

Operating Manual

Your guide to the StatLab

PiSmart Single Hopper Thermal Transfer Cassette Printer
PISMART1HOPPER



Company Information

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Purchase and Service Contact

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StatLab.com



This instrument conforms to the essential requirements of

- Low Voltage Directive 2014/35/EU

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 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.



Manufacturer

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.

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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.

Safety Information

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

General Safety



This instrument, as supplied, conforms to IEC61010-1 issue 2010; however, the addition of chemical 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 supplier.



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

www.PyramidInnovation.com

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.

How To Use This Guide

Introduction

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



Using Cassettes other than the ones recommended may cause irrevocable damage to the instrument. Please see Appendix A for a list of recommended Cassettes.

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 damp soft cloth or paper towel with a mild detergent.

Getting Started

This takes you through from opening the box to printing a test Cassette.

Printer Operation

This takes you through the process of creating and printing Cassettes.

Printer Configuration

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



Hand icon indicates where to touch the display

Getting started

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

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.

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 1 – Installation and Setup

Identification of Parts

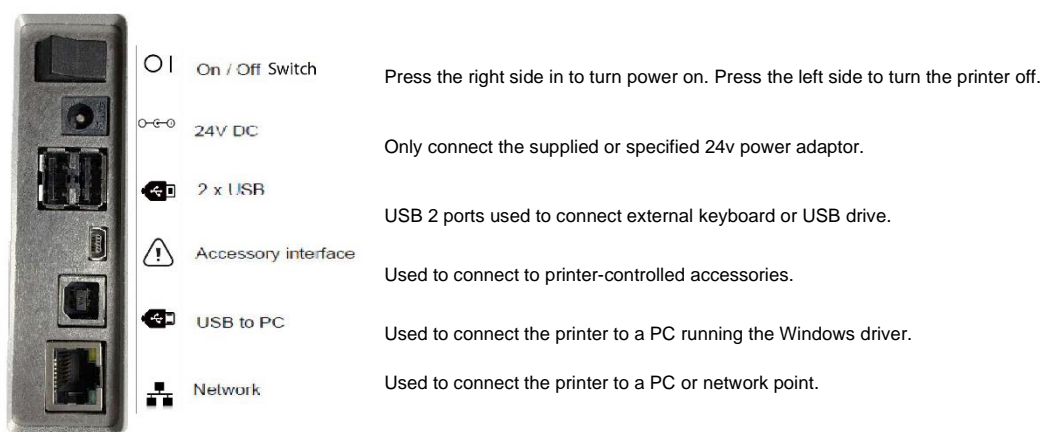
- A. Removable hopper
- B. Touch display
- C. Cassette collection chute
- D. Mains adaptor
- E. Barcode scanner
- F. Connections and power input



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.



Scanner

The barcode scanner mounted under the left front edge of the Cassette printer uses an LED light source requiring no special eye protection during use of the scanner. 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.

Printer Operation

The printer is designed to print the Cassette 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 a thin green bar onto the table surface. This bar is an 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 barcode scanner intentionally reads only specific symbologies, by default, Datamatrix, QR and Code 128 will be decoded.



Before attempting to print Cassettes, the hopper will need to be filled with Cassettes, please refer to the list of approved Cassette types later in the operator guide.

The Cassettes 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.

To print a Cassette, press the play button on the clear area of the displayed Cassette image.

The built-in software enables you to:

- Print individual Cassettes
- Create and print sequences of Cassettes
- Edit Cassette data
- Change the template used to print Cassettes

Design your own templates using different fonts and barcode types

- Set fields to automatically increment
- Setup templates to accept data from scanned barcodes or LIS input
- Edit and delete Cassettes within a sequence of Cassettes
- Print individual Cassettes within a sequence of Cassettes

- Save a sequence of Cassettes as a Protocol to be used again

The Pi Cassette printer can print Cassettes from the following input methods:

- Label images designed using external software or programs
- Internal designed labels using the scanner to capture required data
- Internal designed labels using data files from LIS or other external source



Ribbon Meter

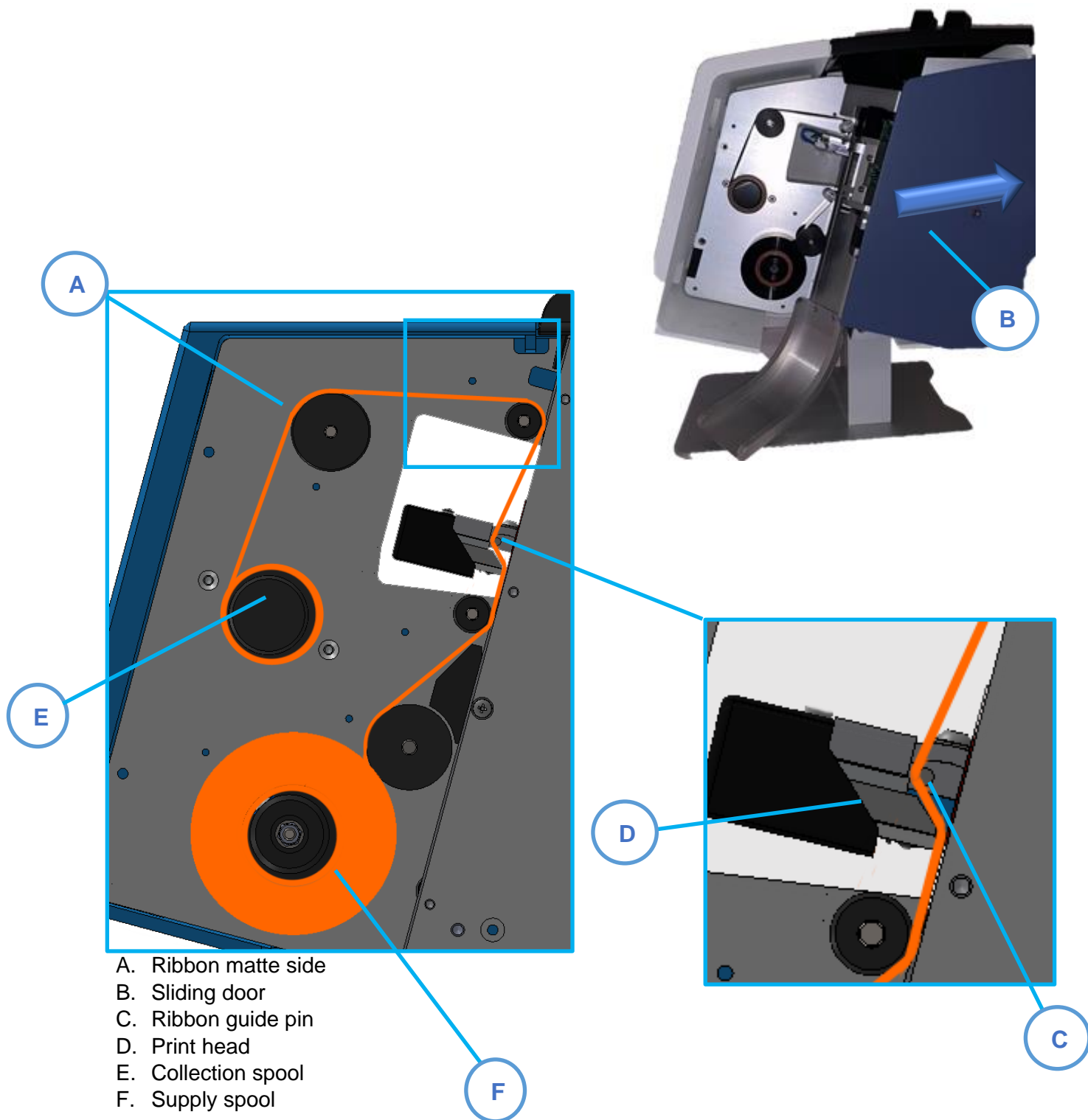
The ribbon meter icon is located on printer status bar. The meter indicates the approximate ribbon that remains on the supply spool. The meter has three indications. When the supply is between full and low, the indication will be Green. When it is getting low, it will indicate two Yellow bars. When it is critically low, it will indicate one Red bar.

Changing the Ribbon

The printer is supplied with one ribbon preloaded inside the Pi Cassette printer. The ribbon will last approximately 12,000 Cassettes before a new ribbon is required.

Use only the correct ribbon identified by the Red core. The Red side of the ribbon core should always face out and can be seen when the ribbon is loaded correctly. Using other printer ribbons may cause damage to the Cassette printer or render the Cassette label ID unreadable. The ink used on the Pyramid Innovation Ltd thermal transfer ribbon is resistant to standard laboratory chemicals including Alcohols and Xylenes. To change the ribbon, remove the old ribbon and spools. Install the new ribbon and feed through the printer as shown in the next diagram.





Loading Cassettes

The Pi Cassette printer can select between one on-board Cassette hoppers and one manual load position. Prior to use, the on-board Cassette hopper should be loaded with Cassettes.

The Cassette hoppers have 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 Cassette hopper will need to be attached to the top of the Pi Cassette printer.

To load Cassettes into the hopper:

1. Place a string of cassettes into the hopper.
2. While pressing downward on the top of the stack, firmly pull the plastic string out of the cassettes.
3. Add Cassettes as necessary until the hopper is full – the Cassettes should never be stacked higher than the top of the hopper.



Cassette Selection

It is critical that the Pyramid Innovation cassettes are used in the Pi Cassette printer, these cassettes are specially designed for best operation in the printer. Using other cassettes, can cause damage to the instrument 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 Pi Cassette printer.

Chapter 2 - Main User Interface



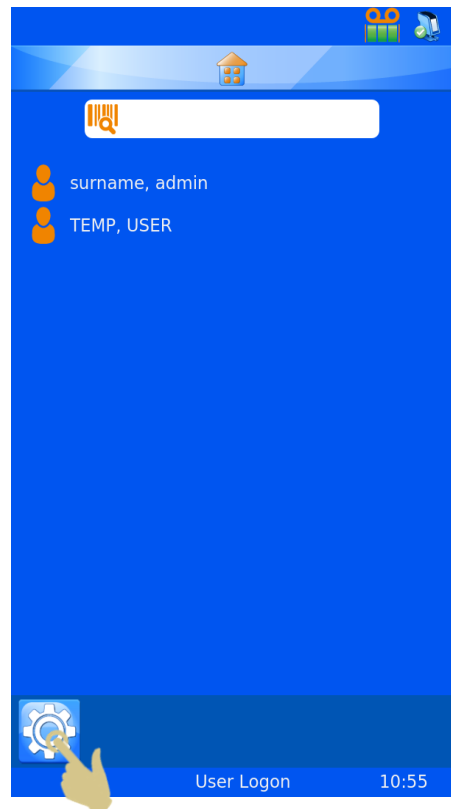
User Mode

Adding a new user

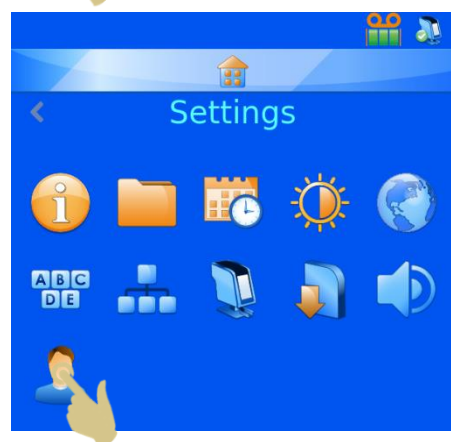
The printer will power up with User Mode enabled, a single admin user and temporary user will be displayed.

To add a new User

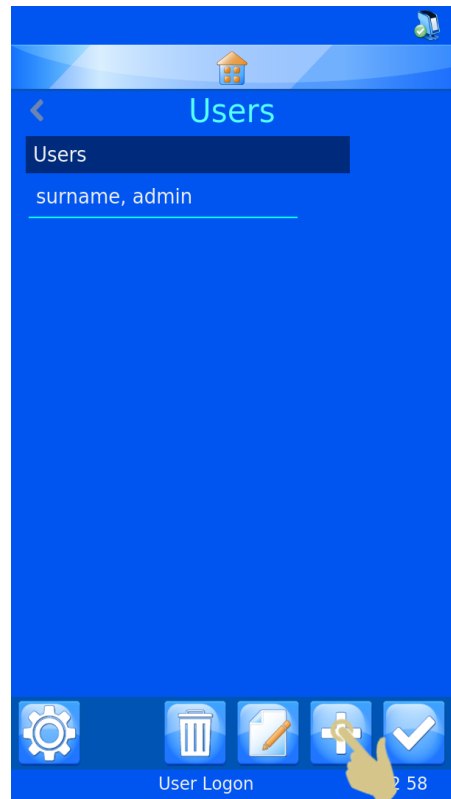
1. Press the settings button.



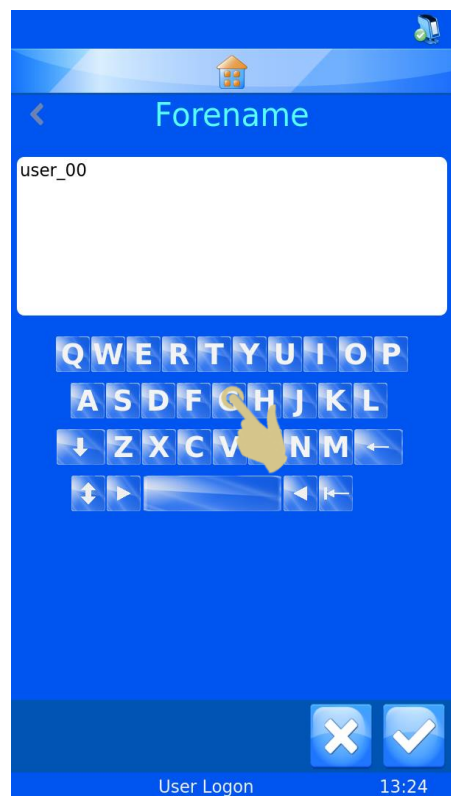
2. Press the User Button



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.

TU

AMY surname

Forename AMY

Surname PARSON

Initials AP

Pin 9631

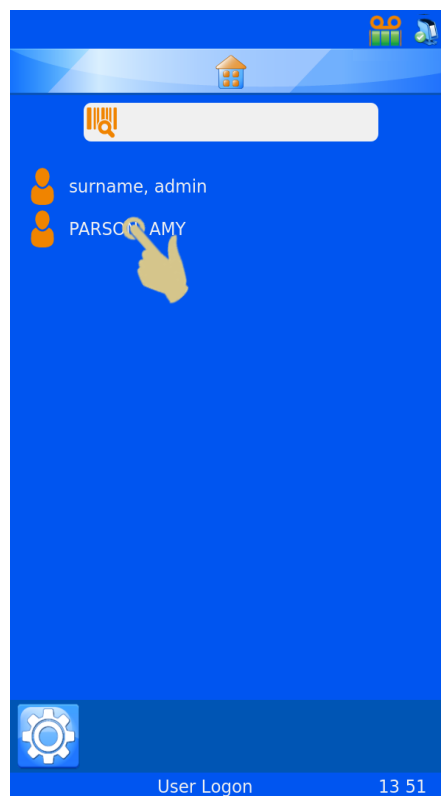
ScanCode @2358@

User Logon 10:4

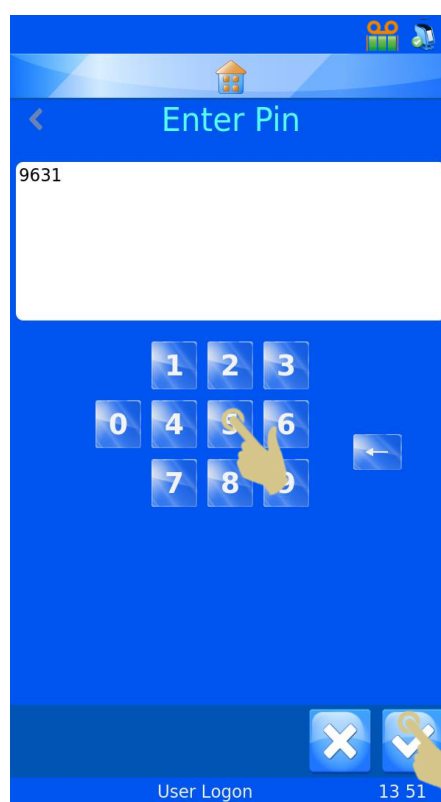
User Log-in

To log into the system

1. Select the correct user and enter the passcode.



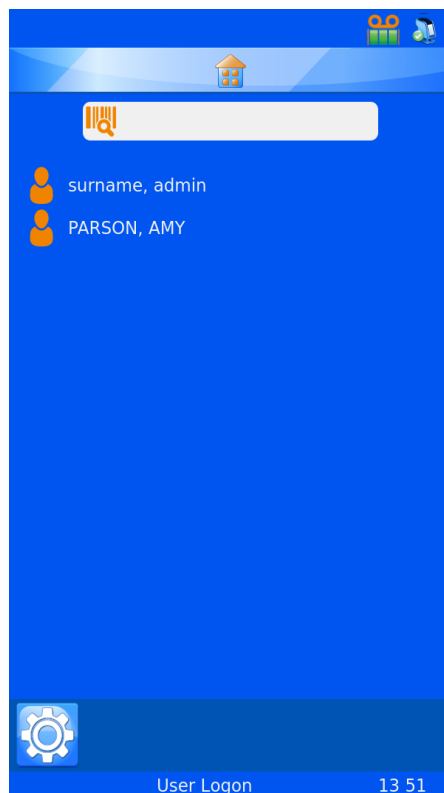
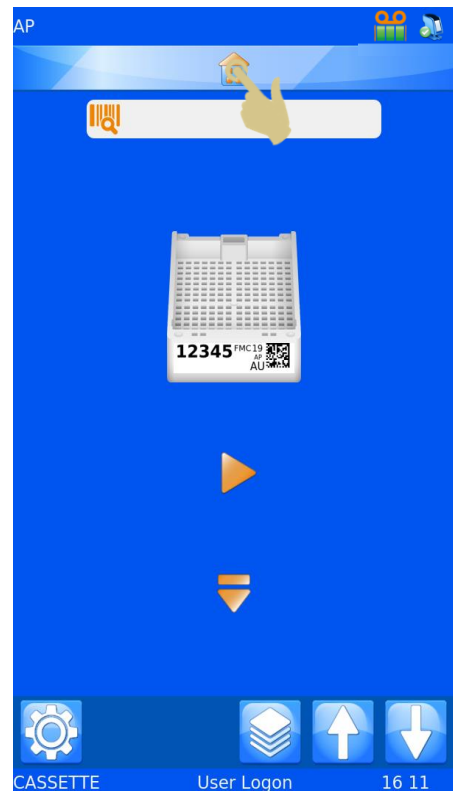
2. Enter the correct passcode
3. Press the check button
4. Once the correct code is entered, the home screen will be displayed. If the incorrect code is entered, the user screen will be displayed.



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.



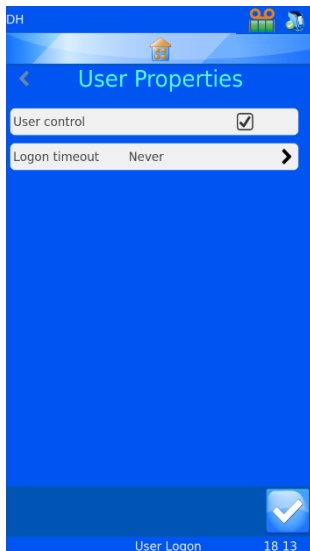
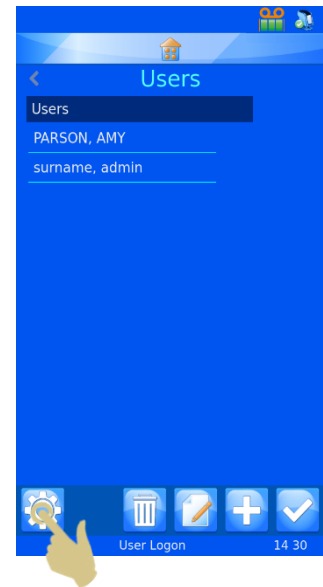
To log into the system using a scan code, simply scan a barcode with the correct SCANCODE embedded, when this code is scanned, the home screen should appear.

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

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.

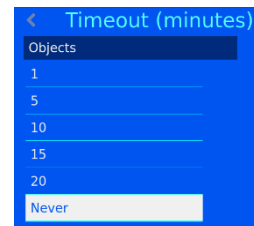


User Control

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

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 Cassettes. The default Template is displayed.

Home Screen

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

A. Printer Status Bar

The top bar of the display shows the printers status.



Ready

Printer is ready to print.



Busy

The printer is printing or busy.



Indicates remaining ribbon

B. Home button

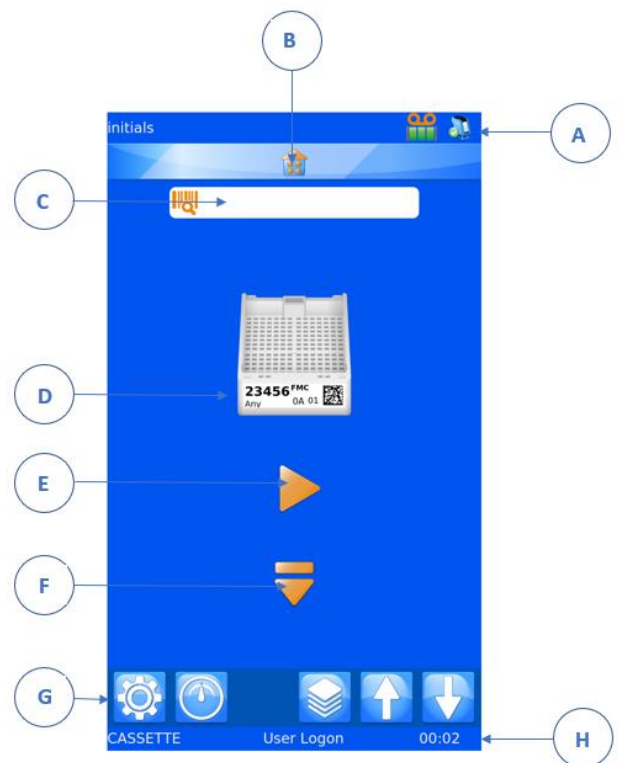
The home bar appears on all software screens. Pressing this bar from anywhere will bring you back to the home screen. If pressed at the home screen, the current user will be logged out and the User-login screen will be displayed.

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 displayed in the print queue.



D. Template

Shows the data that will be printed on the Cassette. 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 a Cassette 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 manual, 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.



This button activates fast mode



Cancel, this button cancels the current action



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



Trash bin or Discard, this button allows the user 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.

Printing Cassettes

The Pi Cassette printer is designed to print Cassettes on-demand. The displayed label shows what will be printed on the Cassette. This section applies to printing Cassettes regardless of the method in which the Cassettes were placed into the print queue.

To print a Cassette, press the play button, a Cassette will be dispensed and printed. If the printer is in fast mode, the printing action will start immediately.

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 Cassette data. Where Cassette labels have been successfully printed, the cancel button should be pressed and the queue inspected and cleared of any duplicate labels.

Printing a batch of Cassettes

When multiple Cassettes 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 Cassettes left



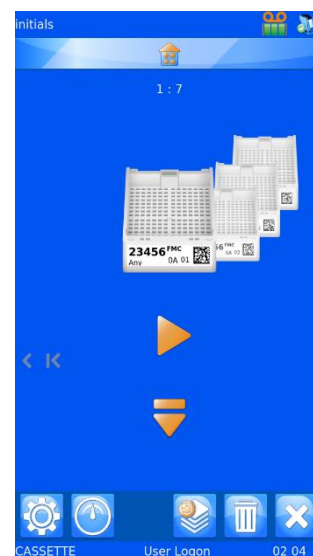
Moves Cassettes right



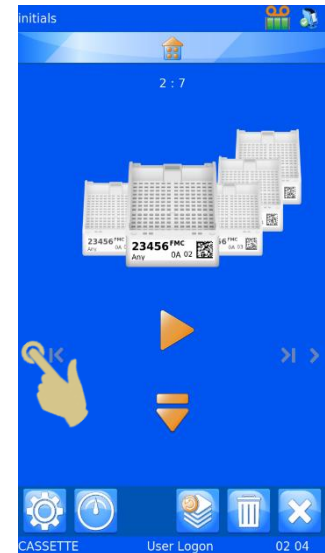
Moves one Cassette



Moves all Cassettes



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

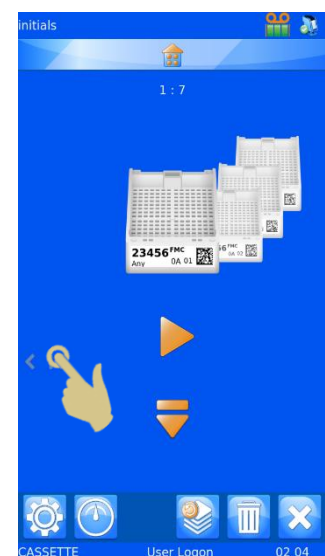


Reverse Order Printing

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

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

Once the Cassettes are printed, the first Cassette ordered will be at the top of the stack in the Cassette collection.



Cassette Queue Quantity

1 : 4

The Numbers at the top center of the home screen indicate the total number of Cassettes in the queue and the position of the front Cassette within that queue.

Deleting Cassettes in the queue

Once Cassettes are in the queue, individual or all Cassettes can be deleted from the queue. To delete all Cassettes, press the X button to delete the entire queue of Cassettes.



Press this button to delete all sides in the queue

To delete individual Cassettes, use the trash bin button. Pressing this button will delete the front Cassette only. Any Cassettes to be deleted, must be moved to the front position prior to pressing the trash bin button.



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

Settings Menu



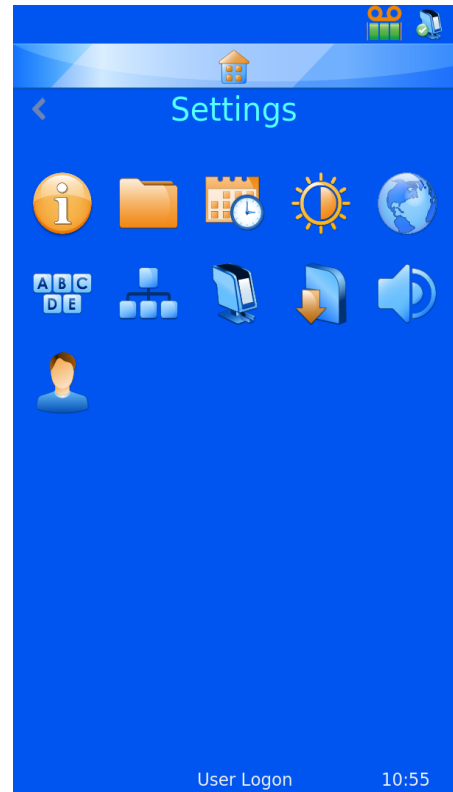
Home Button

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.



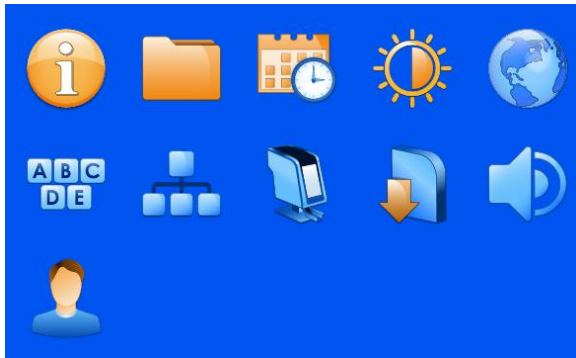
Back Button

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



Settings Menu Icons

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



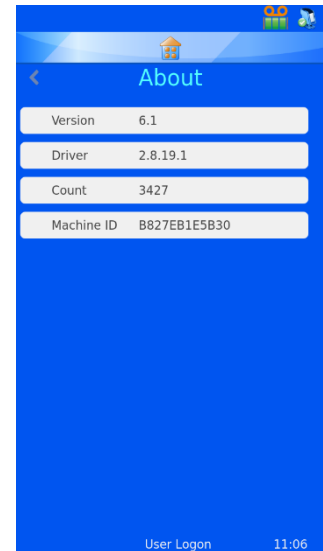


About Menu

Provides information regarding the printer's software and general information.

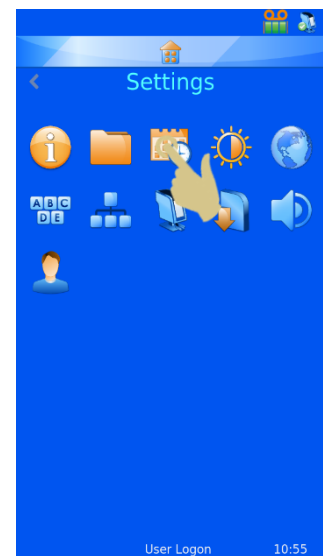
Shows:

- Software version
- Firmware version
- Count of total Cassettes printed
- Machine ID



Date & Time Menu

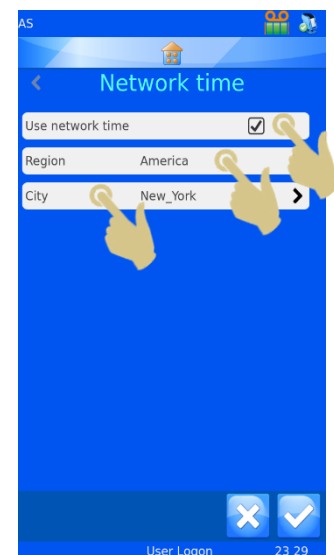
To set the time and date, press Settings and the Calendar Icons.



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



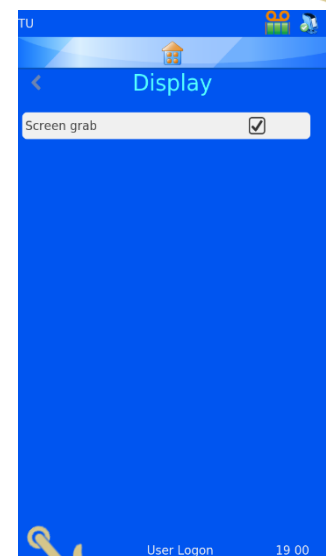
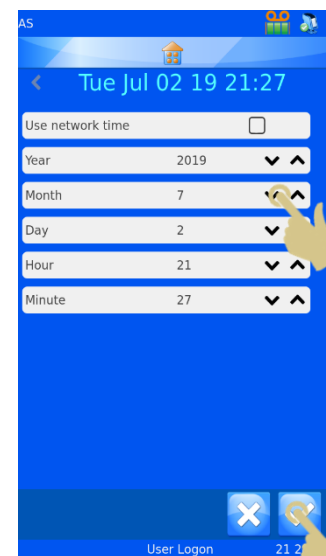
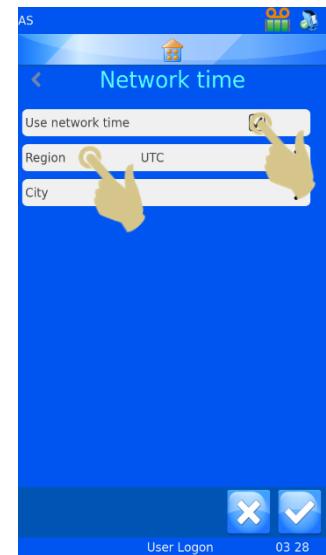
To Adjust the date and time manually.

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 AND THE DATE AND TIME AT THE TOP OF THE SCREEN IS CORRECT, PRESS THE CHECK BUTTON

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



Press here to save a screen image to the USB drive



Display Menu

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.



International Menu

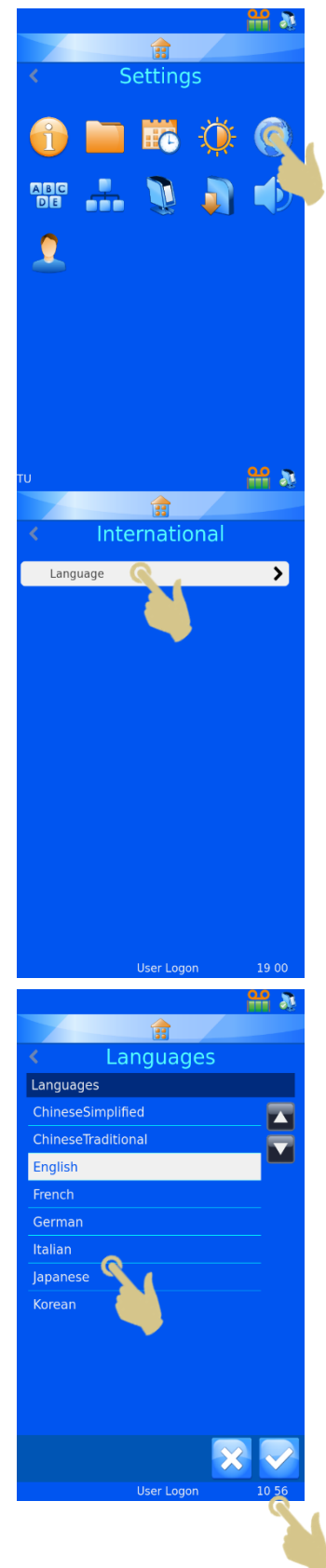
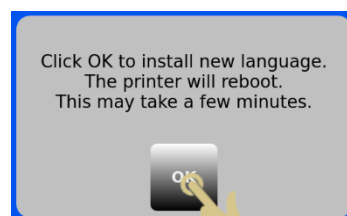
Languages

Provides the ability to change the displayed language.

The default language is English, all Cassette printers ship set to English language.

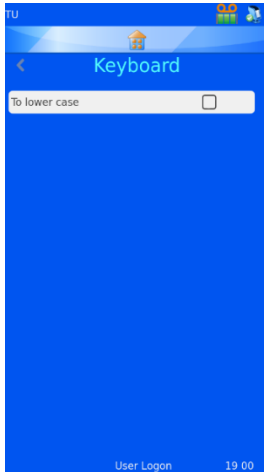
To select a different language:

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 CASSETTE 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.





Keyboard Menu



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

If unselected, the type will remain in uppercase.

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



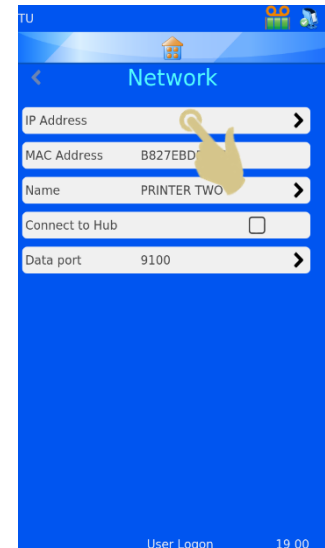
Network Menu

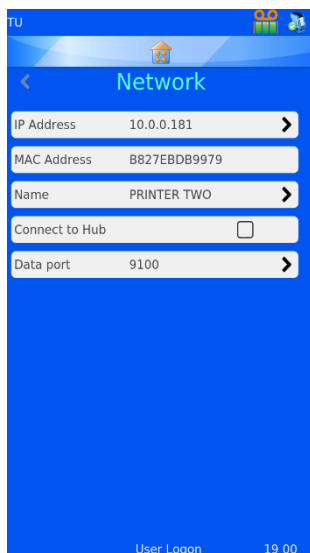
Network settings is used to connect the Cassette printer to networks and network services. The printer can be connected to networks via an RJ45 connector located at the back of the Cassette printer.

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





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)

MAC Address

Displays the MAC Address of the Cassette printer

Name

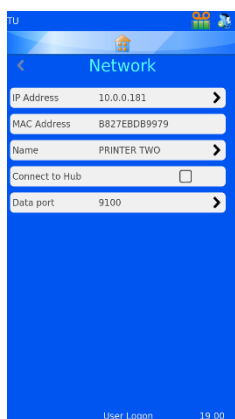
Used to modify printer name – this is used when connecting multiple devices and is also displayed at the bottom of the home screen

Connect to Hub

Used to connect one or more printers to the HUB (not available)

Data Port

Used to set a specific data port when connecting to a network (typical is 9100)

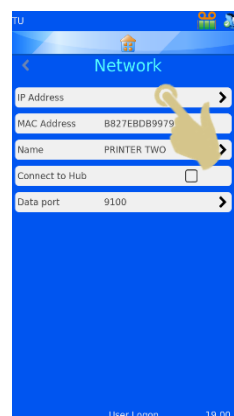


If connection to a network is successful, you should see an IP Address displayed in the box labelled IP Address. If the network is set up to automatically assign IP Addresses and DNS is selected, you should see an IP Address displayed.

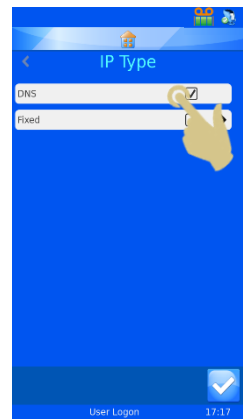
If the network is set up to use static IP Addresses a fixed IP Address will need to be entered.

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 Cassette 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.



Printer Menu

Index Tape

Advances the ribbon. The movement is a short distance if the advance system is working properly. If the ribbon moves a long distance (more than 1 cm) the advance system may be malfunctioning.

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.

Setup Password ON

Activates password requirement at main screen to enter Administration menus.



Production and Heat settings are password protected and cannot be entered by a routine user

Auto print ON

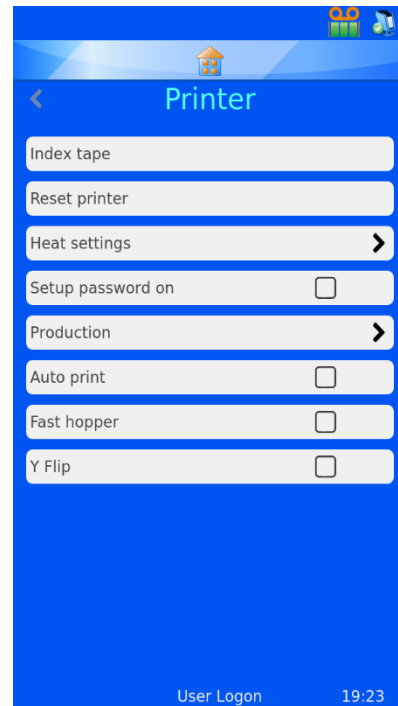
Activates automatic print start when sending images or text files to the printer. This feature does not work for internally generated labels created through keyboard input or scan.

Fast hopper

When checked, the printer operates in fast mode.

Y Flip

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





Software Menu

Upgrade Software

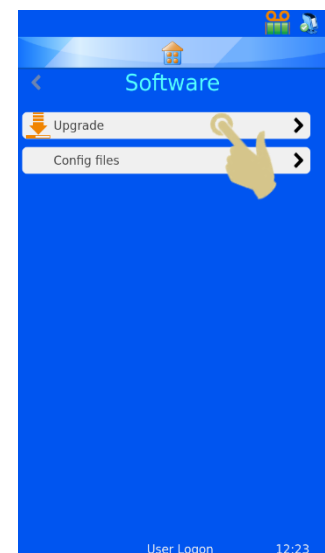
The software menu is used to upgrade the printer User-Interface software or to transfer the user configured settings. These can be uploaded to the printer from a memory stick or downloaded from the printer to a memory stick.

To Upgrade the software

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

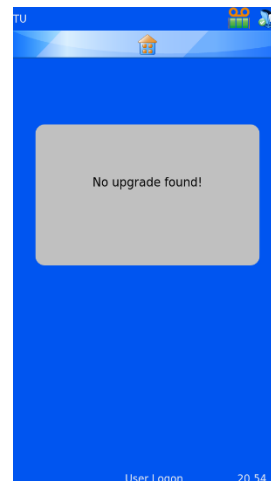
To upgrade the software:

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



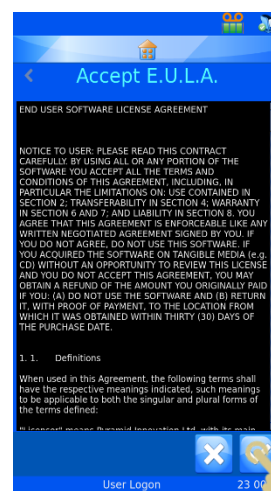
6. IF THERE IS NOT A VALID UPGRADE FILE FOUND IN EITHER USB PORT, A NO UPGRADE FOUND! MESSAGE WILL BE DISPLAYED MOMENTARILY. NO CONFIRMATION OF THE MESSAGE IS REQUIRED.

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.



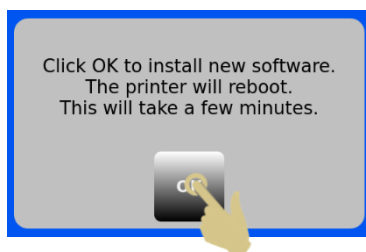
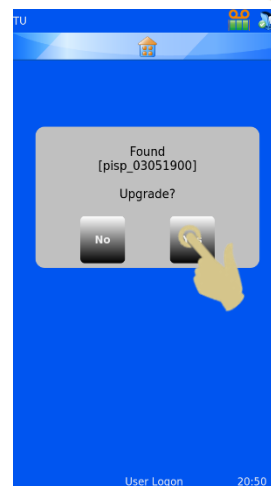
7. IF A VALID UPGRADE FILE IS FOUND AN END-USER-LICENSE AGREEMENT WILL BE DISPLAYED. IF THE CANCEL BUTTON IS PRESSED, THE UPGRADE WILL BE CANCELLED. IF THE CHECK BUTTON IS PRESSED, THE SOFTWARE INSTALLATION WILL CONTINUE.

8. PRESS THE CHECK BUTTON



9. PRESS THE YES BUTTON

10. 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.



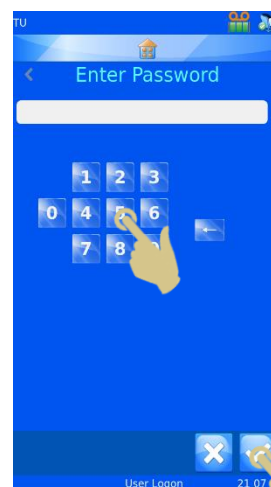
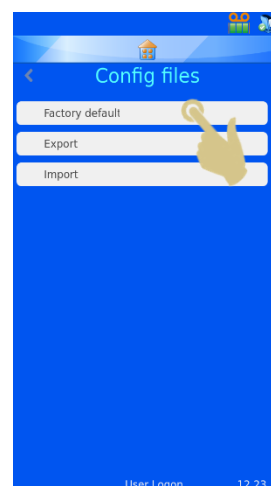
Configuration Files

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 BE CYCLED FOR THE CHANGE TO BE EFFECTIVE.

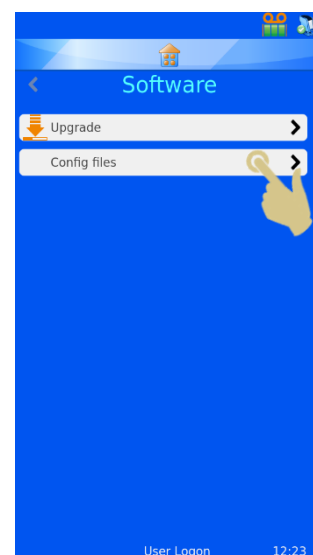


Export Printer User Configuration (XML)

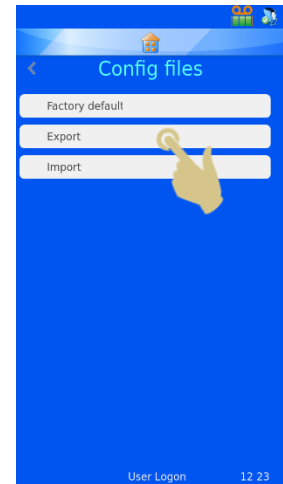
The XML feature allows the user to back up or copy the Cassette printer user configuration. It is good practice to save a back-up copy of the configuration once the Cassette printer has been configured. Having a back-up copy will be useful should anything be lost or inadvertently changed in the configuration.

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 NOT HAVE AN XML FOLDER IN THE ROOT DIRECTORY
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.

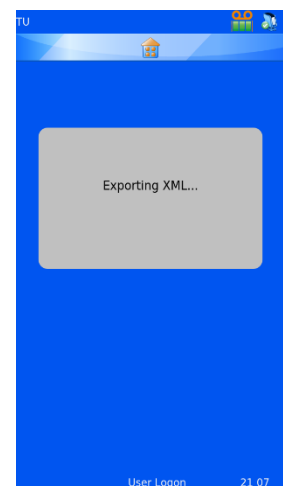


7. A MESSAGE WILL APPEAR AS THE XML FILES ARE BEING EXPORTED. WHEN THE PROCESS IS COMPLETE, THE XML MENU WILL AGAIN BE DISPLAYED. THE FILES CAN BE COPIED TO OTHER STORAGE DEVICES USING NORMAL FILE COPY METHODS.



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

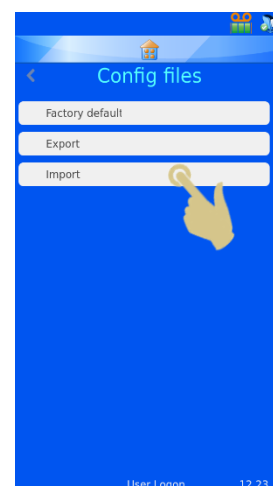
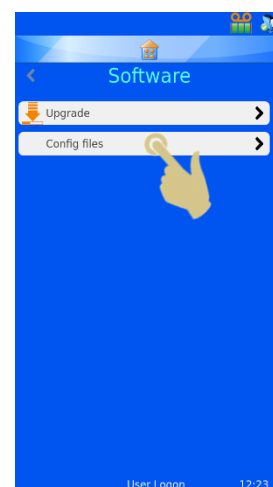
8. IF THE FILES ARE BEING EMAILED, IT IS RECOMMENDED THAT THEY ARE ZIPPED PRIOR TO SENDING VIA EMAIL.



Import Printer User Configuration (XML)

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

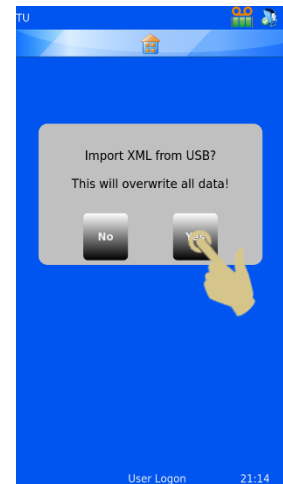
1. PLUG THE USB STICK INTO ONE OF THE USB SOCKETS IN THE BACK OF THE PRINTER. THE USB STICK SHOULD HAVE A VALID SET OF XML FILES IN THE ROOT DIRECTORY OF THE DRIVE.
2. PRESS THE SETTINGS BUTTON
3. PRESS THE SOFTWARE BUTTON
4. PRESS THE CONFIG FILES BUTTON
5. PRESS IMPORT



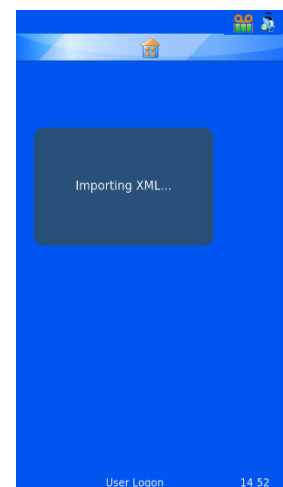
6. A CONFIRMATION MESSAGE WILL APPEAR, TO CANCEL THE DOWNLOAD, PRESS No. TO CONTINUE THE DOWNLOAD PROCESS, PRESS YES.



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

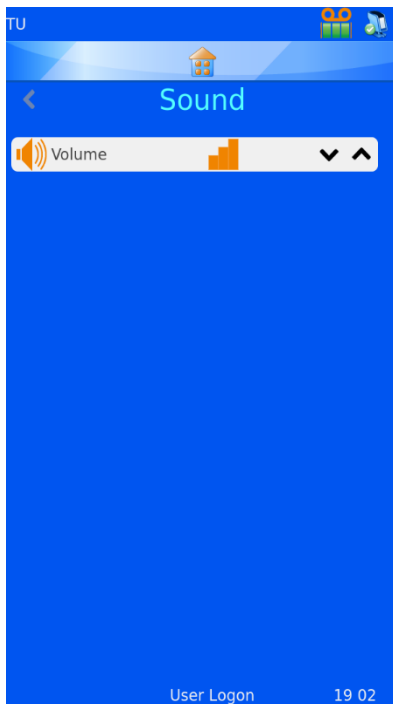


7. A MESSAGE WILL APPEAR AS THE XML FILES ARE BEING IMPORTED. WHEN THE PROCESS IS COMPLETE, THE XML MENU WILL AGAIN BE DISPLAYED.
8. REBOOT PRINTER.





Sound Menu



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



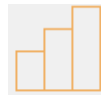
Volume set to High



Volume set to Medium



Volume set to Low



Volume set to Off

Windows Printer Setup

The Cassette 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 USB or Ethernet connection and can be set up and configured automatically using the drivers.

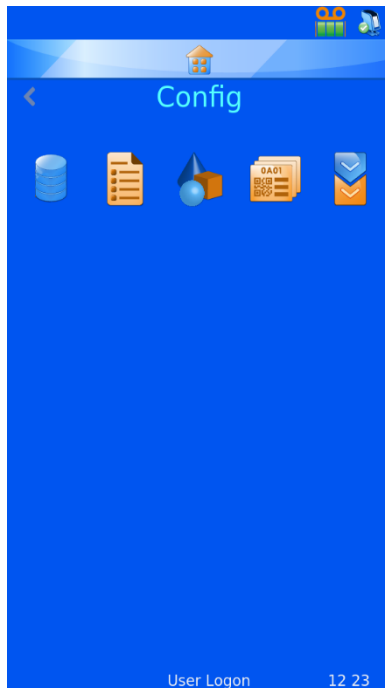
The Cassette printer hardware is digitally signed and usable with Microsoft Windows® operating systems Versions: Windows 7, Windows 8 and Windows 10 for both 32 and 64 bit operating systems.

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.



Config Menu

The Config menu is used to configure the printer to accept data, add the data to the internal database and design the Cassette 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 sets up and configuration of the items used by the system



Objects

The Objects menu sets up items so that Request Forms, Containers, Cassettes and Cassettes 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 to by the Template when creating new label designs

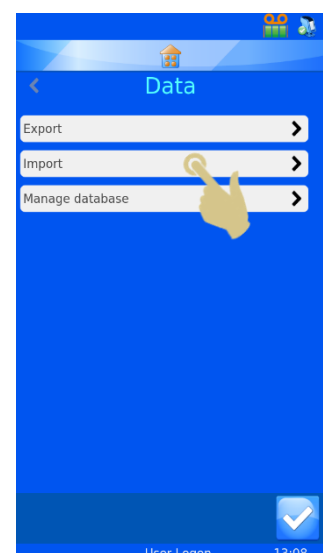
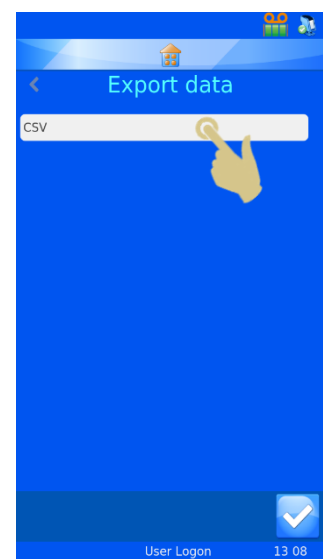
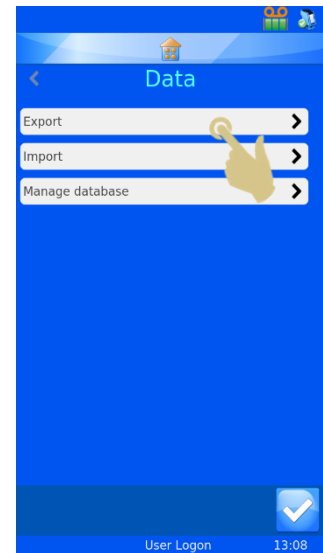


Data Menu

Export

Export as CSV

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



Import

Import is used to import different types of files onto the printer. These files will be either text files 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 data 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.

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.

Manage Database

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

Oldest Days

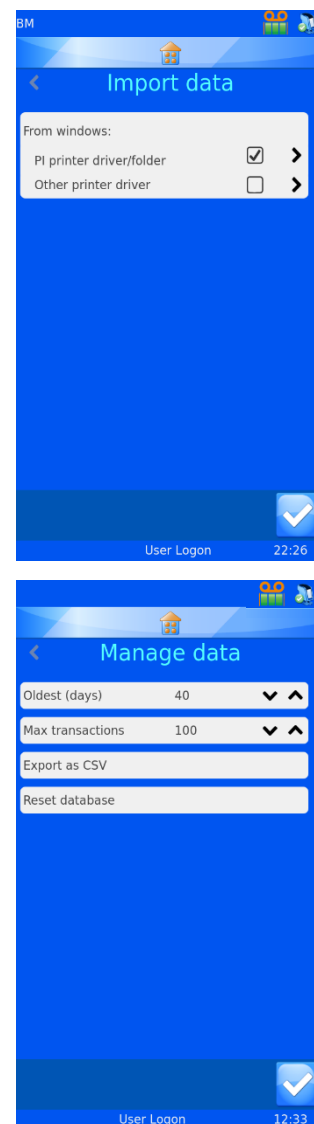
Sets the number of days data will be held on the Cassette printer

Max Transactions

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

Reset Database

Deletes all Cassette printer data



Using the Internal Label Design Function

The Cassette 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 and data can be typed in from a 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 Cassette labels.

The label is designed using several 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 Generic Text Only Windows driver. The data is captured in the scan box.

The data is delimited by the internal data translator. The translator converts the delimited text and imports it into the Cassette printer's internal database.

The template imports data from the database and organizes the data onto a ¼ x 1-inch label design. The items can be moved around and the font size adjusted to achieve a perfect label.



S19,12345,A,01



Data assignment

Item = Data

Prefix = S19

CaseNo = 12345

Suffix1 = A

Suffix2 = 01



Template data

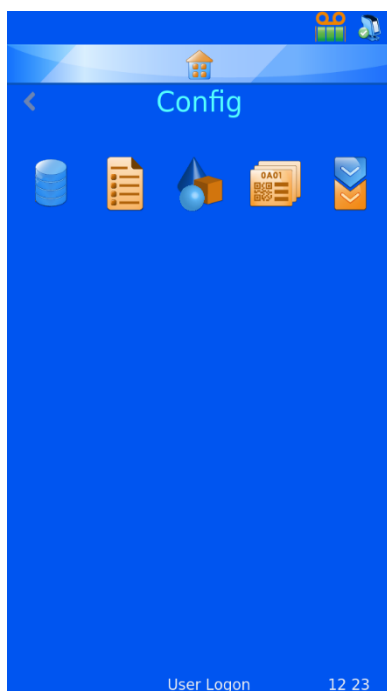
S19	A
12345	01

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 allows setup and configuration of the items used by the system

Objects

The Objects menu allows setup of items so that Request Forms, Containers, Cassettes and Cassettes can be automatically identified by the system

Templates

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

Translator

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



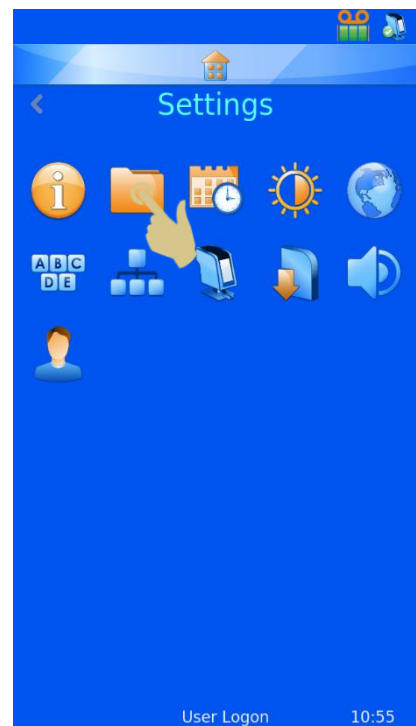
Items Menu

Data items are used to format data and display data in templates. 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.

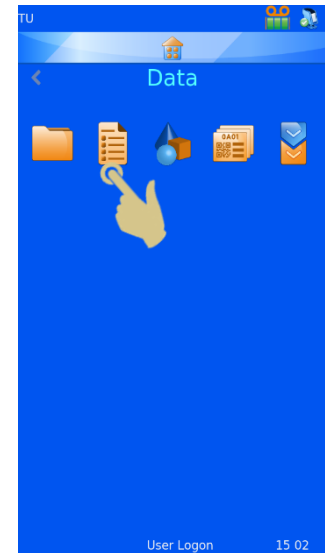
	A	B	C	D	E	F	G
1	Prefix	Case No	Suffix 1	Suffix 2	Generic 1	Generic 2	Generic 3
2							
3							
4							
5							
6							
7							
8							

There is a fixed set of Items in the printer software, 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 DATA

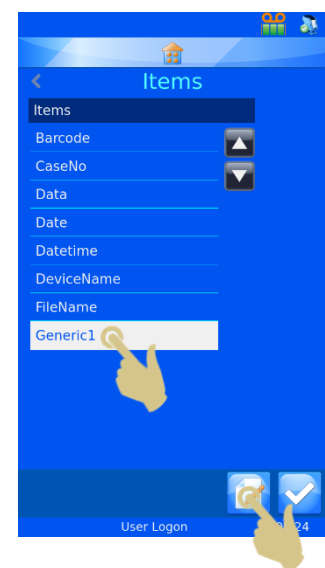


3. PRESS ITEMS



4. SCROLL TO AND SELECT GENERIC 1

5. PRESS THE EDIT BUTTON



Name

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

Data Type

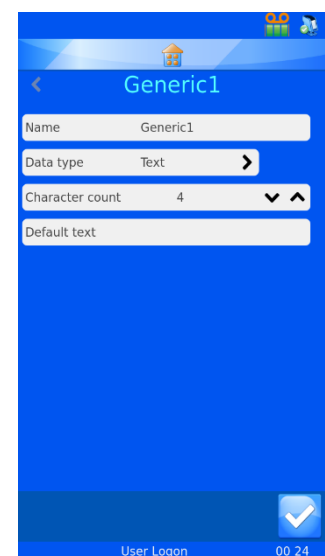
This is used to select specific type of data that will be sent to the database. Choices are Text, Numeric, List and Datetime.

Character Count

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

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							

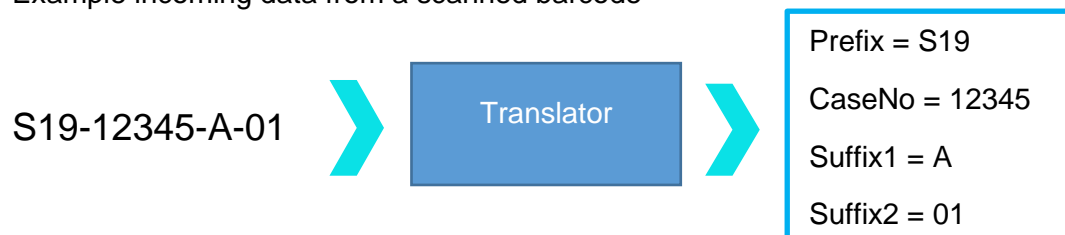
Translators

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

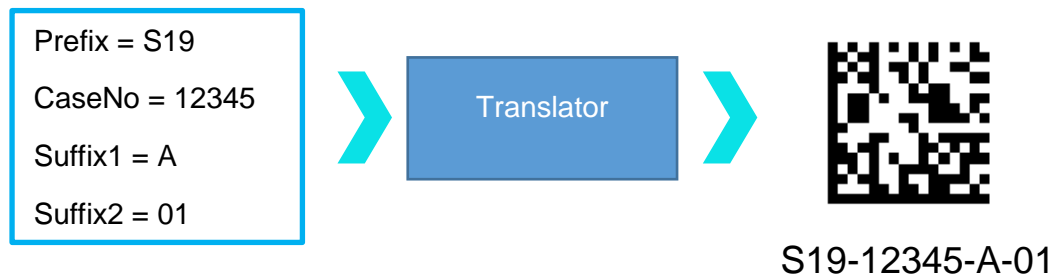
Incoming data is passed through a Translator to extract sections of data and move it into data items.

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

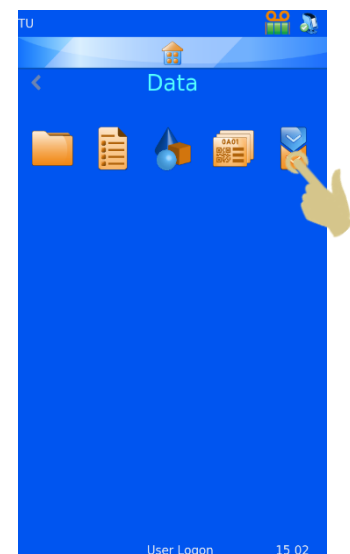
Fixed length data

Fixed length data has data elements of fixed length.

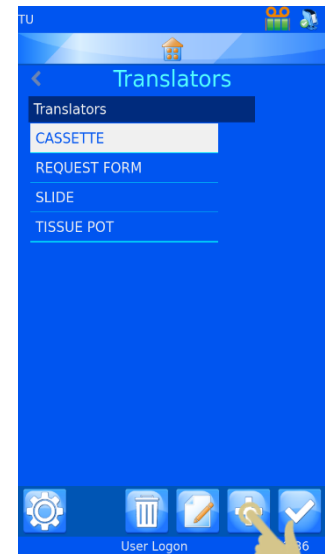
S1912345A01

Adding a Translator- Delimited data

1. PRESS SETTINGS
2. PRESS DATA
3. PRESS TRANSLATOR



4. PRESS ADD

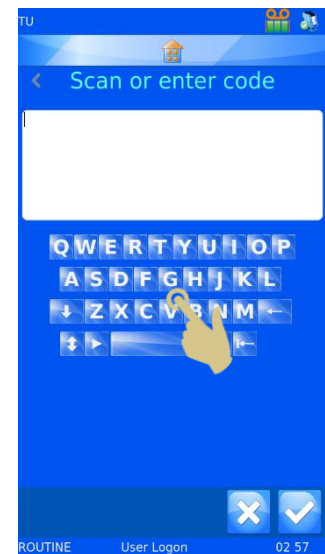


5. TYPE A NAME FOR THE TRANSLATOR

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 THE SOFTWARE. THE DATA SHOULD APPEAR IN THE SCANCODE BOX.

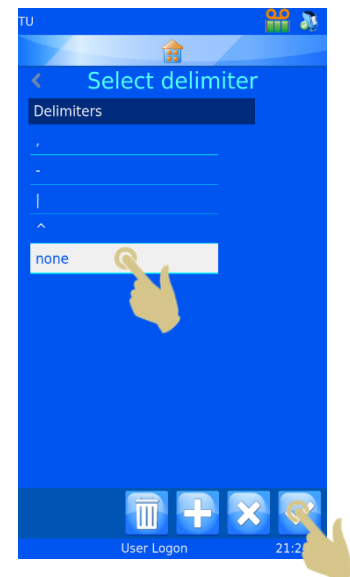
9. PRESS THE CHECK BUTTON

10. THE SELECT DELIMITER BOX WILL OPEN. THE TRANSLATOR WILL 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





Translator Menu

Name

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

Object

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

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.

Item Assignments

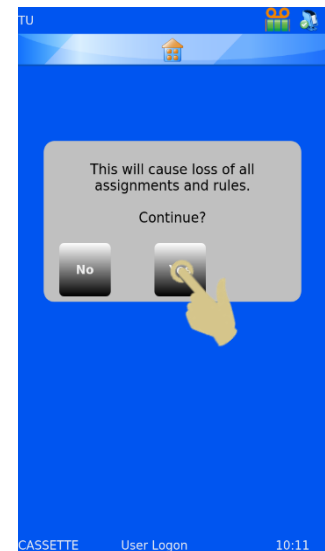
This identifies the item assigned specific data in the translation process.

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.

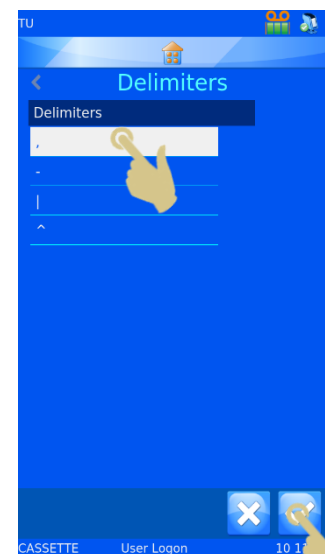
15. A CONFIRMATION WINDOW WILL OPEN. TO CONFIRM THE CHANGE, PRESS YES.

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



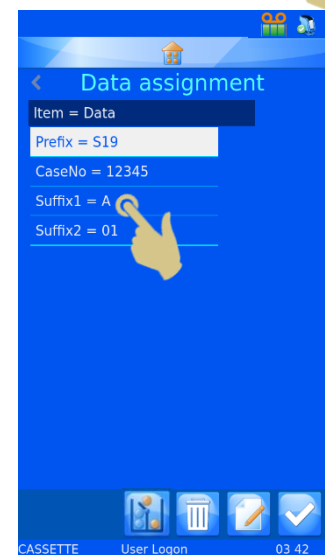
16. SELECT THE REQUIRED DELIMITER AND PRESS THE CHECK BUTTON.

TO ADD ADDITIONAL DELIMITERS, REPEAT STEPS 13 - 15



Item Assignments

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



18. THE CURRENT ASSIGNED ITEM WILL BE HIGHLIGHTED.

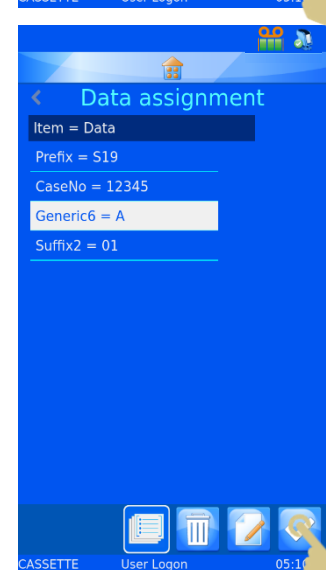
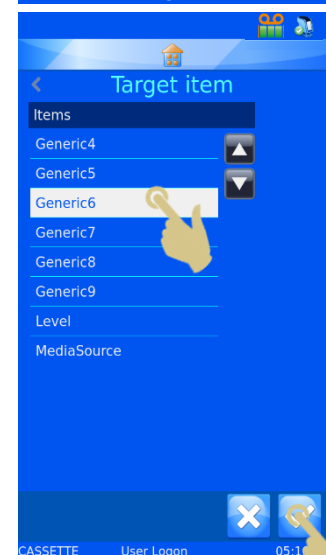
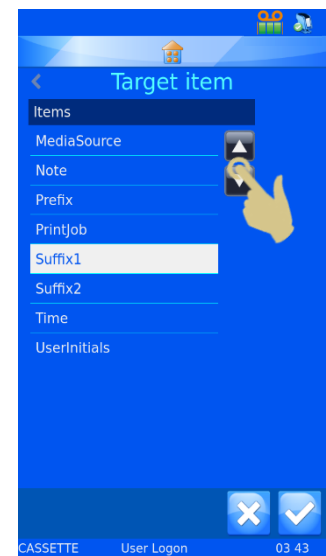
19. PRESS THE UP OR DOWN BUTTONS TO DISPLAY ADDITIONAL ITEMS.

20. SELECT THE NEW ITEM

21. PRESS THE CHECK BUTTON

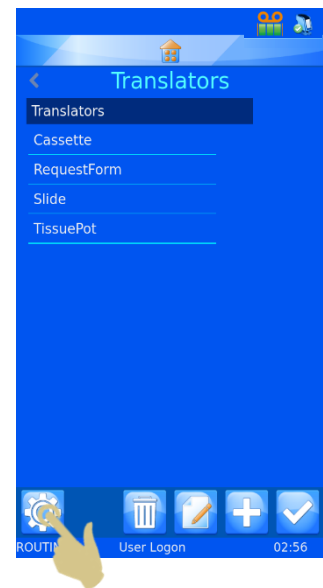
22. THE NEW ASSIGNMENT WILL BE DISPLAYED

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



Translator Properties

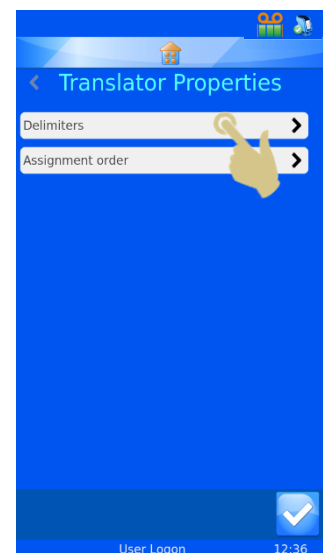
The list of delimiters and the order in which the translator populates data items can be customized using the translator properties menu. From the Translators menu, press the settings button.



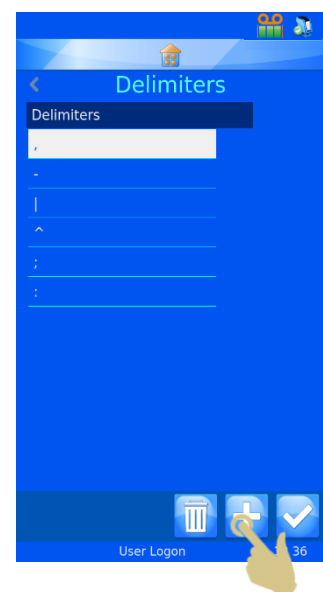
Delimiters

Delimiters can be added to the available list.

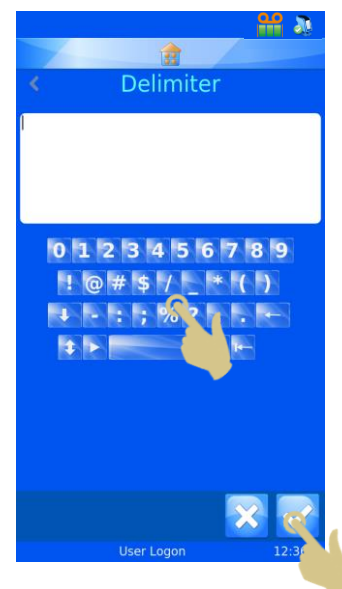
1. TO ADD A DELIMITER, PRESS THE DELIMITERS BUTTON.



2. PRESS THE PLUS BUTTON.



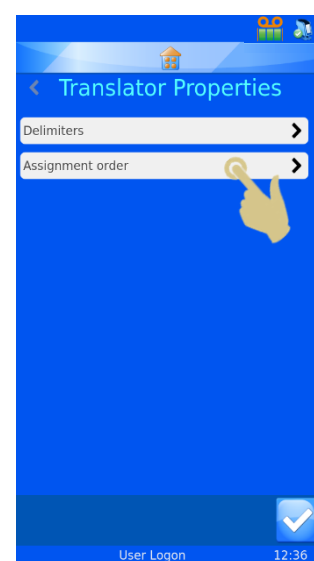
3. AN ENTRY BOX WILL OPEN WITH AN ON-SCREEN KEYBOARD. A NEW DELIMITER CAN BE TYPED IN OR SCANNED IN THROUGH THE INTEGRATED SCANNER.
4. IF THE ON-SCREEN KEYBOARD DOES NOT HAVE THE DESIRED DELIMITER, SCAN A BARCODE WITH THE DELIMITER INCLUDED. DELETE ALL ADDITIONAL CHARACTERS UNTIL ONLY THE DELIMITER REMAINS AND PRESS THE CHECK BUTTON.



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



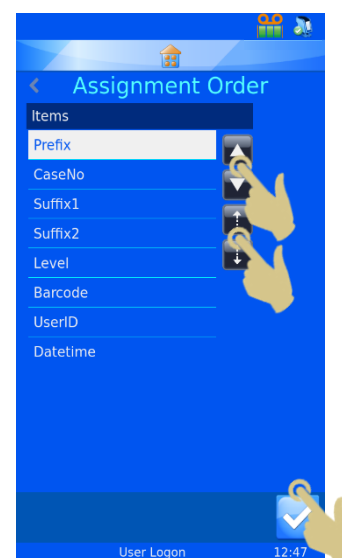
PRESS THE SOLID UP AND DOWN ARROWS TO SCROLL THE LIST UP AND DOWN.



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

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

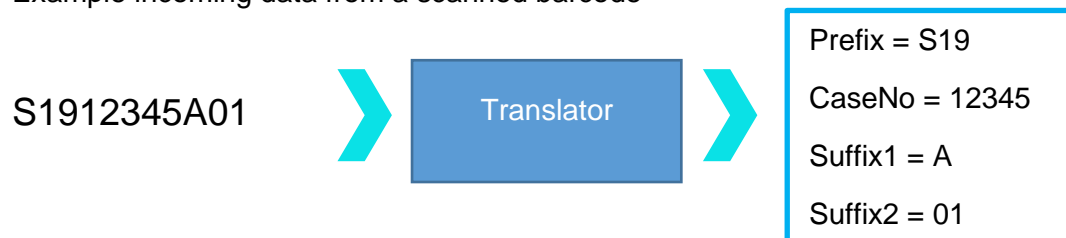
THIS CHANGE WILL NOT AFFECT EXISTING TRANSLATORS. ANY NEW TRANSLATORS CREATED WILL ASSIGN DATA TO ITEMS USING THE MODIFIED ORDER.



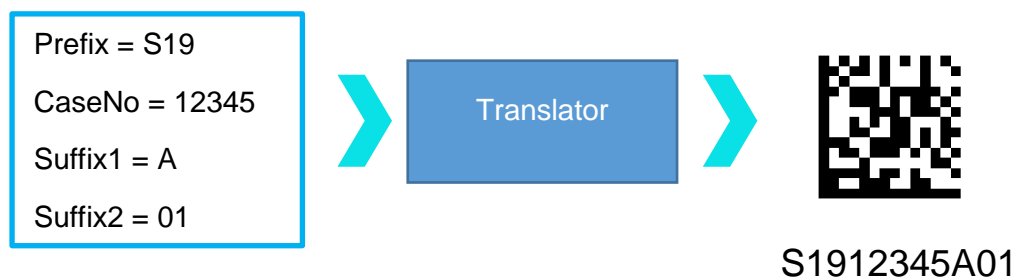
Fixed Length Translator

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

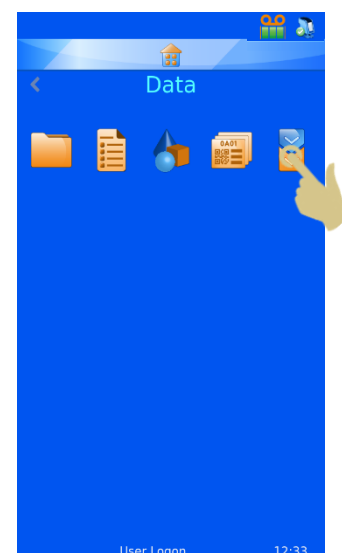


Example outgoing data used to create a printed barcode

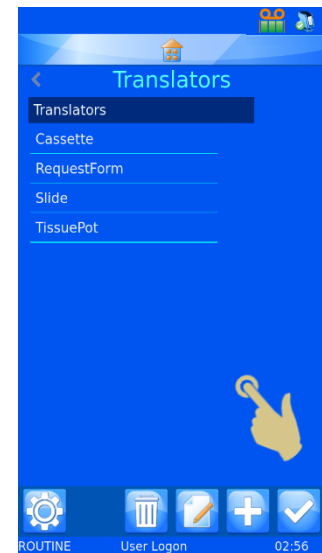


Adding a Translator- Fixed Length data

1. PRESS SETTINGS
2. PRESS DATA
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.



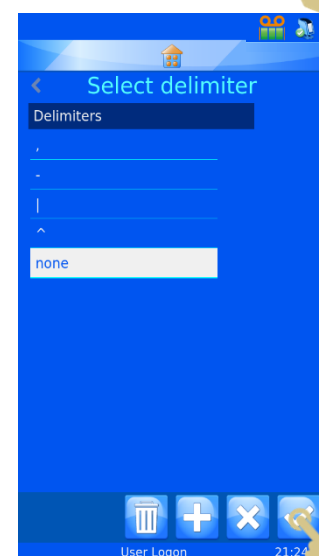
8. THE DATA CAN BE EITHER TYPED IN USING THE KEYBOARD, SCANNED IN USING THE INTEGRATED SCANNER OR SENT FROM THE SOFTWARE. THE DATA SHOULD APPEAR IN THE SCANCODE BOX.

9. PRESS THE CHECK BUTTON



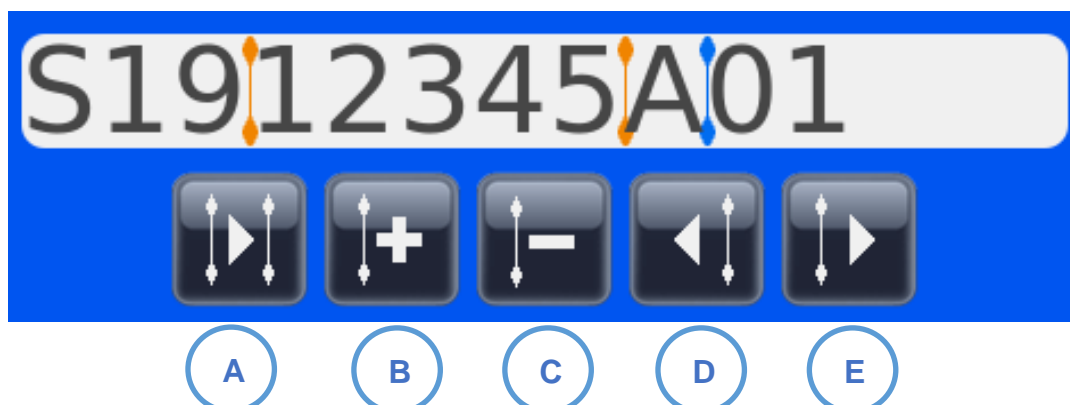
10. THE SELECT DELIMITER BOX WILL OPEN. THE TRANSLATOR WILL NOT SEE A DELIMITER, SO WILL OFFER THE NONE OPTION.

11. PRESS THE CHECK BUTTON.



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

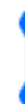
D. Move divider one character to the left

E. Move divider one character to the right

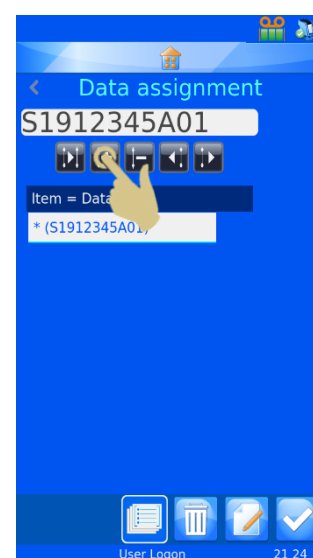
Data Divider



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.



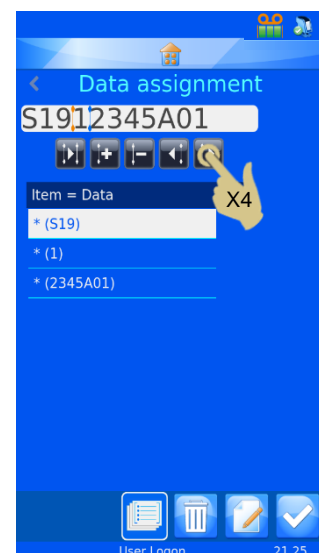
14. THE DIVIDER SHOULD HAVE MOVED TO THE RIGHT TWO SPACES AND * (S19) SHOULD BE LISTED IN THE FIRST BOX UNDER ITEM = DATA



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.

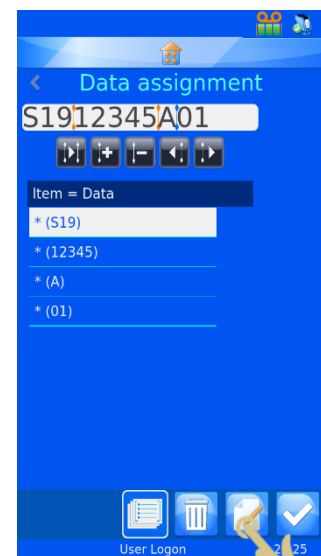


18. THE DIVIDER WILL HAVE MOVED FOUR SPACES TO THE RIGHT

19. PRESS THE ADD DIVIDER BUTTON



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

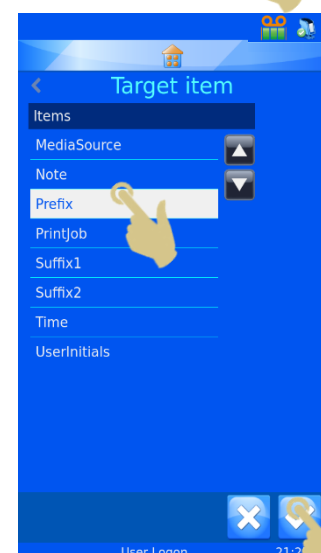


21. TO ASSIGN THE FIRST DATA BLOCK TO AN ITEM, PRESS THE EDIT BUTTON WITH THE FIRST BLOCK HIGHLIGHTED

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

Data assignment

S1912345A01

Item = Data

Prefix = S19

CaseNo = 12345

Suffix1 = A

Suffix2 = 01

User Logon 21 26

If required, the object can be assigned

The translator is now created and ready for use.

ROUTINE

Name ROUTINE

Object Unknown

Code S1912345A01

Item assignments

User Logon 21 26



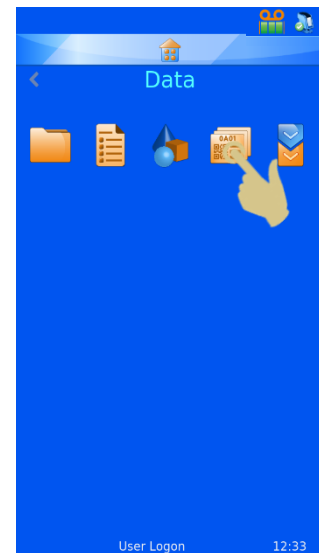
Template Menu

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 white space around the edge of the template and around barcodes.

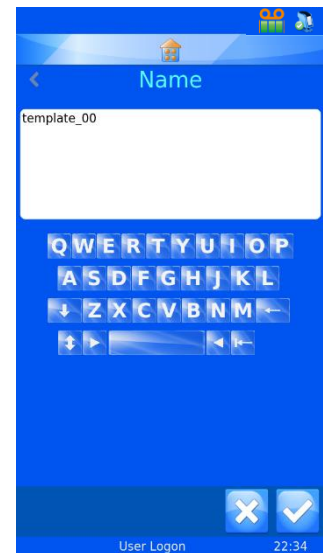
Template creation is made easier if a Translator is selected when creating a new Template. Selecting a translator will automatically populate the template with the items used in the translator reducing the effort needed to create the new template.

Creating a New Template

1. PRESS SETTINGS
2. PRESS DATA
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

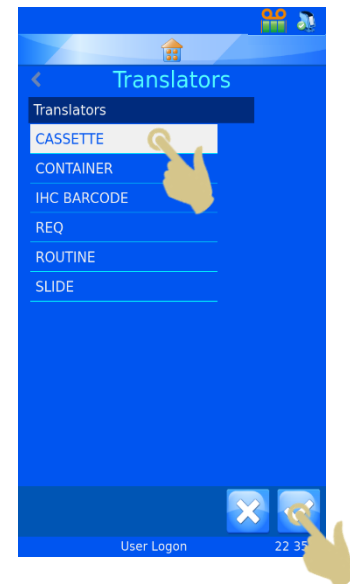


8. A USE TRANSLATOR? BOX WILL OPEN, IF A TRANSLATOR CAN BE USED, PRESS YES

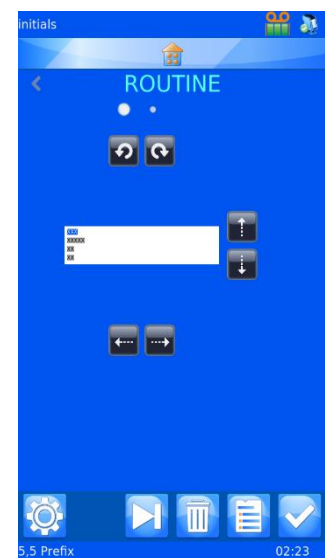
IF A TRANSLATOR IS NOT USED, ALL LABEL ITEMS WILL NEED TO BE ADDED TO THE TEMPLATE MANUALLY.



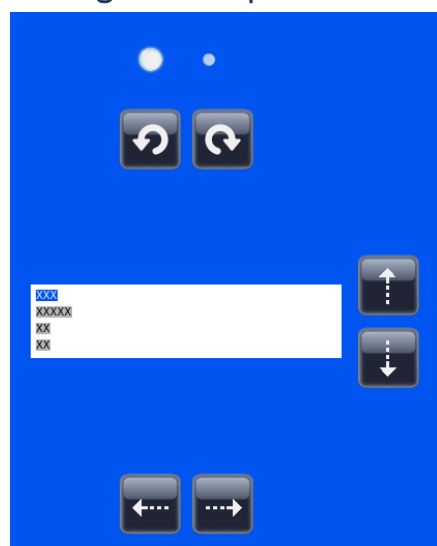
9. SELECT THE TRANSLATOR AND PRESS THE CHECK BUTTON



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.



Editing the Template



Toggles between two formatting menus



Rotates highlighted object left and right



Moves highlighted object up and down



Moves highlighted object left and right



Toggles highlighted object between normal and bold



Toggles highlighted object between normal and italic font



Adjusts font size of highlighted object



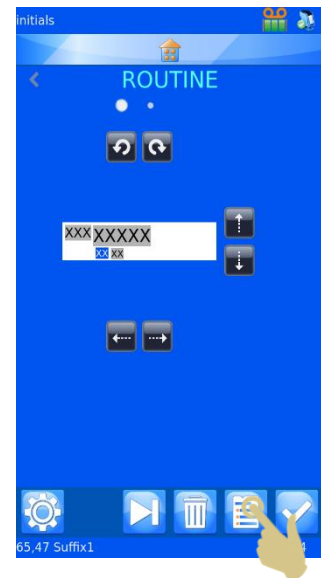
Adjusts the font of the highlighted object

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 Cassettes, the additional data to populate these items will need to be entered. 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.

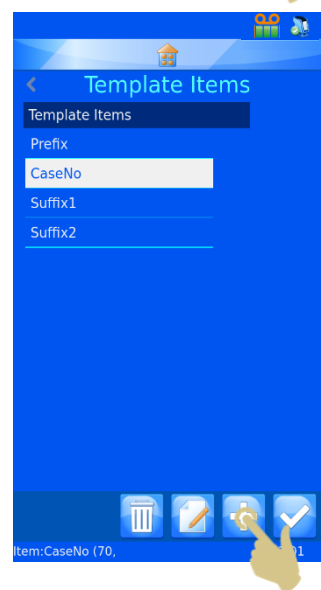
From the Template menu

1. PRESS THE ITEMS BUTTON



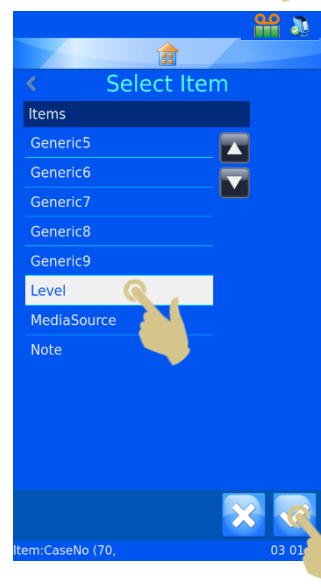
2. A LIST OF CURRENT ITEMS WILL BE DISPLAYED

3. PRESS THE PLUS BUTTON

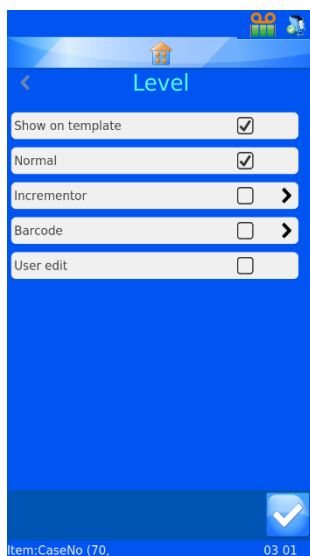


4. THE LIST OF ITEMS WILL BE DISPLAYED, SELECT THE CORRECT ITEM

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 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 Cassette

Barcode - 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

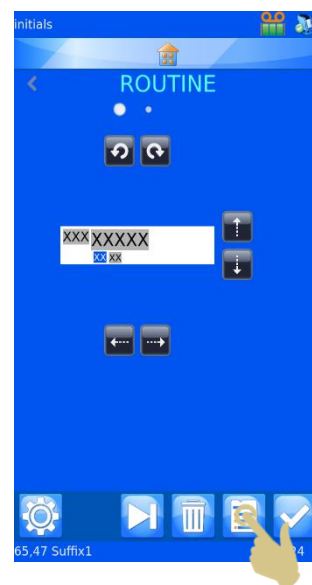
Note: The Normal, Incrementor, Barcode and User edit are unique and only one can be checked at any time. If an unchecked box is checked, the remaining three will be automatically unchecked.

Adding Barcodes to the Template

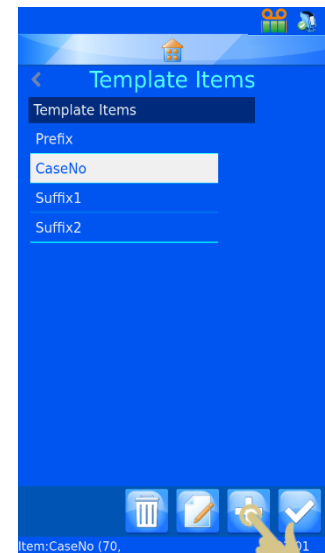
A barcode can be added to the template for printing purposes. The barcode requires additional configuration which is explained further here.

To create a barcode from the template editor menu

1. PRESS THE ITEMS BUTTON

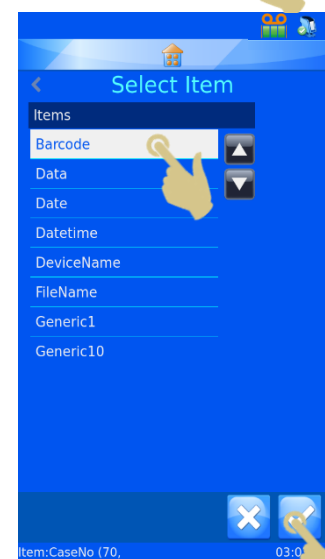


2. PRESS THE PLUS BUTTON



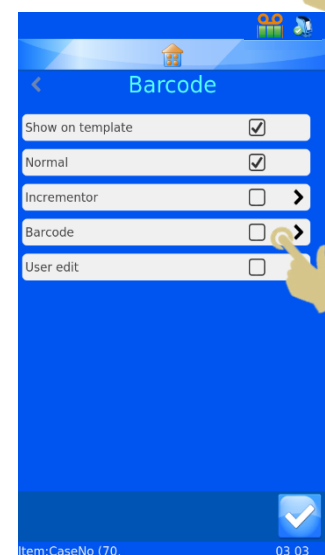
3. SELECT THE ITEM

4. PRESS THE CHECK BUTTON

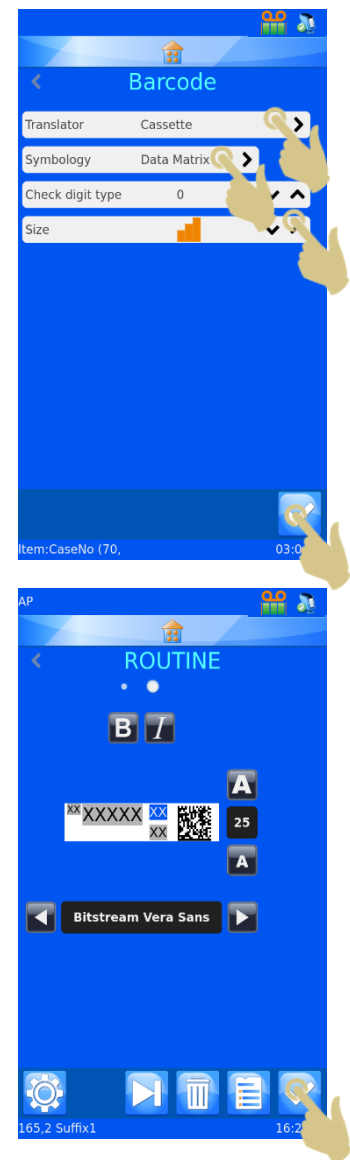


5. THE ITEM PROPERTIES MENU WILL BE DISPLAYED

6. CHECK THE BARCODE BOX

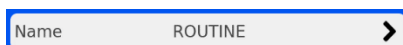
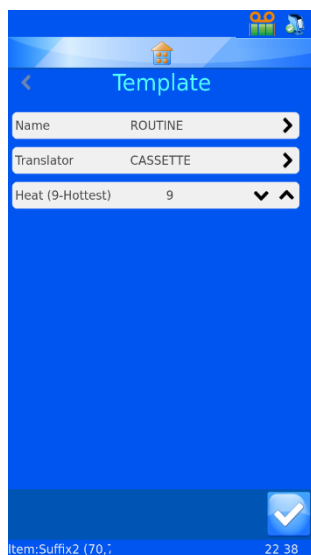


7. THE BARCODE SETTINGS MENU WILL APPEAR
8. SELECT THE CORRECT TRANSLATOR
9. SELECT THE DESIRED SYMBOLOGY
10. SELECT CHECK DIGIT TYPE IF REQUIRED
11. SELECT SIZE OF BARCODE. REGARDLESS OF THIS SELECTION, THE BARCODE WILL AUTOMATICALLY INCREASE IN SIZE WHEN NEEDED TO PRINT A QUALITY BARCODE
12. PRESS THE CHECK BUTTON, THE TEMPLATE WITH THE BARCODE WILL BE DISPLAYED. THE BARCODE CAN BE ORIENTED USING THE DIRECTIONAL BUTTONS.
13. PRESS THE CHECK BUTTON WHEN FINISHED



Template Settings

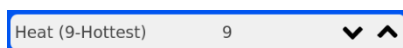
The template settings are accessed by pressing the settings button on a template. The settings are unique to the selected template, each template has its own settings menu.



The Name button is used to change the name of the template



The Translator button is used to select a translator to be used with the template



The Heat button is used to adjust the heat level used by the template when printing. The setting range is 0 – 9 where 0 is the lowest setting and 9 is the highest setting

Setting the Heat

The heat setting is adjustable to compensate for variation in Cassette surface. Each Cassette manufacturer will provide a slightly different surface, the smoother the Cassette, the less heat required to transfer the print. Generally, the lowest heat setting that achieves good print results should be used for most reliable performance.

Advanced Printing Functions

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 Cassette label. The information in these editable items is unique to each Cassette; not all Cassettes are required to have the same data.

To edit template items

1. PRESS THE LABEL AREA OF THE CASSETTE
2. THE TEMPLATE EDITOR WILL BE DISPLAYED, ANY EDITABLE ITEMS WILL HAVE A HIGHLIGHT

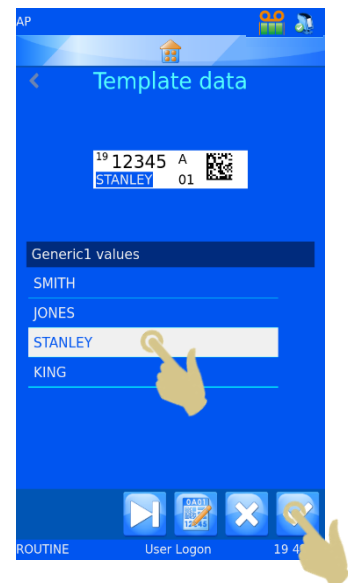
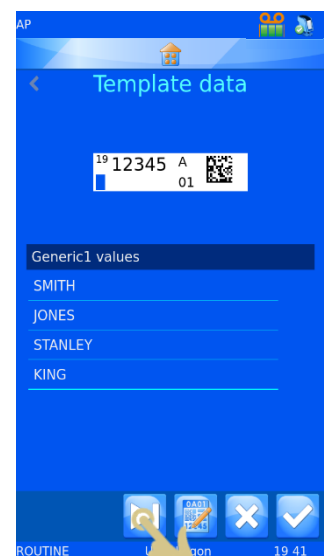
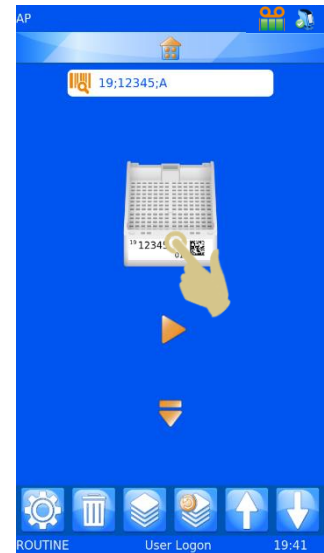


The tab key toggles between editable items

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

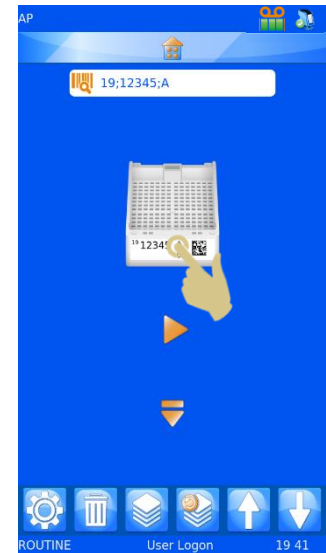


Selecting Templates

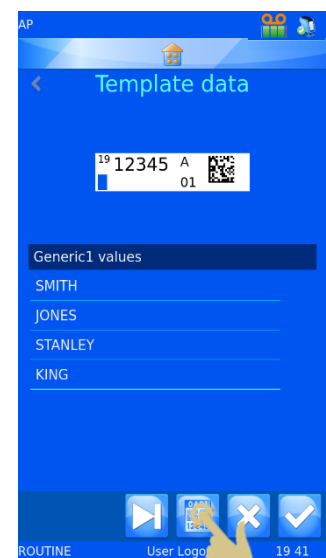
Many different printing templates can be created and used for printing.

To select a different template,

5. PRESS THE TEMPLATE AREA OF THE HOME SCREEN

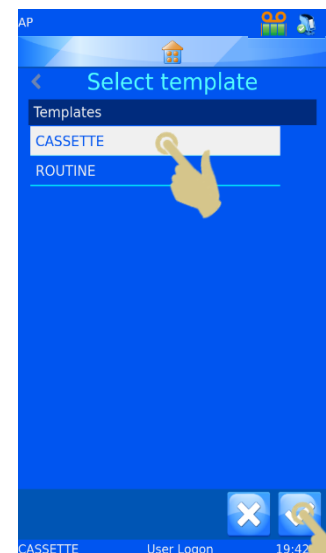


6. THE TEMPLATE EDITOR WILL BE DISPLAYED, PRESS THE TEMPLATE BUTTON

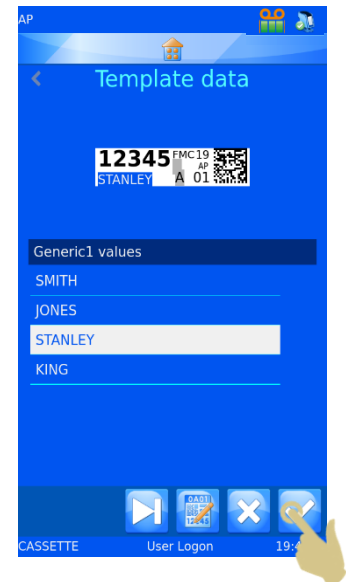


7. THE LIST OF TEMPLATES WILL BE DISPLAYED, SELECT THE DESIRED TEMPLATE

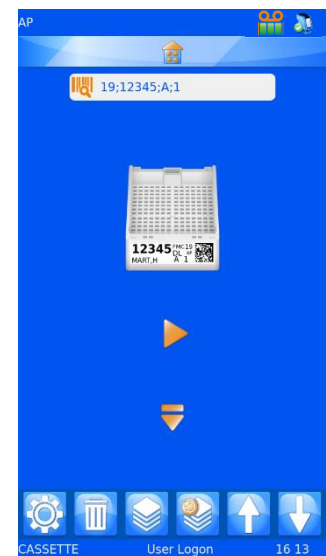
8. PRESS THE CHECK BUTTON



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



THE ALTERNATE TEMPLATE WILL BE DISPLAYED ON THE HOME SCREEN

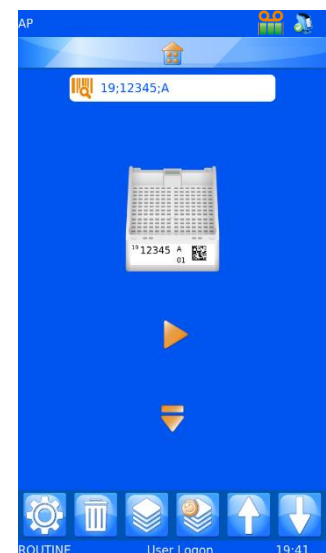


Creating Cassette Sequences

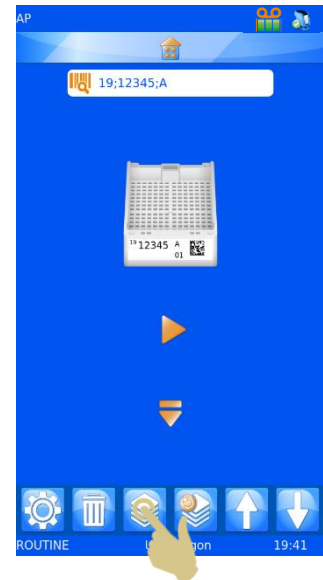
It is possible to print multiple Cassettes from a single entry of data, this will be referred to as sequence printing. Sequence printing can only be performed using templates where an incrementor is configured.

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

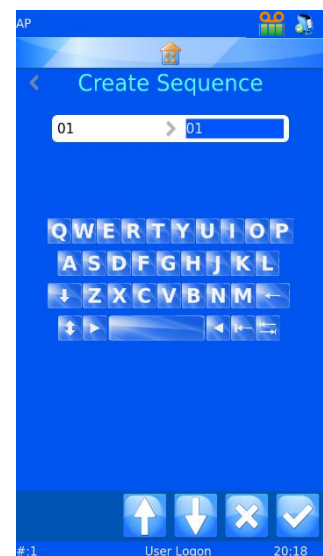
1. SCAN A BARCODE CONTAINING APPROPRIATE DATA



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



The create sequence menu should appear.



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

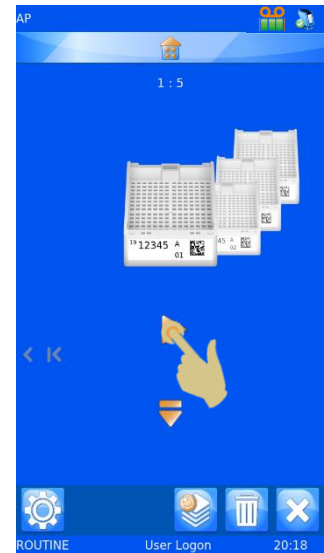
4. TO CREATE A SEQUENCE OF FIVE CASSETTES, PRESS THE UP ARROW FOUR TIMES.



5. PRESS THE CHECK BUTTON

6. FIVE CASSETTES WILL BE CREATED

7. TO PRINT THE CASSETTES, PRESS THE PLAY BUTTON.



Creating a Protocol

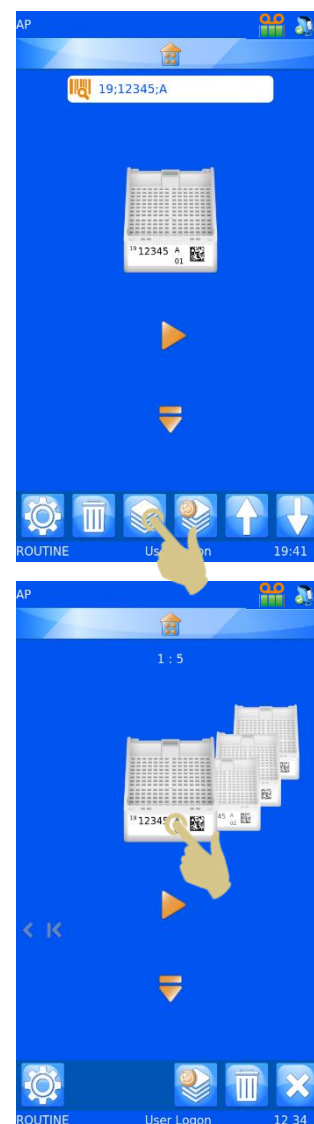
A protocol is a saved sequence of Cassettes. Once the Cassette sequence is created, the sequence can be saved as a Protocol so that it can be recalled later. This will allow the user to create batches of Cassettes quickly. Any custom part of the sequence will be saved with the protocol including:

- Template
- Incremented items
- Editable items

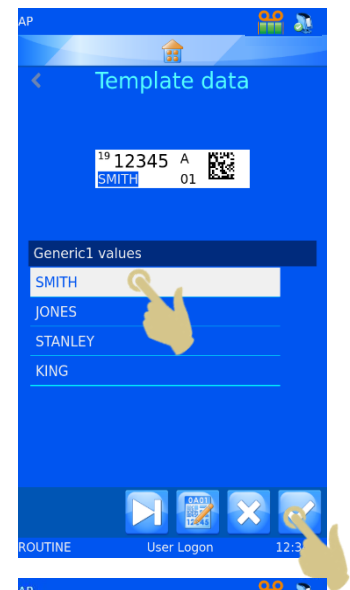
Example 1 - Save a protocol with edited items

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

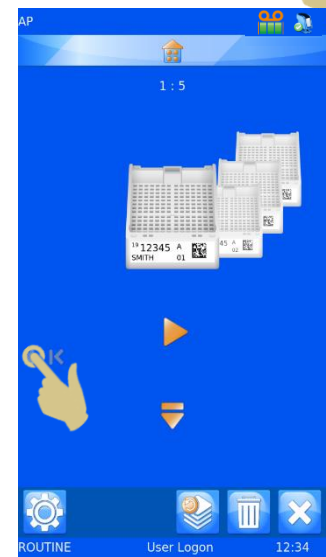
1. *SCAN A BARCODE WITH DATA FORMATTED FOR CASSETTE*
2. *THE LABEL SHOULD POPULATE WITH THE CORRECT DATA*
3. *CREATE A SEQUENCE OF FIVE CASSETTES*
4. *PRESS THE TEMPLATE AREA OF THE CASSETTE*



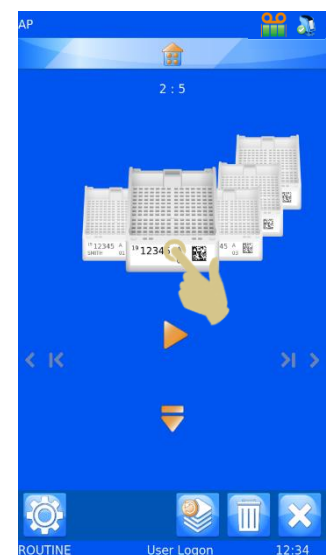
5. *MAKE SELECTION FROM THE DROPDOWN MENU*
6. *PRESS THE CHECK BUTTON*



7. *PRESS THE MOVE SINGLE CASSETTE LEFT BUTTON*

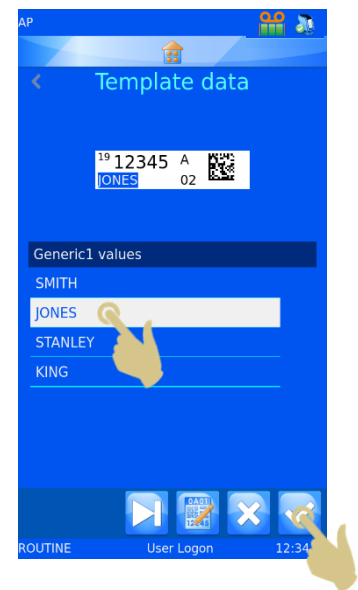


8. *PRESS THE LABEL AREA OF THE CASSETTE*

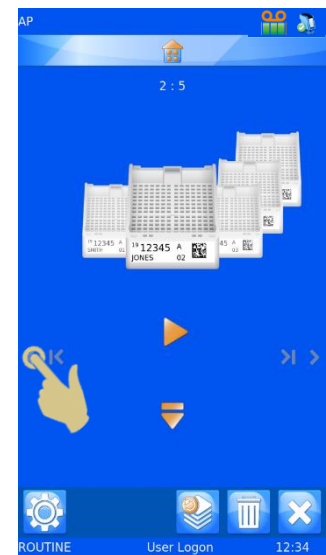


9. MAKE SELECTION FROM THE DROPDOWN MENU

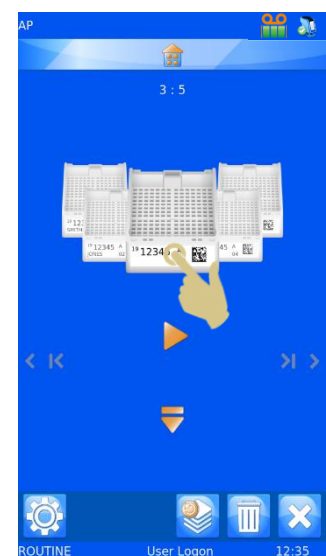
10. PRESS THE CHECK BUTTON



11. PRESS THE MOVE SINGLE CASSETTE LEFT BUTTON

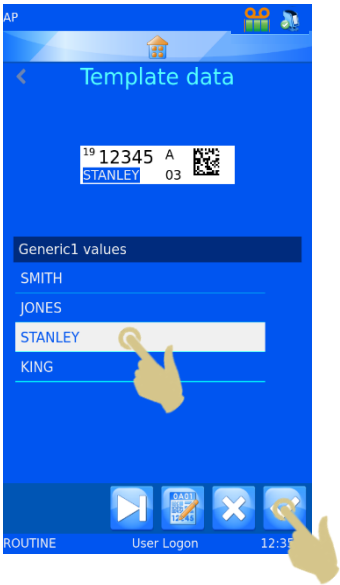


12. PRESS THE LABEL AREA OF THE CASSETTE

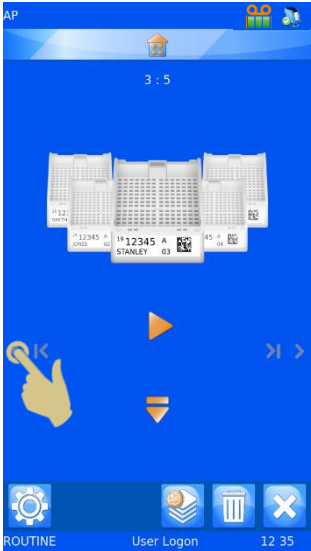


13. MAKE SELECTION FROM THE DROPDOWN MENU

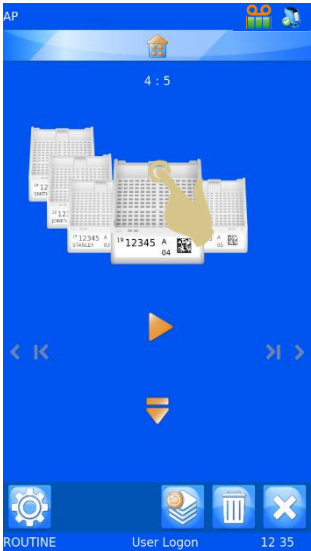
14. PRESS THE CHECK BUTTON



15. PRESS THE MOVE SINGLE CASSETTE LEFT BUTTON

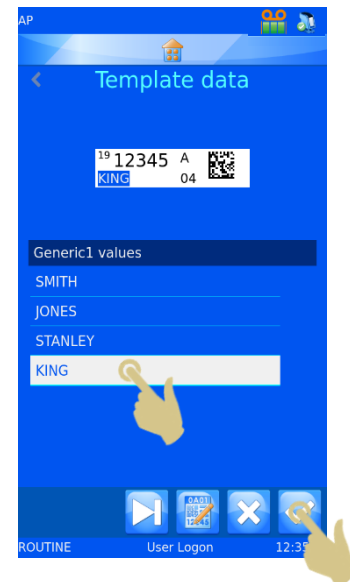


16. PRESS THE LABEL AREA OF THE CASSETTE

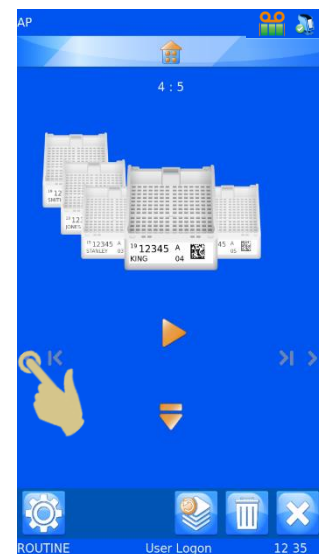


17. MAKE SELECTION FROM THE DROPDOWN MENU

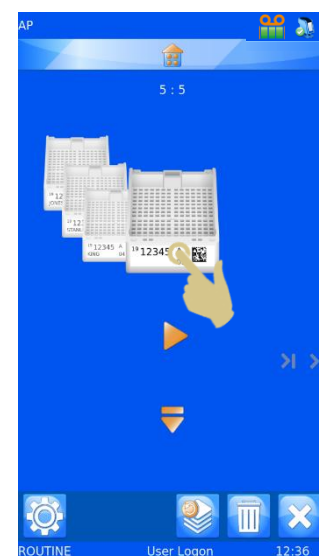
18. PRESS THE CHECK BUTTON



19. PRESS THE MOVE SINGLE CASSETTE LEFT BUTTON

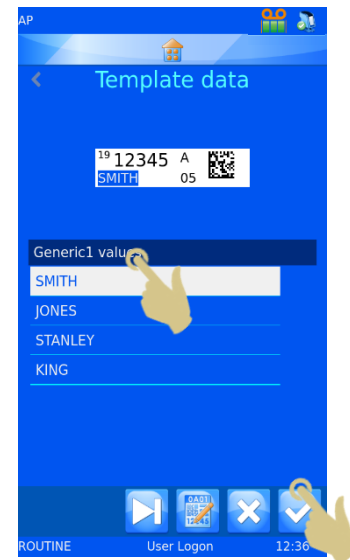


20. PRESS THE LABEL AREA OF THE CASSETTE

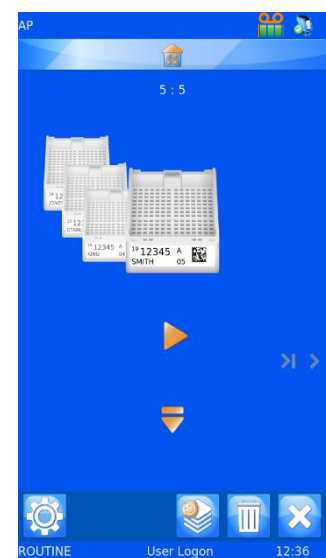


21. MAKE SELECTION FROM THE DROPDOWN MENU

22. PRESS THE CHECK BUTTON



23. FIVE CASSETTES ARE NOW CREATED WITH EDITED ITEMS.



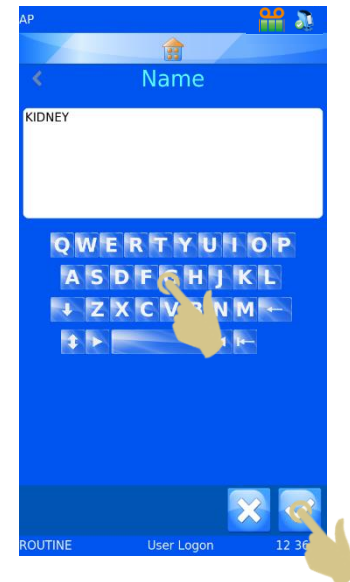
THE PROTOCOL BUTTON IS USED TO SAVE A PROTOCOL OR RECALL A PROTOCOL

24. PRESS THE PROTOCOL BUTTON



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

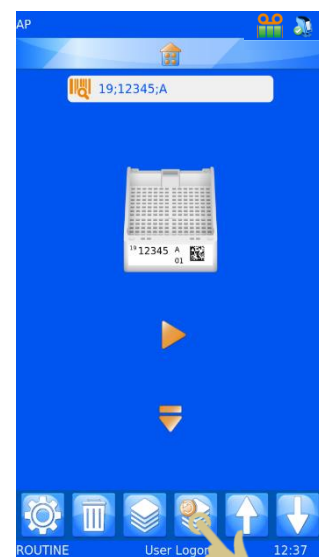
26. PRESS THE CHECK BUTTON TO SAVE THE PROTOCOL



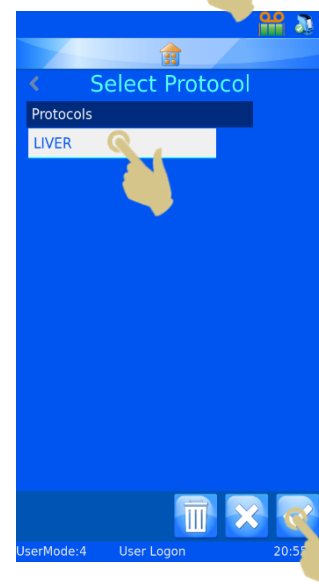
Recalling a protocol

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

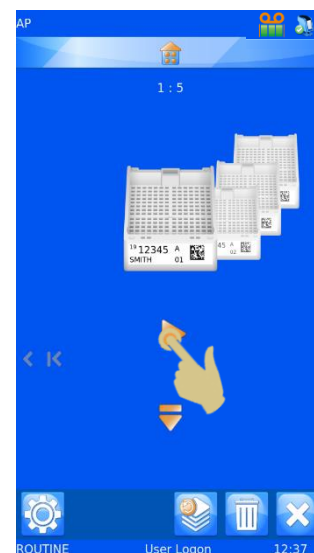
1. SCAN A BARCODE WITH THE APPROPRIATE DATA
2. PRESS THE PROTOCOL BUTTON



3. SELECT THE SAVED PROTOCOL
4. PRESS THE CHECK BUTTON



5. *THE CASSETTES SHOULD BE CREATED*
6. *TO PRINT, PRESS PLAY*



Translator Rules

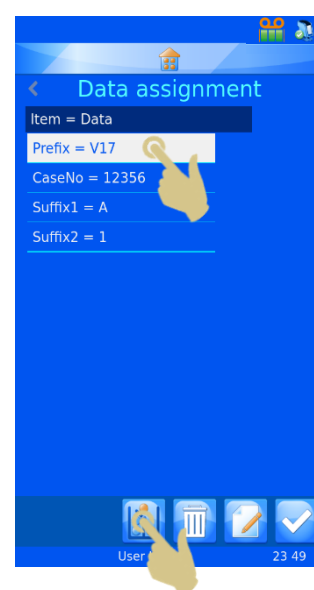
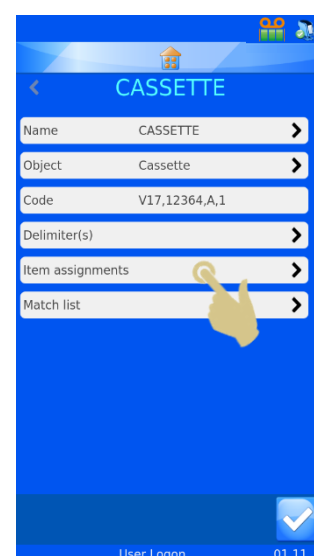
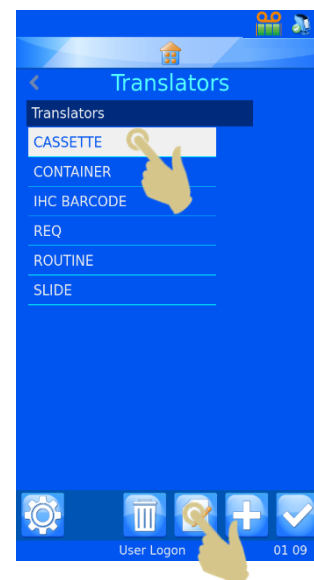
The translator includes a Rules feature that can automate some software and printer functions. There are several rules; these can apply change to templates, items, data, hopper, sequence and protocol. The rules will be generally explained in this guide; trial and error may be required to fully understand 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, so if you get an unexpected result from the rules, recheck how every rule might affect your data.

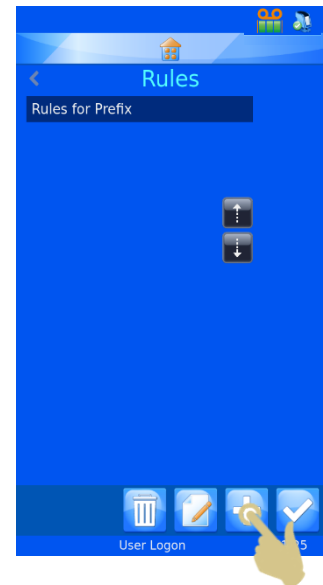
Creating a New Rule

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

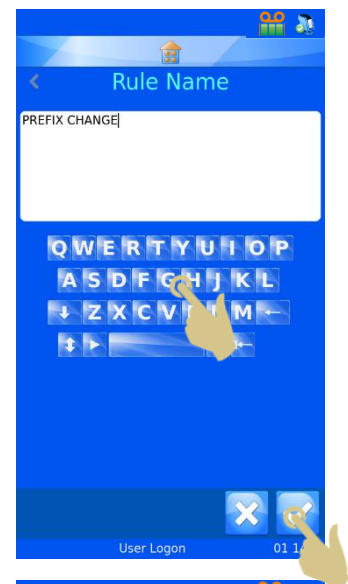
1. PRESS THE SETTINGS BUTTON
2. PRESS THE DATA BUTTON
3. PRESS THE TRANSLATOR BUTTON
4. SELECT THE TRANSLATOR TO BE EDITED
5. PRESS THE EDIT BUTTON
6. PRESS THE ITEM ASSIGNMENTS BUTTON
7. SELECT THE ITEM THAT THE RULE WILL BE CREATED AGAINST
8. PRESS THE RULES BUTTON



9. PRESS THE ADD BUTTON



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

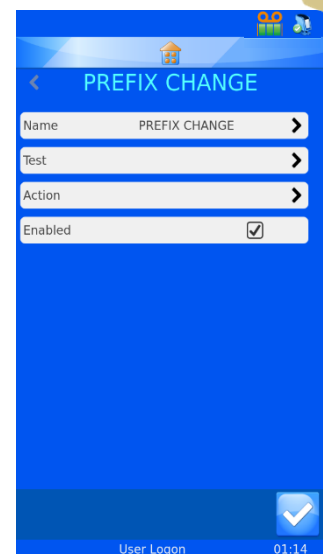


11. THE RULE CONFIGURATION MENU WILL OPEN

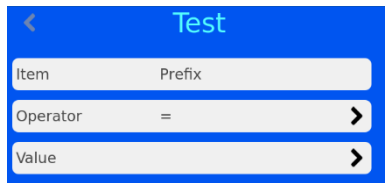
A rule is a function that includes a Test and an Action. The Test is an equation that will produce a pass or fail for the data that the test is run against.

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

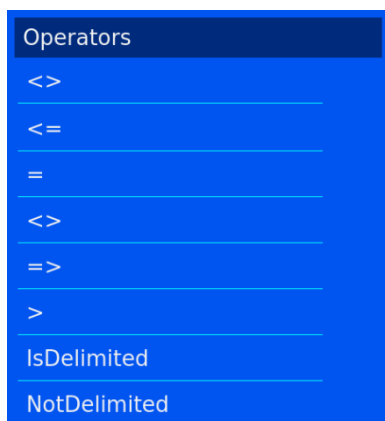
If the Test produces a FAIL, the rule action will not be carried out.



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 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

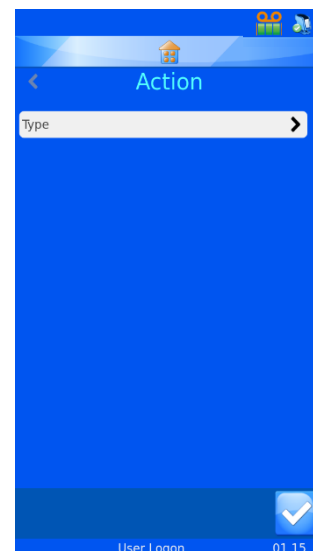
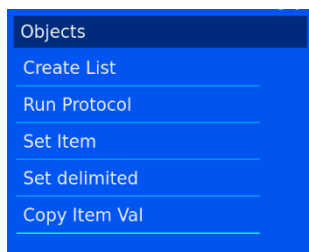
S19 **=** S19 **PASS**

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.

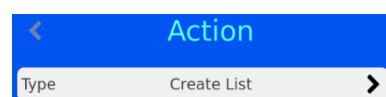
From the rule menu, select the action, then select the action type.

The list of objects available to the action are:



Create List

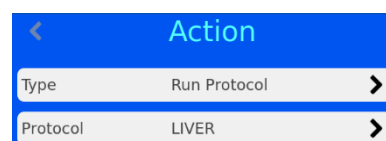
This object creates a sequence of Cassettes based on a list set up in the item properties. The item must be set as a list to use this object.



Run Protocol

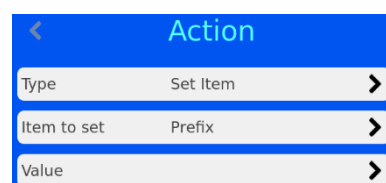
This object will run the specified protocol when a test is passed. The protocol to run will need to be set in the action.

When this action is selected and a barcode scanned, the screen will automatically populate with the number of Cassettes in the protocol.



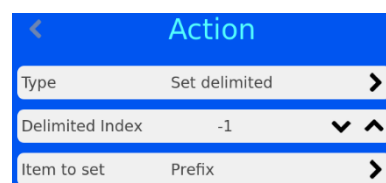
Set Item

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.



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.



Copy Item Val

This object will copy the value of the item to another item.

You must set the Item to copy to.

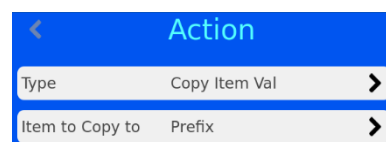
Rules that use IsDelimited and SetDelimited are the most complex. To make this clearer, an example of how these may be used is shown below.

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.

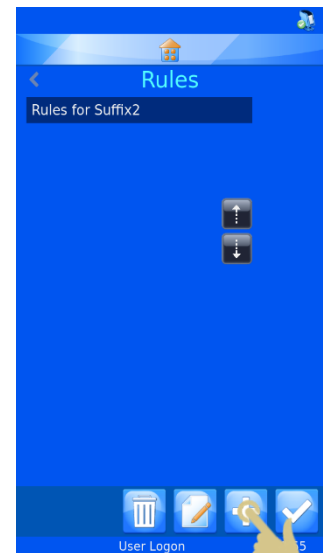


Creating the new rules

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



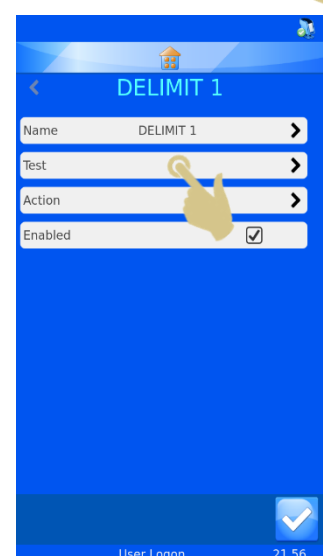
5. ENTER THE RULE NAME

6. PRESS THE CHECK BUTTON



7. THE MENU WILL APPEAR FOR THE DELIMIT 1 RULE

8. PRESS THE TEST BUTTON

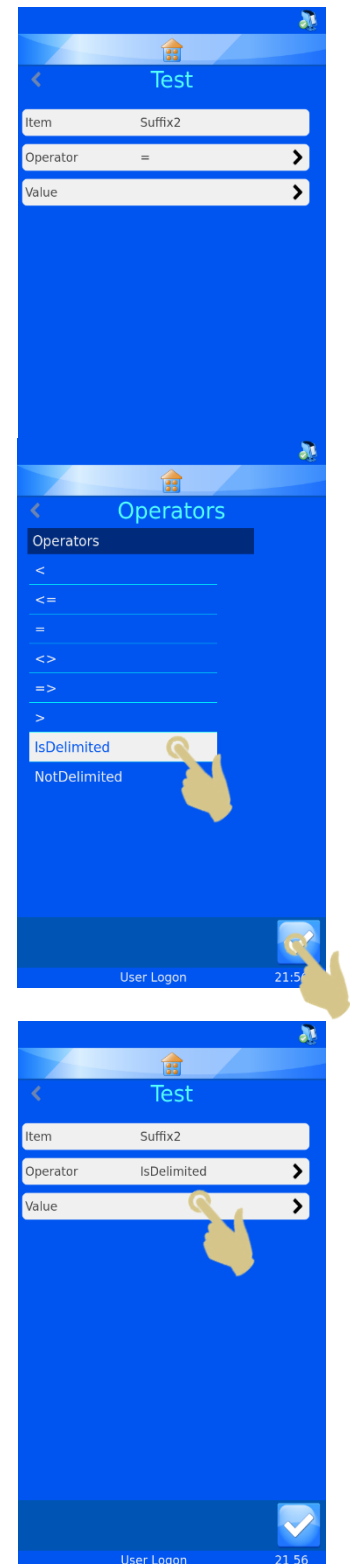


9. THE TEST MENU WILL APPEAR, PRESS THE OPERATOR BUTTON

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

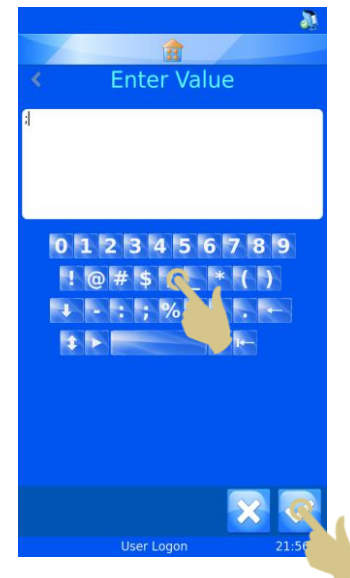
11. PRESS THE CHECK BUTTON

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

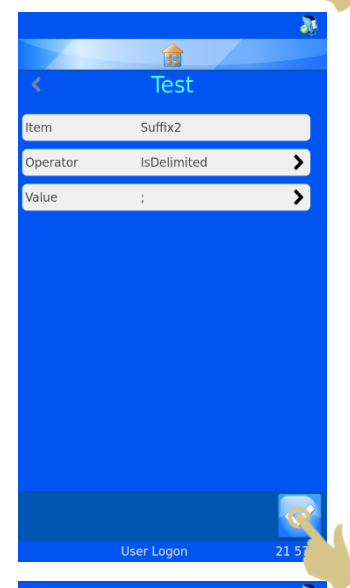


13. ENTER THE DELIMITER INTO THE VALUE BOX

14. PRESS THE CHECK BUTTON



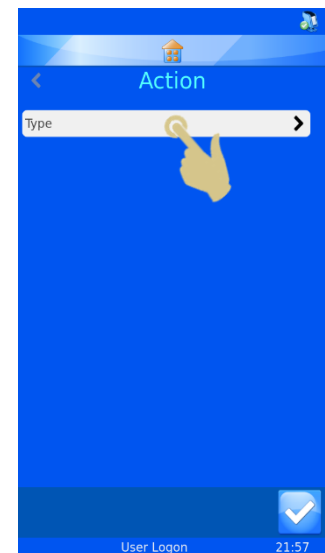
15. THE TEST MENU WILL APPEAR WITH THE SELECTIONS
DISPLAYED, PRESS THE CHECK BUTTON



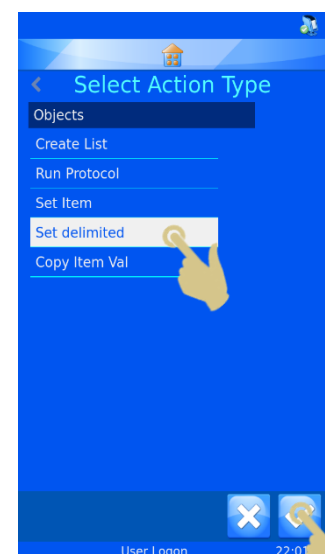
16. THE DELIMIT 1 MENU WILL APPEAR, PRESS THE ACTION
BUTTON



17. PRESS THE TYPE BUTTON

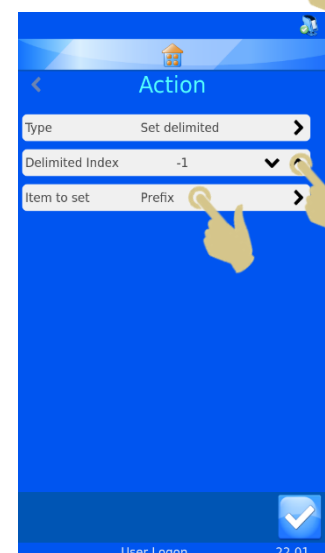


18. THE SELECT ACTION TYPE MENU SHOULD APPEAR, SELECT SET DELIMITED



19. PRESS THE CHECK BUTTON

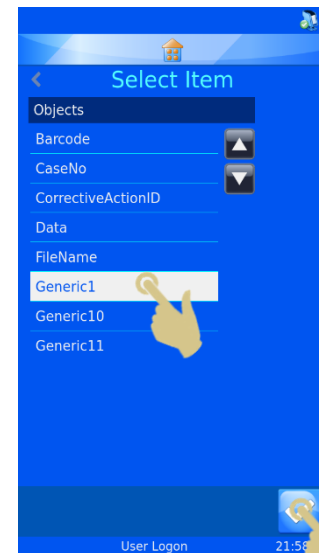
20. THE ACTION MENU SHOULD APPEAR. PRESS THE UP ARROW ONCE TO SET THE DELIMITED INDEX TO "0"



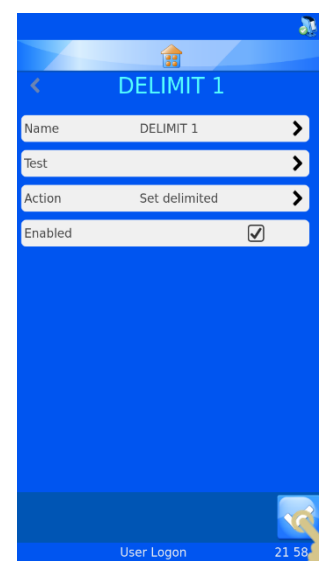
21. PRESS THE ITEM TO SET BUTTON

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

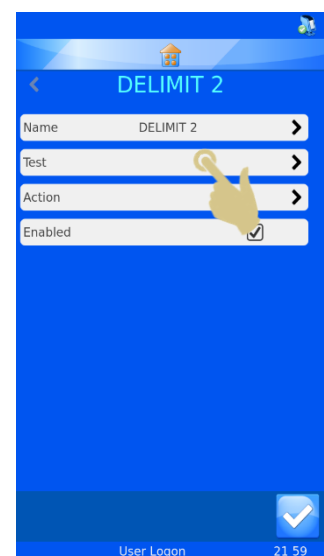


26. THE NAME MENU WILL APPEAR, ENTER THE RULE NAME

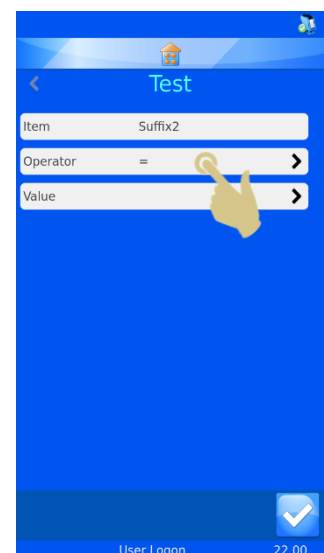
27. PRESS THE CHECK BUTTON



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



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



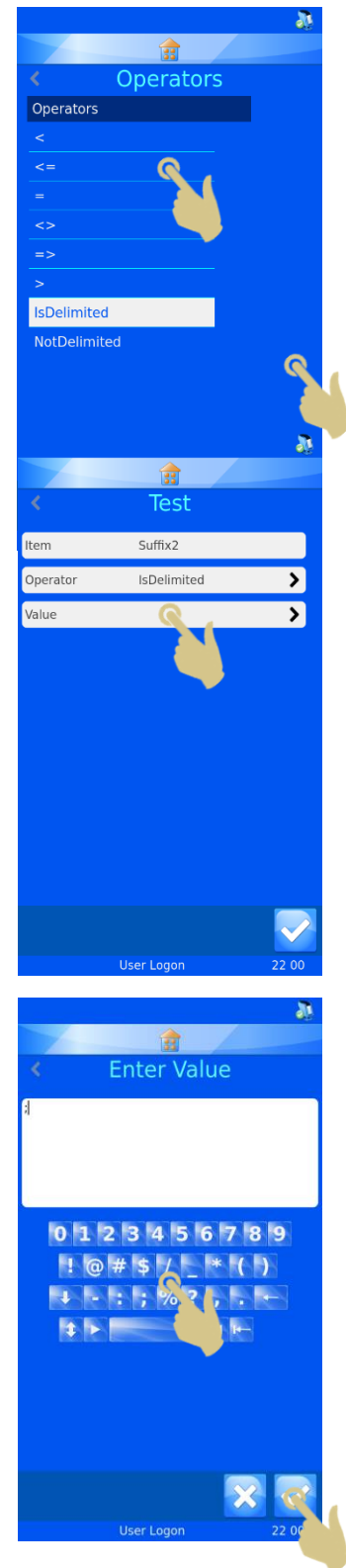
30. THE OPERATORS MENU WILL APPEAR, HIGHLIGHT THE ISDELIMITED OPERATOR

31. PRESS THE CHECK BUTTON

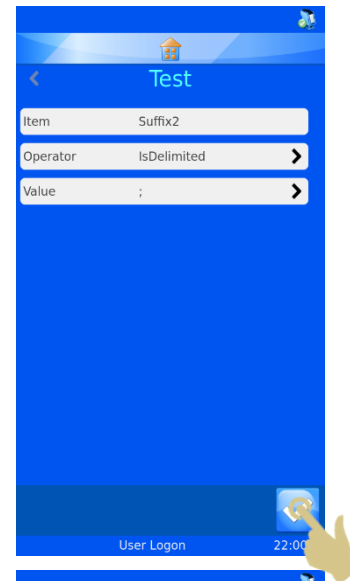
32. THE TEST MENU SHOULD APPEAR, PRESS THE VALUE BUTTON

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

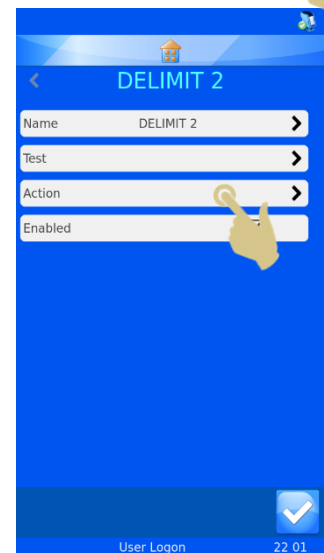
34. PRESS THE CHECK BUTTON



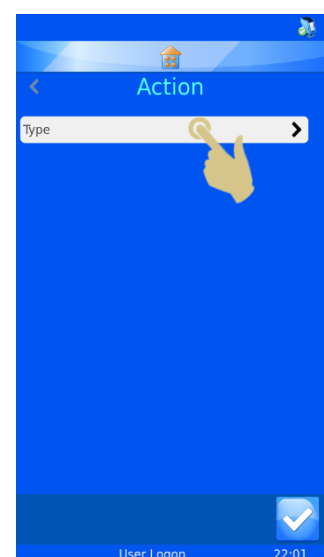
35. THE TEST MENU SHOULD APPEAR, PRESS THE CHECK BUTTON



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



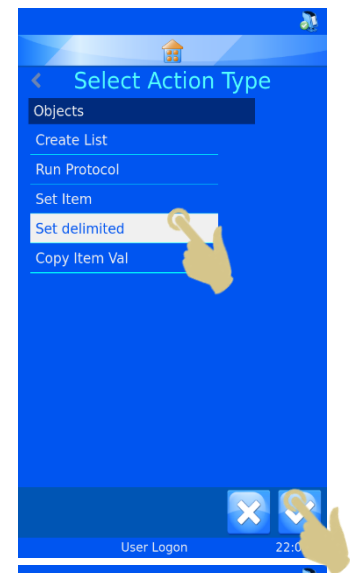
37. THE ACTION MENU SHOULD APPEAR, PRESS THE TYPE BUTTON



38. THE SELECT ACTION TYPE MENU SHOULD BE DISPLAYED.

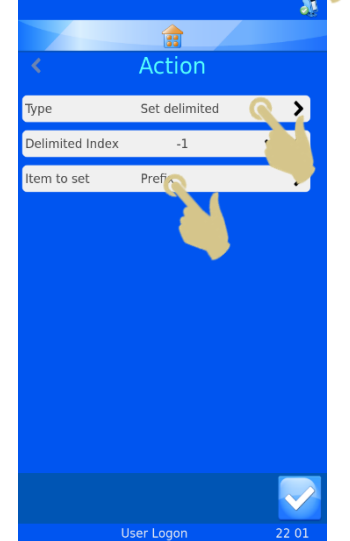
SELECT THE SET DELIMITED ACTION TYPE

39. PRESS THE CHECK BUTTON



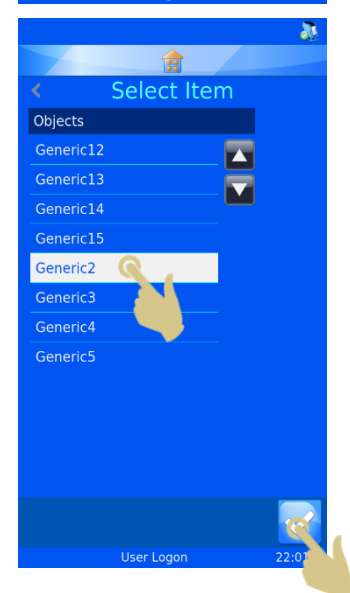
40. THE ACTION MENU WILL APPEAR. PRESS THE UP ARROW TWICE
TO SET THE DELIMITED INDEX TO 1

41. PRESS THE ITEM TO SET BUTTON

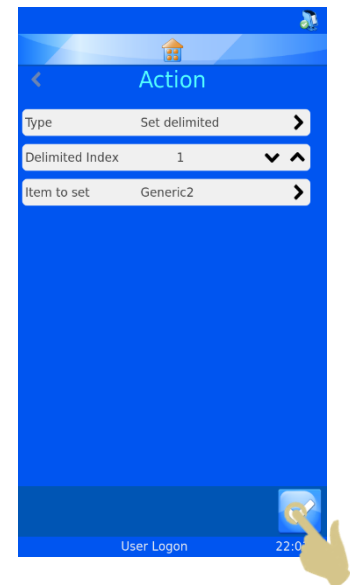


42. THE SELECT ITEM MENU SHOULD APPEAR, SELECT THE
GENERIC2 ITEM

43. PRESS THE CHECK BUTTON



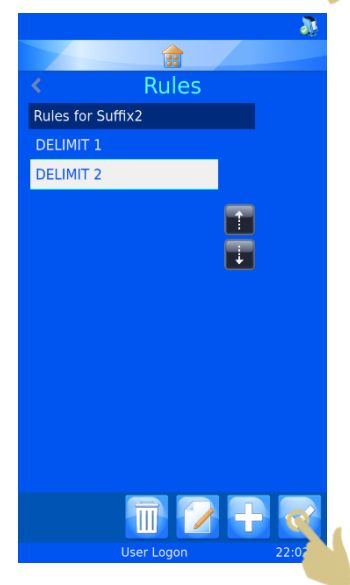
44. THE ACTION MENU SHOULD APPEAR, PRESS THE CHECK BUTTON



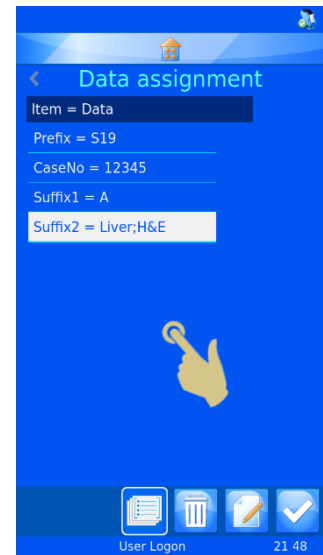
45. THE DELIMIT 2 MENUS SHOULD APPEAR, PRESS THE CHECK BUTTON



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



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



Cassette Requirements

Pyramid Innovation cassettes must be used in the Pi Cassette printer in order to achieve best print quality durability. Use of any other types of cassettes may cause damage to the printer. Use of any other cassette types must be validated by the end-user laboratory.

Ribbon Burn – Possible causes

Heat setting set too high.

Follow the Print Quality Setup. Use a Cassette known to be good quality as a sanity check.

- Incorrect resistance set for the installed print head.
- Check the resistance on the print head is the same as entered on the printer settings.
- Build-up of debris on the print head.
- Uneven Cassette surface can cause local tape burn if the head is not in contact with the Cassette surface.
- If the print head has debris stuck on it this can move and hold the head away from the Cassette causing an air gap. The heat cannot transfer to the Cassette resulting in the head over heating.
- Take the ribbon out and inspect the print head from the top and bottom.
- Print head printing when not in full contact with the Cassette.
- This can be caused by debris on the print head. It can also be as a result of a Cassette jam.
- The head will require cleaning and the Print Head Recovery process should be followed.

Icon Glossary



Information



Data



Date and Time



Display



International



Keyboard



Network



Printer



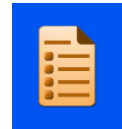
Software



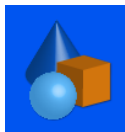
Sound



User



Items



Objects



Templates



Translators



Data

Button Glossary



Home



Settings



Trash Bin



Cancel or Delete



Tab



Up



Down



Confirm



Edit



Add



Sequence



Protocol



Items



Template



Rules



Fast Mode

Printer Specifications

Instrument	
Dimensions	178mm Width x 323mm Deep x 576mm High (with hopper attached)
Weight	6.2Kg
Input Voltage	24V DC
Current	1.5A
Print resolution	300 dpi
Print speed	3-5 seconds typical (full area print)
Cassettes	Pyramid Innovation cassettes must be used on the instrument
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

Consumables and accessories

Description	Part Ref
Printer Ribbon	P21020-E
Power adaptor Input:100-240V ~ 1.1A, 50-60Hz Output: 24V DC 1.5A	SP50008
Mains lead UK	SP50009
Mains lead EU	SP50010
Mains lead USA	SP50007
Mains lead, China	SP50015
Mains lead, Japan	SP50016
Print head cleaning kit	P30001-E
Cassette Dispense Hopper	P52001-E

Appendix A

Recommended Cassettes Types

Manufacturer / Brand	Recommended heat setting
Pyramid Innovation Embedding type	8
Pyramid Innovation Biopsy type	8
Pyramid Innovation Micro-Biopsy type	8

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 has had transit clamps fitted as per Operator Guide (if applicable) ☐

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

RMA No Carrier

For Attention of