

Operating Manual

Your guide to the StatLab

PiSmart Single Hopper Laser Cassette Printer

PISMART-CL1



Company Information

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This instrument conforms to the essential requirements of

- Low Voltage Directive 2014/35/EU
- Safety of Laser Products EN 60825-1

Symbols

The following symbols and conventions may be used throughout this document and on the instrument:



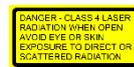
This symbol is used on the equipment, or in a document, to indicate that instructions must be followed for safe and correct operation. If this symbol appears on the instrument, always refer to the operator guide.



This symbol is used on the equipment, or in a document, to warn of the potential hazard of Laser Radiation.



This marking is used on the equipment, it indicates that it is a CLASS 1 Laser product.



This marking is used on the equipment, located on the protective shield covering the laser marking area. It warns of radiation if the cover is removed.



This symbol is used on the equipment, or in a document, to warn that harmful chemicals are used with the instrument. Refer to the material safety data sheets for the chemicals used. Always act with common sense and be aware of local laboratory procedures. Take suitable precautions.



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WARNING

A warning is given in the documentation if there is a danger of personal injury or damage to the equipment or samples.

NOTE

Notes give additional information about a function or instruction but does not form part of the instruction.

Contents

Safety Information.....	6
EMC Statement	6
Introduction.....	6
Laser Safety.....	6
General Safety.....	7
Chemical Safety.....	8
Environment.....	8
Warranty Statement.....	9
Product Return Safety	9
1. Chapter 1 - Operator Guide	10
1.1. How To Use This Guide.....	10
1.2. Getting started.....	11
2. Chapter 2 - Installation and Setup.....	12
2.1. Identification of Parts	12
2.2. Back panel and connections.....	12
2.3. Scanner	13
2.4. Printer Operation	13
2.5. Loading Cassettes	14
2.5.1. To load Cassettes into the hopper:	14
2.6. Cassette Selection.....	15
3. Chapter 3 - Main User Interface	16
3.1. User Mode.....	16
3.1.1. Adding a new user.....	16
3.1.2. User Log-in.....	18
3.1.3. User Properties.....	20
3.1.4. User Control	21
3.1.5. Logon Timeout.....	21
3.2. Home Screen.....	22
3.3. Printing	24
3.3.1. Printing a batch.....	24
3.3.2. Reverse Order Printing	25
3.3.3. Queue Quantity	25
3.3.4. Deleting the queue.....	25
3.4. Settings Menu.....	26
3.4.1. Home Button.....	26
3.4.2. Back Button	26
3.4.3. Settings Menu Icons	26
3.5. About Menu	27
3.6. Date & Time Menu.....	27
3.7. Display Menu.....	28
3.7.1. Screen grab.....	28
3.8. International Menu.....	29
3.8.1. Languages.....	29

3.9.	Keyboard Menu	30
3.10.	Network Menu	30
3.10.1.	IP Address.....	30
3.10.2.	MAC Address	30
3.10.3.	Name.....	30
3.10.4.	Activate Tracking Point Service	31
3.10.5.	Data Port	31
3.11.	Printer Menu	32
3.11.1.	Reset Printer.....	32
3.11.2.	Setup Password ON	32
3.11.3.	Auto print ON.....	32
3.11.4.	Y Flip	32
3.11.5.	Fast Mode (Single Hopper Cassette Printer Only).....	32
3.12.	Software Menu	33
3.12.1.	Upgrade Software.....	33
3.12.2.	Configuration Files.....	35
3.13.	Sound Menu	39
3.14.	Config Menu	40
3.15.	Data Menu	41
3.15.1.	Export.....	41
3.15.2.	Import.....	42
3.15.3.	Manage Database	42
4.	Chapter 4 - Internal Label Designer	43
4.1.	Using the Internal Label Design Function.....	43
4.2.	Setting up a Basic Label Design.....	44
4.3.	Items Menu.....	45
4.3.1.	Name.....	46
4.3.2.	Data Type.....	46
4.3.3.	Character Count	46
4.3.4.	Default Text	46
4.4.	Translator Description.....	47
4.4.1.	Adding a Translator- Delimited data.....	48
4.5.	Translator Menu	50
4.5.1.	Name.....	50
4.5.2.	Object.....	50
4.5.3.	Code.....	50
4.5.4.	Delimiters	50
4.5.5.	Item Assignments	50
4.5.6.	Changing Item Assignments	51
4.5.7.	Translator Properties	53
4.5.8.	Delimiters	53
4.5.9.	Assignment order	54
4.6.	Fixed Length Translator.....	55
4.6.1.	Adding a Translator- Fixed Length data	56
4.6.2.	Dividing up the data string	58
4.7.	Template Menu.....	62

4.7.1.	Creating a New Template	62
4.7.2.	Editing the Template.....	65
4.7.3.	Adding Items to the Template	65
4.7.4.	Adding Barcodes to the Template	67
4.7.5.	Template Settings.....	69
4.8.	Advanced Printing Functions	69
4.8.1.	Template Editor	69
4.8.2.	Selecting Templates	70
4.8.3.	Creating Sequences	72
4.8.4.	Creating a Protocol.....	74
4.8.5.	Recalling a protocol	80
4.9.	Translator Rules	81
4.9.1.	Creating a New Rule.....	81
4.9.2.	Create List	85
4.9.3.	Run Protocol.....	85
4.9.4.	Set Item	85
4.9.5.	Set Delimited	85
4.9.6.	Copy Item Val.....	85
5.	Chapter 5 - Troubleshooting.....	97
5.1.	Cassette Requirements	97
5.2.	Cleaning the Touchscreen.....	97
6.	Chapter 6 – Glossary and Specifications	98
6.1.	Icon Glossary.....	98
6.2.	Button Glossary	99
6.3.	Printer Specifications	100
6.4.	Embedded Laser Specifications	100
6.5.	Consumables and Accessories	101
	Appendix A	102
	Appendix B	103

Safety Information

EMC Statement

This equipment complies with the emissions and immunity requirements of EN61326-1:2013.

This equipment has been designed and tested to CISPR 11 Class A.

This equipment is intended for use in a laboratory environment, by a trained and qualified professional. In a domestic environment, it may cause radio interference, in which case it may be necessary to take measures to mitigate the interference.



Do not use this instrument in close proximity to strong electromagnetic radiation as these may interfere with the proper operation. The electromagnetic environment should be evaluated prior to operation of this device.

Introduction

Pyramid Innovation Ltd instruments are designed for convenient and reliable service; however, improper use or handling by a user may damage the instrument or cause a hazard to health.



The following sections contain important information for the safe setup and use of the instrument and should be read and understood by the user before using the instrument.

Laser Safety

This is a CLASS 1 Laser product, as supplied, conforms to IEC60825-1 issue 2014

Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No.50 dated June 24, 2007.

The product incorporates a CLASS 4 embedded Laser, located inside the protective housing.



WARNING – Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Do not operate the product without the enclosure covers fitted to avoid the risk of CLASS 4 invisible laser radiation exposure.

General Safety



This instrument, as supplied, conforms to IEC61010-1 issue 2010; however, the addition of chemicals introduces potential hazards. Good laboratory practice must be employed and consideration must be given to the potential for hazard when dealing with chemicals.



Do not remove any panels or access covers unless specifically instructed to do so. The instrument does not have any user serviceable parts. Potential lethal voltages are present inside the instrument.



The instrument is only connected to the mains power supply using the supplied power adaptor and detachable mains lead. For replacement power adaptor or mains lead see the Consumables and accessories list or ask your local distributor.



The instrument must be properly connected to a good earth (ground) via the Mains input supply and positioned such that it is possible to interrupt the Mains supply at the source by removing the plug from the socket.



Use only factory approved accessories or replacement parts within the instrument.



If the equipment is used in a manner not specified by Pyramid Innovation Ltd, the protection offered by the equipment may be impaired.



Any problems should be reported to your Pyramid Innovation Ltd distributor.



Correct maintenance procedures are essential for consistent performance. It is recommended that a Maintenance Contract is taken out with the service department.



Any maintenance or service work required may only be carried out by trained personnel.



The instrument should be placed on a suitable level surface and not in direct sunlight.



Only use cleaning agents recommended in the Operator Guide.

Chemical Safety

The introduction of chemicals creates potential hazards. Pyramid Innovation Ltd has adopted the following position with regard to the subject of volatile chemicals used in laboratories:



Do not use harmful chemicals or solvents to clean the instrument.



The operator is fully aware of the contents of the specification documents detailing the properties of the chemicals they are using.



The operator has carried out any legally required assessments of chemicals used and is using good laboratory practice.

Environment

This instrument is required to comply with the European Union's Waste Electrical and Electronic Equipment (WEEE) Directive 2012/19/EU. It is marked with the following symbol:



At the end of the product life, it must be recycled in accordance with local regulations. It can be returned to a Municipal Collection Facility or to the retailer when a replacement is purchased. Where applicable this facility will be offered by the Product dealer.

Further information on Pyramid Innovation Ltd's compliance with these directives, the recyclers in your country, and information on Pyramid Innovation products which may assist the detection of substances subject to the RoHS Directive are available from your distributor.

Warranty Statement

Pyramid Innovation Ltd are proud of our quality, reliability and of our after-sales service. We continuously strive to improve our service to our customers.

Please ask your distributor representative about service contracts which can help maintain your instrument in an optimal operating condition.

Warranty provisions necessarily vary to comply with differences in national and regional legislation. Specific details can be found in the delivery documentation or from your dealer or representative.

Please note that your warranty may be invalidated if:

- This instrument is modified in any way, or not used as intended by Pyramid Innovation Ltd.
- Accessories and reagents which have not been approved by Pyramid Innovation Ltd are used.
- The instrument is not operated or maintained in accordance with the instructions in the Operator Guide.

Product Return Safety

In the event that the instrument has to be returned to the factory, the Product Return Safety Declaration form must be completed and included with the instrument. Contact your supplier or see Appendix B.

Chapter 1 - Operator Guide

1.1. How To Use This Guide

The printer is designed to print directly onto laboratory sample devices. The operator is responsible for ensuring the accuracy of the information printed.



Using accessories or consumables other than the ones recommended may cause irrevocable damage to the instrument. Please see Chapter 6 for a list of recommended accessories and consumables.

Placement of Equipment

Check the environment is suitable for the instrument. Ensure the instrument is positioned away from the edge of the bench on a stable level surface.

Recommended cleaning method

Use a damp soft cloth or paper towel with a mild detergent.

Getting Started

This guides you from connecting power to testing the printer.

Printer Operation

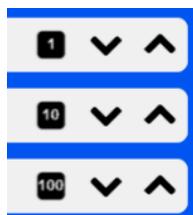
This guides you through general operation and printing.

Printer Configuration

This takes you through the various printer settings and configuration options.



Hand icon indicates where to touch the display.



Some settings within the printer can be adjusted using up and down arrows.

A black square next to the setting is a multiplier for the adjustment. The default is 1, by pressing the black square will cycle the multiplier to 10 or 100 then back to 1. When 10 is set, pressing the up or down arrow one time will adjust the value by 10. When set to 100, pressing the up arrow will adjust the value by 100. This will make some adjustments faster.

On-Screen Keyboard

The standard keyboard



Press  to display the lower-case keyboard



Press  to display the number/symbol keyboard



THE TERM LABEL WILL BE USED THROUGHOUT THIS MANUAL TO DESCRIBE THE LABEL IMAGE THAT WILL BE PRINTED ONTO THE CASSETTE OR SLIDE. IT SHOULD NOT BE CONFUSED WITH PAPER LABEL PRINTING.

1.2. Getting started

WARNING – BEFORE POWERING THE UNIT ON, YOU MUST ENSURE THE HOPPER IS NOT INSTALLED ON THE PRINTER. FAILING TO DO SO, MAY RESULT IN INCOMPLETE INITIALIZATION OF THE PRINTER.

Connect the appropriate mains power lead to the power adaptor.

Plug the round 24V plug into the power socket at the back of the printer.

Plug the mains lead into the wall socket.

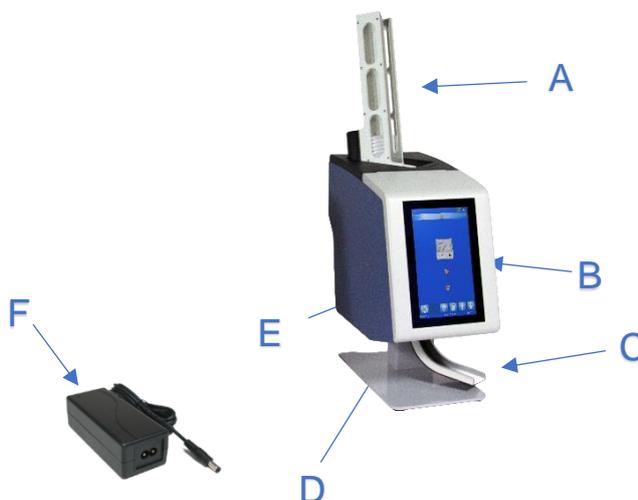
To turn the printer ON, Select the power switch to the ON position on the back of the printer.

Wait for the printer to run through its initialisation process which checks that the internal mechanism is operating correctly.

Chapter 2 - Installation and Setup

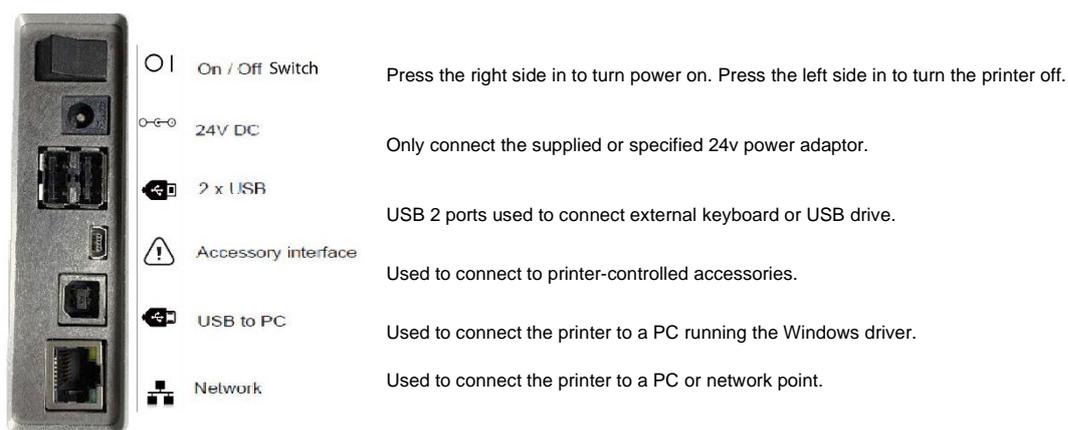
2.1. Identification of Parts

- A. Removable Hopper
- B. Touchscreen Display
- C. Collection chute
- D. Barcode scanner
- E. Connections and power input
- F. Mains Input Adaptor



2.2. Back panel and connections

At the back of the printer there are several connections including the 24v DC power adaptor. Signal connections suitable only for connection to equipment meeting the requirements of clause 6.3 of IEC 61010-1 or the SELV requirements of IEC 60950-1, 2014.



2.3. Scanner

The barcode scanner mounted under the left front edge of the printer uses an LED light source requiring no special eye protection during use. The scanner has a motion sensor that activates the scanner function and illumination.

If the sensor sees no motion for a period, the illumination will cycle off – the area under the scanner will remain dark. When in standby mode, the motion sensor continues to monitor the area and will come out of standby mode as needed.

The scanner is programmed to read the Datamatrix code, QR code and Code 128 barcodes by default. Additional codes can be activated, contact your local distributor for details.

2.4. Printer Operation

The printer is designed to print the label image that is currently displayed on the printer display. The front of the unit is a high-definition, touchscreen display. To operate the unit, press specific areas of the screen to activate buttons and functions; these functions are intended to be obvious.

A barcode scanner is built into the front left-hand corner of the printer. The scanner is motion activated and will project an aimer onto the table surface. This LED aimer that will indicate the area where barcodes should be placed in order to read the data from the barcode into the printer software. Barcodes printed on paper or other objects can be placed under the scanner for decoding.



The built-in software enables you to:

- Print individual label images.
- Create and print sequences.
- Create and print protocols.
- Edit printable data.
- Change the Template used to print.

Design your own Templates using different fonts and barcode types:

- Set Items to automatically increment.
- Setup Templates to accept data from scanned barcodes or LIS input.

- Edit and delete label images within a sequence.

The printer can create label images using the following input methods:

- Text file import.
- Using the scanner to capture required data.
- Internal designed label images using data files from LIS or other external source.

2.5. Loading Cassettes

Prior to use, the hopper should be loaded with Cassettes, please refer to Chapter 6 for a full list of accessories and consumables.

The hopper has a capacity of approximately 40 Cassettes. The Cassettes should never be stacked above the top of the hopper as they could fall from the top if stacked too high. The hopper will need to be attached to the printer.

The cassette must be loaded with the writing surface to the left and the cassette opening to the top. Cassettes should not be loaded while the printer is in operation.

2.5.1. To load Cassettes into the hopper:

1. Place a thread of cassettes into the hopper.
2. While pressing downward on the top of the stack, firmly pull upward to remove the plastic thread.
3. Add Cassettes as necessary until the hopper is full. A partial thread can be loaded.



2.6. *Cassette Selection*

It is critical that the Pyramid Innovation cassettes are used in the Cassette printer, these cassettes are specially designed for best operation in the printer. Using other cassettes, can cause damage to the printer or affect print quality or print chemical resistance.

This operator guide includes a list of Cassettes which have been tested and are approved for use in the Cassette printer.

Chapter 3 - Main User Interface



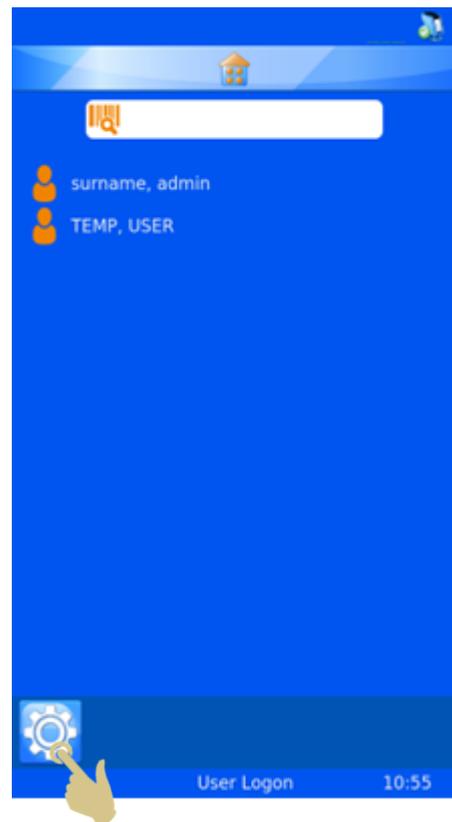
3.1. User Mode

3.1.1. Adding a new user

The printer will power up with User Mode enabled, a single admin user and temporary user will be displayed.

To add a new User:

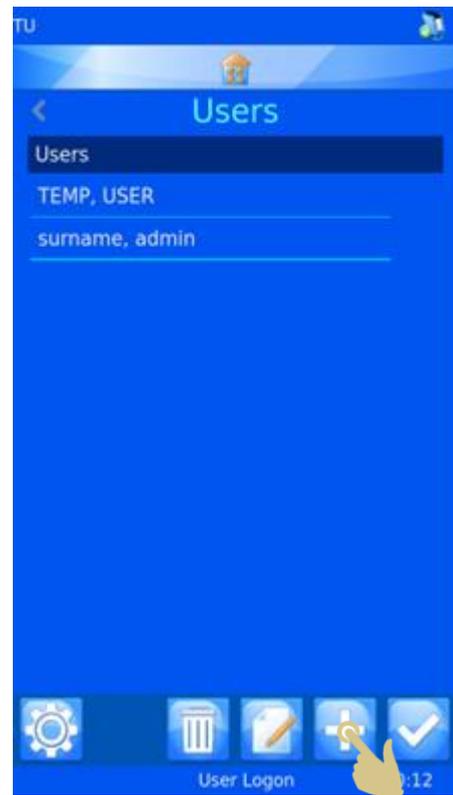
1. Press the settings button.



2. Press the User Button.



3. Press the + button.



4. Delete the text 'User_00' before entering the Forename of the user.

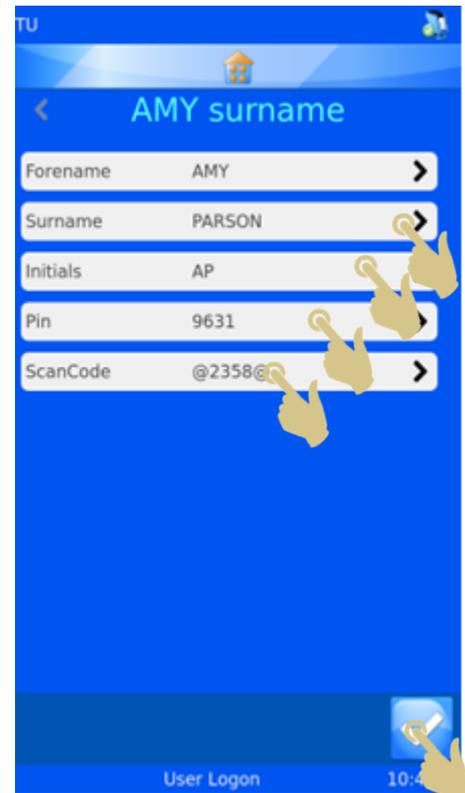
5. Press keys to enter the Forename of the user.

6. Press the Check button when complete.



7. Select Surname and enter the correct information.
8. Select Initials and enter the correct information.
9. Select PIN and enter a pin number (each user PIN must be unique).
10. Enter a scan code if needed – this code will be used to automatically log a user in or out when a barcode containing the code is scanned .
11. Press the Check button, then press the Home button.

Special Note: The scan code must be a sequence of characters that would never be used to create a cassette label.



3.1.2. User Log-in

To log into the system:

1. Select the correct user and enter the passcode.



2. Enter the correct passcode.
3. Press the check button.
4. Once the correct code is entered, the home screen will be displayed. If the incorrect code is entered, the user screen will be displayed.

The system can now be used for printing. To enter additional users, repeat the steps for additional users.

NOTE: EACH USER MUST HAVE UNIQUE INITIALS, PASSCODE AND SCANCODE FOR THE SYSTEM TO OPERATE PROPERLY

To log out of the system, simply press the Home button. If the system is set to use a Logon timeout, the printer will log out automatically after the set time. If the Logon timeout is set to never, the unit will not automatically log the user out.



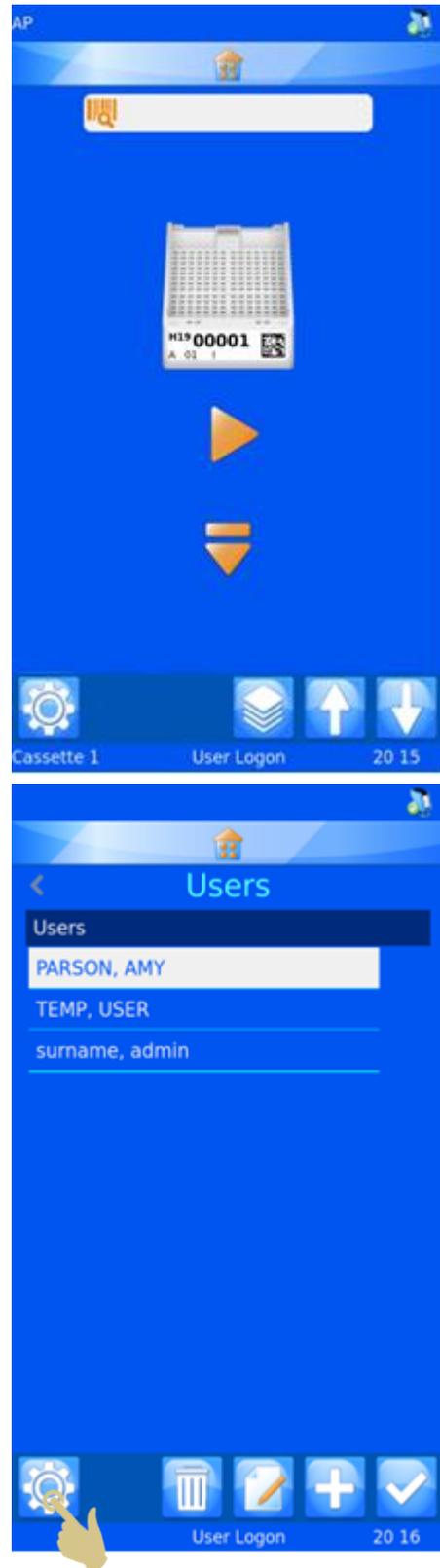
To log into the system using a scan code, simply scan a barcode with the correct SCANCODE embedded, when this code is scanned, the home screen should appear.

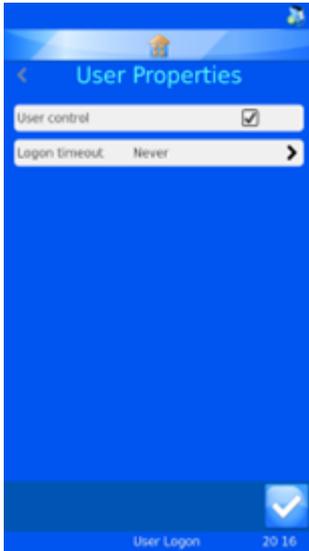
Once at the home screen, scanning the barcode again will log the user out and the User screen should be displayed.

3.1.3. User Properties

The User Properties menu can be used to set preferences used by the system. To access the User Properties menu:

1. PRESS THE SETTINGS BUTTON.
2. PRESS THE USERS BUTTON.
3. PRESS THE SETTINGS BUTTON.
4. THE USER PROPERTIES MENU SHOULD APPEAR.



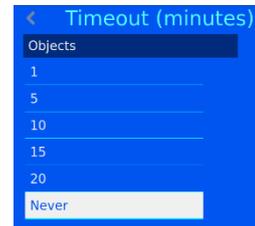


3.1.4. User Control

To disable User Mode, uncheck the box next to User control. Power cycle the printer.

3.1.5. Logon Timeout

To set a Logon timeout, press the Logon timeout button and select the desired time. This time will automatically log the user out after a period of inactivity by the user.



Once the user has logged in, the printer is ready to print. The default Template is displayed.

3.2. Home Screen

The home screen is used to display the status of the printer, create labels and control printing.

A. Printer Status Bar

The top bar of the display shows the printer's status.



Printer is ready to print.



Printer is printing or busy.



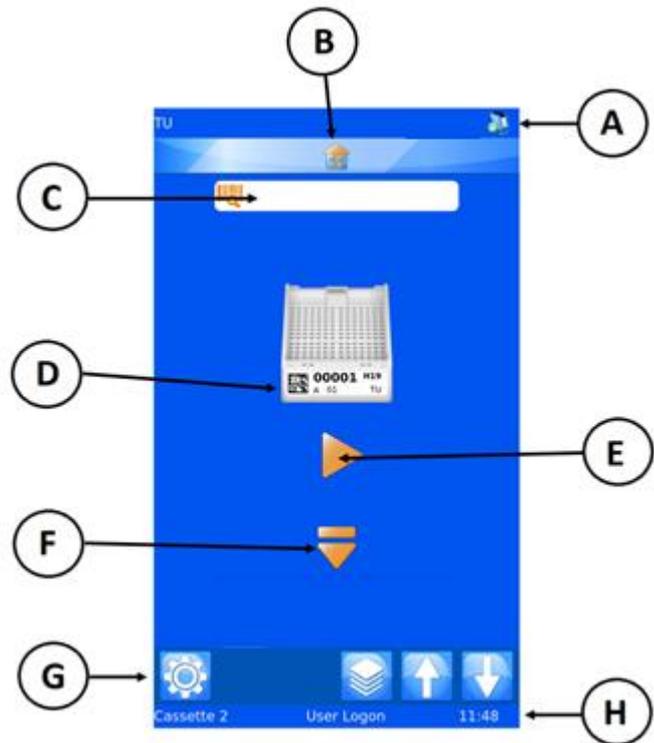
Indicates Y-Flip.



Indicates AutoPrint.



Indicates Fast Hopper (Single Hopper Cassette printer only).



B. Home button

The home bar appears on all software screens. Pressing this bar from anywhere will bring you back to the home screen. If pressed at the home screen, the current user will be logged out and the User-login screen will be displayed.

C. Scanner Bar

The scanner bar displays data scanned using the integrated scanner or typed into the on-screen keyboard. To enter data into this box using the keyboard, press the scanner box to open the keyboard entry mode.

Note

If the scanner box contains data, no images from the windows driver will be imported into the print queue.

D. Template

Shows the data that will be printed. To edit the label, touch the middle of the template.

E. Play Button

Pressing the Play button will start the print process.

F. Eject Button

Pressing the down arrow will initiate an eject sequence.

G. Settings Bar

Buttons on the settings bar will change based on the functions available. Buttons will be added or removed automatically as the screen or information changes to allow or disallow operations. The buttons will be explained further throughout the operator guide, however common buttons are:



Check button, this button might also be referred to as confirm or OK, when pressed any changes will be saved or processes confirmed.



Cancel, this button cancels the current action.



Settings, this button opens the settings menu within the software item.



Trash bin or Discard, this button is used to delete selected items.



Edit, this button allows the user to edit selected items.

H. Status Bar

Displays status information such as time and template information.

3.3. Printing

The Printer is designed to print on-demand. The displayed label shows what will be printed. This section applies to printing regardless of the method used to get labels into the print queue.

To print, press the play button.

Some dispense and print errors will occur after the printing process has been performed. The printer may be uncertain that a fully printed label has been printed. When clearing any printing or dispense errors, care should be taken to avoid second prints of the same data. Where labels have been successfully printed, the cancel button should be pressed and the queue inspected and cleared of any duplicate labels.

3.3.1. Printing a batch

When multiple labels are in the queue, the label selection or print order may be modified using the left and right arrow buttons on the main screen.



Moves queue left



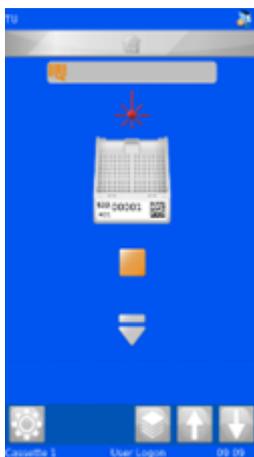
Moves queue right



Moves one



Moves all



When printing, indicates the laser is marking.

Pressing the Moves one arrow once, will move one label to the left side of the queue. The printer will always print the front label first, then continue to the right until all print jobs are printed, then will print the left side queue.



3.3.2. Reverse Order Printing

The operator may choose to print the queue in the reverse order in which they were sent to the queue.

To print in reverse order, create the batch and press the Move All Left button, then begin printing.



3.3.3. Queue Quantity

1 : 4

The Numbers at the top centre of the home screen indicate the total number of labels in the queue and the position of the front label within that queue.

3.3.4. Deleting the queue

Once labels are in the queue, individual or all labels can be deleted from the queue.



Press this button to delete all labels in the queue.



Trash bin or Discard, this button allows the user to delete the label at the front of the queue.

3.4. Settings Menu



To open the settings menu from the home screen, press the settings button.



3.4.1. Home Button

When pressed from any screen, any changes will be saved, and the main printing screen will be displayed. If the Home screen is being displayed and the home button pressed, the user will be automatically logged out and the user list screen will be displayed.



3.4.2. Back Button

When pressed, any changes will be saved, and the previous software menu will be displayed.

3.4.3. Settings Menu Icons

When any of the settings menu icons are pressed, the appropriate menu item will open.





3.5. *About Menu*

Provides information regarding the printers' software and general information.

Shows:

- Software Version
- Firmware Version
- Total Print Count
- Machine ID



3.6. *Date & Time Menu*

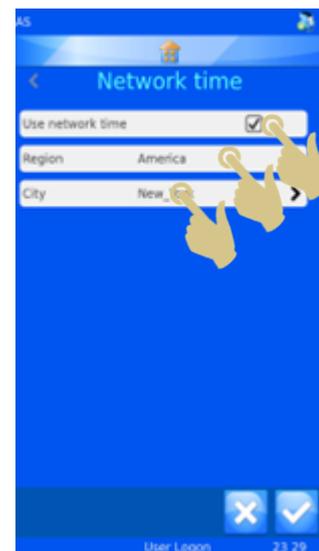
To set the time and date, press Settings and the Calendar Icons.



If the printer is connected to a network or PC, it is recommended that the USE NETWORK TIME setting is used. This will ensure the printer is synchronized with other systems in the laboratory.

To use the network time:

1. Place a check into the Use Network Time box.
2. Set the Region.
3. Select a city in your same time zone.
4. Press the check button.



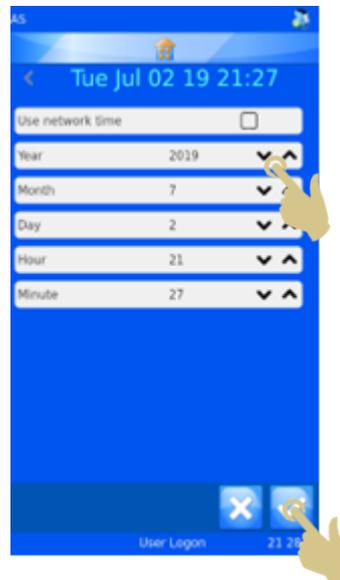
To adjust the date and time manually.

The Region setting must have UTC selected and USE NETWORK TIME must be unchecked.

To adjust the date and time:

1. PRESS SETTINGS.
2. PRESS THE DATE/TIME ICON.
3. USE THE UP AND DOWN ARROWS TO SET THE CORRECT VALUES.
4. ONCE THE INFORMATION IS CORRECT, PRESS THE CHECK BUTTON.

Note: The Date and Time Data Items in Templates use the system date and time.



3.7. Display Menu

3.7.1. Screen grab

If this is ticked, the screen image can be saved to a USB stick by touching the bottom left corner of the display. This can be done from any software menu.



Press here to save a screen image to the USB drive



3.8. International Menu

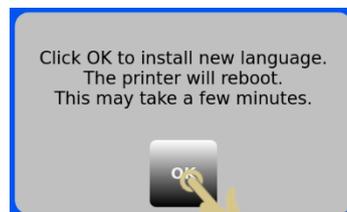
3.8.1. Languages

Used to change the displayed language.

The default language is English, all printers are shipped set to English.

To select a different language:

1. PRESS SETTINGS.
2. PRESS THE GLOBE ICON.
3. PRESS THE LANGUAGE BUTTON.
4. SELECT THE REQUIRED LANGUAGE.
5. PRESS THE CHECK BUTTON AND SELECT OK.
6. THE POWER WILL AUTOMATICALLY CYCLE, WHEN THE PRINTER POWERS UP, THE NEW LANGUAGE SHOULD BE DISPLAYED.
7. TO SEE THE LANGUAGE CHANGE, YOU MAY NEED TO ENTER THE MENU SCREENS BY PRESSING SETTINGS.





3.9. Keyboard Menu



If selected, the first character typed will be uppercase and then automatically switched to lower case.

If unselected, the type will remain in uppercase.

EXTERNAL KEYBOARD – It is possible to connect an external keyboard to the printer. The external keyboard can be used to enter data into specific data entry boxes. Only one model of keyboard is compatible with the printer, this is Accuratus part number: KYB500-K82A.



3.10. Network Menu

Network settings is used to connect the printer to networks and network services. The printer can be connected to networks via an RJ45 connector located at the back of the printer.

To establish this connection, with the power to the printer turned off, insert a standard network cable into the RJ45 connection on the back of the printer.

Plug the other end of the cable into a local network connection.

Power the printer on. Once the printer is powered and initialized, press the settings button, then the Network button, a network IP Address should be displayed.

3.10.1. IP Address

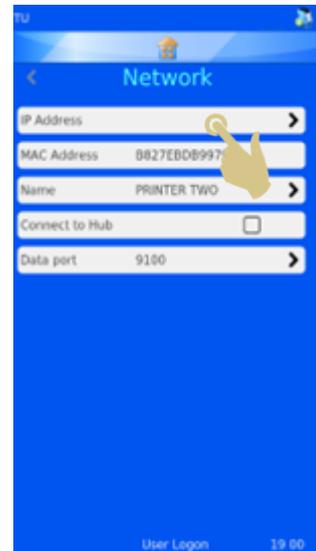
To connect to a network, select IP Address and select IP Type DNS (IP address assigned by Network) or Fixed (IP address selected by user).

3.10.2. MAC Address

Displays the MAC Address of the printer.

3.10.3. Name

Used to modify printer name – this is used when connecting multiple devices and is also displayed at the bottom of the home screen.



3.10.4. Activate Tracking Point Service

Used to connect one or more printers to the PathSmart Tracking System.

3.10.5. Data Port

Used to set a specific data port when connecting to a network (typical is 9100 but some systems automatically set to 3001)



If connection to a network is successful, you should see an IP Address displayed in the box labelled IP Address. If the network is set up to automatically assign IP Addresses and DNS is selected, you should see an IP Address displayed.

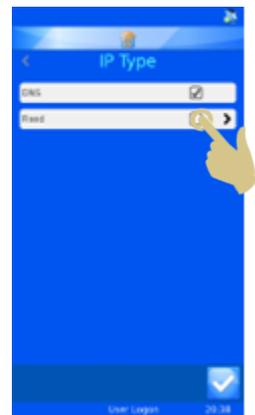
If the network is set up to use static IP Addresses a fixed IP Address will need to be entered.

To set a fixed IP Address from the Network menu:

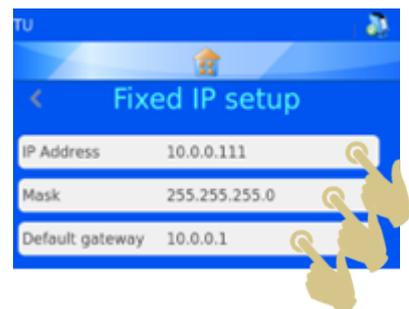
1. PRESS IP ADDRESS



2. PRESS FIXED TO DISPLAY THE FIXED IP SETUP MENU



3. ENTER THE APPROPRIATE INFORMATION INTO THE IP ADDRESS, THE MASK AND THE DEFAULT GATEWAY FIELDS. EACH BOX WILL OPEN WITH AN ONSCREEN KEYBOARD; ENTER THE CORRECT INFORMATION AND PRESS THE CHECK BUTTON TO CONFIRM NEW ENTRY.



4. WHEN THIS IS COMPLETE, POWER CYCLE THE PRINTER TO RESET THE IP ADDRESS.

Once the printer is connected to the network, it can receive information from other applications including the Pyramid Innovation Windows® print driver, Pyramid Innovation Hub, label design programs such as NiceLabel or other LIS applications.



3.11. Printer Menu

3.11.1. Reset Printer

The printer mechanisms will reset. You should hear the print head moving to the bottom and back to the top of the print cycle.

3.11.2. Setup Password ON

Activates password requirement at main screen to enter Administration menus.



Production and Setup Properties are password protected and cannot be entered by a routine user.



3.11.3. Auto print ON

Activates automatic print start when sending images or text files to the printer. This feature does not work for internally generated labels created through keyboard input or scan.

When in Auto Print mode pressing the stop button will temporarily deactivate Auto Print Mode, it will be reactivated with the first press of the Play button.

When AutoPrint is paused, the icon will be greyed out.



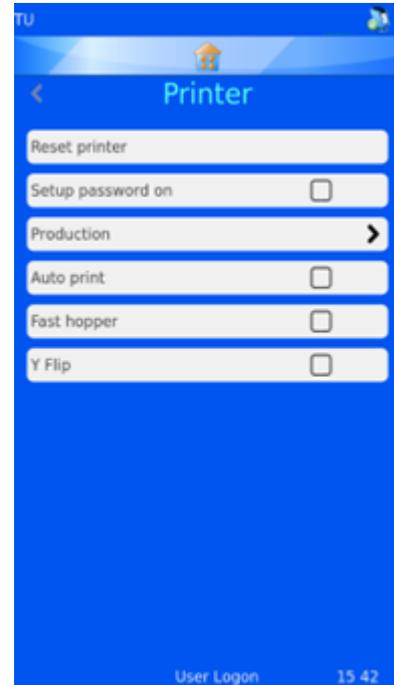
3.11.4. Y Flip

When checked, the label will be rotated 180 degrees prior to printing.



3.11.5. Fast Mode (Single Hopper Cassette Printer Only)

When checked, the printer will operate in Fast Hopper mode. In this mode, a cassette will be preloaded into the printing position awaiting a print job or a press of the play button. Fast Hopper should not be used when manually inserting cassettes.



Icons for Auto print, Fast Mode and Y Flip will appear at the top of the main screen.



3.12. Software Menu

3.12.1. Upgrade Software

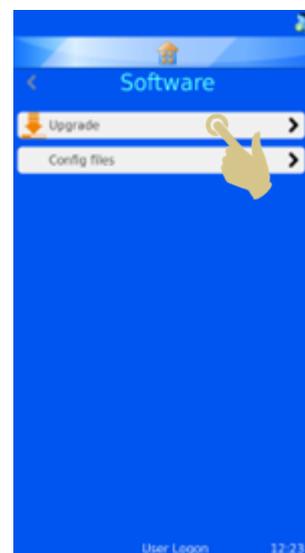
The software menu is used to upgrade the printer User-Interface software or to transfer the user configured settings. These can be uploaded to the printer from a memory stick or downloaded from the printer to a memory stick.

The Upgrade function is used to install new user interface software files onto the printer. The process is simple and automated within the printer software.



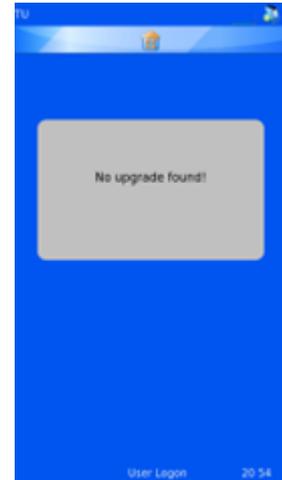
To upgrade the software:

1. A VALID SOFTWARE VERSION MUST BE COPIED TO THE ROOT OF A USB MEMORY STICK.
2. PLUG THE USB STICK WITH THE NEW SOFTWARE VERSION INTO ONE OF THE USB SOCKETS IN THE BACK OF THE PRINTER.
3. PRESS THE SETTINGS BUTTON.
4. PRESS THE SOFTWARE BUTTON.
5. PRESS THE UPGRADE BUTTON.



- IF THERE IS NOT A VALID UPGRADE FILE FOUND IN EITHER USB PORT, A NO UPGRADE FOUND! MESSAGE WILL BE DISPLAYED MOMENTARILY. NO CONFIRMATION OF THE MESSAGE IS REQUIRED.

The date code embedded within the software is used to determine if the software on the USB drive is newer or older than that installed on the printer. Therefore, a file thought to be valid, may not be seen by the system as new.



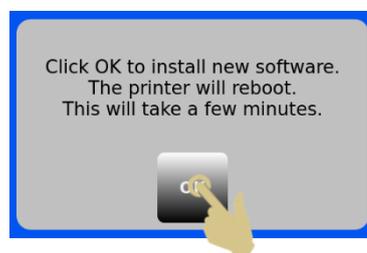
- IF A VALID UPGRADE FILE IS FOUND AN END-USER-LICENSE AGREEMENT WILL BE DISPLAYED. IF THE CANCEL BUTTON IS PRESSED, THE UPGRADE WILL BE CANCELLED. IF THE CHECK BUTTON IS PRESSED, THE SOFTWARE INSTALLATION WILL CONTINUE.



- PRESS THE CHECK BUTTON.

- PRESS THE YES BUTTON.

- PRESS OK ON THE INFORMATION BOX, THE PRINTER WILL AUTOMATICALLY RESET VIA A POWER CYCLE TO COMPLETE THE UPGRADE PROCESS. NOTE: THE PRINTER WILL REMAIN ON THE UPGRADE SCREEN WHILE THE UPDATE IS PERFORMED, THE UNIT WILL REMAIN ON THIS SCREEN FOR UP TO A MINUTE.



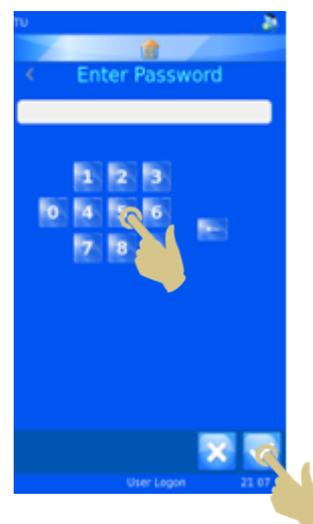
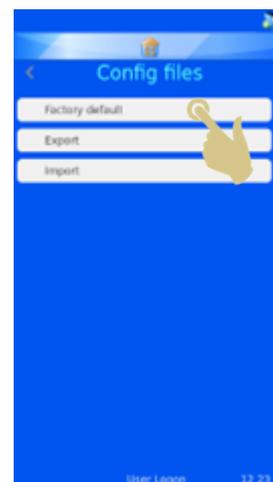
3.12.2. Configuration Files

Factory Default (Resetting XML files)

The user configuration can be restored back to factory default. This will delete the templates and translators set up by the user but will not affect any machine settings.

To perform a Factory reset of the Configuration (XML) files:

1. PRESS THE SETTINGS BUTTON.
2. PRESS THE SOFTWARE BUTTON.
3. PRESS FACTORY DEFAULT.
4. THE PASSCODE WILL NEED TO BE ENTERED TO CONTINUE THE PROCESS. THE PASSCODE IS 7251.
5. PRESS THE X BUTTON TO CANCEL OR THE CHECK BUTTON TO CONFIRM.
6. ONCE THE CHECK BUTTON IS PRESSED, THE FILES WILL BE RESTORED WITHOUT FURTHER CONFIRMATIONS. THE POWER MUST BY CYCLED FOR THE CHANGE TO BE EFFECTIVE.



Export Printer User Configuration (XML)

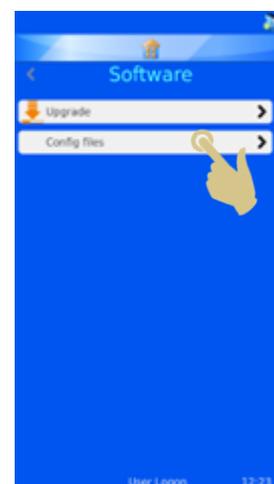
The XML feature allows the user to back up or copy the printer user configuration. It is good practice to save a back-up copy of the configuration once the printer has been configured. Having a back-up copy will be useful should anything be lost or inadvertently changed in the configuration.

To Export (download) a copy of the XML files:

1. PLUG THE USB STICK INTO ONE OF THE USB SOCKETS IN THE BACK OF THE PRINTER. THE USB STICK SHOULD HAVE A FOLDER NAMED XML IN THE ROOT DIRECTORY; THIS FOLDER SHOULD BE EMPTY.



2. PRESS THE SETTINGS BUTTON.
3. PRESS THE SOFTWARE BUTTON.
4. PRESS THE CONFIG FILES BUTTON.



5. PRESS EXPORT.



6. A CONFIRMATION MESSAGE WILL APPEAR, TO CANCEL THE DOWNLOAD, PRESS NO. TO CONTINUE THE DOWNLOAD PROCESS, PRESS YES.

7. A MESSAGE WILL APPEAR AS THE XML FILES ARE BEING EXPORTED. WHEN THE PROCESS IS COMPLETE, THE XML MENU WILL AGAIN BE DISPLAYED. THE FILES CAN BE COPIED TO OTHER STORAGE DEVICES USING NORMAL FILE COPY METHODS.



Warning: Manually editing the XML files may cause the software to operate incorrectly

8. IF THE FILES ARE BEING EMAILED, IT IS RECOMMENDED THAT THEY ARE ZIPPED PRIOR TO SENDING VIA EMAIL.

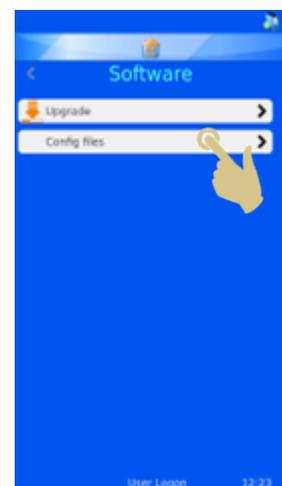
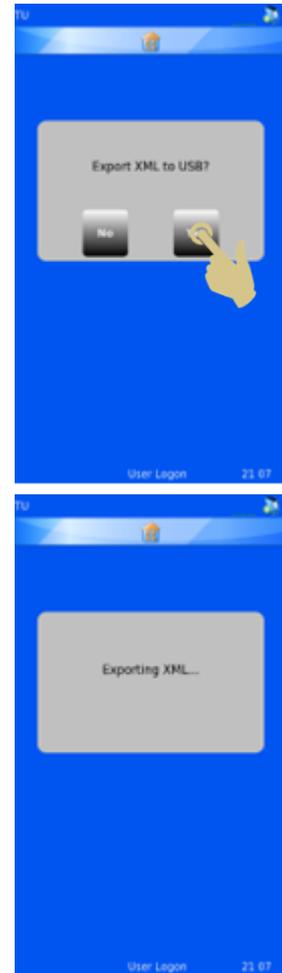
Import Printer User Configuration (XML)

To Import (upload) a copy of the XML files:

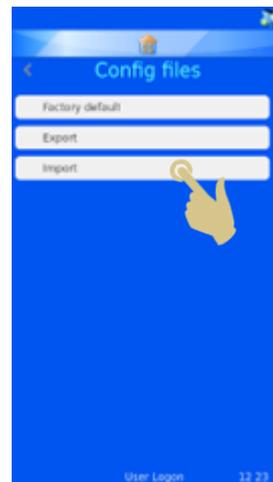
1. PLUG THE USB STICK INTO ONE OF THE USB SOCKETS IN THE BACK OF THE PRINTER. THE USB STICK SHOULD HAVE A VALID SET OF XML FILES IN THE ROOT DIRECTORY OF THE DRIVE.
2. PRESS THE SETTINGS BUTTON.
3. PRESS THE SOFTWARE BUTTON.
4. PRESS THE CONFIG FILES BUTTON.



Warning: NOTE: THE LASER CASSETTE PRINTER USES 600 DPI FOR PRINTING. XML FILES SHOULD NOT BE SHARED BETWEEN PYRAMID INNOVATION LASER AND THERMAL TRANSFER PRINTERS.



PRESS IMPORT.



5. A CONFIRMATION MESSAGE WILL APPEAR, TO CANCEL THE DOWNLOAD, PRESS No. TO CONTINUE THE DOWNLOAD PROCESS, PRESS YES.

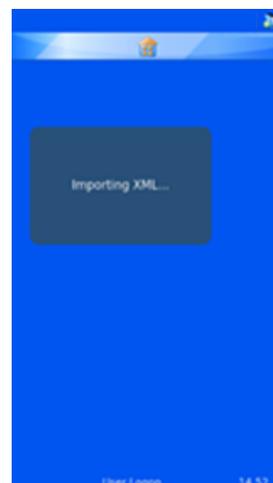


Warning – this process will overwrite the current XML configuration files on the printer.



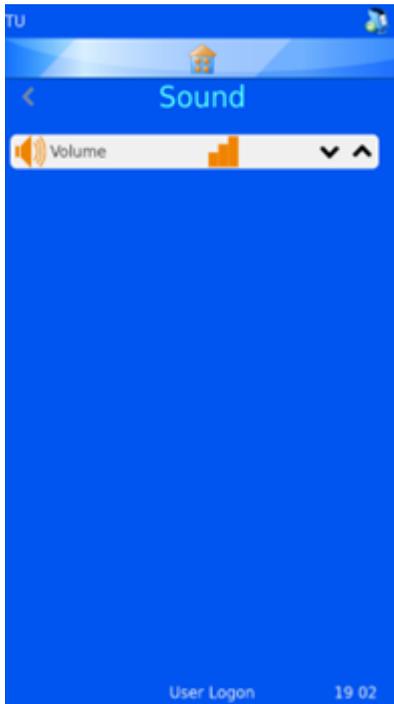
6. A MESSAGE WILL APPEAR AS THE XML FILES ARE BEING IMPORTED. WHEN THE PROCESS IS COMPLETE, THE XML MENU WILL AGAIN BE DISPLAYED.

7. REBOOT PRINTER.





3.13. Sound Menu



There are four sound levels. To adjust the sound level, press the up and down arrows to the desired level.



Volume set to High.



Volume set to Medium.



Volume set to Low.

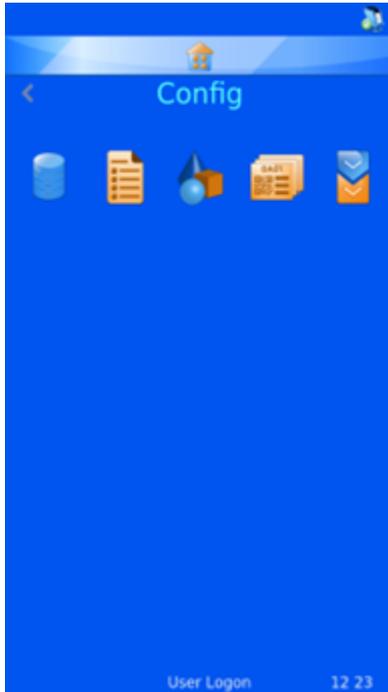


Volume set to Off.



3.14. Config Menu

The Config menu is used to configure the printer to accept data, add the data to the internal database and design the labels. There are several steps required to fully configure the unit, the next section describes this process.



Data

The data menu sets up and configures the data within the database.



Items

The Items menu enables configuration of the items used by the system.



Objects

The Objects menu sets up items so that Request Forms, Containers, Cassettes and Slides can be automatically identified by the system.



Template

The Templates menu designs the label image configuring the orientation of text and numbers.



Translator

The Translator enables incoming data to be used by the Template when creating new label designs.

Windows Printer Setup

The printer can be set up to print labels that are designed and created by label design programs or LIS systems. These labels need to be designed and sent to the printer as a bitmap image. The process to print these labels is much like printing from a computer to a desktop printer using a Windows® driver to manage the queue and send the images to the printer. The connection from the PC or Server to the printer can be either a USB or Ethernet connection and can be set up and configured automatically using the drivers.

The printer hardware is digitally signed and usable with Microsoft Windows® operating systems Versions: Windows 7, Windows 8 and Windows 10 for both 32 and 64 bit operating systems.

The Windows printer is set up automatically like most other printer driver installations, for further information on driver installation, please refer to the Windows Driver manual.

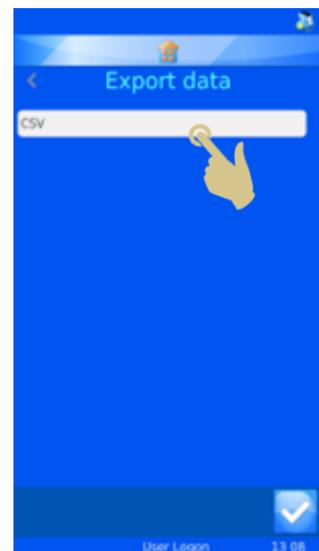
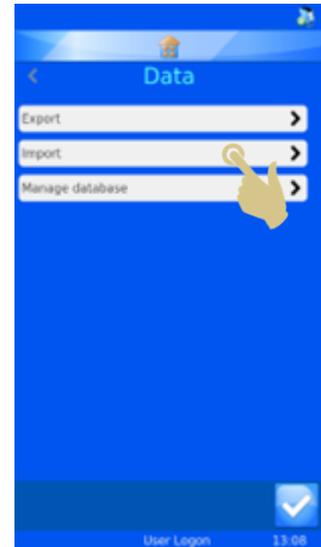


3.15. Data Menu

3.15.1. Export

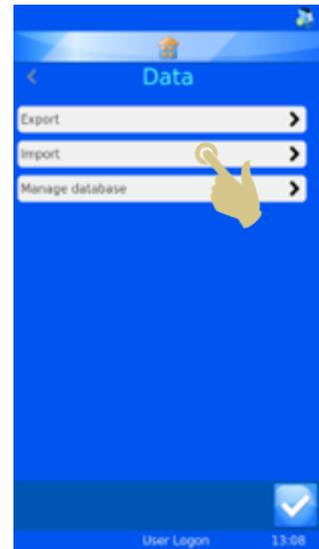
Export as CSV

The export feature downloads the on-board database to an external drive, the file will be in csv format. To use this feature, insert a memory stick into a printer USB port and press the csv button on the Export data menu.



3.15.2. Import

Import is used to import different types of files onto the printer. These files will be either text or image files, depending on the system sending the files. It is critical that the unit is configured prior to sending any type of file to the printer. If the printer is not set to the correct type of file and a file is sent, the unit may reset or display something unexpected. Several formats are supported, the appropriate format must be selected prior to sending files to the printer.

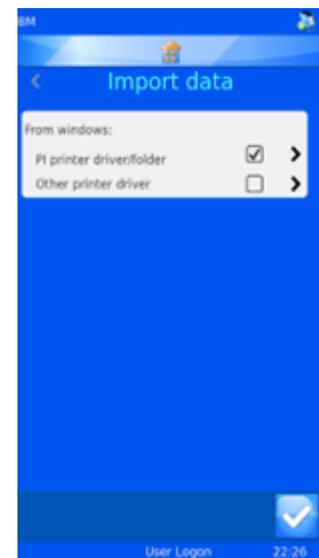


A text file can be sent directly to the printer by placing the file into the Hot Folder (cache folder). The Windows driver will automatically retrieve files from the hot folder and send them to the printer.

The Pi printer driver/folder is used to send any image file or text delimited file.

The other printer driver is used when sending files from other types of Windows drivers or LabWriter software.

For additional information on setting up the Windows driver, see the Pyramid Innovation Windows Printer Operator Guide.



3.15.3. Manage Database

This menu is used to manage, export or reset data stored on the printer.

Oldest Days

Sets the number of days data will be held on the printer.

Max Transactions

Sets the total number of transactions that will be held on the printer.

Reset Database

Deletes all printer data.



Chapter 4 - Internal Label Designer

4.1. Using the Internal Label Design Function

The printer uses an internal label design feature to convert normal text to a printable label. The data can be sent to the printer using several methods. Data can be sent to the printer as a text file or can be scanned in or typed in from the keyboard.

The integrated barcode scanner can scan barcodes and send data automatically to the scan bar at the top of the home screen. This data can also be used within software menus and also by the internal label design software to create printable labels.

The label is designed using two processes within the Data Menu that convert the data to label image. A simplified example of the process is shown below. Each step will be further explained in this section of the operator guide.

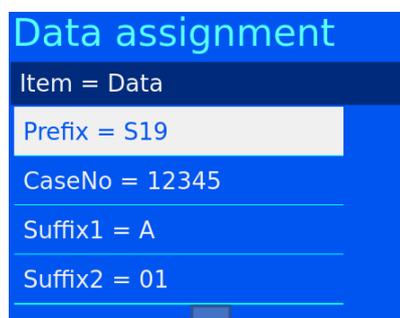
Delimited data is sent to the software via the barcode scanner, on-screen keyboard or Windows driver. The data from the scanner or keyboard is displayed in the scan box.

The data is delimited by the internal data translator. The translator converts the delimited text organizing it in the printers' internal database.

The template uses data from the database to create a label design in the appropriate size. Items can be moved around, font and font size adjusted to achieve the desired label design.



S19,12345,A,01



Data assignment

Item = Data

Prefix = S19

CaseNo = 12345

Suffix1 = A

Suffix2 = 01



Template data

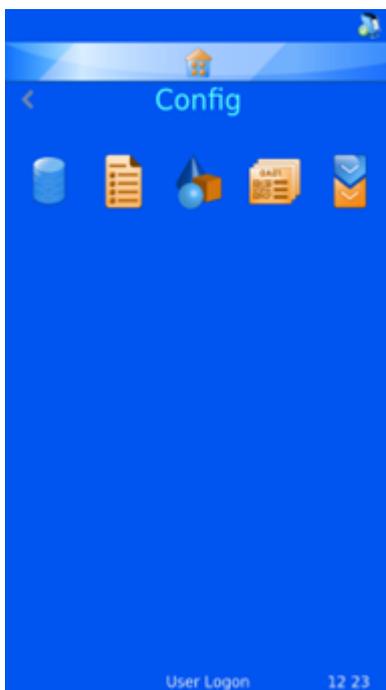
S19	A
12345	01

4.2. Setting up a Basic Label Design

There are four steps to setting up the data import / label design configuration.

The steps are:

- Configure the Items.
- Configure the Objects.
- Configure the Translator.
- Configure the Template.



Items

The Items menu is used to setup and configure items used by the system.



Objects

The Objects menu is used to setup objects so that Request Forms, Containers, Cassettes and Slides can be automatically identified by the system.



Templates

The Templates menu designs the label image configuring the orientation of text, numbers and barcodes.



Translator

The Translator enables incoming data to be used by the Template when creating new label designs.



4.3. Items Menu

Data items are used to customize how the item acts within the template. The Items are fields within the database. The database appears much like an Excel worksheet with the Item names across the top of the sheet and the data organized into columns below the headers.

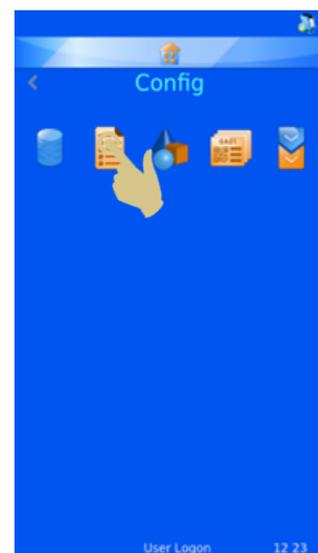
	A	B	C	D	E	F	G
1	Prefix	Case No	Suffix 1	Suffix 2	Generic 1	Generic 2	Generic 3
2							
3							
4							
5							
6							
7							
8							

There is a fixed set of Items in the printer software, some of these Items can be modified. New items cannot be added, nor can items be deleted. The Items menu allows the user to modify each Item, customizing it to the laboratory staff preference. An example of editing the Generic 1 Item is shown below.

1. PRESS SETTINGS.
2. PRESS CONFIG.

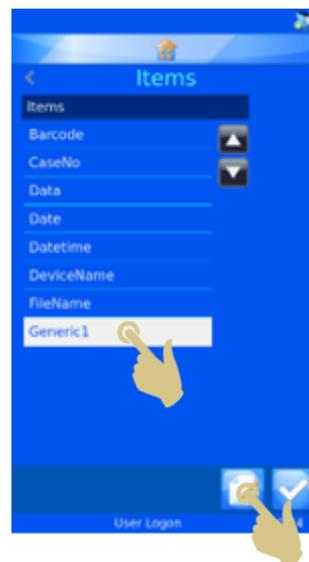


3. PRESS ITEMS.



4. SCROLL TO AND SELECT GENERIC 1.

5. PRESS THE EDIT BUTTON.



4.3.1. Name

Name is the displayed Name of the item; this can be edited but must not be named the same as any another item.

4.3.2. Data Type

This is used to select specific type of data that will be sent to the database. Choices are Text, Numeric, List and Datetime.

4.3.3. Character Count

This should be set to the maximum number of characters that might be sent to this specific item.

4.3.4. Default Text

This is the default data that will populate an item. If data is sent from an external source, it will overwrite this data.



6. SELECT THE NAME, THEN PRESS THE EDIT BUTTON.

7. ENTER "CONTAINER".

8. PRESS THE CHECK BUTTON.

You can see below that column E item has been changed to Container.

	A	B	C	D	E	F	G
1	Prefix	Case No	Suffix 1	Suffix 2	Container	Generic 2	Generic 3
2							
3							
4							
5							
6							
7							
8							

Once data has been captured in the database, it will appear similar to the image below:

	A	B	C	D	E	F	G
1	Prefix	Case No	Suffix 1	Suffix 2	Container	Generic 2	Generic 3
2	S19	12345	A	01			
3							
4							
5							
6							
7							
8							

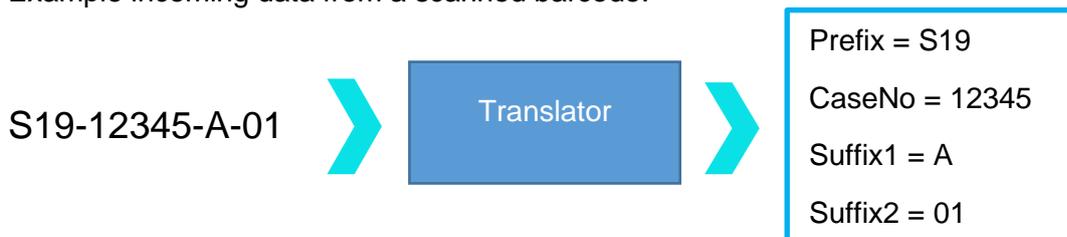
4.4. Translator Description

Translators are used to control how incoming and outgoing data is filtered and formatted.

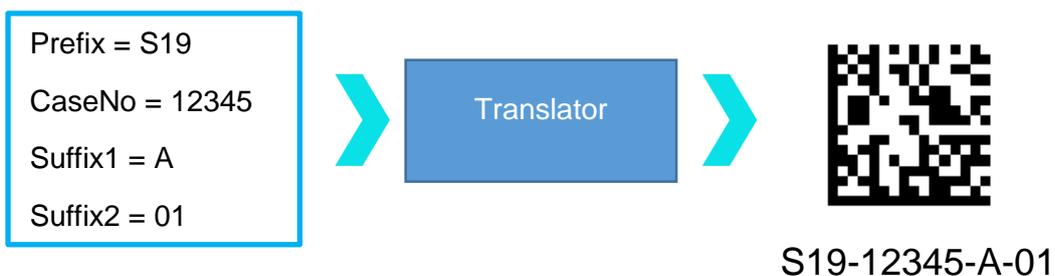
Incoming data is passed through a Translator to extract sections of data and move it into data items within the database.

Outgoing data is created by using a Translator to build a text string of data items, with or without delimiters.

Example incoming data from a scanned barcode.



Example outgoing data used to create a printed barcode.



Delimited data

Delimiters are used to separate data elements; in this case, the dash is used as the delimiter. The data elements can vary in length.

S19-12345-A-01

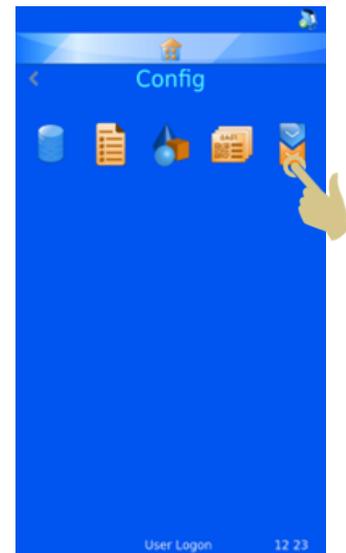
Fixed length data

Fixed length data has data elements of fixed length. Any variation in data structure can cause the translator to work incorrectly.

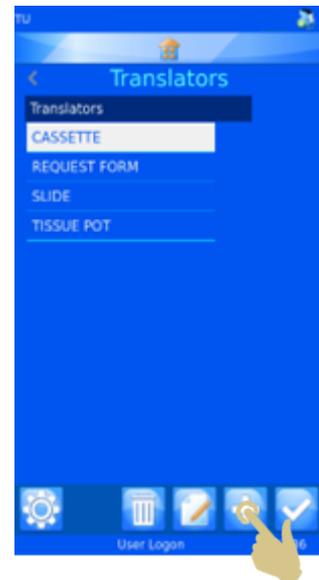
S1912345A01

4.4.1. Adding a Translator- Delimited data

1. PRESS SETTINGS.
2. PRESS CONFIG.
3. PRESS TRANSLATOR.



4. PRESS ADD.



5. TYPE A NAME FOR THE TRANSLATOR.

6. PRESS THE CHECK BUTTON.



7. THE SCAN OR ENTER CODE BOX WILL OPEN WITH NO DATA IN THE BOX.



8. THE DATA CAN BE EITHER TYPED IN USING THE KEYBOARD, SCANNED IN USING THE INTEGRATED SCANNER OR SENT FROM AN EXTERNAL SOURCE. THE DATA SHOULD APPEAR IN THE SCANCODE BOX.

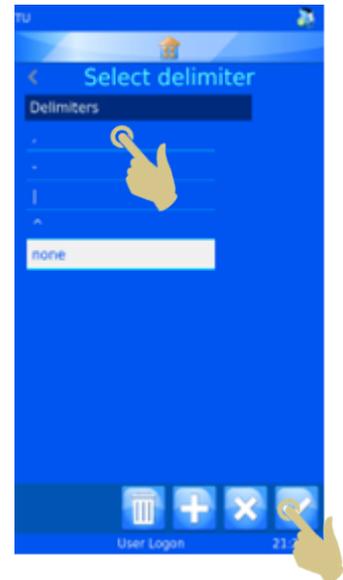
9. PRESS THE CHECK BUTTON.

10. THE SELECT DELIMITER BOX WILL OPEN. THE TRANSLATOR WILL AUTOMATICALLY HIGHLIGHT A DELIMITER IF ONE IS FOUND WITHIN THE STRING OF DATA. IF THIS DELIMITER IS TO BE USED, PRESS THE CHECK BUTTON.

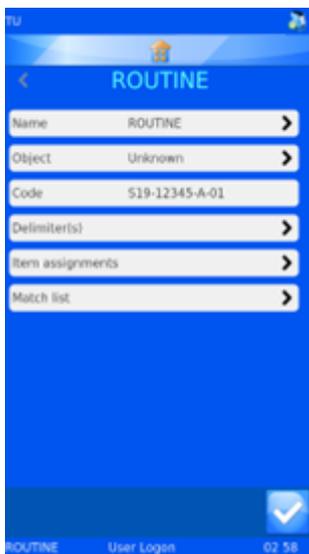


11. IF A DIFFERENT DELIMITER IS REQUIRED, SELECT THAT DELIMITER AND PRESS THE CHECK BUTTON.

12. THE TRANSLATOR WILL BE CREATED.



4.5. Translator Menu



4.5.1. Name

This is the name of the translator. To change the translator name, select name then edit the name and press the check button.

4.5.2. Object

This selects the Object that is to be linked to the translator. To change this, select Object and choose from the dropdown menu.

4.5.3. Code

Shows the code used to create the translator or a more recent code from the scan box. It is not possible to modify the data in this box.

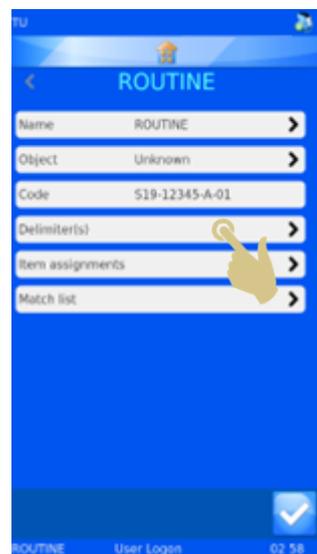
4.5.4. Delimiters

This selects the delimiter(s) to be used. If an additional delimiter needs to be added, confirmation will be required.

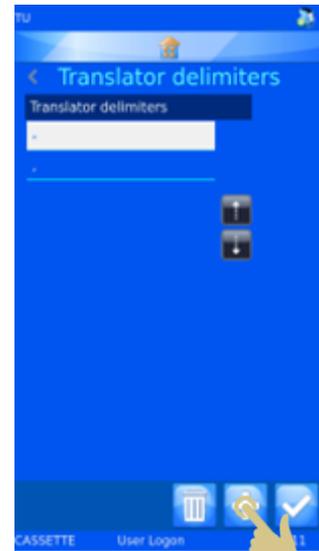
4.5.5. Item Assignments

This identifies the item assigned specific data in the translation process (this is the item the data will be sent to or pulled from in the database).

13. TO ADD ADDITIONAL DELIMITERS, PRESS DELIMITERS.



14. THE LIST OF DELIMITERS USED IN THE TRANSLATOR ARE DISPLAYED. TO ADD NEW DELIMITERS, PRESS THE PLUS BUTTON.



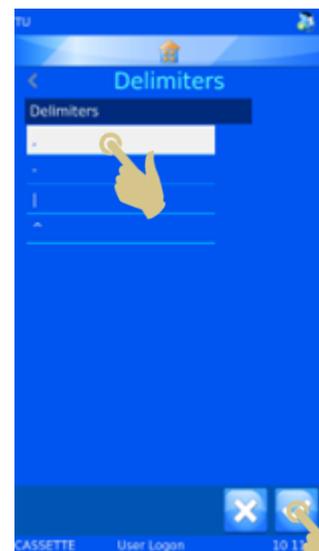
15. A CONFIRMATION WINDOW WILL OPEN. TO CONFIRM THE CHANGE, PRESS YES.

NOTE: THIS WILL CAUSE LOSS OF ALL ASSIGNMENTS AND RULES.



16. SELECT THE REQUIRED DELIMITER AND PRESS THE CHECK BUTTON.

TO ADD ADDITIONAL DELIMITERS, REPEAT STEPS 13 – 15.



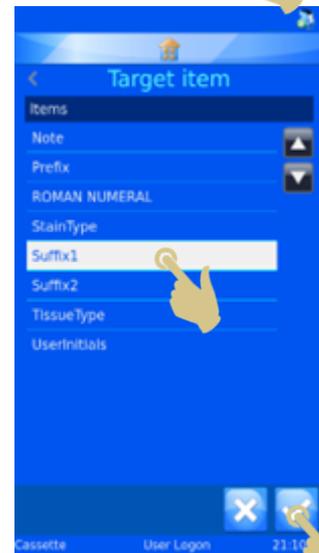
4.5.6. Changing Item Assignments

17. TO CHANGE AN ITEM ASSIGNMENT, SELECT THE ITEM AND PRESS THE EDIT BUTTON.



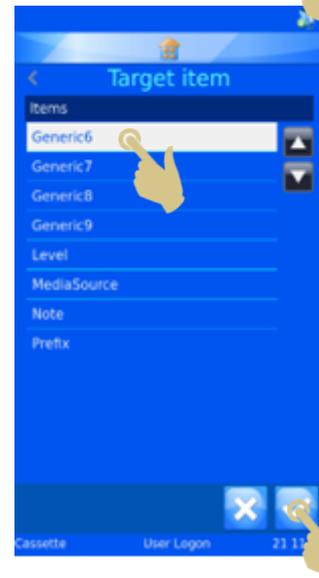
18. THE CURRENT ASSIGNED ITEM WILL BE HIGHLIGHTED.

19. PRESS THE UP OR DOWN BUTTONS TO DISPLAY ADDITIONAL ITEMS.



20. SELECT THE NEW ITEM.

21. PRESS THE CHECK BUTTON.



22. THE NEW ASSIGNMENT WILL BE DISPLAYED.

23. ONCE ALL ASSIGNMENTS ARE CORRECT, PRESS THE CHECK BUTTON.

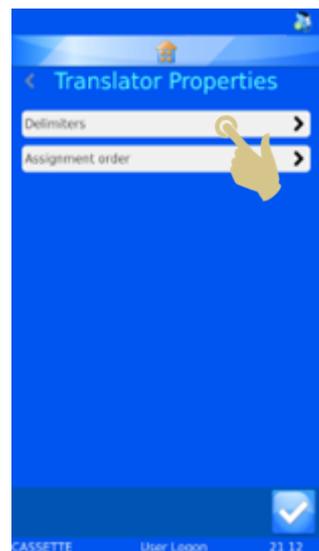
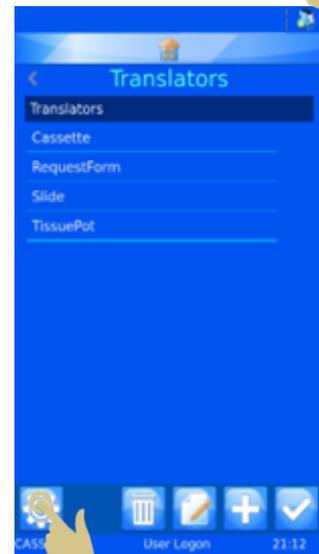
4.5.7. Translator Properties

The list of delimiters and the order in which the translator populates data items can be customized using the translator properties menu. From the Translators menu, press the settings button.

4.5.8. Delimiters

Delimiters can be added to the available list.

1. TO ADD A DELIMITER, PRESS THE DELIMITERS BUTTON.



2. PRESS THE PLUS BUTTON.



3. AN ENTRY BOX WILL OPEN WITH AN ON-SCREEN KEYBOARD. A NEW DELIMITER CAN BE TYPED IN OR SCANNED IN THROUGH THE INTEGRATED SCANNER.

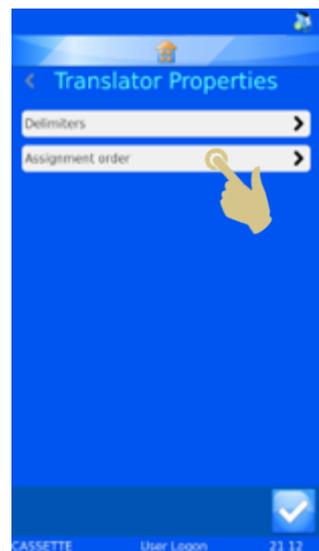


4. IF THE ON-SCREEN KEYBOARD DOES NOT HAVE THE DESIRED DELIMITER, SCAN A BARCODE WITH THE DELIMITER INCLUDED. DELETE ALL ADDITIONAL CHARACTERS UNTIL ONLY THE DELIMITER REMAINS AND PRESS THE CHECK BUTTON.

4.5.9. Assignment order

The order in which the data is automatically assigned can be adjusted for local preferences. To change the order:

1. PRESS THE ASSIGNMENT ORDER BUTTON.





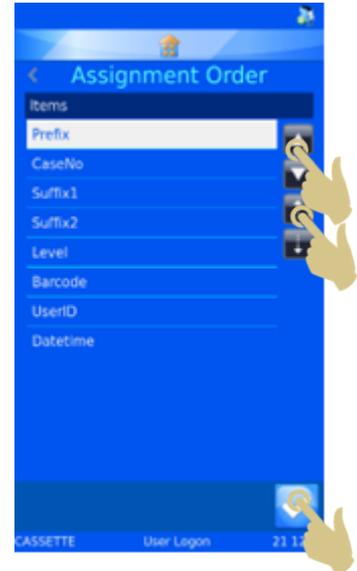
PRESS THE SOLID UP AND DOWN ARROWS TO SCROLL THE LIST UP AND DOWN.



PRESS THE DOTTED ARROWS TO MOVE THE HIGHLIGHTED ITEM UP AND DOWN THE LIST.

- ONCE THE ITEMS ARE IN THE REQUIRED ORDER, PRESS THE CHECK BUTTON.

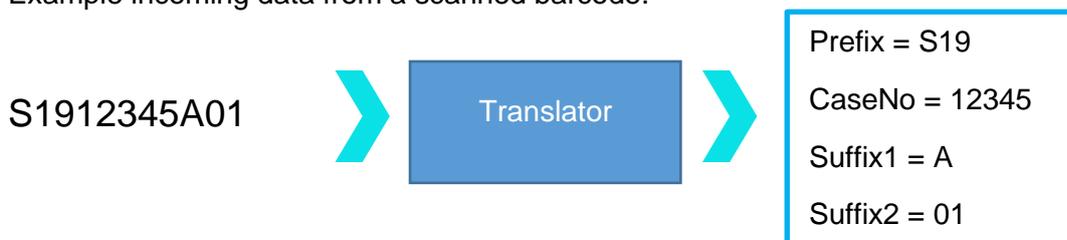
THIS CHANGE WILL NOT AFFECT EXISTING TRANSLATORS. ANY NEW TRANSLATORS CREATED WILL ASSIGN DATA TO ITEMS USING THE MODIFIED ORDER.



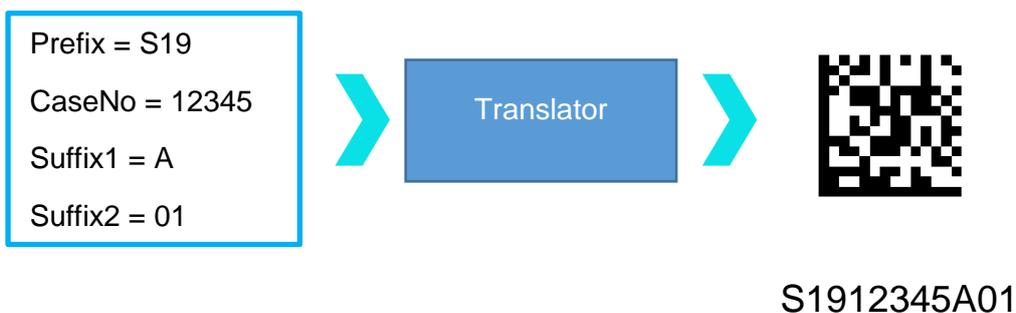
4.6. Fixed Length Translator

The fixed length translator is used to divide data that does not include delimiting characters. The fixed length translator uses number of spaces to delimit the data, therefore the data must always be the same length. If the length of data is changed, the data will not be delimited in the expected way.

Example incoming data from a scanned barcode.

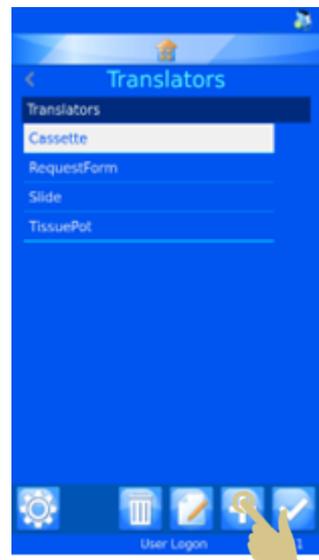
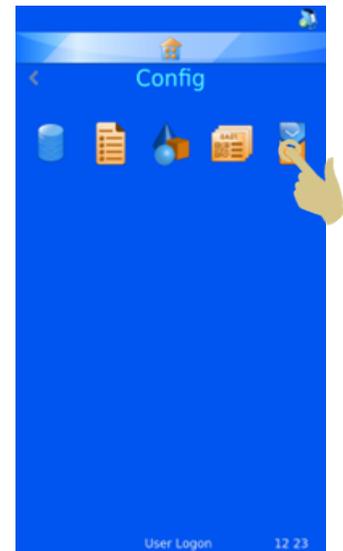


Example outgoing data used to create a printed barcode.



4.6.1. Adding a Translator- Fixed Length data

1. PRESS SETTINGS.
2. PRESS CONFIG.
3. PRESS TRANSLATOR.
4. PRESS ADD.
5. TYPE A NAME FOR THE TRANSLATOR.
6. PRESS THE CHECK BUTTON.



7. THE SCANCODE OR ENTER CODE BOX WILL OPEN WITH NO DATA IN THE BOX.



8. THE DATA CAN BE EITHER TYPED IN USING THE KEYBOARD, SCANNED IN USING THE INTEGRATED SCANNER OR SENT FROM THE SOFTWARE. THE DATA SHOULD APPEAR IN THE SCANCODE BOX.



9. PRESS THE CHECK BUTTON.

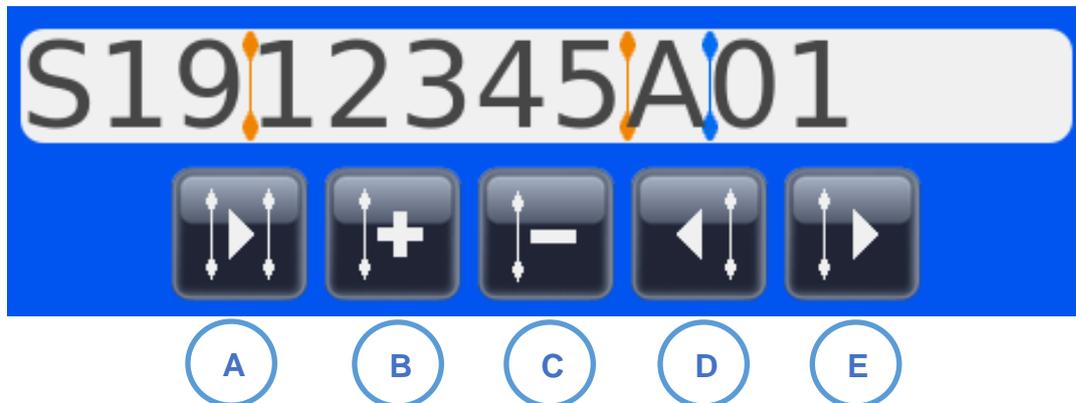
10. THE SELECT DELIMITER BOX WILL OPEN. THE TRANSLATOR WILL NOT SEE A DELIMITER, SO WILL OFFER THE NONE OPTION.



11. PRESS THE CHECK BUTTON.

4.6.2. Dividing up the data string

The Data string has to be divided up into the required data elements.



A. Select next divider.

B. Add a new divider.

C. Remove selected divider.

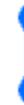
D. Move divider one character to the left.

E. Move divider one character to the right.

Data Divider



Selected Divider



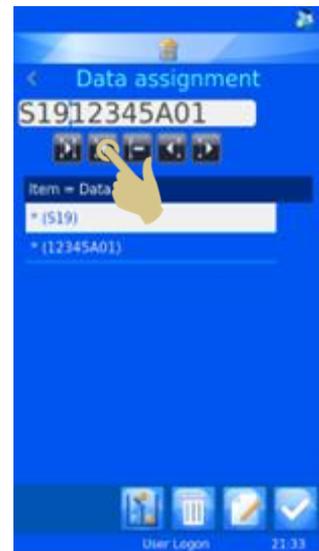
12. TO ADD A NEW DIVIDER, PRESS THE PLUS BUTTON.



13. THE DIVIDER WILL APPEAR IN THE FIRST AVAILABLE SPACE, THE DIVIDER CAN BE MOVED TO THE RIGHT BY PRESSING THE RIGHT ARROW. IN THE EXAMPLE, WE WILL MOVE THE DIVIDER RIGHT TWO SPACES BY PRESSING THE RIGHT ARROW TWICE.



14. THE DIVIDER SHOULD HAVE MOVED TO THE RIGHT TWO SPACES AND * (S19) SHOULD BE LISTED IN THE FIRST BOX UNDER ITEM = DATA.



15. PRESS THE ADD DIVIDER BUTTON.

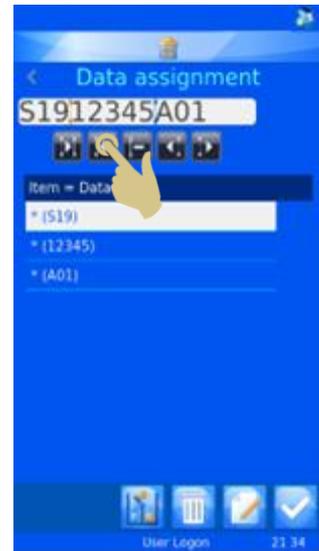
16. A SECOND DIVIDER SHOULD APPEAR IN THE NEXT AVAILABLE SPACE.

17. PRESS THE RIGHT BUTTON TO CAPTURE THE NEXT DATA BLOCK. IN THIS EXAMPLE THE RIGHT ARROW BUTTON WILL BE PRESSED FOUR TIMES.



18. THE DIVIDER WILL HAVE MOVED FOUR SPACES TO THE RIGHT.

19. PRESS THE ADD DIVIDER BUTTON.



20. THE DATA IS NOW DELIMITED BASED ON NUMBER OF SPACES.

21. TO ASSIGN THE FIRST DATA BLOCK TO AN ITEM, PRESS THE EDIT BUTTON WITH THE FIRST BLOCK HIGHLIGHTED.



22. PRESS THE TARGET ITEM.

23. PRESS THE CHECK BUTTON.

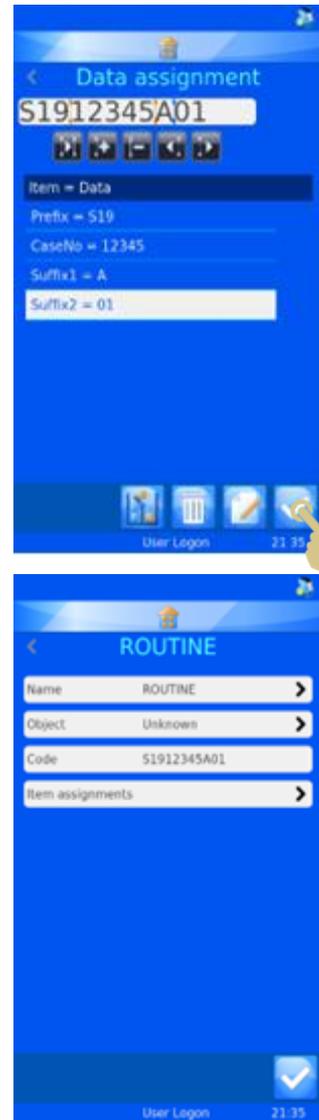


24. REPEAT THIS UNTIL ALL DATA BLOCKS HAVE BEEN ASSIGNED TO ITEMS.

25. PRESS THE CHECK BUTTON.

If required, the object can be assigned.

The translator is now created and ready for use.





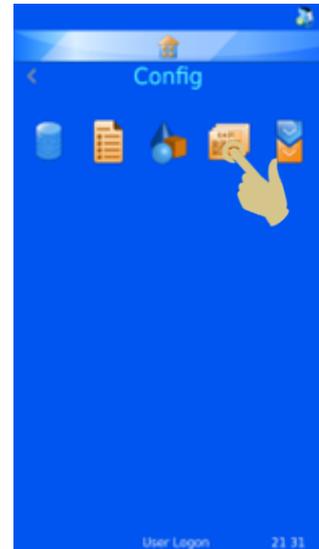
4.7. Template Menu

Templates determine how the data fields and barcodes are printed. You can design the layout utilising fonts, font sizes and barcodes. It is important to try and keep some open space around the edge of the template and around barcodes.

Template creation is made easier if a Translator is selected when creating a new Template. Selecting a translator will automatically populate the template with the items used in the translator reducing the effort needed to create the new template.

4.7.1. Creating a New Template

1. PRESS SETTINGS.
2. PRESS CONFIG.
3. PRESS TEMPLATE.



4. PRESS THE PLUS BUTTON.



5. THE NAME MENU WILL OPEN.



6. ENTER THE DESIRED TEMPLATE NAME.

7. PRESS THE CHECK BUTTON.



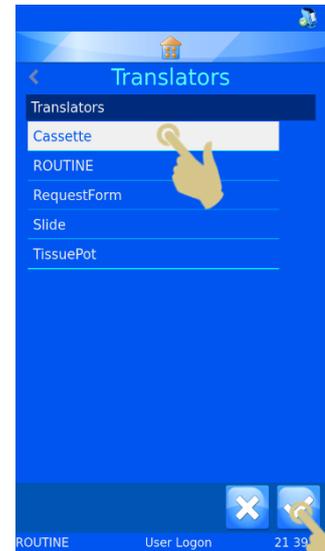
8. A USE TRANSLATOR? BOX WILL OPEN, IF A TRANSLATOR CAN BE USED, PRESS YES.

IF A TRANSLATOR IS NOT USED, ALL LABEL ITEMS WILL NEED TO BE ADDED TO THE TEMPLATE MANUALLY.

NOTE: IF NO TRANSLATOR IS SELECTED, ITEMS WILL NOT POPULATE FROM A BARCODE SCAN OR TEXT STRING.

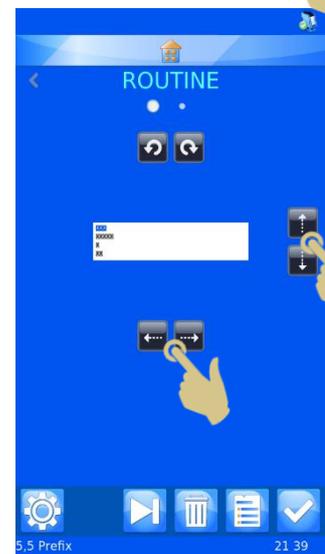


9. SELECT THE TRANSLATOR AND PRESS THE CHECK BUTTON.

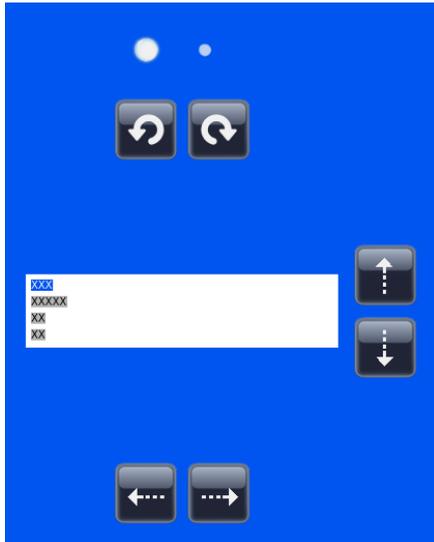


10. THE ITEMS DEFINED IN THE TRANSLATOR WILL BE AUTOMATICALLY ADDED TO THE TEMPLATE.

11. THE ITEMS CAN BE MOVED AROUND AND FONT AND FONT SIZE ADJUSTED TO CREATE THE DESIRED LABEL DESIGN.



4.7.2. Editing the Template

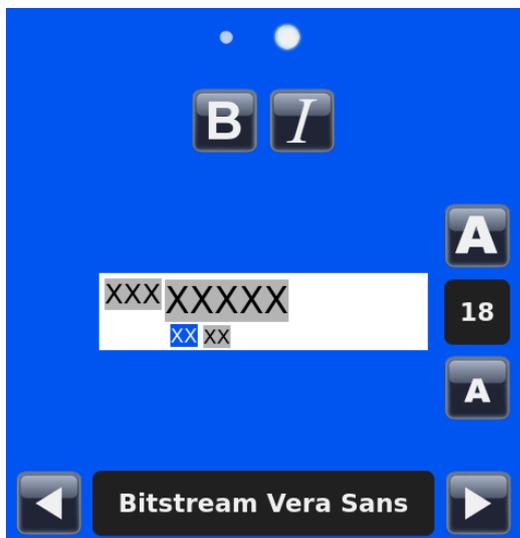


 Toggles between two formatting menus.

 Rotates highlighted Item left and right.

 Moves highlighted Item up and down.

 Moves highlighted Item left and right.



 Toggles highlighted Item between normal and bold.

 Toggles highlighted Item between normal and italic font.

 Adjusts font size of highlighted Item.

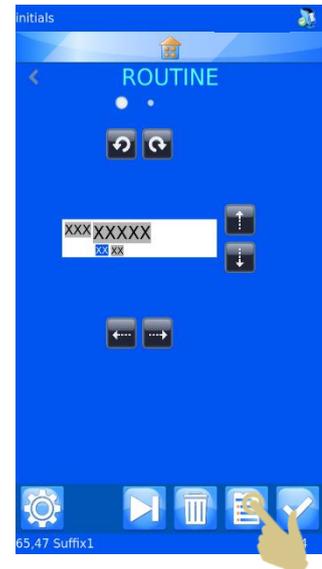
 Adjusts the font of the highlighted Item.

4.7.3. Adding Items to the Template

Additional items can be added to the template providing more information than is included in the translator data. These items will need to be added manually and will need minimal configuration. When printing, the additional data to populate these items will need to be entered or selected. The items default setting will be displayed and can be changed by entering the data from a keyboard, selecting from a dropdown menu or using an incrementing setting.

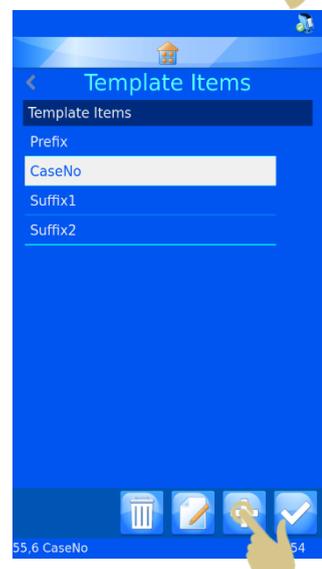
From the Template menu

1. PRESS THE ITEMS BUTTON.



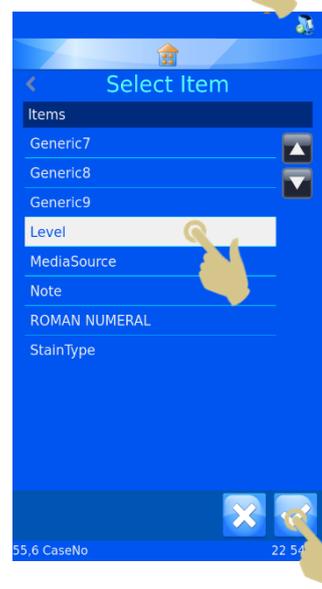
2. A LIST OF CURRENT ITEMS WILL BE DISPLAYED.

3. PRESS THE PLUS BUTTON.

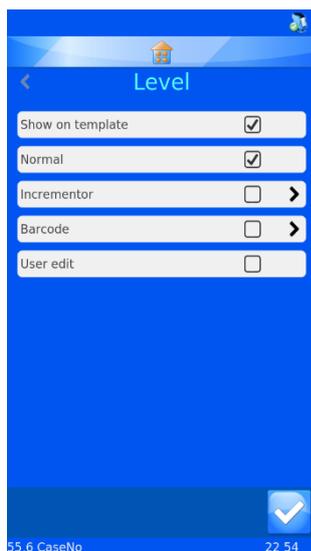


4. THE LIST OF ITEMS WILL BE DISPLAYED, SELECT THE CORRECT ITEM.

5. PRESS THE CHECK BUTTON.



THE ITEM CONFIGURATION MENU WILL APPEAR



Show on Template - When this is checked, the item will show on the template for printing.

Normal - When checked, the Item will be displayed on the template but the item will not be able to be edited.

Incrementor - When this is checked, the item will increment with each additional print.

Barcode – When checked, the item will be displayed as a barcode and will need additional configuration.

User edit - When this is checked, the item will be able to be edited prior to printing.

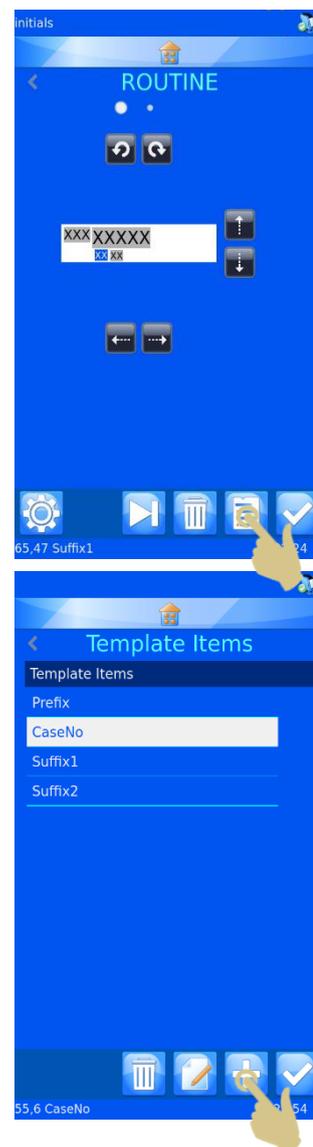
Note: The Normal, Incrementor, Barcode and User edit are unique and only one can be checked at any time. If an unchecked box is checked, the remaining three will be automatically unchecked.

4.7.4. Adding Barcodes to the Template

A barcode can be added to the template for printing purposes. The barcode requires additional configuration which is explained further here.

To create a barcode from the template editor menu:

1. PRESS THE ITEMS BUTTON.
2. PRESS THE PLUS BUTTON.



3. SELECT THE ITEM.

4. PRESS THE CHECK BUTTON.

5. THE ITEM PROPERTIES MENU WILL BE DISPLAYED.

6. CHECK THE BARCODE BOX.

7. THE BARCODE SETTINGS MENU WILL APPEAR.

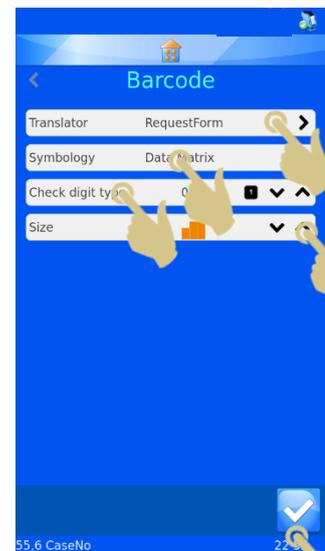
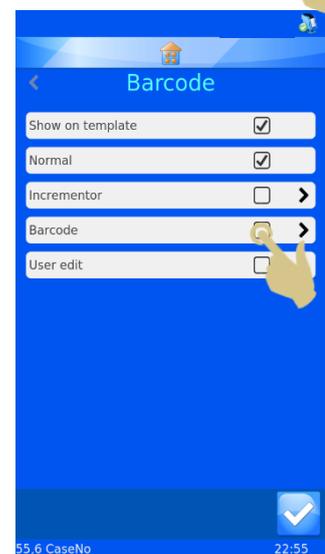
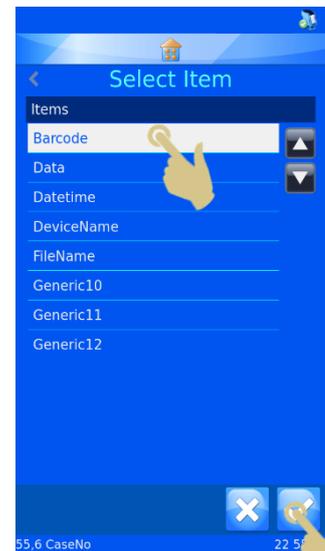
8. SELECT THE CORRECT TRANSLATOR.

9. SELECT THE DESIRED SYMBOLOGY.

10. SELECT CHECK DIGIT TYPE IF REQUIRED.

11. SELECT SIZE OF BARCODE. REGARDLESS OF THIS SELECTION, THE BARCODE WILL AUTOMATICALLY INCREASE IN SIZE WHEN NEEDED TO PRINT A BARCODE THAT CAN BE READ.

12. PRESS THE CHECK BUTTON.



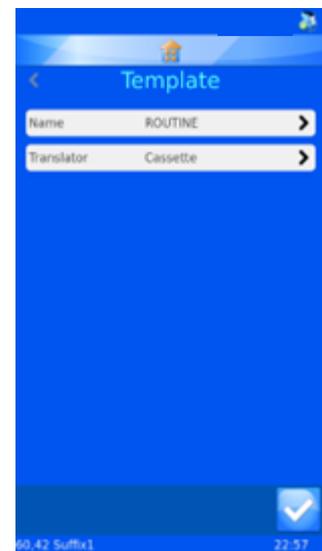
13. THE TEMPLATE WITH THE BARCODE WILL BE DISPLAYED. THE BARCODE CAN BE ORIENTED USING THE DIRECTIONAL BUTTONS.



14. PRESS THE CHECK BUTTON WHEN FINISHED.

4.7.5. Template Settings

The template settings are accessed by pressing the settings button on a template. The settings are unique to the selected template, each template has its own settings menu.



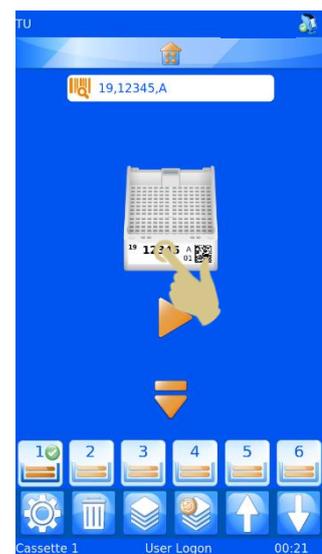
4.8. Advanced Printing Functions

4.8.1. Template Editor

Any of the items that were set up for user edit when creating the template can be edited to add specific information to the label. The information in these editable items is unique to each label; not all labels are required to have the same data.

To edit template items

1. PRESS THE LABEL AREA.



2. THE TEMPLATE EDITOR WILL BE DISPLAYED, ANY EDITABLE ITEMS WILL HAVE A HIGHLIGHT

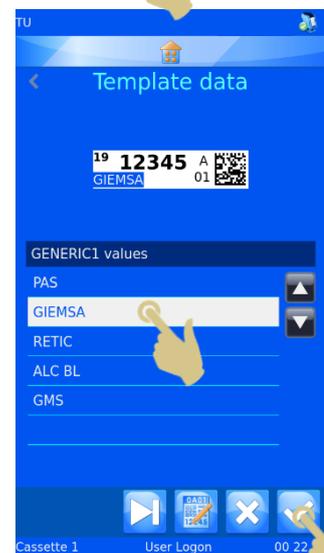


The tab key toggles between editable items.

Editable items can be edited based on the way they were set up in items and the translator. Some items will require information to be entered via a keyboard, while others will use a dropdown box for selection.

Changes to the editable items should be made after the barcode for the case is scanned.

3. MAKE THE NECESSARY CHANGES TO EDITABLE ITEMS.
4. PRESS THE CHECK BUTTON .

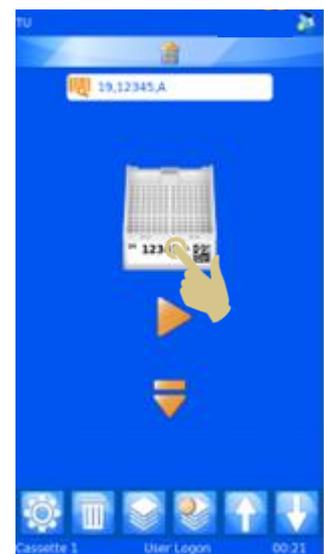


4.8.2. Selecting Templates

Many different printing templates can be created and used for printing.

To select a different template:

5. PRESS THE TEMPLATE AREA OF THE HOME SCREEN.



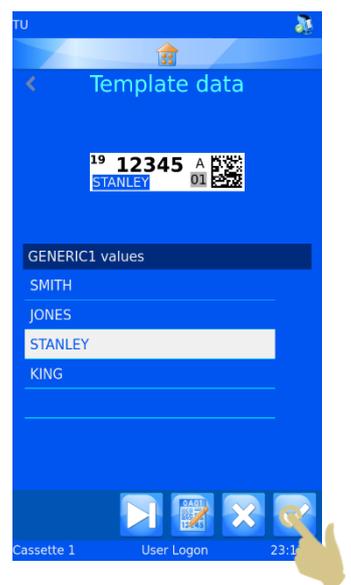
6. THE TEMPLATE EDITOR WILL BE DISPLAYED, PRESS THE TEMPLATE BUTTON.



7. THE LIST OF TEMPLATES WILL BE DISPLAYED, SELECT THE DESIRED TEMPLATE.
8. PRESS THE CHECK BUTTON.



9. THE TEMPLATE EDITOR WILL BE DISPLAYED, PRESS THE CHECK BUTTON.



THE ALTERNATE TEMPLATE WILL BE DISPLAYED ON THE HOME SCREEN.

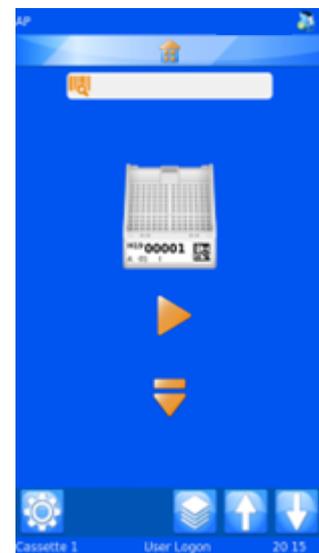


4.8.3. Creating Sequences

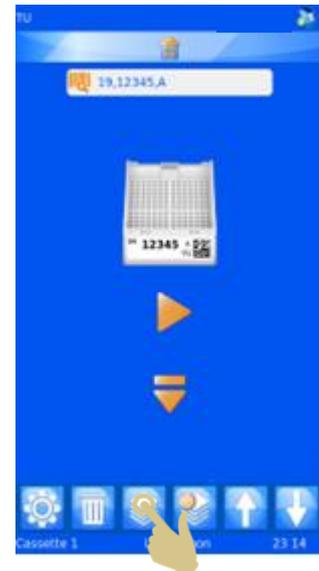
It is possible to print multiple labels from a single entry of data, this will be referred to as sequence printing. Sequence printing can only be performed using templates where an incrementor is configured.

To create a sequence a user should be logged in the main screen should be displayed.

1. SCAN A BARCODE CONTAINING APPROPRIATE DATA.



2. THE SCAN BOX SHOULD BE POPULATED WITH DATA.
3. PRESS THE SEQUENCE BUTTON.



The create sequence menu should appear.



This box displays the FROM and TO data. Pressing the up and down arrows will increase or decrease the highlighted data. The left box data will be printed on the first label in the sequence; the data in the right box will be printed on the last label in the sequence. There will be one label for each number between the two data.

4. TO CREATE A SEQUENCE OF FIVE LABELS, PRESS THE UP ARROW FOUR TIMES.
5. PRESS THE CHECK BUTTON.



6. FIVE LABELS WILL BE CREATED.
7. TO PRINT, PRESS THE PLAY BUTTON.



4.8.4. Creating a Protocol

A protocol is a saved sequence. Once the sequence is created, the sequence can be saved as a Protocol so that it can be recalled later. This will allow the user to create batches quickly. Any custom part of the sequence will be saved with the protocol including:

- Template.
- Incremented items.
- Editable items.

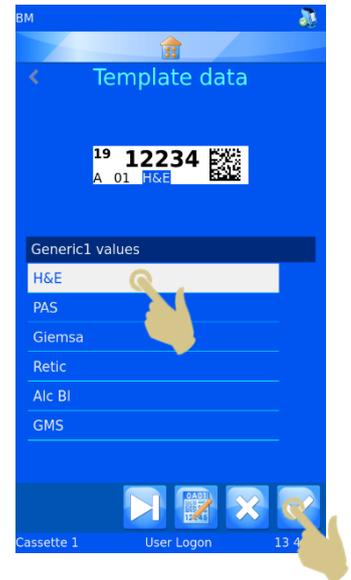
Example 1 - Save a protocol with edited items

For this example, a user edit item has been created with five Labels.

1. SCAN A BARCODE WITH DATA PROPERLY FORMATTED.
2. THE LABEL SHOULD POPULATE WITH THE CORRECT DATA.
3. CREATE A SEQUENCE OF FIVE LABEL IMAGES.
4. PRESS THE TEMPLATE AREA OF THE LABEL IMAGE.



5. MAKE SELECTION FROM THE DROPDOWN MENU.
6. PRESS THE CHECK BUTTON.



7. PRESS THE MOVE SINGLE LEFT BUTTON.

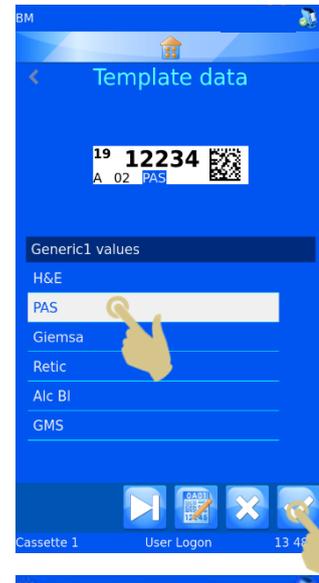


8. PRESS THE LABEL AREA OF THE LABEL IMAGE.



9. MAKE SELECTION FROM THE DROPDOWN MENU.

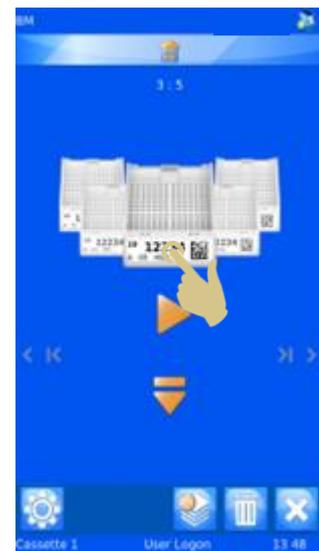
10. PRESS THE CHECK BUTTON.



11. PRESS THE MOVE SINGLE LEFT BUTTON.

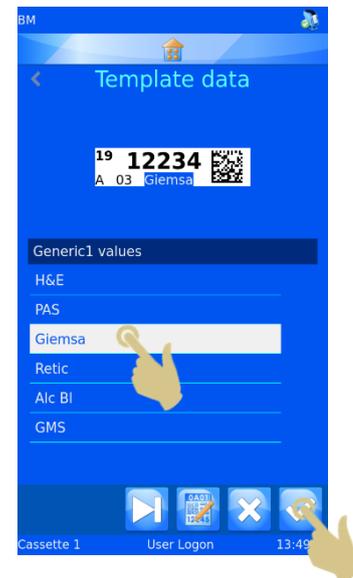


12. PRESS THE LABEL AREA OF THE LABEL IMAGE.

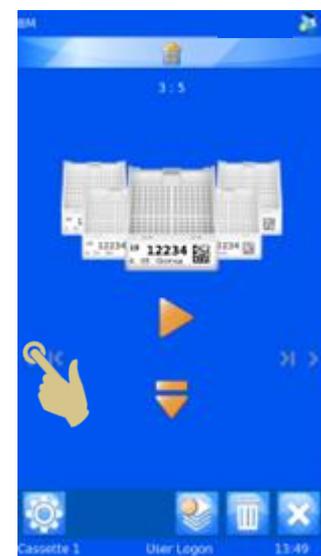


13. MAKE SELECTION FROM THE DROPDOWN MENU.

14. PRESS THE CHECK BUTTON.



15. PRESS THE MOVE SINGLE LEFT BUTTON.

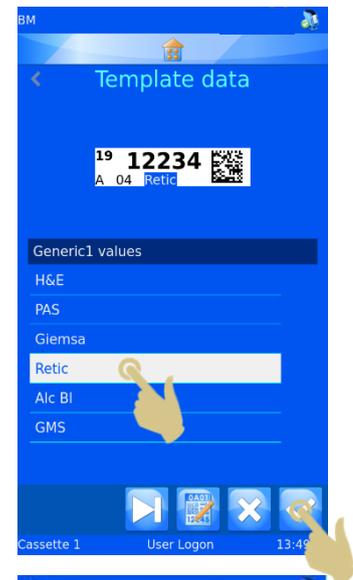


16. PRESS THE LABEL AREA OF THE LABEL IMAGE.



17. MAKE SELECTION FROM THE DROPDOWN MENU.

18. PRESS THE CHECK BUTTON.



19. PRESS THE MOVE SINGLE LEFT BUTTON.

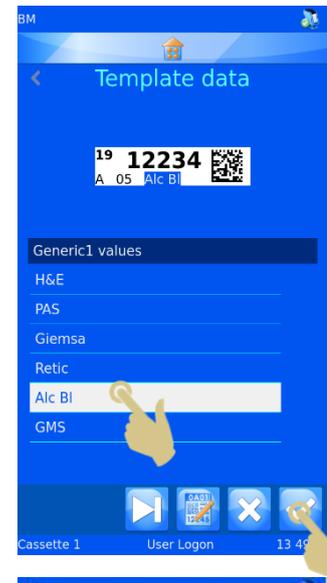


20. PRESS THE LABEL AREA OF THE LABEL IMAGE.



21. MAKE SELECTION FROM THE DROPDOWN MENU.

22. PRESS THE CHECK BUTTON.



23. FIVE LABELS ARE NOW CREATED WITH EDITED ITEMS.



THE PROTOCOL BUTTON IS USED TO SAVE A PROTOCOL OR RECALL A PROTOCOL.

24. PRESS THE PROTOCOL BUTTON.



25. THE PROTOCOL NAME MENU WILL OPEN, ENTER THE DESIRED NAME.

26. PRESS THE CHECK BUTTON TO SAVE THE PROTOCOL.



4.8.5. Recalling a protocol

When a sequence is displayed, the Protocol button opens the Save Protocol menu. If a single label is displayed the Protocol button opens the Protocol selection List

1. SCAN A BARCODE WITH THE APPROPRIATE DATA.

2. PRESS THE PROTOCOL BUTTON.



3. SELECT THE SAVED PROTOCOL.

4. PRESS THE CHECK BUTTON.



5. THE LABEL IMAGES SHOULD BE CREATED.
6. TO PRINT, PRESS PLAY.



4.9. Translator Rules

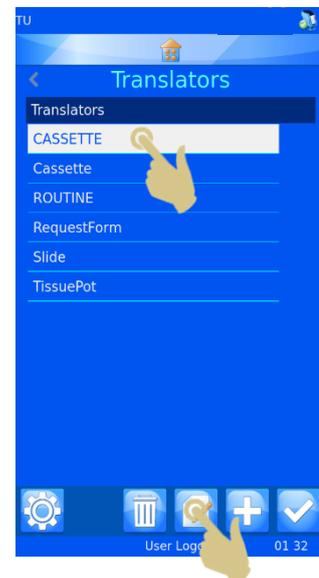
The translator includes a Rules feature that can automate some software and printer functions. There are several rules; these can apply change to templates, items, data, hopper, sequence and protocol. The rules will be generally explained in this guide; trial and error may be required to fully understand Rule operation.

Rules are applied against items within the translator, these rules compare the incoming data to a rule statement and either apply, or not, apply the rule. This comparison process is applied every time a record is scanned, entered manually or imported from the Windows printer driver. Within the translator rules can be applied against any or all items. When data is entered, all of the rules in the translator will be applied to the data. One rule may have an effect on other rules; if you see an unexpected result from the rules, recheck how every rule might affect your data.

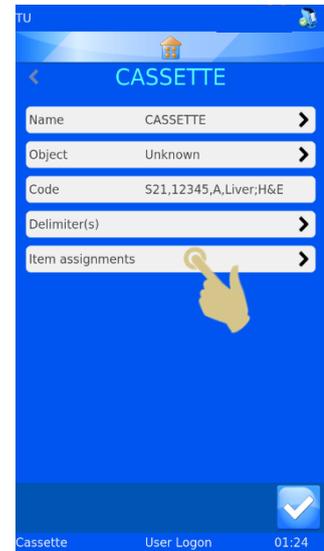
4.9.1. Creating a New Rule

The rule is created against an item in the translator, to create a new rule:

1. PRESS THE SETTINGS BUTTON.
2. PRESS THE CONFIG BUTTON.
3. PRESS THE TRANSLATOR BUTTON.
4. SELECT THE TRANSLATOR TO BE EDITED.
5. PRESS THE EDIT BUTTON.

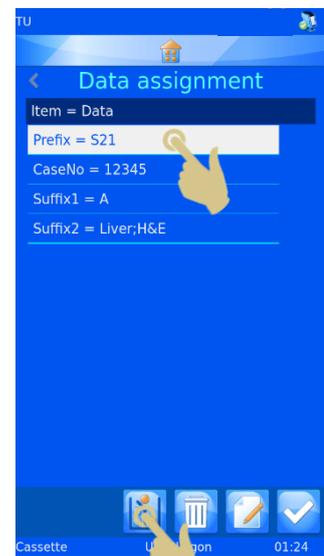


6. PRESS THE ITEM ASSIGNMENTS BUTTON.

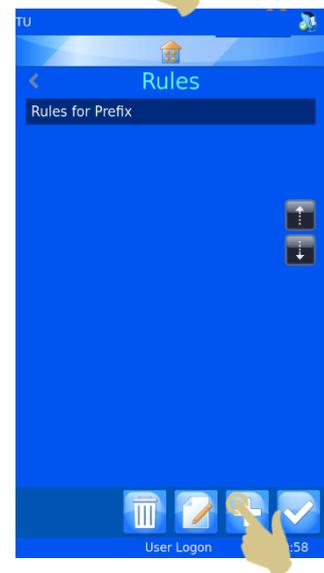


7. SELECT THE ITEM THAT THE RULE WILL BE CREATED AGAINST.

8. PRESS THE RULES BUTTON.



9. PRESS THE ADD BUTTON.



10. THE RULE NAME BOX WILL OPEN, ENTER A NAME AND PRESS THE CHECK BOX.



11. THE RULE CONFIGURATION MENU WILL OPEN.

A rule is a function that includes a Test and an Action. The Test is an equation that will produce a pass or fail for the data that the test is run against.

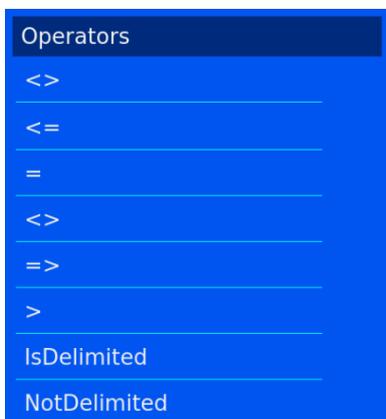
If the Test produces a PASS, the rule action will be carried out.

If the Test produces a FAIL, the rule action will not be carried out.

The test compares the Item against a value using an operator.



The list of operators includes common formula symbols and an IsDelimited and NotDelimited operator.



- <>** This operator determines if the data is not equal to the item.
- <=** This operator determines if the data is less than or equal to the item.
- =** This operator determines if the data is equal to the item.
- <>** This operator determines if the data is not equal to the item.
- =>** This operator determines if the data is equal or greater than the item.
- >** This operator determines if the data is greater than an item.
- IsDelimited** This operator determines if a specific delimiter is included in the text string.
- NotDelimited** This operator determines if a specific delimiter is not included in the text string.

The value is the data that will be compared against the item data. If the item was S19 and the value was S19 and the operator was set to equals, the test would produce a PASS.

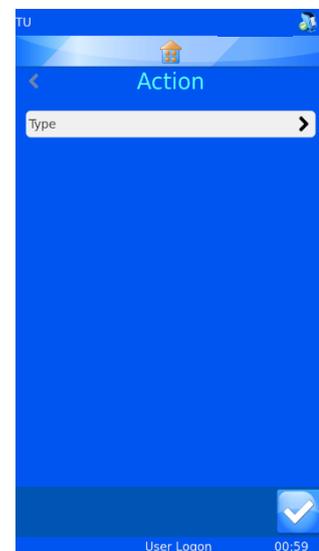
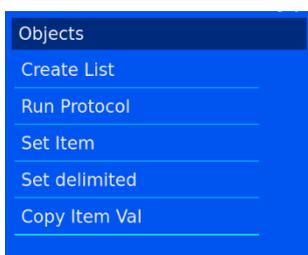
S19 **=** S19 PASS

S18 **=** S19 FAIL

The Action will be applied if the test passed tests. The intended action will need to be set based on a passes test.

From the rule menu, select the action, then select the action type.

The list of objects available to the action are:



4.9.2. Create List

This object creates a sequence based on a list set up in the item properties. The item must be set as a list to use this object.

The screenshot shows a blue header with a back arrow and the title 'Action'. Below the header, there is a single configuration row with the label 'Type' on the left and 'Create List' on the right, followed by a right-pointing chevron arrow.

4.9.3. Run Protocol

This object will run the specified protocol when a test is passed. The protocol to run will need to be set in the action. When this action is selected and a barcode scanned, the screen will automatically populate with the number of Labels in the protocol.

The screenshot shows a blue header with a back arrow and the title 'Action'. Below the header, there are two configuration rows. The first row has 'Type' on the left and 'Run Protocol' on the right, with a right-pointing chevron arrow. The second row has 'Protocol' on the left and 'LIVER' on the right, also with a right-pointing chevron arrow.

4.9.4. Set Item

This object will set an item to a specific value when the test is passed. Set item can set any item to a specific value including the item the rule is being run against. The item to set and value must be defined in the rule.

The screenshot shows a blue header with a back arrow and the title 'Action'. Below the header, there are three configuration rows. The first row has 'Type' on the left and 'Set Item' on the right, with a right-pointing chevron arrow. The second row has 'Item to set' on the left and 'Prefix' on the right, with a right-pointing chevron arrow. The third row has 'Value' on the left and a right-pointing chevron arrow on the right.

4.9.5. Set Delimited

This object will further delimit an item using delimiters not used by the translator. The delimiter index is the data position relative to the delimiter – this means the data ahead of the first delimiter is “0” and the data following the first delimiter is 1. Item to set is the item where the data should be copied to.

The screenshot shows a blue header with a back arrow and the title 'Action'. Below the header, there are three configuration rows. The first row has 'Type' on the left and 'Set delimited' on the right, with a right-pointing chevron arrow. The second row has 'Delimited Index' on the left, '-1' in the center, and up/down arrow icons on the right. The third row has 'Item to set' on the left and 'Prefix' on the right, with a right-pointing chevron arrow.

4.9.6. Copy Item Val

This object will copy the value of the item to another item. You must set the Item to Copy to.

The screenshot shows a blue header with a back arrow and the title 'Action'. Below the header, there are two configuration rows. The first row has 'Type' on the left and 'Copy Item Val' on the right, with a right-pointing chevron arrow. The second row has 'Item to Copy to' on the left and 'Prefix' on the right, with a right-pointing chevron arrow.

Rules that use IsDelimited and SetDelimited are the most complex. To make this clearer, an example of how these may be used is shown below.

Example:

For this example, a translator will have already been set up to translate the following data.

S19,12345,A,Liver;H&E

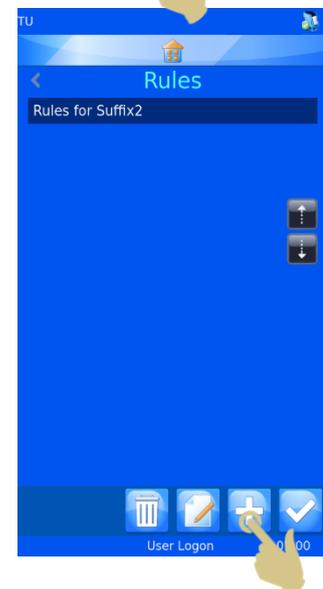
The translator uses only the comma and later the semicolon will be used for IsDelimited and SetDelimited.

Creating the new rules

1. FROM THE TRANSLATOR MENU, PRESS ITEM ASSIGNMENTS BUTTON.
2. HIGHLIGHT THE ITEM FOR WHICH THE RULE WILL BE SET.
3. PRESS THE RULES BUTTON .

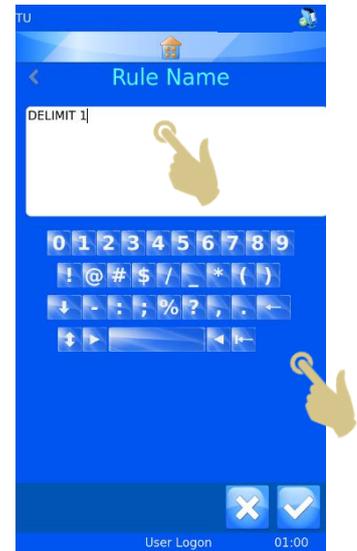


4. THE RULES MENU WILL APPEAR, PRESS THE ADD BUTTON.



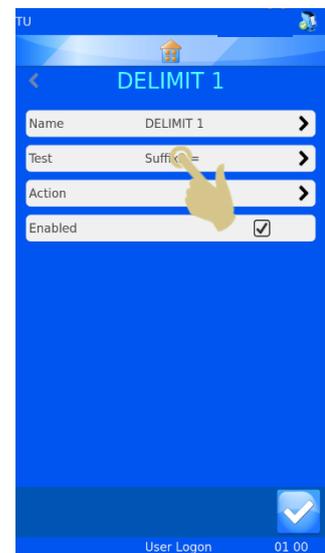
5. ENTER THE RULE NAME.

6. PRESS THE CHECK BUTTON.

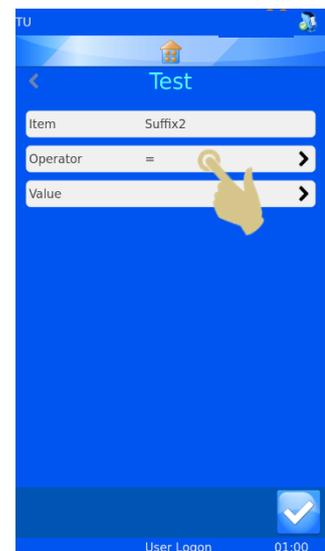


7. THE MENU WILL APPEAR FOR THE DELIMIT 1 RULE.

8. PRESS THE TEST BUTTON.

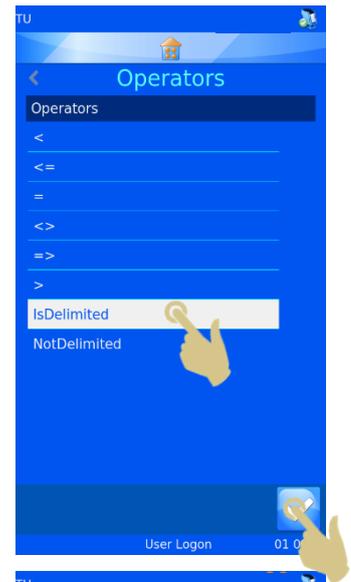


9. THE TEST MENU WILL APPEAR, PRESS THE OPERATOR BUTTON.

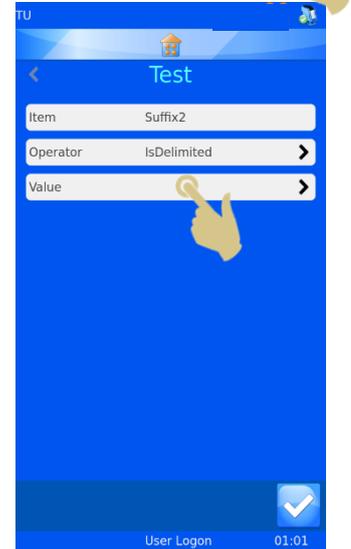


10. THE OPERATORS MENU WILL APPEAR, HIGHLIGHT THE ISDELIMITED OPTION.

11. PRESS THE CHECK BUTTON.

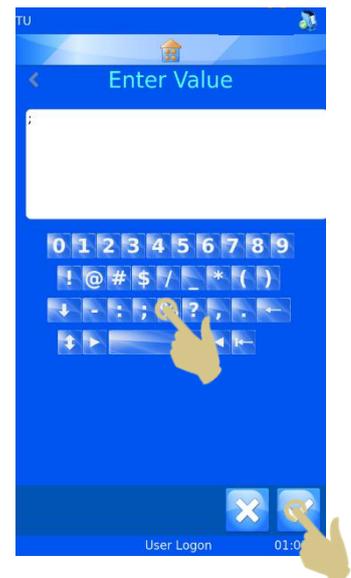


12. THE TEST MENU WILL APPEAR, PRESS THE VALUE BUTTON.



13. ENTER THE DELIMITER INTO THE VALUE BOX.

14. PRESS THE CHECK BUTTON.



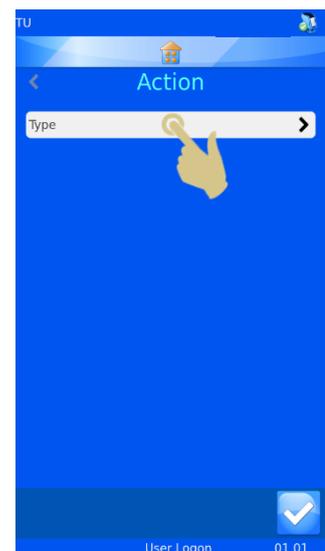
15. THE TEST MENU WILL APPEAR WITH THE SELECTIONS DISPLAYED, PRESS THE CHECK BUTTON.



16. THE DELIMIT 1 MENU WILL APPEAR, PRESS THE ACTION BUTTON.

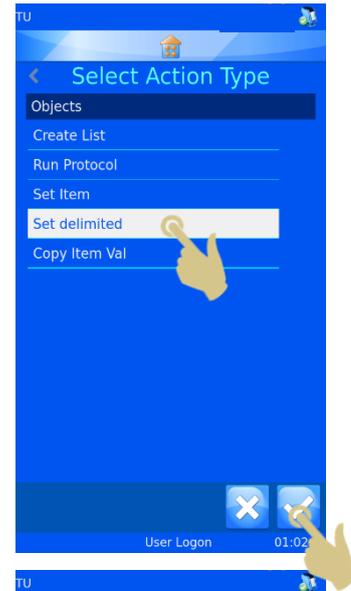


17. PRESS THE TYPE BUTTON.



18. THE SELECT ACTION TYPE MENU SHOULD APPEAR, SELECT SET DELIMITED.

19. PRESS THE CHECK BUTTON.



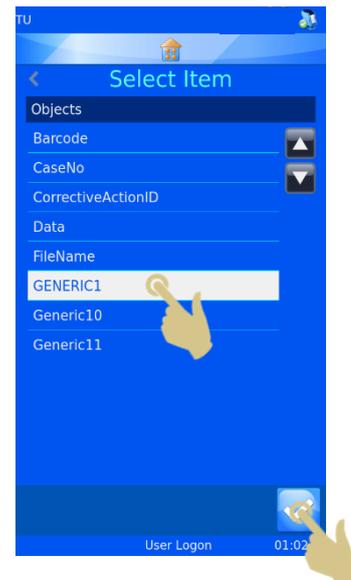
20. THE ACTION MENU SHOULD APPEAR. PRESS THE UP ARROW ONCE TO SET THE DELIMITED INDEX TO "0".

21. PRESS THE ITEM TO SET BUTTON.



22. THE SELECT ITEM MENU SHOULD APPEAR, SELECT GENERIC1.

23. PRESS THE CHECK BUTTON.



24. THE DELIMIT 1 MENU SHOULD APPEAR, PRESS THE CHECK BUTTON.



25. THE RULES MENU WILL BE DISPLAYED, PRESS THE ADD BUTTON.



26. THE NAME MENU WILL APPEAR, ENTER THE RULE NAME.

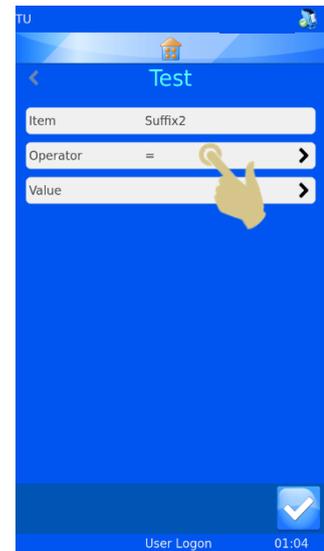
27. PRESS THE CHECK BUTTON.



28. THE DELIMIT 2 MENU WILL APPEAR, PRESS THE TEST BUTTON.

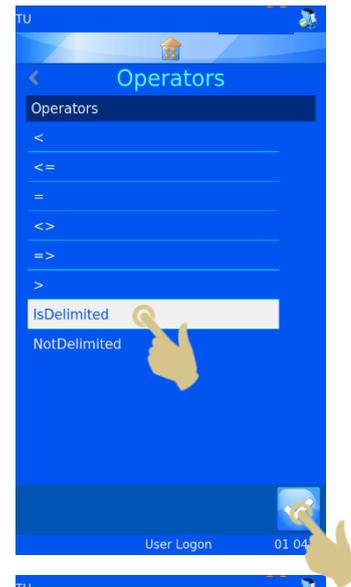


29. THE TEST MENU WILL APPEAR, PRESS THE OPERATOR BUTTON.

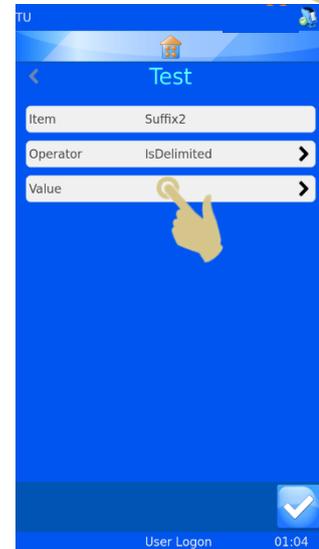


30. THE OPERATORS MENU WILL APPEAR, HIGHLIGHT THE ISDELIMITED OPERATOR.

31. PRESS THE CHECK BUTTON



32. THE TEST MENU SHOULD APPEAR, PRESS THE VALUE BUTTON.



33. THE VALUE MENU SHOULD APPEAR, ENTER THE CORRECT DELIMITER.

34. PRESS THE CHECK BUTTON.



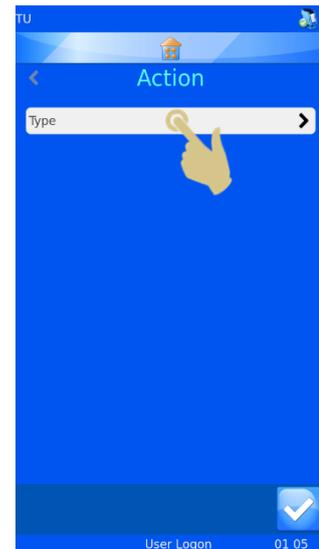
35. THE TEST MENU SHOULD APPEAR, PRESS THE CHECK BUTTON.



36. THE DELIMIT 2 MENU SHOULD APPEAR, PRESS THE ACTION BUTTON.

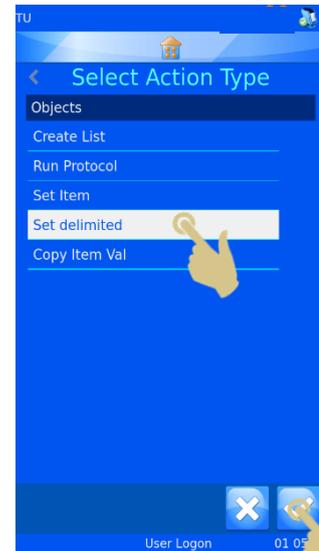


37. THE ACTION MENU SHOULD APPEAR, PRESS THE TYPE BUTTON.



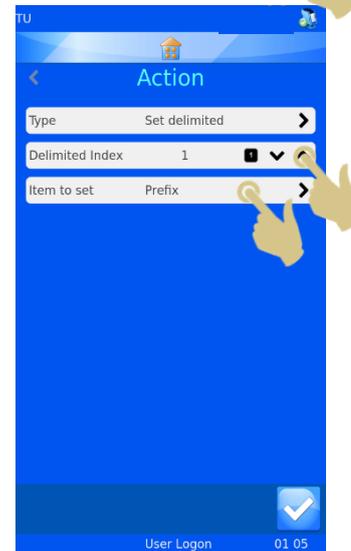
38. THE SELECT ACTION TYPE MENU SHOULD BE DISPLAYED.
SELECT THE SET DELIMITED ACTION TYPE.

39. PRESS THE CHECK BUTTON.



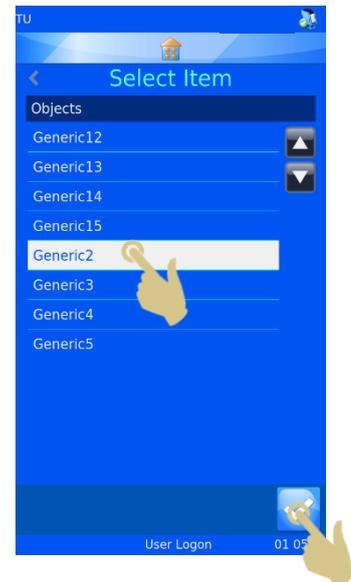
40. THE ACTION MENU WILL APPEAR. PRESS THE UP ARROW TWICE
TO SET THE DELIMITED INDEX TO 1.

41. PRESS THE ITEM TO SET BUTTON.



42. THE SELECT ITEM MENU SHOULD APPEAR, SELECT THE
GENERIC2 ITEM.

43. PRESS THE CHECK BUTTON.



44. THE ACTION MENU SHOULD APPEAR, PRESS THE CHECK BUTTON.



45. THE DELIMIT 2 MENUS SHOULD APPEAR, PRESS THE CHECK BUTTON.



46. THE RULES MENU SHOULD APPEAR, PRESS THE CHECK BUTTON.



47. THE DATA ASSIGNMENT MENU SHOULD APPEAR, PRESS THE HOME BUTTON.



Chapter 5 - Troubleshooting

5.1. *Cassette Requirements*

Only approved consumables listed in Appendix A should be used in the Pyramid Innovation Printers in order to achieve best print quality and print durability. Use of any other types of consumables may cause damage to the printer. Use of any other consumables must be validated by the end-user laboratory.

5.2. *Cleaning the Touchscreen*

The touch screen should only be cleaned when necessary. Because the display is a touch screen, it should never be cleaned when the power is on. A commercial glass cleaner can be used.

To clean the touchscreen:

- a. Power the printer off.
- b. Clean the screen using a soft cloth and glass cleaner or alcohol.
- c. Power the printer on.

Chapter 6 – Glossary and Specifications

6.1. Icon Glossary



Information



Data



Date and Time



Display



International



Keyboard



Network



Printer



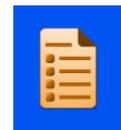
Software



Sound



User



Items



Objects



Templates



Translators



Data



Auto Print



Y Flip



Fast Mode

6.2. Button Glossary



Home



Settings



Trash Bin



Cancel or Delete



Tab



Up



Down



Confirm



Edit



Add



Sequence



Protocol



Items



Template



Rules



Play



Eject



Hopper



Active Hopper

6.3. Printer Specifications

Instrument	
Dimensions	160mm Width x 307mm Deep x 575mm High (with hopper)
Weight	12Kg (including hopper)
Input Voltage	24V DC
Current	2.7A
Print resolution	600 dpi
Print speed	3-5 seconds typical (full area print)
Cassettes	Only approved cassettes listed in Appendix A can be used in the Pyramid Innovation Cassette Printers
Environment	Altitude up to 2,000m Temperature 5 °C to 40 C Recommended +15°C to +30 °C (+59 °F to +86 °F) Performance may deteriorate if operated outside recommended range.
Storage environment	-25 °C to +45 °C (-13 °F to 113 °F) Short period only
Relative Humidity	Max. 80% RH up to 31°C Decreasing linearly to 50% RH at 40°C
Pollution	Level 2
Over voltage category	II

6.4. Embedded Laser Specifications

Embedded Laser Category	CLASS 4
Wavelength	1064nm
Beam divergence	35mrad
Modulation frequency (nominal)	40kHz
Pulse width (nominal)	3nsec
Max Power (nominal)	2.0W

6.5. Consumables and Accessories

Description	Part Ref
Mains lead USA	SP50007
Power adaptor for Laser Printer 24V 2.7A	CP50006
Mains lead UK	SP50009
Mains lead EU	SP50010
Mains lead, China	SP50015
Mains lead, Japan	SP50016
Cassette Dispense Hopper	P52001-E
Hopper Rack, 2 position	P52002-E
Collection Tray	P52003-E
Cassette Hopper Stand	P52004-E

Appendix A

Recommended Cassette Types

Manufacturer / Brand
Cellpath / System II+ Slotted Laser Threaded Cassettes
Cellpath / System II+ Biopsy Laser Threaded Cassettes
Cellpath / System II+ MicroBiopsy Laser Threaded Cassettes
Sakura / Tissue-Tek® Paraform® Sectionable Laser Cassette

Appendix B

Product return Safety Declaration Form

Part1 Decontamination Certificate

Any instrument or part of any instrument must be clean before being returned, and where necessary accompanied by a completed Decontamination Certificate. Should the instrument or any part of it be received in an unclean condition, or Pyramid Innovation Ltd consider it to be a hazard, the instrument or part will be returned unrepaired at the expense of the customer.

It is important that the certificate is forwarded by post or fax, and a copy attached to the exterior of the container. Containers will not be opened until the company is in possession of the required certificate.

This form MUST be completed by the customer and NOT by a Distributor or distributor employee.

If an instrument or part is to be returned to Pyramid Innovation Ltd, please note the following.

1. If the instrument or any part of it has been exposed to or been in contact with potential pathogenic or radioactive material, it is essential that it is decontaminated.
2. Set procedures are laid down in the European Health and Safety Directives for decontamination. To avoid any misunderstanding, we request that all instruments or parts returned to us must be accompanied by a certificate stating the following:

We certify that this (Model)

Serial No

- Has not been exposed to pathogenic, radioactive or other hazardous material and has been cleaned.
OR
- Has been decontaminated and cleaned (if exposed to the above) according to approved procedures following exposure to:

Has the instrument been used for work with human or animal Transmissible Spociform Encephalopathies, e.g. Creutzfeld-Jacob disease, Scrapie or BSE?

YES / NO

If yes, please contact Pyramid Innovation service before taking any further action.

Signed Position

Name (Block Capitals)

Company or Organization

Full Address.....

Part 2 Guidelines for Returning Instruments

Please use the checklist below to ensure that the instrument being returned is ready for collection.

All reagents / wax removed from instrument, including vapour traps (if applicable).....

Accessories are secured / itemised

Instrument is packed in original packaging..... YES / NO

RMA No Carrier

For Attention of