Default=I/O line 3
Value=I/O line 3
Choice=I/O line 1
Choice=I/O line 2
Choice=I/O line 3
Choice=I/O line 4
Choice=I/O line 5
Choice=I/O line 6
Choice=I/O line 7
Choice=I/O line 8
Help=This sets the I/O line to activate for this error condition.
Help=The default value is I/O line 3, which corresponds to the red light.

Setting=StopMotion
Default=do not stop
Value=do not stop
Choice=do not stop
Choice=immediately
Choice=after 2 in a row
Choice=after 3 in a row
Choice=after 4 in a row
Choice=after 5 in a row
Choice=after 6 in a row
Choice=after 7 in a row
Choice=after 8 in a row
Choice=after 9 in a row
Choice=after 10 in a row
Help=This specifies if this error condition should also trigger activation of the stop motion signal.

[Alarm (Mismatch)]

Setting=Signal Duration
Default=100ms
Value=100ms
Choice=10ms
Choice=20ms

Choice=100ms
Choice=200ms
Choice=500ms
Choice=1 second
Choice=5 seconds
Choice=hold
Help=This specifies the signal duration. Use "hold" to require a manual reset.

Setting=Signal Output Line
Default=I/O line 3
Value=I/O line 3
Choice=I/O line 1
Choice=I/O line 2
Choice=I/O line 3
Choice=I/O line 4
Choice=I/O line 5
Choice=I/O line 6
Choice=I/O line 7
Choice=I/O line 8
Help=This sets the I/O line to activate for this error condition.
Help=The default value is I/O line 3, which corresponds to the red light.

Setting=StopMotion
Default=do not stop
Value=do not stop
Choice=do not stop
Choice=immediately
Choice=after 2 in a row
Choice=after 3 in a row
Choice=after 4 in a row
Choice=after 5 in a row
Choice=after 6 in a row
Choice=after 7 in a row
Choice=after 8 in a row
Choice=after 9 in a row
Choice=after 10 in a row
Help=This specifies if this error condition should also trigger activation of the stop motion signal.

[Alarm (No read)]

Setting=Signal Duration
Default=100ms
Value=100ms
Choice=10ms
Choice=20ms
Choice=100ms
Choice=200ms
Choice=500ms
Choice=1 second
Choice=5 seconds
Choice=hold
Help=This specifies the signal duration. Use "hold" to require a manual reset.

Setting=Signal Output Line

Default=I/O line 3
Value=I/O line 3
Choice=I/O line 1
Choice=I/O line 2
Choice=I/O line 3
Choice=I/O line 4
Choice=I/O line 5
Choice=I/O line 6
Choice=I/O line 7
Choice=I/O line 8
Help=This sets the I/O line to activate for this error condition.
Help=The default value is I/O line 3, which corresponds to the red light.

Setting=StopMotion
Default=do not stop
Value=do not stop
Choice=do not stop
Choice=immediately
Choice=after 2 in a row
Choice=after 3 in a row
Choice=after 4 in a row
Choice=after 5 in a row
Choice=after 6 in a row
Choice=after 7 in a row
Choice=after 8 in a row
Choice=after 9 in a row
Choice=after 10 in a row
Help=This specifies if this error condition should also trigger activation of the stop motion signal.

[Alarm (Not assessed)]

Setting=Signal Duration
Default=100ms
Value=100ms
Choice=10ms
Choice=20ms
Choice=100ms
Choice=200ms
Choice=500ms
Choice=1 second
Choice=5 seconds
Choice=hold
Help=This specifies the signal duration. Use "hold" to require a manual reset.

Setting=Signal Output Line
Default=I/O line 3
Value=I/O line 3
Choice=I/O line 1
Choice=I/O line 2
Choice=I/O line 3
Choice=I/O line 4
Choice=I/O line 5
Choice=I/O line 6
Choice=I/O line 7

Choice=I/O line 8
Help=This sets the I/O line to activate for this error condition.
Help=The default value is I/O line 3, which corresponds to the red light.

Setting=StopMotion
Default=do not stop
Value=do not stop
Choice=do not stop
Choice=immediately
Choice=after 2 in a row
Choice=after 3 in a row
Choice=after 4 in a row
Choice=after 5 in a row
Choice=after 6 in a row
Choice=after 7 in a row
Choice=after 8 in a row
Choice=after 9 in a row
Choice=after 10 in a row
Help=This specifies if this error condition should also trigger activation of the stop motion signal.

[Alarm (Not synced)]

Setting=Signal Duration
Default=100ms
Value=100ms
Choice=10ms
Choice=20ms
Choice=100ms
Choice=200ms
Choice=500ms
Choice=1 second
Choice=5 seconds
Choice=hold
Help=This specifies the signal duration. Use "hold" to require a manual reset.

Setting=Signal Output Line
Default=I/O line 3
Value=I/O line 3
Choice=I/O line 1
Choice=I/O line 2
Choice=I/O line 3
Choice=I/O line 4
Choice=I/O line 5
Choice=I/O line 6
Choice=I/O line 7
Choice=I/O line 8
Help=This sets the I/O line to activate for this error condition.
Help=The default value is I/O line 3, which corresponds to the red light.

Setting=StopMotion
Default=do not stop
Value=do not stop
Choice=do not stop
Choice=immediately

Choice=after 2 in a row
Choice=after 3 in a row
Choice=after 4 in a row
Choice=after 5 in a row
Choice=after 6 in a row
Choice=after 7 in a row
Choice=after 8 in a row
Choice=after 9 in a row
Choice=after 10 in a row
Help=This specifies if this error condition should also trigger activation of the stop motion signal.

[Alarm (Quality)]

Setting=Signal Duration
Default=100ms
Value=100ms
Choice=10ms
Choice=20ms
Choice=100ms
Choice=200ms
Choice=500ms
Choice=1 second
Choice=5 seconds
Choice=hold
Help=This specifies the signal duration. Use "hold" to require a manual reset.

Setting=Signal Output Line
Default=I/O line 3
Value=I/O line 3
Choice=I/O line 1
Choice=I/O line 2
Choice=I/O line 3
Choice=I/O line 4
Choice=I/O line 5
Choice=I/O line 6
Choice=I/O line 7
Choice=I/O line 8
Help=This sets the I/O line to activate for this error condition.
Help=The default value is I/O line 3, which corresponds to the red light.

Setting=StopMotion
Default=do not stop
Value=do not stop
Choice=do not stop
Choice=immediately
Choice=after 2 in a row
Choice=after 3 in a row
Choice=after 4 in a row
Choice=after 5 in a row
Choice=after 6 in a row
Choice=after 7 in a row
Choice=after 8 in a row
Choice=after 9 in a row
Choice=after 10 in a row

Help=This specifies if this error condition should also trigger activation of the stop motion signal.

[Alarm (Range)]

Setting=Signal Duration
Default=100ms
Value=100ms
Choice=10ms
Choice=20ms
Choice=100ms
Choice=200ms
Choice=500ms
Choice=1 second
Choice=5 seconds
Choice=hold
Help=This specifies the signal duration. Use "hold" to require a manual reset.

Setting=Signal Output Line
Default=I/O line 3
Value=I/O line 3
Choice=I/O line 1
Choice=I/O line 2
Choice=I/O line 3
Choice=I/O line 4
Choice=I/O line 5
Choice=I/O line 6
Choice=I/O line 7
Choice=I/O line 8
Help=This sets the I/O line to activate for this error condition.
Help=The default value is I/O line 3, which corresponds to the red light.

Setting=StopMotion
Default=do not stop
Value=do not stop
Choice=do not stop
Choice=immediately
Choice=after 2 in a row
Choice=after 3 in a row
Choice=after 4 in a row
Choice=after 5 in a row
Choice=after 6 in a row
Choice=after 7 in a row
Choice=after 8 in a row
Choice=after 9 in a row
Choice=after 10 in a row
Help=This specifies if this error condition should also trigger activation of the stop motion signal.

[Alarm (Sequence)]

Setting=Signal Duration
Default=100ms
Value=100ms
Choice=10ms
Choice=20ms

Choice=100ms
Choice=200ms
Choice=500ms
Choice=1 second
Choice=5 seconds
Choice=hold
Help=This specifies the signal duration. Use "hold" to require a manual reset.

Setting=Signal Output Line
Default=I/O line 3
Value=I/O line 3
Choice=I/O line 1
Choice=I/O line 2
Choice=I/O line 3
Choice=I/O line 4
Choice=I/O line 5
Choice=I/O line 6
Choice=I/O line 7
Choice=I/O line 8
Help=This sets the I/O line to activate for this error condition.
Help=The default value is I/O line 3, which corresponds to the red light.

Setting=StopMotion
Default=do not stop
Value=do not stop
Choice=do not stop
Choice=immediately
Choice=after 2 in a row
Choice=after 3 in a row
Choice=after 4 in a row
Choice=after 5 in a row
Choice=after 6 in a row
Choice=after 7 in a row
Choice=after 8 in a row
Choice=after 9 in a row
Choice=after 10 in a row
Help=This specifies if this error condition should also trigger activation of the stop motion signal.

[Alarm (Stop motion)]

Setting=Signal Duration
Default=100ms
Value=100ms
Choice=10ms
Choice=20ms
Choice=100ms
Choice=200ms
Choice=500ms
Choice=1 second
Choice=5 seconds
Choice=hold
Help=This specifies the signal duration. Use "hold" to require a manual reset.

Setting=Signal Output Line

Default=I/O line 4
Value=I/O line 4
Choice=I/O line 1
Choice=I/O line 2
Choice=I/O line 3
Choice=I/O line 4
Choice=I/O line 5
Choice=I/O line 6
Choice=I/O line 7
Choice=I/O line 8
Help=This sets the I/O line to activate for this error condition.
Help=The default value is I/O line 4, which corresponds to the blue light.

Setting=StopMotion
Default=
Value=
Choice=

[Alarm (Wrong length)]

Setting=Signal Duration
Default=100ms
Value=100ms
Choice=10ms
Choice=20ms
Choice=100ms
Choice=200ms
Choice=500ms
Choice=1 second
Choice=5 seconds
Choice=hold
Help=This specifies the signal duration. Use "hold" to require a manual reset.

Setting=Signal Output Line
Default=I/O line 3
Value=I/O line 3
Choice=I/O line 1
Choice=I/O line 2
Choice=I/O line 3
Choice=I/O line 4
Choice=I/O line 5
Choice=I/O line 6
Choice=I/O line 7
Choice=I/O line 8
Help=This sets the I/O line to activate for this error condition.
Help=The default value is I/O line 3, which corresponds to the red light.

Setting=StopMotion
Default=do not stop
Value=do not stop
Choice=do not stop
Choice=immediately
Choice=after 2 in a row
Choice=after 3 in a row

Choice=after 4 in a row
Choice=after 5 in a row
Choice=after 6 in a row
Choice=after 7 in a row
Choice=after 8 in a row
Choice=after 9 in a row
Choice=after 10 in a row
Help=This specifies if this error condition should also trigger activation of the stop motion signal.

[Alarm matrix]

Setting=StackLightDuration
Default=0
Value=0

Setting=UsePassFailMethod
Default=0
Value=0

[ApertureGrading]

Setting=ApertureScaling1D
Default=1.0
Value=1.0
Help=The aperture settings are used to calculate barcode grading.
Help=These should not be changed by a customer unless requested by a qualified Label Vision Systems representative.
Setting=ApertureScaling2D
Default=1.0
Value=1.0
Help=The aperture settings are used to calculate barcode grading.
Help=These should not be changed by a customer unless requested by a qualified Label Vision Systems representative.

Setting=IgnoreGS1Rules
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON
Help=The aperture settings are used to calculate barcode grading.
Help=These should not be changed by a customer unless requested by a qualified Label Vision Systems representative.

Setting=SharpenMatrixSize
Default=9
Value=9
Help=The aperture settings are used to calculate barcode grading.
Help=These should not be changed by a customer unless requested by a qualified Label Vision Systems representative.

Setting=SharpenValue
Default=45
Value=45
Help=The aperture settings are used to calculate barcode grading.

Help=These should not be changed by a customer unless requested by a qualified Label Vision Systems representative.

[ApertureReading]

Setting=ApertureScaling1D
Default=1.0
Value=1.0
Help=The aperture settings are used to calculate barcode grading.
Help=These should not be changed by a customer unless requested by a qualified Label Vision Systems representative.

Setting=ApertureScaling2D
Default=1.0
Value=1.0
Help=The aperture settings are used to calculate barcode grading.
Help=These should not be changed by a customer unless requested by a qualified Label Vision Systems representative.

Setting=IgnoreGS1Rules
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON
Help=The aperture settings are used to calculate barcode grading.
Help=These should not be changed by a customer unless requested by a qualified Label Vision Systems representative.

Setting=SharpenMatrixSize
Default=9
Value=9
Help=The aperture settings are used to calculate barcode grading.
Help=These should not be changed by a customer unless requested by a qualified Label Vision Systems representative.

Setting=SharpenValue
Default=45
Value=45
Help=The aperture settings are used to calculate barcode grading.
Help=These should not be changed by a customer unless requested by a qualified Label Vision Systems representative.

[Basic]

Setting=ColorMode
Default=0=monochrome
Value=0=monochrome
Choice=0=monochrome
Help=This setting must match the installed camera technology type.

Setting=DistanceMethod
Default=1=inches
Value=1=inches
Choice=0=encoder ticks

Choice=1=inches
Choice=12=feet
Help=Reports show distances using the units selected here.

Setting=EncoderPort
Default=-1=USB light tower / stop motion
Value=-1=USB light tower / stop motion
Choice=0=no light tower / stop motion
Choice=-1=USB light tower / stop motion
Choice=-2=Printronix printer with USB light tower / stop motion
Choice=-3=Printronix printer without USB light tower / stop motion
Help=EncoderPort is determined by the encoder board's serial port in Device Manager.

Setting=LinesPerInch
Default=400
Value=400
Help=This setting must match the FOV of the installed camera.

Setting=MaxSpeed
Default=30
Value=30
Help=This is the top speed of the camera in KHz.
Help=The default value of 30 means the camera can run at up to 30 KHz or 30,000 lines/second.

Setting=PageBreaks
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON
Help=PageBreaks are used to let the system know if there are expected nonuniformities of label repeats.
Help=0 means none expected, and 1 means expected.
Help=If the system expects these repeats then it will not log those as errors once seen.
Help=This is dangerous as the system DOES NOT REPORT MISSING LABELS in this configuration.

Setting=PressID
Default=0
Value=0
Help=PressID is the press Identifier for multiple presses in a Microscan 7000 RIMS system.
Help=This must be an Alpha Charater (A-Z).

Setting=RimsBarcodePlacementOffsetDistance
Default=0
Value=0
Help=RIMSBarcodePlacementOffsetDistance is an offset for the barcode placement in a LVS7000 RIMS system from the camera viewing point.

[Blemish]

Setting=BlemishDebug
Default=0=off
Value=0=off
Choice=0=off
Choice=1=save failed images
Choice=2=save all images

Setting=FloodDiff
Default=2.0
Value=2.0

Setting=FloodSize
Default=2
Value=2

Setting=MaxErrorsBeforeQuit
Default=50
Value=50
Help=When a given sector reaches more than the number of errors defined in this field, the Microscan 7000 stops reporting the errors.
Help=For example, if MaxErrorsBeforeQuit=20, the Microscan 7000 stops reporting errors after a given sector reaches 20 errors.
Help=NOTE: This value is configurable; however, the value must limited to keep from causing processing overflow.

Setting=MaxThumbnailsPerSector
Default=4
Value=4
Help=MaxThumbnailsPerSector limits how many thumbnails are used for a single Blemish sector's errors.

Setting=ScrollMax
Default=0.125
Value=0.125
Help=ScrollMax controls the maximum size range of the blemish.
Help=Value is in inches.

Setting=ShowDieCutCrossHatch
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON
Help=tbd

Setting=ShowMatrixDieCutControls
Default=0
Value=0
Help=ShowMatrixDieCutControls is used to make the sensitivity controls for Matrix and Die Cut available during setup.
Setting=TargetDPI
Default=204.8
Value=204.8
Help=TargetDPI is used for Blemish quality.
Help=Lower settings help the system to run faster but fewer errors are found.
Help=Higher settings slow the system but more errors will be found.
Help=It is advised to leave this setting as is unless instructed by an Microscan representative.
Help=This should be changed to a straight reduction factor number. None,2,3,4,5,6,7,8 ect...

Setting=UseAreas
Default=0=off
Value=0=off

Choice=0=off
Choice=1=ON
Help=When the UseAreas feature is turned on, you can define separate rules for each area.

Setting=UseSpots
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON
Help=When the UseSpots feature is turned on, you can define a number of "violations" of the blemish size to allow.
Help=Regardless of the setting, any single error that is larger than double the allowed size will cause a failure.

Setting=WanderX
Default=6
Value=6
Help=Wander is used to align pixels within the Blemish sector FOREGROUND Only.
Help=It will hunt for the best matching pixel values in an array size equal to the WanderX,Y value.
Help=WanderX controls horizontal motion.

Setting=WanderY
Default=6
Value=6
Help=Wander is used to align pixels within the Blemish sector FOREGROUND Only.
Help=It will hunt for the best matching pixel values in an array size equal to the WanderX,Y value.
Help=WanderY controls vertical motion.
[Blemish area rule 1]

Setting=AllowedSpots
Default=0
Value=0
Choice=0
Choice=1
Choice=2
Choice=3
Choice=4
Choice=5
Choice=6
Choice=7
Choice=8
Choice=9

Setting=BackgroundSensitivity
Default=80
Value=80
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=BackgroundSize
Default=0.020
Value=0.020
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=DieCutSensitivity
Default=50

Value=50
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=DieCutTolerance
Default=0.080
Value=0.080
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=ForegroundSensitivity
Default=80
Value=80
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=ForegroundSize
Default=0.015
Value=0.015
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=MatrixSensitivity
Default=25
Value=25
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=MatrixSize
Default=0.06
Value=0.06
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=Separation
Default=80
Value=80
Help=Separation is used to differentiate the Foreground from the Background.
Help=Increasing this number will define more print as Foreground and less as Background.
Help=Decreasing this number will define more of the label as Background and less as Foreground.
Help=A sensitivity of 0 will call everything Background and 100 will call everything Foreground.

[Blemish area rule 2]

Setting=AllowedSpots
Default=0
Value=0
Choice=0
Choice=1
Choice=2
Choice=3
Choice=4
Choice=5
Choice=6
Choice=7
Choice=8
Choice=9

Setting=BackgroundSensitivity
Default=50

Value=50
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=BackgroundSize
Default=0.024
Value=0.024
Help=This is the default value for a Blemish setting in the Microscan 7000 software.
Setting=DieCutSensitivity
Default=50
Value=50
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=DieCutTolerance
Default=0.039
Value=0.039
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=ForegroundSensitivity
Default=65
Value=65
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=ForegroundSize
Default=0.015
Value=0.015
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=MatrixSensitivity
Default=25
Value=25
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=MatrixSize
Default=0.06
Value=0.06
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=Separation
Default=80
Value=80
Help=Separation is used to differentiate the Foreground from the Background.
Help=Increasing this number will define more print as Foreground and less as Background.
Help=Decreasing this number will define more of the label as Background and less as Foreground.
Help=A sensitivity of 0 will call everything Background and 100 will call everything Foreground.

[Blemish area rule 3]

Setting=AllowedSpots
Default=0
Value=0
Choice=0
Choice=1
Choice=2
Choice=3

Choice=4
Choice=5
Choice=6
Choice=7
Choice=8
Choice=9

Setting=BackgroundSensitivity
Default=50
Value=50
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=BackgroundSize
Default=0.024
Value=0.024
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=DieCutSensitivity
Default=50
Value=50
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=DieCutTolerance
Default=0.039
Value=0.039
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=ForegroundSensitivity
Default=65
Value=65
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=ForegroundSize
Default=0.015
Value=0.015
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=MatrixSensitivity
Default=25
Value=25
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=MatrixSize
Default=0.06
Value=0.06
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=Separation
Default=80
Value=80
Help=Separation is used to differentiate the Foreground from the Background.
Help=Increasing this number will define more print as Foreground and less as Background.
Help=Decreasing this number will define more of the label as Background and less as Foreground.
Help=A sensitivity of 0 will call everything Background and 100 will call everything Foreground.

[Blemish area rule 4]

Setting=AllowedSpots
Default=0
Value=0
Choice=0
Choice=1
Choice=2
Choice=3
Choice=4
Choice=5
Choice=6
Choice=7
Choice=8
Choice=9

Setting=BackgroundSensitivity
Default=50
Value=50
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=BackgroundSize
Default=0.024
Value=0.024
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=DieCutSensitivity
Default=50
Value=50
Help=This is the default value for a Blemish setting in the Microscan 7000 software.
Setting=DieCutTolerance
Default=0.039
Value=0.039
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=ForegroundSensitivity
Default=65
Value=65
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=ForegroundSize
Default=0.015
Value=0.015
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=MatrixSensitivity
Default=25
Value=25
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=MatrixSize
Default=0.06
Value=0.06

Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=Separation
Default=80
Value=80
Help=Separation is used to differentiate the Foreground from the Background.
Help=Increasing this number will define more print as Foreground and less as Background.
Help=Decreasing this number will define more of the label as Background and less as Foreground.
Help=A sensitivity of 0 will call everything Background and 100 will call everything Foreground.

[Blemish area rule 5]

Setting=AllowedSpots
Default=0
Value=0
Choice=0
Choice=1
Choice=2
Choice=3
Choice=4
Choice=5
Choice=6
Choice=7
Choice=8
Choice=9

Setting=BackgroundSensitivity
Default=50
Value=50
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=BackgroundSize
Default=0.024
Value=0.024
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=DieCutSensitivity
Default=50
Value=50
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=DieCutTolerance
Default=0.039
Value=0.039
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=ForegroundSensitivity
Default=65
Value=65
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=ForegroundSize
Default=0.015
Value=0.015

Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=MatrixSensitivity
Default=25
Value=25
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=MatrixSize
Default=0.06
Value=0.06
Help=This is the default value for a Blemish setting in the Microscan 7000 software.

Setting=Separation
Default=80
Value=80
Help=Separation is used to differentiate the Foreground from the Background.
Help=Increasing this number will define more print as Foreground and less as Background.
Help=Decreasing this number will define more of the label as Background and less as Foreground.
Help=A sensitivity of 0 will call everything Background and 100 will call everything Foreground.

[Calibration]

Setting=Barcodes
Default=0
Value=0
Help=Barcodes is the minimum number of barcodes that must be present on the Calibration screen to complete calibration.

Setting=CalibrationFrequency
Default=0
Value=0
Help=This number is customer configurable.
Help=It will make the operator calibrate the system after "X" amount of days.

Setting=Data
Default=012345678905
Value=012345678905
Help=This should match the value on the calibration card.

Setting=LastDate
Default=
Value=

Setting=MaxDaysBeforeRequired
Default=0
Value=0

Setting=MaxWhite
Default=99
Value=99
Help=MaxWhite is the highest reflectance value allowed when shining the light on the designated white standard.
Help=This is the top of the green bar seen during the calibration procedure.

Setting=MilsPerPixel
Default=2
Value=2
Help=This value is set by the computer during the calibration process. It is not user configurable, so doesn't need to be presented.

Setting=MinOverall
Default=0.0
Value=0.0
Help=This is the minimum overall grade of any barcode used to calibrate.

Setting=MinWhite
Default=75
Value=75
Help=MinWhite is the minimum reflectance value allowed when shining the light on the designated white standard.
Help=This is the bottom of the green bar seen during the calibration procedure.

Setting=Rmax
Default=89
Value=89
Help=This should match the value on the calibration card.

Setting=Rmin
Default=5
Value=5
Help=This should match the value on the calibration card.

Setting=SmoothGraininess
Default=40
Value=40

Setting=Xdim
Default=21.3
Value=21.3
Help=This should match the value on the calibration card.

[Camera]

Setting=CalSpeed
Default=44
Value=44

Setting=Flip
Default=1=ON
Value=1=ON
Choice=0=off
Choice=1=ON

[CartonTracking]

Setting=CloseEnoughAngle
Default=0.05
Value=0.05

Setting=CollectDevImages
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON

Setting=MaxAngle
Default=3
Value=3

Setting=RamPath
Default=
Value=

Setting=SolidTriangleSize
Default=0.25
Value=0.25

[CharSet]

Setting=AlphaNumeric
Default=ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789
Value=ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789
Help=The CharSet parameters are for OCR/OCV and are customer configurable.
Help=They dictate which characters are to be used or omitted within a sequential number system.

Setting=Numeric
Default=0123456789
Value=0123456789
Help=The CharSet parameters are for OCR/OCV and are customer configurable.
Help=They dictate which characters are to be used or omitted within a sequential number system.

Setting=NumericAlpha
Default=0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ
Value=0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ
Help=The CharSet parameters are for OCR/OCV and are customer configurable.
Help=They dictate which characters are to be used or omitted within a sequential number system.

[Color]

Setting=BalanceMatrix
Default=3
Value=3
Choice=0
Choice=1
Choice=2
Choice=3

Setting=BayerPatternMatrix
Default=3
Value=3
Help=The Bayer Color pattern sequence readout for decoding color value.
Help=These settings should only be configured by an Microscan technician.

Setting=BlueBalance
Default=1.00
Value=1.00
Help=The Color parameters are the Red, Green and Blue values calculated during white balance calibration.
Help=These settings should only be configured by an Microscan technician.

Setting=BlueTarget
Default=250
Value=250

Setting=GreenBalance
Default=1.00
Value=1.00
Help=The Color parameters are the Red, Green and Blue values calculated during white balance calibration.
Help=These settings should only be configured by an Microscan technician.

Setting=GreenTarget
Default=250
Value=250

Setting=RedBalance
Default=1.00
Value=1.00
Help=The Color parameters are the Red, Green and Blue values calculated during white balance calibration.
Help=These settings should only be configured by an Microscan technician.

Setting=RedTarget
Default=250
Value=250

Setting=RGBGGain
Default=1
Value=1

[Database]

Setting=ConnectionString
Default=Provider=Microsoft.Jet.OLEDB.4.0;Data Source="%.mdb"
Value=Provider=Microsoft.Jet.OLEDB.4.0;Data Source="%.mdb"
Help=This lists the connection string of the database being used.
Help=Put the mySQL default string we intend to use.

Setting=Jobname
Default=
Value=

Setting=LimitDuplicateCheckingSize
Default=0
Value=0

[Debug]

Setting=Mode

Default=0
Value=0
Help=This needs more description

[Display]

Setting=Rotate
Default=0
Value=0

[Encoder]

Setting=AcceptReplaceOutputString
Default=G10250
Value=G10250
Help=AcceptReplaceOutputString defines the output signal sent when the "Accept" or "Replace" buttons are selected when reviewing errors on the Operate screen.

Setting=ArrowOffset
Default=0
Value=0
Help=ArrowOffset should not be altered as this is a result of changing the arrow's position when using the ShowRollerOnReverse feature.

Setting=AutoRejectDistance
Default=0
Value=0

Setting=CameraToInspection
Default=100
Value=100
Help=CameraToInspection is the distance from the camera to the downstream inspection table.

Setting=CommandLine
Default=
Value=

Setting=EnableRunStatusOnMakeReady
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON

Setting=EncoderDirection
Default=0=forward
Value=0=forward
Choice=0=forward
Choice=1=reverse

Setting=OverrideLine
Default=0
Value=0
Help=The OverrideLine setting is used if a customer requires one of the I/O ports to change states at program start up.

Help=It will hold this line high until the program is closed.
Help=Most commonly used as a handshaking to a rewinder.
Help=Multiple ports can be triggered by adding the numbers into a string.
Help=345 would activate ports (3), (4), (5) at software start up.

Setting=Preset
Default=0
Value=0
Help=Preset is the default starting location of the encoder pulse count.

Setting=RampDown1
Default=0
Value=0

Setting=RampDown2
Default=0
Value=0

Setting=RampDown3
Default=0
Value=0

Setting=RegradeOnReverse
Default=0=do not regrade previously inspected labels
Value=0=do not regrade previously inspected labels
Choice=0=do not regrade previously inspected labels
Choice=1=regrade any previously inspected labels that were Replaced
Choice=2=regrade all previously inspected labels
Choice=3=regrade all previously inspected labels that were not Accepted
Choice=4=supports Mode 1 and Mode 2 reversal
Help=RegradeOnReverse tells the software if labels needs to be re-graded when a Rewinder winds the labels back to a point then forward again.

Setting=SetCPRMode
Default=0=pulses per revolution
Value=0=pulses per revolution
Choice=0=pulses per revolution
Choice=1=cycles per revolution
Help=SetCPRMode enables the system to switch between encoder cycles per revolution and pulses per revolution

Setting=SetRunStatusOnSetup
Default=0
Value=0

Setting=SetRunStatusOutput
Default=0
Value=0

Setting=ShowRollerOnReverse
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON

Help=ShowRollerOnReverse determines if a Roll-to-Roll will be displayed when running in reverse.
Help=0 means show the actual image when running.
Help=1 means show the Roll-to-Roll image when running in reverse.

Setting=SimulateStopMotion
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON

Setting=SpliceToCamera
Default=100
Value=100
Help=SpliceToCamera is the distance from the camera to the upstream splice table.

Setting=StopLoggingOnError
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON
Help=When this feature is on, then when a single error occurs, all logging stops until the rewinder is backed up.
Help=Then, the Microscan 7000 re-inspects the label after it moves back under the camera and continues logging from that point.

Setting=StopMotionDelay
Default=40
Value=40
Help=This is the minimum allowed distance that Label Vision Systems has determined that the Stop Motion Output signal can be sent without missing any outputs.
Help=This should not be changed unless instructed by a qualified Label Vision Systems representative.

Setting=UseVSyncInput
Default=0
Value=0

[Grading]

Setting=AutoSetupGrade1D
Default=1=grade 1D barcodes
Value=1=grade 1D barcodes
Choice=0=read 1D barcodes
Choice=1=grade 1D barcodes

Setting=AutoSetupGrade2D
Default=1=grade 2D barcodes
Value=1=grade 2D barcodes
Choice=0=read 2D barcodes
Choice=1=grade 2D barcodes

Setting=DeductForBlemish
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON

Setting=LightFrequency
Default=0=red light (660nm)
Value=0=red light (660nm)
Choice=0=red light (660nm)
Choice=1=white light

Setting=MaxDecodesToGrade
Default=10
Value=10
Help=MaxDecodesToGrade is the amount of decodable scan lines it takes to grade a barcode.
Help=ANSI standards require at least 10 lines.

Setting=MinimumPassScore
Default=1.5
Value=1.5
Help=MinimumPassScore activates an error signal and logs an error in the log.

Setting=MinimumWarningScore
Default=0
Value=0
Help=MinimumWarningScore activates a warning that alerts an operator without generating an error in the log.
Help=This value is user configurable.

Setting=Override1DAperture
Default=0
Value=0

[ImageSaver]

Setting=DumpColorSlabPath
Default=
Value=

Setting=Path
Default=
Value=
Help=This is a path to be specified to store images to.
Help=A target folder must be made and the path to that target folder is to be put directly after the path=.
Help=As an example Path=C:\Images would need a folder called Images under the C:\ drive.
Help=It will store all incoming images to that directory.
Help=This will show a Pop up window reminding the operator that it was set as it will consume massive processing power and HDD space if left with a path specified.

Setting=Range
Default=
Value=

Setting=SaveLabelRepeat
Default=0
Value=0
Help=0 means save every unsynchronized label.
Help=1 means save every synchronized label
Help=2,3,4,5 mean save every label multiple of (ex 2 every other, 3 every third,…etc) synchronized.

[JobQRCode]

Setting=Debug
Default=0
Value=0

Setting=Enabled
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON

Setting=MaxCodeSize
Default=0.5
Value=0.5
Setting=MinCodeSize
Default=0.3
Value=0.3

Setting=ScanHeight
Default=1
Value=1

Setting=ScanWidth
Default=0
Value=0

Setting=StartScan
Default=0
Value=0

Setting=YShift
Default=0.25
Value=0.25

[Jobs]

Setting=Archive
Default=.\Archive
Value=.\Archive

Setting=Import
Default=.\Import
Value=.\Import

Setting=Output
Default=.\Output
Value=.\Output

Setting=Path
Default=.\Jobs
Value=.\Jobs

Help=To store jobs to a different location other than the default, a new path can be specified to the system & it will store the jobs to that location.
Help=It is done exactly like the ImageSaver feature.
Help=The default path is =.\Jobs.
Help=This stores the Jobs to the same directory that the I7000.exe is running from to a folder called Jobs.

[Lumenera]

Setting=Brightness
Default=1.5
Value=1.5

Setting=Exposure
Default=0.3
Value=0.3
Help=Exposure is the exposure setting of a Lumenera USB camera.

Setting=FixedSpeed
Default=0
Value=0
Help=FixedSpeed is the speed of an external belt or conveyor in feet per minute.

Setting=Gain
Default=1.0
Value=1.0
Help=Gain is used on certain Lumenera cameras.

Setting=Gain0
Default=1.0
Value=1.0
Help=Gain0, Gain1, Gain2 and Gain3 are the four gain values for the line-scan camera sensors.

Setting=Gain1
Default=1.0
Value=1.0
Help=Gain0, Gain1, Gain2 and Gain3 are the four gain values for the line-scan camera sensors.

Setting=Gain2
Default=1.0
Value=1.0
Help=Gain0, Gain1, Gain2 and Gain3 are the four gain values for the line-scan camera sensors.

Setting=Gain3
Default=1.0
Value=1.0
Help=Gain0, Gain1, Gain2 and Gain3 are the four gain values for the line-scan camera sensors.

Setting=MaxGainPercent
Default=85
Value=85
Help=MaxGainPercent is the maximum allowed gain the Microscan 7000 will use to calibrate in the automatic calibration procedure.

Setting=MaxLumeneraSpeed
Default=60
Value=60
Help=MaxLumeneraSpeed is the maximum frames that a Lumenera USB camera can run at per second.

Setting=MultiCamera
Default=0
Value=0
Help=MultiCamera is turning the camera on or off.
Help=The Microscan 7000 only supports either one or two cameras.
Help=MultiCamera=0 turns off the camera.
Help=To turn on a second camera, specify the camera's serial number (example: MultiCamera=[camera serial number])

Setting=PhotoeyeSkip
Default=0
Value=0
Help=PhotoeyeSkip=0 means that every photoeye trigger is used.
Help=
Help=PhotoeyeSkip=N If N is a positive number, the photoeye will use the first trigger and skip to the "Nth" of photoeye trigger.
Help=For instance, if N=1, the first trigger is used then every other photoeye trigger that follows is used.
Help=
Help=PhotoeyeSkip=-N If N is a negative number, the photoeye will not use the first trigger and it will start at the "Nth" photoeye trigger.

Setting=SerialNumber
Default=0
Value=0
Help=SerialNumber=0. This can be 0 if you have 0 or 1 Lumenera cameras.
Help=If you have more than 1 Lumenera camera, then this is the serial number of the right half of the split screen image.

Setting=SizeX
Default=0
Value=0
Help=This value overrides an area scan camera's width. Use 0 for the normal camera width.
Setting=SizeY
Default=0
Value=0
Help=This value overrides an area scan camera's height. Use 0 for the normal camera height.

Setting=StrobeDelay
Default=0.0
Value=0.0
Help=Delay the strobe pulse by this number of milliseconds.

Setting=StrobeLen
Default=0.1
Value=0.1
Help=This is the length of the strobe pulse in milliseconds.

[OCR]

Setting=MaxHorizontalShift
Default=0
Value=0
Help=MaxHorizontalShift follows the movement of printed characters.

Setting=OCRDebug
Default=0=off
Value=0=off
Choice=0=off
Choice=1 save only OCR error images with scores
Choice=2 save all OCR images with scores
Choice=-1=save OCR images as cropped images without scores

Setting=RatioMethod
Default=0=normal
Value=0=normal
Choice=0=normal
Choice=1=DontForceRatio2to3
Choice=2=Learn and use ratio from font

Setting=TouchMode
Default=0=off
Value=0=off
Choice=0=off
Choice=1=compensate for slight gaps
Choice=2=compensate for large gaps
Choice=3=use customer-specific features

[OCV]

Setting=MinimumPassScore
Default=40
Value=40
Help=MinimumPassScore sets the default minimum pass score for OCV

Setting=MinimumWarningScore
Default=60
Value=60
Help=MinimumWarningScore sets the default minimum warning score for OCV

[PLC]

Setting=DataValidOutputLine
Default=0
Value=0

[PopUp]

Setting=ShowCameraWarning
Default=1=ON
Value=1=ON
Choice=0=off
Choice=1=ON

Help=ShowCameraWarning allows the software to show a popup message when the number specified in the CpuUtilizationWarning is reached.

Setting=ShowNotAssessedWarning
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON
Help=ShowNotAssessedWarning allows the software to show a popup message when labels are not being inspected.

Setting=ShowNotSyncedWarning
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON

[Preset]

Setting=Default
Default=Med
Value=Med

Setting=High
Default=85,85,5,85,5,25,59,50,39,0
Value=85,85,5,85,5,25,59,50,39,0

Setting=Low
Default=65,65,15,65,24,25,59,50,39,0
Value=65,65,15,65,24,25,59,50,39,0

Setting=Med
Default=75,75,15,75,15,25,59,50,39,0
Value=75,75,15,75,15,25,59,50,39,0

Setting=UseFeature
Default=0
Value=0

[Printer]

Setting=Width
Default=700
Value=700
Help=This setting tells the software where to print a barcode when tagging the end of a roll.

[Printronix]

Setting=Increment
Default=3
Value=3
Help=Increment is only to be used when requested by a qualified Microscan representative.

Setting=MinimumStep

Default=32
Value=32
Help=MinimumStep is only to be used when requested by a qualified Microscan representative.

Setting=ReprintTimeout
Default=10
Value=10
Help=ReprintTimeout is only to be used when requested by a qualified Microscan representative.

Setting=StopTimeout
Default=7000
Value=7000
Help=StopTimeout adjusts the delay time when the Stop run button is clicked. The stop delay timer suspends all stop motion output signals to the Printronix printer immediately but allows the LVS-7510 software to continue inspecting for the length of the delay timer. This permits the label currently printing to complete and get inspected instead of stopping inspection immediately leaving the currently printing label uninspected. Units are milliseconds (7000 = 7000 ms).

Note: A 9 inch long label printing at 1 ips will take longer than 7000 ms. A setting of 7000 ms could mean the timer expires and inspection terminates before the label finishes printing. A setting of 10000 ms or higher is recommended under these conditions.

Setting=SystemType
Default=0=Normal
Value=0=Normal
Choice=0=Normal
Choice=1=Design
Choice=2=Production

[Simulation]

Setting=HealthCheck
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON
HealthCheck=1 demonstrates the health check option for barcodes instead of grading to standards.

Setting=Path
Default=
Value=
Help=This is the path to a directory of stored images.
RestartOnChange=yes

Setting=ProcessPath
Default=
Value=
Help=This is the path to a directory of stored images.

Setting=Speed
Default=50
Value=50
Help=Speed is how fast the system will simulate web motion.
Help=A positive value indicates feet/minute.

Help=A negative value specifies the maximum CPU percentage to use.

Setting=StopOnWrap
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON
Help=StopOnWrap stops the Microscan 7000 when in simulation mode after one time though the associated image file.

[StreakVoid]

Setting=AllowedSpots
Default=0
Value=0
Choice=0
Choice=1
Choice=2
Choice=3
Choice=4
Choice=5
Choice=6
Choice=7
Choice=8
Choice=9

Setting=BackgroundSensitivity
Default=80
Value=80
Help=BackgroundSensitivity works the same way as ForegroundSensitivity but it is meant to find contrast differences in the label's background.

Setting=BackgroundSize
Default=0.002
Value=0.002
Help=BackgroundSize allows the user to increase or decrease the size of detected Blemishes.

Setting=ForegroundSensitivity
Default=80
Value=80
Help=ForegroundSensitivity is the system's allowable deviation in print color contrast after converting to gray scale.
Help=A sensitivity of 0 will accept all variations from the original pixels gray scale value, while 100 will allow no variation of the gray scale values.
Help=In other words, a setting of 0 will pass everything that is defined as Foreground print and a setting of 100 will pass nothing.

Setting=ForegroundSize
Default=0.002
Value=0.002
Help=ForegroundSize allows the user to increase or decrease the size of detected Blemishes.

Setting=Separation
Default=80

Value=80
Help=Separation is used to differentiate the Foreground from the Background.
Help=Increasing this number will define more print as Foreground and less as Background.
Help=Decreasing this number will define more of the label as Background and less as Foreground.
Help=A sensitivity of 0 will call everything Background and 100 will call everything Foreground.

Setting=StreakVoidX
Default=0.125
Value=0.125
Help=StreakVoidX controls how far the streak/void line is allowed to move in the X direction (default is 1/8").

Setting=StreakVoidY
Default=0.125
Value=0.125
Help=StreakVoidY controls how far the streak/void line is allowed to move in the Y direction (default is 1/8").

Setting=WanderX
Default=2
Value=2
Help=WanderX control how far individual pixels are allowed to move in the X direction in relation to the rest of the streak/void line.
Help=This is different from controlling how far the entire streak/void line can move in relation to the rest of the image.
Help=Motion of the entire line is controlled with the following settings: StreakVoidX and StreakVoidY.

Setting=WanderY
Default=2
Value=2
Help=WanderY control how far individual pixels are allowed to move in the X direction in relation to the rest of the streak/void line.
Help=This is different from controlling how far the entire streak/void line can move in relation to the rest of the image.
Help=Motion of the entire line is controlled with the following settings: StreakVoidX and StreakVoidY.

[Sync]

Setting=AutoSyncSpanFactor
Default=6
Value=6
Help=AutoSyncSpanFactor sets the width of the sync span in automatic setup. The sync span is set to AutoSyncSpanFactor * HopX.

Setting=BookletMode
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON

Setting=FastSync
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON
Help=FastSync tells the system to not resync when the "Start" button in pushed.

Help=This is needed on LVS-7510 systems to not miss the first label.

Setting=HopX
Default=0.125
Value=0.125
Help=HopX tracks the movement of the labels in the horizontal direction.

Setting=HopY
Default=0.125
Value=0.125
Help=HopY tracks the movement of the labels in the vertical direction.

Setting=Log
Default=
Value=

Setting=SyncErrorsInARowBeforeResync
Default=3
Value=3
Help=If the 7000 loses synchronization, this is the number of repeats allowed to pass before the 7000 attempts to sync again.

[System]

Setting=A5Follows
Default=34
Value=34

Setting=AcceptReplaceInputTimer
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON

Setting=AddMissingTriggers
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON
Help=When enabled, the system will estimate where photoeye triggers should have occurred and create phantom triggers.
Help=This enables customers to have photoeye triggers on every plate repeat instead of on every label.

Setting=Audible Alarm
Default=34
Value=34
Help=A5Follows tells the software what I/O Line the system should use to trigger a beep.

Setting=AutoBreakRoll
Default=0
Value=0
Help=AutoBreakRoll should be enabled when used with turrets.

Setting=AutoLogin

Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON

Setting=AutoMakeReady
Default=0
Value=0

Setting=AutoSetup
Default=0=do not use AutoSetup
Value=1=ask if AutoSetup should be used
Choice=0=do not use AutoSetup
Choice=1=ask if AutoSetup should be used
Choice=2=always use AutoSetup without asking
Choice=3=carton mode
Help=AutoSetup tells the software when to use the Microscan 7000 automated process when creating a new job.

Setting=AutoSetup3Margin
Default=0.5
Value=0.5

Setting=AutoSetupSideMatch
Default=32
Value=32

Setting=AutoStop
Default=0
Value=0
Help=AutoStop turns on autostop for stopping after a specified label count.

Setting=Base64Trailer
Default=0
Value=0

Setting=BorderIndent
Default=0
Value=0
Help=BorderIndent makes the Microscan 7000 window smaller or larger.
Help=This helps in making navigation easier when using a touch screen monitor.

Setting=BypassSignalDelay
Default=0
Value=0
Help=BypassSignalDelay sets delay (in inches) from the moment the bypass signal is received, until the bypass command is activated.

Setting=CameraSpeedWarning
Default=90
Value=90
Help=CameraSpeedWarning tells the software when to show a warning message if the camera gets to the specified speed.

Setting=CameraToError
Default=54
Value=54
Help=CameraToError is a special function used as of version 5.1.0 and is the distance past the camera to the splice table.

Setting=CameraToRollCount
Default=64
Value=64
Help=CameraToRollCount is a special function used as of version 5.1.0 and is the distance from the camera to the second splice location on the mandrel.

Setting=ChangeRollOnFly
Default=
Value=

Setting=ClearPrompts
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON
Help=If set to zero (default), the system will re-use the most recently entered data for prompts.
Help=If set to non-zero, the computer will start with blanks and the operator must fill in all data.

Setting=ConsecutiveReadLines
Default=5
Value=5
Help=ConsecutiveReadLines is how large a gap must be between 2 adjacent barcodes during autosetup to separate them into 2 separate sectors.

Setting=CpuUtilizationWarning
Default=75
Value=75
Help=CpuUtilizationWarning tells the software when to show a warning message if the CPU usage gets to the specified value.

Setting=DontProcessDuringBypass
Default=0=process during bypass
Value=0=process during bypass
Choice=0=process during bypass
Choice=1=don't process during bypass
Help=DontProcessDuringPypass makes the Microscan 7000 not process any sectors during bypass;
Help=this minimizes processor usage when the vision system does not need to be inspecting.

Setting=DontStopWhileInMotion
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON

Setting=ePedigree
Default=0=off
Value=0=off
Choice=0=off

Choice=1=ON
Help=ePedigree switches between normal Microscan 7000 checking and ePedigree checking.

Setting=Gap
Default=off
Value=off
Choice=off
Choice=ON
Help=The Gap=OFF/ON is a specialized reporting ability that if turned on, any jump in a sequential number in a positive direction is called a GAP and is allowed.
Help=If the GAP is turned off then this same condition would result in a Sequence error.

Setting=HideAlarmMatrix
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON

Setting=IgnoreHealthCheck
Default=0=performs HealthCheck on 1D and 2D codes
Value=0=performs HealthCheck on 1D and 2D codes
Help=IgnoreHealthCheck is for Microscan technician use only.
Choice=0=performs HealthCheck on 1D and 2D codes
Choice=1=performs HealthCheck on 2D codes and grading on 1D codes
Choice=2=performs HealthCheck on 1D codes and grading on 2D codes
Choice=3=ignores the HealthCheck code

Setting=InactivityTimeout
Default=0
Value=0
Help=Inactivity Timeout automatically logs out any user if the system is left idle for the defined amount of time.
Help=This value is defined in minutes.

Setting=IncludeRimsBarcodeInJobName
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON
Help=If off, the names of jobs will be of the form LVS########.
Help=If on, then instead of using LVS, the Rims barcode computer name will be used, but repeated 3 times (AAA, CCC, etc.).

Setting=LaneDivision
Default=0=disabled
Value=0=disabled
Choice=0=disabled
Choice=1=prompt the operator whether or not to split lanes
Choice=2=always split lanes without prompting the operator
Choice=3=non-RIMS applications where "channel" information is uploaded via Tcp/Ip
Choice=4=divides the web into lanes to make separate log files per lane
Help=LaneDivision splits a job into its separate lanes for RIMS systems in case they were slit on the press;
Help=it prints a barcode per lane as well.
Help=Note that LaneDivision does not function in conjunction with the Turret signal.

Setting=LastBCLCode
Default=000001
Value=000001
Help=LastBCLCode is active when LaneDivision=4.
Help=A unique roll number given.

Setting=LastBCLRoll
Default=000
Value=000
Help=LastBCLRoll is active when LaneDivision=4.

Setting=LvsContactSensor
Default=0=not installed
Value=0=not installed
Choice=0=not installed
Choice=5=5" sensor installed
Choice=8=8" sensor installed
Help=LvsContactSensor is for Microscan technician use only.
Help=It designates the type of contact sensor used with LVS-7510 systems.

Setting=LvsContactSizeY
Default=96
Value=96

Setting=MajorityDelta
Default=0
Value=0

Setting=MakeReady
Default=
Value=
Help=MakeReady is used when the operator needs to ignore a specified string in a sector at the beginning of a job.
Help=For instance, type in the word VOID and the software will ignore that word at the beginning of the job only.

Setting=MaxCpuBusyPercent
Default=100
Value=100
Help=MaxCpuBusyPercent is the maximum allowable CPU usage as a percentage.
Help=If the CPU usage exceeds this value, sectors will be Not Assessed (NA) until the CPU utilization drops to a point equal to this value.
Help=Default is 100.

Setting=MaxErrPerSec
Default=30
Value=30
Help=MaxErrPerSec prevents the software from failing when inundated with errors;
Help=it will not create more than 30 thumbnails of errors per second.
Help=After 30 errors, no more thumbnails will be collected until the next second.

Setting=MaxThumbnails
Default=1000
Value=1000

Help=MaxThumbnails is the amount of thumbnail images that can be reviewed while the system is running.

Setting=MaxTriggerGap
Default=0
Value=0
Help=MaxTriggerGap causes an error if photo-eye triggers have stopped after a certain distance.
Help=Do not alter this setting unless instructed by an Microscan Technician.

Setting=MinimumPreserveLength
Default=10
Value=10

Setting=MinimumScrapPerRun
Default=0
Value=0

Setting=MonitorInterval
Default=10000
Value=10000

Setting=MonthsBeforePasswordChange
Default=0
Value=0
Help=MonthsBeforePasswordChange prompts users for passwords to be changed after the number of months entered.

Setting=NumColorWBThreads
Default=5
Value=5

Setting=NumGrabImages
Default=0
Value=0

Setting=NumPacketThreads
Default=8
Value=8
Help=NumPacketThreads is the number of threads;
Help=it is set by how many processing CORES are available per PC.

Setting=OneBigBlemishSector
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON
Help=OneBigBlemishSector make the autosetup feature not separate label lanes.

Setting=PDF417UEC
Default=0
Value=0
Help=PDF417UEC stops PDF from using ISO. PDF417UEC =1 only uses UEC as grade.

Setting=Pharmacode
Default=0=off

Value=0=off
Choice=0=off
Choice=1=ON
Help=Pharmacode indicates whether pharmacode is included in the automatic 1D barcode reading/discrimination.
Help=
Help=Pharmacode=0 means pharmacode is not included in the automatic 1D barcode reading/discrimination.
Help=
Help=Pharmacode=1 indicates pharmacode is included in the automatic 1D barcode reading/discrimination

Setting=PhotoeyeSignalDelay
Default=0
Value=0
Help=PhotoeyeSignalDelay is utilized to externally synchronize a line scan, or trigger an area scan Microscan 7000.

Setting=RelearnAuthorization
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON

Setting=ReportUnusedCodes
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON
Help=If enabled, a button entitled "Report unused codes" appears.
Help=This is used to generate a report of codes that were in the match file, but never seen by the system.

Setting=ResyncMatchFileOnMismatch
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON
Help=If enabled, whenever a mismatch error occurs, the system will assume it is possibly not in the right location in the match file and try to find where it is again.
Help=This allows the system to recover instead of generating non-stop mismatch errors after an inserted or deleted label.

Setting=RollOutputFilePath
Default=
Value=
Help=RollOutputFilePath is used in conjunction with the AutoBreakRoll feature.
Help=The path is where to store the roll output files.

Setting=RollsPerCase
Default=4
Value=4
Help=RollsPerCase is used in conjunction with LaneDivision=4.
Help=It is the number of rolls in a case. Once this number is reached, the case number is incremented, and the roll number goes back to 1.

Setting=SerialNumber
Default=missing

Value=missing
Help=SerialNumber is the Microscan 7000 serial number and should never be changed.

Setting=ShowAdditionalCounters
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON

Setting=ShowBlemishMotion
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON

Setting=ShowElapsedTime
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON

Setting=ShowJobReportButton
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON

Setting=ShowMod10CheckBox
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON

Setting=ShowReportLabel
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON

Setting=ShowRuntimeGradeStats
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON

Setting=ShowSnapshotButton
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON

Setting=ShowSpeed
Default=0=off
Value=0=off

Choice=0=off
Choice=1=ON

Setting=ShowStatusAlert
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON

Setting=SkipAutoSetupShrink
Default=0
Value=0

Setting=Splash
Default=
Value=

Setting=SpotVoidCheck
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON
Help=SpotVoidCheck will error any spot anywhere within a barcode.
Help=Do not use unless instructed by Microscan technician.

Setting=Stagger
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON

Setting=StripParentheses
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON
Help=StripParentheses takes parentheses off decoded data strings from symbologies such as GS1 databar or Data Matrix.

Setting=Strobe
Default=0=Normal mode
Value=0=Normal mode
Choice=0=Normal mode
Choice=1=Strobe mode
Choice=2=Advanced strobe mode
Help=Strobe allows the system to be used in viewing mode like a strobe light.
Help=There must be a consistent sync mark on the web to use this feature.
Help=Only use this setting if advised by an Microscan Technician.

Setting=TakeSecondPicture
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON

Setting=ThreadLockTimeout
Default=0
Value=0

Setting=TiltedRead
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON
Help=TiltedRead attempts to read a short in height barcode by applying a slight rotation.

Setting=TitleBar
Default=
Value=

Setting=TriggerStopMotionOnLearnBlemish
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON
Help=TriggerStopMotionOnLearnBlemish tells the software to send a stop motion signal when a Blemish sector has been defined.
Help=This helps to stop the Rewinder to visually inspect label(s) that are used as a Golden image.
Help=
Help=TriggerStopMotionOnLearnBlemish=0 – Feature is off.
Help=
Help=TriggerStopMotionOnLearnBlemish=1 – Signal will be sent to stop Rewinder after Blemish sector is defined or Golden Image is relearned.

Setting=TurretSignalDelay
Default=0
Value=0
Help=TurretSignalDelay sets delay (in inches) from the moment the turret signal is received, until the Change Roll on the fly command is activated.

Setting=UseBypassSignal
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON
Help=UseBypassSignal turns on the monitoring of the Bypass signal Input line.
Help=Activated on LOW signal.

Setting=UsePhotoeyeSignal
Default=0
Value=0
UsePhotoeyeSignal=0 Disables this setting
UsePhotoeyeSignal=1 Enables this setting
UsePhotoeyeSignal simulates a photoeye signal every time the encoder reverses direction.

Setting=UseSectorTags
Default=0
Value=0

Setting=UseTrackingSignal
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON

Setting=UseTurretSignal
Default=0=off
Value=0=off
Choice=0=off
Choice=1=ON
Help=UseTurretSignal turns on the monitoring of the Turret Cutsignal Input line.
Help=Activated on LOW signal.
Help=It will effectively stop logging for a roll and begin another.

[TcpIp]

Setting=Host
Default=0.0.0.0
Value=0.0.0.0

Setting=Mode
Default=off
Value=off
Choice=off
Choice=remote
Choice=XML
Help=Mode indicates if the Microscan 7000 is connecting to another system.
Help=Use off if the Microscan 7000 is not connecting to another system.
Help=Use remote if the Microscan 7000 is connecting with a remote computer, such as the Microscan HMI Command Center or a non-Microscan system.
Help=Note that all remaining settings (such as Host, Port1, Port2, etc.) do not apply if the Microscan 7000 is not connecting to another system.

Setting=Port1
Default=0
Value=0
Help=Enter the port where the first external system will be listening for Microscan data.

Setting=Port1Filter
Default=
Value=

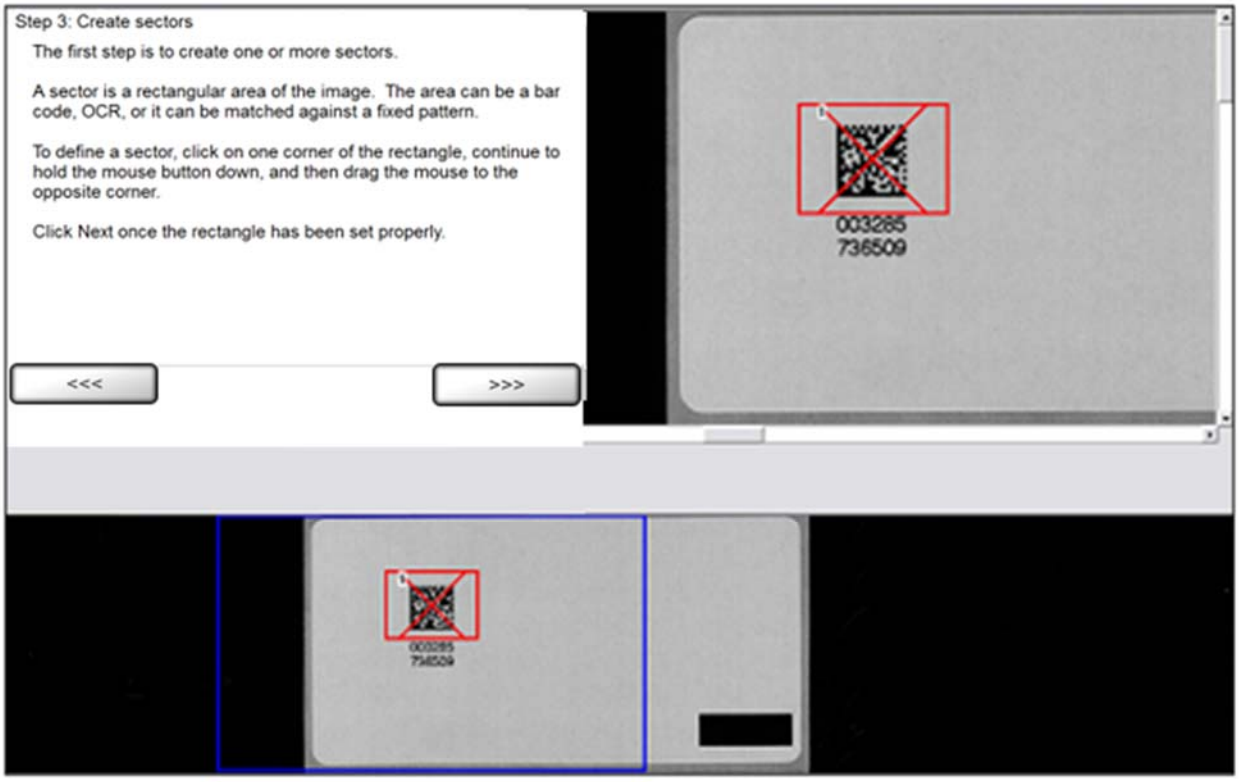
Setting=Port2
Default=0
Value=0
Help=Enter the port where the second external system will be listening for Microscan data.

Setting=Port2Filter
Default=
Value=
Help=Port2Filter specifies the type of information received from the non-Microscan system.
Help=
Help=Leave blank to receive all information.
Help=
Help=Use 7 to receive error only information.

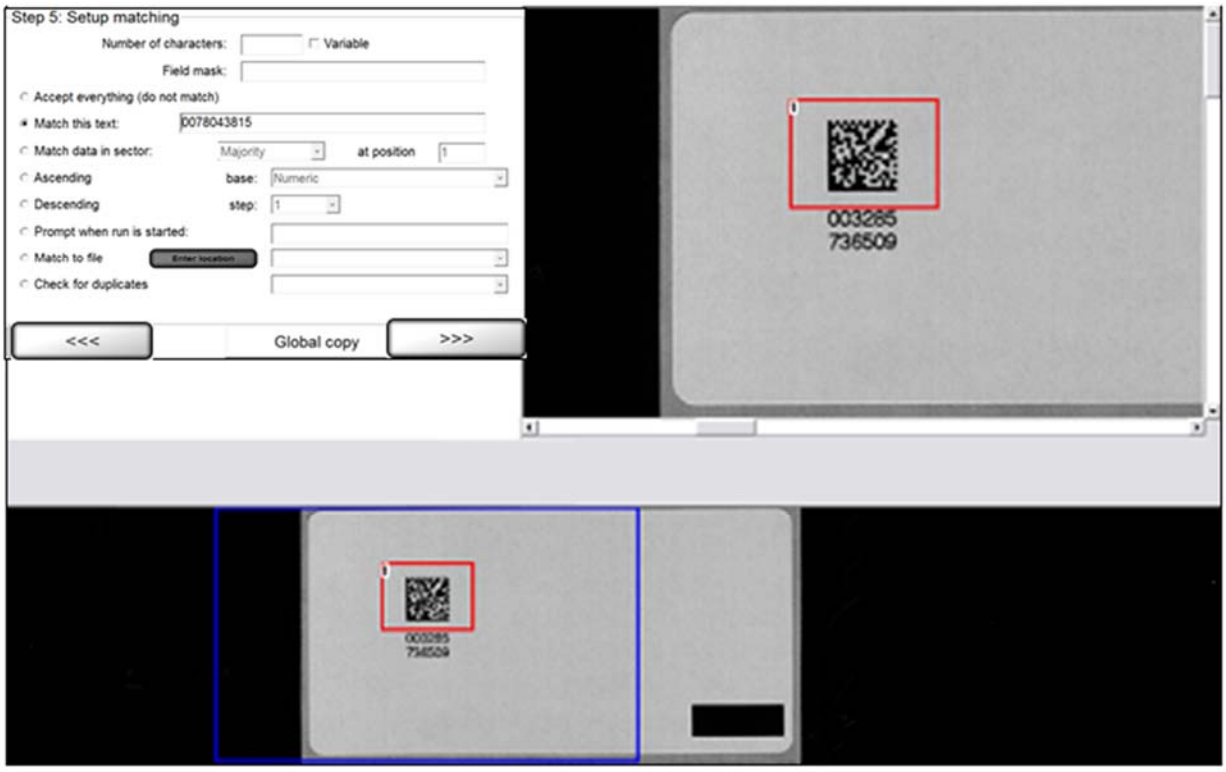
Appendix B: Epedigree

Systems with ePedigree enabled are using the normal LVS-7510 software with enhanced tracking features. Below are a couple of steps that highlight the LVS-7510 ePedigree process.

1. When drawing a sector over a 2D Data Matrix code, make sure that the center of the X within the sector is close to the center of the 2D code. This helps the software to determine the position of the barcode.



2. Choose the Check for Duplicates option to make sure that the barcode's encoded data is unique for this job or the sect. When running the job, a !DU error will show up if the software finds a duplicate of the barcode.



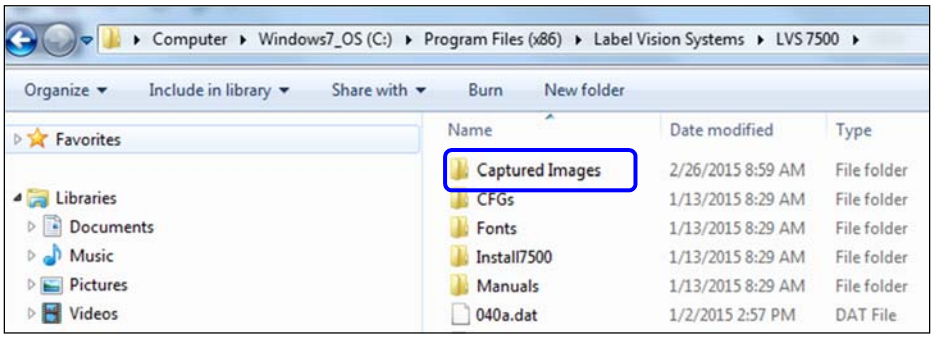
3. Draw an OCR sector around the human readable characters and let it match its corresponding barcode.

   In this example, we have to start matching OCR at position 17 of the barcode, because the barcode is 28 characters long and the human readable characters match the last 12 characters of the barcode.

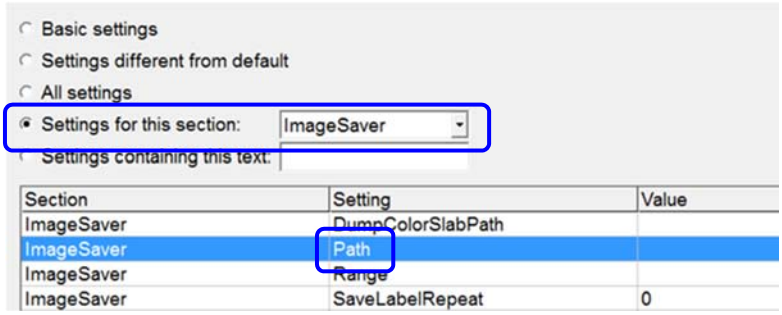
Appendix C: ImageSaver Instructions

Saving Raw Images Without a Label Repeat

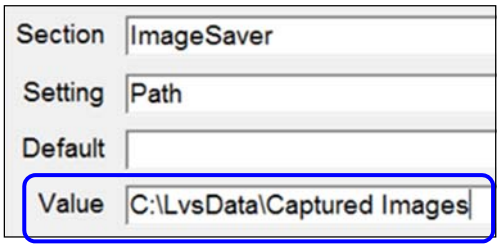
1. Create and name a target folder where images can be saved (see below).



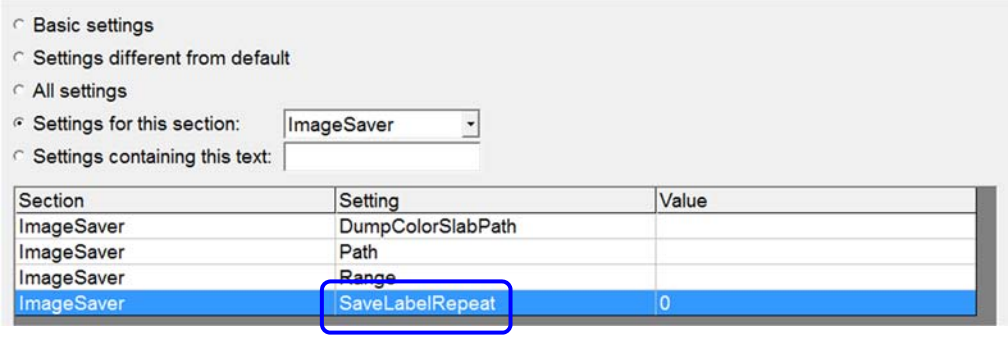
2. Open the LVS-7510 software and click “Settings” in the menu bar.
   a. Select the “Settings for this section” radio button and select “ImageSaver” from the dropdown list (see below).
   b. Double-click “Path” located in the “Setting” column (see below).



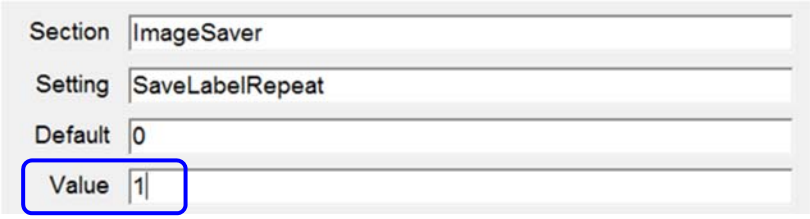
   c. In the “Value” field, enter the path of the folder that was created to store images. Then, click “OK (save changes).”



d. Double-click “SaveLabelRepeat.”

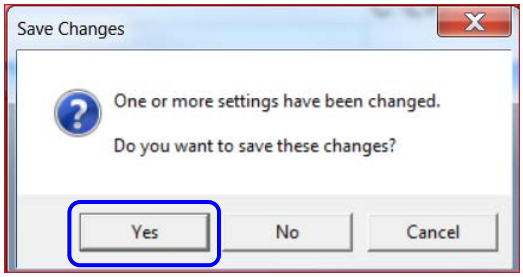


e. Type “1” in the “Value” field and click “OK (save changes).”



f. Close the “Settings” menu by clicking the red “X” in the top, right corner of the Configuration Editor screen.

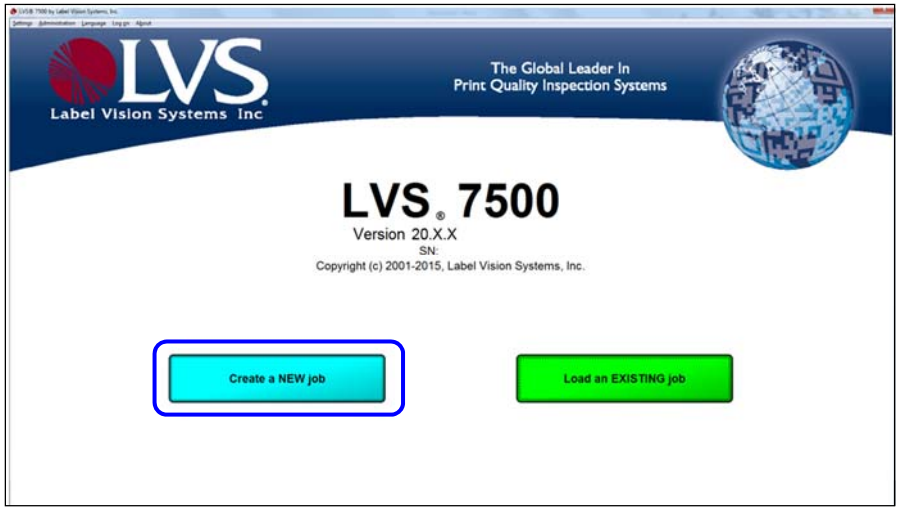
3. Click “Yes” to the “Save Changes” confirmation.



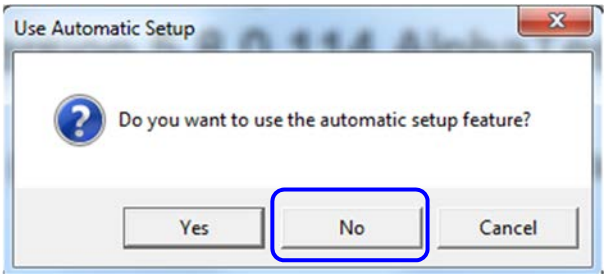
4. Close and then restart the LVS-7510 software.
5. Click “OK” at the ImageSaver warning.

   Clearing the ImageSaver after capturing the desired images is important as it will continue to save images causing the hard drive to fill up.

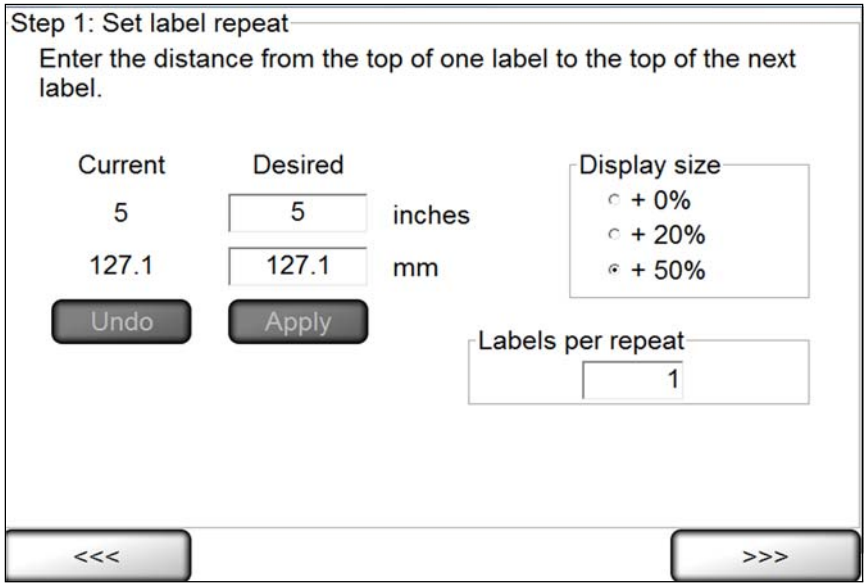
6. Click the “Create a New Job” button.



7. Select “No” when asked, “Do you want to use the automatic setup feature?”

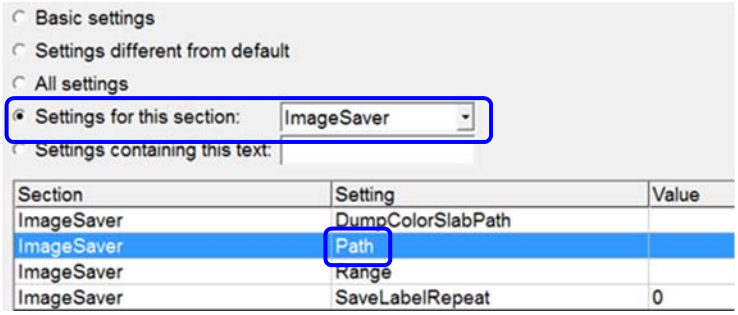


8. Stay at the “Step 1: Set label repeat” screen (your settings may appear differently than the settings in the image below).

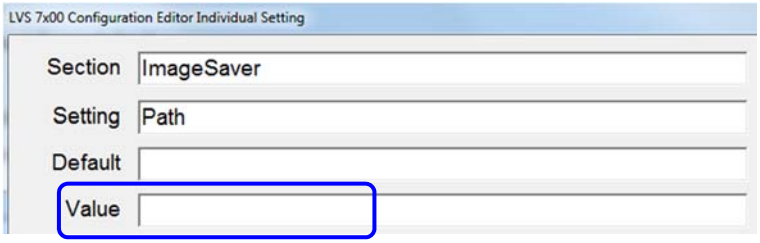


9. Run the printer to obtain a desired amount of images. The system is capturing images although the onscreen images may not immediately update.

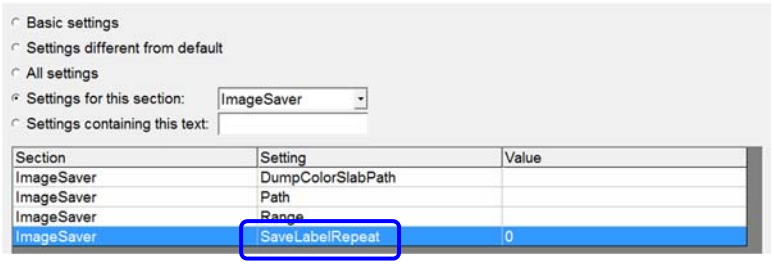
10. Stop the job and close the LVS-7510 software; then, stop the printer.
11. Navigate to the “captured images” folder (your folder may be named differently) that was created in Step 1 and the images should appear from the last job.
12. When image capturing is complete, click “Settings” in the menu bar.
    a. Select the “Settings for this section” radio button and select “ImageSaver” from the dropdown list.
    b. Double-click “Path” in the “Setting” column.



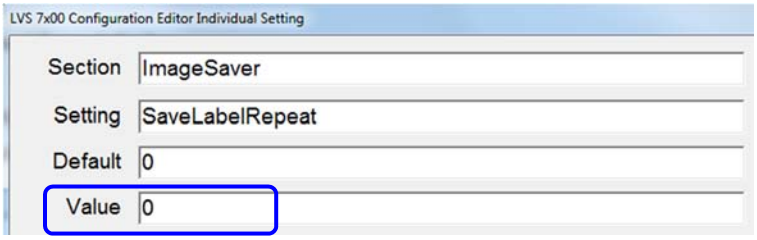
    c. Delete the path in the “Value” field and save your changes.



    d. Double-click “SaveLabelRepeat.”

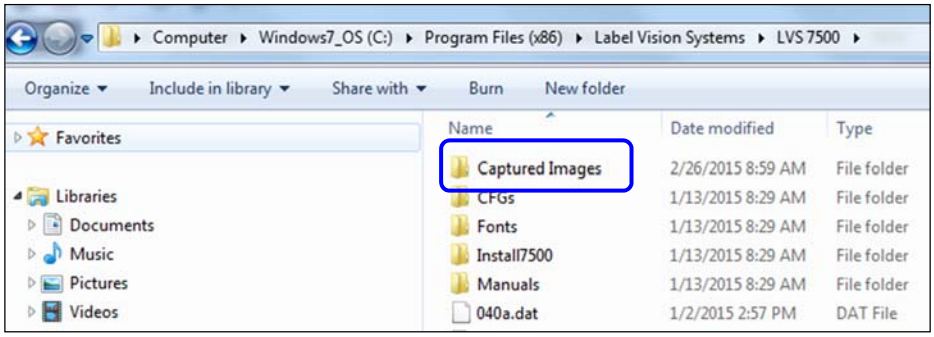


    e. Enter 0 (zero) in the “Value” field and then save your changes.

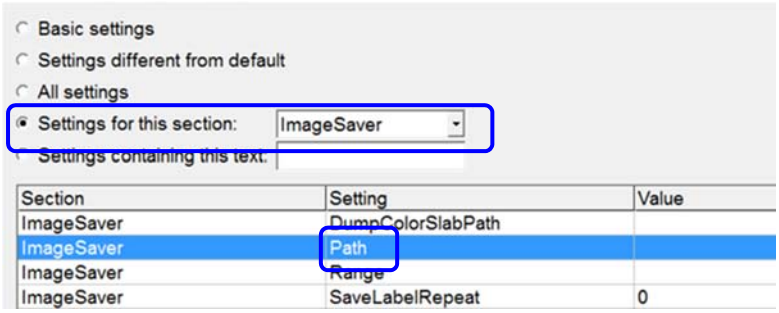


Saving Images With a Label Repeat

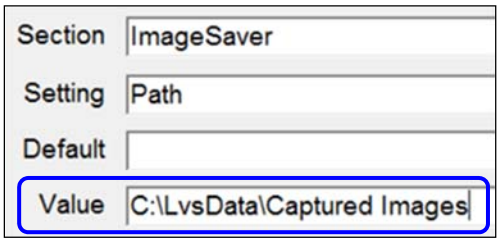
1. Open the LVS-7510 software and create a new job with the labels that you would like to capture.
2. Correctly synchronize the labels, define any sector, and save the job.
3. After the job is created, close the LVS-7510 software and stop the printer.
4. Open Windows Explorer and navigate to the LVS-7510 folder:
   - For new installations of software version 20.1.X on Windows® 7 Professional and Windows® 8.1 Professional operating systems: C:\LvsData\LVS 7500
   - For systems that are upgrading from a previous software version to version 20.1.X or higher:
     - Windows® XP:
       C:\Program Files\Label Vision Systems\LVS 7500
     - Windows® 7:
       C:\Users\[User Login Name]\ AppData\Roaming\Label Vision Systems\LVS 7500
5. Create and name a target folder where images can be saved (see below).



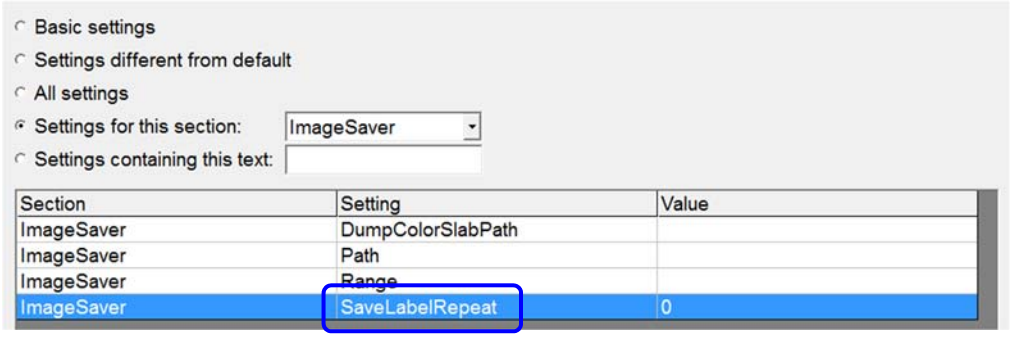
6. Open the LVS-7510 software and click “Settings” in the menu bar.
   a. Select the “Settings for this section” radio button and select “ImageSaver” from the dropdown list.
   b. Double-click “Path” located in the “Setting” column (see below).



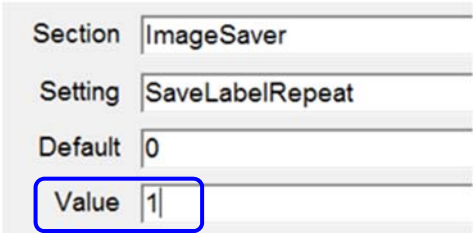
   c. In the “Value” field, enter the path of the folder that was created to store images. Then, click “OK (save changes).”



d. Double-click “SaveLabelRepeat.”

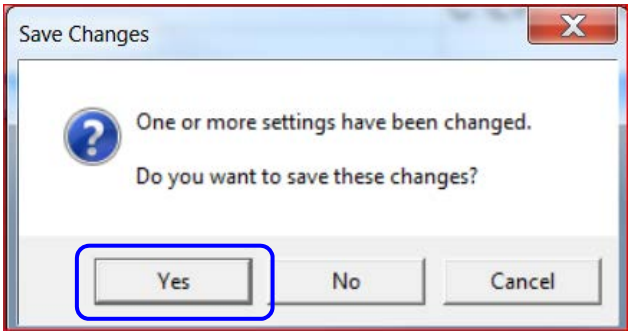


e. Type “1” in the “Value” field and then click “OK (save changes).”



f. Close the “Settings” menu by clicking the red “X” in the top, right corner of the Configuration Editor screen.

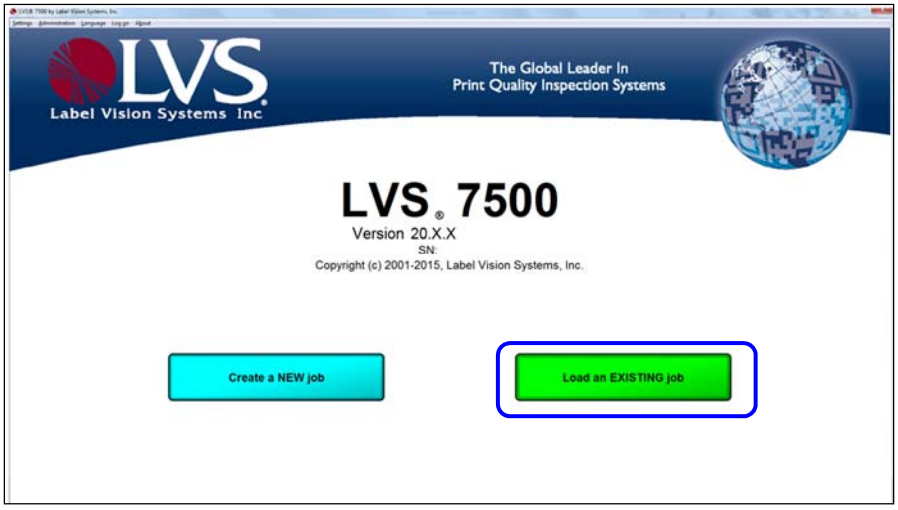
7. Click “Yes” to the “Save Changes” confirmation.



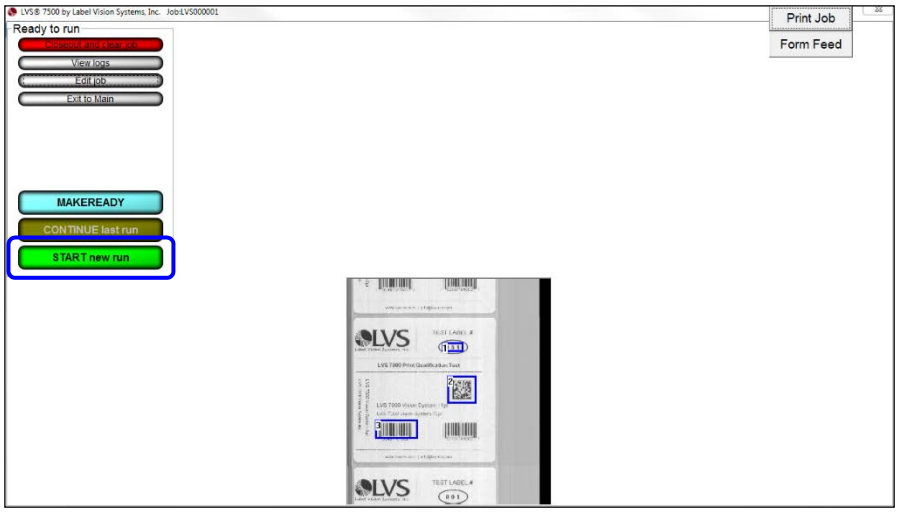
8. Close and then restart the LVS-7510 software.
9. Click “OK” at the ImageSaver warning.

   Clearing the ImageSaver after capturing the desired images is important as it will continue to save images causing the hard drive to fill up.

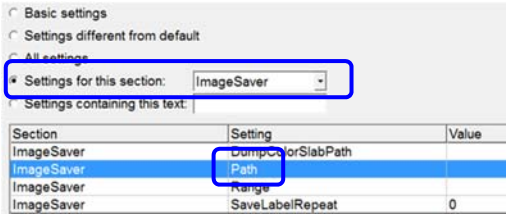
10. Click the “Load an Existing Job” button and choose the job that was created for image capturing.



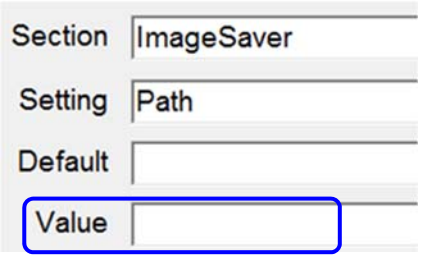
11. After the job is loaded, click the “Start new run” button and jog the printer for a desired amount of images. Each label repeat should be a full image.



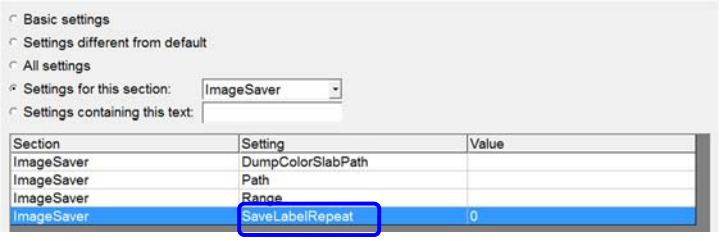
12. Stop the printer.
13. Stop the job and close the LVS-7510 software.
14. Navigate to the “captured images” folder (your folder may be named differently) that was created in Step 1 and the images should appear from the last job.
15. When image capturing is complete, click “Settings” in the menu bar.
    a. Select the “Settings for this section” radio button and select “ImageSaver” from the dropdown list.
    b. Double-click “Path” in the “Setting” column.



c. Delete the path in the “Value” field and save your changes.



d. Double-click “SaveLabelRepeat.”

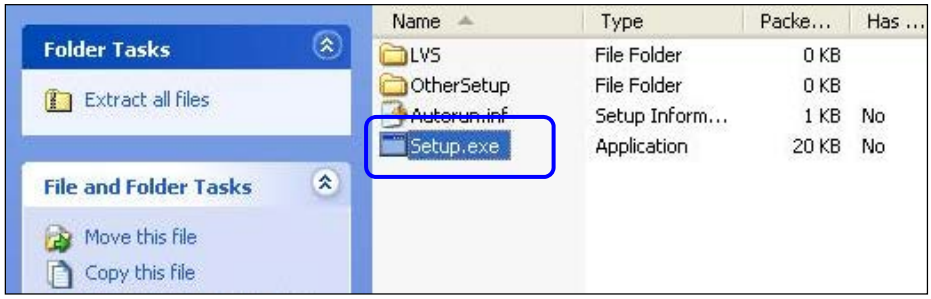


e. Enter 0 (zero) in the “Value” field and then save your changes.

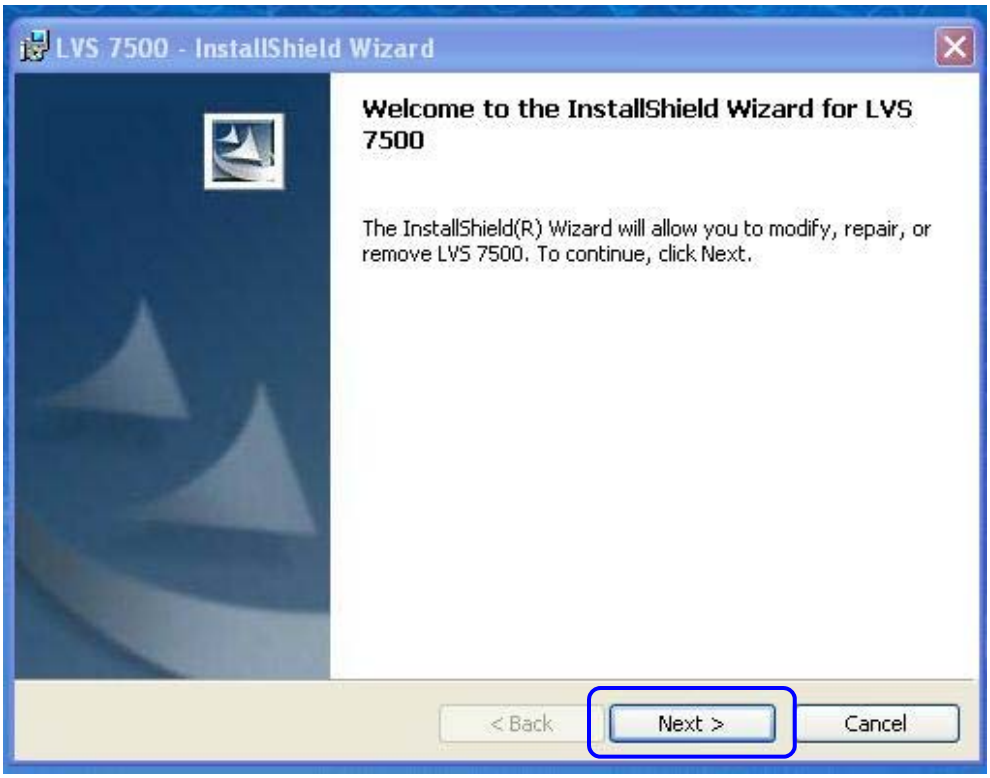
16. Remember to remove all excess images as they will quickly take up space on the hard drive.

Appendix D: Upgrading Software

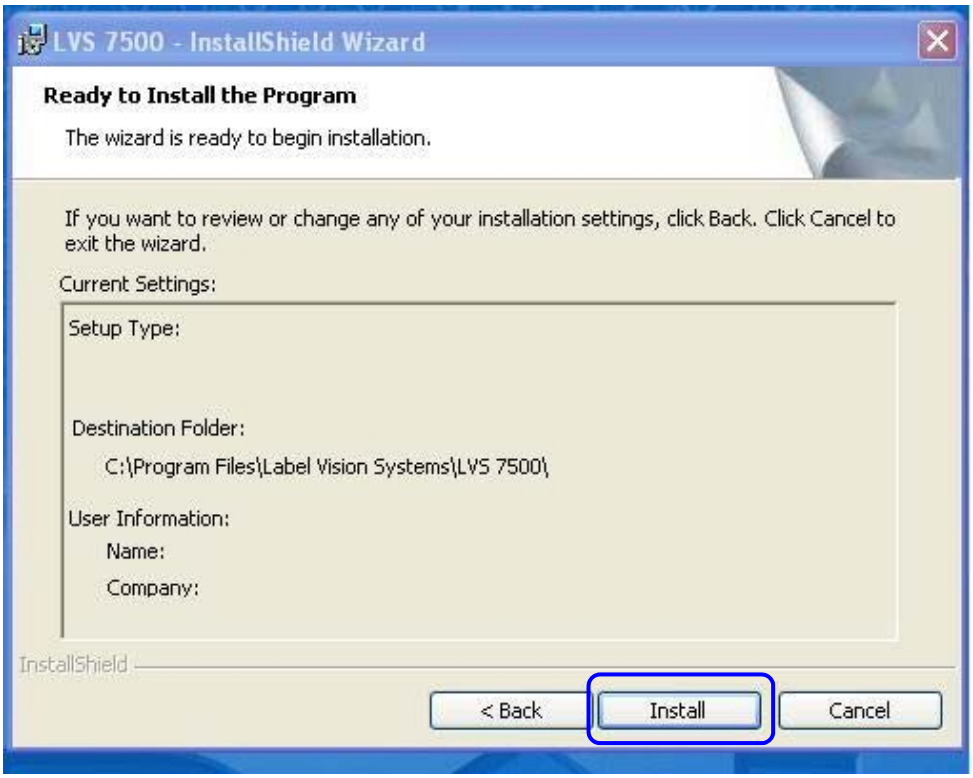
1. After receiving the LVS-7510 software files to download, open the .zip folder and double-click “Setup.exe.”



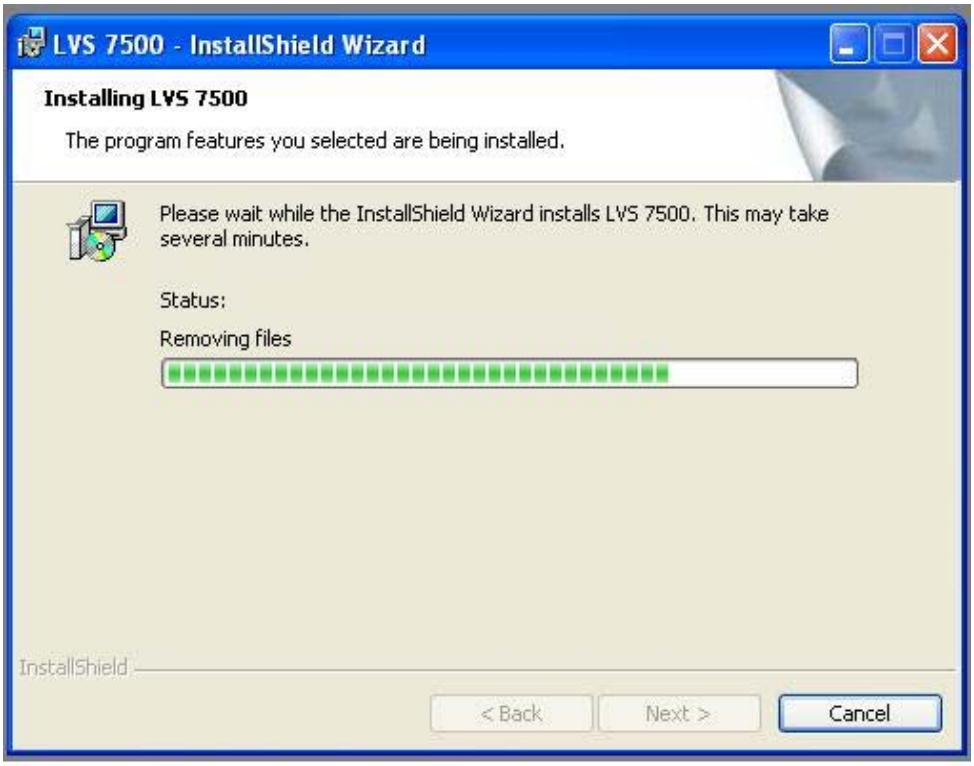
2. Click “Next” on the “LVS-7510 InstallShield Wizard” screen.



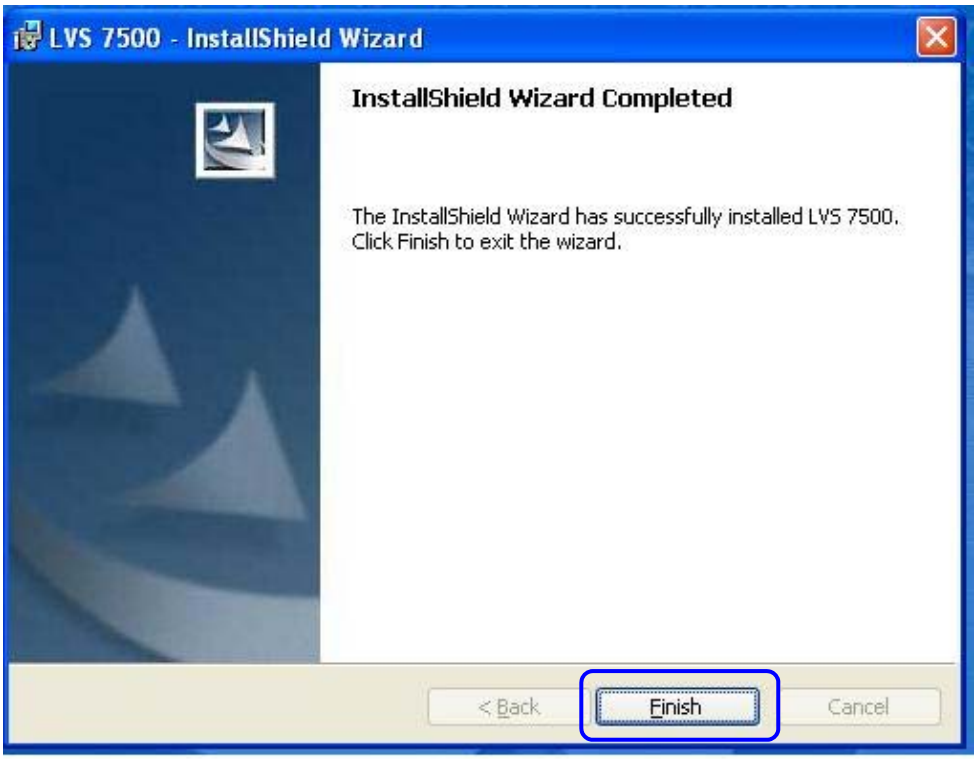
3. Click “Install” to begin installation.



4. Installation begins, which may take several minutes to complete.



5. The “InstallShield Wizard Completed” window appears when installation is complete. Click “Finish.”



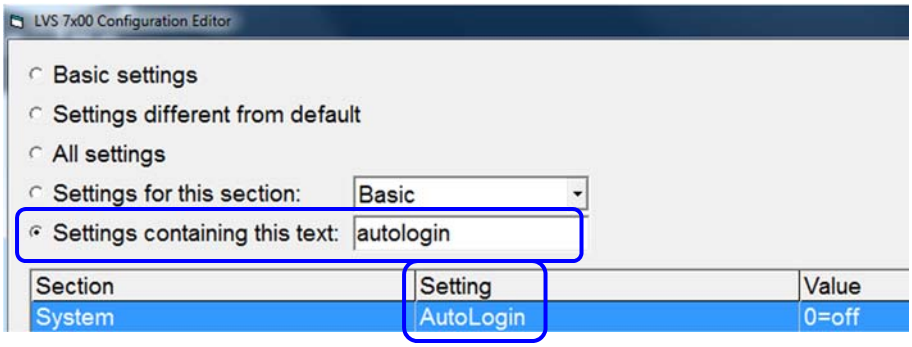
Appendix E: Automatic Login

The Automatic Login feature allows a user to automatically log in to the LVS-7510 software without entering an Operator ID and Password.

Automatic Login Settings

Automatic Login settings are controlled in the "Settings" menu file:

1. Click "Settings" in the menu bar.
2. Type "autologin" (uppercase or lowercase letters) in the "Settings containing this text" field (see below).
3. Double-click "AutoLogin" in the "Setting" column.



4. In the "Value" field, select one of the following:
   - **0=off** – disables Automatic Login
   - **1=On** – enables Automatic Login

5. Click "OK (save changes)."
6. Click the red "X" in the top, right corner of the Configuration Editor screen.

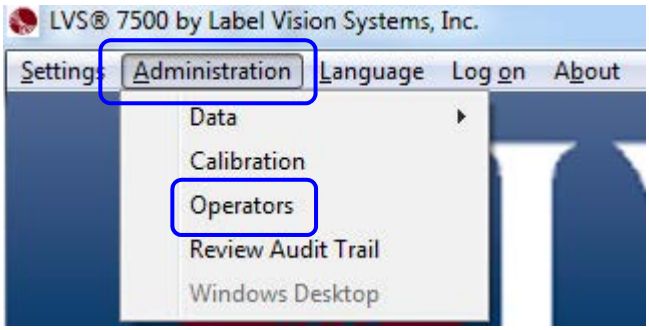
Automatic Login Instructions

When enabled, the LVS-7510 compares the current Windows user name to the list of LVS-7510 operator names. If there is a match, and if the operator's LVS-7510 password is set to "AUTO," then the user will automatically be logged in to the LVS-7510 software.

Automatic Login is attempted only when the LVS-7510 is first opened. If a user logs out of the LVS-7510, then the next user is required to log in manually. If the operator closes the LVS-7510 entirely, then Automatic Login will be attempted the next time the LVS-7510 software is launched.

To enable an operator to use Automatic Login, follow the steps below.

1. Click "Administration" > "Operators" from the menu bar.



2. On the "Operator Administration" screen, click the "Add new operator" button.

3. Enter the operator name in the "Operator ID (short name)" field and "Operator name (full)" field. **The Operator name must match the Windows user name.**
4. Enter "AUTO" (all uppercase letters) in the "Password" field. Enter this password in each of the two "Password" fields.
5. Select the desired operator permissions in the "Permissions" section.
6. Click the "Save Changes" button, and then click the "Done" button.
7. Close the LVS-7510 software by clicking the X in the top, right corner of the screen.
8. Log in to Windows as the user you just setup in the LVS-7510 software.
9. Open the LVS-7510 software. The user should automatically be logged in and the "Create a New Job" or "Load an Existing Job" screen is visible. The user is not prompted to enter a user name or password.

   See the "Create a New Job" section in this manual for detailed instructions on creating a new job. See the "Load an Existing Job" section for detailed instructions on loading an existing job.
10. Close the LVS-7510 when work is complete.
11. Log off of Windows.

IMPORTANT: Automatic Login is only attempted when the LVS-7510 is first opened. If the operator logs out of the LVS-7510, then the next user must log in manually. If the operator closes the LVS-7510 entirely, then Automatic Login will be attempted the next time the LVS-7510 software is launched.

In practice, an operator would follow the steps below:

1. Log in to Windows.
2. Launch the LVS-7510. Automatic Login executes for that Windows user name.
3. Run the LVS-7510 as needed.
4. Close the LVS-7510.
5. Log off of Windows.
6. The next operator repeats the above steps.

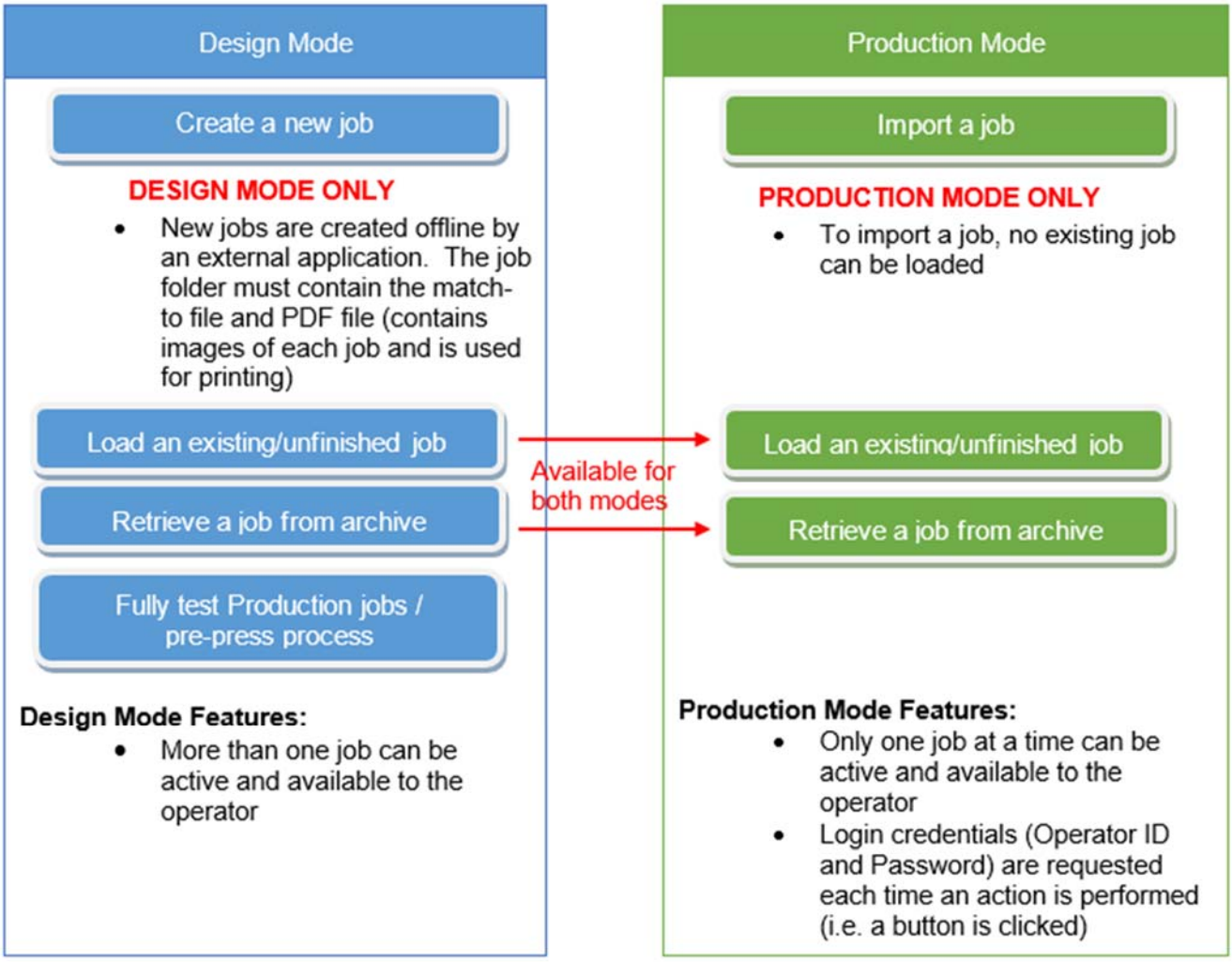
Appendix F: Operating Modes

Appendix G outlines the product detail and interface setup instructions to the LVS-7510 inspection system for labels printed from thermal or thermal transfer printers.

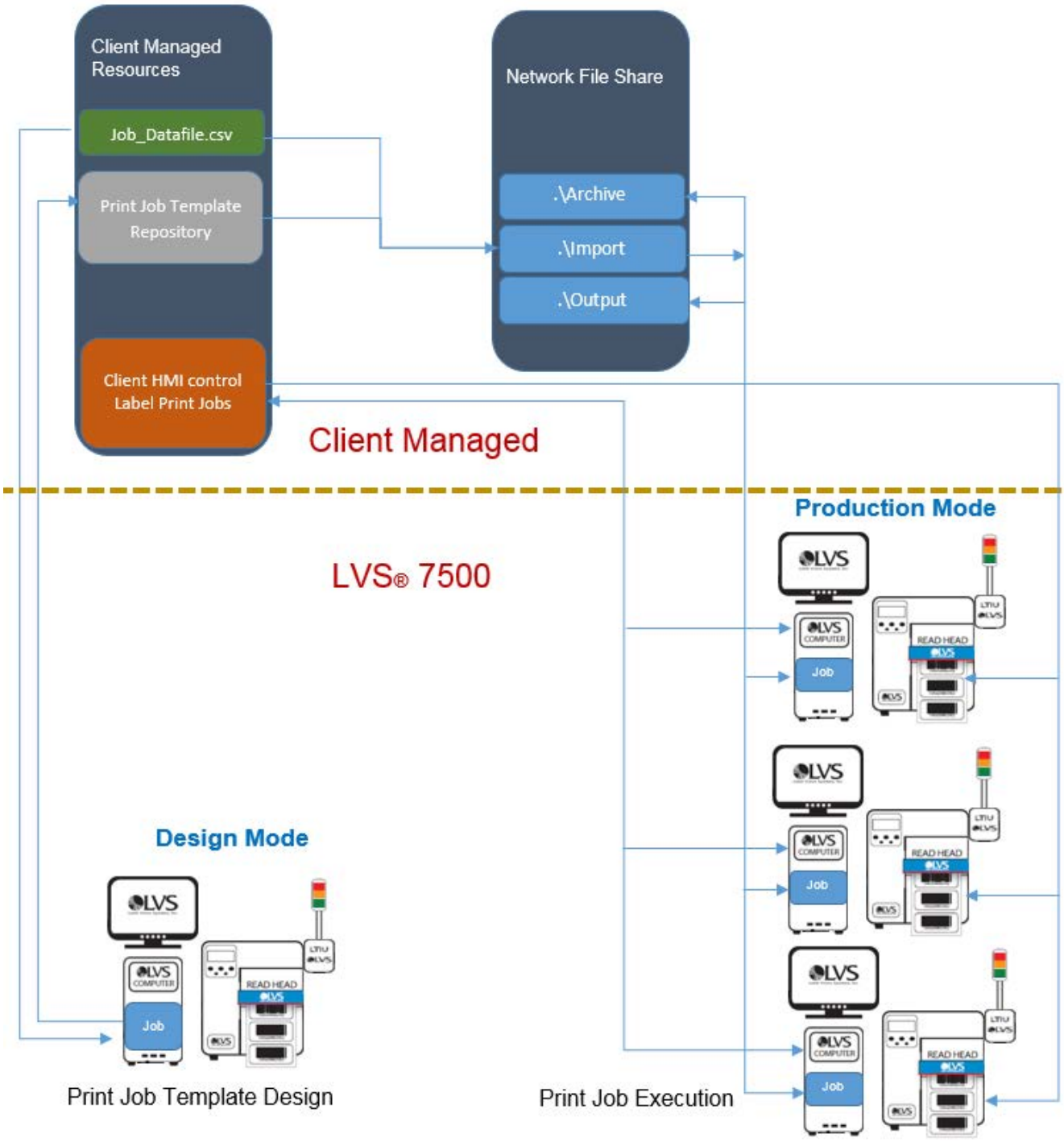
The LVS-7510 software is highly configurable through settings in an integrated configuration editor. The three primary modes of operation are: **Normal**, **Design** and **Production** modes. The reason for the different modes is to support the segregation of duties and provide a productive and secure environment for label production and validation.

In Normal mode, there is no separation of duties. A unit in normal mode is usually intended to be used for multiple functions, both label template design and label inspection in print production.

Design and Production mode units are separate physical systems. The primary differences between the two modes are that jobs are created in *Design mode* only. New jobs are then imported and ran in *Production mode* only. Highlights of each mode are listed below.



Design and Production Mode Flow Chart



Design Mode

Overview

Design mode is intended to eliminate the set-up process on the production line. Design mode systems can be setup anywhere on the client's network. The Design mode system is a complete system that includes the LVS-7510 inspection unit, computer and client printer. The process of capturing a Golden Image is through a physical printout of a mock production run of labels. The mock production labels are printed and variable data attributes are tested in the Design mode. Once a golden image is captured from an actual label print, the Design operator can compare that image against an approved PDF using the supplied PDF comparison software on the Design system. The comparison process is as simple as loading an approved PDF from a folder location on the network and clicking "Play." The software runs a comparison against the captured golden image and highlights any differences for the operator to review. Once satisfied that the PDF and Golden image match, the operator clicks "Accept" and a report is stored with the job for any future reference. If the operator finds any discrepancies, he/she simply reprints a new image on the LVS-7510 and runs the comparison again. The Design system is a sophisticated software package with many inspection capabilities. It is best operated by a well-trained individual or group to ensure the final production process runs as automated as possible with as little operator interference as possible.

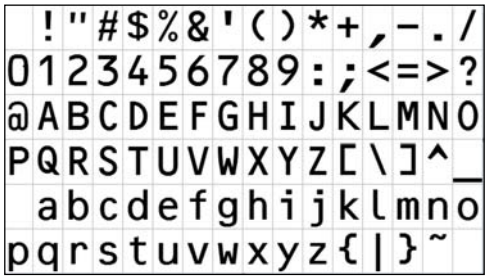
Label areas or sectors that require vision inspection/validation are defined and the details of the type of validation are stored in the job template.

The following sector types are available:

Sector Type	Description
Barcode read	This sector type validates a 1D (linear) or 2D (two-dimensional) barcode image and determines if the code is "readable" by a scanner. Expected data can be variable or static.
Barcode grade	This sector type grades a 1D or 2D barcode image according to ISO/IEC 15415/15416 standards. The passing grade is user configurable for each sector.
OCR read	The Optical Character Recognition (OCR) sector type is used to "read" the human readable characters located within a drawn sector; this data can be variable or static. Variable data, such as Lot Number and Expiration Date, is passed to the LVS-7510 using one of two options: One option is to use a data file in a csv format that contains the variable data. This data file and the job template are sent to the Microscan Production system at runtime. A second option for handling variable data is to send the data over TCP/IP to the LVS-7510 Production system after the job template is loaded. For OCR guidelines, read the section below entitled "OCR and OCV Guidelines."
OCV verify	The Optical Character Verification (OCV) sector type scores the print quality of human readable characters within a drawn sector. The passing score is user configurable for each sector. For OCV guidelines, read the section below entitled "OCR and OCV Guidelines."
Blemish	This sector type identifies and tracks potential print errors such as die cut errors, broken letters, skews, smears, spots, voids, wrinkles, missing copy, and other print quality defects.

OCR and OCV Guidelines:

- Characters must not touch or overlap
- All uppercase letters in any font are allowed
- Lowercase letters, uppercase letters, and some special characters are allowed in OCR-B MT font (6 to 14 points). Shown to the right are the letters, numbers, and special characters supported by OCR-B MT font (6 to 14 points)
- Monospaced fonts, like OCR-B, are preferred and perform better in the LVS-7510
- Do not attempt to re-learn any of the supplied OCR-B MT fonts



In Design mode, more than one job can be active and available to the operator, who will be trained in the design and creation of the label inspection templates.

A job name is given to the job folder where the LVS-7510 will create and save all files involved in the execution of an actual production job. After design is complete, the Designer will close out the job which zips up all files for the job and stores the jobname.zip file in the Archived folder of the Design Mode LVS-7510 or a mapped location on the client's server.

Once the job folder is archived by the LVS-7510, the control and storing of that file are now in the hands of the client's system. It is the client's responsibility to store that template on their server or production file location. Version control of the template is the responsibility of the client.

In Design mode, the LVS-7510 utilizes the following job-related file folders for a specific purpose. The naming of the folders below is based on their purpose but can be changed to suit the client. All folders can be on a mapped network drive or local drive for each LVS-7510 system.

Jobs folder:

- In Design mode, this is where new jobs are created and designed. Multiple jobs under development are allowed
- A new job is initiated by creating a new folder with the new job name in the Jobs folder

Archived jobs:

- In Design mode, jobs that are complete and closed out are zipped up and removed from the Jobs folder to the Archived jobs folder (stored as a template on server). The jobname.zip file is ready for execution in Production mode or recall back into Design mode for changes and/or updates

In Design mode, the label verification template is created as a separate process in a pre-press or off-line environment. During the design process, label templates are created and golden images of the actual labels are captured in an off-line process. The inspection points are all set in Design mode so the production process can remain as automated as possible.

Important: The functionality of Design and Production modes is based on using a match-to file which compares the data decoded within a sector to the data in a user-created file. The match-to file must contain a unique record each row (such as 001, 002, 003). A unique record is data that can be used only once in the file; it cannot appear in any other row or column in the file. Refer to the "Match-to File" section in this appendix for the match-to file requirements.

Define Job Locations in Design Mode

You must define where jobs are located on a network drive or local folder. This section explains how to choose path locations for the following types of jobs:

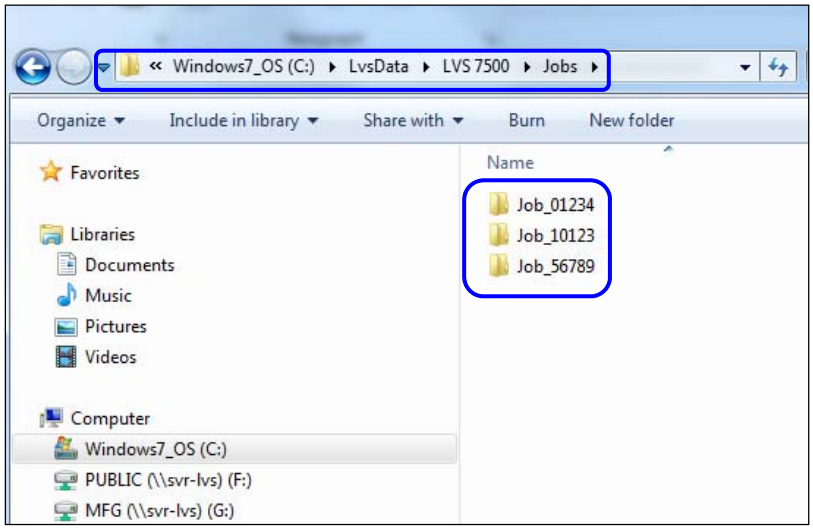
- New jobs ready to be worked on
- Archived jobs (jobs that are complete and closed out)

Define Location of New Jobs

> **Important:** Only users who are granted the "Allow Create NEW Job / Edit" permission can setup a job in Design mode. For more information on user permissions, refer to the "Setup Operator Permissions" section further in this document.

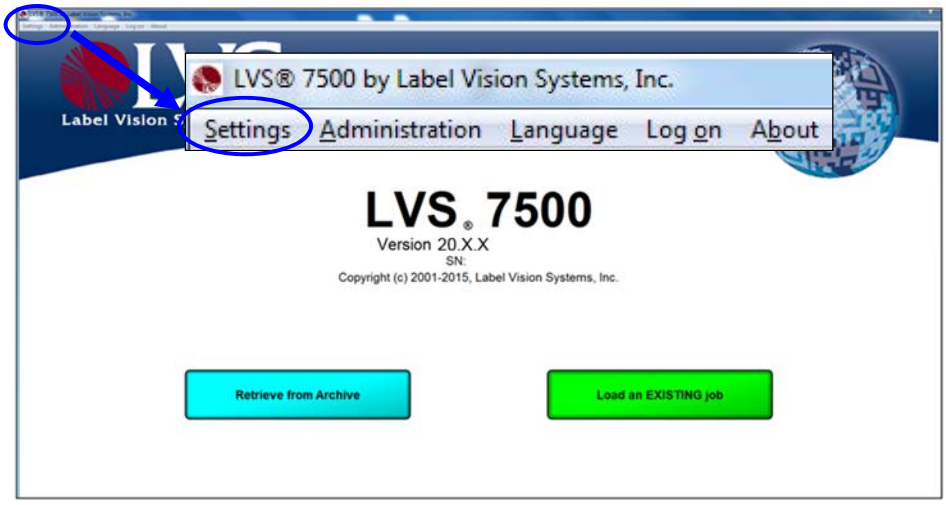
When setting up a new job in Design mode, the job folder must be created offline by an external application, such as Windows Explorer. To define the location of new jobs:

1. Create a job folder using an external application. The job folder is where new jobs are placed. When a user clicks the "Create a NEW Job" button on the Welcome screen, any job(s) placed in this folder will appear for selection.
2. The example below shows three job folders created in Windows Explorer at the following location: C:\LvsData\LVS 7500\Jobs

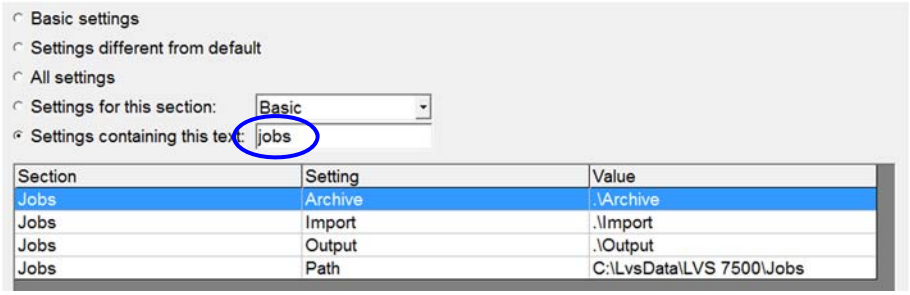


3. Place the following files in the job folder:
   - Match-to file (see the "Match-to file" section in this appendix for more information)
   - Adobe PDF file (contains images of each job)
   - PDF Master
4. Log in to the LVS-7510 software. You must have administrator rights to perform the following steps.

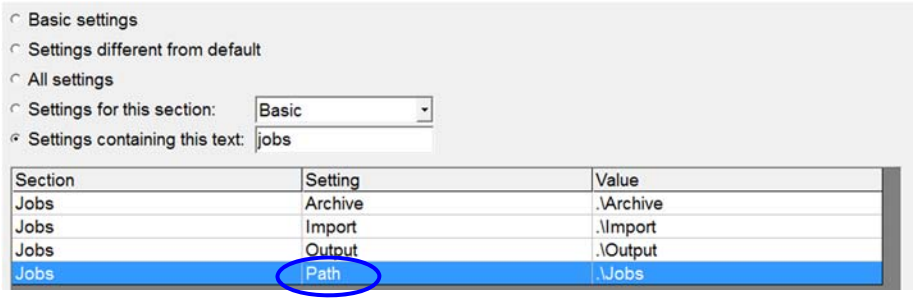
5. Click “Settings” in the menu bar.



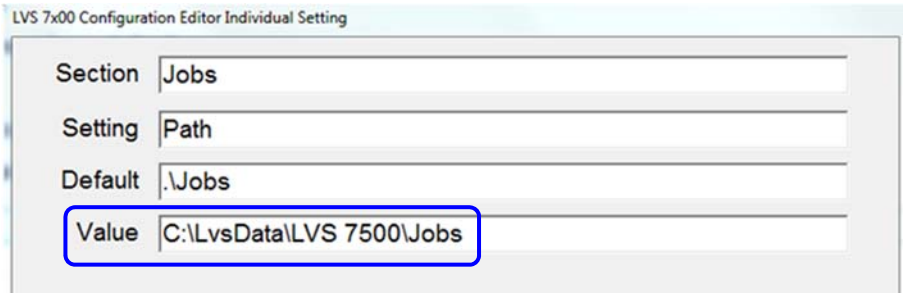
6. In the “Settings containing this text” field, type “jobs.”



7. Double-click “Path” located in the “Setting” column.



8. Enter the path for new jobs in the “Value” field and then click “OK (save changes).

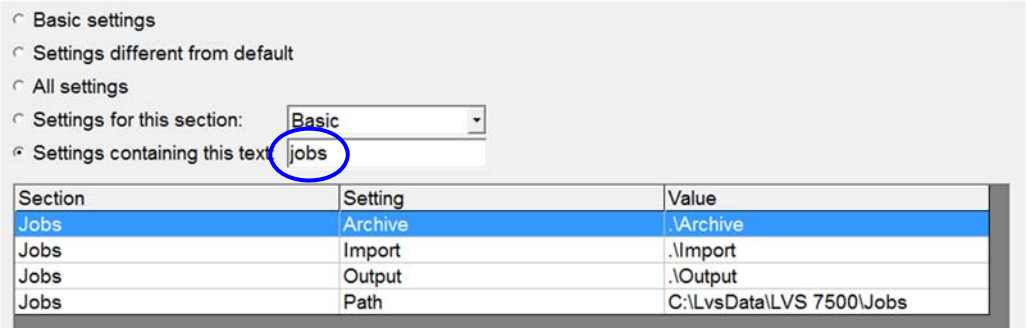


Define Location of Archived Jobs

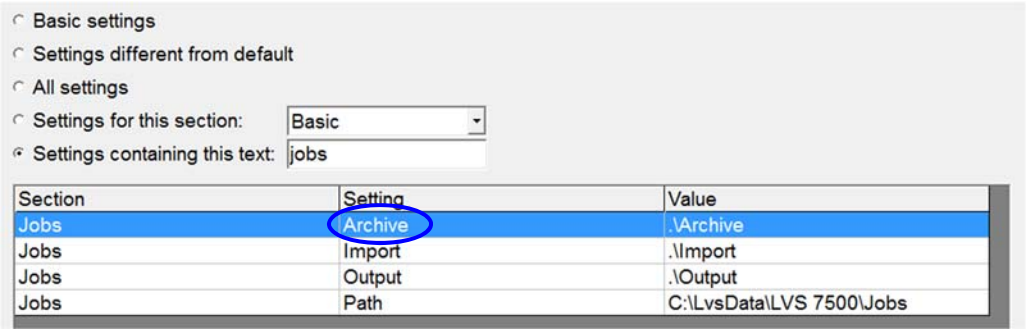
Archived jobs (jobs that are complete and closed out) must be stored in an “Archive” folder located on a network drive or local folder. Follow the steps below to define the location of the “Archive” folder.

1. Log in to the LVS-7510 software. You must have administrator rights to perform the following steps.
2. Click “Settings” in the menu bar.

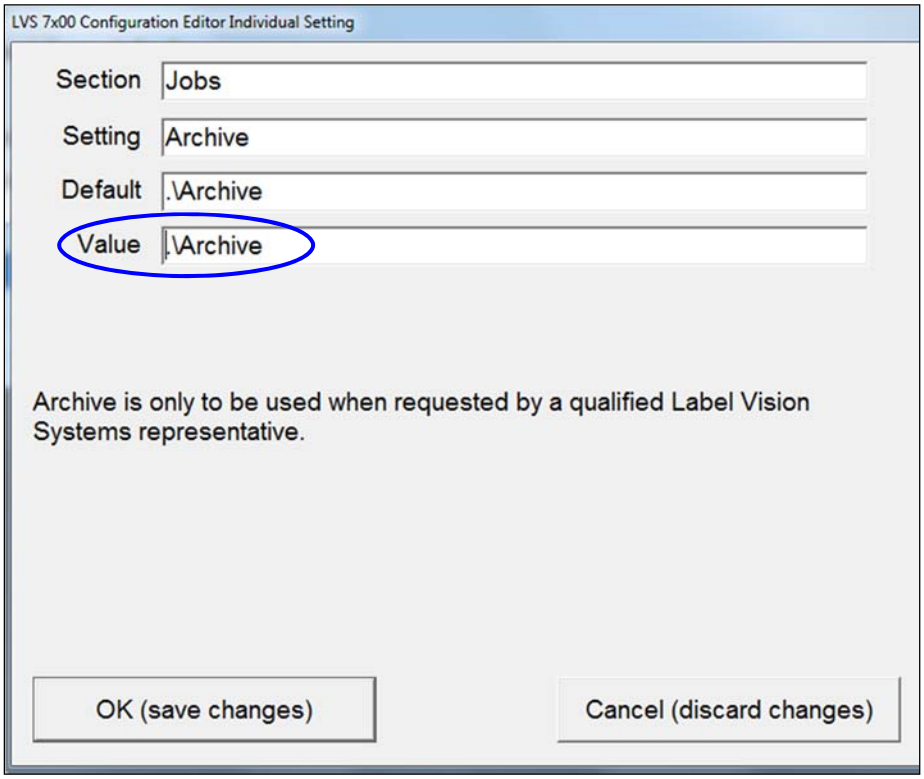
3. In the “Settings containing this text” field, type “jobs.”



4. Double-click “Archive” located in the “Setting” column.



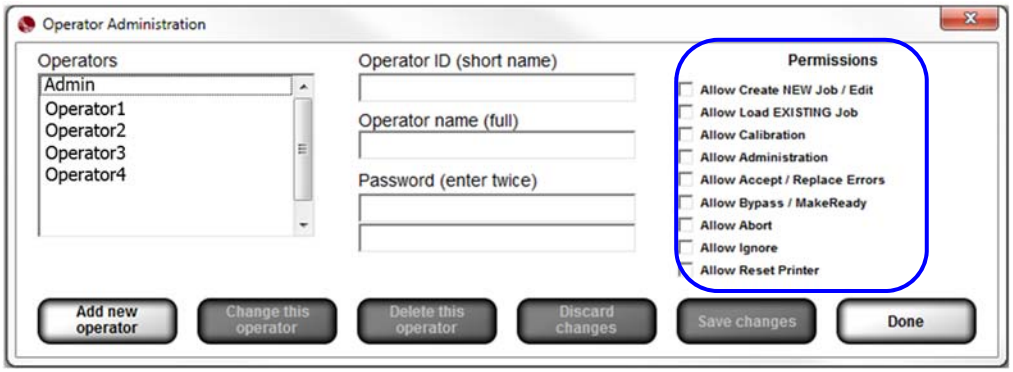
5. Enter the desired path for archived jobs in the “Value” field. Example: C:\LVSData\LVS 7500\Jobs\Archive. By default, archived jobs are stored at .\Archive.



6. Click “OK (save changes).”

Setup Operator Permissions

To setup operator permissions in Design mode, select “Administration” and then “Operators” from the menu bar. The “Operator Administration” window appears.

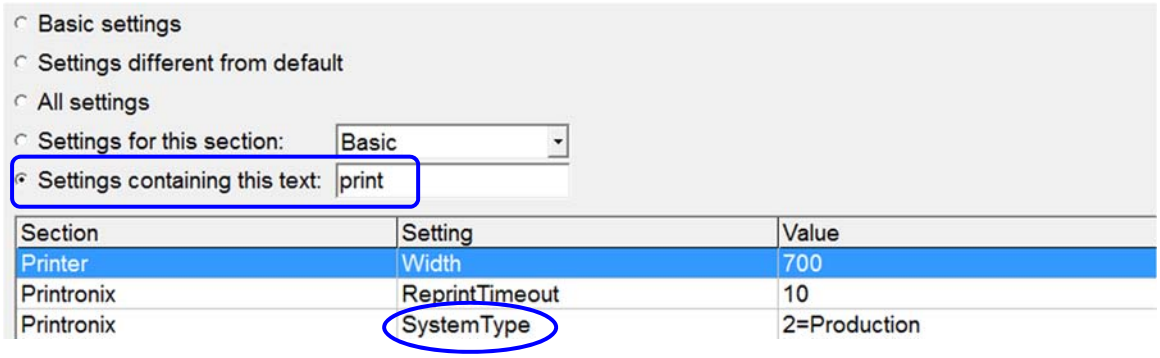


Operation	Design Mode Permission	Description
Create a Job	Allow Create NEW Job / Edit	Allows the operator to create, edit, or delete a job.
Load a Job	Allow Load EXISTING Job	Allows the operator to load and execute existing jobs. Existing jobs cannot be edited.
Retrieve a Job	Allow Load EXISTING Job	Allows the operator to load and execute existing jobs. Existing jobs cannot be edited.
Print a Job	Allow Abort	Allows the operator to stop running the job after three consecutive errors of the same type are detected (except Foreground and Background errors). For more information, refer to the “Printing Stopped Error Message” section in this appendix (Error Messages > Printing Stopped Error Message).
Print a Job	Allow Ignore	Allows the operator to ignore a failed label and continue printing the next label in the job after three consecutive errors of the same type are detected (except Foreground and Background errors). For more information, refer to the “Printing Stopped Error Message” section in this appendix (Error Messages > Printing Stopped Error Message).
Print a Job	Allow Reset Printer	Allows the operator to reset the printer. For more information, refer to the “Reset the Printer” section in this appendix (Error Messages > Reset the Printer).

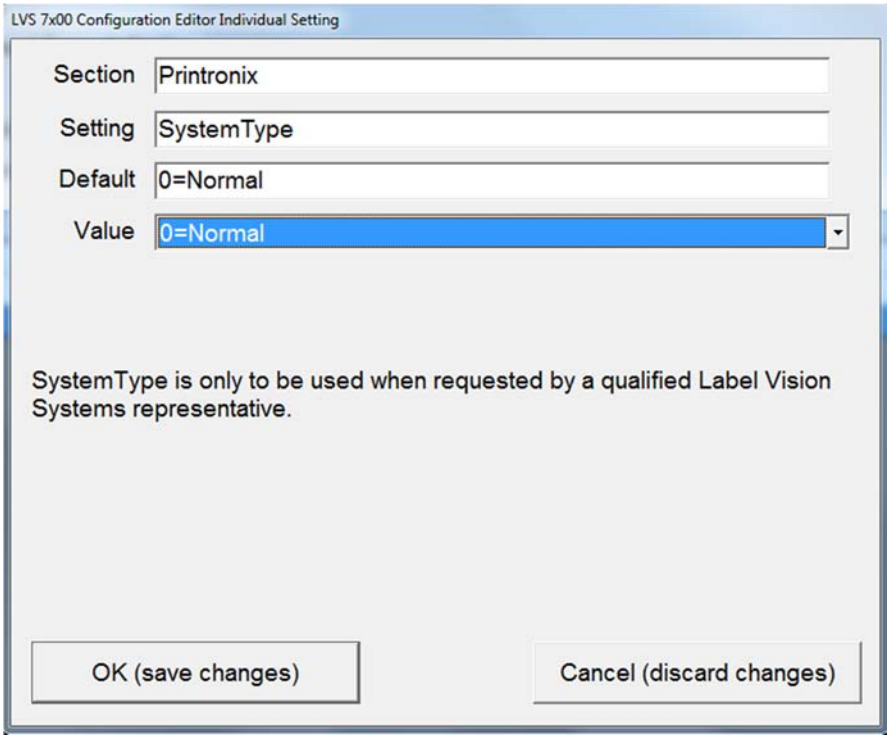
Activating Design Mode

Follow the steps below to activate Design mode.

1. Log into the LVS-7510 software.
2. Click “Settings” in the menu bar.
3. Click the “Settings containing this text” radio button and in the text field, type “print” (referring to Printronix). A list of search options appears containing the word “print.”

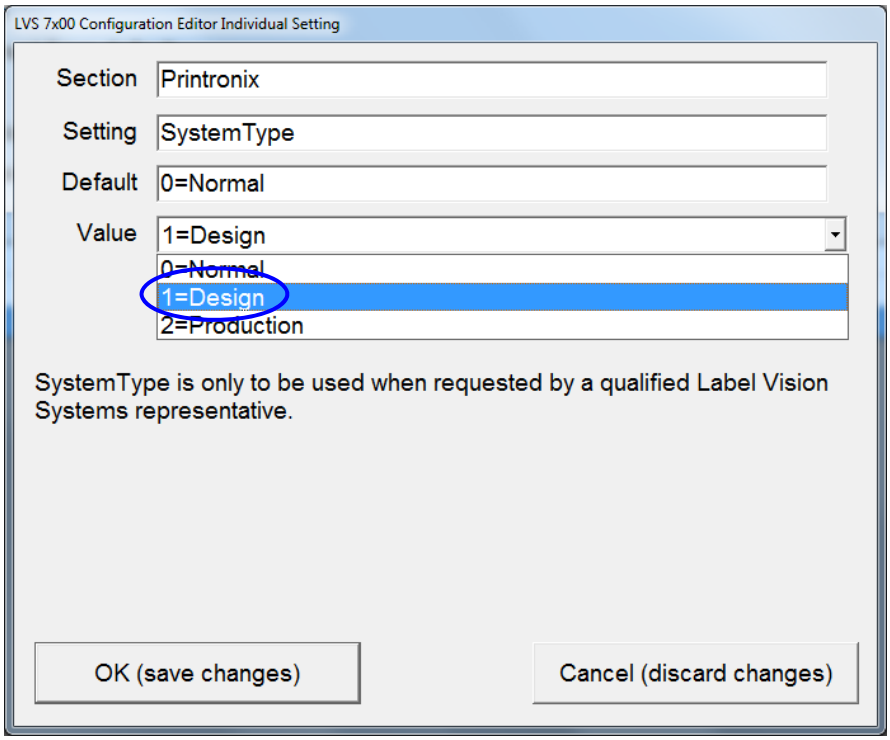


4. Double-click “SystemType” located in the “Setting” column (see above). The “LVS-7510 Configuration Editor Individual Setting” window appears.

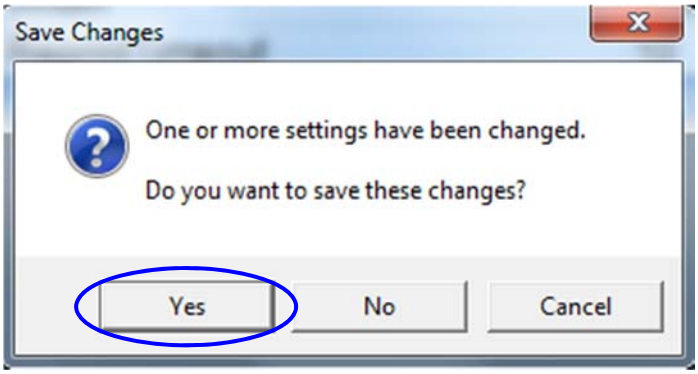


5. Click the “Value” drop-down list and select **“1=Design**.”

   Note: The **“0=Normal”** option puts the LVS-7510 software back into normal operating mode.



6. Click the “OK (save changes)” button.
7. Click the “X” in the top right corner of the “LVS-7510 Configuration Editor” screen.
8. Click “Yes” to save changes in the “Save Changes” window.



9. Shut down and then restart the LVS-7510 software for Design mode to take effect.

Design Mode Operating Steps

This section provides steps on using the LVS-7510 software in Design mode.

The following buttons are available on the Welcome screen:

- **Create a NEW job** – Click this button to create a new job. This button appears if a new job folder has been created offline by an external application
- **Retrieve from Archive** – Click this button to view a list of archived jobs and reactivate a job if necessary. This button appears when there is no job number folder present
- **Load an Existing job** – Click this button to load an existing job. This button appears if there is an existing job that is open and active

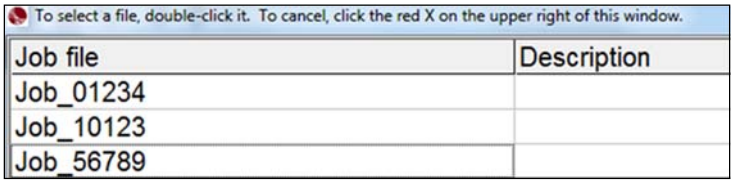
The Welcome screen uses “smart button” functionality, meaning certain buttons are made available based on actions performed in the system. For example, the “Create a NEW job” button appears if there is a new job number folder available. If a new job number folder is not available, the “Retrieve from Archive” button automatically appears.

Create a New Job

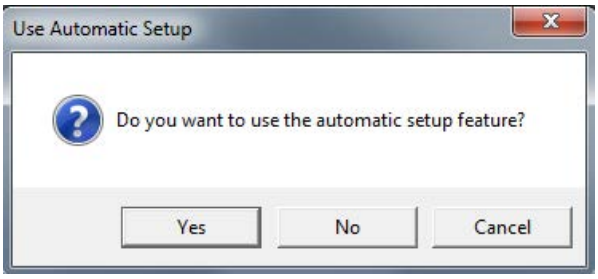
Follow the steps below to create a new job.

1. Click the “Create a NEW job” button.

2. A list of new jobs appears. Double-click the job file name to open the job.



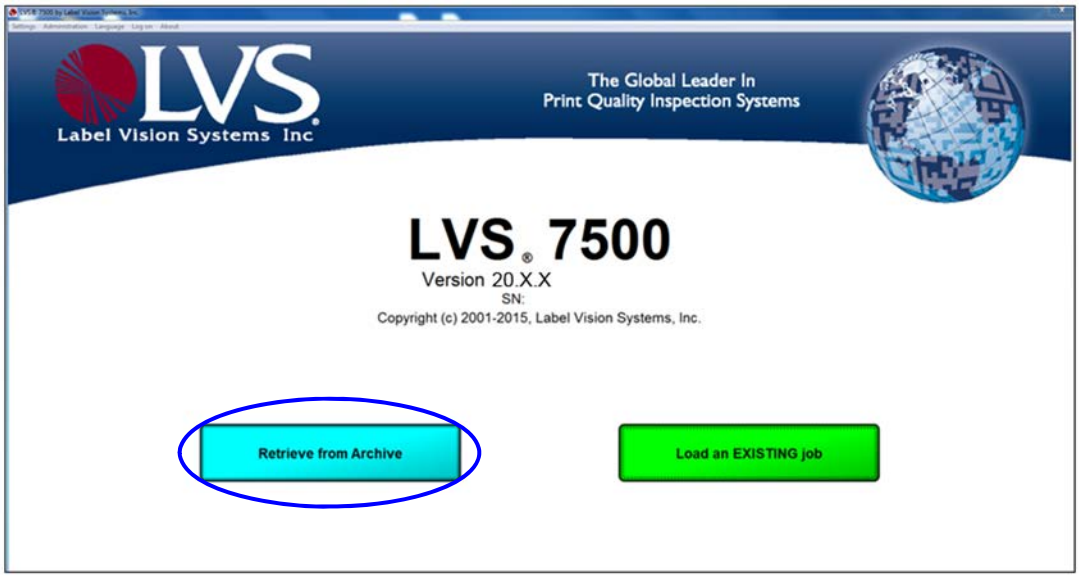
3. Select “Yes” to use the Automatic Setup feature or “No” to use the Manual Setup feature. Follow the onscreen instructions until the “Ready to run” screen appears. See the “Ready to Run Screen” section for more information.



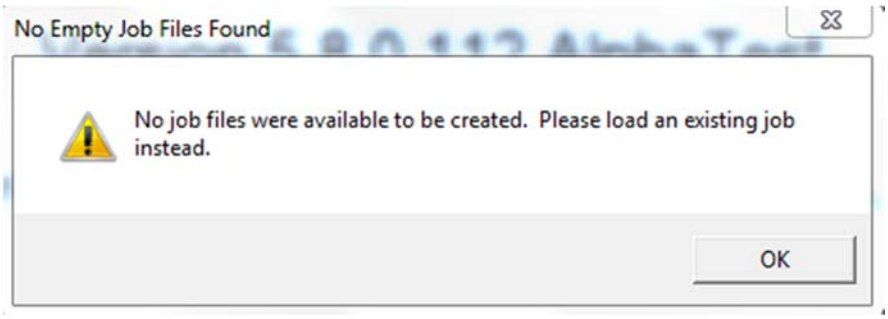
4. Refer to the “Automatic Setup” section in this manual for detailed instructions on using the Automatic Setup feature. Refer to the “Manual Setup” section in this manual for instructions on using the Manual Setup feature.

Retrieve from Archive

1. Click the “Retrieve from Archive” button.



Note: If archived jobs do not exist (there are no zipped jobs in the “Archive” folder), then the following message appears.



2. A list of archived jobs appears. Archived jobs are compressed and contained in a .ZIP file. Double-click on the file name.

Job file
Job_01234.zip
Job_10123.zip
Job_56789.zip

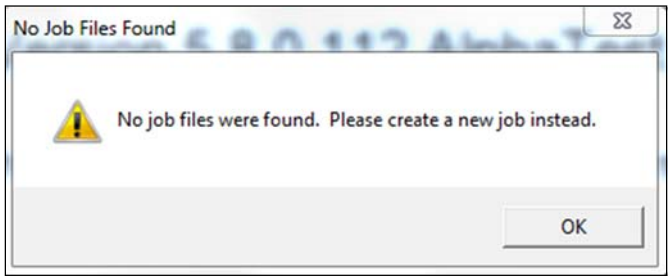
3. The “Ready to run” screen appears. See the “Ready to Run Screen” section for more information.

Load an Existing Job

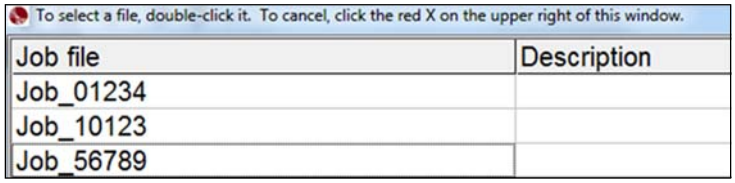
Follow the steps below to load an existing job.

1. Click the “Load an EXISTING job” button.

If an existing job does not exist (the “Jobs” folder does not contain a job folder with files from an active job), then the following message appears:



2. A list of jobs appears. Double-click the job file name to open the job.



3. The “Ready to run” screen appears. See the “Ready to Run Screen” section for more information.

Production Mode

Overview

In Production mode, the LVS-7510 can be configured based upon the printer implementation and level of operator interaction desired. Some printers allow failing labels to be pulled back into the printer and over struck, effectively destroying the failing label and we consider those systems to be fully automated. While other printers that do not have this overstrike feature are paused by the LVS-7510 for the operator to take action to remove and destroy a failing label. The LVS-7510 software can be configured to accommodate the level of user interaction desired by a customer.

Production mode systems are designed for easy production process. The client can choose what level of automation they prefer for their production environment. From a basic HMI provided by the client to handle the movement of job folders from your server to our local production systems to a fully controlled client created HMI running and controlling the LVS-7510. Microscan has options for most clients' needs.

In Production mode, the LVS-7510 utilizes the following folders:

- **Import jobs – ACTIVE FOLDER**

  In Production mode, new jobs waiting to be worked on are dropped into the Import folder. Only one job can reside in the Import folder. After a job is completed, the LVS-7510 will clear the system and archive any reference (Inspection/ Run) data.
- **Output job reports**

  In Production mode when a job is completed and closed out, the output reporting and summary files are written to this folder path.
- **Archived jobs**

  Jobs that are complete and closed out are zipped up and moved from the Jobs folder to the Archive folder. This folder can be located on a network drive or local folder.

Important: The functionality of Design and Production modes is based on using a match-to file which compares the data decoded within a sector to the data in a user-created file. The match-to file must contain a unique record each row (such as 001, 002, 003). A unique record is data that can be used only once in the file; it cannot appear in any other row or column in the file. Refer to the "Match-to File" section in this appendix for the match-to file requirements.

Define Job Locations in Production Mode

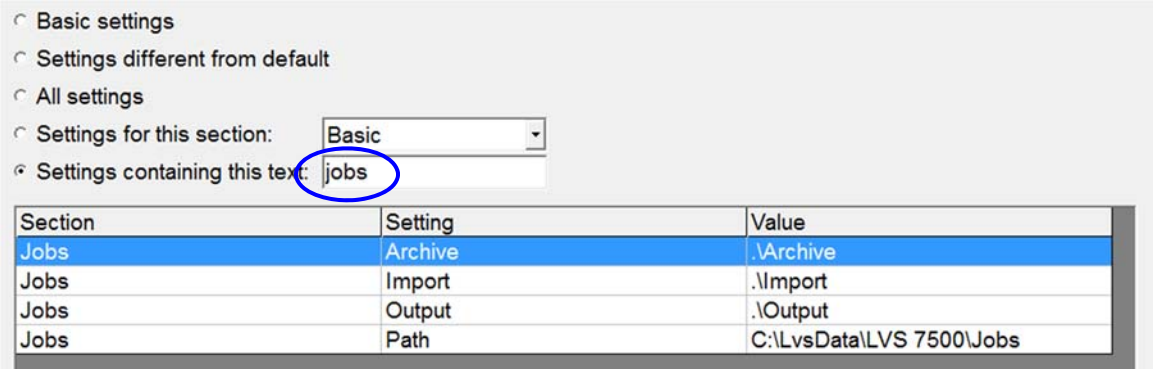
You must define where jobs are located on a network drive or local folder. This section explains how to choose path locations for the following types of jobs:

- New jobs ready to be worked on
- Existing jobs (active jobs currently being worked on)
- Output Summary Files (created when a Production mode job is closed out and after the match-to file has been processed. If a match-to file is not being used, Output Summary Files will not be created. Refer to the "Match-to File" section in this appendix for match-to file formatting requirements)
- Archived jobs (jobs that are complete and closed out)

Important: You must have administrator rights to perform the steps in this section.

1. Log in to the LVS-7510 software.
2. Click "Settings" in the menu bar.

3. In the "Settings containing this text" field, type "jobs."



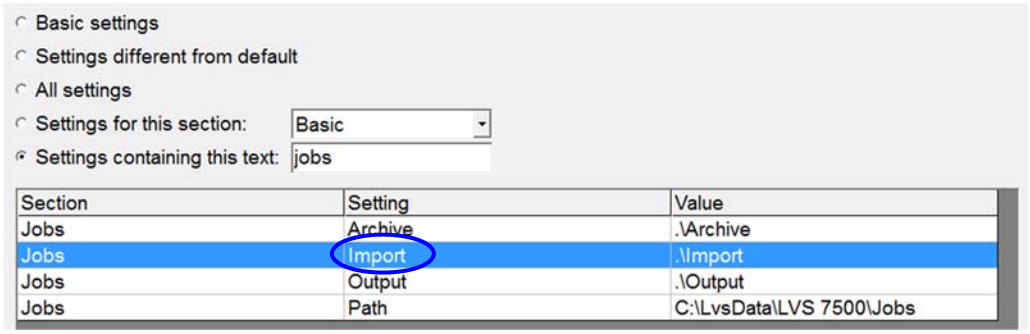
4. Follow the steps in the remaining sections to define path locations.

Define Location of New Jobs

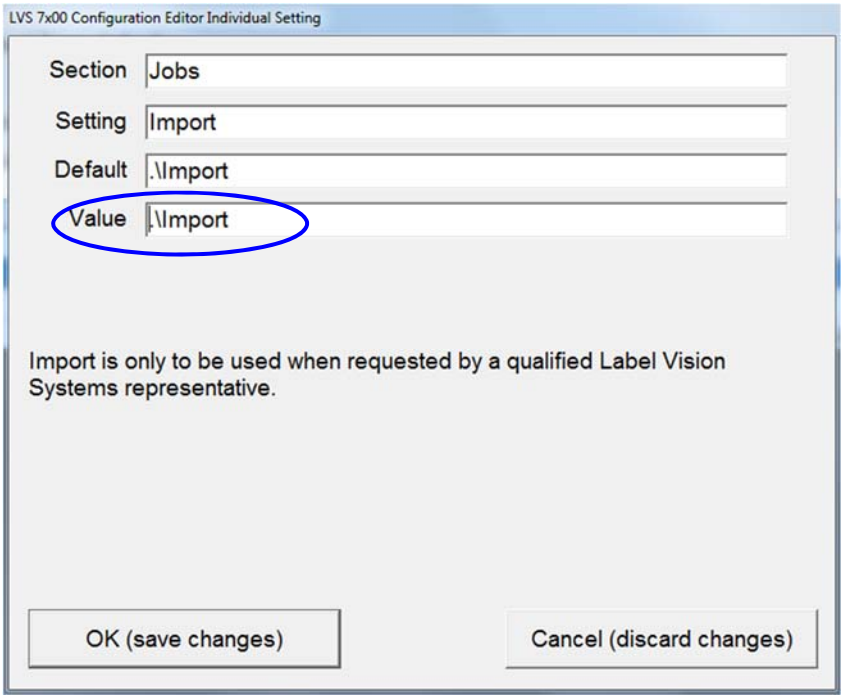
In Production mode, new jobs ready to be worked on must be stored in an “Import” folder located on a network drive or local folder. Follow the steps below to define the location of the “Import” folder.

1. Open Windows Explorer and create an “Import” folder at the following path: C:\LVSData\LVS 7500\Jobs\Import. New jobs must be placed in the “Import” folder.

2. In the LVS-7510 software, double-click “Import” located in the “Setting” column.



3. Enter the desired path for new jobs in the “Value” field. Example: C:\LVSData\LVS 7500\Jobs\Import. By default, jobs ready to be imported are stored at .\Import.

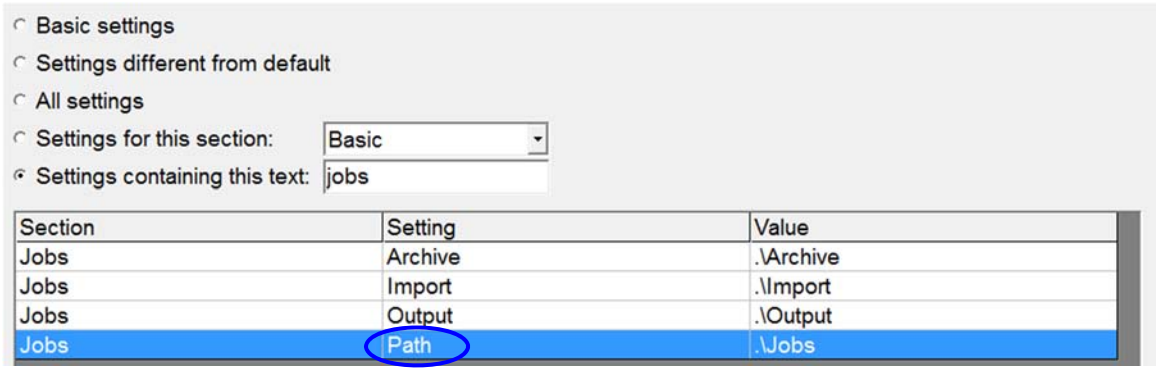


4. Click “OK (save changes).”

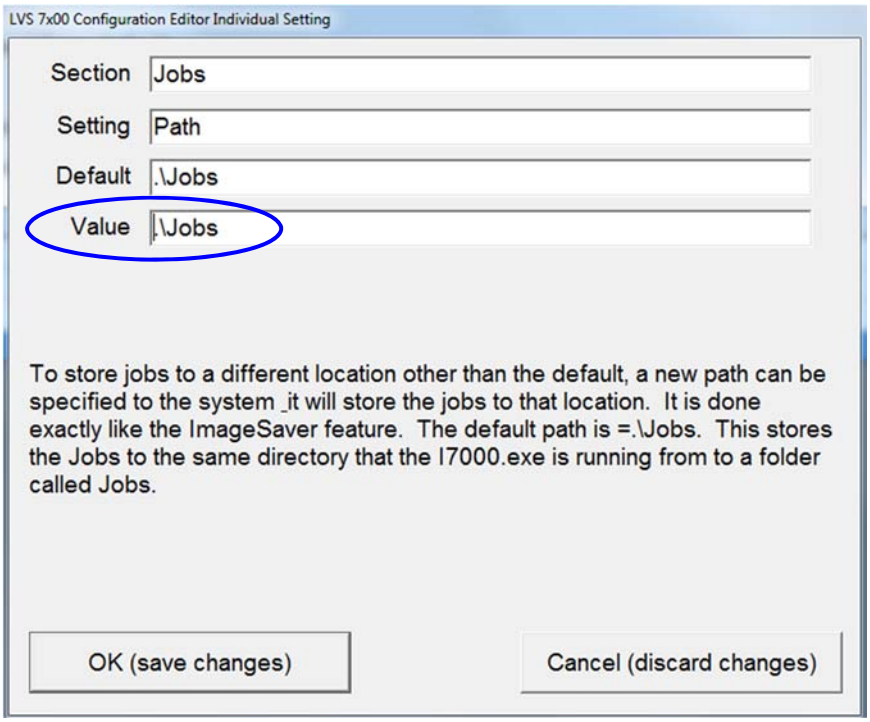
Define Location of Existing Jobs

Existing jobs (active jobs that are currently being worked on) must be stored in a “Jobs” folder located on a network drive or local folder. Follow the steps below to define the location of the “Jobs” folder.

1. Double-click “Path” located in the “Setting” column.



2. Enter the desired path for existing jobs in the “Value” field. Example: C:\LVSData\LVS 7500\Jobs. By default, existing jobs are stored at .\Jobs.

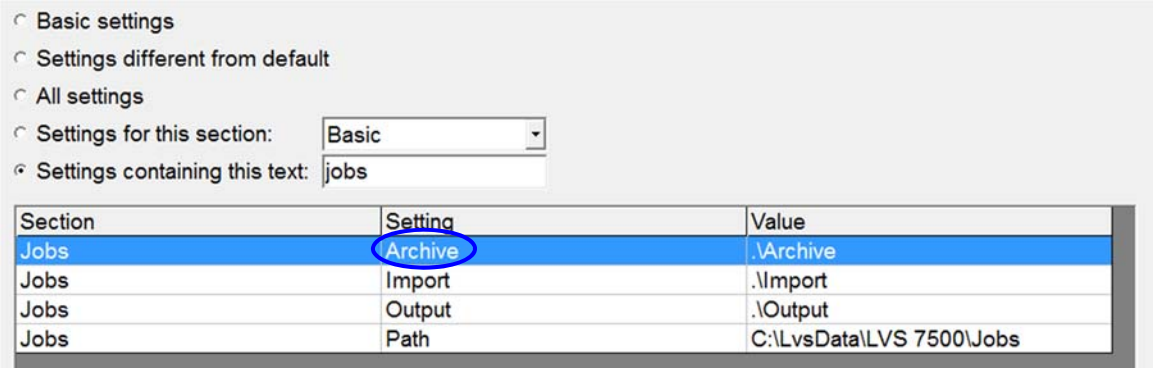


3. Click “OK (save changes).”

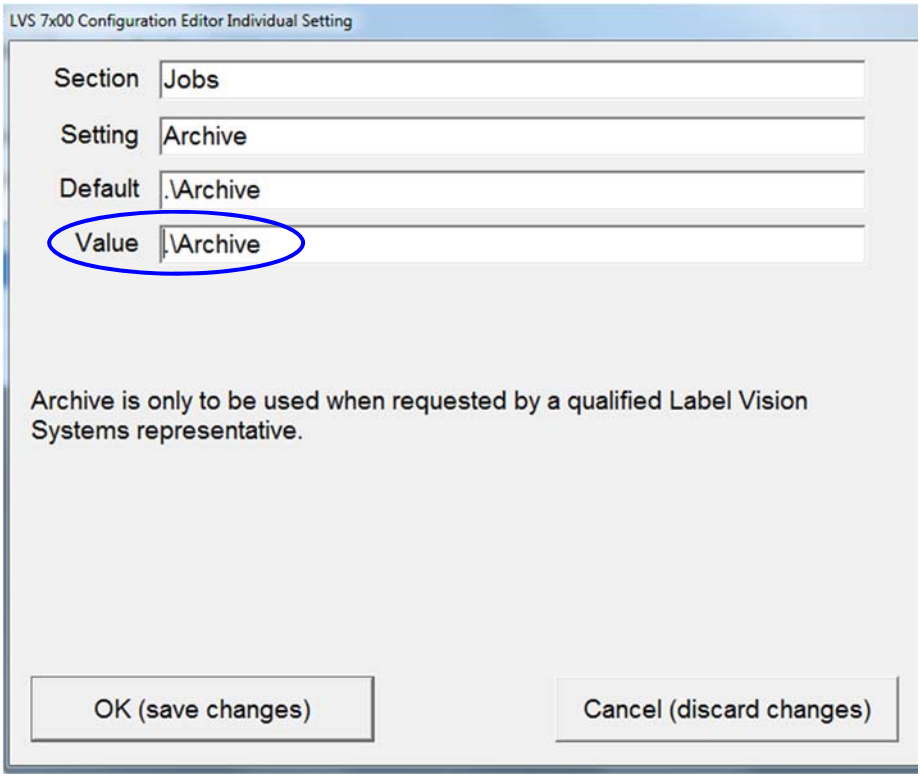
Define Location of Archived Jobs

Archived jobs (jobs that are complete and closed out) must be stored in an “Archive” folder located on a network drive or local folder. Follow the steps below to define the location of the “Archive” folder.

1. Double-click “Archive” located in the “Setting” column.



2. Enter the desired path for archived jobs in the “Value” field. Example: C:\LVSData\LVS 7500\Jobs\Archive. By default, archived jobs are stored at .\Archive.



3. Click “OK (save changes).”

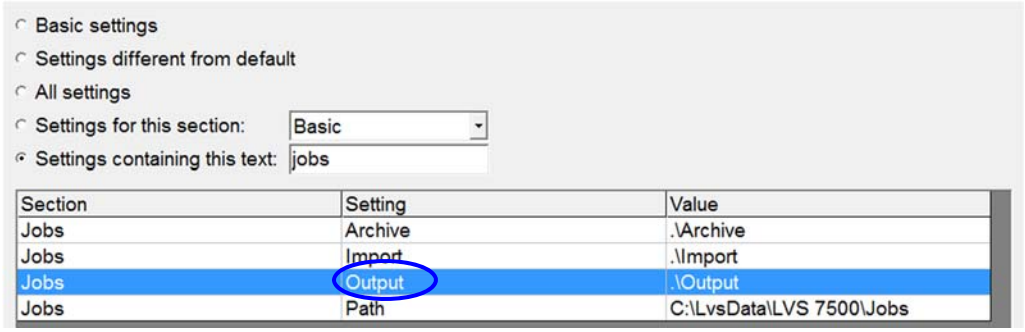
Define Location of Output Summary Files

The following five Output Summary Files are created when a Production mode job is closed out and after the match-to file has been processed. If a match-to file is not being used, Output Summary Files will not be created. The Output Summary Files are stored in an "Output" folder located on a network drive or local folder. Refer to the "Output Summary Files" section in this appendix for detailed information on Output Summary Files. Refer to the "Match-to File" section in this appendix for match-to file formatting requirements.

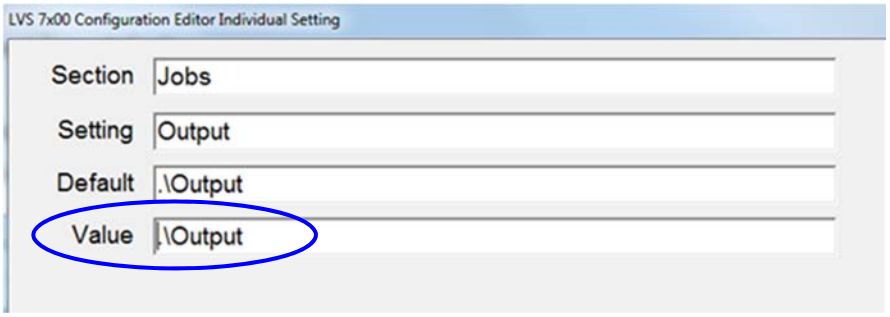
- **jobname_SUMMARYREPORT_1.htm** – The Summary Report in .htm format.
- **jobname_SUMMARY_1.csv** – A .csv file that summarizes the run results, such as the total number of good labels printed, the total number of reprinted labels, the total number of replaced labels, and the user supplied job number.
- **jobname_REPLACEMENT_1.csv** – A .csv file that includes the repeat, time, and distance for replacement labels printed in the previous job run. The file is empty if no replacement labels are printed.
- **jobname_PRODUCTION_1.csv** – A comma separated value (.csv) file that includes the repeat, time, distance, and inspection data results for each sector.
- **jobname_AUDITTRAIL_1.txt** – A text file that includes all audit history for the job.

Follow the steps below to define the location of the "Output" folder.

1. Double-click "Output" located in the "Setting" column.



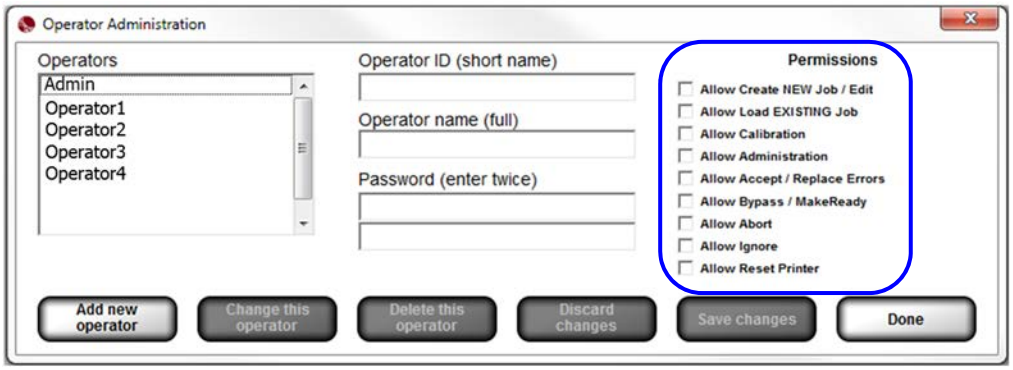
2. Enter the desired path for output summary files in the "Value" field. Example: C:\LVSData\LVS 7500\Jobs\Output. By default, output summary files are stored at .\Output.



3. Click "OK (save changes)."

Setup Operator Permissions

To setup operator permissions in Production mode, select “Administration” and then “Operators” from the menu bar. The “Operator Administration” window appears.

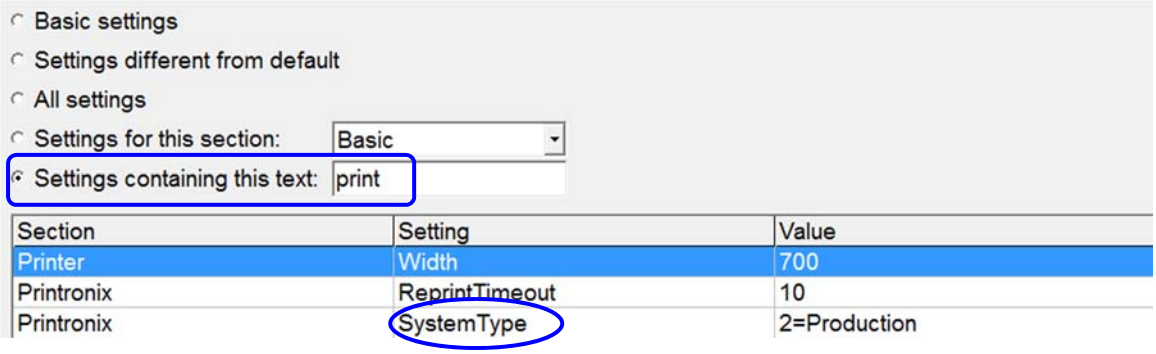


Operation	Production Mode Permission	Description
Import a Job	Allow Load EXISTING Job	Allows the operator to load and execute existing jobs. Existing jobs cannot be edited.
Load a Job	Allow Load EXISTING Job	Allows the operator to load and execute existing jobs. Existing jobs cannot be edited.
Retrieve a Job	Allow Load EXISTING Job	Allows the operator to load and execute existing jobs. Existing jobs cannot be edited.
Replacement	Allow Accept / Replace Errors	Allows the operator to accept or replace errors.
Print a Job	Allow Abort	Allows the operator to stop running the job after three consecutive errors of the same type are detected (except Foreground and Background errors). For more information, refer to the “Printing Stopped Error Message” section in this appendix (Error Messages > Printing Stopped Error Message).
Print a Job	Allow Ignore	Allows the operator to ignore a failed label and continue printing the next label in the job after three consecutive errors of the same type are detected (except Foreground and Background errors). For more information, refer to the “Printing Stopped Error Message” section in this appendix (Error Messages > Printing Stopped Error Message).
Print a Job	Allow Reset Printer	Allows the operator to reset the printer. For more information, refer to the “Reset the Printer” section in this appendix (Error Messages > Reset the Printer).

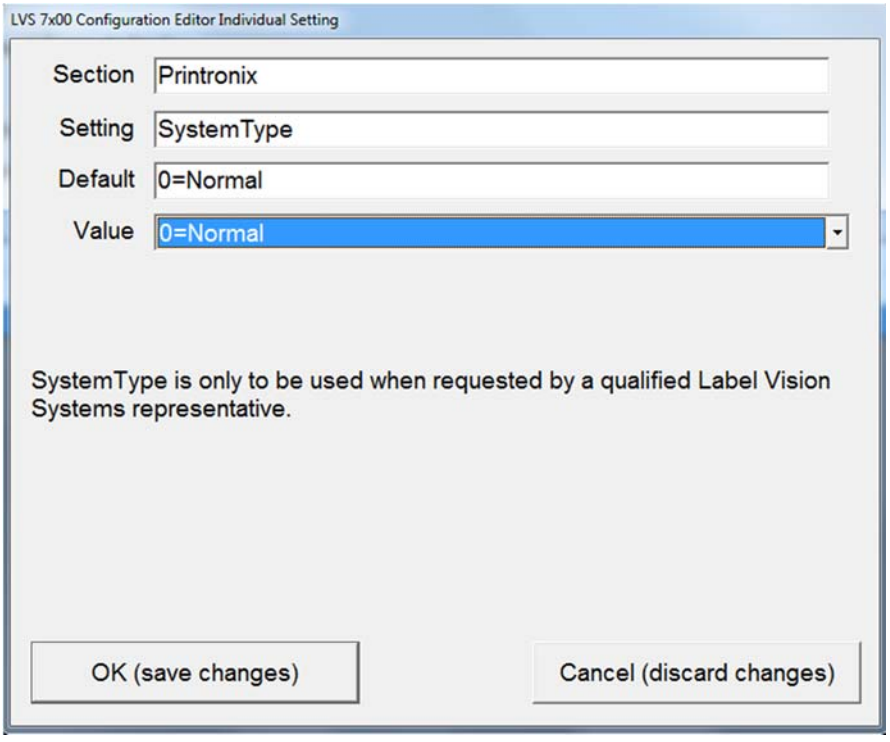
Activating Production Mode

Follow the steps below to activate Production mode.

1. Log into the LVS-7510 software.
2. Click “Settings” in the menu bar.
3. Click the “Settings containing this text” radio button and in the text field, type “print” (referring to Printronix). A list of search options appears containing the word “print.”

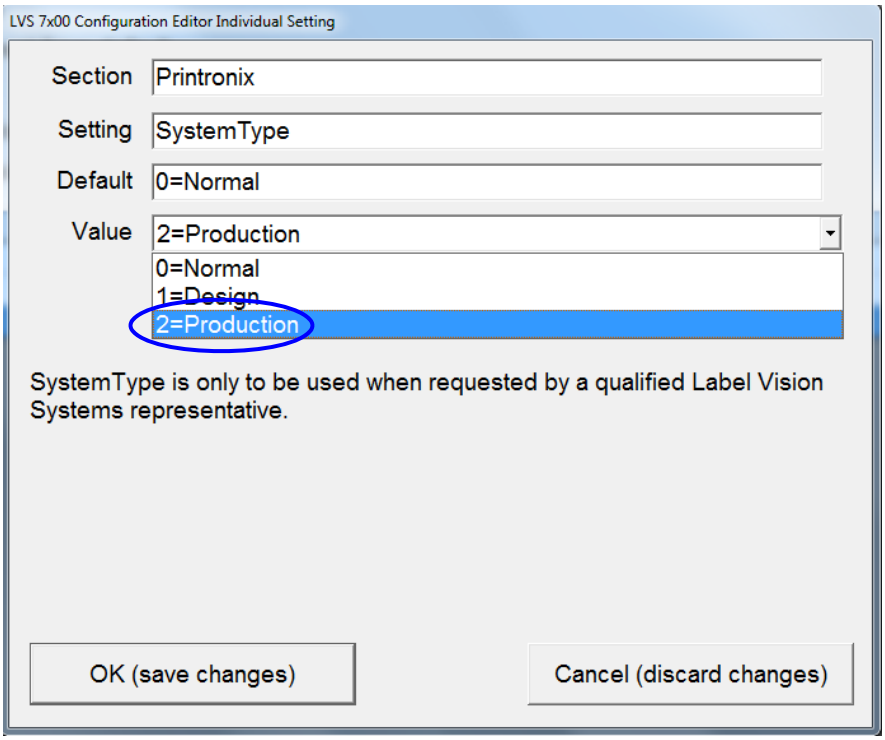


4. Double-click “SystemType” located in the “Setting” column (see above). The “LVS-7510 Configuration Editor Individual Setting” window appears.

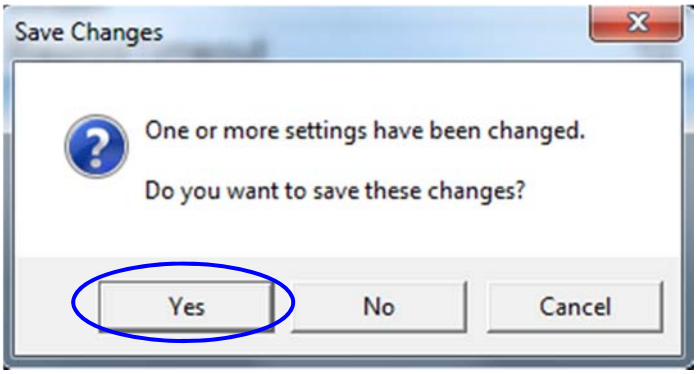


5. Click the “Value” drop-down list and select **“2=Production**.”

   Note: The **“0=Normal”** option puts the LVS-7510 software back into normal operating mode.



6. Click the “OK (save changes)” button.
7. Click the “X” in the top right corner of the “LVS-7510 Configuration Editor” screen.
8. Click “Yes” to save changes in the “Save Changes” window.



9. Shut down and then restart the LVS-7510 software for Production mode to take effect.

Production Mode Operating Steps

This section provides steps on using the LVS-7510 software in Production mode.

In Production mode, you are prompted to enter your Operator ID and Password for every action performed (such as each time a button is clicked). This feature provides an audit trail of modifications made to the system.

In Production mode, the following buttons are available on the Welcome screen:

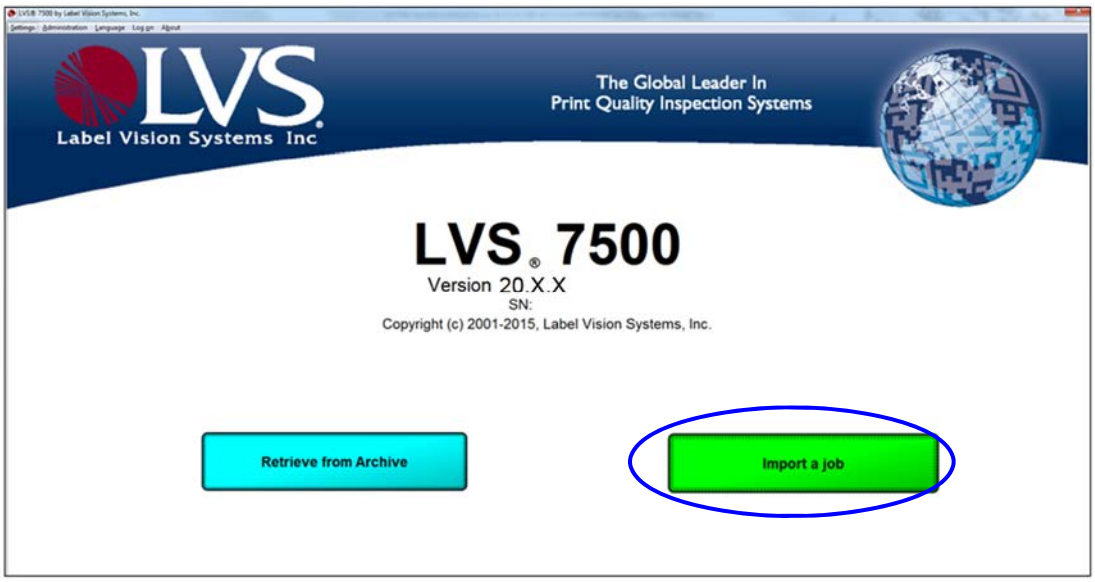
- **Import a Job** – Click this button to import a job. This button appears when there is no existing job present. Only one job at a time can be imported and active
- **Retrieve from Archive** – Click this button to view a list of archived jobs and reactivate a job if necessary
- **Load an Existing Job** – Click this button to load an existing job. This button appears when an existing job is present and still active

The Welcome screen uses “smart button” functionality, meaning certain buttons are made available based on actions performed in the system. For example, the “Import a job” button appears if there is no existing job present and active. If an existing job is present and active, the “Load an EXISTING job” button appears.

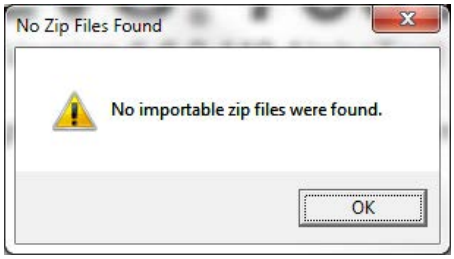
Import a Job

Follow the steps below to import a job.

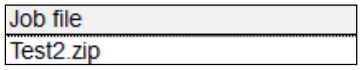
1. Click the “Import a job” button.



Note: The following message appears if no job is available to import.



2. Enter the “Operator ID” and “Password” and then click “OK.”
3. Jobs are compressed and contained in a .ZIP file. The job appears in the “Job file” column. Double-click on the job file name.

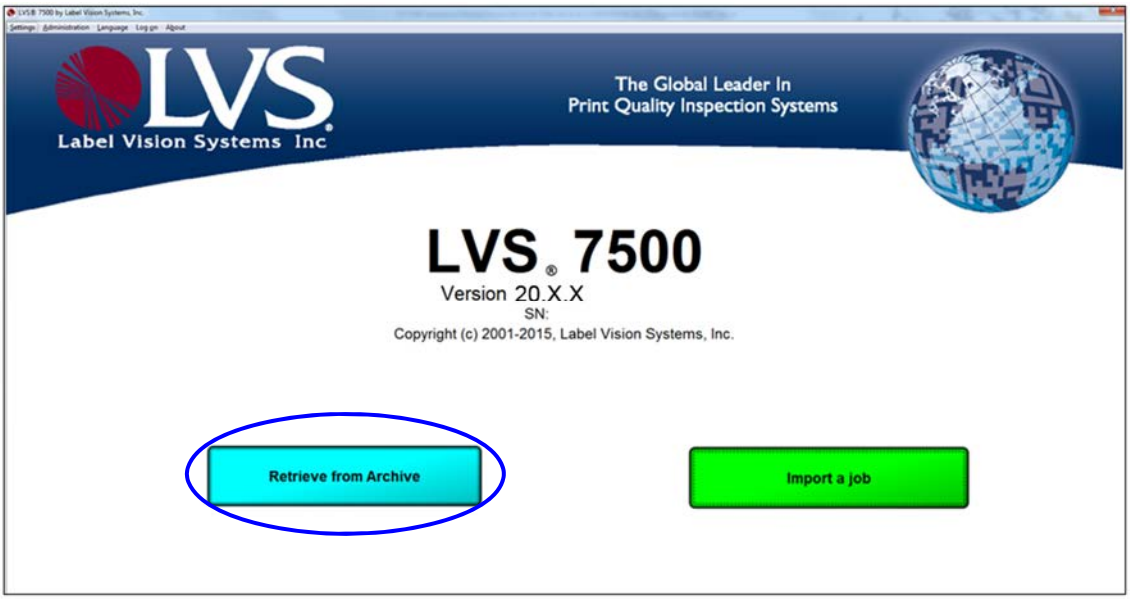


4. The “Ready to run” screen appears. See the “Ready to Run Screen” section for more information.

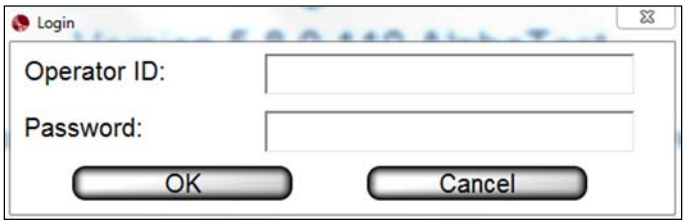
Retrieve from Archive

Follow the steps below to retrieve a job from archive.

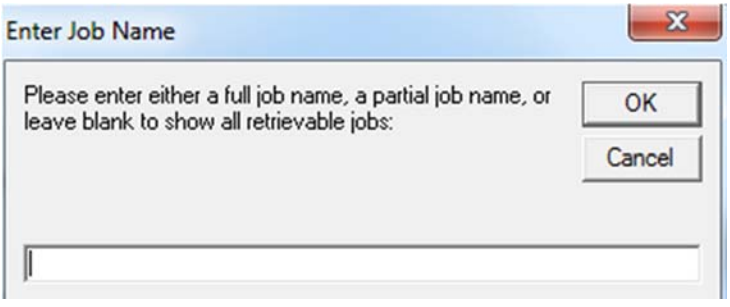
1. Click the “Retrieve from Archive” button.



2. Enter the “Operator ID” and “Password” and then click “OK.”

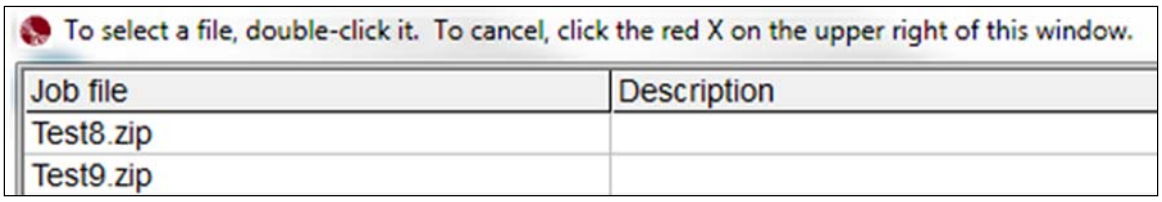


3. Enter either a full job name, partial job name, or leave the field empty to show all retrievable jobs. You may also scan a barcode if using a barcode scanner. When complete, click “OK.”

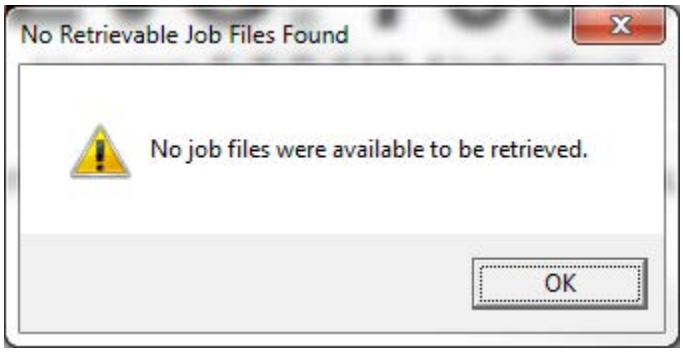


The following message appears if a job is loaded. Click “OK” and then close out the job. See the “Close Out a Job” section in this appendix for detailed instructions on closing out a job.

4. A list of archived jobs appears. Archived jobs are compressed and contained in a .ZIP file. Double-click on the file name.



The following message appears if there are no archived jobs.

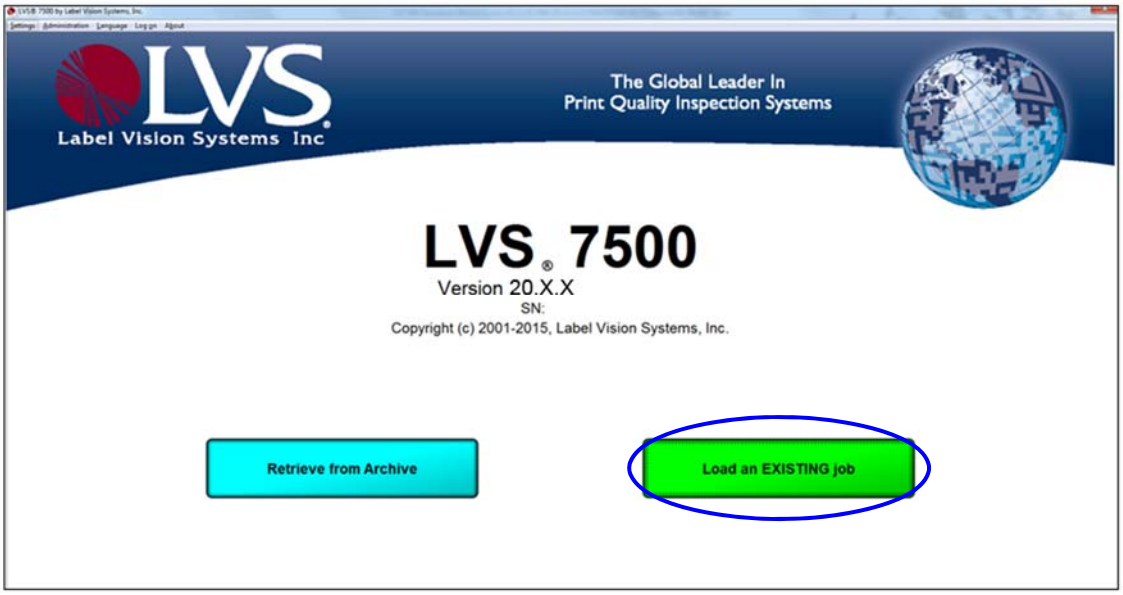


5. The “Ready to run” screen appears. See the “Ready to Run Screen” section for more information.

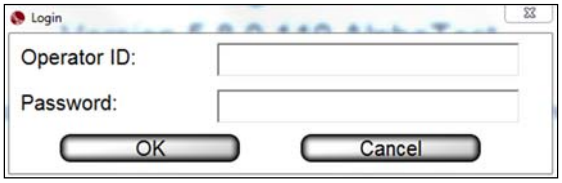
Load an Existing Job

Follow the steps below to load an existing job.

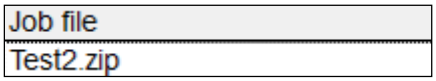
1. Click the “Load an Existing Job” button.



2. Enter the “Operator ID” and “Password” and then click “OK.”



3. Jobs are compressed and contained in a .ZIP file. Double-click on the job file name.

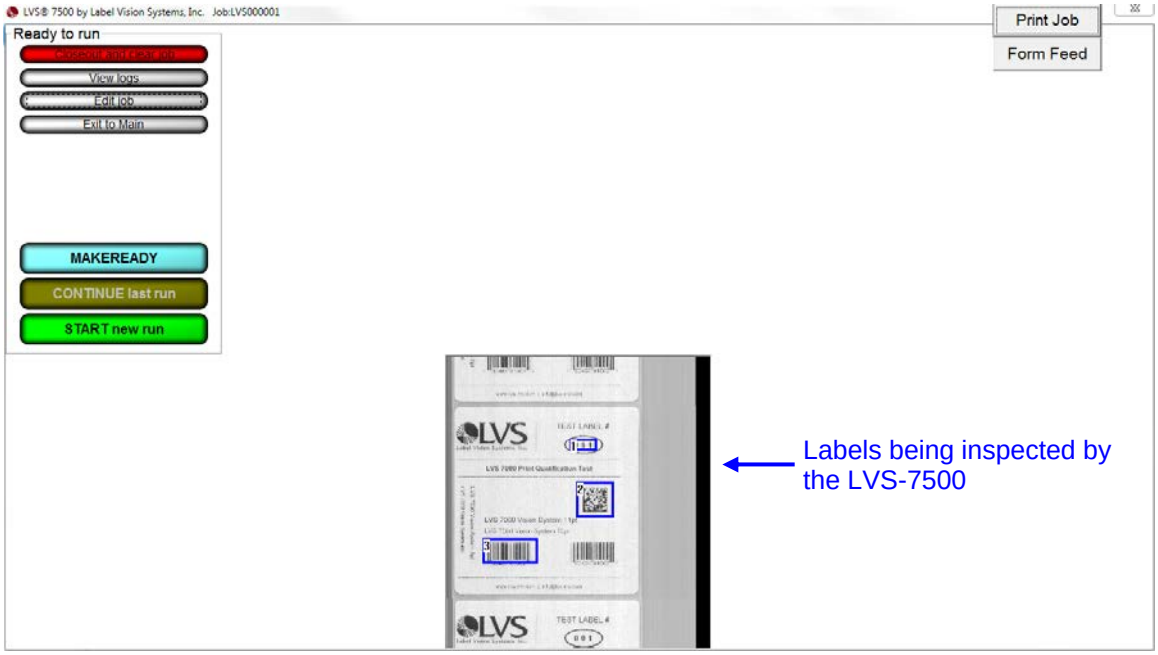


4. The job opens and the “Ready to run” screen appears. See the “Ready to Run Screen” section for more information.

Ready to Run Screen

Overview

The “Ready to run” screen allows you to perform numerous functions to a job, including editing a job, testing changes made to a job, viewing a report log for each job, printing a job, closing out and clearing a job. In addition, this screen allows you to start a new run, continue the last run, replace a damaged label, and push out any labels under the LVS-7510 readhead (for Printronix printers only). Detailed features of the “Ready to run” screen are provided in the table below.



Button	Description
Closeout and clear job	Click to close out and clear a job. If prompted, enter your Operator ID and Password. After clicking this button, the job folder is compressed in a .ZIP file and archived. The job can later be retrieved from archive and reactivated if necessary. Refer to the “Close Out a Job” section in this appendix for more information on closing out a job, including how this feature works in Design and Production modes.
View Logs	Click to view report logs created for each job. See the “View Logs” section in this appendix for more information.
Edit Job	Click to change the current job’s settings. When prompted, enter your Operator ID and Password. Only operators who are granted the “Allow Create NEW Job / Edit” permission are allowed to edit a job.
Exit to Main	Click to access the LVS-7510 Welcome screen.
MAKEREADY	Click to place the system in “Make Ready” mode which operates exactly as if the system was running normally with the exception that no data is stored and no I/O is triggered. Make Ready mode allows an operator to: • Simulate how inspections will perform • Simulate how the job created will work in a live setting

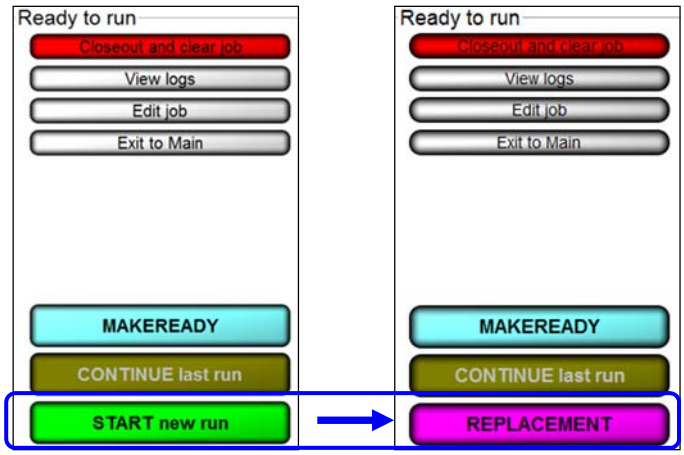
Button	Description
	• Test any changes made to the job • Test the system without triggering any output signals that might affect the rewinder or thermal printer "Make Ready" mode is available only after a job has been loaded. To exit Make Ready mode, click the "CANCEL MAKEREADY" button. For complete instructions on Make Ready mode, refer to the "Make Ready Mode" section in this manual.
Continue Last Run	Click this button to initiate inspection. The results will be appended to the most recent run file (CSV file) instead of creating a new run. This button is enabled only after a job has been loaded. See the "Start a New Run, Stop a Run, and Continue Last Run" section in this appendix for more information on continuing a run.
Start New Run	Click this button to start the currently loaded job on the LVS-7510. See the "Start a New Run, Stop a Run, and Continue Last Run" section in this appendix for more information on starting a new run.
Replacement	Click this button to replace a label that becomes damaged in the application process. The "Replacement" button appears after the run is finished, all labels are printed to completion, and the Match-to file results have been accounted for in the "<Job name>_SUMMARY_1.csv" file (a file that summarizes the run results, such as the total number of good labels printed, the total number of reprinted labels, the total number of replaced labels, and the job number). If the run has no associated match-to file, the "Replacement" button will not appear. See the "Replace a Label" section in this appendix for more information. Only operators who are granted the "Allow Accept/Replace Errors" permission are allowed to replace a label.
Print Job	Click this button to access a PDF file of each job; this allows you to quickly view and print each PDF job file. See the "Print a Job" section in this appendix for more information.
Form Feed	Click this button to advance all labels located under the LVS-7510 readhead when printing is complete (for Printronix printers only). Labels fed from the printer after the "Form Feed" button is pressed are not inspected by the LVS-7510. The ability to form feed labels is available only after the LVS-7510 stops inspection (by pressing the "Stop" button). Form feeding labels is not available when a job is running or in MAKEREADY mode. See the "Form Feed Labels" section in this appendix for more information.

Smart Button Functionality

The “Ready to run” screen uses “smart button” functionality, meaning certain buttons are enabled or disabled based on actions performed in the system.

Examples:

- The “START new run” button is replaced by the “Replacement” button when a run is completed, all labels are printed to completion, and the match-to file results have been accounted for in the “<Job name>_SUMMARY_1.csv” file. If the “Replacement” button appears, you must print any replacement labels (if desired), closeout and clear the job, and then import a new job for the “START new run” button to appear.



- The “Continue last run” button is enabled when the last run is still active and has not been closed out. The “Start new run” button is enabled when the previous run job is closed out and a new run is ready to start.

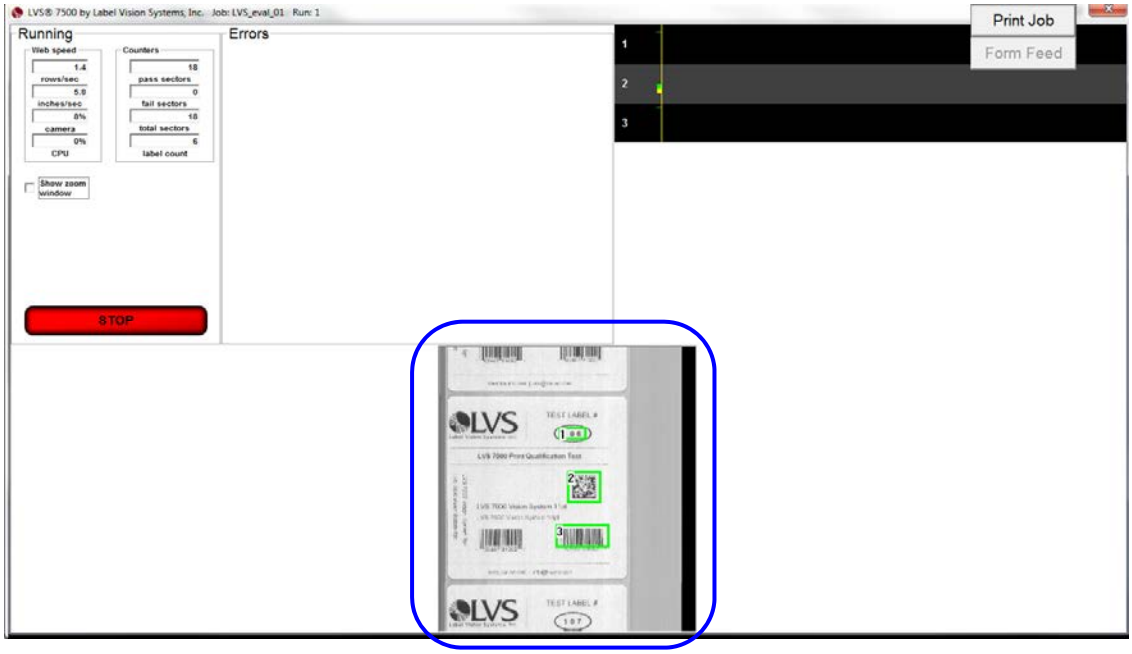
Start a New Run, Stop a Run, and Continue the Last Run

Start a New Run

1. Click the “START new run” button.

   Tip: If the “Replacement” button appears, you must print any replacement labels (if desired), closeout and clear the job, and then import a new job; the “START new run” button will then appear.

2. Make sure the printer is turned on. The labels begin printing and are visible on the screen as they are inspected.



Stop a Run

To stop a run, click the “Stop” button. When prompted, enter your Operator ID and Password. A “Stopping” message appears indicating the software is stopping.

IMPORTANT INFORMATION ABOUT STOPPING A RUN

When the “Stop” button is clicked, the LVS-7510 does not stop the run immediately. Instead, a configurable delay timer starts when the “Stop” button is clicked.

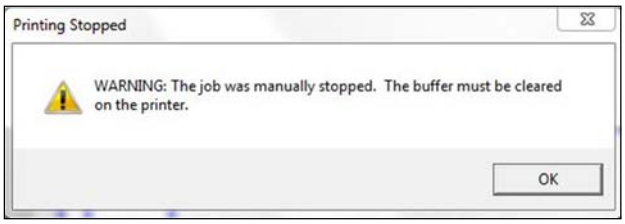
Note: The 7-second delay is the default setting. You can change the delay setting in the “Settings” menu > [Printronix] section > “StopTimeout” setting. The default value is StopTimeout=7000 (entered in milliseconds). For example, 7000 milliseconds is equal to 7 seconds. Enter the desired value in milliseconds.

Section	Setting	Value
Printronix	StopTimeout	7000

During the delay timer, the operator cannot perform any action in the LVS-7510 software; the operator must wait until the timer expires before the LVS-7510 software will accept commands.

If the inspection results of a label printing during the delay timer arrive before the delay timer expires, then the delay timer expires when the inspection results arrive:

- If the label printing when the “Stop” button was clicked passes inspection, printing stops and the “Printing Stopped” message appears. The operator must clear the printer’s buffer on the printer’s console and send the print job again to continue the job.



  The text appearing in the “Printing Stopped” message can be edited in the “StopPass.txt” file. See the section below entitled “Customizing the Printing Stopped Error Message” for instructions.

- If the label printing when the “Stop” button was clicked fails inspection, printing stops, the printer **will not** back up and overstrike the failed label, and the message below appears. The last label printed will count as a reprint but will not be automatically voided from the printer. The label must be manually destroyed by the operator and the operator must clear the printer’s buffer on the printer’s console.

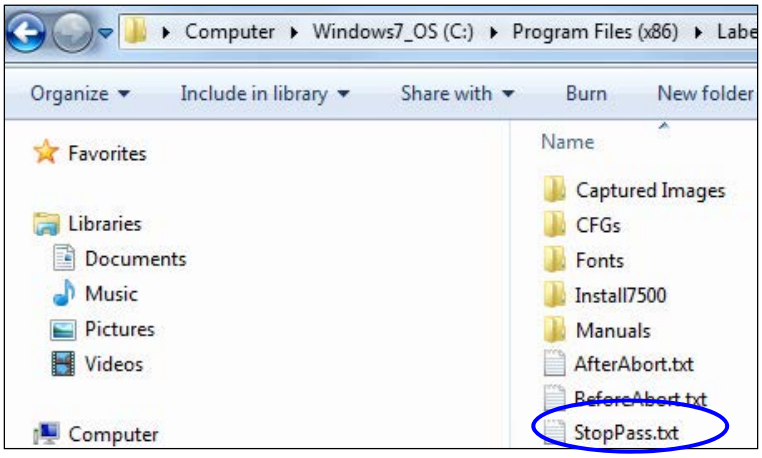
- Any inspection results arriving after the delay timer expires are not captured or logged by the LVS-7510. This means the delay timer must be sufficiently long as to allow the current label printing to complete before the delay timer expires or that label's inspection results are lost. For example, a 9-inch long label printing at 1 ips will take 9 seconds to print from start to finish. A 7-second delay timer that began at the start of the label printing will expire before the label printing is complete. Inspection begins after the label finished printing; therefore, the Stop command is executed before the label finished printing and the

inspection results will not exist. The StopTimeout setting should be adjusted to 10 – 12 seconds in this example.

Customizing the "Printing Stopped" Error Message

To change the text appearing in the "Printing Stopped" error message, follow the steps below. Windows Administrator access is required.

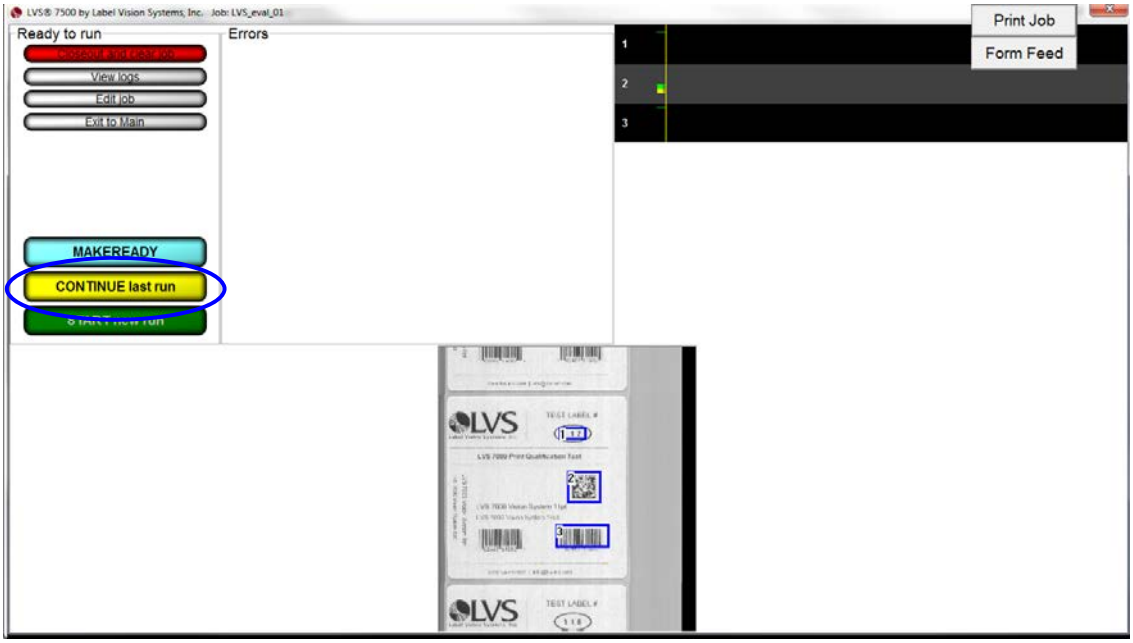
1. Shut down the LVS-7510 software
2. Open Windows Explorer and access the following path:
   C:\Program Files (x86)\Label Vision Systems\LVS 7500
3. Copy the "StopPass.txt" file to your desktop (or another preferred location).



4. Open the file in Notepad or another text editor program and make your editing changes. When changes are complete, save and then close the file.
5. Copy the "StopPass.txt" file back to C:\Program Files (x86)\Label Vision Systems\LVS 7500.
6. Restart the LVS-7510 software for the error message changes to appear.

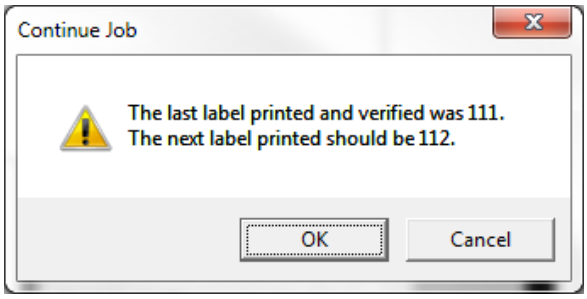
Continue a Job

1. To continue a job, click the “Continue last run” button. When prompted, enter your Operator ID and Password.



2. The following message appears indicating which label you should begin the job continuation. Click “OK.”

   Note: The label numbers in the message below appear only if using a match-to file that contains a unique record in each row. If a match-to file without a unique record in each row is not being used, the last label printed and next label printed will not appear in the message. Refer to the “Match-to File” section in this appendix for more information on the match-to file.



3. The labels begin printing and are visible on the screen as they are inspected.

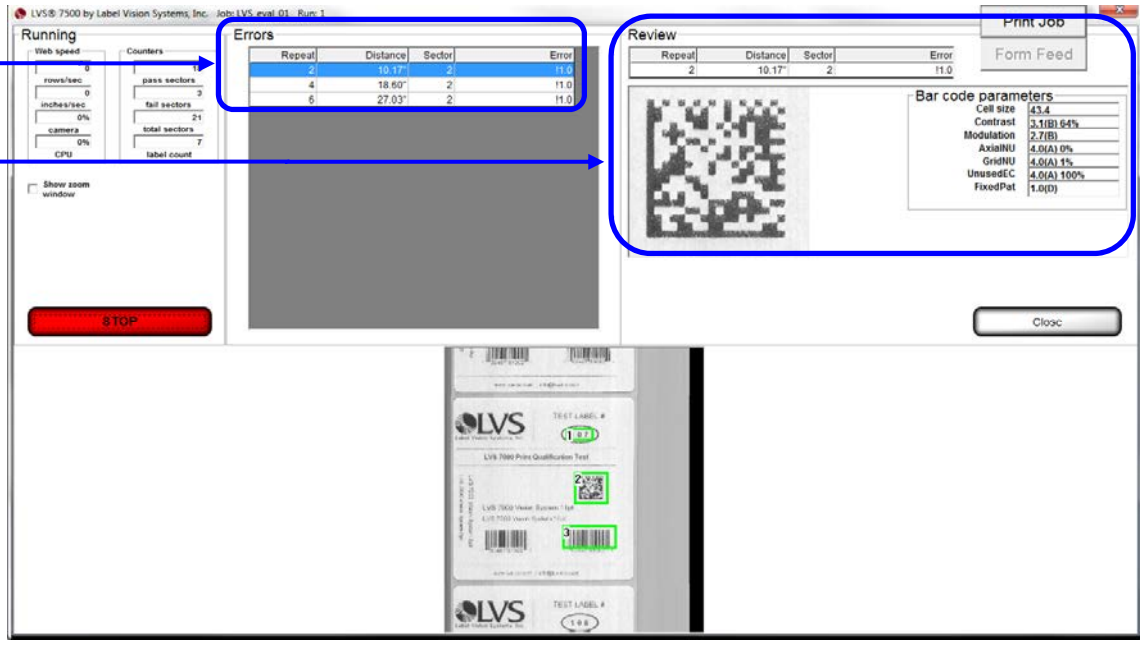
Identification of Non-Conforming Labels

During the job inspection process, any errors are displayed in the Error Display log provided on the Operate screen while you are running the job. Click on an error to view the barcode image and barcode graded parameters. The non-conforming label results are also stored for analysis post job inspection on the Run Log Reports Screen.

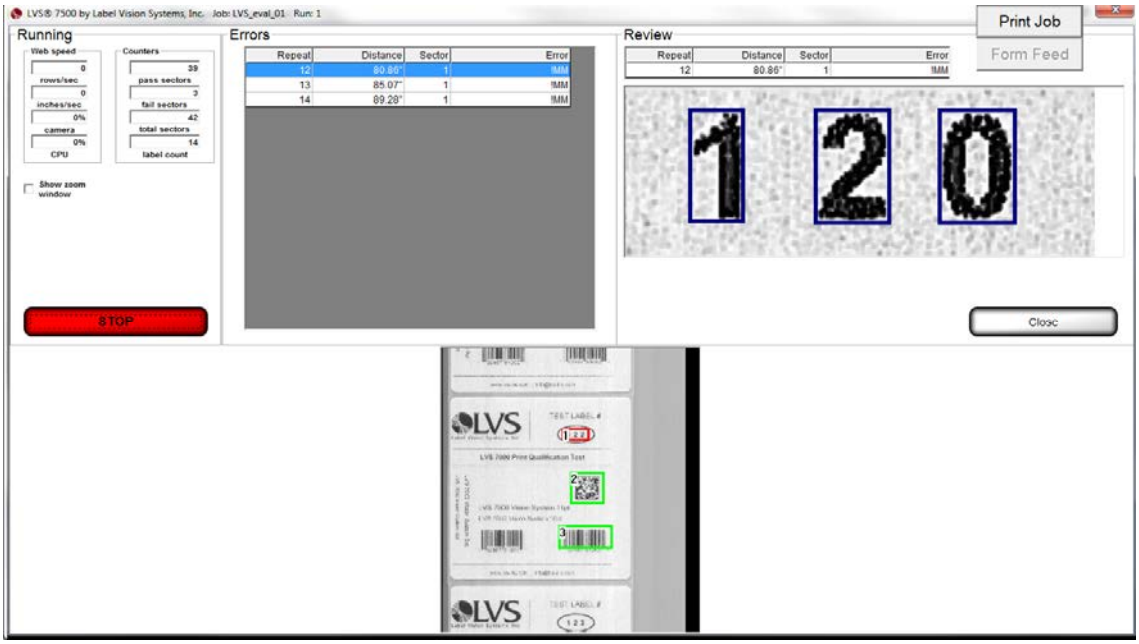
Example of a 2D Barcode Grading error:

Error Display Log

Barcode image and graded parameters



Example of a mismatch error:



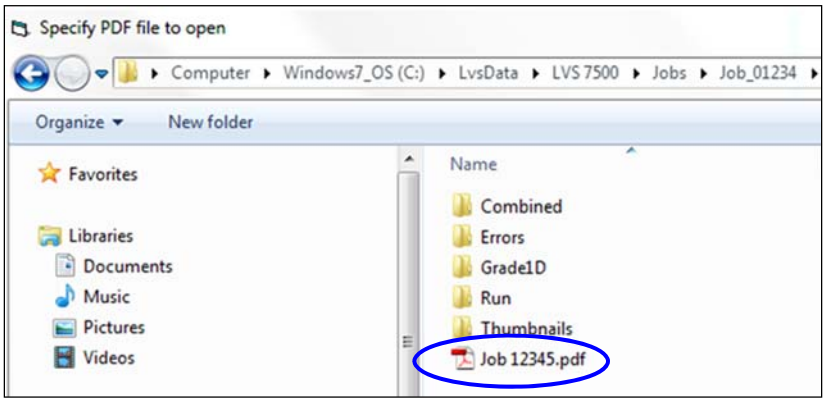
Replace a Label

Labels that pass inspection but are damaged in the application process may need to be replaced. The "Replacement" button allows an operator to replace a label(s). The "Replacement" button appears after the run is finished, all labels are printed to completion, and the Match-to file results have been accounted for in the "<Job name>_SUMMARY_1.csv" file (a file that summarizes the run results, such as the total number of good labels printed, the total number of reprinted labels, the total number of replaced labels, and the job number). If the run has no associated match-to file, the "Replacement" button will not appear. See the "Match-to File" section in this appendix for more information on the match-to file.

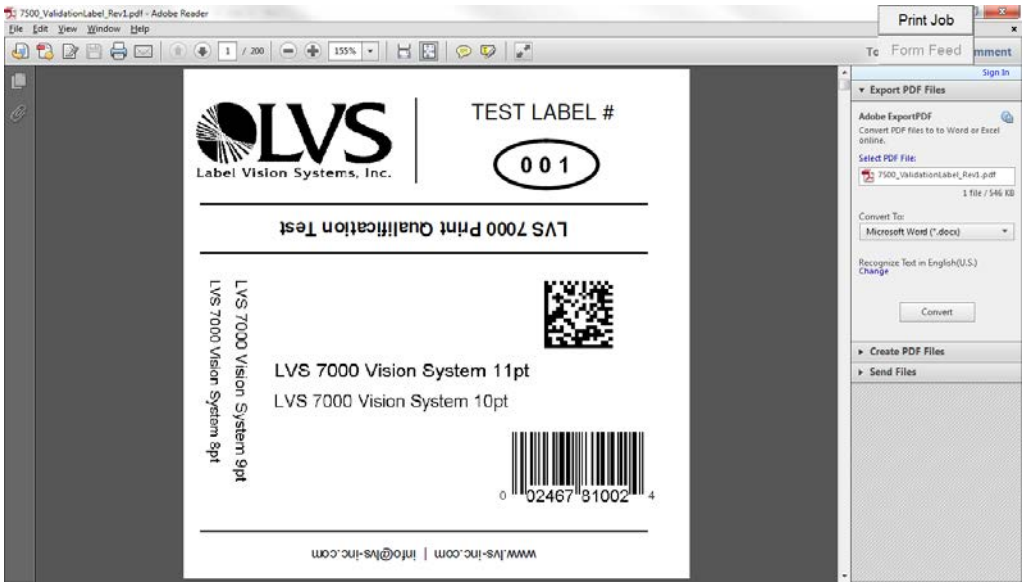
Only operators who are granted the "Allow Accept/Replace Errors" permission are allowed to replace a label. To replace a label, follow the steps below.

1. Click the "Replacement" button on the "Ready to run" screen (see "A" below).

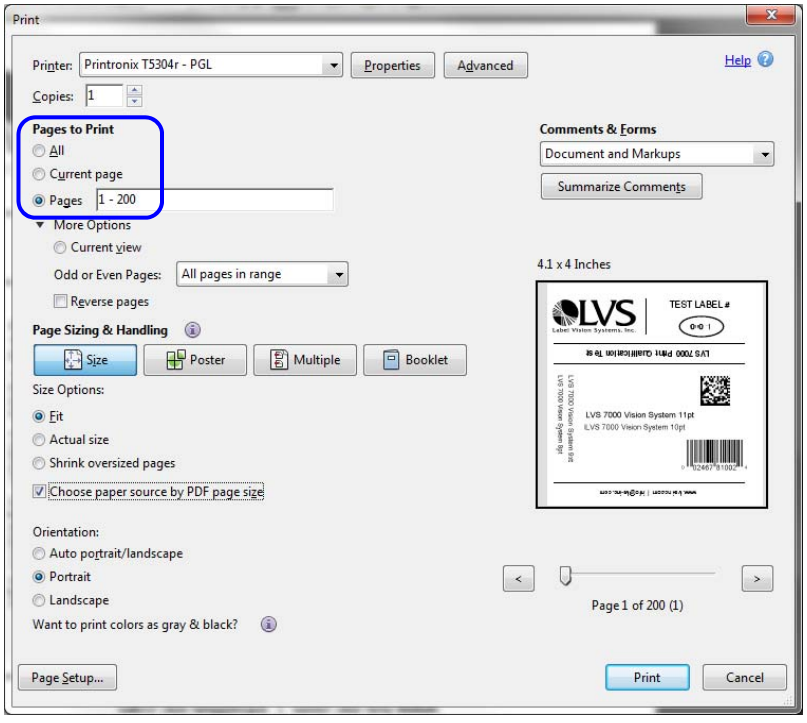
2. When prompted, enter your Operator ID and Password. The Operator ID is recorded on the LVS-7510 Summary Report to provide an audit trail of users who replaced labels. If multiple logins are used to replace a label, the Operator ID of each user is recorded on the LVS-7510 Summary Report.
3. Click the "Print Job" button (see "B" in the above image).
4. Select the PDF file containing the labels.



5. The job opens in Adobe Acrobat. From the menu bar, select **File** > **Print**.



6. You can print all the pages (labels) in the file or print selected pages. Select “All” to print all the labels, or enter the desired page numbers of the labels to print in the “Pages” field. Then, click “OK.”
   - You can specify a group of non-sequential pages by separating them by commas (example: 4, 8, 19)
   - You can specify a sequential range of pages by putting a dash between them (example: entering 4-7 will print pages 4 through 7)

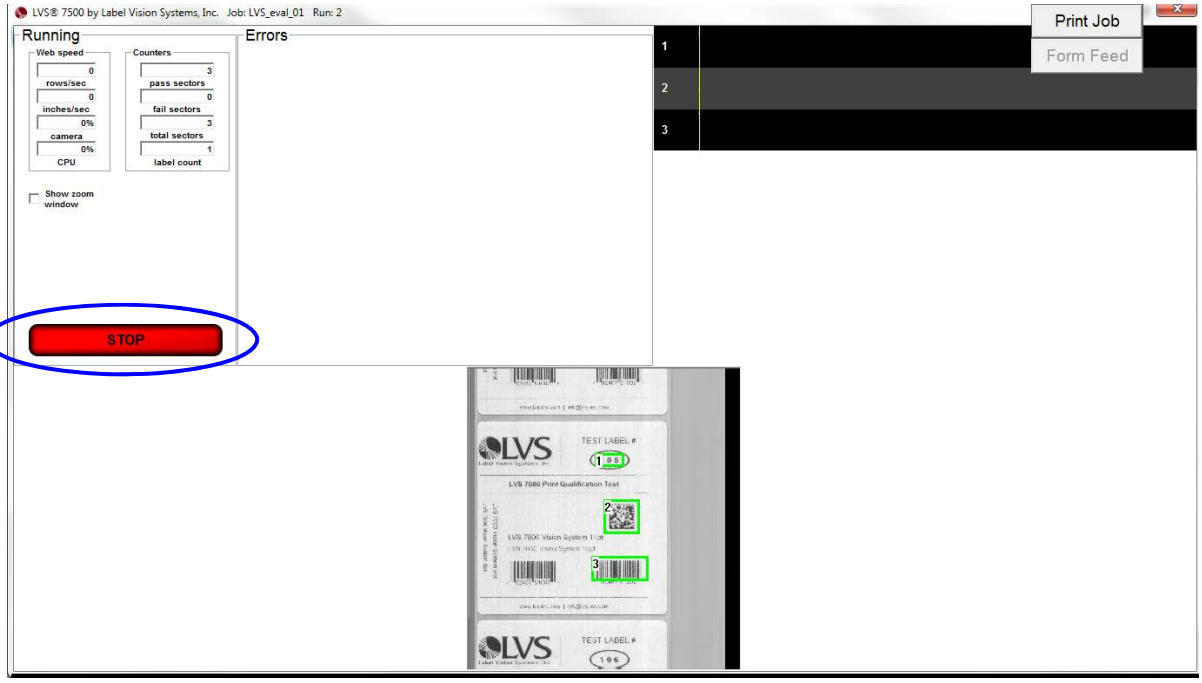


Note: Your version of Adobe® Acrobat® may appear differently than the above image.

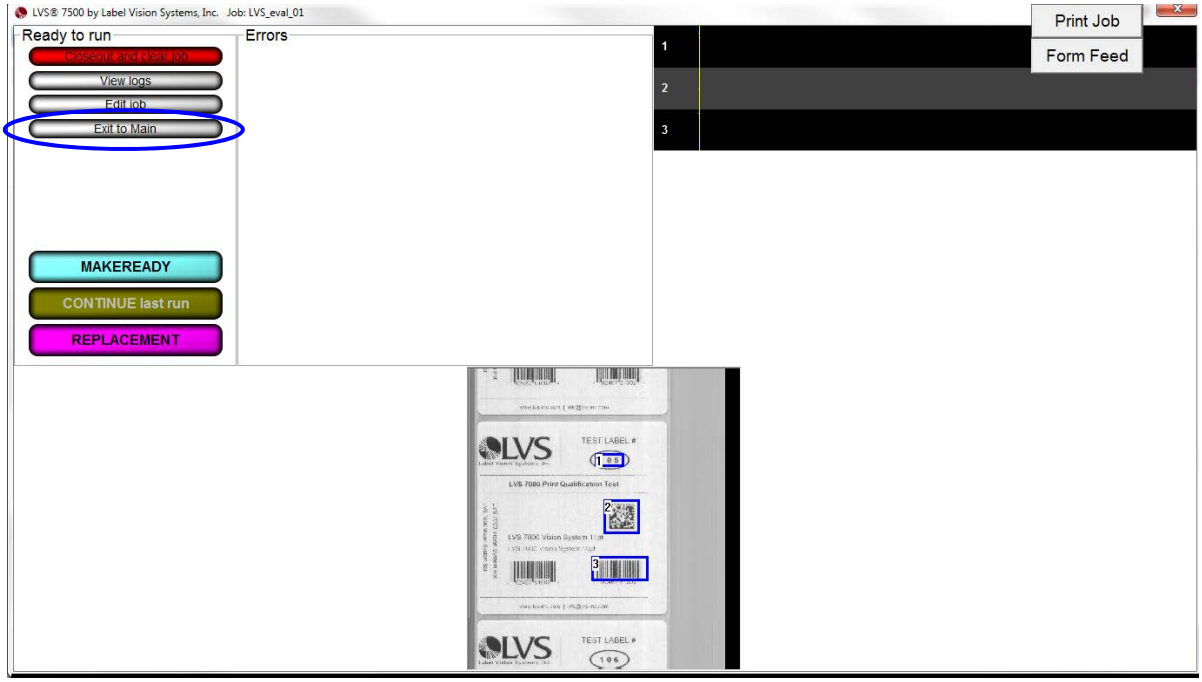
7. The labels begin printing. When printing is complete, close Adobe Acrobat.

   An Inactivity Timeout message appears after the printer has been idle for 20 seconds. You must either print more labels or press the “Stop” button as described in the next step.

8. On the “Running” screen, click the “Stop” button to stop the label replacement process and when prompted, enter your Operator ID and Password.



9. Click the “Exit to Main” button. You are directed back to the LVS-7510 Welcome screen.

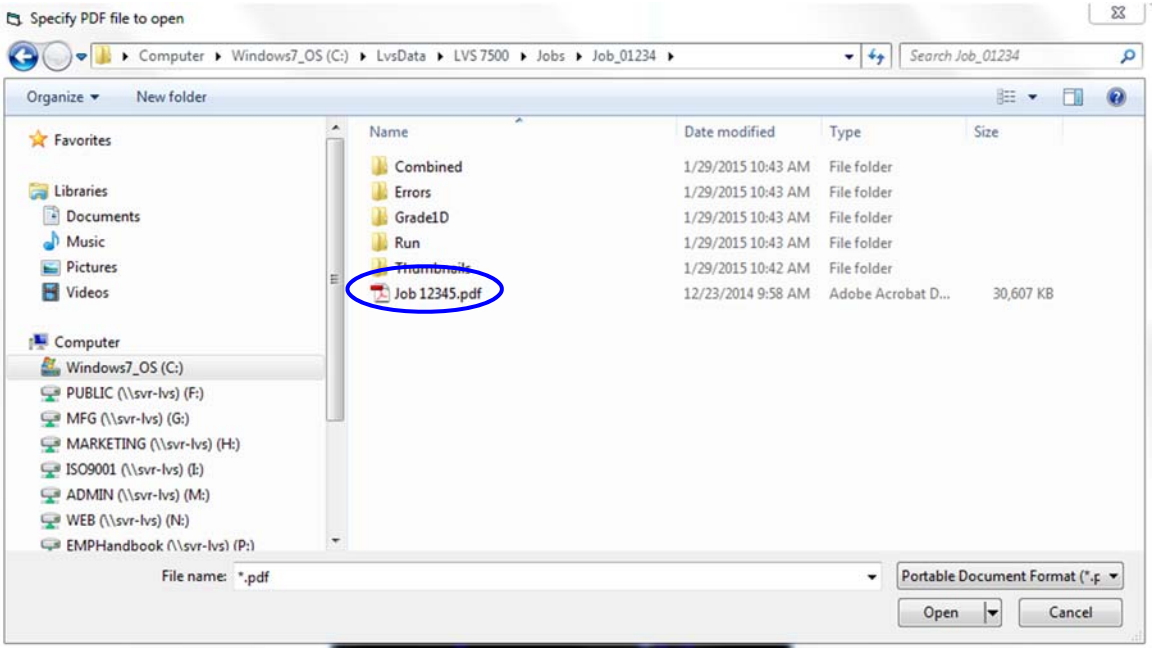


Print a Job

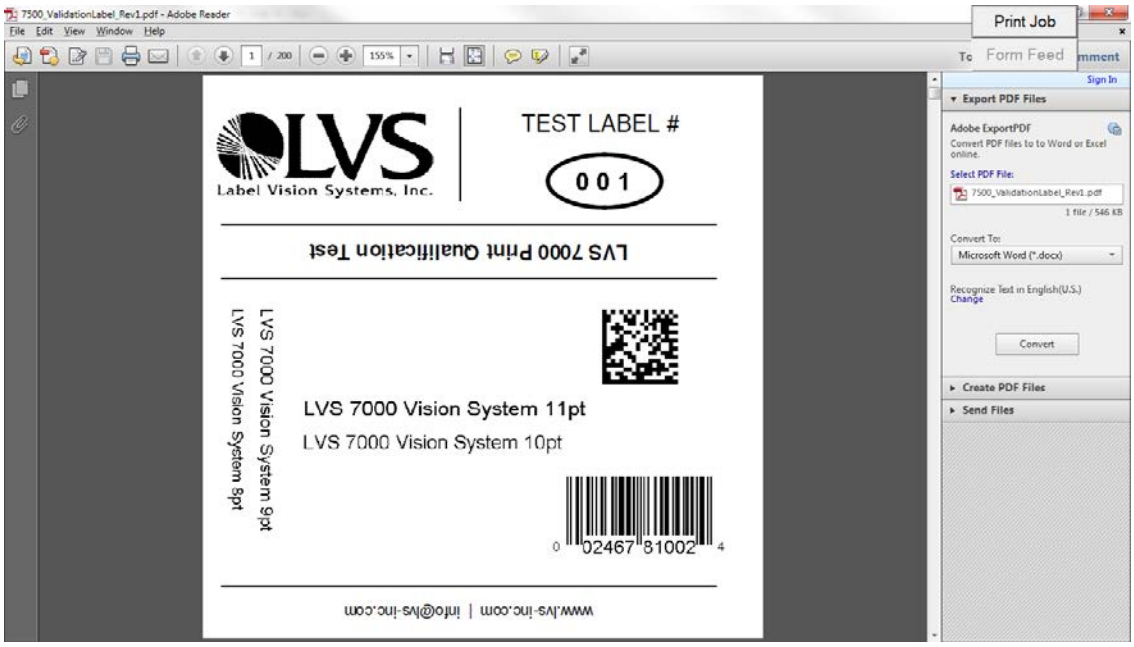
The “Print Job” button allows you to view and print a PDF file of each job.

1. Click the “Print Job” button.

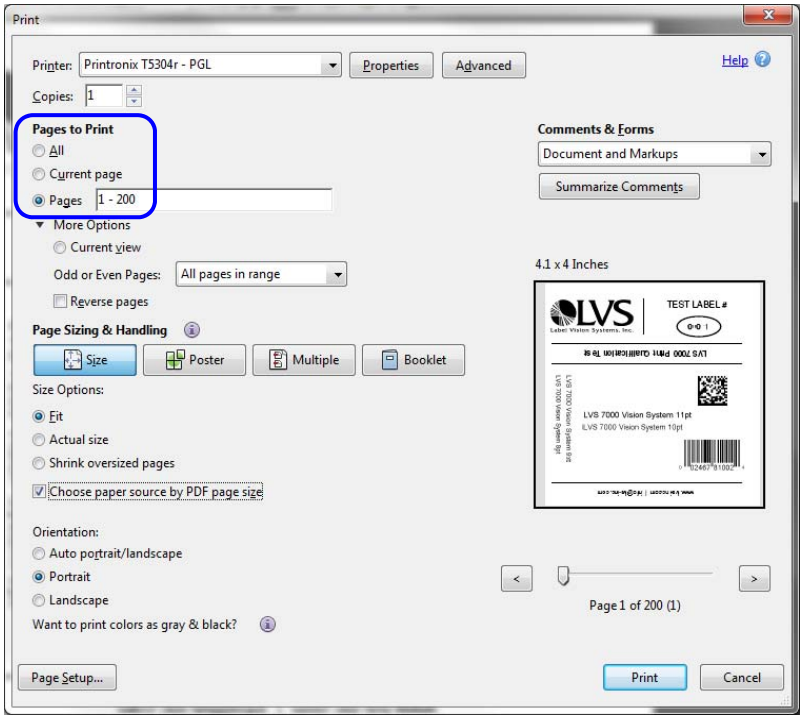
2. Select the job PDF file.



3. The job opens in Adobe Acrobat. From the menu bar, select **File** > **Print**.

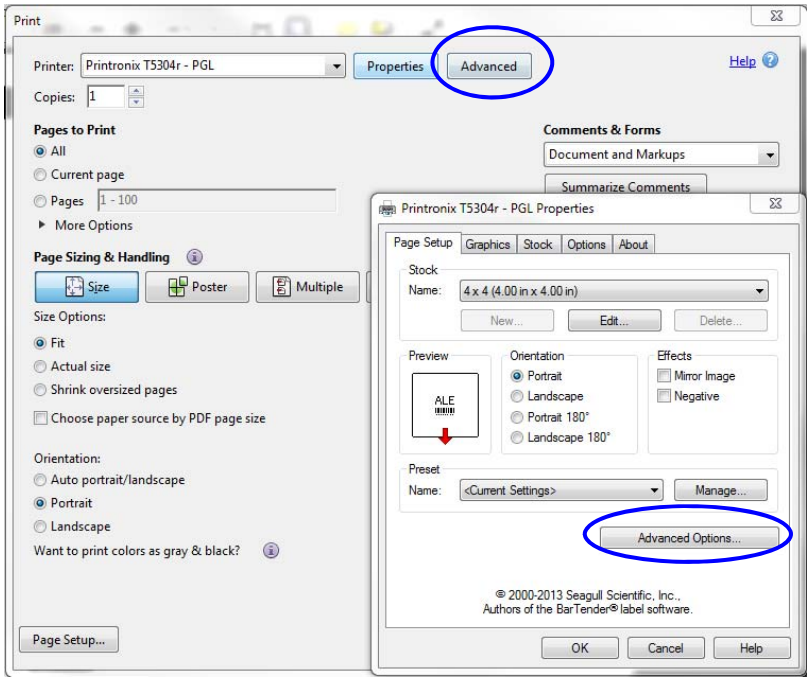


4. You can print all the pages (labels) in the file or print selected pages. Select “All” to print all the pages in the file, or enter the desired page numbers to print in the “Pages” field.
    - You can specify a group of non-sequential pages by separating them by commas (example: 4, 8, 19)
    - You can specify a sequential range of pages by putting a dash between them (example: entering 4-7 will print pages 4 through 7)

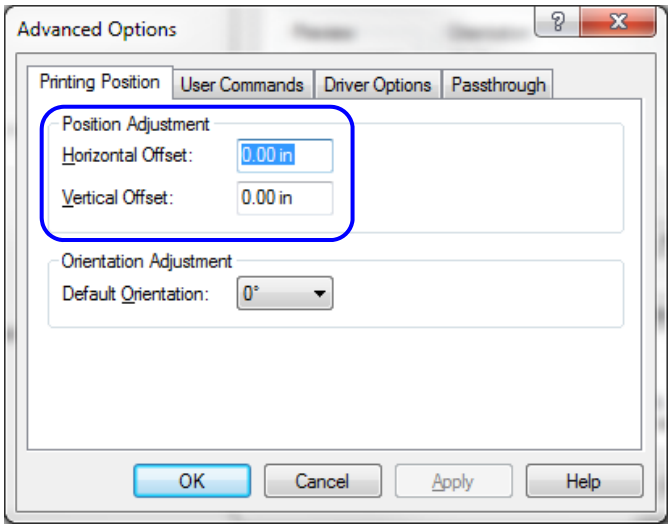


Note: Your version of Adobe® Acrobat® may appear differently than the above image.

5. Label templates are created in Design mode. To ensure the labels print as designed in Production mode, follow the steps below:
   a. Click “Advanced.”
   b. On the “Page Setup” tab, click “Advanced Options.”



   c. Verify the “Horizontal Offset” and “Vertical Offset” settings in Production mode match the settings in Design mode. Click “OK.”



6. Click “Ok” on the remaining windows. The labels begin printing. When complete, close Adobe® Acrobat®.

Form Feed Labels (for Printronix Printers Only)

This Section Applies to Printronix Printers Only

The “Form Feed” button advances all labels under the LVS-7510 readhead when printing is complete.

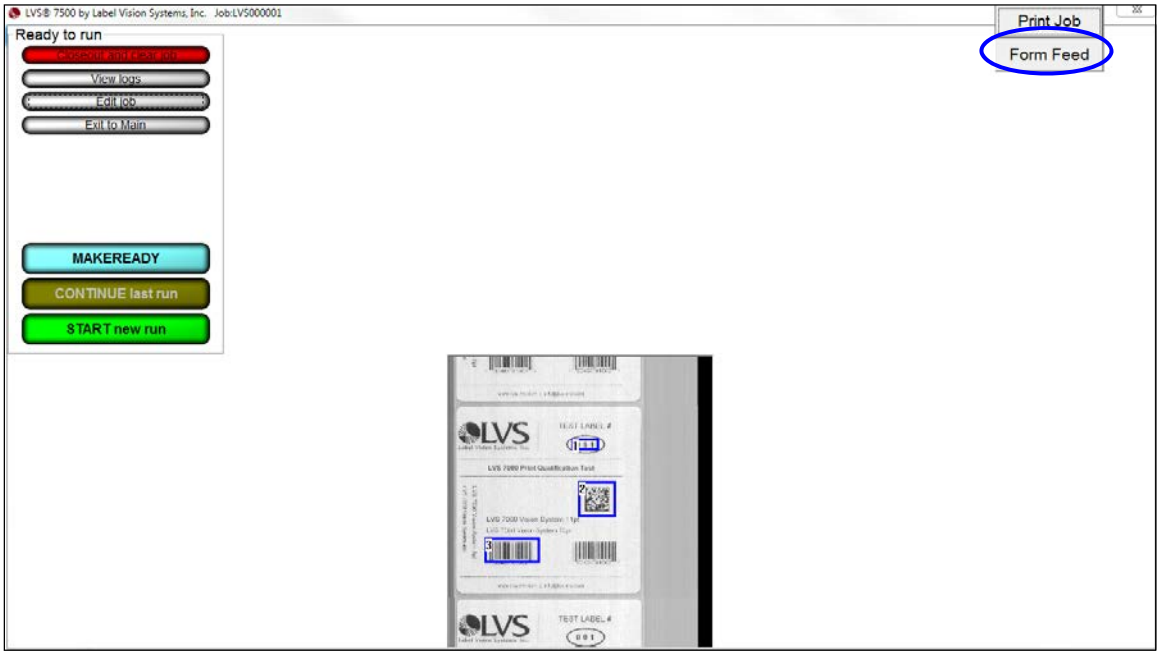
Labels fed from the printer after the “Form Feed” button is pressed are not inspected by the LVS-7510.

The ability to form feed labels is available only after the LVS-7510 stops inspection (by pressing the “Stop” button). Form feeding labels is not available when a job is running or in MAKEREADY mode.

To form feed labels:

1. Click the “Stop” button to stop label inspection.

2. Click the “Form Feed” button. The LVS-7510 readhead advances all remaining labels.



Close Out a Job

Click the “Closeout and clear job” button to close out and clear a job. If prompted, enter your Operator ID and Password.

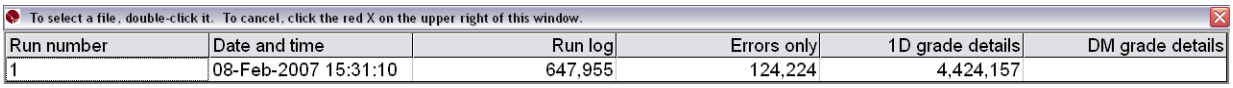
In Design mode, the Designer will close out the job and this process zips up all files for the job, removes the folder containing the job, and stores the jobname.zip file in the Archived folder of the Design Mode LVS-7510 or a mapped location on the client’s server. The job can later be retrieved from archive and reactivated if necessary. In addition, mock run data is deleted and only job template setup files remain for archive.

In Production mode, when a job is completed and closed out, the job is zipped up and moved from the “Jobs” folder to the “Archive” folder. These folders can be located on a network drive or local folder. The Output Summary Files are written to the “Output” folder path. Output Summary Files are created only when a Production mode job is closed out and after the match-to file has been processed. If a match-to file is not being used, Output Summary Files will not be created. Refer to the “Output Summary Files” section in this appendix for detailed information on Output Summary Files. Refer to the “Match-to File” section in this appendix for match-to file formatting requirements.

View Logs

Click the “View logs” button to view report logs for each job.

The Reports Screen is used to view the report logs created for each job and displays the run number, date and time stamp, error code (if any), and other data associated with the image being inspected. Refer to the “Reports/QC File Viewer” section in this manual for more information on reports.



Run number	Date and time	Run log	Errors only	1D grade details	DM grade details
1	08-Feb-2007 15:31:10	647,955	124,224	4,424,157	

The report type is displayed in the column header (such as Errors only, 1D grade details, etc.). To view a particular report, click on the desired run located under the corresponding header.

The data is stored in a .csv (comma separated values) format. By default, the files are stored in the following directories:

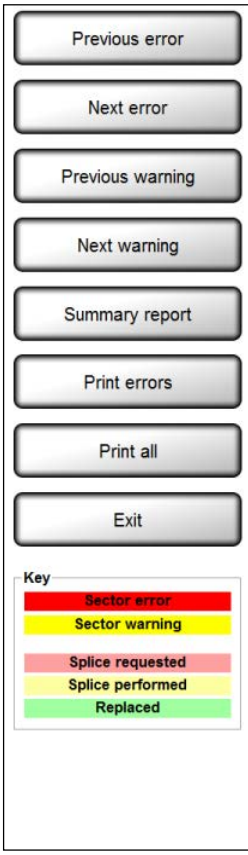
- For new installations of software version 20.1.X on Windows® 7 Professional and Windows® 8.1 Professional operating systems: C:\LvsData\LVS 7500\Jobs
- For systems that are upgrading from a previous software version to version 20.1.X or higher:
  - **Windows® XP:** C:\Program Files\Label Vision Systems\LVS 7500\Jobs
  - **Windows® 7:** C:\Users\[User Login Name]\AppData\Roaming\Label Vision Systems\LVS 7500\Jobs

The operator may choose to print a report for an entire run or print a report of errors only.

Sample Reports

Run Log Reports Screen

The Run Log reports screen displays a report for each sector. Each line of data starts with the label repeat number followed by a date/time stamp, decoded string, error code (if any), and other data associated with the image being inspected.

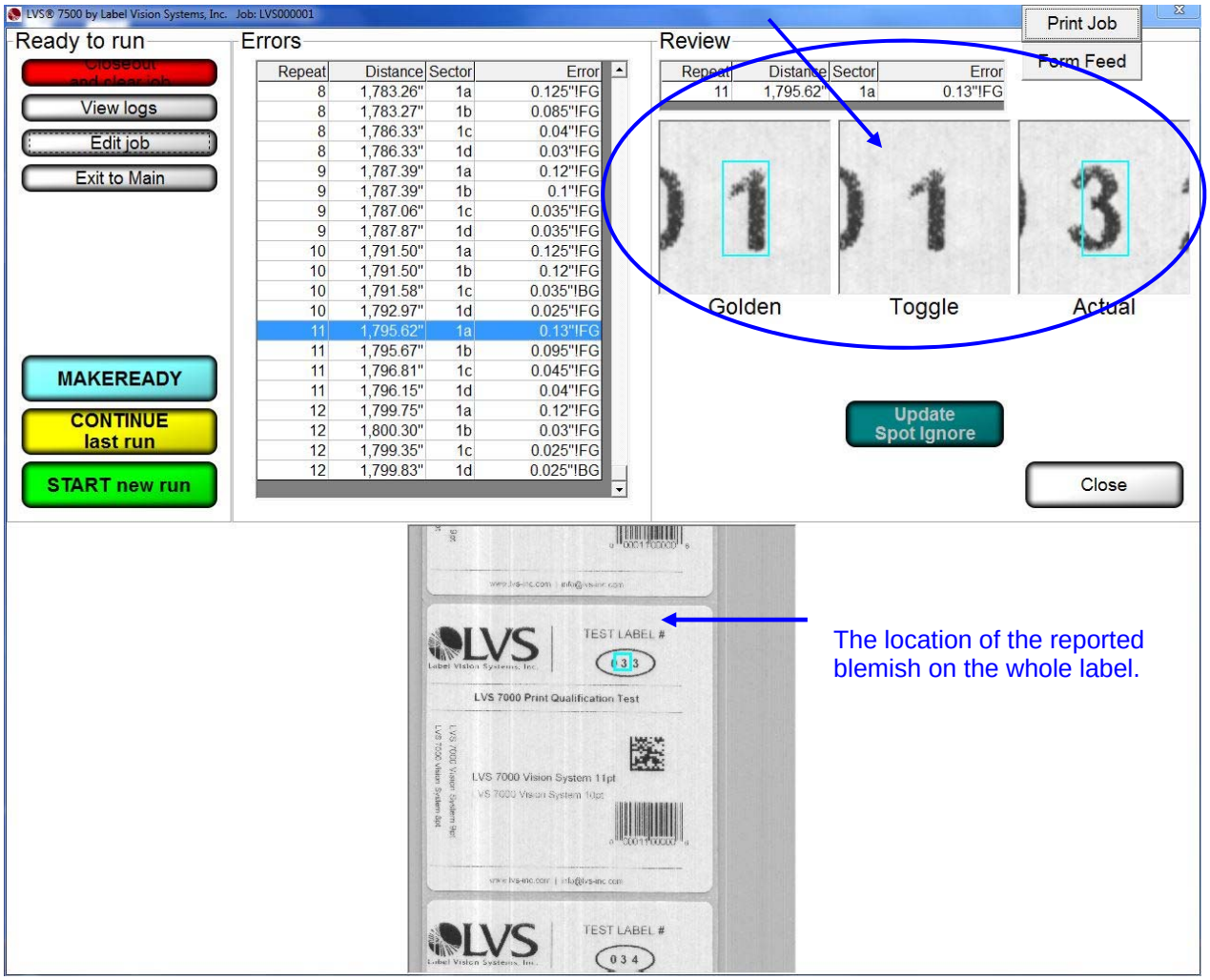


Repeat	Time	Distance	Sector 1	Sector 2	Sector 3	Sector 4	Sector 5	Sector 6	Sector 7
37	30-Mar-2012 16:03:01	178.19"	0.074"!FG	0"	0"	1.2	0.6	0.3	300780438155
38	30-Mar-2012 16:03:01	182.61"	0.027"!FG	0"	0"	0.5	0.4	0.7	300780438155
39	30-Mar-2012 16:03:01	187.04"	0.061"!FG	0"	0"	0.8	0.2	1.1	300780438155
40	30-Mar-2012 16:03:02	191.43"	0.055"!FG	0"	0.344"!BG	0.5	0.2	0.5	300780438155
41	30-Mar-2012 16:03:02	195.83"	0.027"!FG	0"	2.242"!FG	0.6	1.6	2.0	300780438155
42	30-Mar-2012 16:03:02	200.25"	0.047"!FG	0.141"!BG	2.242"!FG	0.5	0.9	1.1	300780438155
43	30-Mar-2012 16:03:02	207.43"	0"	0"	0"	0.1	0.4	0.4	300780438155
44	30-Mar-2012 16:03:02	211.86"	0.035"!FG	0"	0"	1.7	1.2	0.8	300780438155
45	30-Mar-2012 16:03:03	216.29"	0.098"!FG	0"	0"	0.9	0.6	0.3	300780438155
46	30-Mar-2012 16:03:03	220.71"	0.023"!FG	0"	0"	0.6	0.5	0.6	300780438155
47	30-Mar-2012 16:03:03	225.14"	0.055"!FG	0"	0"	0.9	0.1	0.8	300780438155
48	30-Mar-2012 16:03:03	229.54"	0.047"!FG	0"	0.145"!BG	0.2	0.3	0.3	300780438155
49	30-Mar-2012 16:03:04	233.93"	0.039"!FG	0"	2.242"!FG	0.3	1.3	1.7	300780438155
50	30-Mar-2012 16:03:04	238.35"	0.039"!FG	0.078"!BG	2.242"!FG	0.5	0.8	0.8	300780438155
51	30-Mar-2012 16:03:04	245.53"	0"	0"	0"	0.0	0.4	0.1	300780438155
52	30-Mar-2012 16:03:05	249.96"	0"	0"	0"	0.0!DE	0.0!DE	0.0!DE	300780438155
53	30-Mar-2012 16:03:05	254.39"	0"	0"	0"	0.6	0.8	1.1	300780438155
54	30-Mar-2012 16:03:05	258.82"	0"	0"	0"	1.3	0.6	1.4	300780438155
55	30-Mar-2012 16:03:05	263.24"	0"	0"	0"	1.0	1.2	0.3	300780438155
56	30-Mar-2012 16:03:05	267.64"	0"	0"	0"	1.9	1.5	1.0	300780438155
57	30-Mar-2012 16:03:06	272.03"	0"	0"	2.238"!BG	1.5	0.5	0.9	300780438155
58	30-Mar-2012 16:03:06	276.45"	0"	0"	2.238"!BG	1.1	0.4	0.0	300780438155
59	30-Mar-2012 16:03:06	283.63"	0.082"!BG	0"	0"	1.8	0.9	0.8	300780438155
60	30-Mar-2012 16:03:06	288.06"	0"	0"	0"	0.4	0.3	0.3	300780438155
61	30-Mar-2012 16:03:06	292.49"	0"	0"	0"	0.9	0.8	1.1	300780438155
62	30-Mar-2012 16:03:06	296.92"	0"	0"	0"	1.3	0.6	1.1	300780438155
63	30-Mar-2012 16:03:07	301.34"	0"	0"	0"	0.9	1.2	0.3	300780438155
64	30-Mar-2012 16:03:07	305.74"	0"	0"	0"	1.9	1.5	1.0	300780438155
65	30-Mar-2012 16:03:07	310.13"	0"	0.004"	0.309"!FG	1.5	0.4	0.8	300780438155
66	30-Mar-2012 16:03:07	314.55"	0"	0.555"!BG	2.238"!BG	1.3	0.5	1.3	300780438155
67	30-Mar-2012 16:03:07	321.73"	0.086"!BG	0"	0"	1.7	0.8	0.5	300780438155
68	30-Mar-2012 16:03:08	326.16"	0"	0"	0"	0.4	0.4	0.3	300780438155
69	30-Mar-2012 16:03:08	330.59"	0"	0"	0"	0.8	0.8	1.3	300780438155
70	30-Mar-2012 16:03:08	335.02"	0"	0"	0"	1.3	0.9	1.5	300780438155
71	30-Mar-2012 16:03:08	339.43"	0"	0"	0"	0.9	1.2	0.3	300780438155
72	30-Mar-2012 16:03:09	343.84"	0"	0"	0"	1.9	1.4	1.0	300780438155
73	30-Mar-2012 16:03:09	348.23"	0"	0"	0.309"!FG	1.2	0.3	1.1	300780438155
74	30-Mar-2012 16:03:09	352.65"	0"	0.484"!BG	2.238"!BG	1.1	0.4	1.9	300780438155
75	30-Mar-2012 16:03:09	359.84"	0.07"!BG	0"	0"	1.7	1.0	0.8	300780438155
76	30-Mar-2012 16:03:09	364.27"	0"	0"	0"	0.3	0.3	0.1	300780438155
77	30-Mar-2012 16:03:10	368.70"	0"	0"	0"	0.6	0.8	1.1	300780438155

Run Log with Images

Blemish, barcode, and OCR/OCV error images can be viewed by clicking on the red cell in the log file. An error display screen then appears. If the error is a blemish, the Golden Image will show on the Left; a Toggle between Golden and Actual in the center; and the Actual Blemish image is on the right.

Toggle screens of Golden image as compared to the actual image. This is a duplicate of the Operate screen's error presentation methodology.



The location of the reported blemish on the whole label.

Output Summary Files

When a Production mode job is closed out, the LVS-7510 creates a set of Output Summary Files and writes these files to user specified folders (see the “Settings” section in this document) that can be on the local machine or a shared network folder for the unit.

Important: Output Summary Files are created only after the match-to file has been processed. The match-to file feature compares the data decoded within a sector to the data in a file created by the user. If a match-to file is not being used, then Output Summary Files will not be created. Refer to the “Match-to File” section in this appendix for match-to file formatting requirements.

The five Output Summary Files are created in the Output path defined in each LVS-7510 configuration settings. The job name is the prefix on all files. The files can be stored on a central location file share or network mapped location.

1. **jobname_SUMMARYREPORT_1.htm** – The Summary Report in .htm format.
2. **jobname_SUMMARY_1.csv** – A .csv file that summarizes the run results, such as the total number of good labels printed, the total number of reprinted labels, the total number of replaced labels, and the user supplied job number.
3. **jobname_REPLACEMENT_1.csv** – A .csv file that includes the repeat, time, and distance for replacement labels printed in the previous job run. The file is empty if no replacement labels are printed.
4. **jobname_PRODUCTION_1.csv** – A comma separated value (.csv) file that includes the repeat, time, distance, and inspection data results for each sector.
5. **jobname_AUDITTRAIL_1.txt** – A text file that includes all audit history for the job.

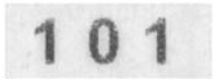
Examples of each of the Output Summary Files are provided on the next page.

jobname_SUMMARYREPORT_1.htm

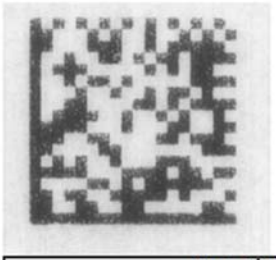
LVS 7X00 Summary Report

05-Feb-2015 08:26:02

Job name	LVS_eval_01
Operator	Admin (Administrator)
Start time	05-Feb-2015 08:24:36
End time	05-Feb-2015 08:26:02



Sector1	OCR read
Minimum passing score	1
FontFile	Arial.bmp
okay	32 / 32 = 100%



Sector2	Bar code 2D grade
Minimum passing score	1.0
okay	20 / 32 = 62.5%
Grade warning	12 / 32 = 37.5%
DecodedText	LVS INTEGRA 7000T
Overall	B:1 (3%), C:19 (59%), D:12 (38%)
Symbology	Data Matrix
Xdim	43.1 to 43.8; average was 43.4
Contrast	B:32 (100%)
Modulation	B:16 (50%), C:16 (50%)
AxialNonUniform	A:32 (100%)
GridNonUniform	A:32 (100%)
UnusedEC	A:32 (100%)
FixedPat	B:1 (3%), C:19 (59%), D:12 (38%)

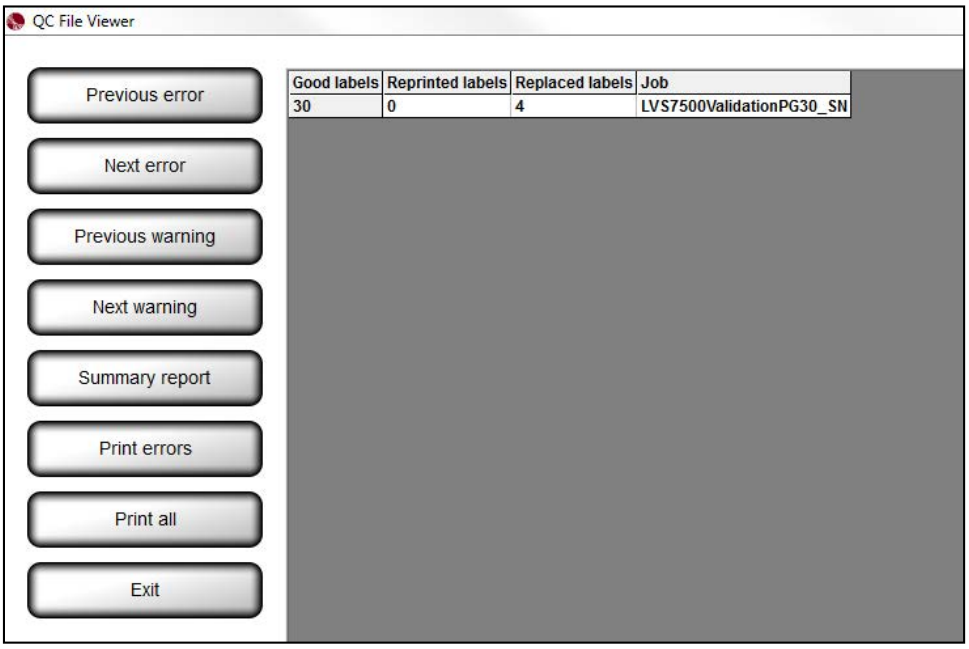
Remaining portion of Summary Report

Sector3	Bar code 1D read
okay	32 / 32 = 100%

05-Feb-2015 08:24:27 to 05-Feb-2015 08:24:56: Admin (Administrator) Run 1 stopped -- printed 29 labels with 0 reprints
05-Feb-2015 08:25:45 to 05-Feb-2015 08:26:12: testuser2 (test user 2) Replaced 3 labels with 0 reprints

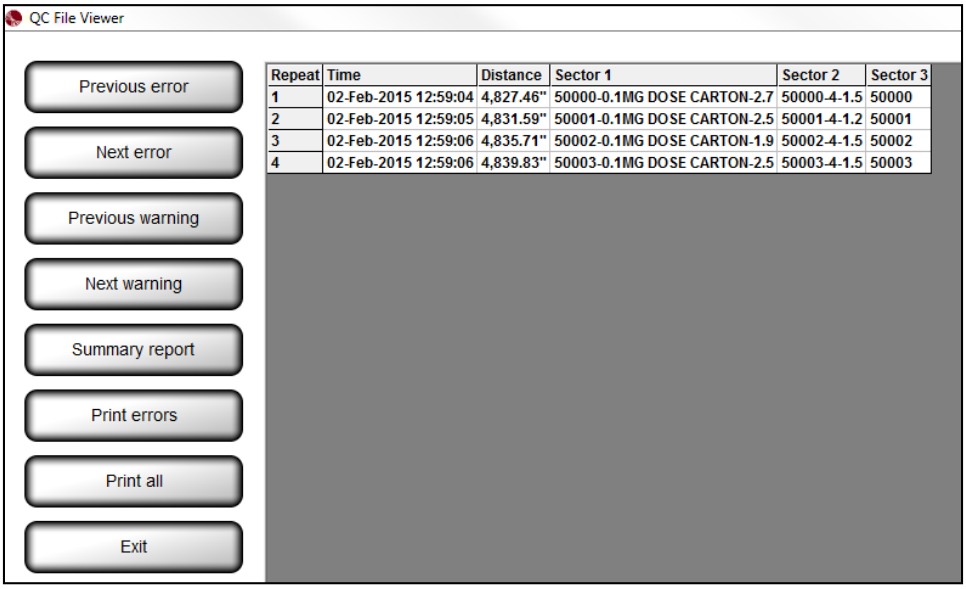
jobname_SUMMARY_1.csv

Good labels,Reprinted labels,Replaced labels,Job
30,0,4,"LVS7500ValidationPG30_SN"



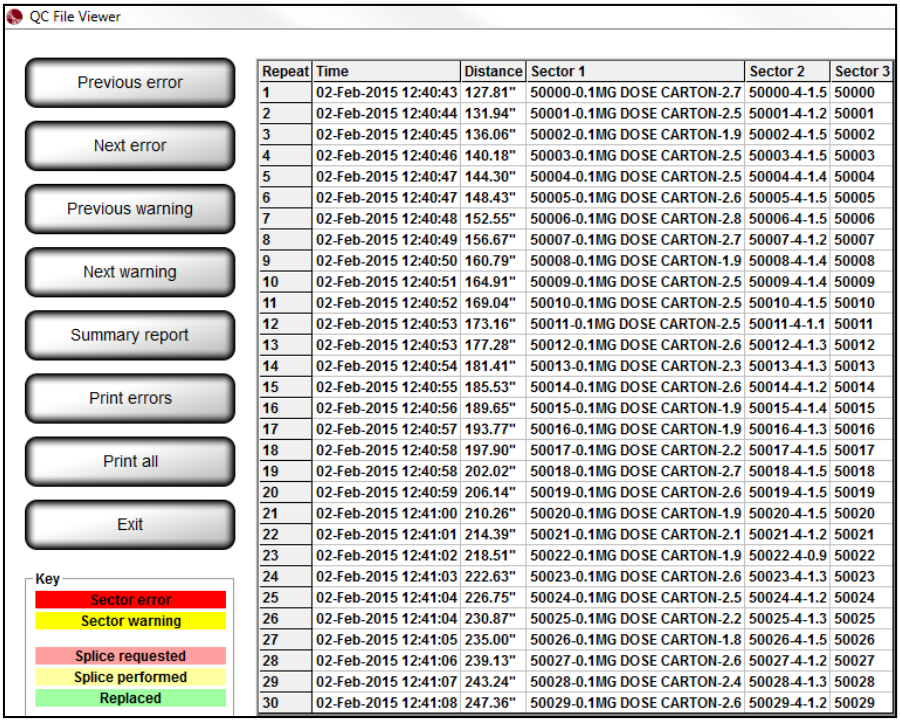
jobname_REPLACEMENT_1.csv (csv data shown as example)

Repeat,Time,Distance,Sector 1,Sector 2,Sector 3
1,02-Feb-2015 12:59:04,"4,827.46""",50000-0.1MG DOSE CARTON-2.7,50000-4-1.5,50000
2,02-Feb-2015 12:59:05,"4,831.59""",50001-0.1MG DOSE CARTON-2.5,50001-4-1.2,50001
3,02-Feb-2015 12:59:06,"4,835.71""",50002-0.1MG DOSE CARTON-1.9,50002-4-1.5,50002
4,02-Feb-2015 12:59:06,"4,839.83""",50003-0.1MG DOSE CARTON-2.5,50003-4-1.5,50003



jobname_PRODUCTION_1.csv (only first 5 rows of data shown as example)

Repeat,Time,Distance,Sector 1,Sector 2,Sector 3
1,23-Jan-2015 14:36:17,4.14",50000-0.1MG DOSE CARTON-2.7,50000-4-1.5,50000
2,23-Jan-2015 14:36:18,8.26",50001-0.1MG DOSE CARTON-2.5,50001-4-1.2,50001
3,23-Jan-2015 14:36:19,12.38",50002-0.1MG DOSE CARTON-1.9,50002-4-1.5,50002
4,23-Jan-2015 14:36:19,16.50",50003-0.1MG DOSE CARTON-2.5,50003-4-1.5,50003
5,23-Jan-2015 14:36:20,20.63",50004-0.1MG DOSE CARTON-2.5,50004-4-1.4,50004



Repeat	Time	Distance	Sector 1	Sector 2	Sector 3
1	02-Feb-2015 12:40:43	127.81"	50000-0.1MG DOSE CARTON-2.7	50000-4-1.5	50000
2	02-Feb-2015 12:40:44	131.94"	50001-0.1MG DOSE CARTON-2.5	50001-4-1.2	50001
3	02-Feb-2015 12:40:45	136.06"	50002-0.1MG DOSE CARTON-1.9	50002-4-1.5	50002
4	02-Feb-2015 12:40:46	140.18"	50003-0.1MG DOSE CARTON-2.5	50003-4-1.5	50003
5	02-Feb-2015 12:40:47	144.30"	50004-0.1MG DOSE CARTON-2.5	50004-4-1.4	50004
6	02-Feb-2015 12:40:47	148.43"	50005-0.1MG DOSE CARTON-2.6	50005-4-1.5	50005
7	02-Feb-2015 12:40:48	152.55"	50006-0.1MG DOSE CARTON-2.8	50006-4-1.5	50006
8	02-Feb-2015 12:40:49	156.67"	50007-0.1MG DOSE CARTON-2.7	50007-4-1.2	50007
9	02-Feb-2015 12:40:50	160.79"	50008-0.1MG DOSE CARTON-1.9	50008-4-1.4	50008
10	02-Feb-2015 12:40:51	164.91"	50009-0.1MG DOSE CARTON-2.5	50009-4-1.4	50009
11	02-Feb-2015 12:40:52	169.04"	50010-0.1MG DOSE CARTON-2.5	50010-4-1.5	50010
12	02-Feb-2015 12:40:53	173.16"	50011-0.1MG DOSE CARTON-2.5	50011-4-1.1	50011
13	02-Feb-2015 12:40:53	177.28"	50012-0.1MG DOSE CARTON-2.6	50012-4-1.3	50012
14	02-Feb-2015 12:40:54	181.41"	50013-0.1MG DOSE CARTON-2.3	50013-4-1.3	50013
15	02-Feb-2015 12:40:55	185.53"	50014-0.1MG DOSE CARTON-2.6	50014-4-1.2	50014
16	02-Feb-2015 12:40:56	189.65"	50015-0.1MG DOSE CARTON-1.9	50015-4-1.4	50015
17	02-Feb-2015 12:40:57	193.77"	50016-0.1MG DOSE CARTON-1.9	50016-4-1.3	50016
18	02-Feb-2015 12:40:58	197.90"	50017-0.1MG DOSE CARTON-2.2	50017-4-1.5	50017
19	02-Feb-2015 12:40:58	202.02"	50018-0.1MG DOSE CARTON-2.7	50018-4-1.5	50018
20	02-Feb-2015 12:40:59	206.14"	50019-0.1MG DOSE CARTON-2.6	50019-4-1.5	50019
21	02-Feb-2015 12:41:00	210.26"	50020-0.1MG DOSE CARTON-1.9	50020-4-1.5	50020
22	02-Feb-2015 12:41:01	214.39"	50021-0.1MG DOSE CARTON-2.1	50021-4-1.2	50021
23	02-Feb-2015 12:41:02	218.51"	50022-0.1MG DOSE CARTON-1.9	50022-4-0.9	50022
24	02-Feb-2015 12:41:03	222.63"	50023-0.1MG DOSE CARTON-2.6	50023-4-1.3	50023
25	02-Feb-2015 12:41:04	226.75"	50024-0.1MG DOSE CARTON-2.5	50024-4-1.2	50024
26	02-Feb-2015 12:41:04	230.87"	50025-0.1MG DOSE CARTON-2.2	50025-4-1.3	50025
27	02-Feb-2015 12:41:05	235.00"	50026-0.1MG DOSE CARTON-1.8	50026-4-1.5	50026
28	02-Feb-2015 12:41:06	239.13"	50027-0.1MG DOSE CARTON-2.6	50027-4-1.2	50027
29	02-Feb-2015 12:41:07	243.24"	50028-0.1MG DOSE CARTON-2.4	50028-4-1.3	50028
30	02-Feb-2015 12:41:08	247.36"	50029-0.1MG DOSE CARTON-2.6	50029-4-1.2	50029

jobname_AUDITTRAIL_1.txt

23-Jan-2015 14:34:49 Admin (Administrator) Imported LVS7500ValidationPG30_SN.zip
23-Jan-2015 14:35:40 Admin (Administrator) Entered credentials prior to START new run
23-Jan-2015 14:35:40 Admin (Administrator) Starting run 1 of job LVS7500ValidationPG30_SN
23-Jan-2015 14:36:41 Admin (Administrator) Stopping run
23-Jan-2015 14:36:41 Admin (Administrator) Started run and printed 30 labels with 0 reprints
23-Jan-2015 14:36:56 testuser2 (test user 2) Entered credentials prior to REPLACEMENT
23-Jan-2015 14:36:56 testuser2 (test user 2) Starting run 2 of job LVS7500ValidationPG30_SN
23-Jan-2015 14:37:07 testuser2 (test user 2) Entered credentials prior to STOP
23-Jan-2015 14:37:07 testuser2 (test user 2) Stopping run
23-Jan-2015 14:37:07 testuser2 (test user 2) Replaced 0 labels with 0 reprints
23-Jan-2015 14:37:29 Admin (Administrator) Entered credentials prior to REPLACEMENT
23-Jan-2015 14:37:29 Admin (Administrator) Starting run 2 of job LVS7500ValidationPG30_SN
23-Jan-2015 14:37:47 Admin (Administrator) Entered credentials prior to STOP
23-Jan-2015 14:37:47 Admin (Administrator) Stopping run
23-Jan-2015 14:37:47 Admin (Administrator) Replaced 3 labels with 0 reprints
23-Jan-2015 14:38:02 testuser2 (test user 2) Entered credentials prior to Closeout and clear job

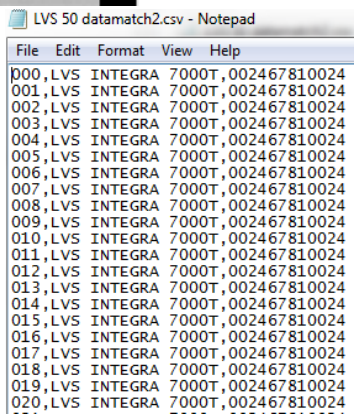
Match-to File

This feature compares the data decoded within a sector to the data in a file created by the user. The format of the file must be as follows:

- The format of the file must be a comma-separated values (CSV) file.
- The order in which the data is stored is matched to the sector number in lowest to highest order that has been selected to “Match to file.”
- The file must contain a unique record each row (such as 001, 002, 003). A unique record is data that can be used only once in the file; it cannot appear in any other row or column in the file. The software uses the unique record to determine where to start, continue or stop a job. The unique record must be the first column in the match-to file. All other columns should be set to “Duplicates allowed.”
- The unique record must match to a barcode, preferably a 2D barcode because 2D barcodes have a better resiliency for error detection. If a 2D barcode cannot be used, the next preferred code is a linear (1D) barcode. If a 1D barcode cannot be used, the next preferred code is an OCR or OCV code.
- Headers are not allowed.
- The match-to file can have more columns of data than are mapped to sectors. Extra columns must appear after mapped columns.

Any number of sectors can be set to use “match to file.” The following shows an LVS-7510 in design mode, editing a job to create inspection sectors. Three sectors are defined numbered 1, 2 and 3.

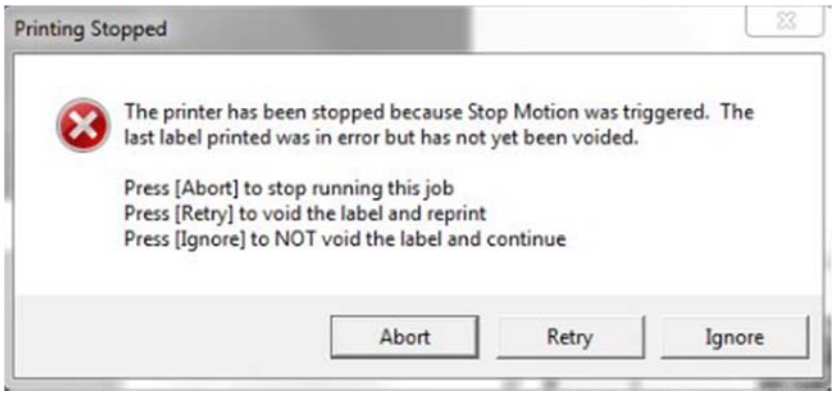
The image to the right is an example data file showing three columns of csv data corresponding to the three sectors. Sector 1 would be defined as being unique for the job allowing the LVS-7510 to determine when a job was completed.



Error Messages

Printing Stopped Error Message

As the LVS-7510 is validating labels, a failed label will be overstruck and reprinted. If the label fails a second time, the label will be overstruck and reprinted again. After three consecutive errors of the same type are detected (except Foreground and Background errors), the printer stops printing labels and the "Printing Stopped" message appears.



"Printing Stopped" error message

Note: The text appearing in the "Printing Stopped" message can be edited in the "BeforeAbort.txt" file. See the section entitled "Customizing Error Messages" for instructions.

Options include:

- **Abort** – Stops running the job. After clicking this button, Production mode users are prompted to login. After logging in, the "Manual Intervention Required" message appears (see below). The user must be granted the "Allow Abort" permission to allow the LVS-7510 to stop running the job.

  "Manual Intervention Required" message

  Note: The text appearing in the "Manual Intervention Required" message can be edited in the "AfterAbort.txt" file. See the section entitled "Customizing Error Messages" for instructions.

  Important: After aborting a print job, there may be print data remaining in the printer's memory buffer. If granted the "Allow Reset Printer" permission, a user can reset the printer to accept new print data. For detailed instructions, refer to the "Reset the Printer" section further in this document.

- **Ignore** – Ignores the failed label and continues printing the next label in the job. After clicking this button, Production mode users are prompted to login. The user must be granted the "Allow Ignore" permission to allow the LVS-7510 to ignore the failed label and continue printing the next label in the job.
- **Retry** – Voids the label and reprints the label. If the label fails, the "Printing Stopped" message appears. There is no user permission associated with the "Retry" option.

Foreground and Background Errors

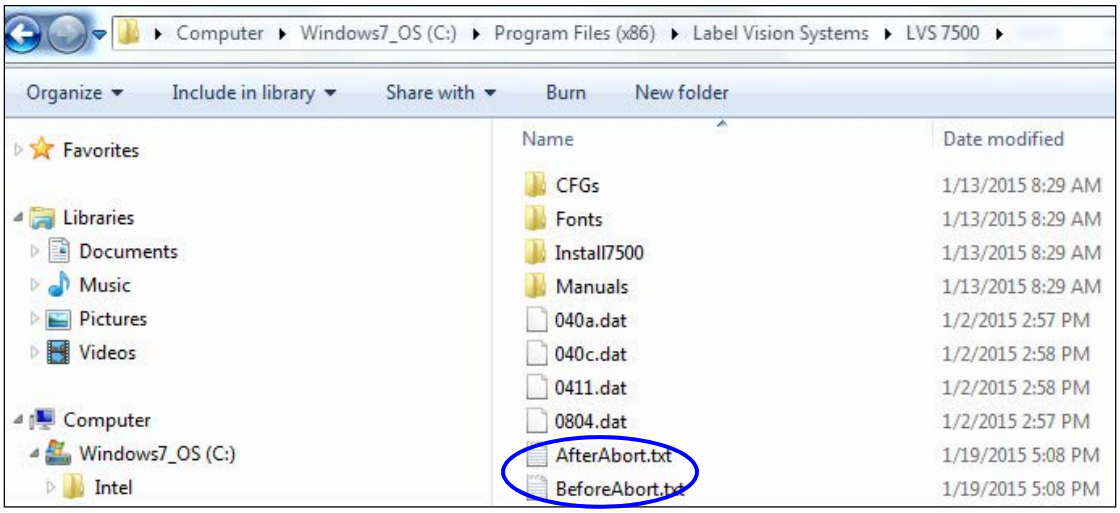
The three consecutive errors works differently for Foreground and Background errors. When a Foreground and Background error occur on the same label, a single counter is set by the larger of the two errors. Whichever of the Foreground or Background errors for that label repeat is larger will set/index the counter. This means that if there are both a Foreground and a Background error(s) on the same label, the bigger error (Foreground or Background) sets/indexes the counter. All errors are recorded but only the largest Foreground or Background error affects the counter. The result is three Foreground errors are allowed (i.e. will not stop the process) if a Background error accompanies any of the Foreground errors and the Background error is larger than the corresponding label's Foreground error. Additionally, three Background errors are allowed (i.e. will not stop the process) if a Foreground error accompanies any of the Background errors and the Foreground error is larger than the corresponding label's Background error.

Customizing the "Printing Stopped" and "Manual Intervention Required" Error Messages

To change the text appearing in the "Printing Stopped" and "Manual Intervention Required" error messages, follow the steps below. Windows Administrator access is required.

1. Open Windows Explorer and access the following path:
   C:\Program Files (x86)\Label Vision Systems\LVS 7500
2. Copy the file(s) "AfterAbort.txt" or "BeforeAbort.txt" to your desktop (or another preferred location).

   The "AfterAbort.txt" file contains the text appearing in the "Manual Intervention Required" message. The "BeforeAbort.txt" file contains the text appearing in the "Printing Stopped" message.



3. Open the file in Notepad or another text editor program and make your changes. When changes are complete, save and then close the file.
4. Copy the files ("AfterAbort.txt" and/or "BeforeAbort.txt") back to C:\Program Files (x86)\Label Vision Systems\LVS 7500.
5. Shut down and then restart the LVS-7510 software for the error message changes to appear.

Reset the Printer

Sometimes the printer will stop printing for no apparent reason (like after aborting a print job) and there may be print data remaining in the printer's memory buffer. To reset the printer back to a state where it is ready to accept new print data, follow the steps below. A user must be granted the "Allow Reset Printer" permission to reset the printer.

1. Using the Printronix printer's console buttons, take the printer offline, clear the printer's buffer, and place the printer back online.
2. The LVS-7510 software must be at the "Ready to run" screen (refer to the "Ready to Run Screen" section in this appendix for more information).
3. Hold down the [Alt] keyboard button and click the "Print Job" button in the top, right corner of the "Ready to run" screen.
4. Enter your login credentials. The "Confirm Reset Printer" message appears.

5. Click the "OK" button. The printer will reset and form feed a few label.

Printing Timeout Error

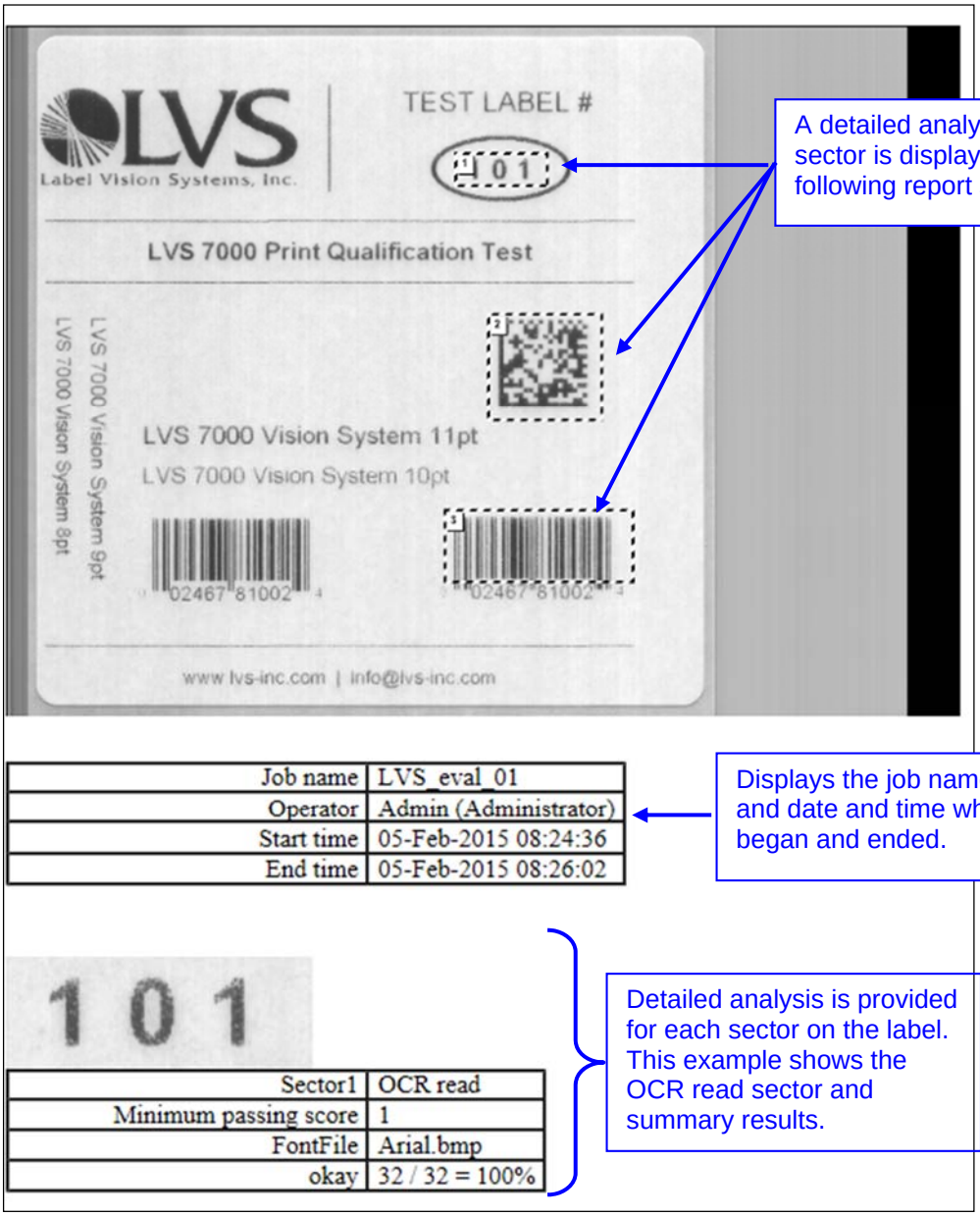
The following message appears when a printing timeout has occurred: "Queue up more labels to resume printing and the message will automatically go away. Or, push the "Stop" button to stop the run."

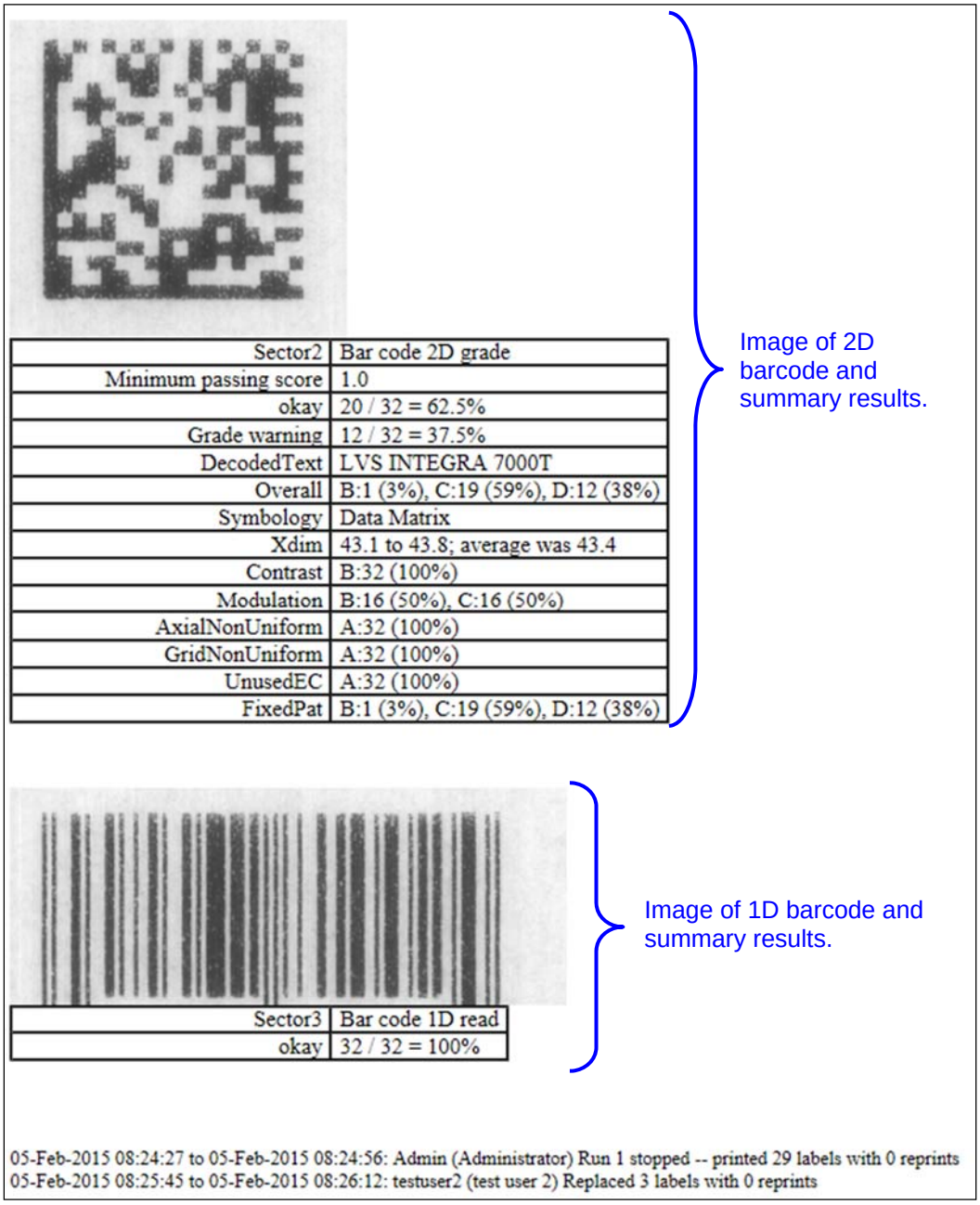
Summary Report

The LVS-7510 Summary Report gives a summation of the entire job and each sector's settings and parameters. The report also shows example images where sectors were drawn. See a sample LVS-7510 Summary Report below.

LVS 7500 Summary Report

05-Feb-2015 08:26:02





Sector2	Bar code 2D grade
Minimum passing score	1.0
okay	20 / 32 = 62.5%
Grade warning	12 / 32 = 37.5%
DecodedText	LVS INTEGRA 7000T
Overall	B:1 (3%), C:19 (59%), D:12 (38%)
Symbology	Data Matrix
Xdim	43.1 to 43.8; average was 43.4
Contrast	B:32 (100%)
Modulation	B:16 (50%), C:16 (50%)
AxialNonUniform	A:32 (100%)
GridNonUniform	A:32 (100%)
UnusedEC	A:32 (100%)
FixedPat	B:1 (3%), C:19 (59%), D:12 (38%)

Image of 2D barcode and summary results.

Sector3	Bar code 1D read
okay	32 / 32 = 100%

Image of 1D barcode and summary results.

05-Feb-2015 08:24:27 to 05-Feb-2015 08:24:56: Admin (Administrator) Run 1 stopped -- printed 29 labels with 0 reprints
05-Feb-2015 08:25:45 to 05-Feb-2015 08:26:12: testuser2 (test user 2) Replaced 3 labels with 0 reprints

Summary of operator actions, including the operator ID, the action performed on the system (such as replaced 3 labels with 0 reprints), and the date and time the action was performed.