ESPO Label Management Software

By QRlogix

USER MANUAL

V1.5.3

Contents

CUSTOMER SUPPORT

Immediate customer support is available by phone and email. If we are unavailable at the moment, we will get back to you at our first available opportunity.

Phone support: 800-650-0632

Email support: ESPO@QRlogix.com

User manuals, support documents and video tutorials can be found at:
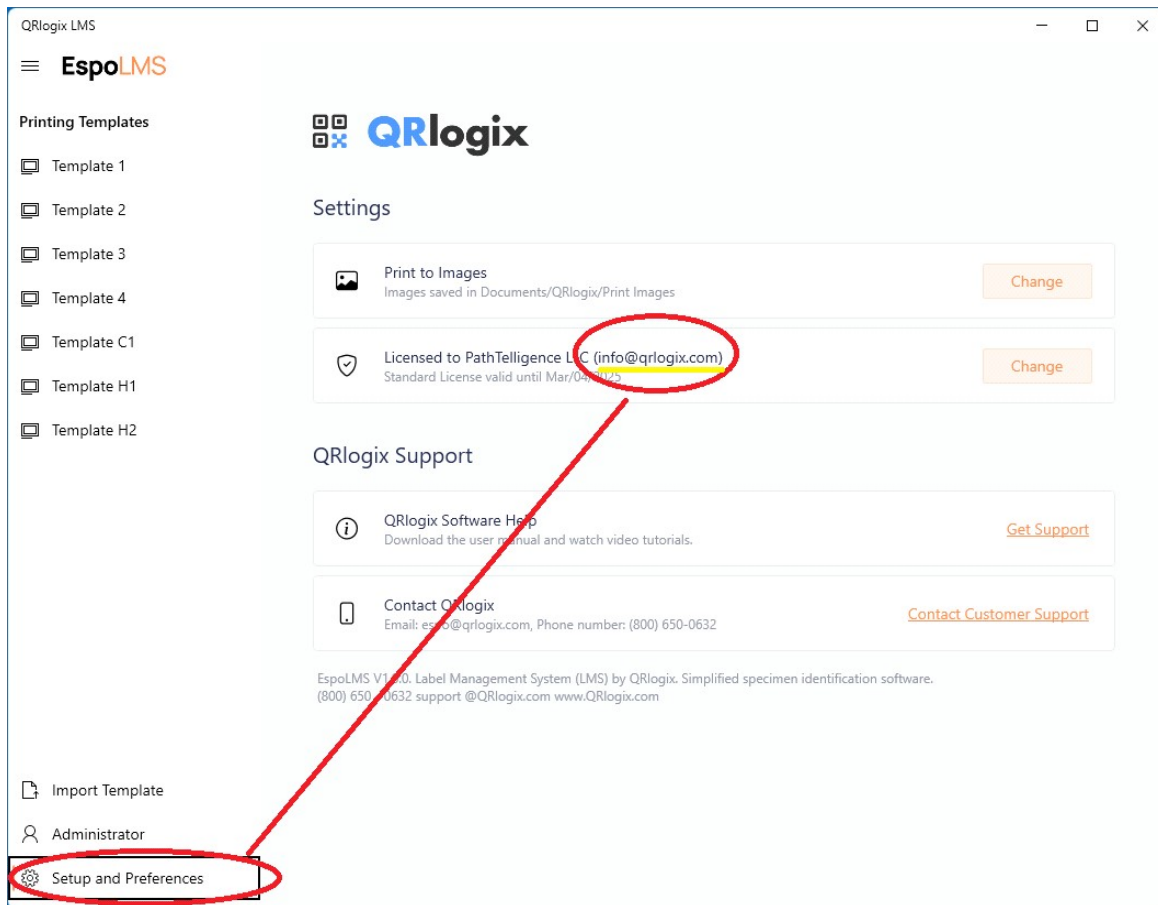https://qrlogix.com/pages/espolms-support

Scan for Support

Support resources are also available by clicking links inside the software:
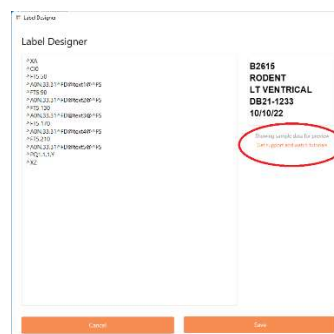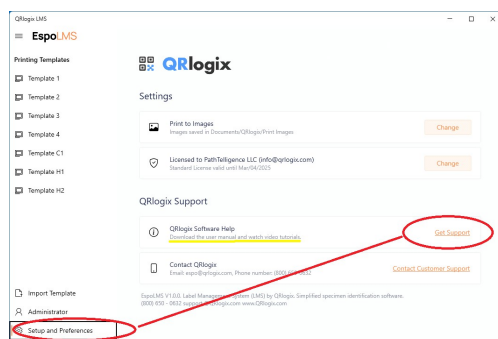
If login is required, use the email address shown on the Setup and Preferences page.

INSTALLATION

Follow the link in your welcome email to download the ESPO LMS software.

Chose the correct version for your operating system.
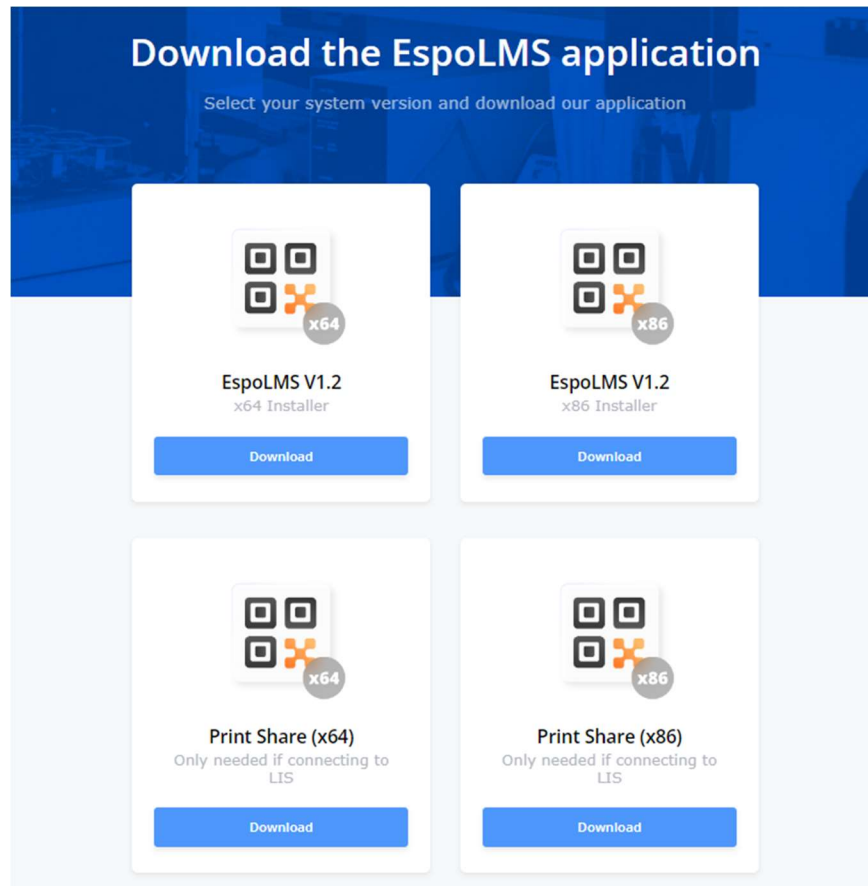
To determine if you need x64 (most common) or x86, go your Windows Control Panel, and then select System -> About, and reference System Type.

The Print Share download is ONLY NEEDED IF YOU ARE CONNECTING TO LIS or printing data from the shared folder. Otherwise, you should not download and install the Print Share service application.

IMPORTANT: If installing PrintShare, the same credentials must be used through all aspects of the installation to avoid network access errors. The main application, the PrintShare service application, and the unlock key must all be installed/activated using the same credentials that access the shared folder.

Select the appropriate files to download, click the link to begin the installation.

The installer window will appear. Click Next to begin the installation.
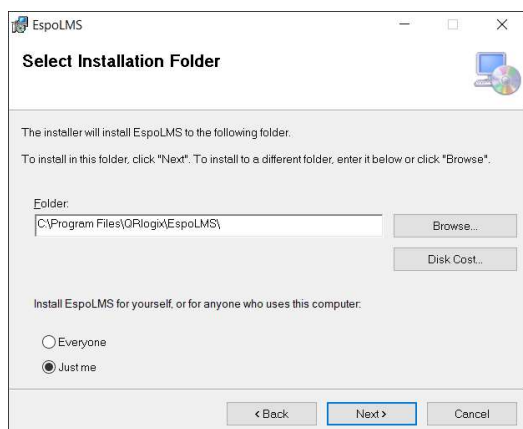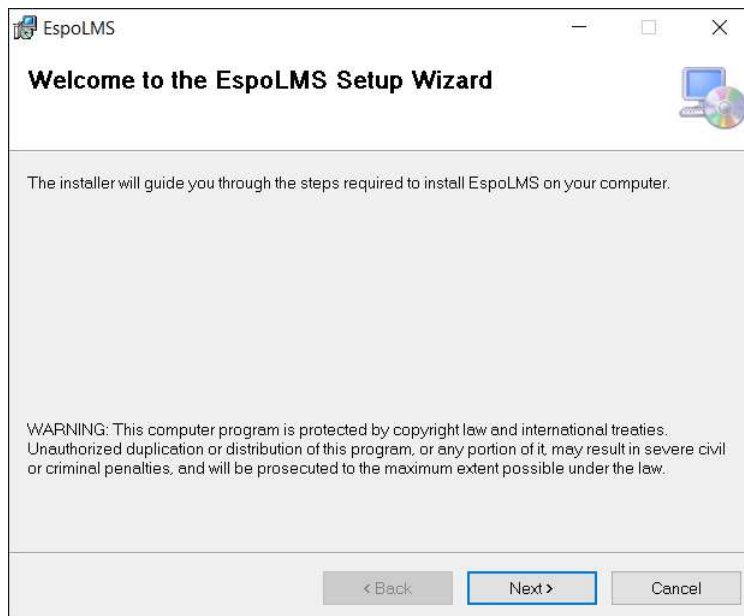
Confirm the file installation path.

Next, determine if anyone else who logs into the workstation will need access to the software. If so, select Everyone, otherwise choose Just me.

Choose Next to continue.

CONFIRM INSTALLATION

Click Next to confirm the installation.

Installation will begin.

Allow for a few minutes for the QRlogix LMS installation to complete.
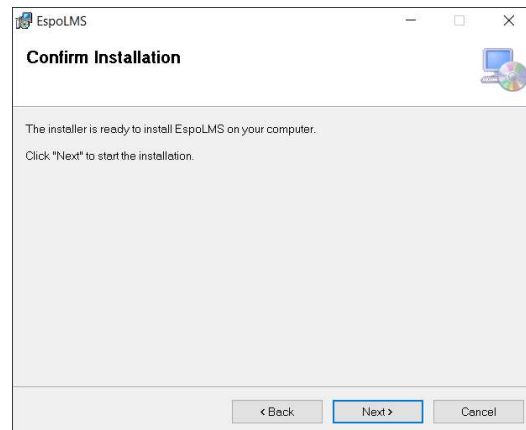
Once instllation completes, an icon for the ESPO LMS will appear on the computer's desktop.

Click the icon to launch the software.

LICENSE ACTIVATION

There are two options for license activation:

1. Drag and drop license file into license activator window
   PLEASE ALLOW 10 - 20+ SECONDS TO PROCESS

2. Click BROWSE FILES, and then navigate to the folder and select the license file for activation
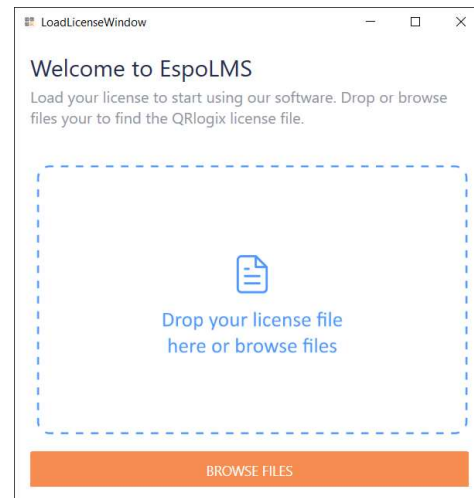
Once the license is confirmed, the ESPO LMS will open on your screen:

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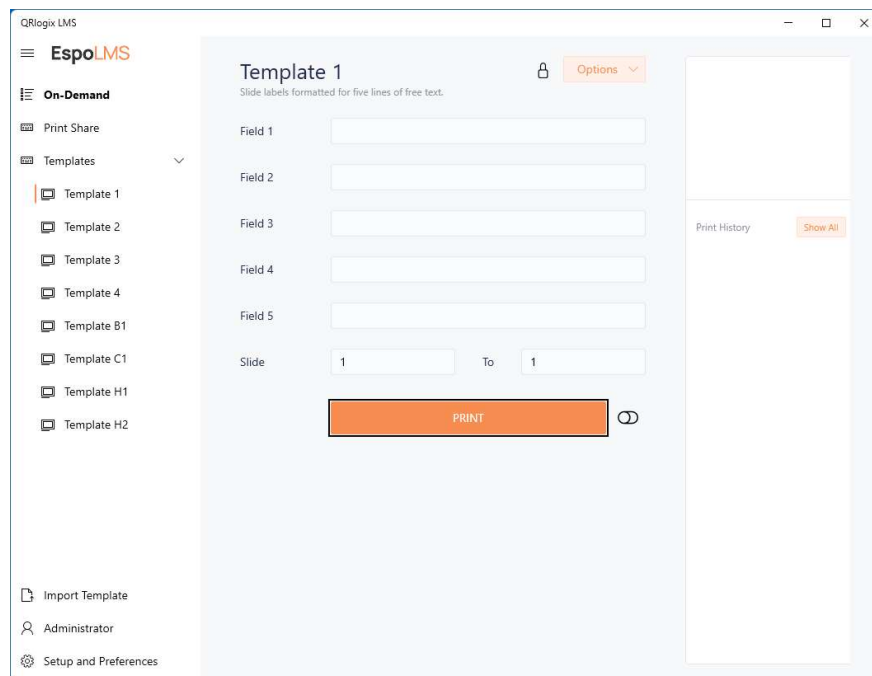
INTERFACE OVERVIEW
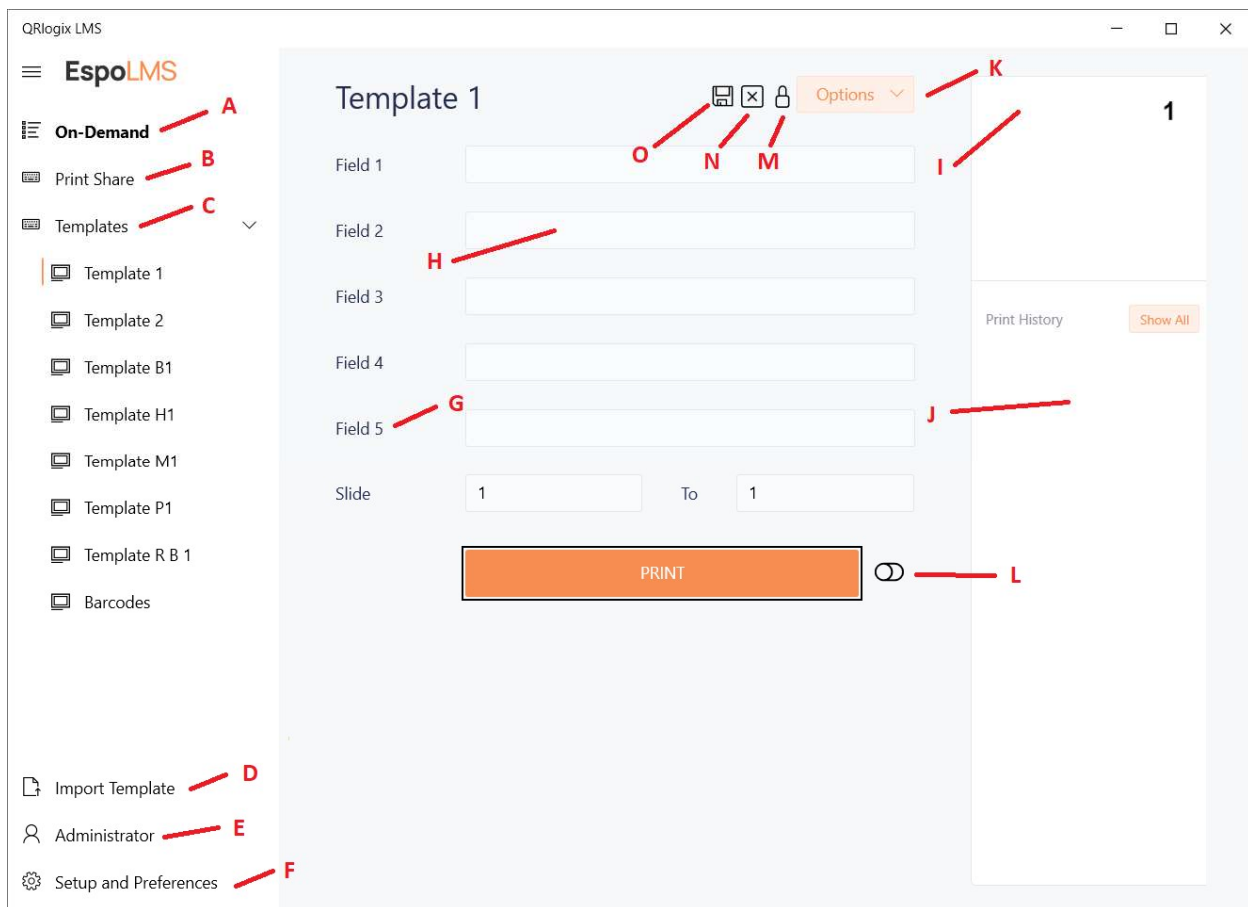
A = On-Demand: Templates for printing from keyboard or barcodes
B = Print Share: Connects with LIS to receive print jobs through a shared folder
C = List of different templates that are setup to print to the ESPO printer.
D = Import a new template from the library located at Documents\QRlogix\Templates
E = Add new users. Switch current user
F = Swith from printer to print to images. License information. Software support links
G = Editable name of the form field
H = Form field user input data
I = Label print preview
J = Print history
K = Customize Template, Label Designer, Export Template, Delete Template
L = Auto-Print - Intitates immediate print upon cursor arriving at Print button
M = Lock/Unlock Form fields
N = Clear field content/reset counters
O = Save field content/counter values

On-Demand Printing

On-demand printing allows data to be added to template forms from keybaord entry, barcode scanning, or a combination of both.

You can adjust form field features by clicking the Optopns dropdown, and selecting Customize Template.

Customize Form allows you to select different form items and edit their individual properties. You can also add/remove and move form objects such as dropdown boxes, text fields and numeric fields.
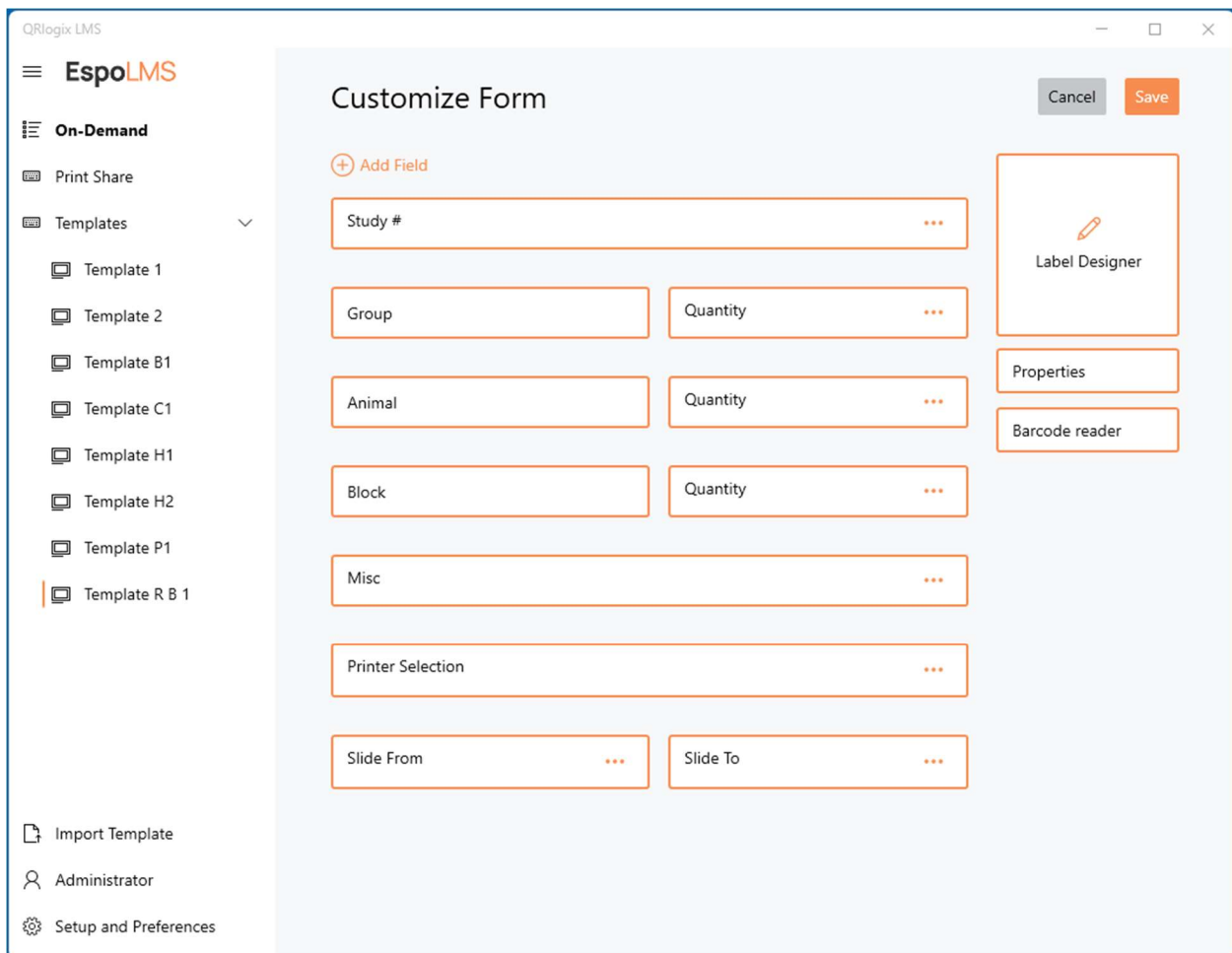
To add fields or dropdown boxes to a form, select the Add Field option at the top of the window.
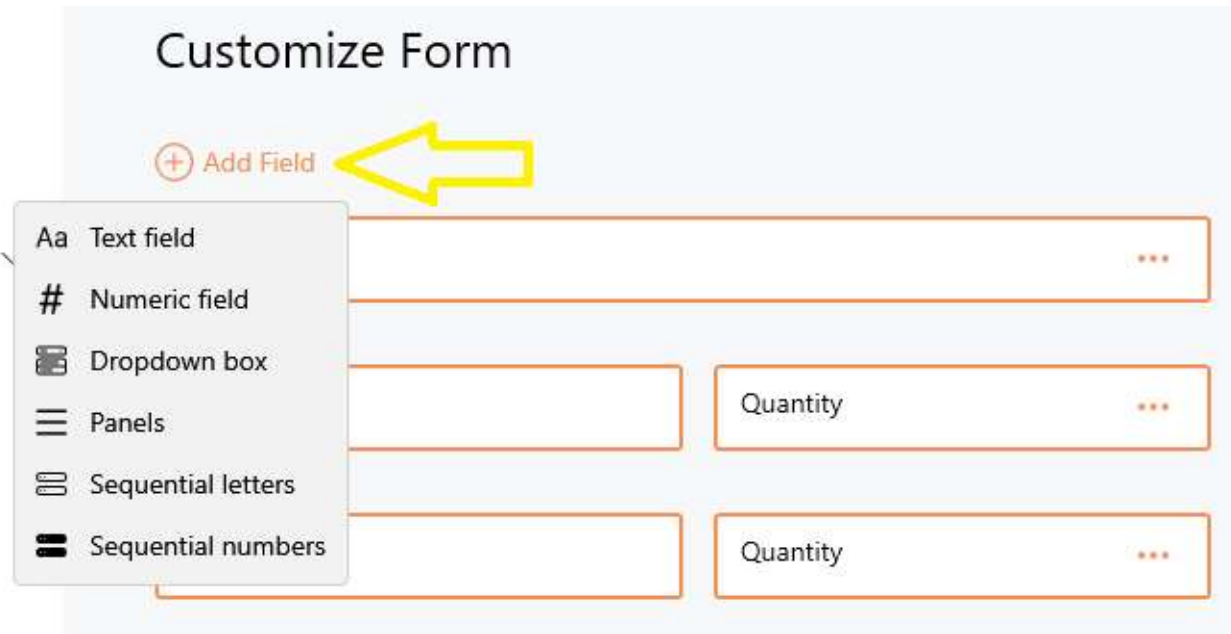
Select the type of form field you want to add, and proceed to edit the field settings accordingly.

Text Field Settings   Dropdown Field Settings   Numeric Field Settings

Panels

Sequential letters

Sequential numbers

Note the Identifier. The identifier connects the data in the form fields to the corresponding location on the slide label.

Afer adding a new form field, the identifier must also be added to the label in label designer. If the identifer is not added to the label, the data from the form will not appear or print out.

IMPORTANT: Whenever a new field is added to a form, a corresponding identifier must be added to the label as well.

EDIT FORM FIELDS

Text Field

FIELD NAME: Rename field

IDENTIFIER: Used to place data on label. A corresponding identifier must be included on the label for data to appear

SAMPLE VALUE: Is displayd in Label Designer preview. It's important to use data similar to what will acutally be used.

MAX LENGTH: Set max character length to print on label

LOCKED: Locks form field so data remains and cursor skips field

Save or Cancel selections

Numeric Text Field

Numeric data input box

FIELD NAME: Rename field

IDENTIFIER: Used to place data on label. A corresponding identifier must be included on the label for data to appear

SAMPLE VALUE: Is displayd in Label Designer preview. It's important to use data similar to what will acutally be used.

AUTO-INCREMENT: Set number to automatically increment after each print job

LOCKED: Locks form field so data remains and cursor skips field

LEADING ZEROS: Prints leading zeros based on user defined numbed of digits

Save or Cancel selections

Dropdown box settings

Input selection list

FIELD NAME: Rename field

IDENTIFIER: Used to place data on label. A corresponding identifier must be included on the label for data to appear

LOCKED: Locks form field so data remains and cursor skips field

Customize dropdown field options:
- Name
- Printed value
- Move up/down
- Remove selection
- Add new selection

Save or Cancel selections

Stain Panels Dropdown

List of stains to print for each record

PANEL: Group of selections (stains) to print, individually

PANEL SELECTIONS: Individual values for the panel group. Each selection is printed on one slide. If there are 3 selections, 3 slides will print, one with each of the selection values.

ADD NEW PANEL: Allows user to create a new panel group.

ADD OPTION: Allows user to add new individual selections to print with the panel group.

Save or Cancel selections

Add panel identifiers to the label:

Label Designer

```
^XA
^CI0
^FT5,50
^A0N,33,31^FD@text1@^FS
^FT5,90
^A0N,33,31^FD@text2@^FS
^FT5,130
^A0N,33,31^FD@text3@^FS
^FT5,170
^A0N,33,31^FD@panelname@^FS
^FT5,210
^A0N,33,31^FD@panelstain@^FS
^PQ1,1,1,Y
^XZ
```

B2615
RODENT
LT VENTRICAL
STOMACH PANEL
H&E

Showing sample data for preview
Get support and watch tutorials

Printing sequentially lettered/numbered slides:

Sequential letters

Text input ✕

Field settings

FIELD NAME	Letters
IDENTIFIER	@letters@
SAMPLE VALUE	A
MAX LENGTH	5
LOCKED	⬤ Unlocked

Cancel   Create

FIELD NAME: Rename field

IDENTIFIER: Used to place data on label. A corresponding identifier must be included on the label for data to appear

SAMPLE VALUE: Data that is displayed in label designer placeholder

MAX LENGTH: Displayed/Printed data not to exceed this many ahracters

LOCKED: Locks form field so data remains and cursor skips field

Save or Cancel selections

Sequential Numbers

Text input   ✕

Field settings

FIELD NAME	Numbers
IDENTIFIER	@numbers@
SAMPLE VALUE	1001
LOCKED	⬤ Unlocked
REVERSE ORDER	⬤ False
LEADING ZEROS	⬤
DIGITS	0 ∧ ∨

Cancel   Create

FIELD NAME: Rename field

IDENTIFIER: Used to place data on label. A corresponding identifier must be included on the label for data to appear

SAMPLE VALUE: Data that is displayed in label designer placeholder

LOCKED: Locks form field so data remains and cursor skips field

LEADING ZEROS: Prints leading zeros based on user defined numbed of digits

REVERSE ORDER: Prints in opposite order of default

Save or Cancel selections

Add sequential letters and sequential numbers identifiers to the label:

Label Designer

```
^XA
^CI0
^FT5,50
^A0N,33,31^FD@text1@^FS
^FT5,90
^A0N,33,31^FD@letters@^FS
^FT5,130
^A0N,33,31^FD@numbers@^FS
^FT5,170
^A0N,33,31^FD@text4@^FS
^FT5,210
^A0N,33,31^FD@text5@^FS
^PQ1,1,1,Y
^XZ
```

B2615
A
1001
DB21-1233
10/10/22

Showing sample data for preview
Get support and watch tutorials

Reverse the printing output order

Reverse Print Order

FIELD NAME: Rename field

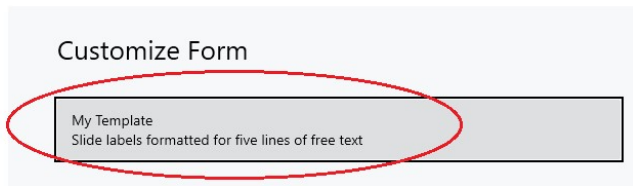LOCKED: Locks form field so data remains and cursor skips field

REVERSE ORDER: Flips output so sequential numbering order is reveresed

Save or cancel selection

PROPERTIES

To edit template properties, select the Properties button on the Customize Template screen below Label Designer.

EDIT TEMPLATE NAME AND DESCRIPTION

ADD MAGAZINE SELECTION DROPDOWN (Using printer driver selection)
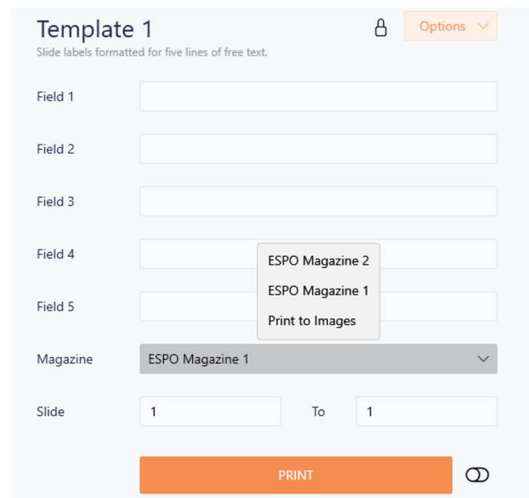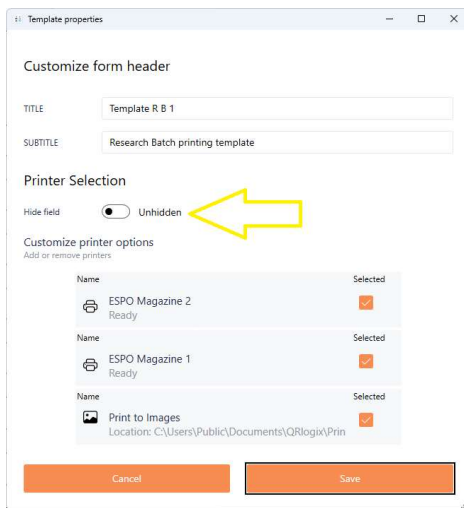
To print from two different magazines, the ESPO driver must be installed twice in the Control Panel. We suggest naming the installed drives ESPO Magazine 1 and ESPO Magazine 2. The driver for magazine 1 needs to have its driver settings changed to Use Magazine = Magazine 1. See below:
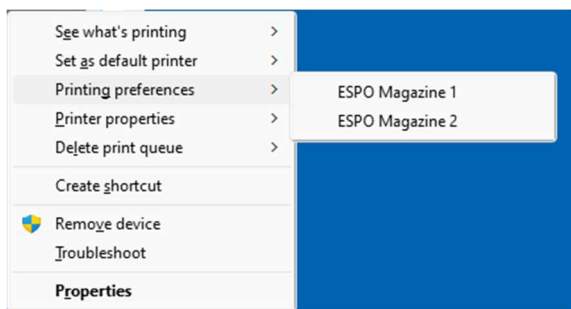
SAVE / CLEAR / LOCK Form Fields
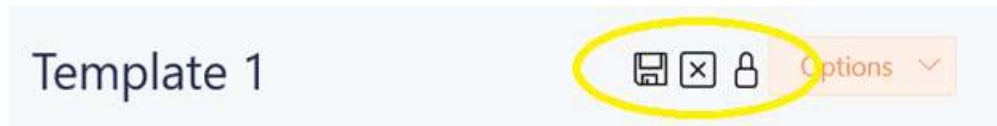
LOCK/UNLOCK Field Data

Clicking the Lock icon allows users to lock in data that needs to be printed on most slides.
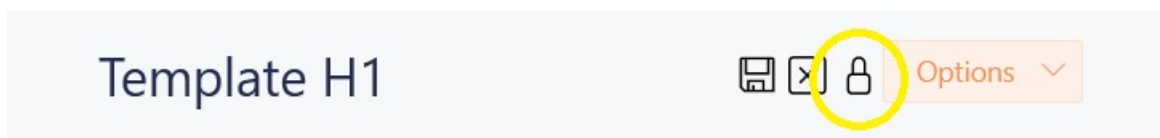
CLEAR Field Data

Click on the Clear icon to clear data out of open firm fields and reset the counters.

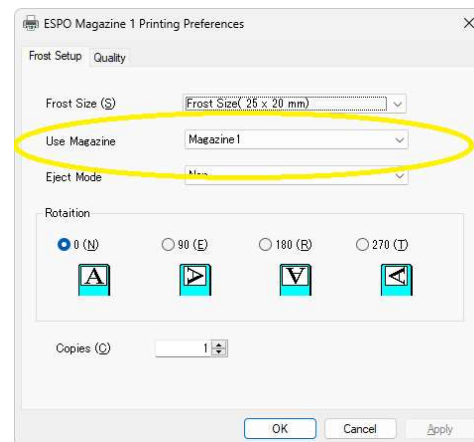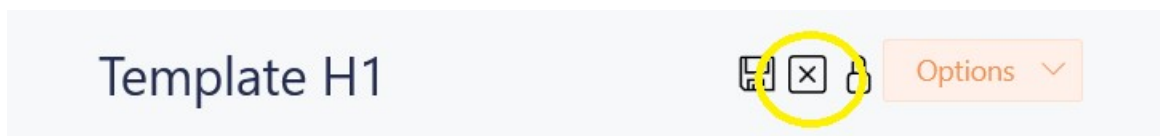## SAVE Field Data

Click on the Save icon to save the current data in the open fields so they automatically repopulate with that data after printing. This will also save the current counter values (if the counter fields are unlocked).
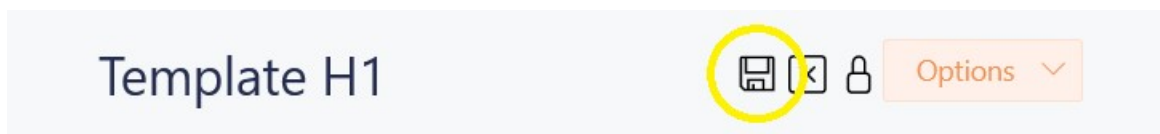
BARCODE SCANNER SETUP

From the Customize Template screen, select the barcode reader field.
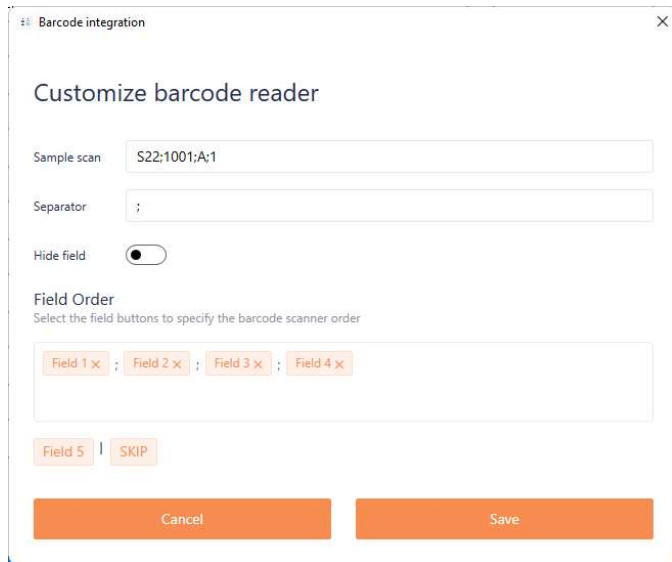
1. Provide a sample scan for reference.

2. Define the separator used in your barcode

3. Unhide the barcode scanner field, so it shows on the template form

4. Select the order in which the data is placed in the form fields, from left to right on the barcode. Use the SKIP option for data that will not be used.

5. Save or cancel the selections

Next, lock and edit the form fields for each of the fields selected:

The barcode scanner field will appear on the form, and the corrensponding fields will be locked

Before scanned barcode   After scanned barcode
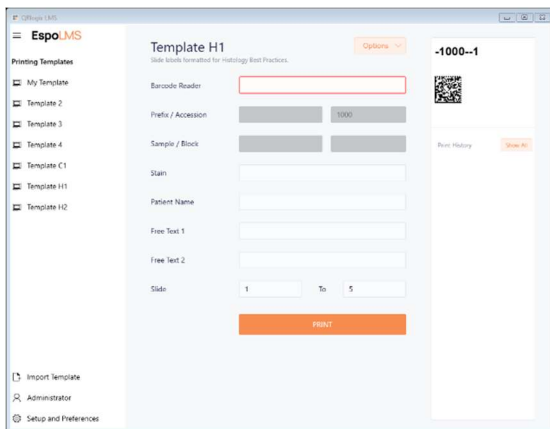
PRINT SHARE – Connect to LIS

Receive print job from .TXT or .CSV (UTF-8) files through a shared folder.

Using this solution requires that the QRlogix Automation Service is installed and running in the system background. It is recommended that you ONLY install and run this application if you will be printing from .txt or .csv files from a shared folder (file drop).

IMPORTANT: The same credentials must be used through all aspects of the installation to avoid network access errors. The m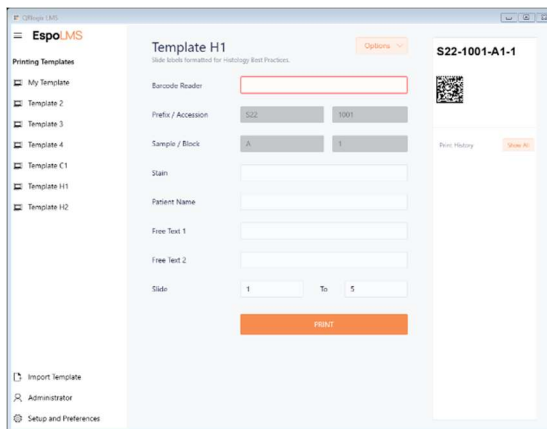ain application, the PrintShare service application, and the unlock key must all be installed/activated using the same credentials that access the shared folder.

Begin by downloading the PrintShare service application from the link provided. Once downloaded, double click the AutomationService.exe file to begin the installation process.

Click through the selections in the installer.
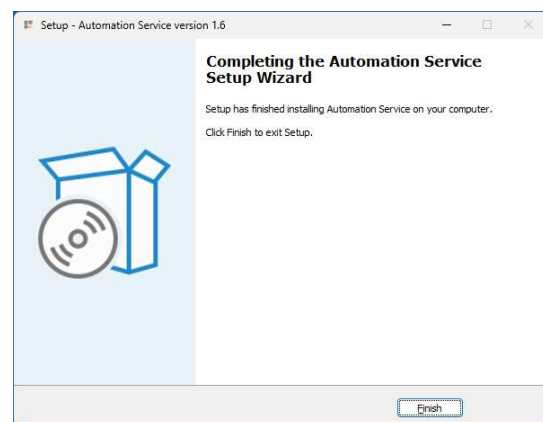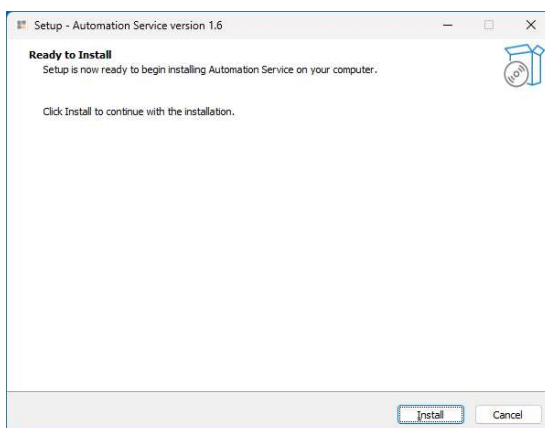
After finishing, the service application will automatically launch and activate itself. You will be prompted to click any key to continue. This will finalize the PrintShare service installation.

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To confirm that the Print Share service installed correctly, type "Services" in the Windows search bar, then click on the Services App.
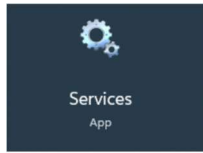
Next, find the QRlogix Automation service in the list, and confirm the status is running. If not, click Start the Service.
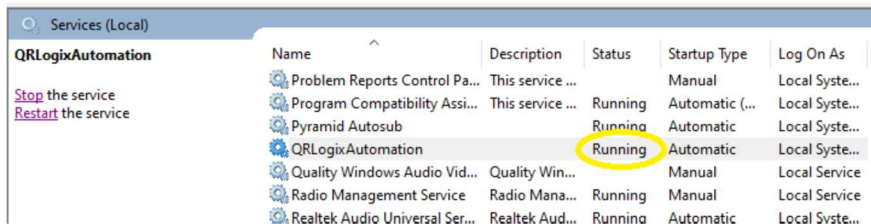
PRINT SHARE – Interface Overview
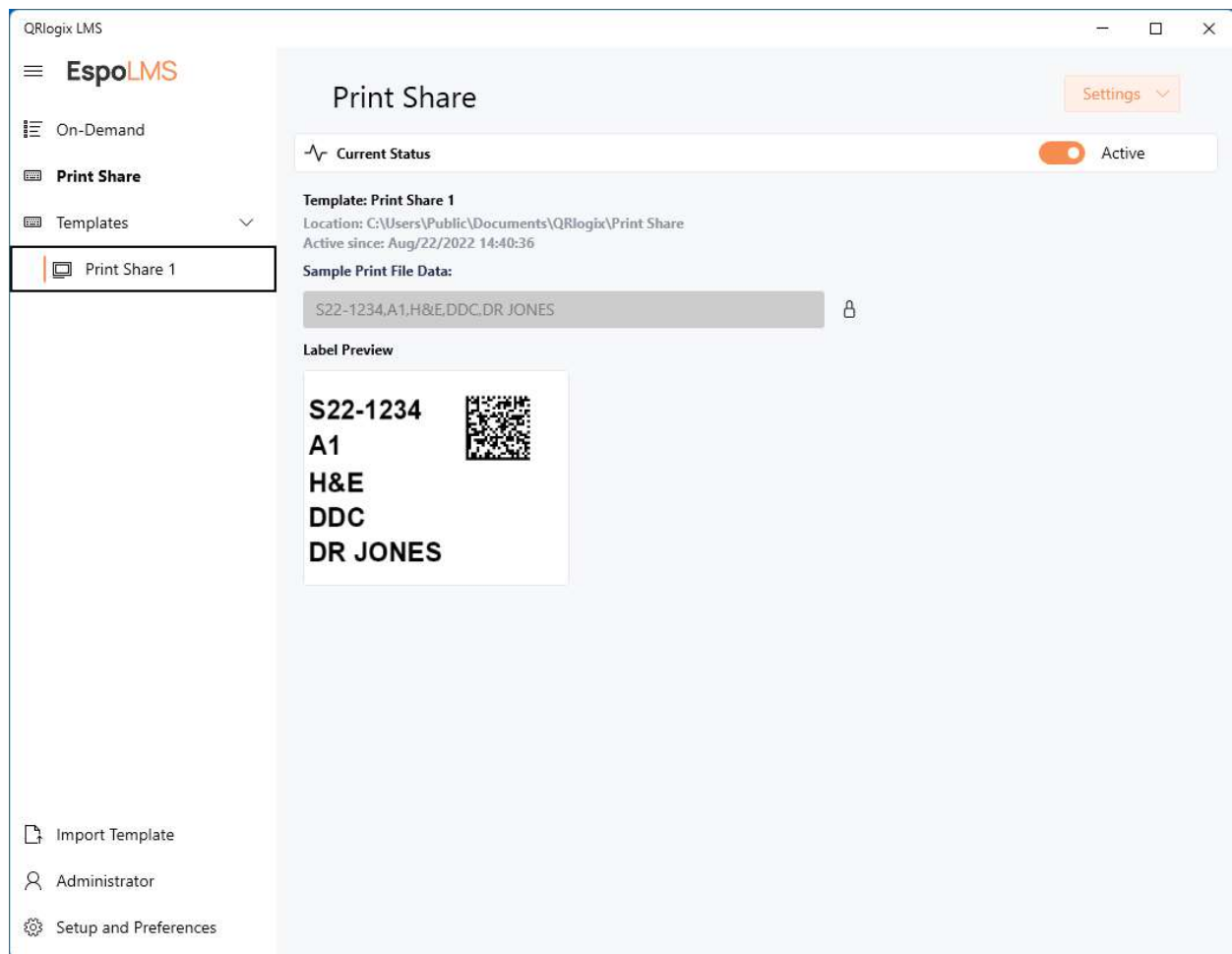
Templates = List of Print Share templates

Current status – Indicates if template is actively running in the service application

Template = Name of active template

Location = Shared folder that service application is watching for shared print jobs

Active since = Date and time current solution was activated

Sample Print File Data = Example of print job formatting with sample data. Used to feed label preview

Label Preview = Applies the Sample Print File Data against the label settings for the current template

Settings = Adjust the shared folder settings, data settings (mapping) and label settings (design format)

Active – Turn on/off the current template. Only 1 template can be active at a time

Paste a sample string of data into the Sample Print File Data field. For CSV files, you'll need to separate the sample data with a comma.

Print Share Settings
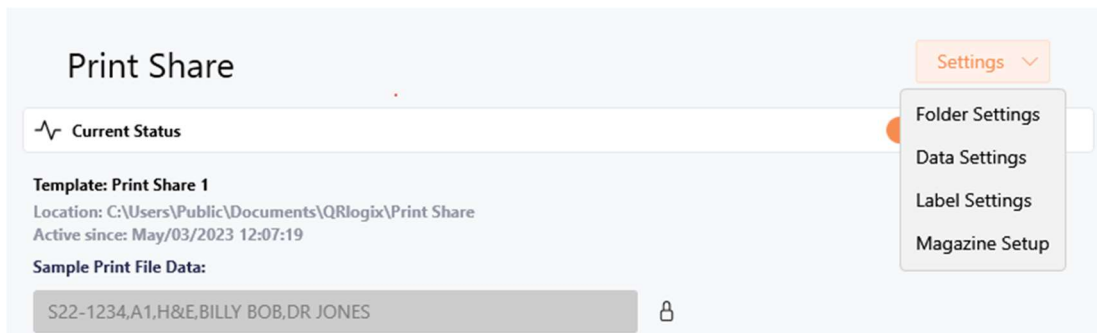
To setup a new Print Share template, first click on Folder Settings from the Options dropdown menu.

FOLDER SETTINGS
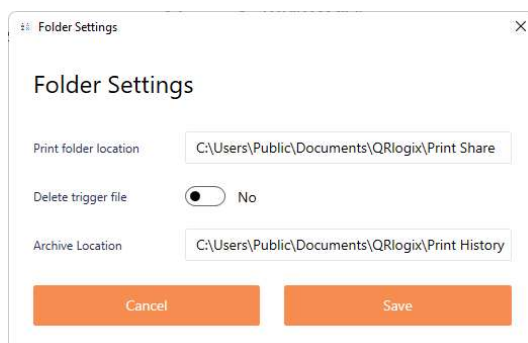
Next, select the shared folder to watch for new print jobs.

Determine if the text files should be deleted after printing or if they should be archived.

If archiving the print job files, select the folder to archive them in.

DATA SETTINGS

To set what data is mapped from the text file to the label, click on Data Settings in the Options dropdown menu.

Define the fields from the text file by giving them descriptive names. The name will become the keywords in the label designer.

Make sure you have 1 field for each data container being used.

Define the separator. I.E. = ","

Select the FIELD ORDER so it matches the sequence of data in the text file that is sent over.

Save the settings.

Field Order

Make sure the Field Order matches the order in which the data containers are placed in the sample text file:

Text file data: S22-1234,A1,H&E,BILLY BOB,DR JONES

S22-1234	A1	H&E	BILLY BOB	DR JONES
Field 1	Field 2	Field 3	Field 4	Field 5

Once the field order is confirmed to match the order of the data containers in the text files (print jobs), save the settings and proceed to Label Settings.

LABEL SETTINGS

Using the Available Fields, just created in Data Settings, follow the instructions in the Label Designer section below to create and format your label.
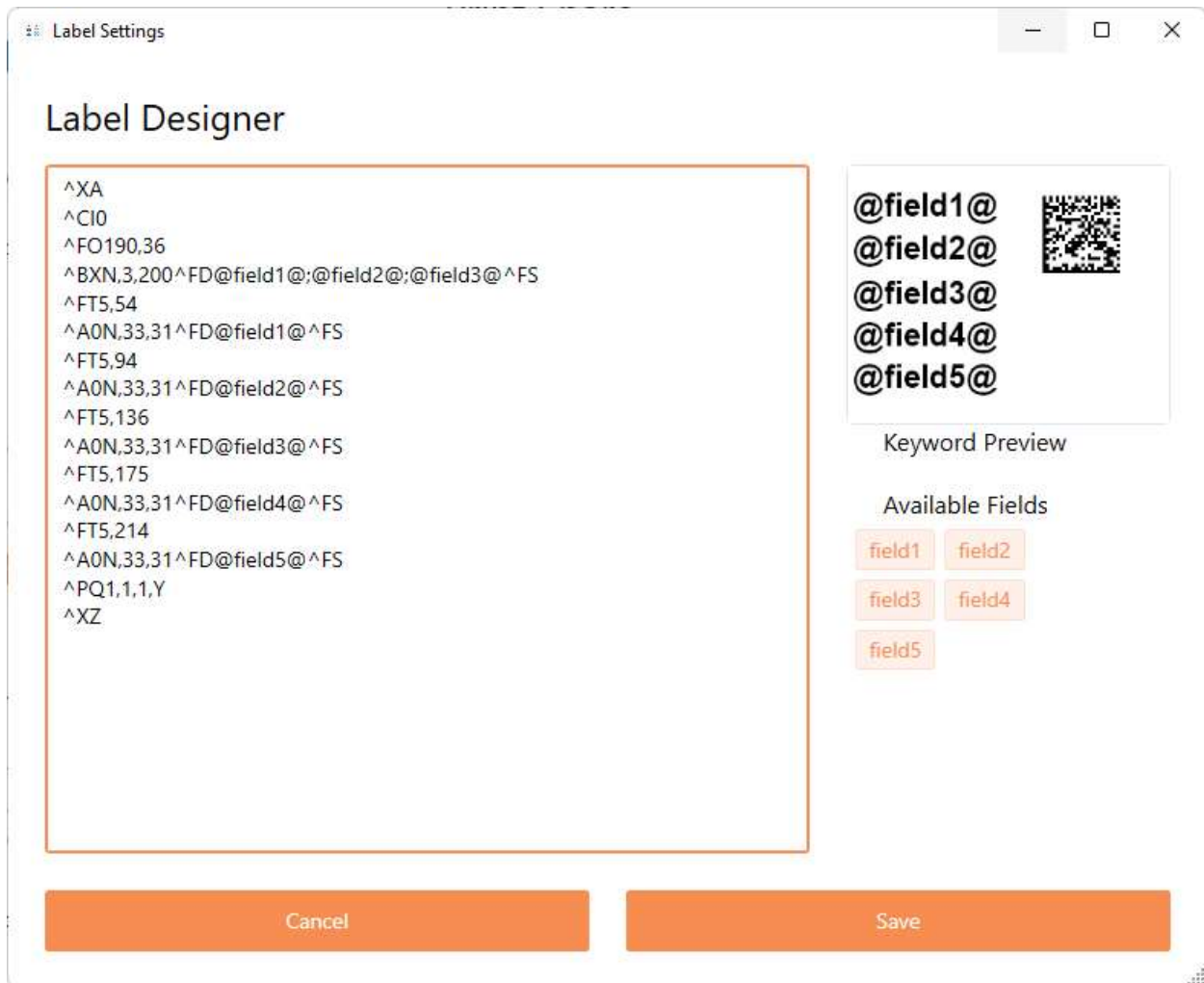
For more detailed instructions on label design, please reference the LABEL DESIGNER instructions. We also recommend printing a copy of the Label Designer Cheat Sheet.

Once the label design is complete, save the data and proceed to the main Print Share screen.

Magazine Selection (Printer Driver Selection)

Print jobs sent to the shared folder can define which printer to print to.
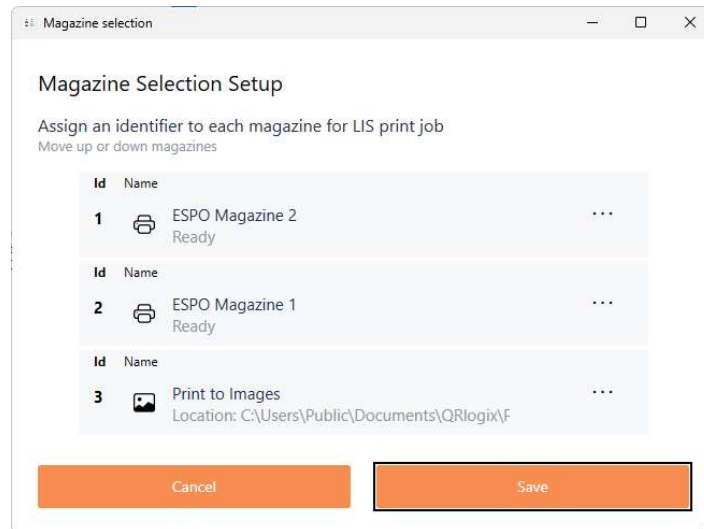
The magazine ID show above is included in the text file containing the print job.

The Field Settings (order) needs to match the text file formatting.

Launching Print Share

On the Print Share screen, copy and paste actual print file text string into the Sample Print File Data field as shown below:

If the label order and format look correct in the label preview, then the Print Share template settings should be correct.

Next, confirm that Print Share is currently running as a service by going to your Windows search bar and typing in "Services". Next, click the Services App to open it up.
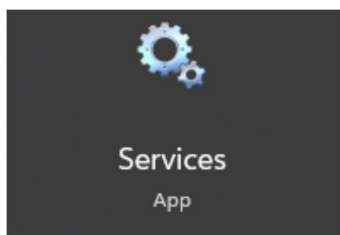
In the Services App, Scroll to QRlogixAutomation and confirm that Status is "Running".
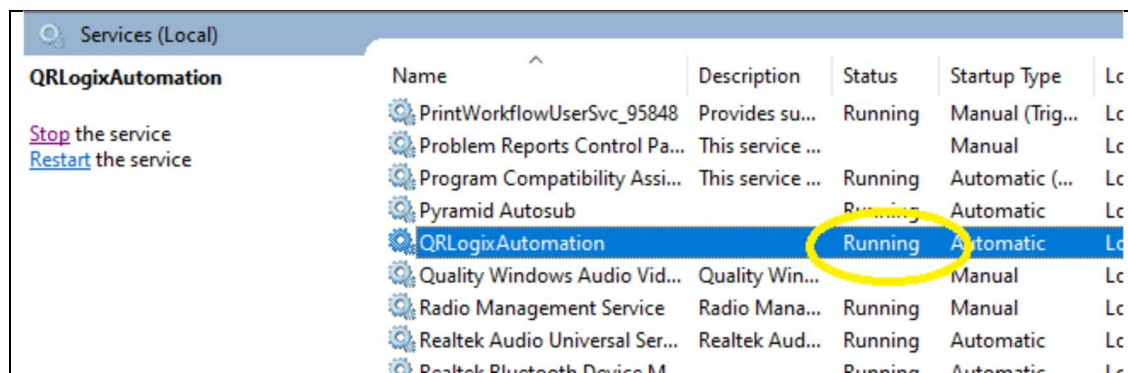
If the service is not running, click the Start button to launch it.

If you do not see the QRlogixAutomation service listed, please make sure the file was downloaded and installed correctly. Contact QRlogix for assistance.

One the Print Share service is confirmed to be running, you will need to activate the Print Share template on the main screen:

You should now be able to print from LIS by accepting print jobs as text files that are sent to the shared folder.

Test Print

You can test print using Print Share 1 Template. Locate the SAMPLE PRINT.txt (text) file located in the following folder: C:\Users\Public\Documents\QRlogix\Print History

Drop the SAMPLE PRINT.TXT file into the following shared folder with the system active: C:\Users\Public\Documents\QRlogix\Print Share
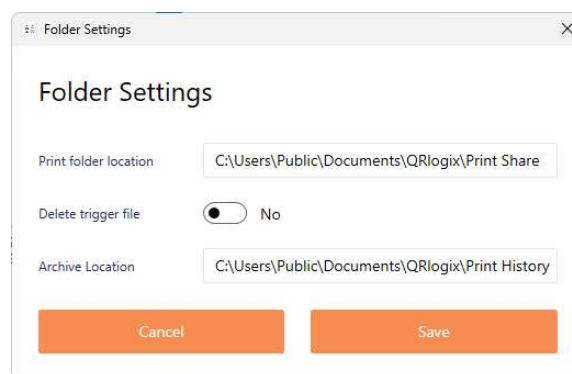
QRlogix LABEL DESIGNER

Understanding QRlogix Design Code

The QRlogix Label Designer uses programming code to easily create labels. This allows us to efficiently change font size and the position of objects on the label, as well as add barcodes and static text.

Don't worry! You don't need to know anything about programming to quickly learn how to design and edit labels. You only need to understand how to change the font size, and how to position label elements.

We strongly recommend, first watching the LMS Label Designer Video Tutorials at the following webpage (login required):

https://QRlogix.com/pages/lms-label-designer
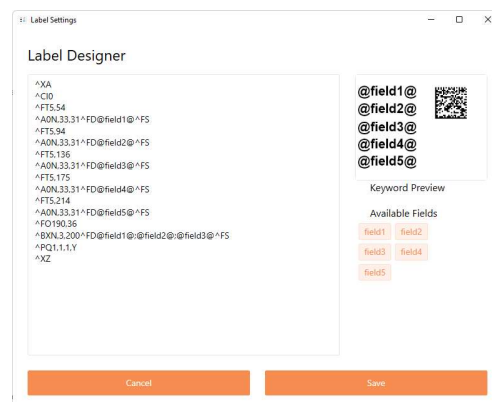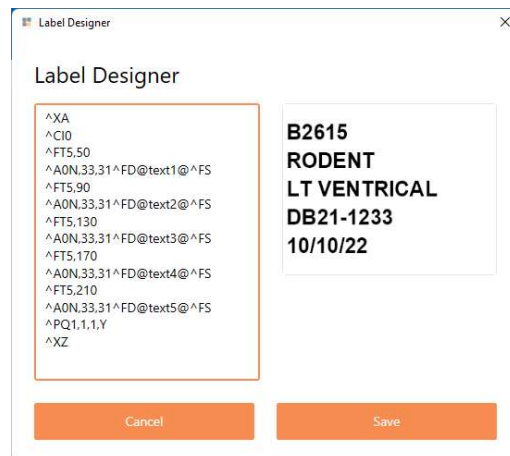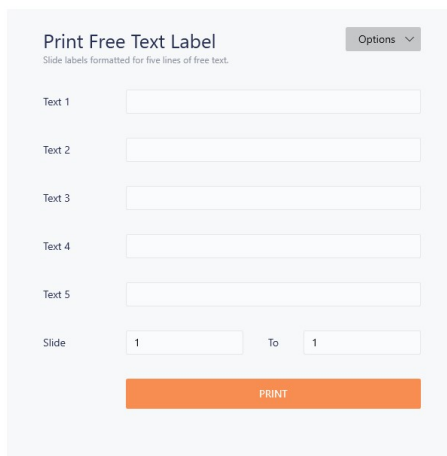
Label Designer allows users to move label objects (content containers) to different positions on the label. We can also increase or decrease the font size (height and width) and even add static content that is not part of the template form.

The following example of label design code, shows color coded commands we use to move and resize the label objects. The items highlighted in green move the objects from left to right on the label canvas. The items highlighted in blue move the objects up and down on the label. The items highlighted in red increase or decrease the font size, and can be separated to individually control font height and font width.

GREEN = Left/right positioning based on X axis (horizontal)
BLUE = Up/down positioning based on Y axis (vertical)
RED = Font Size (font height, font width)

```
^XA
^CI0
^FT5,50
^A0N,33,31^FD@text1@^FS
^FT5,90
^A0N,33,31^FD@text2@^FS
^FT5,130
^A0N,33,31^FD@text3@^FS
^FT5,170
^A0N,33,31^FD@text4@^FS
^FT5,210
^A0N,33,31^FD@text5@^FS
^PQ1,1,1,Y
^XZ
```

^FT (or ^FO) define where the object is placed on the label and ^AON defines the font, as detailed below.

LABEL DESIGN CODE

It is a requirement that all label code begin with ^XA, and end with ^XZ. Generally, ^CI0 (defines font) will follow ^XA at the top in this format:
^XA
^CI0

X-Y AXIS LOGIC

The QRlogix Label Designer uses X-Y axis logic, where X is horizontal, and Y is vertical. With a 1" x 1" label canvas and a 300-dpi printer, the label area would contain 300 dots down and 300 dots from left to right. An X-Y value of 0,0 is the very top left corner of the 1" label canvas. An X-Y value of 150/150 would be the center of the 1" x 1" label canvas.

OBJECT PLACEMENT ON LABEL

Using ^FT or ^FO

Field Typeset command = ^FT   Object positioned down from that point on canvas
Field Origin command = ^FO   Object positioned up from that point on canvas

^FT5,50
^FO5,50

The ^FT (field typeset) command sets the data's placement on the label using X-Y axis logic. In the example below, ^FT5,50 places the data 5 dots to the right of the label edge, and 50 dots down from the top. Because it us ^FT (and not ^FO) the object extends DOWN from that point. Whereas, if it was ^FO5,50, the object would extend UP from that point on the canvas.

The example below shows the NAME object placed on the label using ^FO and ^FT using the exact same values. ^FT extends down, and ^FO extends up:
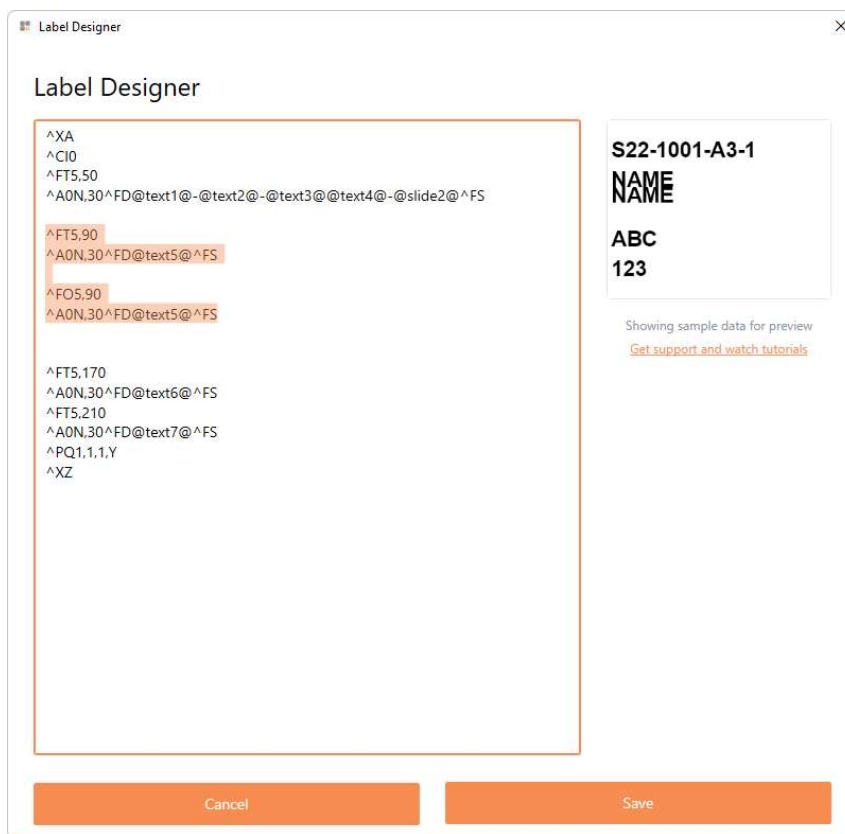
The data that is being placed inside the Field Typeset needs to be defined. First, the ^AON commands define the font and orientation as normal.

^A0N,33,31

The first value (33) is FONT HEIGHT, and the second value (31) is FONT WIDTH. An increase in the number equites to an increase in the font height or width.

34

If both values are the same, they can be replaced with just 1 value as shown below:

^A0N,31

For the example above, both the font height and the font width equal 31.

The ^FS command denotes the end of the field definition. It is required at the end of each label object.

^FT5,50
^A0N,33,31^FD@text1@@^FS

The above string contains all the information needed to place the contents of Text 1 from the form in the correct position on the label.

Below, is a breakdown of how form field Text 2 looks using the code format we just reviewed:

^FT5,90
^A0N,33,31^FD@text2@^FS

For Text 2 above, notice the X axis is 5, just like Text 1. That's because they both start with the same placement from the side of the label. Whereas the value for Y axis is 90 (compared to 50 with Text 1). That's because the data for Field 2 needs to be far enough below the data for field one, that it doesn't overlap.

^FT5,50
^A0N,33,31^FD@text1@^FS
^FT5,90
^A0N,33,31^FD@text2@^FS

Notice the trend below. They Y values increase by 40 for each line on the slide, giving the data equal distance apart from each other.

^FT5,50
^A0N,33,31^FD@text1@^FS
^FT5,90
^A0N,33,31^FD@text2@^FS
^FT5,130
^A0N,33,31^FD@text3@^FS
^FT5,170
^A0N,33,31^FD@text4@^FS
^FT5,210
^A0N,33,31^FD@text5@^FS

You can move the above fields as needed to design the best label for your needs.

ADDING PERMANENT TEXT TO A SLIDE

The below example shows how permanent text of "Animal Research" is added to every slide that gets printed from this template.

To add permanent static text to a label, "Animal Research", use the following code:

^FDAnimal Research^FS

With permanent text added	Without permanent text
B2615 -1 RODENT LT VENTRICAL DB21-1233 Animal Research	B2615 -1 RODENT LT VENTRICAL DB21-1233
^XA ^CI0 ^FT5,50 ^A0N,33,31^FD@text1@ -@slide2@^FS ^FT5,90 ^A0N,33,31^FD@text2@^FS ^FT5,130 ^A0N,33,31^FD@text3@^FS ^FT5,170 ^A0N,33,31^FD@text4@^FS ^FT5,210 ^A0N,33,31^FDAnimal Research^FS ^PQ1,1,1,Y ^XZ	^XA ^CI0 ^FT5,50 ^A0N,33,31^FD@text1@ -@slide2@^FS ^FT5,90 ^A0N,33,31^FD@text2@^FS ^FT5,130 ^A0N,33,31^FD@text3@^FS ^FT5,170 ^A0N,33,31^FD@text4@^FS ^PQ1,1,1,Y ^XZ

ADDING A BARCODE TO THE LABEL

To add a barcode, you will need to arrange a place on the label canvas where it can fit, and then embed the correct code.

Code for Data Matrix Barcode:

^FT5,185
^BXN,4,200^FD@text1@;@slide2@^FS

Code for a QR Code Barcode:

^FT5,185
^BQN,2,3,H,5^FD@text1@;@slide2@^FS

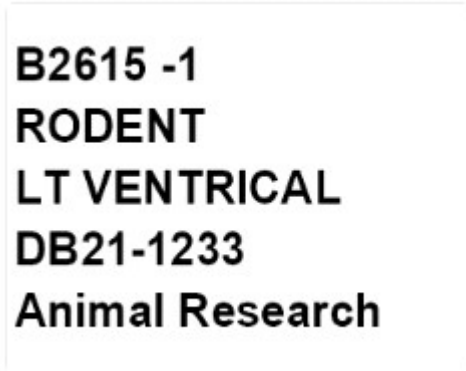| CODE FOR DATA MATRIX BARCODE	CODE FOR QR CODE BARCODE
^XA ^CI0 ^FT5,50 ^A0N,33,31^FD@text1@ -@slide2@^FS ^FT125,130 ^A0N,33,31^FD@text2@^FS ^FT5,90 ^A0N,33,31^FD@text3@^FS ^FT125,170 ^A0N,33,31^FD@text4@^FS ^FT125,210 ^A0N,33,31^FD@text5@^FS ^FT5,115 **^BXN,4,200**^FD@text1@;@slide2@^FS ^PQ1,1,1,Y ^XZ	^XA ^CI0 ^FT5,50 ^A0N,33,31^FD@text1@ -@slide2@^FS ^FT125,130 ^A0N,33,31^FD@text2@^FS ^FT5,90 ^A0N,33,31^FD@text3@^FS ^FT125,170 ^A0N,33,31^FD@text4@^FS ^FT125,210 ^A0N,33,31^FD@text5@^FS ^FT5,115 **^BQN,2,3,H,4^FDQA,**@text1@;@slide2@^FS ^PQ1,1,1,Y ^XZ

The contents of the barcode are defined as show below in green:

^BQN,2,3,H,5^FD@text1@;@slide2@^FS

If you want to add data to the barcode, using the example above, position the desired data keywords in the barcode as shown below in grey:

^BQN,2,3,H,5^FD@text1@;@text2@;@text3@;@text4@;@slide2@^FS

For the examples above, scanning the barcode would generate the following:

B2615;LT VENTRICAL;RODENT;DB21-1233;1

Label Design Features available for On-demand Printing

ADDING CURRENT DATE

@date1@ = 05/03/2023
@date2@ = 2023-05-03
@date3@ = 03-May-2023
@date4@ = 03-May-23

Curerent date can be added to a slide label by embedding a command in the label design code.

First, determins where you want to place the date, and what size text you wantt to use. Then use the command and logic shown below to add the ffeature.

^FT5,200
^A0N,20^FD@date1@^FS

Label Designer

```
XA
^CI0
^FT8,46
^A0N,33,33^FD@prefix@-@accession@-@sample@@block@-@slide1@^FS
^FO15,110
^BXN,3,200^FD@prefix@;@accession@;@name@^FS

^FT5,200
^A0N,20^FD@date1@^FS
```

S21-1003-A2-1
PATIENT ZERO
H&E
FSU
06/12/2022 DERM3

SEQUENTAIL PRINTING and DUPLICATE PRINTING

Sequentially printed microscope slides

Most templates are setup to offer sequential printing of microscope slides, where a range of slide prints is selected. For example, if you need to print 3 slides for a histology case, you setup the slide selection as shown below:

We include sequential number printing by adding the following to the code, -@slide2@^, as seen below:

^FD@text1@^FS = No sequential numbering
        Example = S21-1234

^FD@text1@-@slide2@^FS= With Sequential Numbering
        Example = S22-1000-A1-1, S21-1000-A1-2, S21-1000-A1-3

The "-" shown before the @ is static text.

If each microscope slide is to be labeled sequentially, the Label Designer code must include the @slide2@ command.

^A0N,33,31^FD@text1@-@slide2@^FS

It's important to note that if you want fixed text to separate data fields, it would be placed in the code as highlighted below. The fixed data is placed between the "@" symbols:

^A0N,33,31^FD@text1@-@slide2@^FS

The result is the -1, -2, -3 at the end of the top lines below:

DUPLICATE PRINTS

If you do not want slide numbers (for sequentially printed slides) on your slide labels the @slide2@ parameter needs to be excluded from code:

B2615 RODENT LT VENTRICAL DB21-1233 10/10/22	B2615 RODENT LT VENTRICAL DB21-1233 10/10/22	B2615 RODENT LT VENTRICAL DB21-1233 10/10/22
DUPLICATE PRINTS = Identical label printed multiple times		

Label WITH sequential numbering: ^A0N,33,31^FD@text1@-@slide2@^FS
Label WITHOUT sequential numbering: ^A0N,33,31^FD@text1@FS

Label WITH sequential numbering	Label WITHOUT sequential numbering
S22-1000-A1-3 PATIENT NAME H&E DRJ 1/5/22	S22-1000-A1 PATIENT NAME H&E DRJ 1/5/22
Not used for DUPLICATE printing	Used for DUPLICATE printing

Contact QRlogix for help or assistance with your label design.