

Thermo Scientific
LabWriter
Operator Guide
A79510105 Issue 4



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Contact Addresses:

Anatomical Pathology Int., 93-96 Chadwick Road, Astmoor, Runcorn, Cheshire, WA7 1PR, UK

Tel: +44 (0) 1928 562 600; Fax: +44 (0) 1928 562 627; Web: www.thermo.com/pathology

Anatomical Pathology USA, 4481 Campus Drive, Kalamazoo, MI 49008, USA

Tel: 1-800-522-7270; Fax: +1 269-372-2674; Web: www.thermo.com/pathology

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This symbol is used on the equipment, or in a document, to indicate that there may be a biohazard associated with the instrument. Always act with common sense and be aware of the samples used. Take suitable precautions.



This symbol indicates that a surface is hot. If this symbol appears on the instrument, always refer to the operator guide. Take suitable precautions.



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Note

Notes give additional information about a job or instruction, but do not form part of the instruction.

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Operator Guide

How To Use This Guide

Introduction

LabWriter is a software package designed for use with Thermo Scientific labelling products.

It is intended for use in laboratories by operators familiar with labelling techniques and laboratory equipment.

In general this guide uses the Thermo Scientific PrintMate as the output instrument.

If LabWriter is used with other products some of the techniques described may vary slightly.

In cases where a specific instruction applies to a specific instrument only, this will be stated.

Chapter 1 - Installing the Software

This chapter explains how to install the LabWriter Application as well as the other software packages contained on the software CD. It also provides details of the minimum hardware specification required to run the package.

Chapter 2 - Admin Setup

This chapter explains how to use the Administrator features. This includes creating new user items, managing the way in which data is stored and connecting to external devices.

Chapter 3 - Creating Print Templates

This chapter gives a step-by-step tutorial of how to create a LabWriter template. By working through this section in order, the user will learn how to create new print templates, add user items to the template, assign specific properties and create suitable barcodes from the data.

Chapter 4 - Daily Operation

This chapter explains how to carry out basic day-to-day tasks using LabWriter.

Chapter 5 - Troubleshooting

This chapter is designed to help users diagnose and cure commonly encountered errors.

Chapter 6 - Automated Data Processing

This chapter is intended to introduce users to the automated data processing capabilities of LabWriter, and how it interacts with existing LIS systems.

Chapter 1 - Installing the Software

System Requirements

There are 2 versions of the LabWriter Application:

- LabWriter
- LabWriter Advanced

Each version of the application has the same basic system requirements as shown below.

Minimum Installation Requirements

Software Microsoft Windows XP; 2000; ME; 98 or Vista
Microsoft .NET Framework V2.0 or later

Hardware 550 MB Hard Disk space
CD ROM Drive

Note

If the PC running LabWriter was purchased with the labelling instrument, the software will already be installed.

If using a computer which was not supplied with LabWriter pre-installed, it may be necessary to install the .NET Framework before use.

Notes

The .NET Framework V3.5 is included on the software CD.

If your PC is running Windows XP 64-Bit, you may need to download an alternative version of the .NET Framework. At the time of writing, alternative versions of the .NET Framework were available from:

www.microsoft.com/downloads

Installing the Software

If using a computer which was not supplied with LabWriter pre-installed, it will be necessary to install the LabWriter Application using the CD provided.



It is strongly recommended that the Documentation also be installed; as the electronic version contains additional material such as video tutorials.

Running the Application

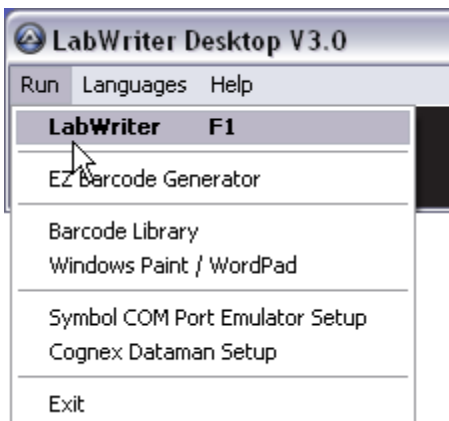
To run the LabWriter application:

- Double-click on the 'LabWriter Desktop' Icon.



LabWriter Desktop Icon

- When the LabWriter Desktop appears, click on the 'Run' menu, and select 'LabWriter'.



LabWriter Desktop

Chapter 2 - Admin Setup

Introduction

This chapter describes how to setup LabWriter and configure it to suit the way your laboratory operates.

In this chapter you will be shown how to:

- Logon as an Administrator.
- Setup basic user options.
- Change the Admin password.
- Change the language.
- Detect and configure external devices such as PrintMate.
- Navigate around the Templates tab.
- Create new User Items.
- Save your settings and logoff.

Admin Logon

To begin configuring LabWriter you must first logon as an Administrator.

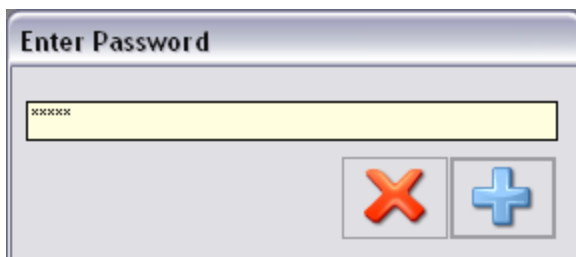
To logon as an Administrator:

- When LabWriter is fully loaded click on the 'Setup' icon at the top of the screen.



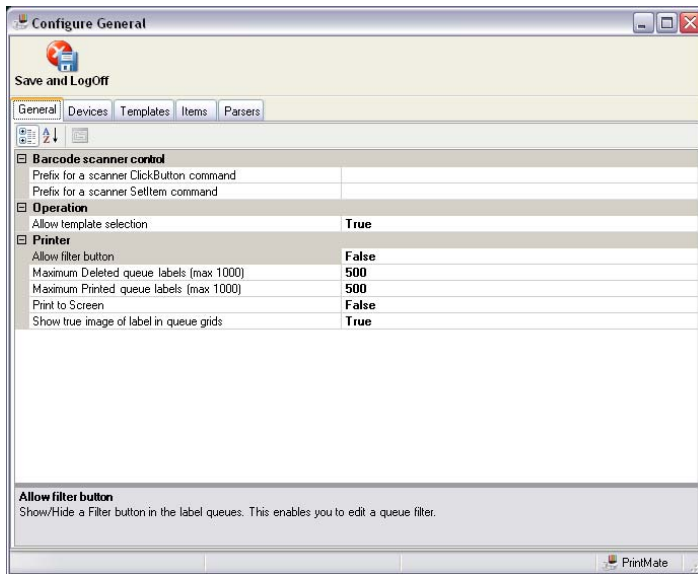
Setup Icon

- Enter the word 'admin' in the 'Enter Password' dialog box and then press 'Return'.



Enter Password Dialog Box

- The Admin Area should now be visible.



Admin Area

Navigating around the Admin Area

The Admin Area consists of 5 tabs.



Admin Area Tabs

The function of each of these tabs is as follows:

General

This tab allows several basic user preferences to be configured.

Devices

This tab allows the connectivity options for peripheral devices, such as PrintMate and barcode readers, to be defined.

Templates

This tab allows print templates to be created and edited to suit specific requirements. More detailed instructions for using this tab can be found in Chapter 3 - Creating Print Templates.

Items

This tab allows user items to be created and managed.

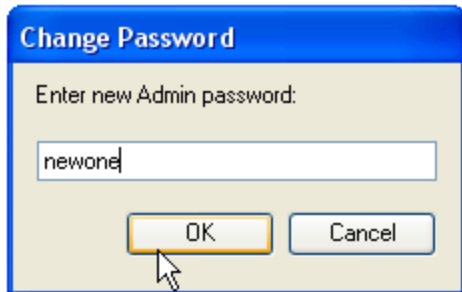
Parsers

This tab allows rules for Automated Data Handling to be created - see Chapter 6 - Automated Data Processing for details of this tab and its functions.

Changing the Admin Password

When in the admin area:

Hold down the 'Ctrl' and 'F5' buttons.



Change Password

Enter the required new password.

Click on the OK button

Click on the Save and LogOff Button



Save and LogOff Button

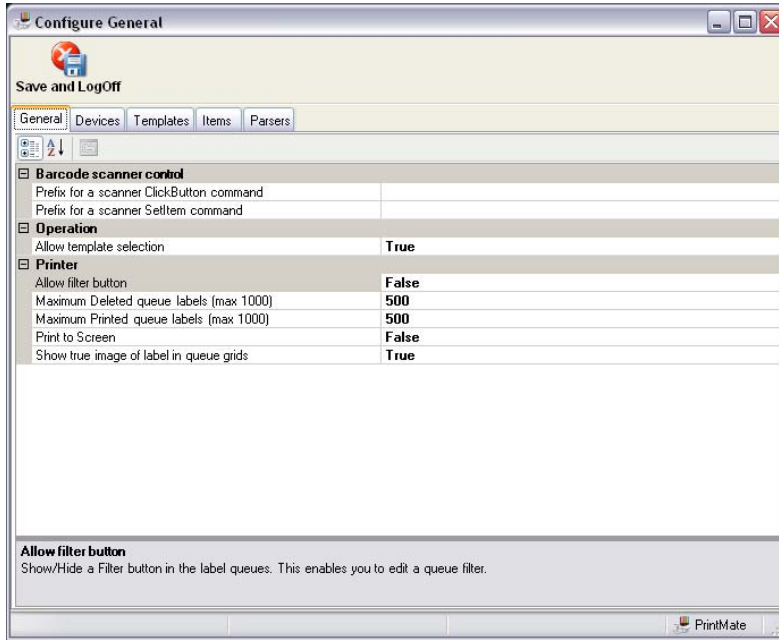
Click on the Close Button



Close Button

General Tab

The General tab is the default screen which appears when the Admin Area is entered.



General Tab Screen

- Several options are shown, and clicking on the right-hand field next to any of the descriptors will allow the setting to be changed.
- Changing a setting is done by either typing in the new value or by selecting an option from a drop-down list.

An explanation of each of the options is given below:

Prefix for a scanner ClickButton command

This defines the prefix which will be used to recognise 'ClickButton' commands.

Prefix for a scanner SetItem command

This defines the prefix which will be used to recognise 'SetItem' commands.

Allow 'Filter' button

This option defines whether or not the 'Filter' button is displayed in the User Screen.

The 'Filter' button allows large amounts of data to be sorted according to specific rules defined by the user.

If this option is set to 'True' the 'Filter' button will be visible to the user; if set to 'False' the button will not appear on the User Screen.

Maximum number of labels in the 'Deleted' list

This sets the number of labels which will be retained in the 'Deleted' list in the User Screen.

The maximum possible value for this setting is 1000.

If the number of labels sent to the 'Deleted' list exceeds the set value, the earliest labels will be permanently deleted.



If your laboratory procedures require all cassette details are permanently stored, this must be done before the list exceeds its maximum capacity, otherwise the data will be permanently lost.

Note

Decreasing the maximum value for this setting may increase the performance of LabWriter.

Maximum number of labels in the 'Printed' list

This sets the number of labels which will be retained in the 'Printed' list in the User Screen.

The maximum possible value for this setting is 1000.

If the number of labels sent to the 'Printed' list exceeds the set value, the earliest labels will be permanently deleted.



If your laboratory procedures require all cassette details are permanently stored, this must be done before the list exceeds its maximum capacity, otherwise the data will be permanently lost.

Note

Decreasing the maximum value for this setting may increase the performance of LabWriter.

Print to screen

With this option set to 'True', LabWriter will display a bitmap image of the printed cassette in a pop-up window instead of printing to the external device.

This would typically be used during the development of Print Templates to avoid wasting cassettes.

With this option set to 'False' the label will be sent to print on the external device as normal.

Show image of label in queues

When this is set to 'True' an image of the printed cassettes will appear alongside the rest of the data in the Queue Grids.

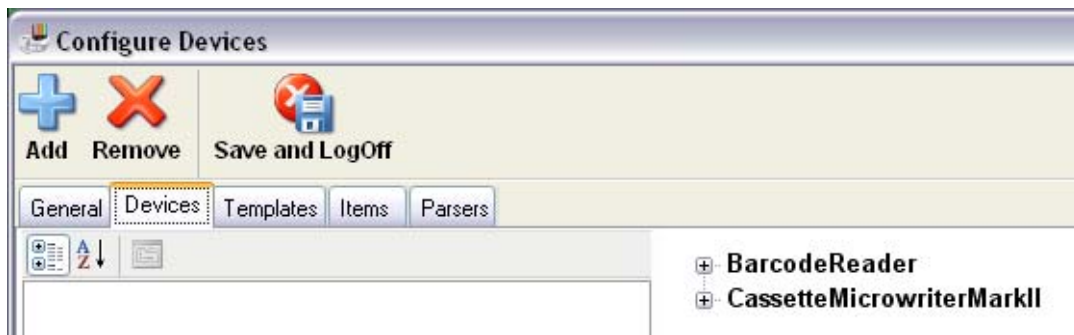
If set to 'False', no image will appear.

Note

Turning this feature off may increase the performance of LabWriter.

Devices Tab

Click on the Devices Tab to display the following screen:



Devices Tab Screen

By clicking on the + sign next to the text on the right-hand side, any Sub-Level Devices will be shown.



Sub-level devices

By selecting the Sub-Level Device, a list of Device Properties will appear on the left-hand side of the screen.

Hoppers	
⊕ Hoppers	Device Hoppers
Inputs and Outputs	
⊕ CacheDirectories	Cache Directories
⊕ ComPorts	ComPorts.
Misc	
RunStatus	False
MaxQuantity	10
Name	PrintMate
Outlets	
Outlet1	Outlet1
Outlet3	Outlet3
Outlet2	Outlet2

Device properties list

Note

The list shown in the above figure is specific for a PrintMate instrument.

It is possible to add new Sub-Level Devices such as Barcode Readers which will have far fewer options.

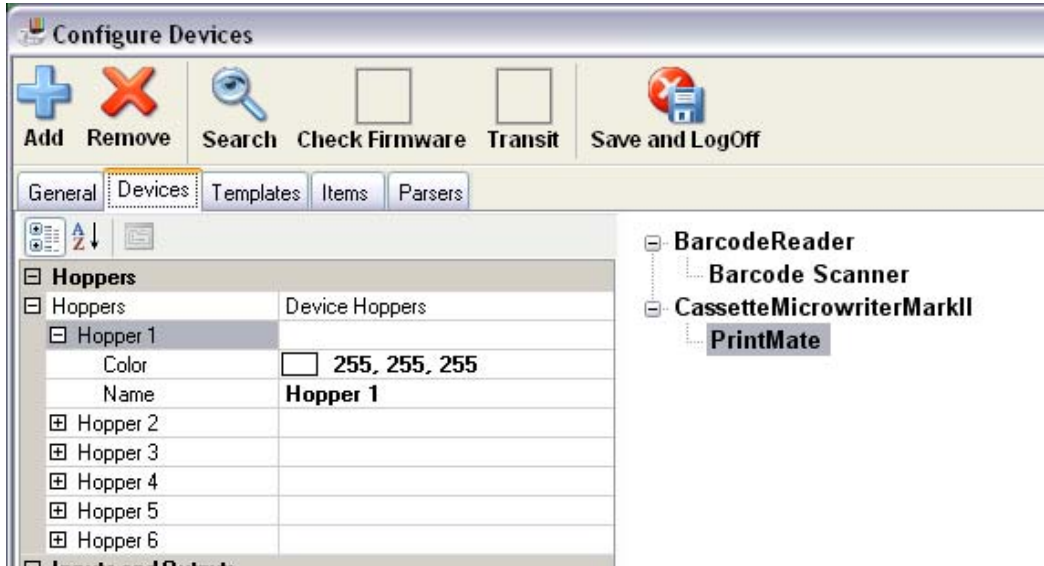
PrintMate Device Properties

The following is an explanation of each of the fields in the PrintMate Device Properties list:

Hoppers

Clicking on the + sign next to Hoppers will display either 2, 6 or 12 Hopper fields with a numerical identifier for each - for example Hopper1, Hopper 2 etc.

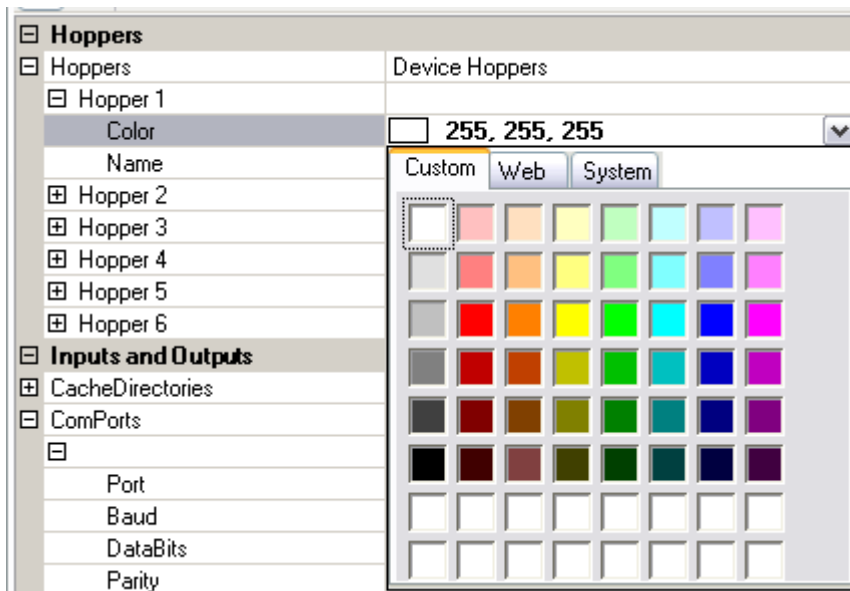
Clicking on the + sign next to any of these Hopper fields will display a Color field and a Name field.



Expanded hopper fields

These fields can be used to identify the contents of a particular Hopper to enable quick-reference when deciding which Hopper to print a particular Cassette Label to.

Clicking on the Color field allows a drop-down Color Palette to be used to select a color.



Drop-down color palette


Alternatively it is possible to type in the name or Red-Green-Blue components of a color instead.

Example Typing in *Red* and pressing Return will produce the following result:

☐ Hopper 1	
Color	 Red
Name	Hopper 1

Typing in a color name

Example Typing in *255,255,128* and pressing Return will produce the following result:

☐ Hopper 1	
Color	 255, 255, 128
Name	Hopper 1

Typing in RGB components

Clicking on the Name field allows the Hopper Name to be changed.

Name	Post Mortem
------	--------------------

Changing the hopper name

Inputs and Outputs

- CacheDirectories - The CacheDirectories option allows the user to define the location of the data they wish to import. This is often the LIS Output Directory.
- ComPorts - This defines the Com Port Settings which allow the LabWriter Application to communicate with the specific device.

Warning

Com Port Settings are critical to successful operation and should auto-detect in most cases. Changing them may affect operation.

Misc

- RunStatus - This is used to define whether LabWriter is being used in conjunction with an external data source, such as an LIS. If set to 'True', an external data source will be used.
- MaxQuantity - This sets the maximum Quantity value shown in the drop-down menu on the Main User Screen.
- Name - This allows the Name of the selected device to be changed to aid identification.

Outlets

The 3 values under this sub-heading allow the Name of each of the Outlet Positions (1 to 3) to be changed to aid identification.

Note *The default setting has Outlet 1 as the furthest from the front of the PrintMate instrument, and Outlets 3 as the furthest forward.*

Adding New Devices

To add a new Device:

- Select the Device Type to add.



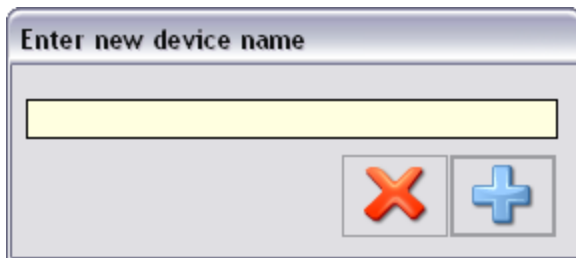
Select the device type

- Click on the Add icon.



Add icon

- Enter the name of the new Device in the New Device dialog box which appears and then click on the + icon.



Select the device type

- The new Device should appear under the relevant Device Type heading.

Alternative Device Setup

If using a labelling device which is not PrintMate, refer to the appropriate section below for connectivity information.

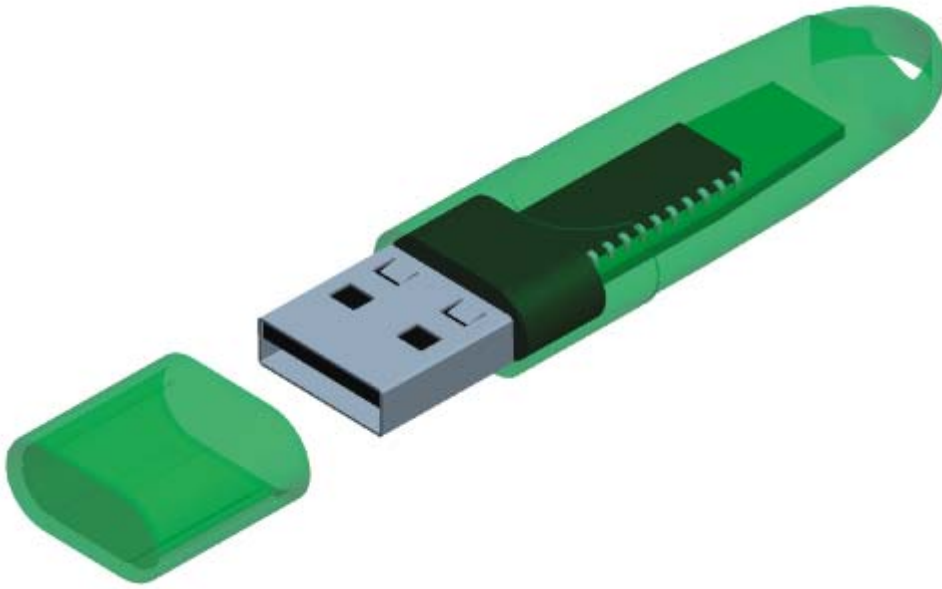
SlideMate Setup

To connect and setup a SlideMate device, refer to the SlideMate Operator Guide.

Note:

When printing to a SlideMate device the dongle supplied with LabWriter must be plugged in to a suitable USB port.

It will not be possible to print to a SlideMate without the dongle fitted.



SlideMate dongle

Under normal circumstances it should be possible to run SlideMate without having to adjust any settings within LabWriter.

However, the following settings must be used on SlideMate:

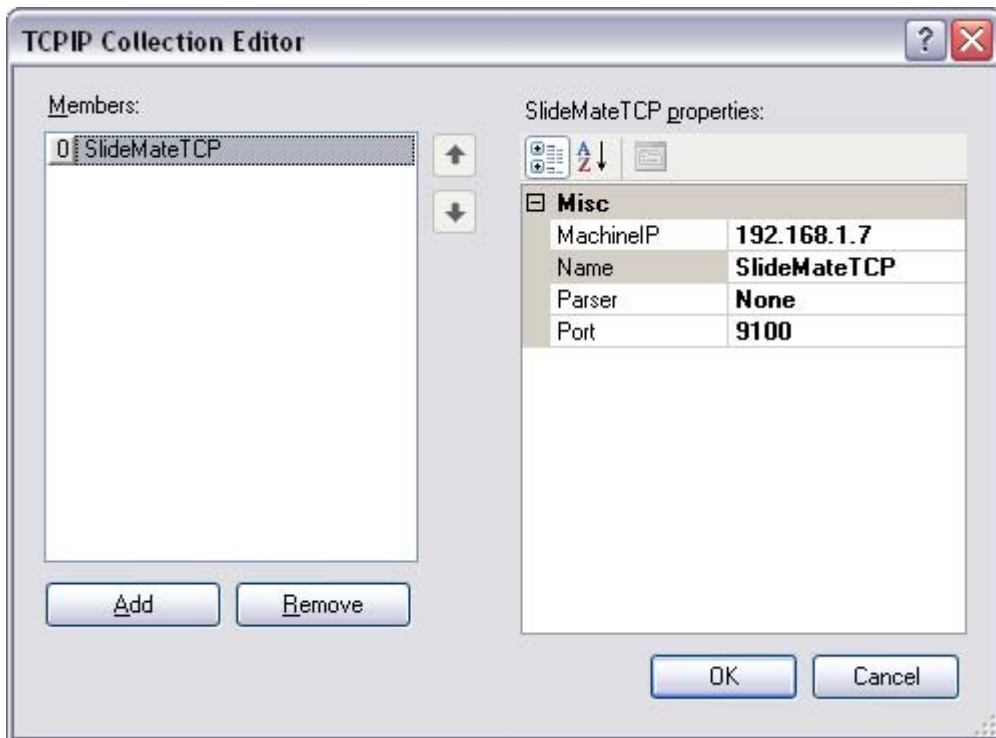
- SlideMate Input device should be set to 'Network'.
- From the Network Settings Menu set:
 - DHCP = OFF
 - IP = 192.168.1.7 (or another if required)
 - SlideMate Data Type = Raster

Note:

If a different IP Address has been assigned to SlideMate, LabWriter will need to be set up as follows:

- Enter the Admin Area and click on the Devices Tab.
- Expand the SlideMate device type and then select the specific SlideMate device required.

- In the Device Properties list open the TCPIPS parameter to open the TCPIP Collection Editor.



TCPIP Collection Editor

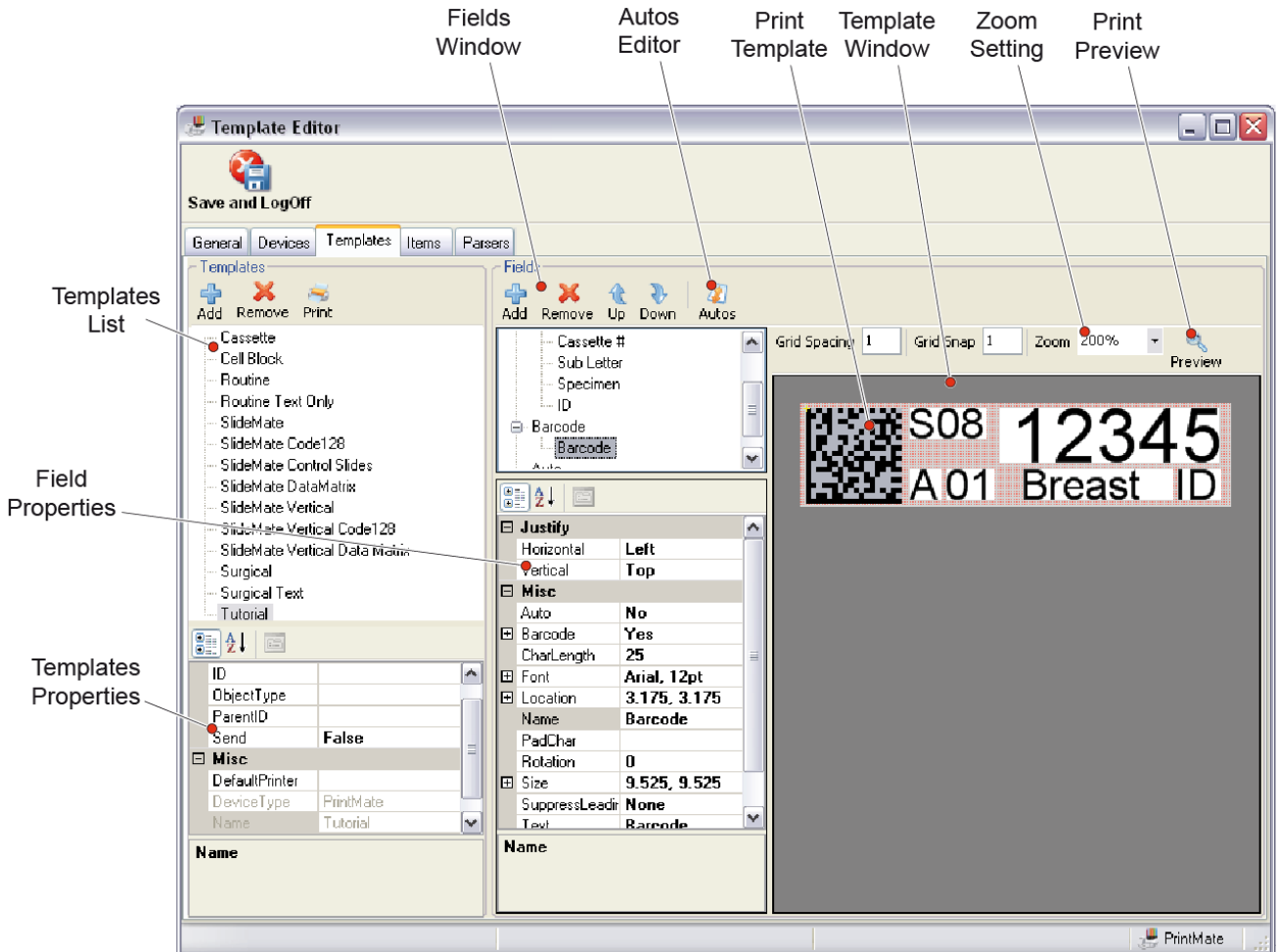
- Change the IP Address value to be the same as for SlideMate.
- Click 'OK' to close the Collection Editor.
- Click the 'Save and Logoff' button to exit to the User Screen.

Templates Tab

The Templates tab is where most of the basic setup work is carried out.

A Tutorial to explain creating and editing Print Templates can be found in Chapter 3 - Creating Print Templates.

The following screenshot identifies the main features of the tab in order to make working through the Tutorial easier.



Items Tab

The Items tab is used to create generic User Items which can then be imported into Print Templates.

The generic properties of User Items can be modified within specific Print Templates.

Notes

Item properties modified from within the Templates tab will override the generic properties, but only for the specific instance of the Item.

If the generic properties of an Item are modified from the Items tab, the change will be reflected in ALL instances of this Item unless the property has already been overridden from within the Templates tab.

If a property of the generic Item requires changing, but the existing instances of the Item need to stay as they are, a new Item will need to be created.

Creating a New User Item

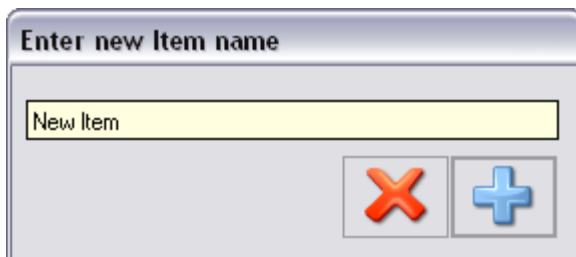
To create a new User Item:

- From the Items tab click on the 'Add' icon.



Add Icon

- Enter the name of the User Item to be created in the dialog box.



New Item Dialog Box

- The new User Item will be created and its name will appear in the list in the right-hand window.



New Item Shown In List

- The generic properties of the newly created User Item are shown in the top-left window.

[-] Misc	
ControlType	TextBox
[+] Data	
Data	String[] Array
DataType	String
DefaultVal	
Justify	Left
Length	-1
Name	New Item

User Item Properties

Editing Generic Properties

The properties of generic User Items are edited by clicking on the box adjacent to the property name.

Properties values may need to be typed in or selected from drop-down lists.

The details of the generic properties are as follows:

ControlType

This property defines the method of data input.

Clicking on the property value will display a drop-down list with 3 options.

DropDown - Allows a user-defined drop-down list of values to be used as the input.

EditBox - Allows standard text entry either manually or automatically.

None - Disables the ability to input data into the Item.

Data

This property allows the values for a drop-down list to be defined.

Note

This drop-down list will be used if the ControlType is set to DropDown.

DataType

This property defines the type of data being input.

Clicking on the property value will display a drop-down list with 2 options.

String - This indicates that the data consists of a series of standard Unicode characters.

System - This indicates that the data consists of system text.

Note

Under normal operating conditions this value would only ever be set to 'String'.

DefaultVal

This property allows a default value to be defined for the User item.

Justify

This property defines the text alignment.

Clicking on the property value will display a drop-down list with 3 options.

Left - This indicates that the text will be aligned to the left.

Centre - This indicates that the text will be aligned centrally.

Right - This indicates that the text will be aligned to the right.

Length

This property defines the number of characters which can be contained within a User Item.

This is typically set to '-1', which indicates that an infinite number of characters can be used.

Note

Specific limitation of this value is usually carried out from within the Templates tab, so that it only affects the specific instance of the User Item.

Name

This is the name used to identify the User Item.

Select Language

Turn on the PrintMate

Run the LabWriter software.

Click on the Setup button.



Setup Button

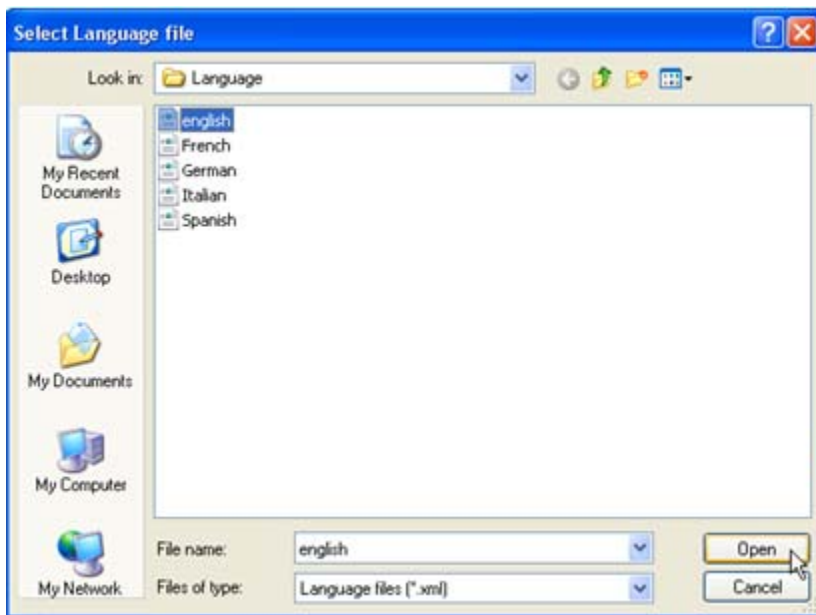
Enter the password 'adminlan'.

Click on the Open button.



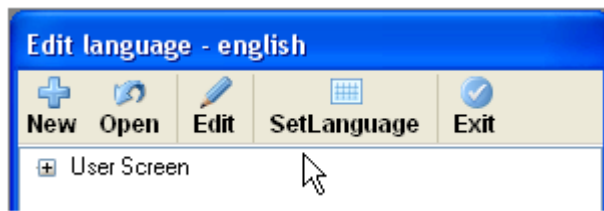
Open Button

Select the required language and then click on the Open button.



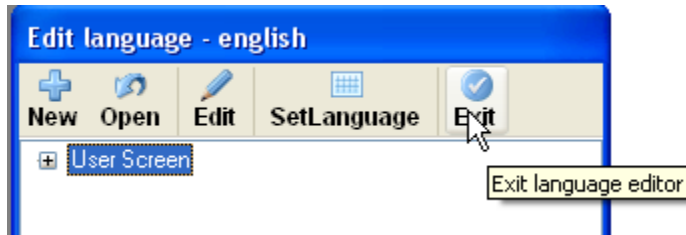
Select Language

Click on the SetLanguage button.



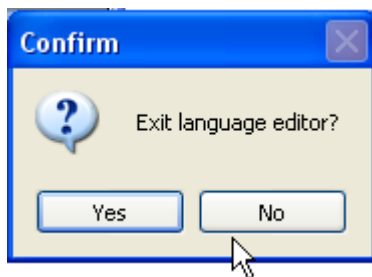
SetLanguage Button

Click on the Exit button.



Exit Button

Click on the Yes button if you want to exit.



Confirm Exit

Click on the Close button.



Close Button

Run the LabWriter software.

Save and Logoff

Once all Administrator actions have been completed it is essential that the correct Logoff procedure is followed.



Failure to logoff correctly may result in the loss of any changes made in the current session.

To save settings and logoff as an Administrator:

- Click on the 'Save and Logoff' icon at the top of the screen.



Save and Logoff Icon

Chapter 3 - Creating Print Templates

Introduction

This chapter is intended to explain how to use the Admin Area - and in particular the Templates tab - to create Print Templates.

This chapter is also intended as a Tutorial, which when worked through from start-to-finish will create a Print Template which uses most of the commonly used features.

Print Templates are required to define the layout and content of a label.

User Items are used as the building-blocks for creating a Print Template.

User Items come in various forms, but the five basic types are:

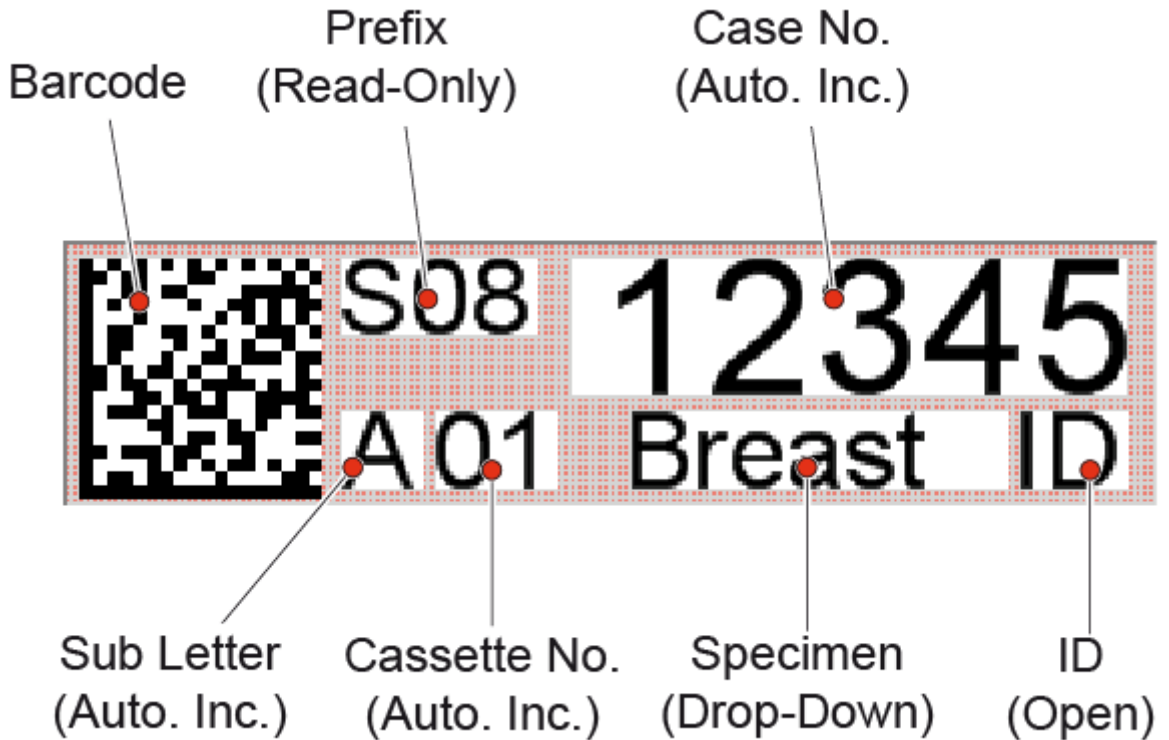
- Fixed Value (Read Only)
- User Editable (Open)
- Automatically Filled Variable (Auto. Incremental)
- User Selectable (Drop-Down)
- Barcodes

By working through this chapter and the tutorials you will learn how to do the following:

- Create a new Print Template
- Add User Items to the Print Template
- Edit User Item Properties to suit requirements
- Layout User Items on the Print Template
- Edit fonts, size and justification of User Item text.
- Create Barcodes from User Item data.
- Check the print layout.

Tutorial Print Template

The Print Template created by the tutorial is shown below.



Print Template Created Using Tutorial

The details of each of the elements are:

Barcode - This is an 18 x 18, DataMatrix Barcode which is made up of the following data:

{Prefix} - {Case No.} - {Sub Letter} {Cassette No.} - {ID}

Prefix - This is a Read-Only text field which contains pre-determined text.

Case No. - This is a 5 digit number which will incrementally increase according to a pre-defined set of rules.

Sub Letter - This is a single character text field which will change automatically according to a pre-defined set of rules.

Cassette No. - This is 2 digit number which will incrementally increase according to a pre-defined set of rules. If a single digit number is entered, a leading zero will be added to create a 2 digit entry.

Specimen - This field is filled via a drop-down list with several preset values. These values are defined during the creation of the Print Template.

ID - This is an Open field which allows any 2 characters to be entered (a persons initials for example).

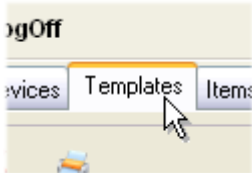
Creating a New Print Template

The first step in building a Print Template is to create a blank 'canvas' to allow the template contents to be laid out on.

Tutorial Exercise

To create a new Print Template:

- Click on the Templates tab.



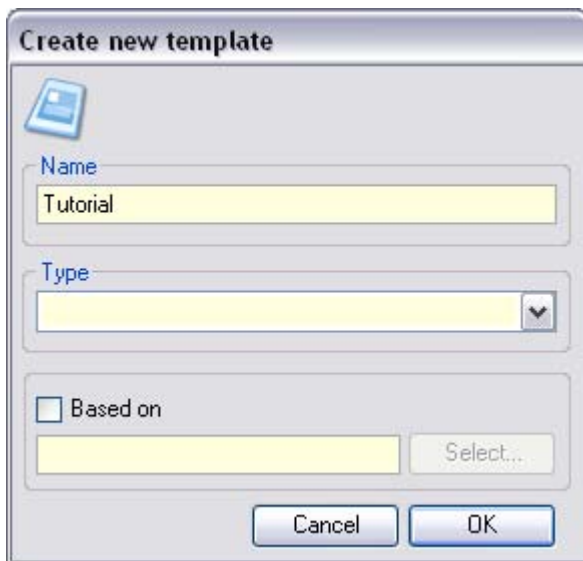
Templates Tab

- In the Templates field, click on the Add icon.



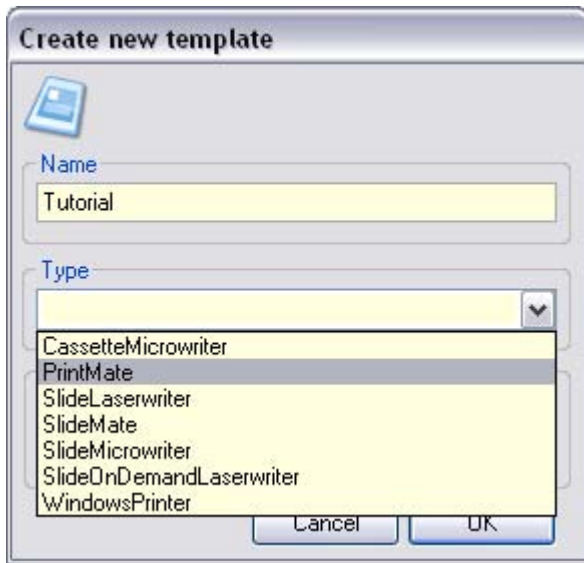
Add Icon

- Enter the Template Name into the Name field of the dialog box which appears.



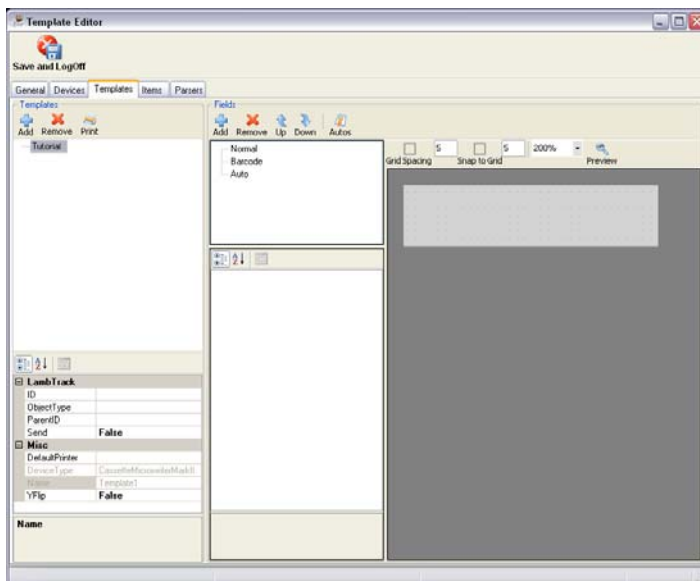
Create New Template Dialog Box

- Select the appropriate printer type from the drop-down list.



Select Printer Type

- Click 'OK' to confirm.
- The new, blank Print Template will be created.



Blank Template

Introducing User Items

- User Items are the building blocks from which Print Templates are made.
- User Items can be thought of as containers which hold specific pieces of information to allow it to be manipulated.
- User Items are generic and are available to all Print Templates.
- New User Items can be created from the Items tab - *see Chapter 2 - Items Tab.*

Tutorial Exercise

Note

For the purpose of this tutorial, the pre-defined User Items are sufficient.

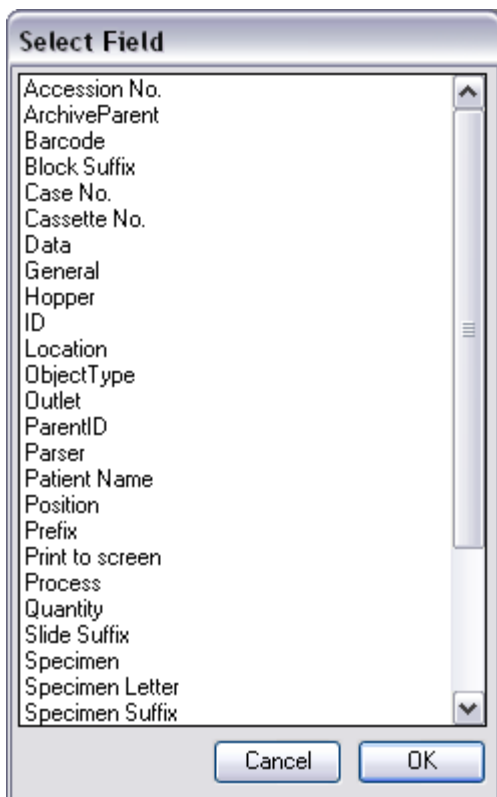
To assign User Items to the Print Template:

- From the Templates tab, click on the 'Add' icon in the Fields Window.



Add Items Button

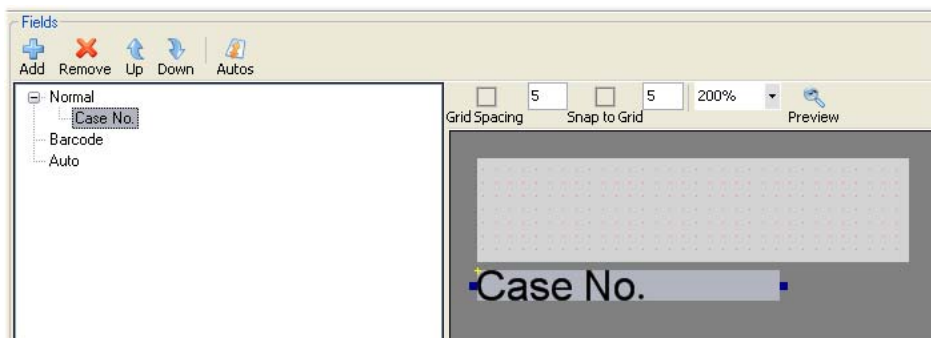
- A list of available User Items will appear.



Add Items List

- Select 'Case No.' from the list and click 'OK'.

- 'Case No.' will appear in the Fields Window under the 'Normal' heading, and a box will appear in the Template Window.



User Item Added to Print Template

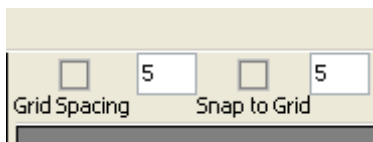
Positioning and Resizing User Items

User Items can be moved around the Template Window, resized and aligned to a defined grid.

Moving User Items

User Items can be moved by either clicking on the Item and dragging it to the required position, or by using the arrow keys.

To allow precise positioning of the User Items, there are two checkboxes and numerical fields at the top of the Template Window.



Positioning Checkboxes and Values

- The Grid Spacing setting defines the grid spacing, visible as the red dots on the light grey background.
- The Snap to Grid setting defines the distance which a single press of an arrow key will move the User Item.

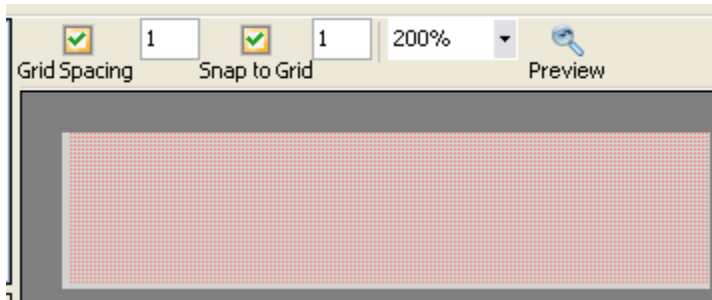
In each of the above cases, the smaller the numerical value, the more precisely a User Item box can be positioned.

Resizing User Items

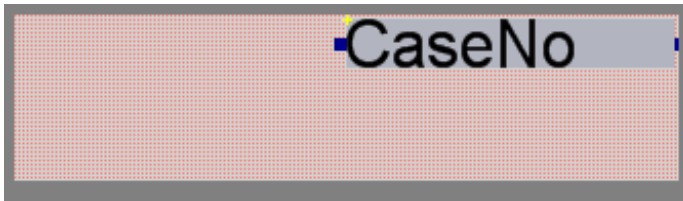
- User Items can be resized (horizontally only) by using the blue handles which appear on either side of the User Item box.
- The 'Size' property can also be used - *see Formatting User Items.*

Tutorial Exercise

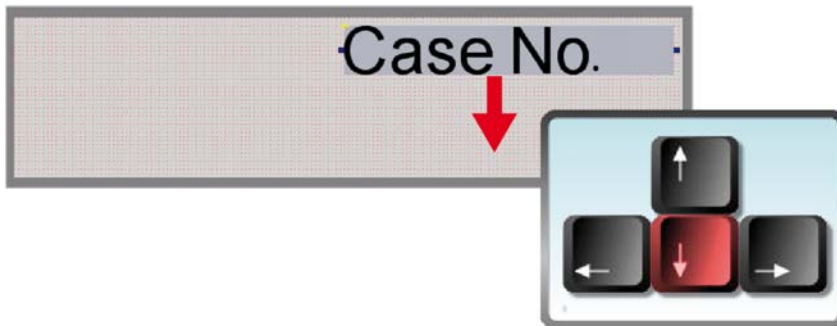
- Activate both of the positioning checkboxes and set the numerical values to 1.

*Positioning Checkboxes and Values*

- Resize the 'Case No.' User Item box to approximately the size shown, and drag it to the top, right-hand corner of the Template.

*Resized User Item Box*

- Use the arrow keys to precisely position the box.

*Positioning Using Arrow Keys*

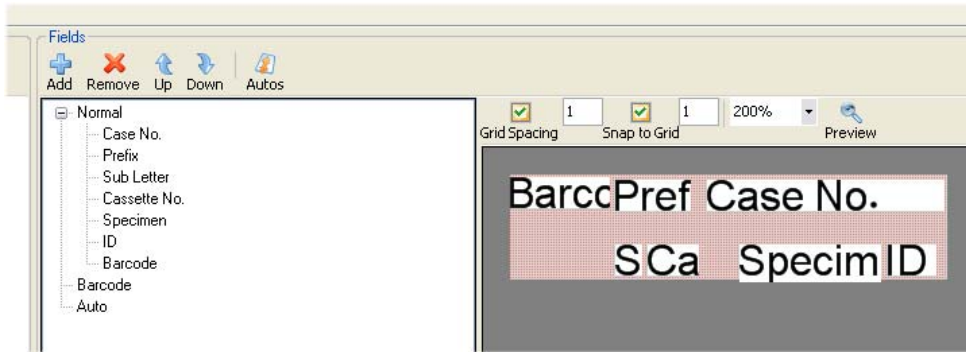
- With the 'Case No.' User Item box in approximately the right position, you can now begin to insert, position and resize the other User Items required to make up this Print Template.
- The remaining User Items required are:
 - Prefix
 - Sub Letter
 - Cassette No.
 - Specimen
 - ID
 - Barcode

Notes

The Barcode User Item will initially appear as a text box containing the word 'Barcode'.

When resizing some of the User Items, the text may appear cropped.

- Once all the User Items have been inserted and positioned, the Template should look similar to the following image.



All Items Added



When positioning User Items, ensure they do not overlap each other or exceed the boundary of the Print Template. Failure to do so may cause print quality errors such as missing or incomplete text and unreadable barcodes.

Formatting User Items

Once all the User Items have been inserted into the Print Template, you can now start to format their properties.

The formatting options for any particular User Item can be seen at the bottom of the screen when the User Item is selected.

Justify	
Horizontal	Left
Vertical	Top
Misc	
Auto	Yes
Barcode	No
CharLength	6
Font	Arial, 27.75pt
Location	30.1625, 2.645833
Name	CaseNo
PadChar	
Rotation	0
Size	34.01786, 7.276042
SuppressLeadingZero	None
Text	12345
UserInput	Normal

Formatting Options Palette

The Formatting Options are:

Justify

Horizontal - Defines the horizontal justification of the text, with options to Left-Align, Right-Align and Centre.

Vertical - Defines the vertical justification of the text, with options to align to Top, Middle or Bottom.

Misc

Auto - Defines whether the value entered Auto. Increments or not.

Note

Rules can be set to govern how Auto. Increment Items behave and interact with each other - see Appendix C - Auto Settings.

Barcode - Defines whether a User Item is displayed as a Barcode or not.

Note

Selecting 'Yes' from the drop-down list will display the Barcode Options dialog box - see Defining Barcodes.

CharLength - Defines the maximum number of characters which will be displayed in a particular User Item.

Note

If too many characters are entered into a field, the extra characters will not be displayed or printed.

Font - Defines the Typeface and the Font Size.

Notes

Any font which is installed on the computer can be used.

The height of a User Item box is defined by the Font Size and will change to suit automatically.

Location - Defines the position of the top, left-hand corner of the User Item box in relation to the bottom, left-hand corner of the Print Template.

Note

The first value is the horizontal distance; the second value is the vertical distance.

Name - Displays the name of the User Item.

Note

This property is not editable from the Templates tab.

PadChar - Defines a character to be used if a User Item must contain a certain number of characters, and the input data does not contain enough.

Example

If the CharLength value for a certain User Item is '5', and the PadChar is defined as '0'; entering a value of '123' into the field will result in the field displaying a value of '00123' when printed.

Rotation - This defines the angular rotation of the User Item in relation to the standard Horizontal layout. Changing the value from 0 to 90, 180 or 270 will cause the User Item to be rotated clockwise by the number of degrees selected.

Size - This displays the width and height of the selected User Item box.

Notes

The first value shown is the width; the second value shown is the height.

The height of the User Item box is determined by the Font Size, so altering the height value will have no effect. The height value is essentially just a reference value.

SuppressLeading Zeros - This allows any leading zeros to be ignored. The possible settings are None, Barcode, label and All.

Example

If this feature is set to Label and the data '00123' is entered, the printed result would be '123' in the relevant field.

Text - This field allows text to be entered into a User Item box. This serves two purposes.

Text can be entered to serve as an example of actual field content to allow the administrator to check that the print layout is correct without having to print.

Text can be entered into a field which is set to Read Only or Hidden (see UserInput below). This text will then appear on the printed label.

UserInput - This defines how data is entered into the field and whether it is visible to the user. The possible settings are:

Normal - This is the default setting and allows standard user input using the keyboard.

Read Only - This makes the field a Fixed value which can be viewed, but not altered outside of the Admin Area. The text entered into the Text property will be used as the value of this field.

Hidden - This works in the same way as Read Only except the field is not visible to the user.

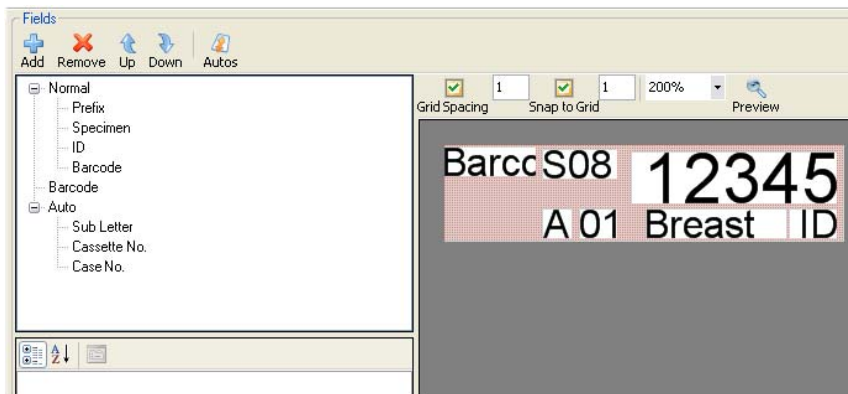
Tutorial Exercise

With reference to the following table, alter the properties of each of the User Items (except the Barcode item which will be dealt with later).

Properties		User Item Name					
		Prefix	Sub Letter	Cassette No.	Specimen	ID	Case No.
Justify	Horizontal	Left	Left	Left	Left	Right	Right
	Vertical	Top	Top	Top	Top	Top	Top
Misc.	Auto	No	Yes	Yes	No	No	Yes
	Barcode	No	No	No	No	No	No
	CharLength	3	1	2	6	2	5
	Font	Arial, 12pt	Arial, 12pt	Arial, 12pt	Arial, 12pt	Arial, 12pt	Arial, 22pt
	PadChar			0			
	Rotation	0	0	0	0	0	0
	Size (Box Length Only)	8	3	4	15	7	22
	SuppressLeading Zeros	None	None	None	None	None	None
	Text	S08	A	01	Breast	ID	12345
	UserInput	Read Only	Normal	Normal	Normal	Normal	Normal

Note Location is not required because the Snap to Grid feature is on.

If the information has been entered correctly, the Print Template should look similar to the following image.



Print Template with Properties Defined

Defining Barcodes

Barcodes have to have their contents defined to ensure that the correct data is contained, and in the correct order.

As was mentioned earlier, the contents of the Barcode for this tutorial will be:

{Prefix}-{Case No.}-{Sub Letter}{Cassette No.}-{ID}

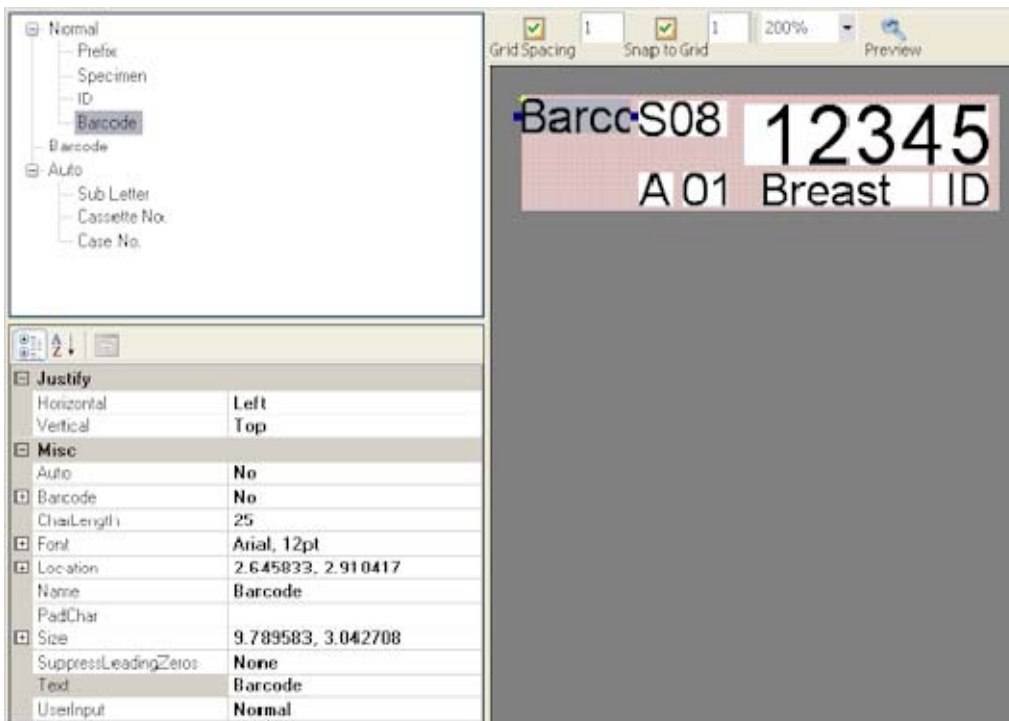
So, with the data contained in the Print Template, the scanned Barcode would read:

S08-12345-A01-ID


Tutorial Exercise

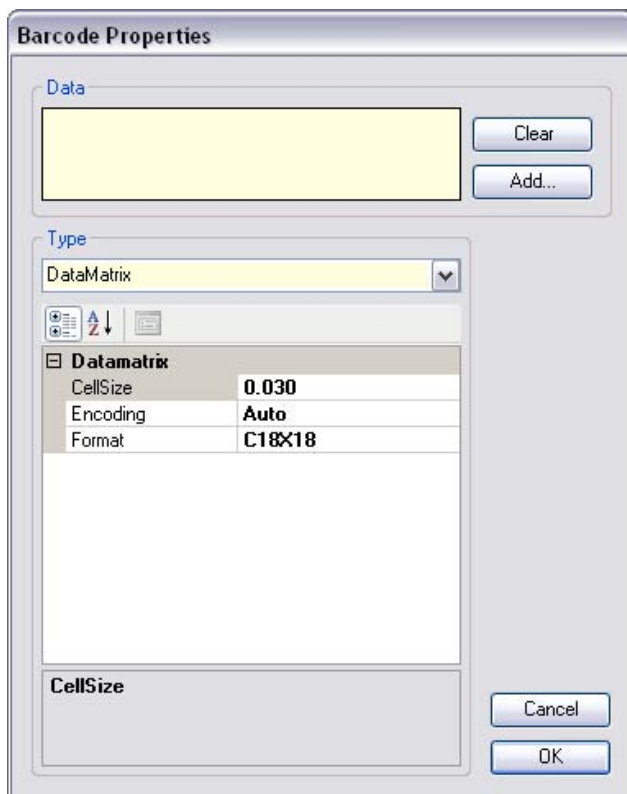
Barcodes are defined as follows:

- Select the Barcode User Item to view the Properties List.



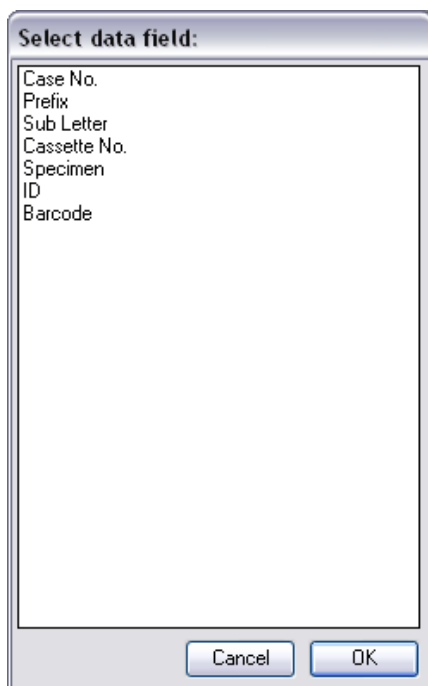
Barcode properties list

- Click on the Barcode field in the Properties List, and then on  to open the Barcode Properties dialog box.



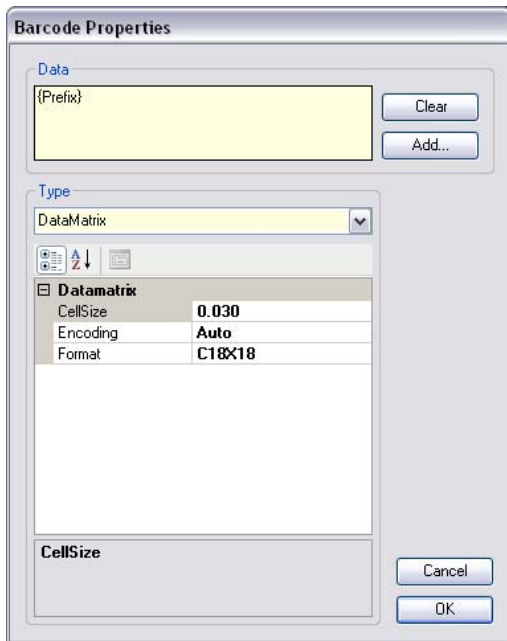
Barcode properties dialog box

- Click on the Add button to display a list of the User Items used in the Print Template.



List of user items used

- Select Prefix from the list and click OK.
- The Barcode Properties dialog box should now look like the following.

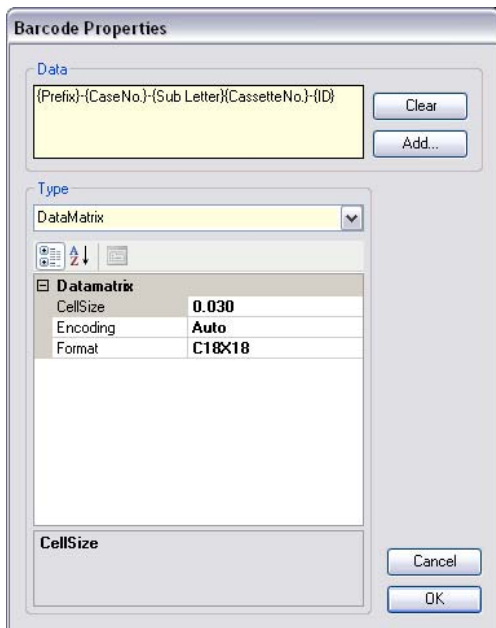


Modified barcode properties dialog box

- Insert the cursor into the Data field after the word {Prefix} and type in a hyphen (-).
- Click Add again and repeat the above process for the rest of the required User Items.

Note *There is no hyphen between {Sub Letter} and {Cassette No.}.*

- After all the required User Items have been selected the Barcode Properties dialog box should now look like the following:



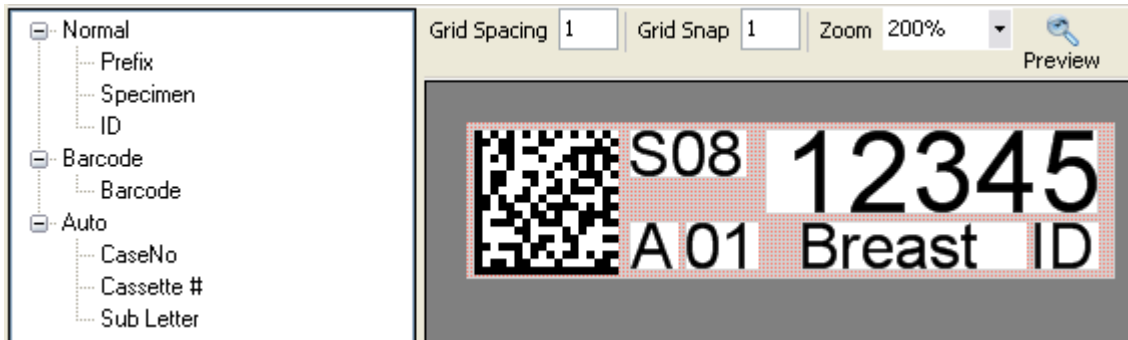
Barcode properties dialog box with data complete

- There are several Barcode Types which are selectable using the drop-down list - see Appendix B - Barcode Reference.

- For the purpose of this tutorial, leave the Barcode Type as DataMatrix.
- Ensure that C18x18 is selected from the Format drop-down list.

Note *Details on barcode capacities can be found in Appendix B - Barcode Reference.*

- Click OK to confirm the Barcode Properties.
- The Print Template should now look similar to the following.



Print template with datamatrix barcode added

- In the Properties List set the UserInput to Hidden.

Creating Drop-Down Lists

The Specimen User Item requires a list of possible values to be created in the form of a Drop-Down List.

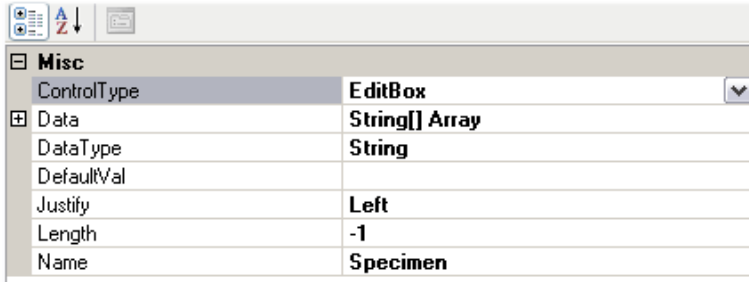
The values required for the purpose of this tutorial are:

- Heart
- Liver
- Lung
- Kidney
- Colon
- Breast
- Other

Tutorial Exercise

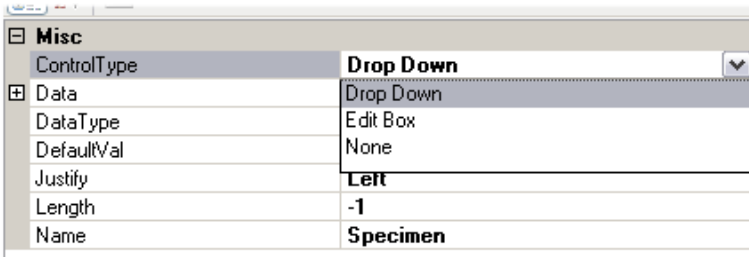
The procedure for creating the Drop-Down List is as follows:

- Click on the Items Tab to display the full list of User Items.
- Select Specimen from the list of User Items.
- The Item Properties list is shown in the top, left-hand corner and should look like the following:




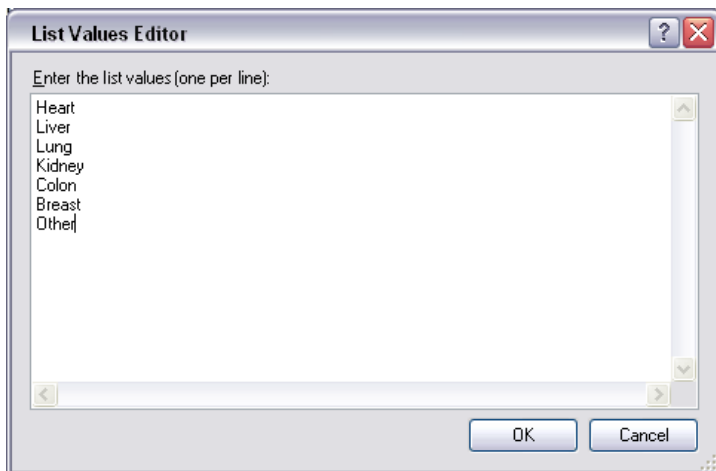
Items properties list

- From the drop-down list adjacent to ControlType, select Drop-Down.



Select drop-down list

- Click on the field adjacent to Data and then on the  button.
- The List Values Editor dialog box will appear.
- Insert the cursor into the large box and type in the required values, each separated by a Return, then click OK.



String collection editor

- Leave all the other Item Properties as they are.

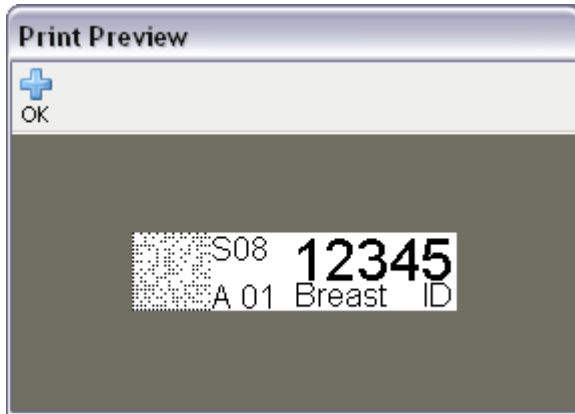
Checking the Print Template

Now that the Print Template is complete we can check that everything works as expected.



Clicking the Preview button at the top of the Template Window will display a bitmap image of the Print Template.

This is useful for checking that text doesn't disappear off the edge of the Printable Area of the Cassette.



Print preview bitmap

Note

Check that all text and barcode items are fully formed and do not overlap each other.

Saving the Print Template

To save the Print Template click on the Save and LogOff button in the top, left-hand corner of the screen.



Save and logoff button

Warning If you do not carry out the Save and LogOff procedure, all changes made since the last save will be permanently deleted.

Importing and Exporting Templates

Turn on the PrintMate.

Run the LabWriter software.

Click on the Setup button.



Setup Button

Enter the password.

Select the Template Tab.



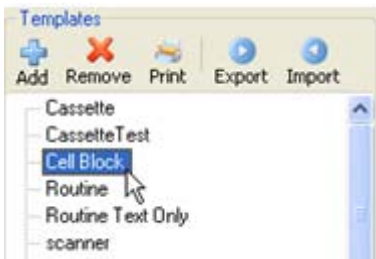
Templates Tab

Exporting a Template

Note

Only V2.1 and later have the facility to export; therefore only V2.1 or later templates can be imported.

Select the Template to export.



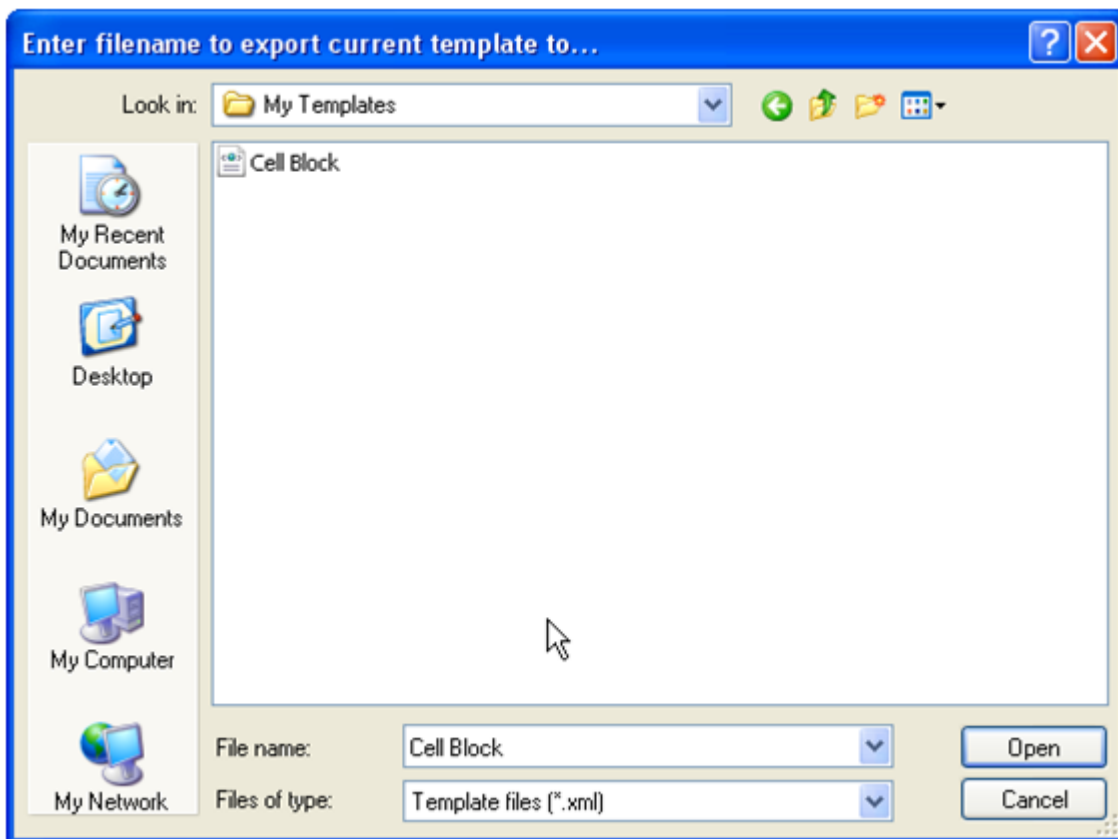
Select Template

Click on the Export button.



Export Button

Browse to the folder where the template is to be saved, then click on the Open button to save the template.



Folder Browser Window

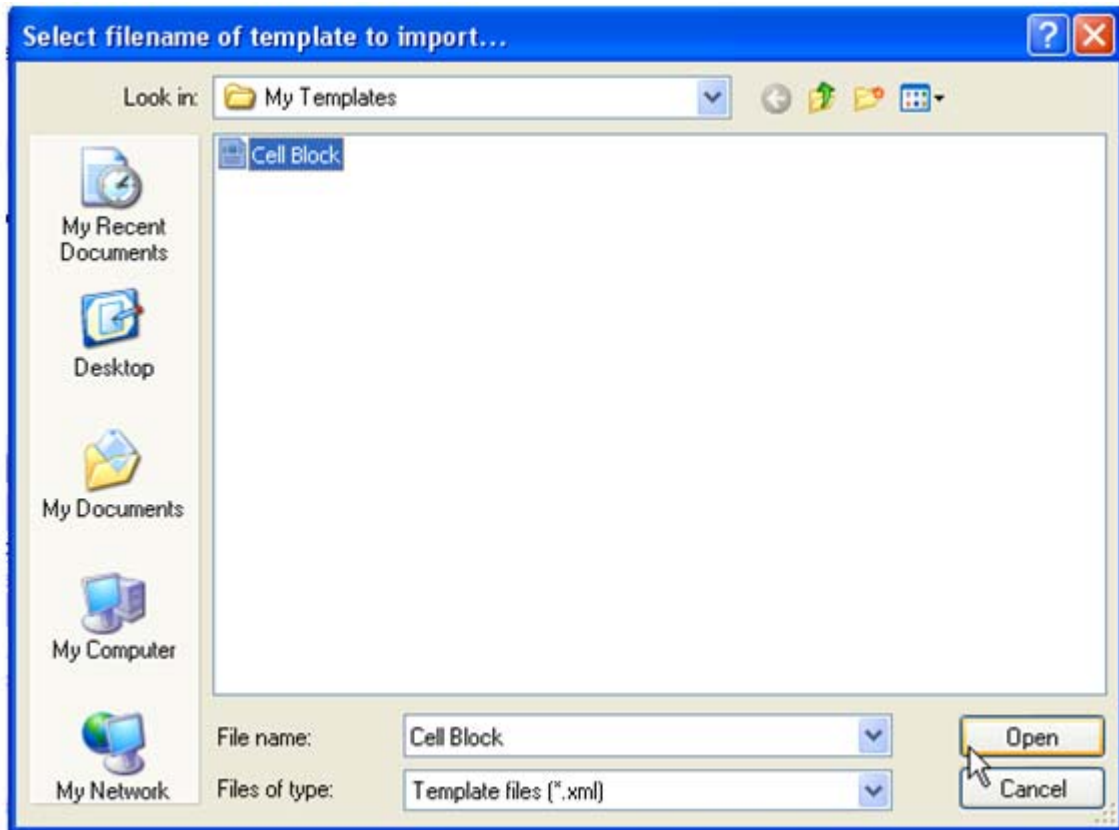
Importing a Template

Click on the Import button.



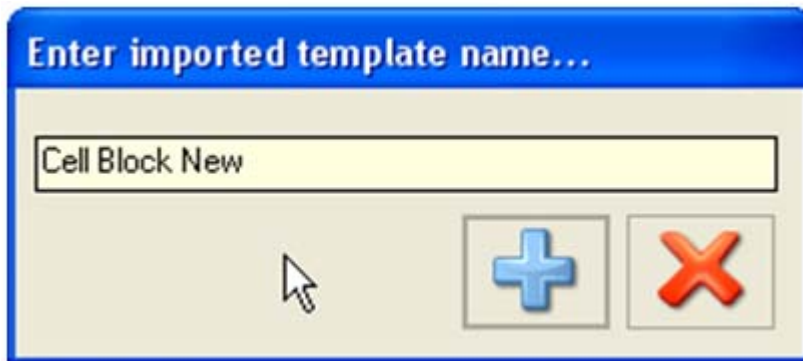
Import Button

Browse to the template to be imported and click on the Open button.



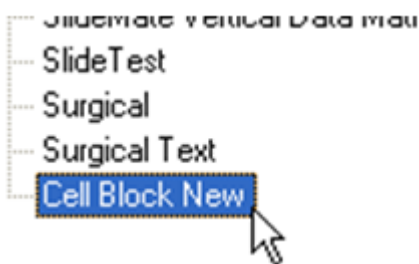
Folder Browser Window

- Enter a new name or use the saved name, then click on the Add button.



Enter Template Name

- The imported template will be displayed in the list.

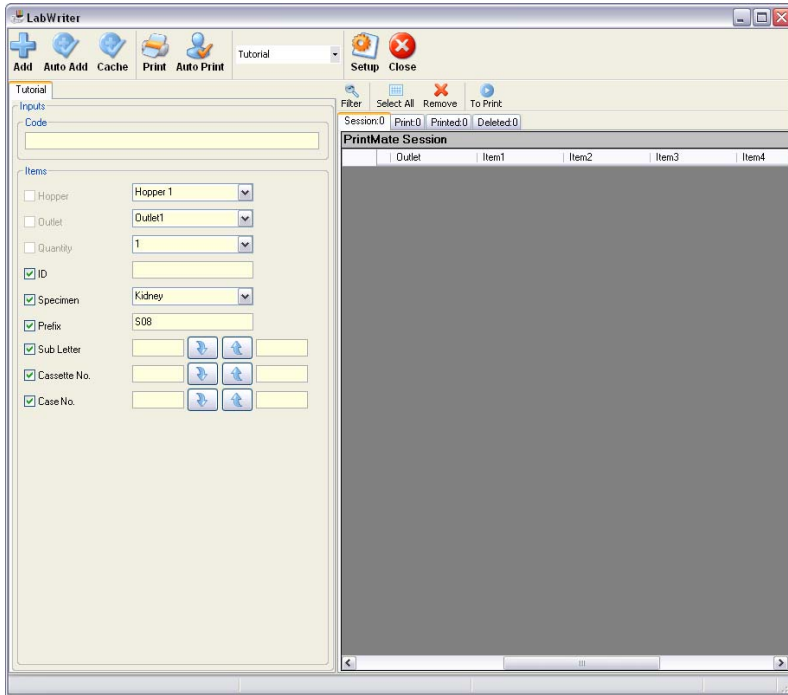


Template List

Chapter 4 - Daily Operation

Introducing the Operator Screen

When the LabWriter application is loaded the screen which appears will be the Operator Screen.











Operator screen




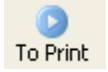
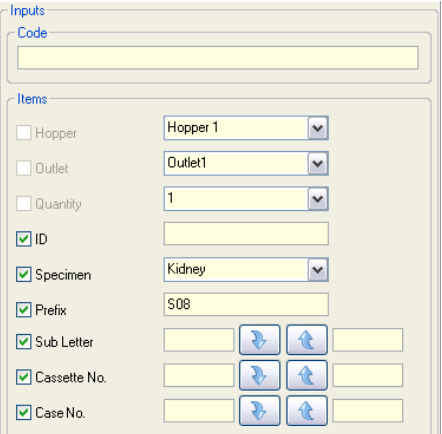
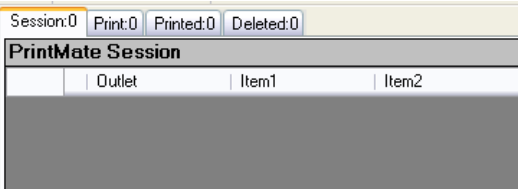
All printing and daily operation is carried out from this screen.



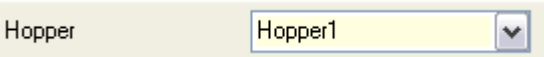
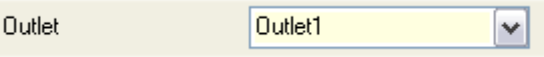
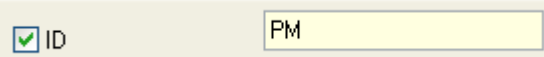
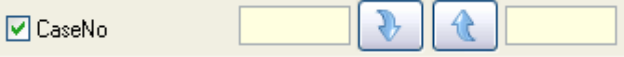
Note

The exact layout and appearance of the screen will depend on the template selected.

A description of each of the main features is given in the following tables:

Item	Function/Description
	<p>Clicking on this button will add all the Cassette Data currently setup to the Session Queue (Print Queue if Auto-Print is On). The number of Cassettes added is dependant on the settings of any Incremental Fields or the value entered into the Quantity Field.</p>
	<p>Clicking this button will turn the Auto-Add feature On or Off. When Auto-Add is On scanned Barcodes will be sent directly to the Session Queue.</p>
	<p>This button allows the application to interface with an LIS System. Note <i>This function is not available in the LabWriter Basic Application</i></p>
	<p>Clicking on this button will turn printing On or Off. When printing is turned On, all items in the Print Queue will be printed automatically in turn.</p>
	<p>Clicking on this button will turn the Auto-Print feature On or Off. When Auto-Print is On, clicking the Add button sends all items directly to the Print Queue and bypasses the Session Queue.</p>
	<p>Clicking on the drop-down arrow will allow alternative Print Templates to be selected for use.</p>
	<p>Clicking on this button will open the Enter Password dialog box which restricts entry to the Admin Area. This button will be unavailable when the Print button is On.</p>
	<p>Clicking on this button shuts down the application.</p>

Item	Function/Description
 <p>Filter</p>	<p>This button allows the operator to create Rules for sorting the Print Data.</p>
 <p>Select All</p>	<p>Clicking on this button highlights everything in the currently selected queue.</p>
 <p>Remove</p>	<p>Clicking on this button from all tabs except the Deleted Tab, will send the highlighted items to the Deleted List. Clicking on this button from the Deleted Tab will completely erase the highlighted items.</p>
 <p>To Print</p>	<p>Clicking on this button will send all highlighted entries from their current location to the Print Queue. Note: <i>Alternative versions of this button are available from different tabs, which will send items to the Session Queue.</i></p>
	<p>The Data Input Window contains all the editable fields which need to be filled in to provide the information which will be printed to the Cassettes.</p>
	<p>The Print Data Window contains the 4 tabs and will display the Print Data in a spreadsheet format. Note: <i>Column headings can be reordered as required by clicking on a heading and dragging it to the desired position.</i></p>

Item	Function/Description
	<p>The 4 tabs can be selected to display the appropriate Queue / List in the Print Data Window.</p>
	<p>This field will display the information in a scanned Barcode.</p>
	<p>This field allows the operator to select the number of the Hopper from which a Cassette is taken for any particular print run.</p>
	<p>This field allows the operator to select the number of the Outlet Position from which a cassette is ejected once printed.</p>
	<p>This is an example of a Static Field. The information contained will be printed as shown for all Cassettes in a given print run.</p>
	<p>This is an example of an Incremental Field. The entered information should be in the form of a lower and upper limit. The number of Cassettes printed will be dependant on the difference between the two limits as well as the entered data in any other Incremental Fields which appear in the Print Template.</p>

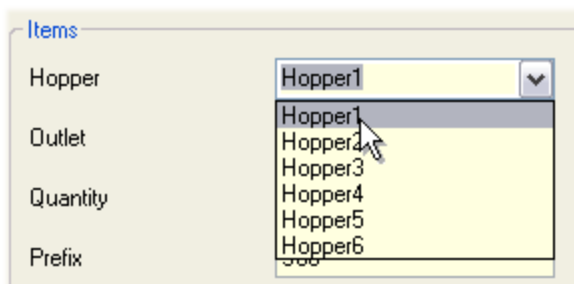
Printing Cassettes

This section explains how to carry out the following tasks:

- Printing Single Cassettes
- Printing Multiple Incrementing Cassettes
- Reprinting Cassettes
- Editing Print Data

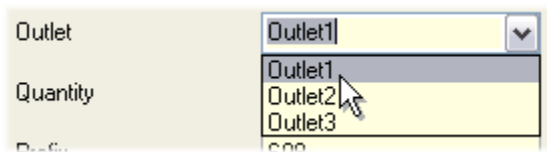
Printing Single Cassettes

- Select the Hopper number required using the drop-down menu.



Select hopper number

- Select the Outlet number required using the drop-down menu.

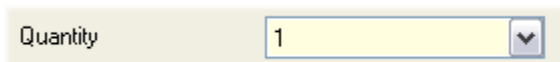


Select outlet number

Note

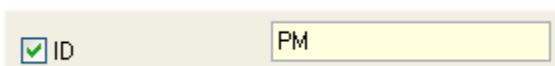
Outlet 3 is at the front of the instrument.

- Ensure Quantity is set to 1.



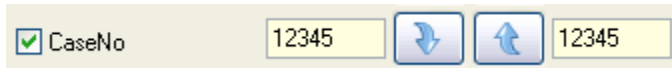
Set quantity to 1

- Enter the required values into any Static Fields.



Fill in static fields

- Enter the required value into the left-hand field of any Incremental Fields and ensure that the right-hand field contains the same value.



Fill in incremental fields

- Click Add to send the data to the Session Queue.



Click the add button

- Check that the data shown in the Session Queue is correct and then highlight the row.

PrintMate Session						
Time Stamp	Template	Label	Hopper	Outlet	Item1	
30/07/2008 09:57	Tutorial	S08 12345 A 01 Kidney PM	Hopper 1	Outlet1	01	

Data in the session queue

- Click To Print to send the data to the Print Queue.



Click To Print button

- Click the Print Tab at the top of the Print Data Window to open the Print Queue.

PrintMate Print			
Time Stamp	Template	Label	
30/07/2008 09:57	Tutorial	S08 12 A 01 Kidn	

Click the print tab

- Click Print to print the cassette.

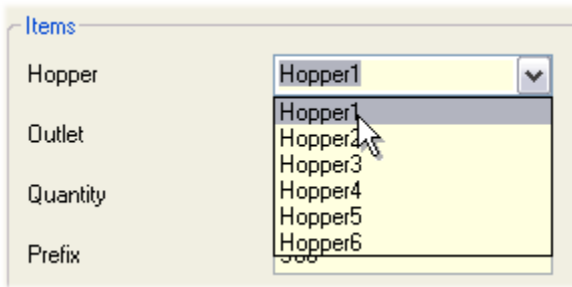


Click the print button

- The cassette will now print and the data will disappear from the Print Queue and appear in the Printed Queue.

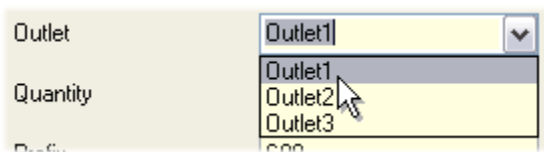
Printing Multiple Incrementing Cassettes

- Select the Hopper number required using the drop-down menu.



Select hopper number

- Select the Outlet number required using the drop-down menu.

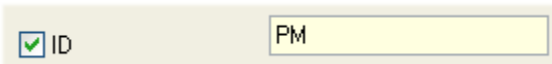


Select outlet number

Note

Ignore the Quantity field as this is automatically filled in by the application based on the data entered in the following steps.

- Enter the required values into any Static Fields.



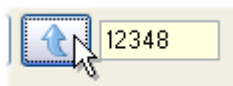
Fill in static fields

- Enter the required lowest value(s) into the left-hand field(s) of any Incremental Fields.



Fill in lowest incremental fields

- Type in, or use the Up and Down Arrows, to enter the uppermost value(s) required into the right-hand field(s).



Fill in highest incremental fields

- Click Add to send the data to the Session Queue.



Click the add button

- Check that the data shown in the Session Queue is correct.

Session:16 Print:0 Printed:0 Deleted:0					
PrintMate Session					
TimeStamp	Template	Label	Hopper	Outlet	
30/07/2008 10:08	Tutorial	S08 12348 B 02 Kidney PM	Hopper 1	Outlet1	
30/07/2008 10:08	Tutorial	S08 12347 B 02 Kidney PM	Hopper 1	Outlet1	
30/07/2008 10:08	Tutorial	S08 12346 B 02 Kidney PM	Hopper 1	Outlet1	
30/07/2008 10:08	Tutorial	S08 12345 B 02 Kidney PM	Hopper 1	Outlet1	
30/07/2008 10:08	Tutorial	S08 12348 B 01 Kidney PM	Hopper 1	Outlet1	

Data in the session queue

- Highlight all the rows or by clicking the Select All button.

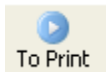


Click the select all button

Note

To select several sequential rows, highlight the first row, hold down the shift key and then select the last row. To select several non-sequential rows, highlight the first row, hold down the Ctrl key and then select any subsequent rows.

- Click To Print to send the data to the Print Queue.



Click To Print button

- Click the Print Tab at the top of the Print Data Window to open the Print Queue.

Session:0 Print:16 Printed:0 Deleted:0			
PrintMate Print			
TimeStamp	Template	Label	
30/07/2008 10:08	Tutorial	S08 12347 B 01 Kidney PM	
30/07/2008 10:08	Tutorial	S08 12346 B 01 Kidney PM	
30/07/2008 10:08	Tutorial	S08 12345 B 01 Kidney PM	
30/07/2008 10:08	Tutorial	S08 12348 A 02 Kidney PM	

Click the print tab

- Click Print to print the cassettes.



Click the Print button

- The Cassettes will now print and the data will disappear from the Print Queue and appear in the Printed Queue.

Reprinting Cassettes

In the event that a Cassette fails to print or prints badly it may be necessary to reprint a Cassette.

This is done in the following way:

- Click on the Printed Tab or the Deleted Tab (as necessary) at the top of the Print Data Window.

TimeStamp	Template	Label
30/07/2008 10:08	Tutorial	S08 12347 B 01 Kidney PM
30/07/2008 10:08	Tutorial	S08 12346 B 01 Kidney PM
30/07/2008 10:08	Tutorial	S08 12345 B 01 Kidney PM
30/07/2008 10:08	Tutorial	S08 12348 A 02 Kidney PM

The printed tab

- Highlight the row(s) which need(s) reprinting.

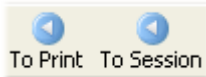
30/07/2008 10:08	Tutorial	S08 12346 B 01 Kidney PM	Hopper 1	Outlet1	0
30/07/2008 10:08	Tutorial	S08 12345 B 01 Kidney PM	Hopper 1	Outlet1	0

Highlight the required rows

Note:

To select several sequential rows, highlight the first row, hold down the shift key and then select the last row. To select several non-sequential rows, highlight the first row, hold down the Ctrl key and then select any subsequent rows.

- Click the To Print button to send the highlighted rows to the Print Queue, or the To Session button to send the highlighted rows to the Session Queue.



Click the to print or to session buttons

- Print the Cassette(s) as normal from the Print Queue or the Session Queue as appropriate.

Editing Print Data

Once Print Data has been added, it can only be edited from the Session Queue.

To edit Print Data:

- Ensure the Print Data to be edited is in the Session Queue by selecting the required row(s) and clicking the To Session button.



Click the To Session button

- Open the Session Queue and double-click on the cell which contains the data to be edited.

	Hopper	Outlet	Item1
8 12345	Hopper 1	Outlet1	2
2 Kidney PM		Outlet2	
8 12345	Hopper 1	Outlet3	2
2 Kidney PM		Outlet1	

Double-click on the cell to be edited

- Some data, when selected, will provide a drop-down list of possible entries.
- Other data will allow free editing and new values can be typed in as required.
- Once the new value is entered either press Return or click the cursor elsewhere on the screen.

Deleting Print Data

Note:

Print Data can be deleted from all four tabs using the same method.

However, deleting from the Deleted tab will permanently erase the data, whilst deleting from the other three tabs will move the selected cassettes to the Deleted List where they can be retrieved if necessary using the method shown in Reprinting Cassettes.

To delete Print Data:

- Highlight the row(s) to be deleted from the appropriate tab in the Print Data Window.

▶	30/07/2008 10:08	Tutorial	S08 12346 B 01 Kidney PM	Hopper 1	Outlet1	0
	30/07/2008 10:08	Tutorial	S08 12345 B 01 Kidney PM	Hopper 1	Outlet1	0

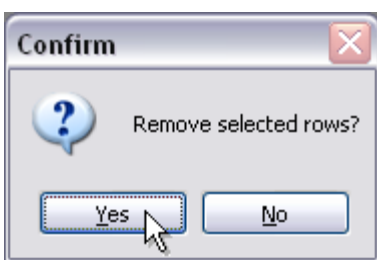
Highlight the required rows

- Click the Remove button to erase the rows from the currently selected tab.



Click the remove button

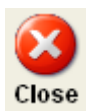
- Confirm your choice by clicking Yes in the pop-up dialog box.



Confirm delete dialog box

Shutdown Procedure

To shutdown the LabWriterApplication click on the Close icon on the User screen.



Close icon

Warning Do not shutdown the LabWriter Application using any other method as this may result in lost data.

Chapter 5 - Troubleshooting

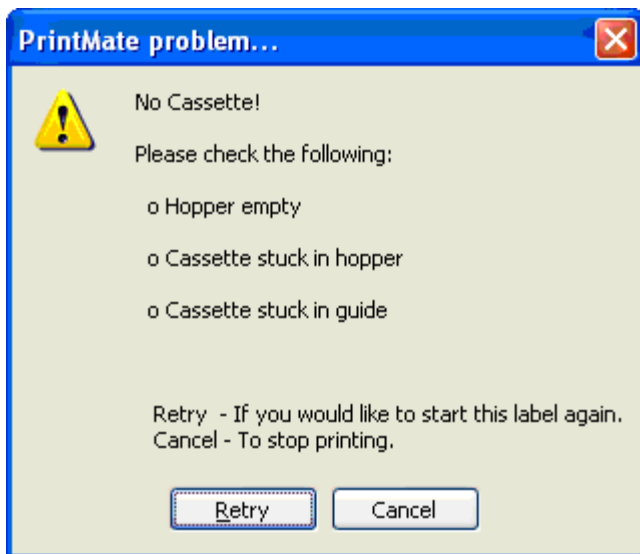
The majority of troubleshooting for the PrintMate and SlideMate systems, is carried out on the instrument.

Detailed troubleshooting can be found in the PrintMate Operator Guide (A79510100) or the SlideMate Operator Guide (B81310009).

Error Screens

In most cases a visual warning of the error is displayed as an Error Screen within the LabWriter Application.

An example of one of these Error Screens is shown below.



Example of an error screen

Between the on-screen instructions provided in the Error Screen and the Troubleshooting chapters in the PrintMate and SlideMate Operator Guide, it should be possible to cure most errors.

If further assistance is required, contact the Thermo Fisher Scientific Service Department or your Thermo Fisher Scientific Representative.

Chapter 6 - Automated Data Processing

LabWriter has the ability to print cassettes automatically using data from a Laboratory Information System (LIS).

This process enables data, both external and internal, to be stored on the LabWriter PC in a specified Cache folder.

This Cache folder is then used by LabWriter as its source data.

The following tutorials will introduce this feature using the Print Template created in Chapter 3 - Creating Print Templates.

Getting Started

Before starting this tutorial it is important that the text file 'LIS_Example.txt' is available.

This file can be found at the following location:

"C:\Thermo Scientific\LabWriter\LW_Desktop\Docs\Tutorial"

If for some reason the text file is not available, and you do not wish to re-install the LabWriter documentation to your PC, the following tutorial shows how to create the file manually.

Tutorial Exercise

Note

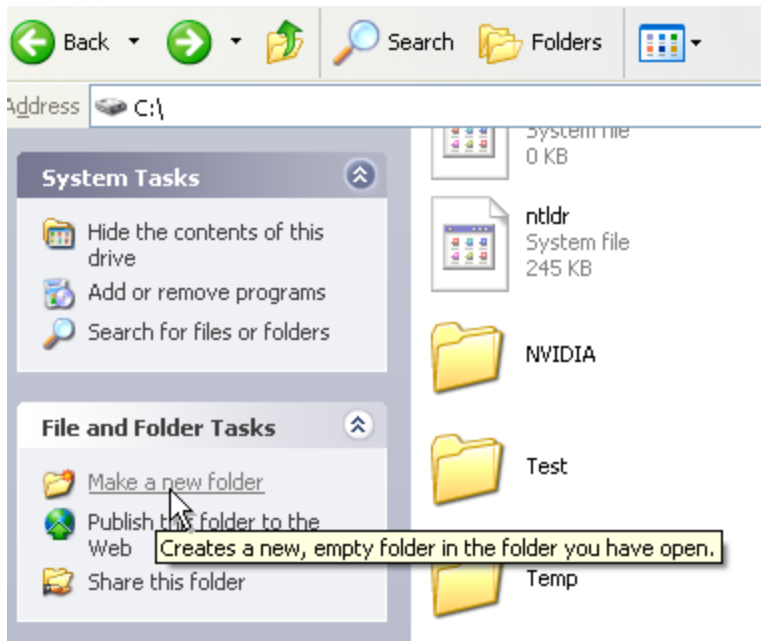
This tutorial assumes that the PC Operating System is Windows XP. If this is not the Operating System being used, the following process may not be accurate. Refer to the documentation supplied with the Operating System for details of how to carry out the following actions.

- Double-click on the 'My Computer' icon on the Desktop.



*My Computer Icon on PC
Desktop*

- Navigate to the location on your hard-disk that you want to save the file to, and then create a new folder by clicking on the 'Make a new folder' option.



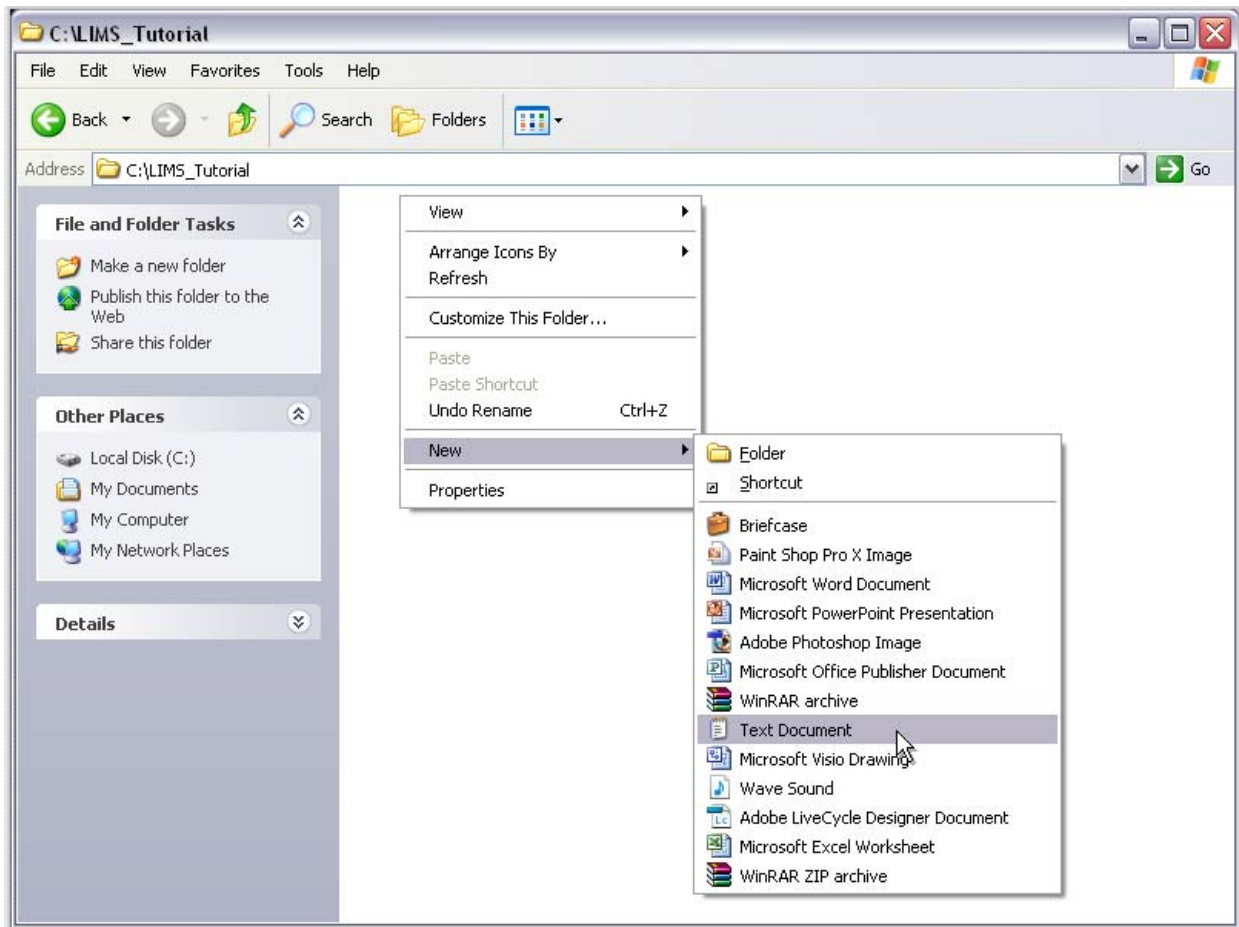
Make a new folder

- Once the new folder has been created, enter a suitable name (for example, 'LIMS_Tutorial') and press Return.



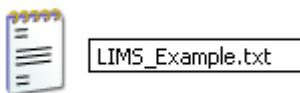
Rename folder

- Open the folder and then create a new text file by right-clicking the mouse and selecting 'New' and then 'Text Document' from the options menu.



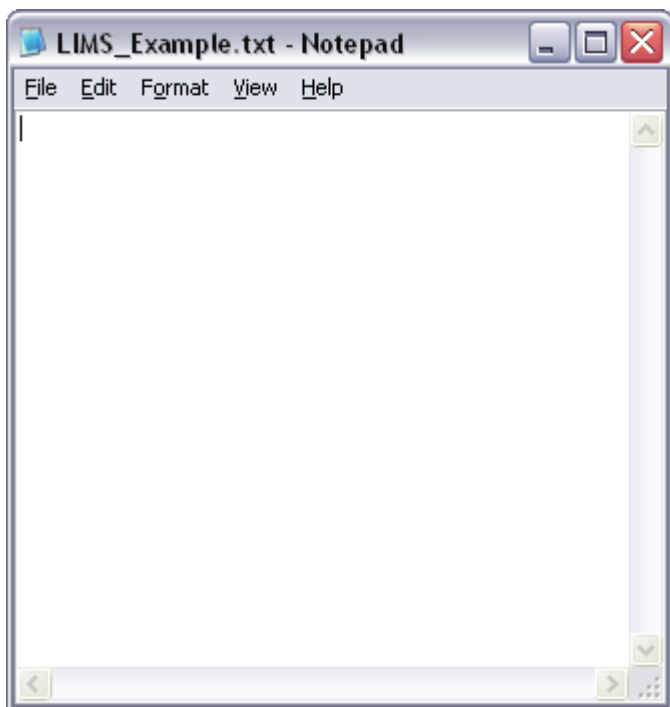
Create new text document

- Call the new document 'LIMS_Example.txt'.



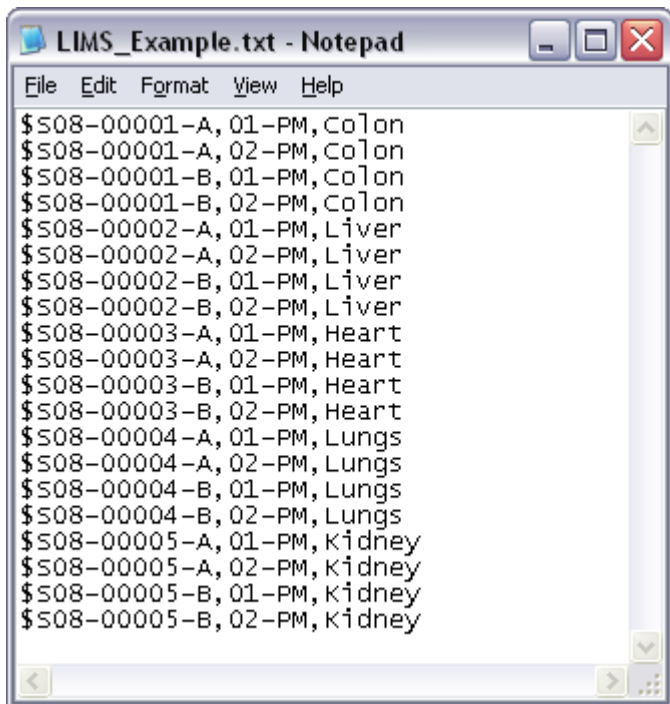
Rename the new document

- Double-click on the new document to open it in Notepad.



New text document in Notepad

- Type in the text shown below **EXACTLY** as it appears.



Enter the text shown

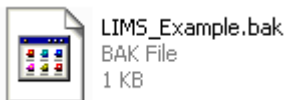
Notes

Ensure all the dollar signs (\$), hyphens (-) and commas (,) are entered in the correct locations.

There are no spaces between any of the characters and each line is separated by a Carriage Return.

Failure to enter the above text correctly may cause errors when carrying out the rest of the tutorials in this section.

- Save this file and close down Notepad.
- From the 'My Computer' window, create a copy of the document and rename it 'LIMS_Example.bak'.



Create a backup of the new document

- Move the backup document to a different folder on the hard-disk.

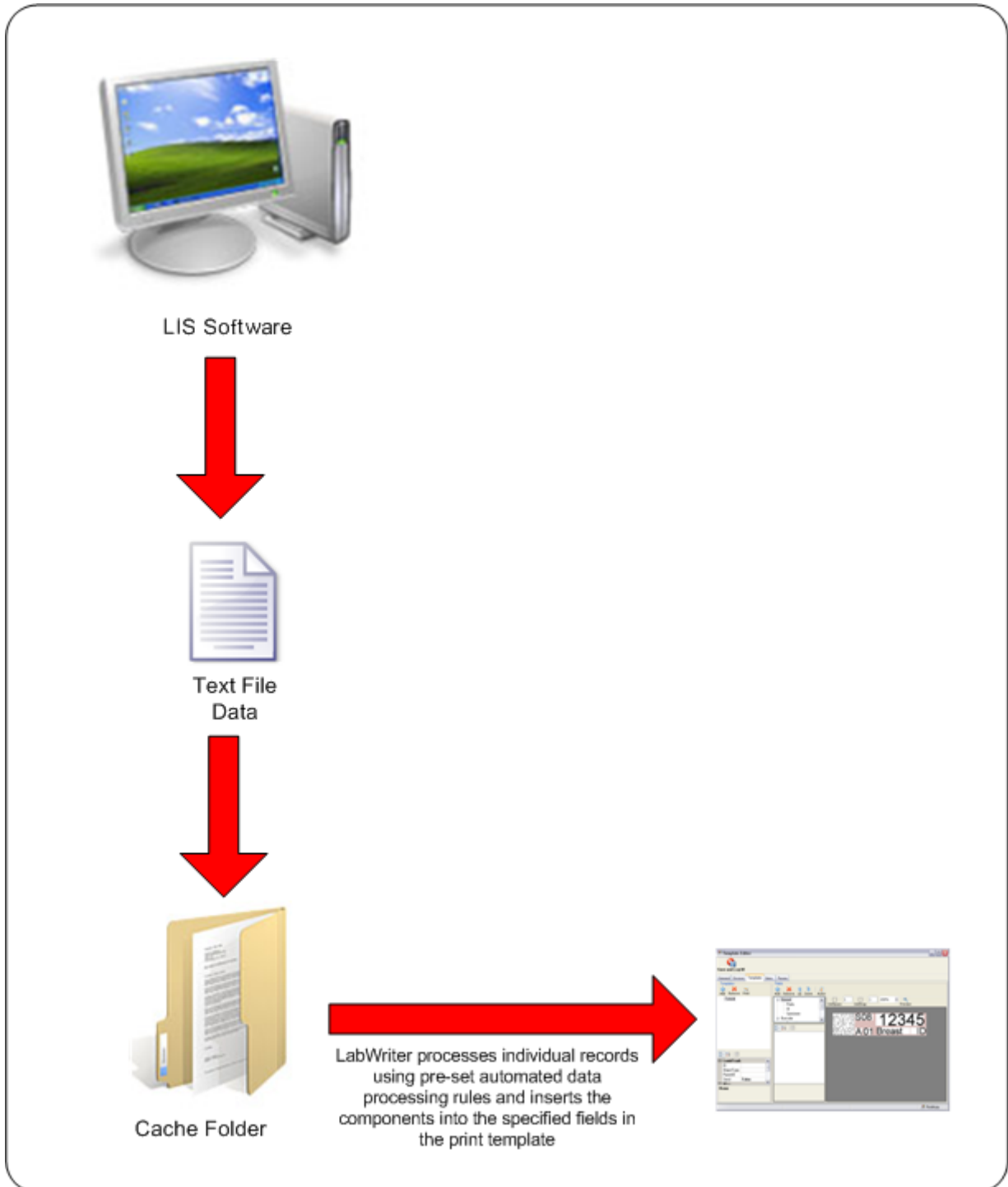
Note

Ensure the backup copy is not stored in the same folder as the original.

- Close down 'My Computer' and open the LabWriter application.

LIS Data Created On LabWriter PC

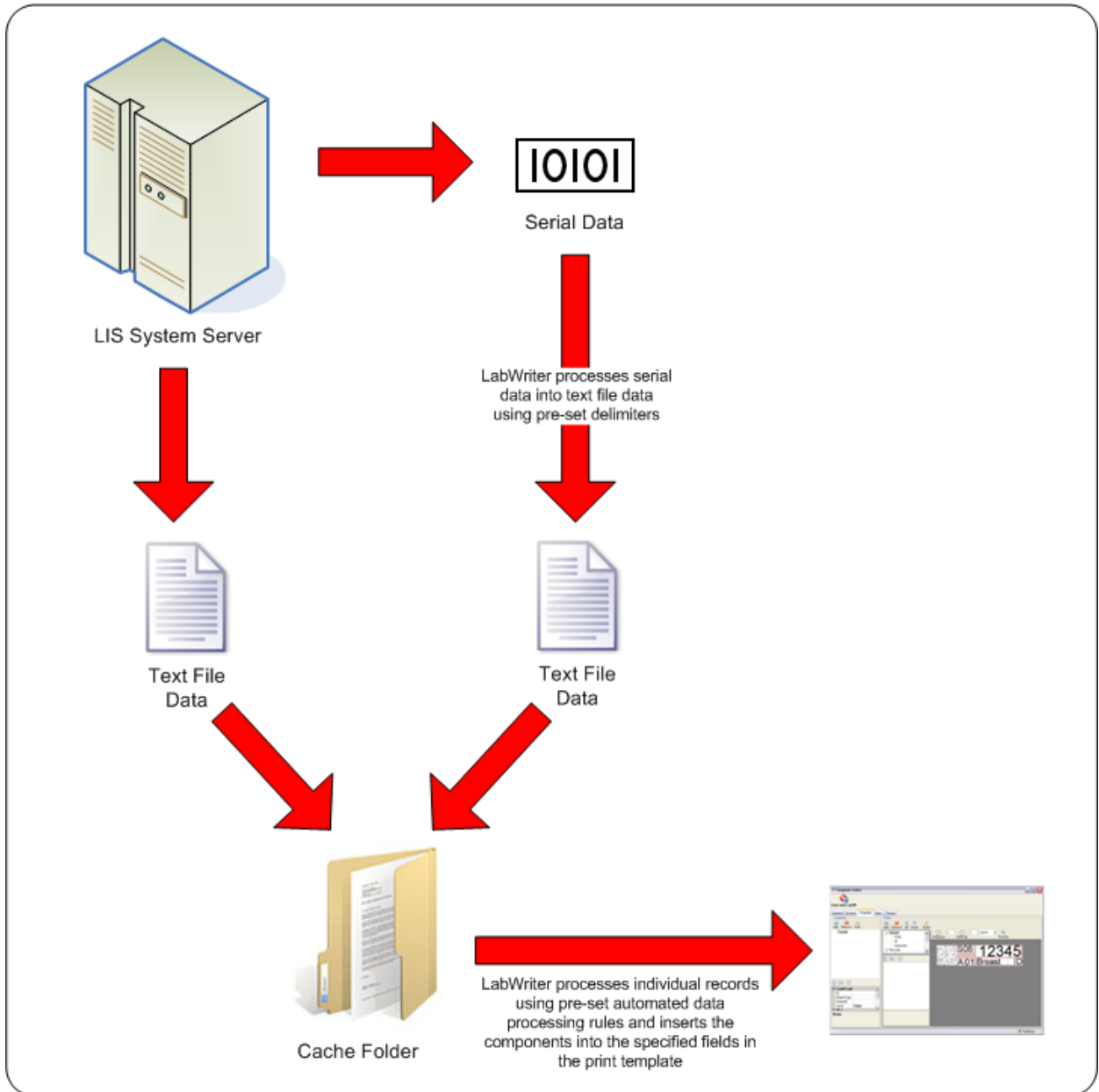
The following work flow diagram illustrates how LIS Data created on the LabWriter PC is handled.



Work flow for LIS Data Created On LabWriter PC

LIS Data Not Created On LabWriter PC

The following work flow diagram illustrates how LIS Data not created on the LabWriter PC is handled.



Work flow for LIS Data Not Created On LabWriter PC

Automatic Printing Setup

Modifying the Print Template

The Print Template created in Chapter 3 - Creating Print Templates must be modified to allow it to accept automated data input.

The modifications required are:

Removal of all Auto settings

Tutorial Exercise

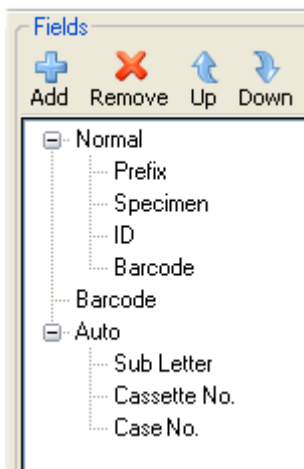
To remove Auto settings:

- Enter the Admin Area as described in Chapter 2 - Admin Setup.
- Navigate to the Templates tab.
- Select the Print Template called 'Tutorial'.
- The following User Items should appear under the 'Auto' heading in the Fields window:

Sub Letter

Cassette No.

Case No.



Fields window in the templates tab

- Select each of the User Items in turn and change the 'Auto' property to 'No'.



Turn off autos

Note

When using the automated data processing feature, all Autos must be switched off.

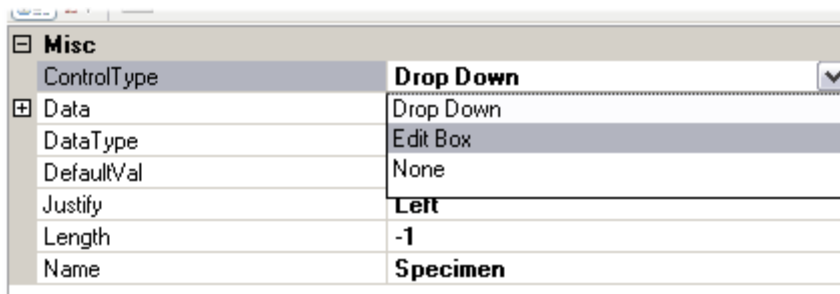
- The 3 User Items should now appear under the 'Normal' heading in the Fields window.

Removal of drop-down lists

Tutorial Exercise

To remove drop-down lists:

- Enter the Admin Area as described in Chapter 2 - Admin Setup.
- Navigate to the Items tab.
- Select the 'Specimen' item from the list.
- Change the 'ControlType' property from 'Drop Down' to 'Edit Box'.



Change ControlType

Creating Automated Data Processing Rules

The rules which define how the input data from the LIS database is handled, are created using the Parsers tab.

Parsing data involves cutting it up into manageable sections which can then be dealt with as individual items.

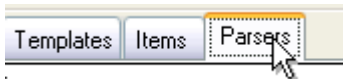
The procedure for defining these rules is described in the following sections:

- Creating a New Parser
- Entering a Sample Code
- Parsing the Sample Code
- Assigning Parsed Data to User Items

Creating a New Parser

Tutorial Exercise

- Click on the Parsers tab.



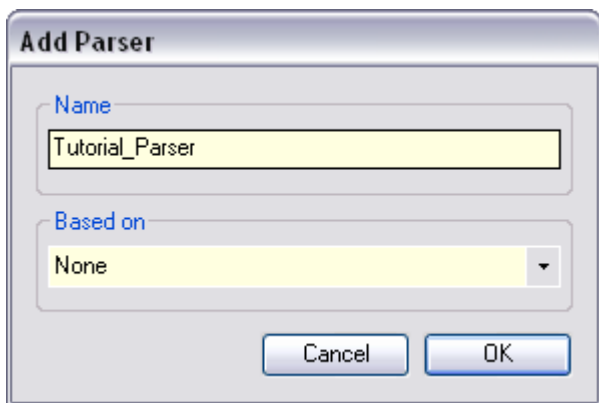
Parsers tab

- Click on the 'Add' icon in the top, left-hand corner of the screen.



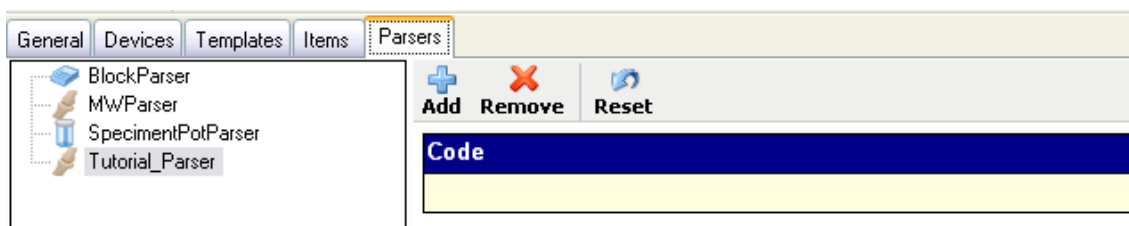
Click the Add icon

- The 'Add Parser' dialog box will appear.
- Enter the name as 'Tutorial_Parser' and then click 'OK'.



Enter the parser name

- The new parser will appear in the list on the left-hand side of the screen, and a blue and white 'Code' box will appear on the right.



Parsers tab

Entering a Sample Code

Before starting to build the parser, a sample code must be entered.

This sample code allows the user to visually check that the code is being cut up correctly and that the correct elements are being assigned to user items.

Tutorial Exercise

- Click on the 'Value' property in the bottom, left-hand corner, and then enter the following text:

\$S08-12345-A,01-ID,Breast

Note

Ensure that the text is entered EXACTLY as it appears above - there are no spaces between any of the characters.

- Clicking anywhere else on the screen will make the text entered appear in white area of the Code box.



Sample code

Parsing the Sample Code

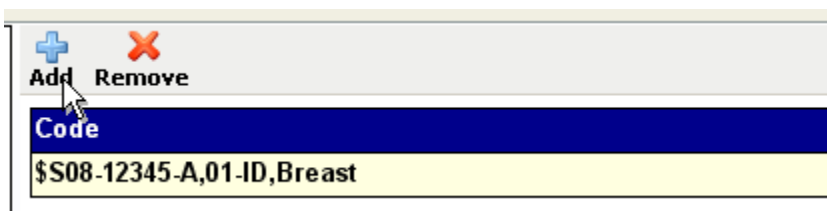
LabWriter can parse data in a variety of ways, but the simplest method involves setting Delimiter Values.

Delimiter Values are specific characters which are used within the data to identify the start or end of a section.

The following example uses Delimiter Values to divide the sample code up into its component parts.

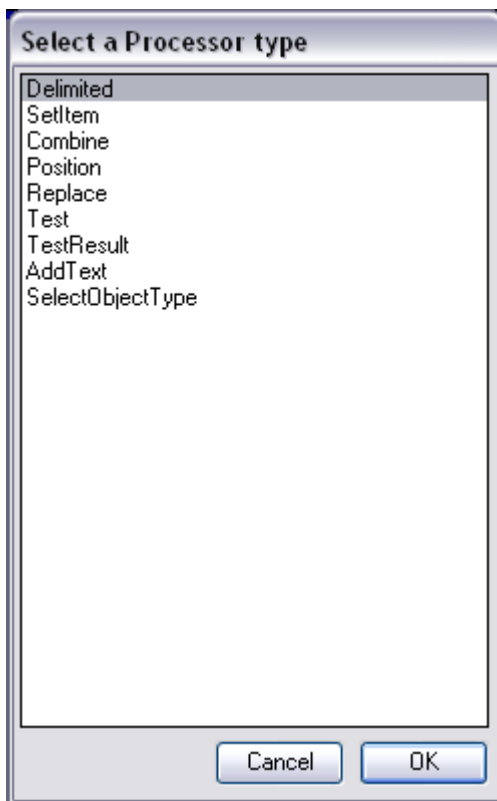
Tutorial Exercise

- Click on the blue area of the Code box, and then click the small Add icon directly above it.



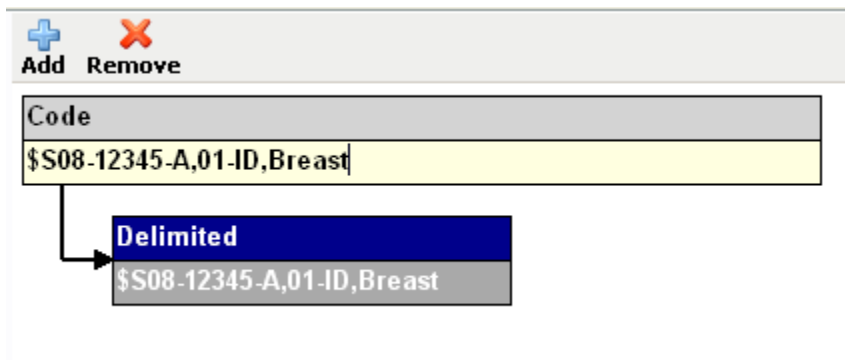
Click the small add icon

- The Processor Menu will appear.



Processor menu

- Click on 'Delimited' and then click 'OK'.
- A Processor box will appear underneath the Code box.




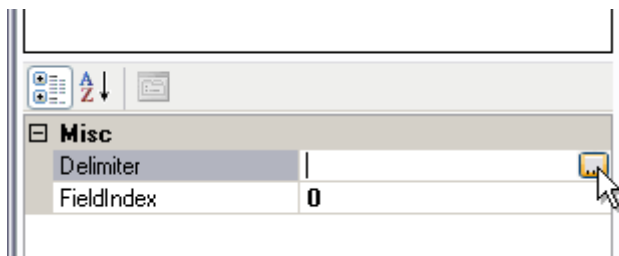
Processor box

Note

Notice how the lower section of the Processor box contains the entire sample code.

- In the bottom, left-hand corner of the screen, a menu will appear.

- Click on 'Delimiter' and then on the  button.



Processor properties

- The Delimiter List window will appear.
- Type in a dollar sign (\$), a hyphen (-) and a comma (,), all separated by a carriage return; then click 'OK'.

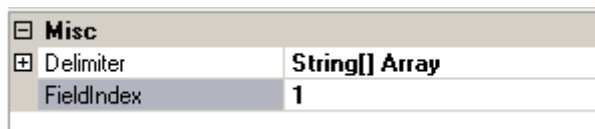


Delimiter list

Note

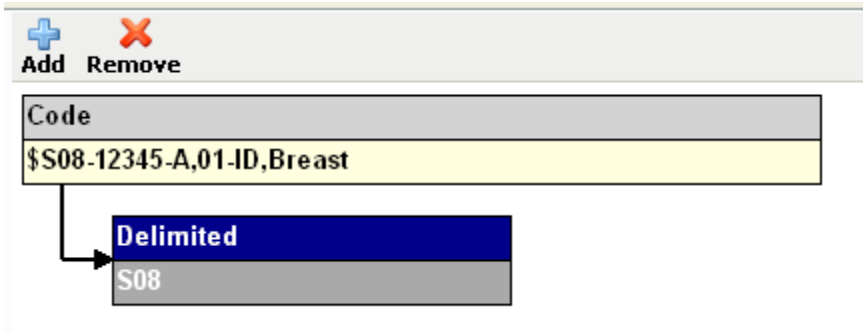
Delimiters must not be made up of characters which are delimiters themselves - for example if '\$' is a delimiter, then another delimiter such as '\$1' will not work.

- LabWriter will now recognise each of these characters as defining the start or end of a section.
- Click on 'Field Index' and type in '1'.



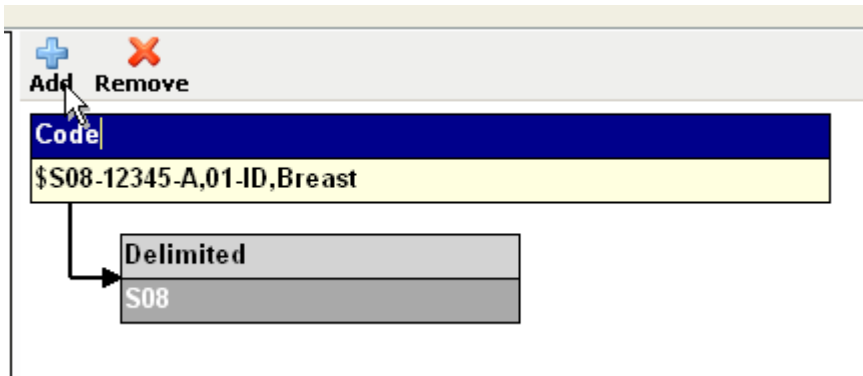
Field index

- The lower section of the Processor box should now have changed to display only the text which appears between the first and second delimiters.



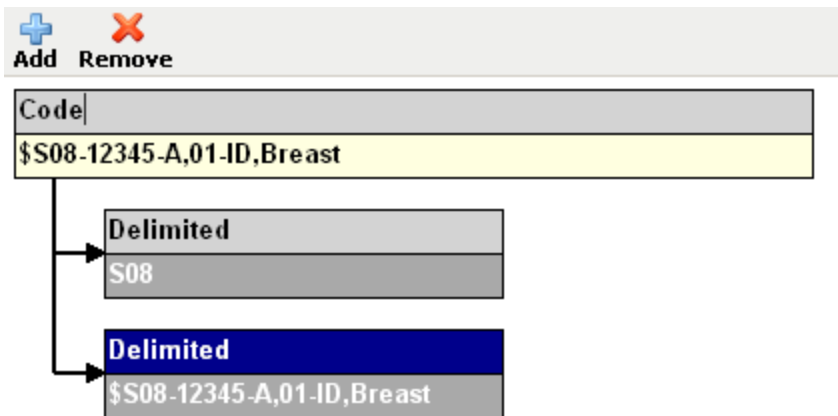
Updated processor

- To add another Processor at the same level, click on the blue area of the Code box again and click the small Add icon again.



Add second processor

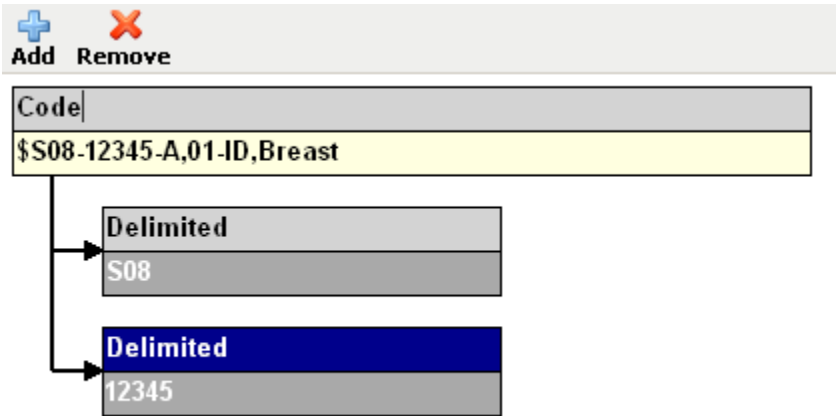
- From the processor menu, select 'Delimited' again, and then click 'OK'.
- The right-hand window should now have a second Processor box directly below the first.



Second processor added

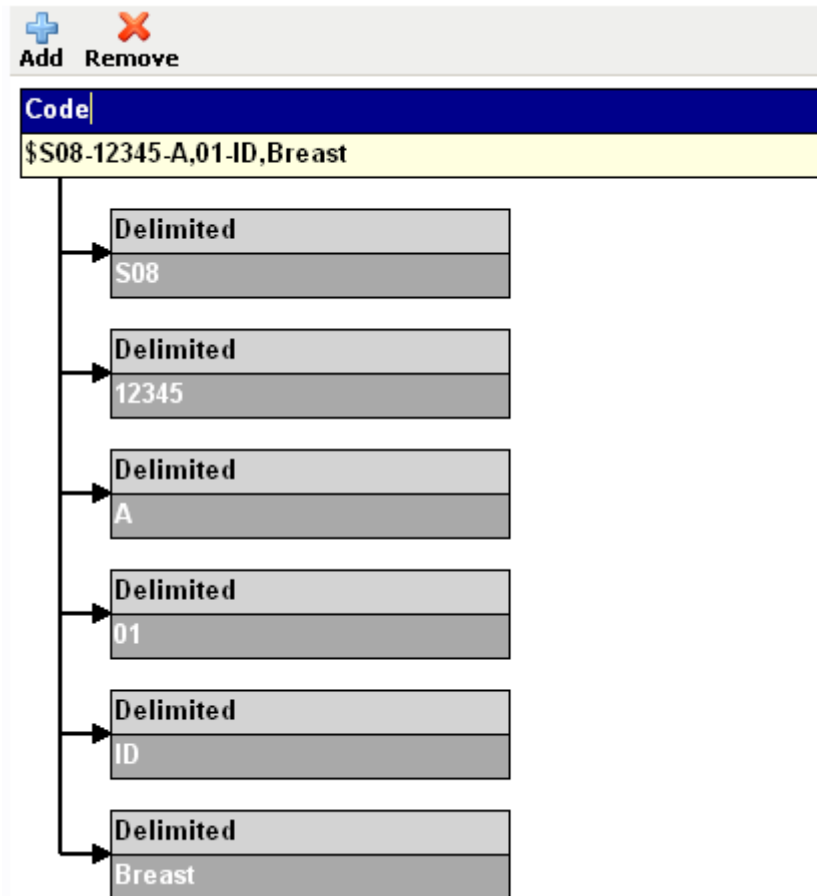
- Repeat the procedure used earlier to define the delimiter values, making sure the same values are used.
- This time, enter a '2' into the 'Field Index' box.

- Check that the new Processor box now contains the text between the second and third delimiters.



Second processor defined

- Continue adding Processors until all the text between delimiters is contained in a Processor box.



Complete set of delimited processors

Note

Ensure the Field Index value is incremented each time.

Assigning Parsed Data to User Items

Once the Sample Code has been cut up into manageable sections, these sections can be assigned to specific User Items in the Print Template.

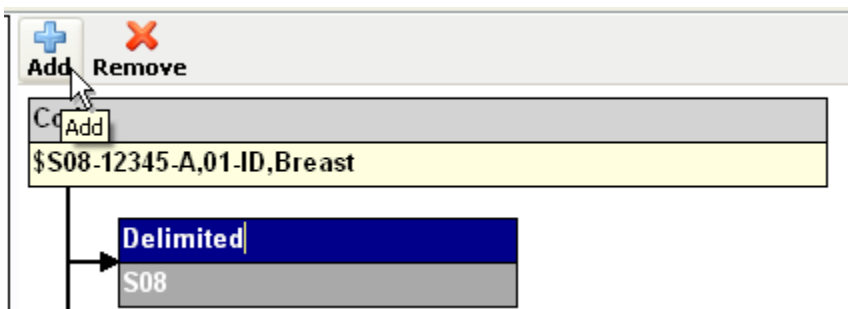
Note

An exception to this is the 'Barcode' User Item, which gets its data from the contents of other User Items and the specific settings assigned in Chapter 3 - Creating Print Templates.

Tutorial Exercise

To assign the parsed data to specific User Items:

- Click on the blue area of the first 'Delimited' Processor box, and then click the small 'Add' icon.



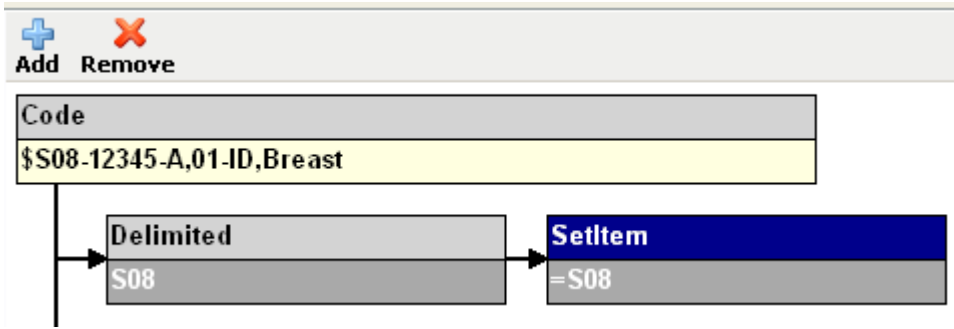
Adding a sub-level processor

- When the Processor Menu appears, select 'Set Item' from the list and click 'OK'.



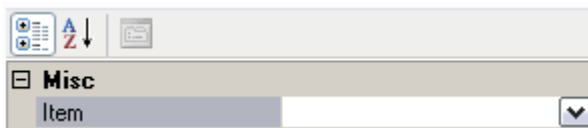
Processor menu

- A Sub-Level Processor will be created on the right-hand side of the 'Delimited' Processor box.



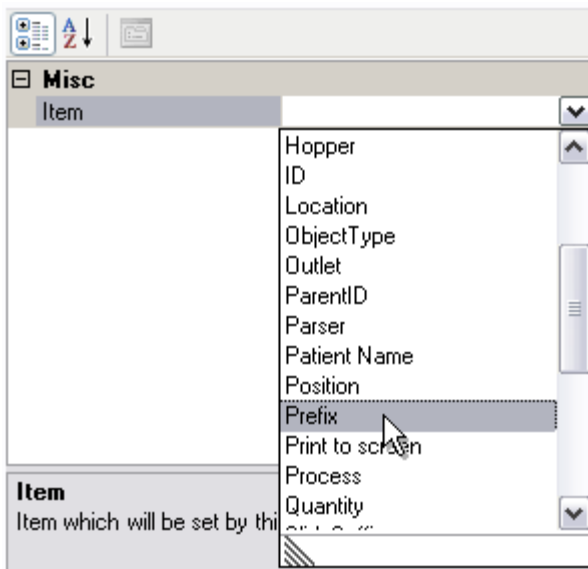
New sub-level processor

- In the bottom, left-hand corner of the screen, the following menu should be visible.



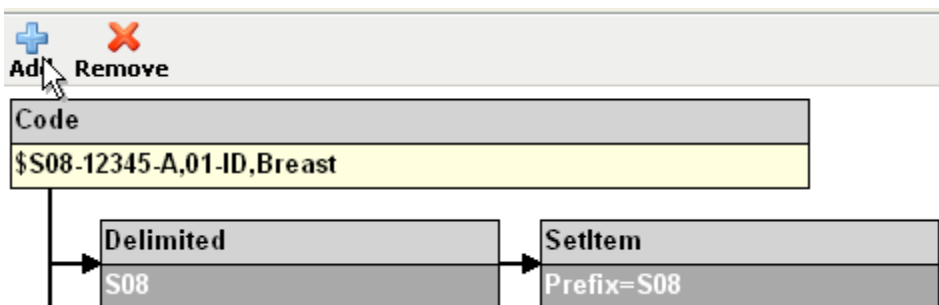
Set item properties

- Click on the drop-down arrow to view the list of User Items.



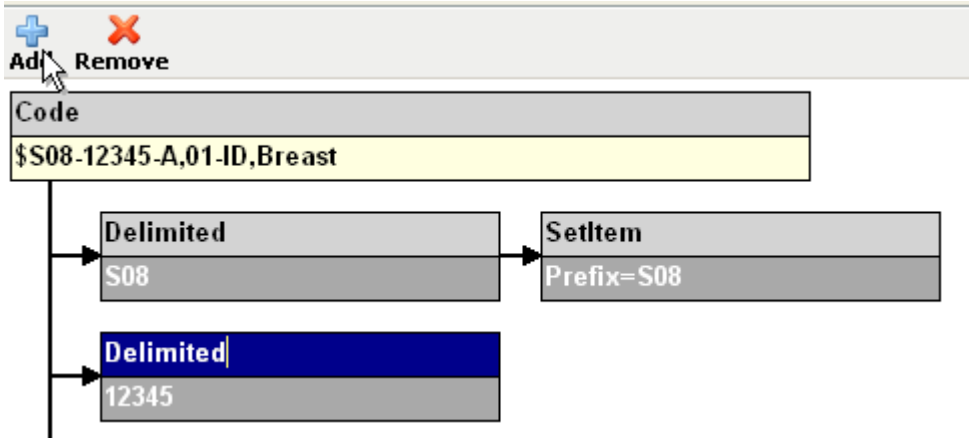
User item list

- Select 'Prefix' from the list.
- The contents of the lower section of the new Processor box should now contain the text shown below.



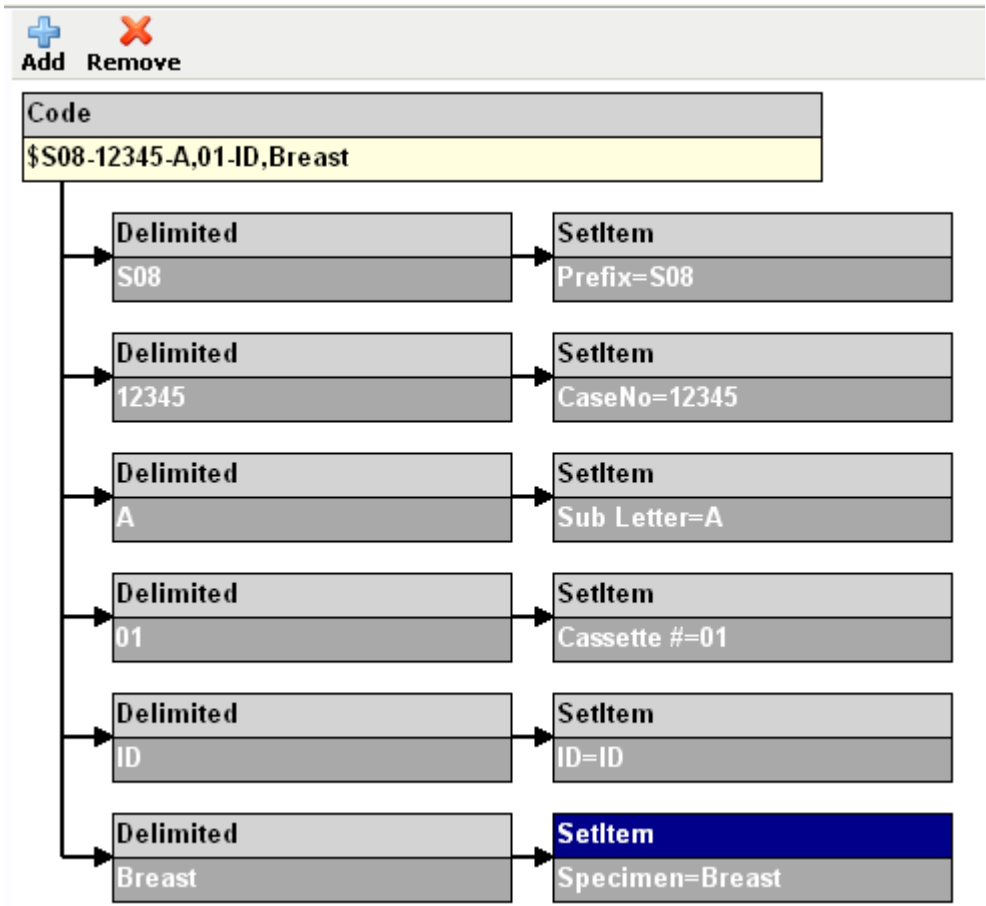
Set item defined

- Click on the next 'Delimited' Processor box and add a Sub-Level Processor in the same way as before.



Add new set item processor

- When selecting the User Item choose 'Case No.' from the drop-down list.
- Repeat this process until each 'Delimited' Processor has been assigned a User Item.
- When complete, the right-hand window should look like the following diagram.



Completed parser

Automatic Selection of Hoppers, Templates and Outputs

Parsers can also be used to automatically determine which hopper, template and outlet position is used by the specific data item.

This is done by including instructions within the data item.

Example

If the data item was:

\$H1\$T3\$O2\$S08-12345-A,01-ID,Breast

The '\$H1', '\$T3' and '\$O2' characters can be used to call up Hopper 1, Template 3 and Outlet Position 2.

The procedure for assigning this kind of information from within a parser is as follows:

Defining the Source Data

For the automated data processing feature to work, a Cache folder must be defined.

The Cache folder contains the LIS data in text-file format, ready for processing by LabWriter.

Note

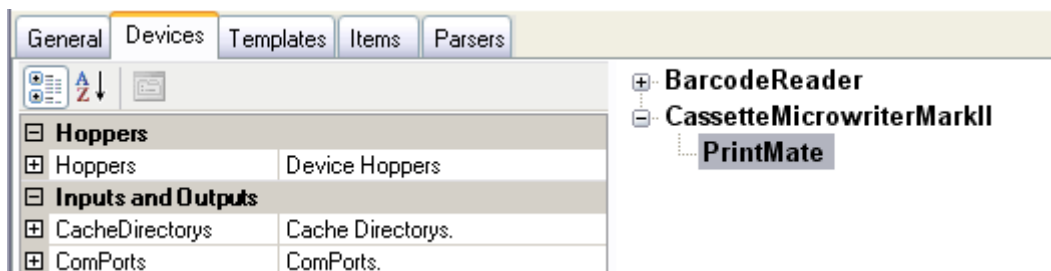
LabWriter can process a variety of file type as source data. Therefore, it is important that the directory used to contain this data only contains the necessary files.

Backups and copies of data stored in the Cache directory may be interpreted by LabWriter as valid source data, irrespective of file extensions. This could cause information to be duplicated accidentally.


Tutorial Exercise

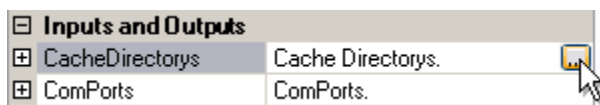
To define the location of the source data:

- Enter the Admin Area as described in Chapter 2 - Admin Setup.
- Navigate to the Devices tab.
- Select 'PrintMate' from the devices window.



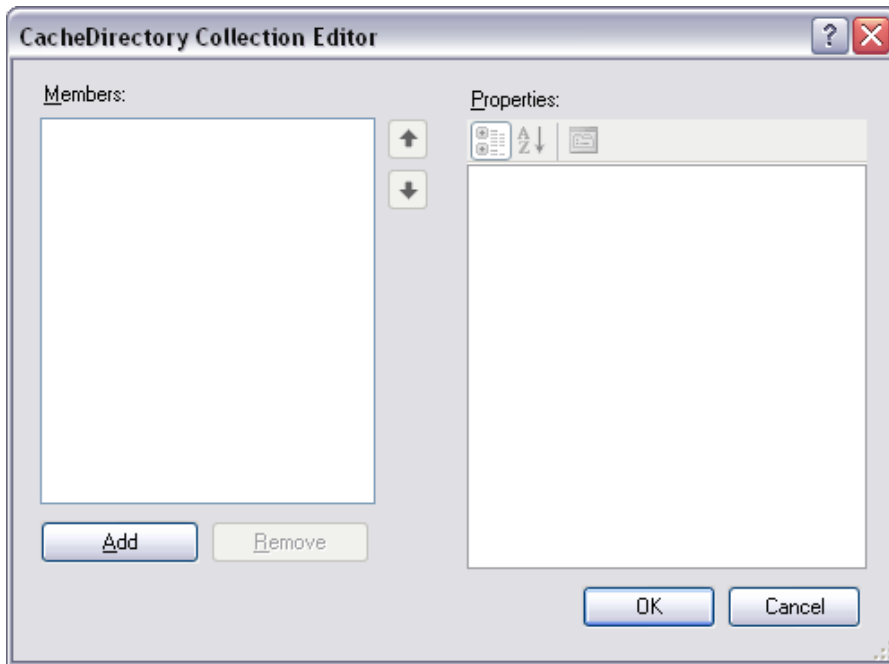
Devices tab

- In the Properties List on the left-hand side of the screen, click on the CacheDirectorys field, and then on the  button.



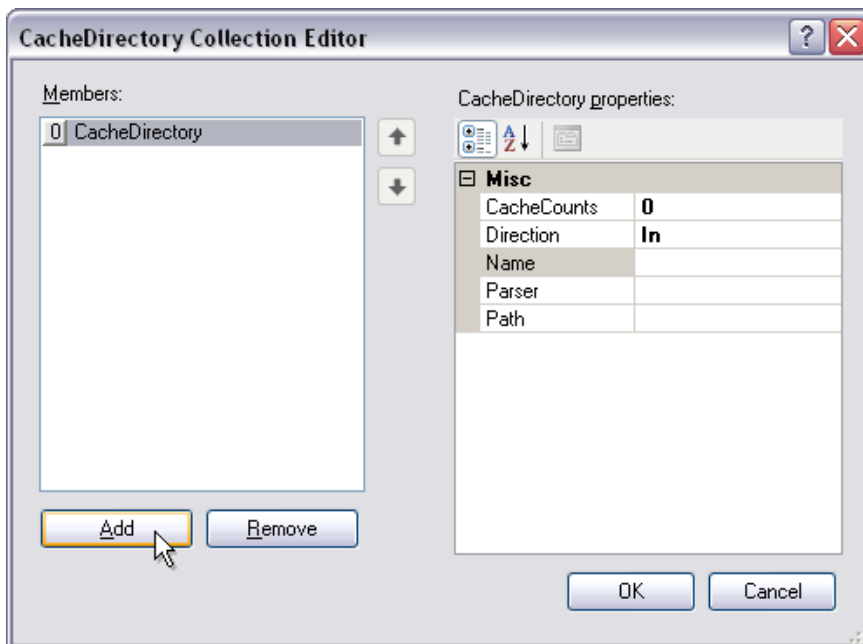
CacheDirectorys

- The CacheDirectory Collection Editor will be displayed.



CacheDirectory Collection Editor

- Click on the 'Add' button to add a new Member to the list.



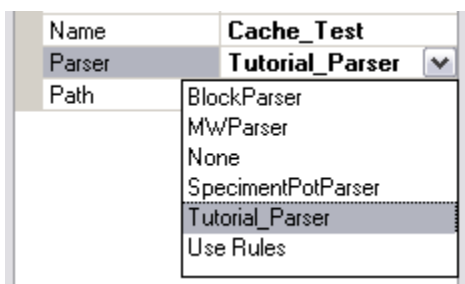
Add new member

- Click on the 'Name' field in the right-hand window and type in 'Cache_Test'.


Direction	In
Name	Cache_Test
Parser	

Name field

- Click on the 'Parser' field and then on the drop-down arrow to display the list of available parsers.



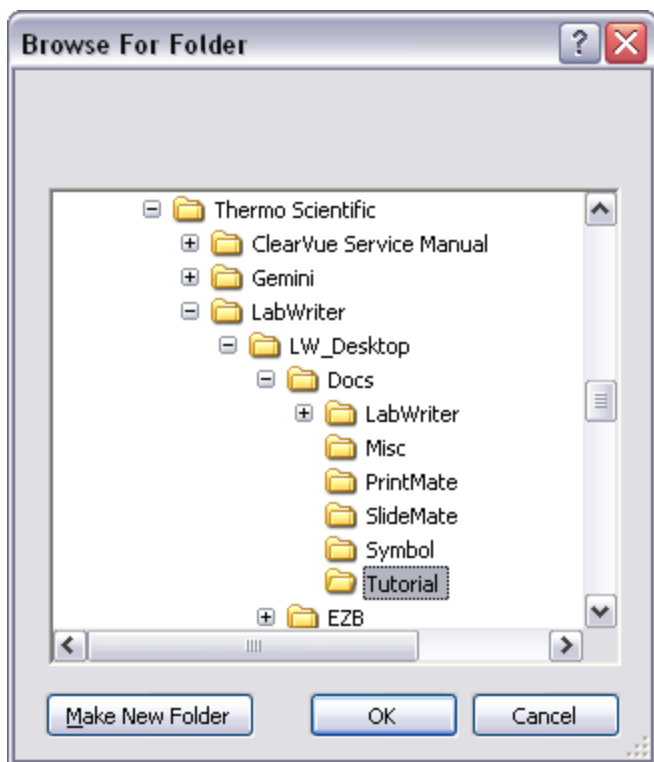
Parser selection

- Click on 'Tutorial_Parser'.
- Click on the 'Path' field and then on the  button.



Define path

- When the browser window appears, navigate to the directory where the 'LIMS_Example.txt' file, mentioned at the start of this chapter, is stored, and then click OK.



Navigate to the cache directory

Note:

The Cache Folder can be located anywhere, according to user preferences.

- Click OK in the CacheDirectory Collection Editor window to return to the Devices tab..

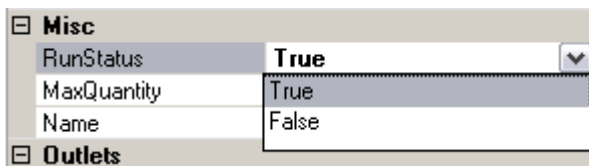
Activating Automated Data Processing

After all the necessary setup work has been carried out, the Automated Data Processing feature needs to be switched on.

Tutorial Exercise

To switch on the Automated Data Processing feature:

- Click on the Devices tab.
- Set the value of 'RunStatus' to 'True'.



Set RunStatus to true

Note

Setting the RunStatus to 'True' tells LabWriter to look for data in the defined Cache Directory.

- Click on the 'Save and Logoff' button to exit the Admin Area.



Save and logoff

- When the User Screen appears, turn the 'Auto Add' and 'Cache' buttons 'On'.



Turn the auto add and cache buttons on

- The Session Queue Grid should begin filling up with labels.

Session:20 Print:0 Printed:0 Deleted:0				
PrintMate Session				
	TimeStamp	Template	Label	Hopper
	06/08/2008 15:07	Tutorial	S08 00005 B 02 Kidney PM	Hopper 1
	06/08/2008 15:07	Tutorial	S08 00005 B 01 Kidney PM	Hopper 1
	06/08/2008 15:07	Tutorial	S08 00005 A 02 Kidney PM	Hopper 1
	06/08/2008 15:07	Tutorial	S08 00005 A 01 Kidney PM	Hopper 1
	06/08/2008 15:07	Tutorial	S08 00004 B 02 Lungs PM	Hopper 1
	06/08/2008 15:07	Tutorial	S08 00004 B 01 Lungs PM	Hopper 1

Session queue grid

- If all the steps in this tutorial have been followed correctly, there should be 20 labels containing the data which was stored in the 'LIMS_Example.txt' file.
- Once the data from the file has been read, the source file will be deleted.

Note

If one or more of the tutorial steps have not been followed correctly, the labels may not appear as shown. In this case, the 'LIMS_Example.bak' file can be copied into the Cache Directory to allow further attempts without the need to retype all the data.

Locking LabWriter to Cache Input

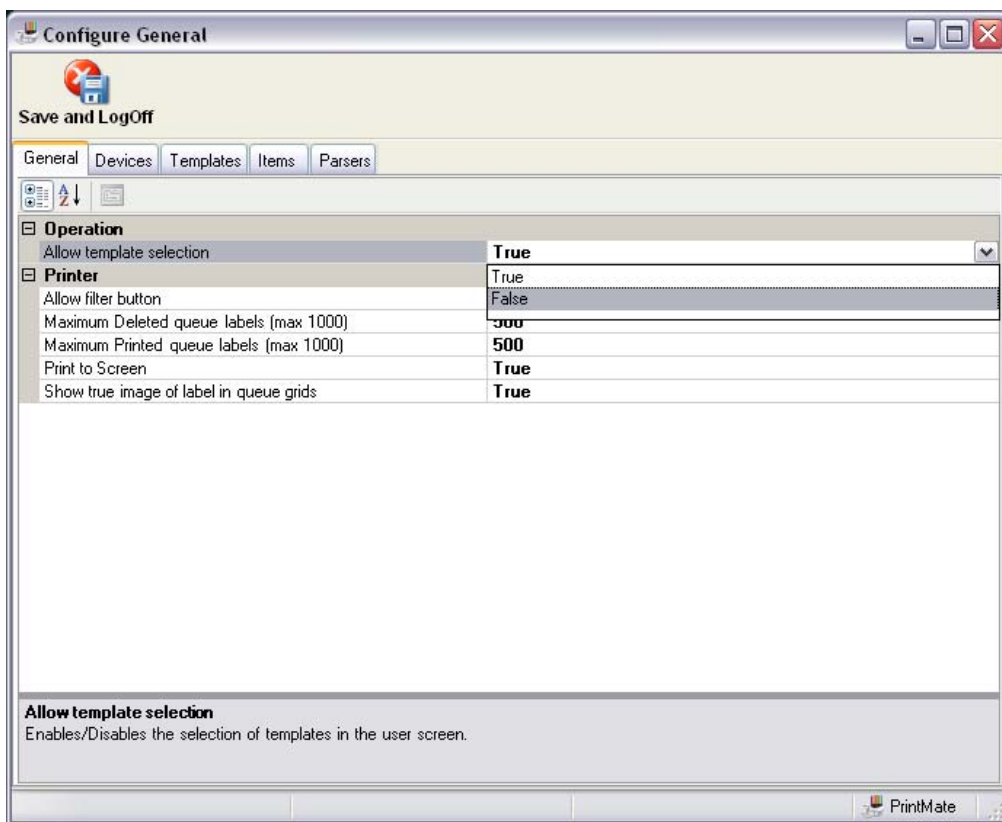
When using the Automated Data Processing feature, it is recommended that the ability to change the selected Template from the User Screen is switched off.

Tutorial Exercise

Disabling Template Selection

To disable template selection and lock LabWriter to Cache input:

- Select the required template from the User Screen using the drop-down list at the top of the screen.
- Enter the Admin Area as described in Chapter 2 - Admin Setup.
- In the General tab there is an option to 'Allow Template Selection'.
- Click on the drop-down arrow and select 'False'.



Allow template selection

Note

Setting this option to 'False' will allow templates to be selected from the User Screen.

Setting this option to 'True' will stop templates from being selected from the User Screen.

- Click the 'Save and Logoff' button to exit the Admin Area.
- It should now not be possible to change the template from the User Screen.

Enabling Template Selection

To enable template selection by the user once the 'Allow Template Selection' feature has been activated:

- Enter the Admin Area and disable the 'Allow Template Selection' feature by setting it to 'False'.
- Click the 'Save and Logoff' button to exit the Admin Area.

Changing Selected Templates

To change templates once the 'Allow Template Selection' feature has been activated:

- Enter the Admin Area and disable the 'Allow Template Selection' feature by setting it to 'False'.
- Click the 'Save and Logoff' button to exit the Admin Area.
- Select the required template from the User Screen using the drop-down list at the top of the screen.
- Enter the Admin Area and enable the 'Allow Template Selection' feature by setting it to 'True'.
- Click the 'Save and Logoff' button to exit the Admin Area.

Processing COM Port Data

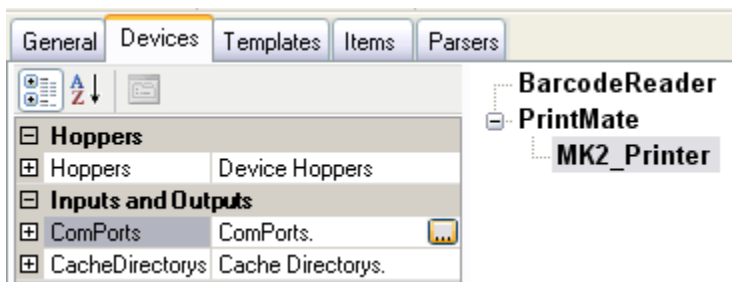
If Serial Data is being received via the COM port of the LabWriter PC, it will need to be processed before it is usable.

This processing requires additional rules to be set up to define:

- Where the data is received from.
- How the data string is split.
- Where the output file is delivered to.


Tutorial Exercise

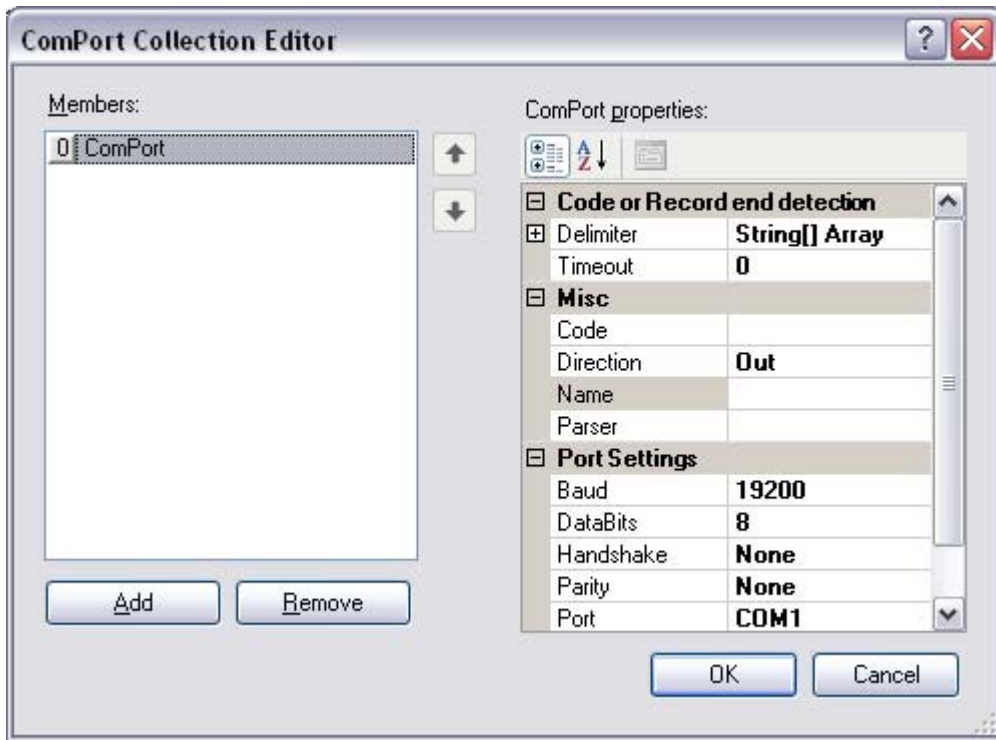
- Enter the Admin Area and navigate to the Devices tab as described in Chapter 2 - Admin Setup.



Device tab

- Click on 'PrintMate' and 'MK2_Printer' in the right-hand window.

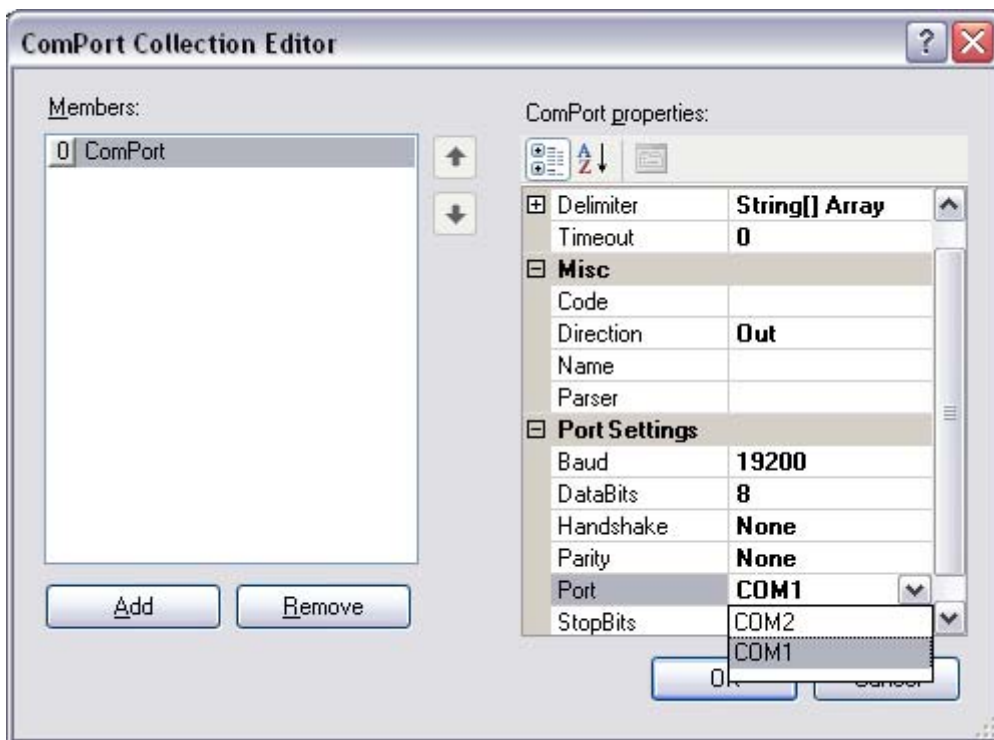
- Then click on the 'ComPorts' field in the properties list, and then on the  button to display the ComPort Collection Editor.



ComPort Collection Editor

To define the COM port


- Click on the 'Port' field and then on the drop-down arrow to display a list of available COM ports.



Select the COM port to use

- Select the COM port to use from the list.

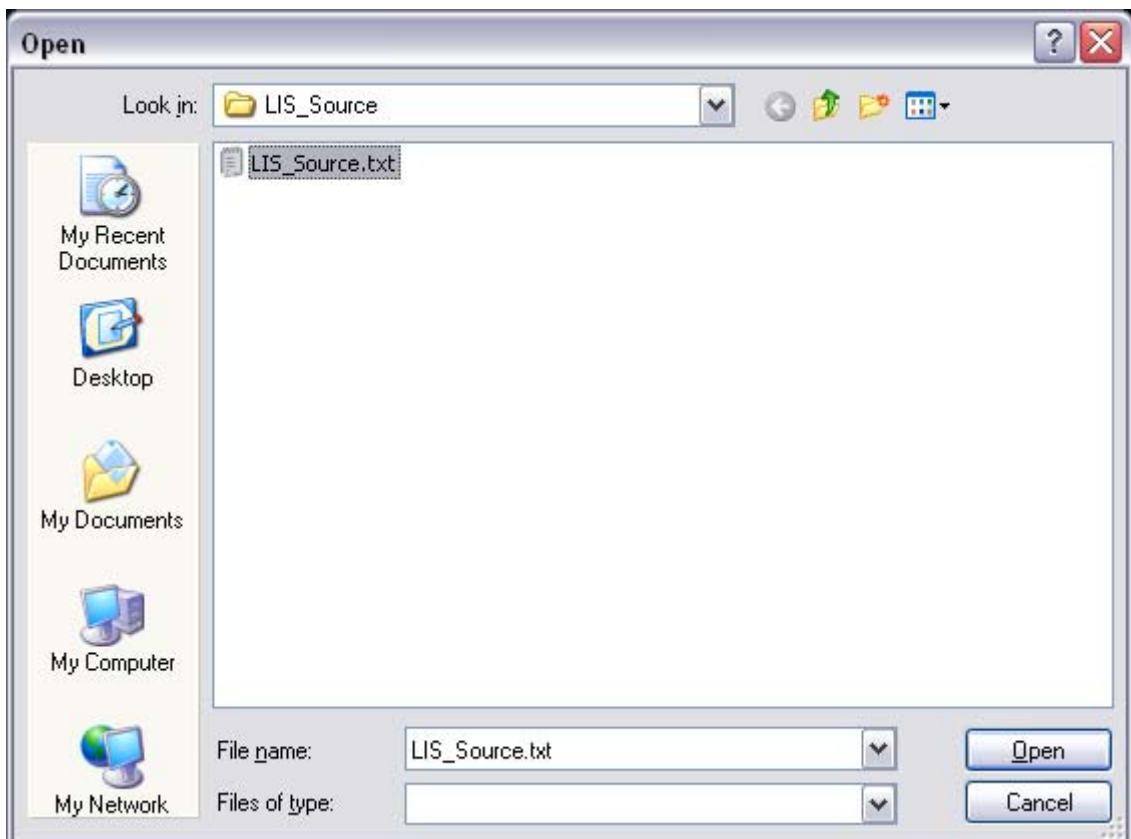
To define a delimiting process for the incoming string of data

- Click on 'Delimiter' and then on the  button to display the Edit Delimiter window.



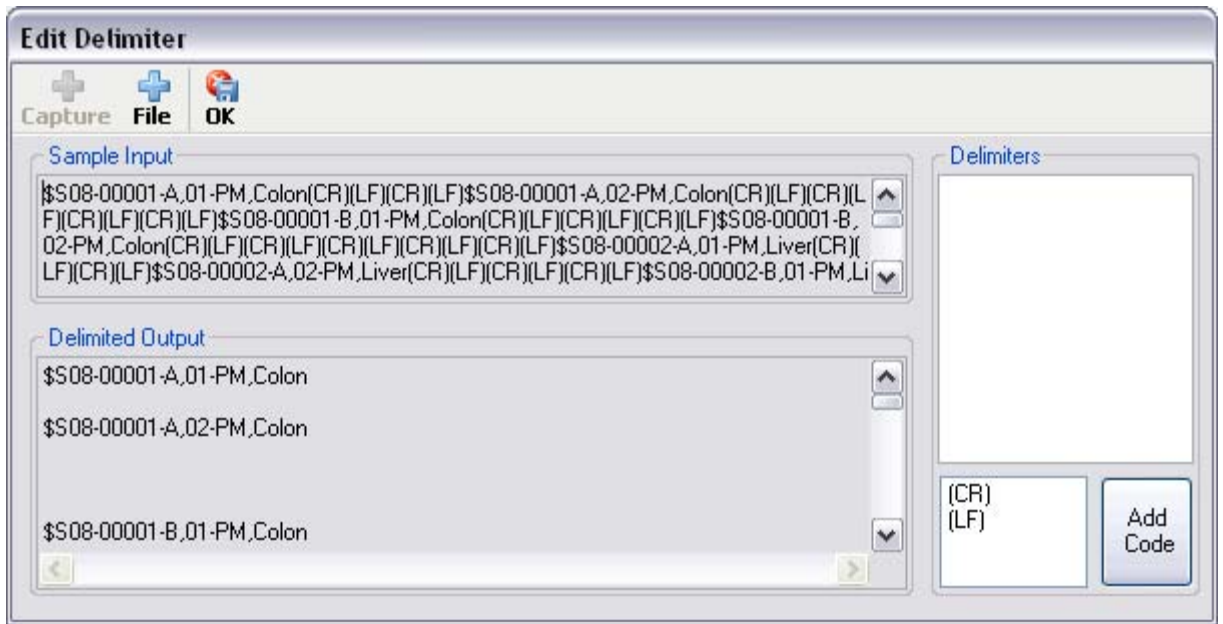
Edit delimiters window

- Click on the 'File' icon.
- Browse to the folder which contains the serial data, select a file to use as sample data and then click 'Open'.



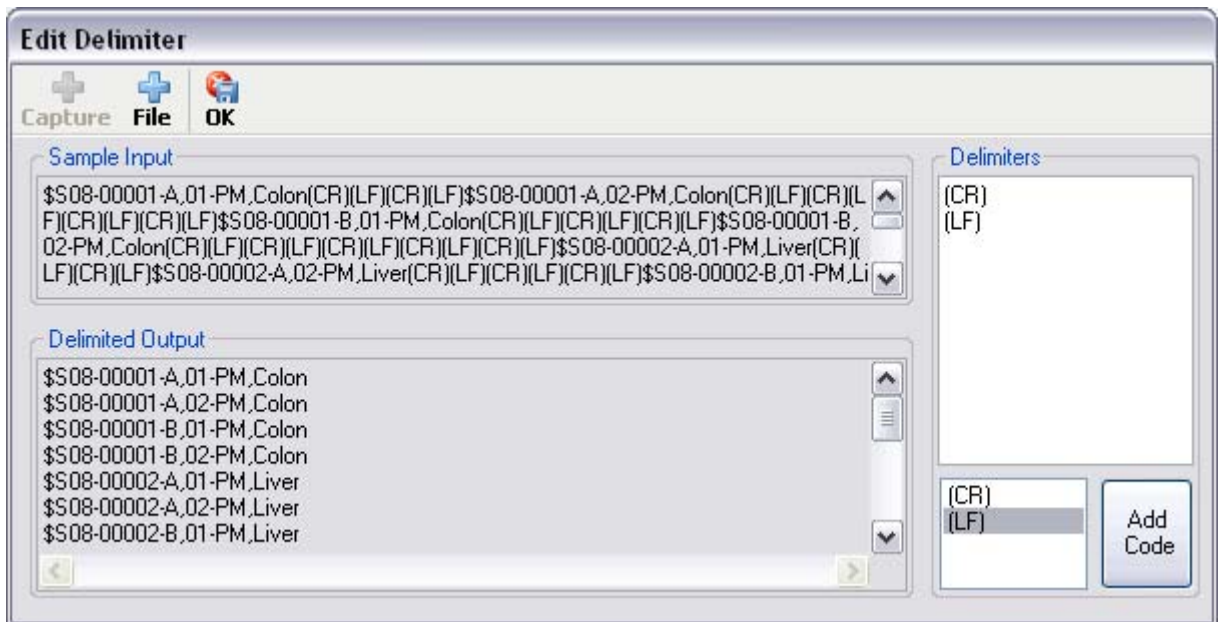
Browse to serial data folder

- The sample data will appear in the upper, left-hand section of the Edit Delimiter window as a single long string of text.



Unprocessed sample data

- Select the delimiter(s) to use by double-clicking on the available delimiters in the lower, right-hand section or by entering single characters in the upper, right-hand section.

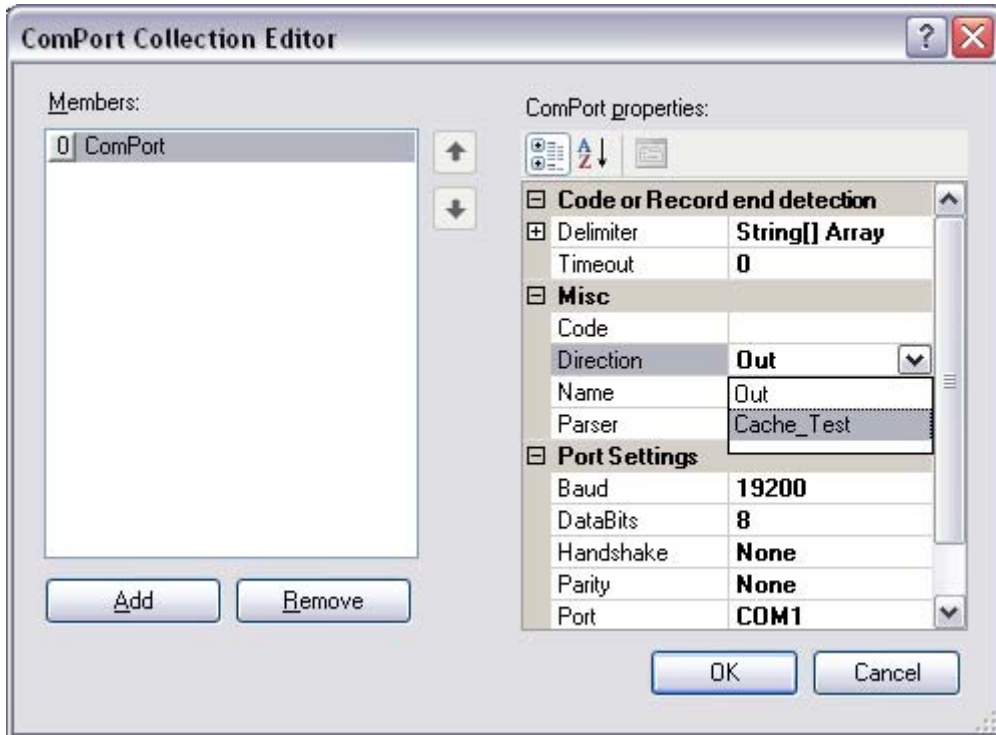


Delimited sample data

- The lower, left-hand section of the window will change as delimiters are added.
- Once the delimited text appears correctly in the lower, left-hand window, click 'OK' and save your changes when prompted.

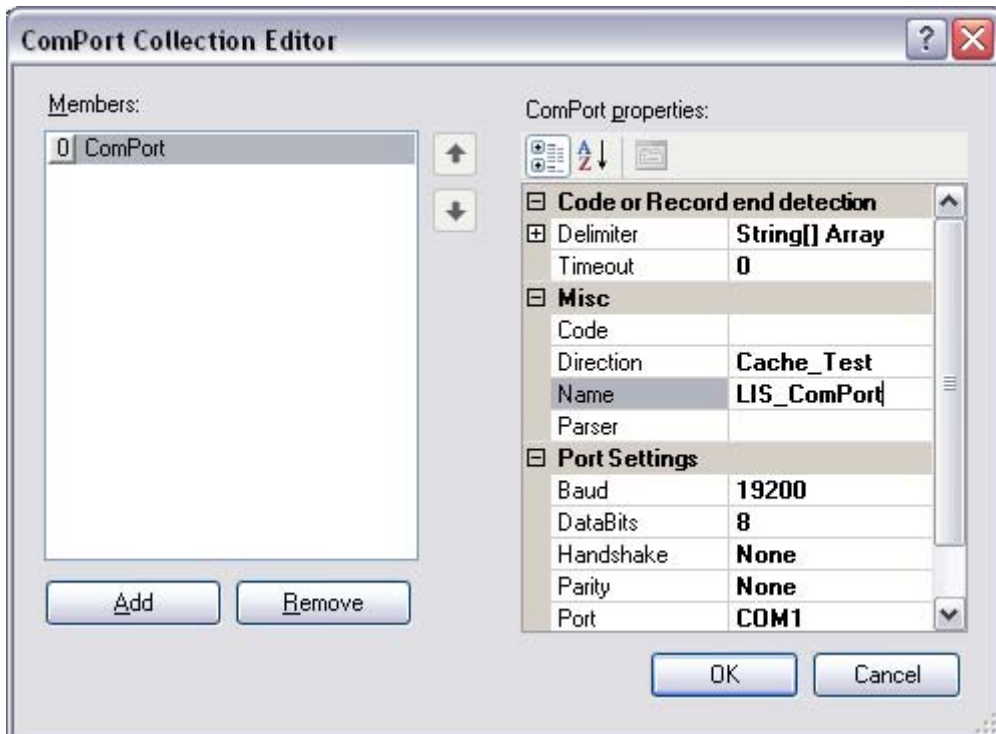
To define the output file location

- Click on the 'Direction' field and then on the drop-down arrow to display a list of available Cache Folders.



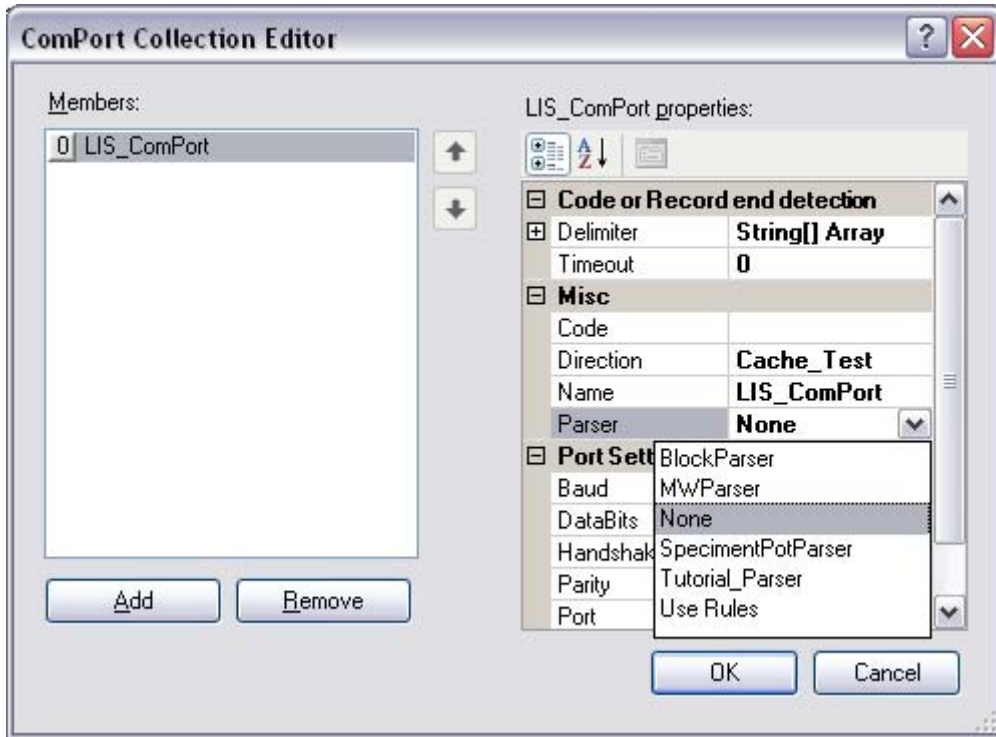
Select the cache folder

- Select the Cache Folder to use from the list.
- Enter a suitable name for the COM port in the 'Name' field.



Enter COM port name

- Select the 'Parser' field and then click on the drop-down arrow to display a list of available parsers.



Select parser

- Select 'None' from the list.

Note

Under normal circumstances no parser would be used at this point, although dedicated parsers can be created if necessary.

- Click 'OK' to exit the ComPort Collection Editor.
- Check that 'RunStatus' is set to 'True' - see Activating Automated Data Processing.

Automatic Printing Troubleshooting

Problem	Possible Cause	Remedy
Parser matching error.	LIS data does not match parser.	<ul style="list-style-type: none"> • Clear cache directory. • Set RunStatus to 'True' - <i>see Activating Automated Data Processing.</i>
Automatic printing feature not working.	RunStatus setting incorrect.	Set RunStatus to 'True' - <i>see Activating Automated Data Processing.</i>
Incorrect print data.	Wrong Print Template selected.	Select correct Print Template.
	Wrong parser selected.	Select correct parser - <i>see Defining the Source Data.</i>

Appendices

Appendix A - Processor Reference

Processor	Description
Delimited	<p>Looks for pre-defined characters which are used to indicate the start and / or end of a required set of characters.</p> <p>The Field Index value defines how many Delimiters to bypass.</p> <p>Example: Sample code: \$S08-12345-A,01-ID,Breast Delimiters: Dollar sign (\$), Hyphen (-) and Comma (,) Field Index: 2</p> <p>Result: 12345</p>
SetItem	<p>Takes the result from a linked Processor and assigns it to a User Item.</p>
Combine	<p>Allows the values of two or more User Items to be combined into a single User Item.</p> <p>Multiple User Items are selected from the Value list and the SetItem Processor is used to send them all to a single User Item.</p>
Position	<p>Similar in use to the Delimited Processor except the Start Position and End Position are defined by the number of characters preceding the required position (i.e: counting begins at 0 and not 1).</p> <p>Example: Sample code: \$S08-12345-A,01-ID,Breast Start Position: 5 End Position: 9</p> <p>Result: 12345</p>

Processor	Description
Replace	<p>Looks for pre-defined characters and replaces them with alternative characters when they appear.</p> <p>This can be set to look for any occurrence of the characters, or only occurrences which appear at a pre-defined location in the code.</p> <p>Example 1: Sample code: \$S08-12345-A,01-ID,Breast New: XX Old: 01 Remove Spaces: False Type: All Result: \$S08-12345-A,XX-ID,Breast</p> <p>Example 2: Sample code: \$S08-12345-A,01-ID,Breast New: XX Old: 01 Remove Spaces: False Start Position: 10 Type: At Position Result: \$S08-12345-A,01-ID,Breast</p> <p>Example 3: Sample code: \$S08-12345-A,01-ID,Breast New: XX Old: 01 Remove Spaces: False Start Position: 13 Type: At Position Result: \$S08-12345-A,XX-ID,Breast</p>

Processor	Description
Test	<p>Allows multi-format data to be imported from an LIS and dealt with appropriately.</p> <p>Example:</p> <p>An LIS contains 2 data formats, one of 10 characters and one of 14 characters. The Test Processor is set to check for the number of characters, and give a true or false output.</p> <p>TestType: EqualTo Value: 10 ValueType: Length IfFalse: Value=False IfTrue: Value=True</p> <p><i>Note This Processor needs to be followed by a TestResult Processor.</i></p>
TestResult	<p>Follows a Test Processor and defines what action is to be taken based on the result.</p>
AddText	<p>Allows text to be added before and / or after the code.</p> <p>Example:</p> <p>Sample code: \$\$S08-12345-A,01-ID,Breast After Text: -AB Before Text: HI Result: HI\$\$S08-12345-A,01-ID,Breast-AB</p>
SelectObjectType	<p>Used to define the type of object associated with the code.</p> <p>Available values are: Bone, Cassette, Pot, RequestForm, Slide, SlideOrPot and Tissue.</p>

Appendix B - Barcode Reference

Table of Barcode Capacities

Different barcode types have different capacities for data - some are limited to numeric data only, and others can handle the full range of ASCII characters.

Similarly, they all have certain properties which can be altered to affect the way in which the barcode is displayed and / or the data encoded.

In order to allow it to be read by a barcode reader, the size of a printed barcode must be such that it has clear definition between the coding elements.

The table below lists all the Barcodes which can be created using the LabWriter Application, and gives suggested values for the properties which will affect the size and readability of the barcode.

Although all the barcodes types can be used with both cassettes and slides, some barcode types are not really practical for printing on a cassette due to the smaller print area, .

Barcode Type	Barcode Size	Numeric Capacity		Alphanumeric Capacity	Bar Width		Ratio	Column	Compaction Type	
		Slide	Cassette		Slide	Cassette			Slide	Cassette
DataMatrix	C8x18	10		6	-		-	-	-	
DataMatrix	C8x32	20		13	-		-	-	-	
DataMatrix	C10x10	6		3	-		-	-	-	
DataMatrix	C12x12	10		6	-		-	-	-	
DataMatrix	C12x26	32		22	-		-	-	-	
DataMatrix	C12x36	44		31	-		-	-	-	
DataMatrix	C14x14	16		10	-		-	-	-	
DataMatrix	C16x16	24		16	-		-	-	-	
DataMatrix	C16x36	64		46	-		-	-	-	
DataMatrix	C16x48	98		72	-		-	-	-	
DataMatrix	C18x18	36		25	-		-	-	-	
DataMatrix	C20x20	44	-	31	-		-	-	-	
Code 128	-	15	10	10	0.007	0.01	1	-	-	
Code 39	-	7	4	-	0.007	0.01	2	-	-	
Interleaved 2 of 5	-	15	8	-	0.007	0.01	2	-	-	
Codabar	-	10	4	-	0.007	0.01	2	-	-	
PDF417	-	20		-	0.01		3	2	Binary	Text

Note: Some linear barcodes can contain as many characters as required, however the size of the barcode produced will increase as the amount of data contained increases. This means that there is a practical limit to the size of the barcode which is determined by the available print area. The values shown are the maximum capacity which will fit onto the Print Template area.

Barcode Terminology Reference

ASCII Characters - The character set and code described in American National Standard Code for Information Interchange between data processing systems, communication systems and associated equipment. The ASCII set consists of both control and printing characters.

ASCII (Encoding) - An encoding method used for data which contains the ASCII character set (0-127) - data can contain numeric, upper case and lower case characters as well as punctuation and control characters.

Auto (Encoding) - A setting which allows the LabWriter software to determine the most suitable encoding method based on the data content.

Bar Ratio - The ratio of the thicknesses of thick bars to thin bars for dual-width barcodes such as Code 39 and Interleaved 2 of 5. For variable width barcodes such as Code 128, this has no effect.

Base 256 (Encoding) - An encoding method used to encode images, double-byte data, binary data and 8-bit values.

Bearer Bars - A minimum of two parallel bars running the length of the top and bottom edge of a barcode. Bearer bars, if used, reduce the probability of a misread when a skewed scanning beam enters and/or leaves the symbol through the top or bottom.

Binary (Encoding) - An encoding method used for data which contains the full ASCII character set as well as international characters.

C40 (Encoding) - An encoding method used for data which contains only numeric and upper case characters.

Check Digit / Character - A character used to check the integrity of the preceding barcode symbol. A check character is normally found at the end of the data encoded within the barcode.

Checksum - A calculated value used to check the integrity of the barcode. It is calculated using the data to be encoded.

Code 39 - An alphanumeric barcode that can encode decimal numbers, the upper case alphabet, and the following special symbols: _ . * \$ / % + (also see Extended Code 39).

Codabar - Codabar is a discrete, numeric code with special characters and four different start/stop characters. Allowable data characters are (0 - 9), special characters (- \$: / . +), and start-stop characters (A, B, C, D).

Code 128 - A continuous, multilevel, full ASCII code. There are three types of code 128 encoding. Type A provides the character set of all upper case alphanumeric characters plus all of the ASCII control characters. Type B provides the character set of all upper and lower case alphanumeric characters. Type C provides increased density for numeric encoding with double density numeric characters for all number pairs from 00 to 99.

DataMatrix - A 2-Dimensional barcode capable of encoding large quantities of data into a single label. It is made up of rows and columns of cells (dots).

Error Correction Level - Used in PDF417 barcodes instead of check characters. The error correction level allows the barcode to withstand some damage without losing data. Error correction levels range from 0 to 8 - the recommended minimum

Extended Code 39 - The full 128 character ASCII character set can be encoded by pairing Code 39 characters. Enabling Extended Code 39 causes the following characters to be output for each character pair.

Interleaved 2 of 5 - A numeric only barcode. Due to the interleaving of the characters, the number of characters in an Interleaved 2 of 5 message must be even. The check character, if used, must be included in the character count. It is designed to be read by a fixed or portable bi-directional scanner.

Numeric (Encoding) - An encoding method used for numeric data only.

PDF 417 - A 2-Dimensional barcode capable of encoding large quantities of data into a single label. It is made up of several linear rows of stacked codewords.

Start/Stop Characters - A distinct character or pattern of bars used at the beginning and end of each barcode symbol, which provides initial timing references and direction of read information to the decoding logic.

Text (Encoding) - An encoding method used for data which contains mainly numeric and lower case characters.

Appendix C - Auto Settings

The Templates Tab has a feature which allows the behaviour of Auto User Items to be defined.

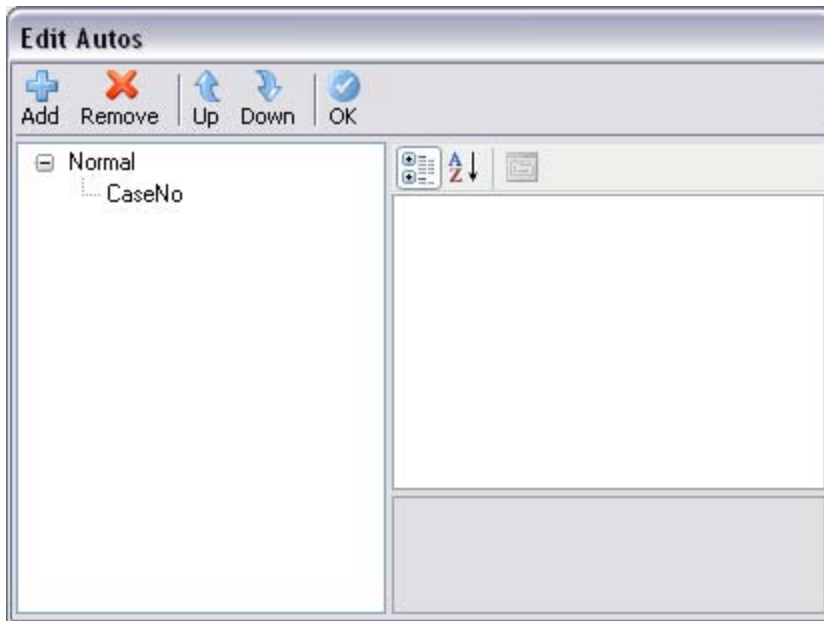
To assign a particular behaviour to a User Item:

- Click on the User Item and then click on the Autos button.



Autos button

- This will open the Edit Autos window from which the behaviour of the User Item can be defined.



Edit autos window

The following sections explain the different settings and their use:

Barcode Auto Increment Mode

If the same Barcode is scanned more than once, this setting will cause the Auto User Item to increment automatically.

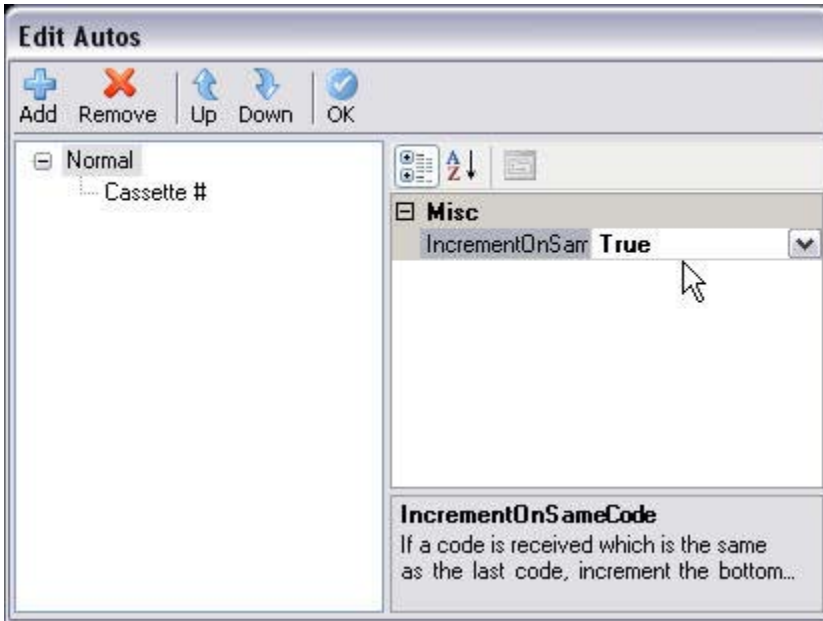
If a different Barcode is scanned the original value will be used.

Note

This setting will only work with Print Templates that contain a single Auto User Item; although other Normal User Items can be included in the Print Template.

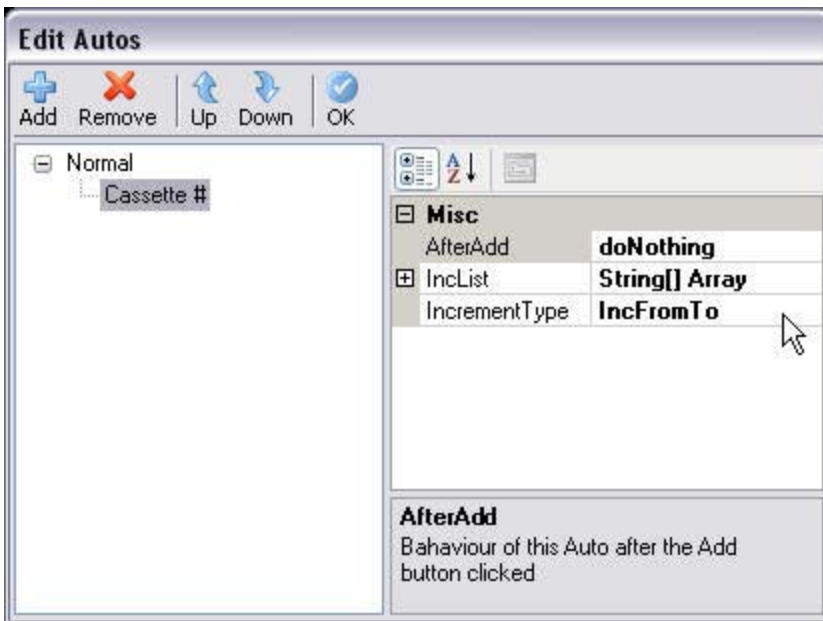
The Barcode Auto Increment Mode is set as follows:

- Open a Print Template which contains a single Auto User Item.
- Click on the Auto User Item and then click on the Autos button to display the Edit Autos window.
- Highlight the word **Normal** at the top of the left-hand window.
- Set the IncrementOnSameScan value in the right-hand window to **True**.



Set value to true

- Highlight the Auto User Item in the left-hand window to view the User Item Properties.
- Click on the AfterAdd drop-down list and select 'doNothing' from the list.



Set properties

- Click OK to exit to the Templates Tab.

Normal Auto Increment Mode

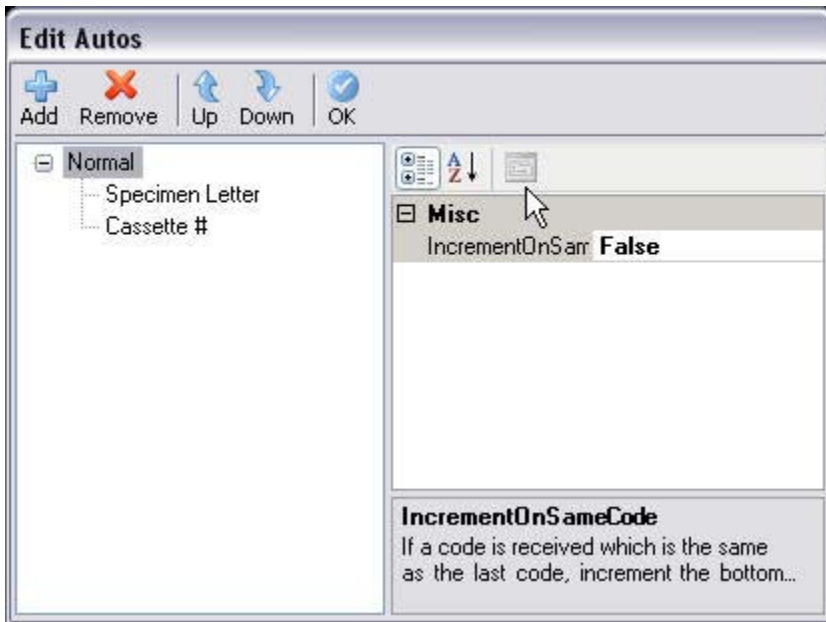
The Normal Auto Increment Mode does not check to see if the scanned data is the same as the previous data.

In this mode a Print Template can contain multiple Auto User Items.

The Normal Auto Increment Mode is set as follows:

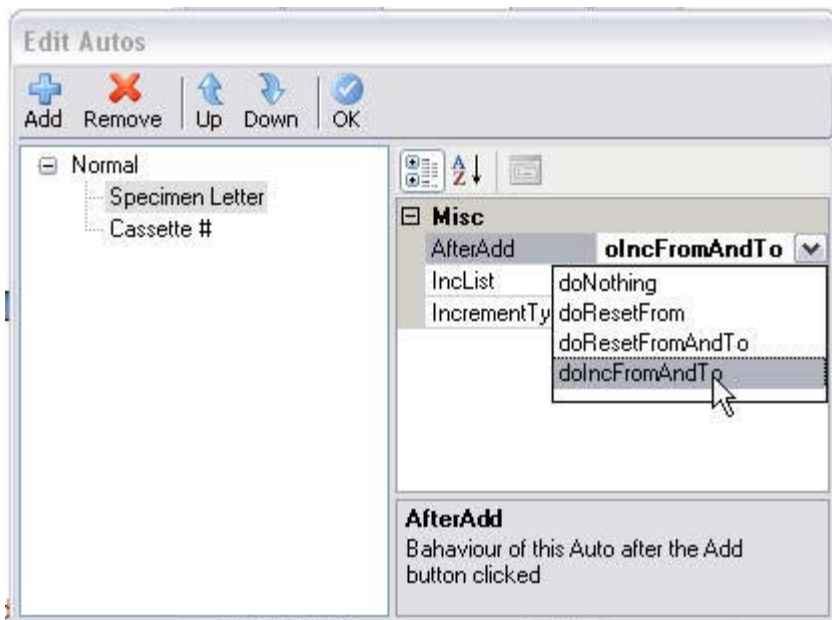
- Open the required Print Template.

- Check that all the User Items which need to be Autos are defined as such - see Chapter 3 - Formatting User Items.
- Click on the Autos button to display the Edit Autos window.
- Highlight the word **Normal** at the top of the left-hand window.
- Check that the IncrementOnSameScan value in the right-hand window to **False**.



Check value is false

- Highlight the Auto User Item in the left-hand window to view the User Item Properties.
- Click on the User Item Properties to change them as required.



Set properties

Note

A description of each of the User Item Properties is given in the following section.

- The order of the Auto User Items in the list can be altered by clicking on a User Item and using the Up and Down buttons to reposition it within the list.
- Click OK to exit to the Templates Tab.

User Item Properties

The User Item Properties available in the Edit Autos window are as follows:

AfterAdd - This defines the behaviour of the Auto User Item after the Add button has been clicked.

The options available are:

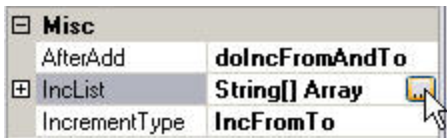
- doNothing - The values in the From and To fields remain unchanged.
- doResetFrom - The From field is reset to its original value.
- doResetFromAndTo - Both the From and the To fields are reset to their original values.
- doIncFromAndTo - The values in both the From and To fields are incremented by 1.

IncList - The IncList provides an alternative to standard Alphabetical or Numeric incrementing.

This allows non-sequential lists to be created as well as non-standard sequential lists such as roman numerals (I, II, III, IV etc.).

To create a list:

- Click on the IncList button to open the String Collection Editor.



Click IncList button

- Enter the required list items, with each item separated by a Carriage Return.



Enter list items

- Click OK to confirm and exit.

IncrementType - This defines the type of incrementation.

The options available are:

- IncFromTo - This uses standard Alphabetical or Numeric incrementing.
- ThroughList - This uses the InclList created above.

Appendix D - Barcode Control

The Barcode Control feature allows users to control the User Screen by scanning pre-defined barcodes - see Using Barcode Control.

There are two types of Control Barcodes:

Click Button - This type of barcode can be used to click a button on the User Screen.

Note:

Only certain buttons can be clicked using this feature.

Set Item - This type of barcode can be used to fill Item fields with data.

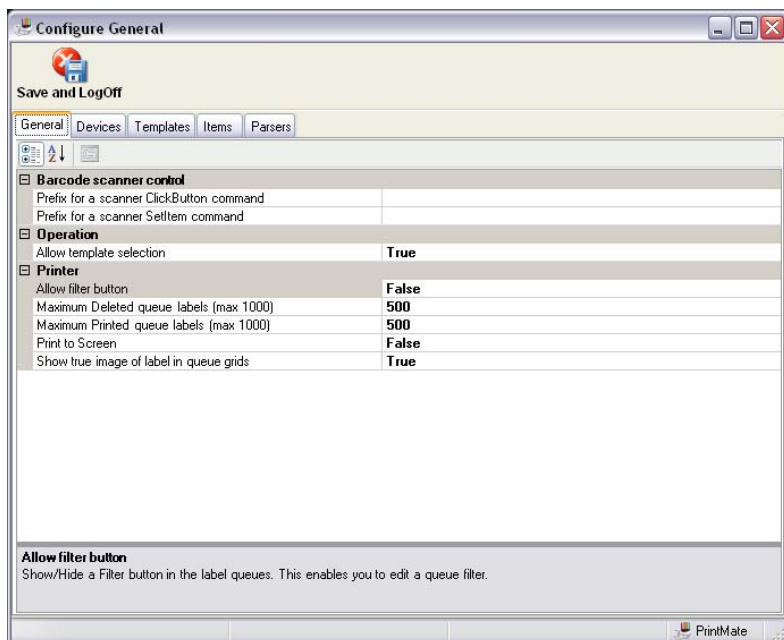
Control Barcodes must be created using a suitable syntax - see Barcode Control Syntax Table - and pre-defined prefixes must be set up to allow LabWriter to differentiate between scanned data and Control Barcodes.

To use the Barcode Control feature, the Barcode Reader device must be set up to act as a COM Port and LabWriter must be set up to look for Control Barcodes - see Setting Up LabWriter For Barcode Control.

Setting Up LabWriter For Barcode Control

To set up LabWriter to accept Barcode Control:

- Run LabWriter by clicking on the Desktop icon.
- Click on the 'Setup' button and enter the Administrator Password when prompted - see Admin Logon.
- The 'General' tab will appear as shown.



General Tab Screen

- Enter suitable prefixes for the 'ClickButton' and 'SetItem' commands in the appropriate boxes.

Barcode scanner control	
Prefix for a scanner ClickButton command	_CB
Prefix for a scanner SetItem command	_SI

Enter Barcode Control Prefixes

- Click on the 'Devices' tab and setup the Barcode Reader for COM Port Emulation - see Appendix E - Barcode Reader Setup.
- Once the Barcode Reader has been setup, exit the Admin area by clicking on the 'Save and Logoff' button.
- It should now be possible to control the User Screen using the Barcode Reader - see Using Barcode Control.

Using Barcode Control

Once LabWriter and the Barcode Reader have been set up - see Setting Up LabWriter For Barcode Control, it should now be possible to control certain aspects of the User Screen using barcodes.

Control Barcodes must be created specifically for the configuration of LabWriter.

Note:

A Library of standard barcodes is provided in the LabWriter Desktop Applet, but these rely on the Barcode Control Prefixes having been set to '_CB' and '_SI'. If different prefixes have been used, these barcodes will not work.

To use Barcode Control:

- Create a Barcode Sheet which is relevant to your workflow.

Note:

A Barcode Generator must be used to create appropriate barcodes. The LabWriter Desktop Applet has EZ Barcode Generator included and allows simple creation of Barcode Sheets using the Barcode Creator Toolbar.

- Load the appropriate Template into the User Screen.
- If any SetItem barcodes are to be used, scan these in turn - the appropriate fields should fill automatically with the scanned data.
- Fill in any further fields which require manual input.
- Scan the '_CBAdd' (or similar) barcode to add the label to the Print Queue.
- Repeat the above process as required.
- Other features such as 'Print / Stop', 'Auto Add' and 'Cache' can be turned on or off as required using appropriate barcodes - see Barcode Control Syntax Table.

Note:

Not all buttons can be controlled by barcodes.

Barcode Control Syntax Table

	Command	Syntax	Example
Buttons	Click 'Add' Button	<ClickButtonPrefix> Add	_CBAdd
	Click 'Auto Add' Button	<ClickButtonPrefix> Auto Add	_CBAuto Add
	Click 'Cache' Button	<ClickButtonPrefix> Cache	_CBCache
	Click 'Print' Button	<ClickButtonPrefix> Print	_CBPrint
	Click 'Stop' Button	<ClickButtonPrefix> Stop	_CBStop
	Click 'Auto Print' Button	<ClickButtonPrefix> Auto Print	_CBAuto Print
Hoppers	Set 'Hopper' Item to 'Hopper 1'	<SetItemPrefix> Hopper=Hopper 1	_SIHopper=Hopper 1
	Set 'Hopper' Item to 'Hopper 2'	<SetItemPrefix> Hopper=Hopper 2	_SIHopper=Hopper 2
	Set 'Hopper' Item to 'Hopper 3'	<SetItemPrefix> Hopper=Hopper 3	_SIHopper=Hopper 3
	Set 'Hopper' Item to 'Hopper 4'	<SetItemPrefix> Hopper=Hopper 4	_SIHopper=Hopper 4
	Set 'Hopper' Item to 'Hopper 5'	<SetItemPrefix> Hopper=Hopper 5	_SIHopper=Hopper 5
	Set 'Hopper' Item to 'Hopper 6'	<SetItemPrefix> Hopper=Hopper 6	_SIHopper=Hopper 6
	Set 'Hopper' Item to 'Hopper 7'	<SetItemPrefix> Hopper=Hopper 7	_SIHopper=Hopper 7
	Set 'Hopper' Item to 'Hopper 8'	<SetItemPrefix> Hopper=Hopper 8	_SIHopper=Hopper 8
	Set 'Hopper' Item to 'Hopper 9'	<SetItemPrefix> Hopper=Hopper 9	_SIHopper=Hopper 9
	Set 'Hopper' Item to 'Hopper 10'	<SetItemPrefix> Hopper=Hopper 10	_SIHopper=Hopper 10
	Set 'Hopper' Item to 'Hopper 11'	<SetItemPrefix> Hopper=Hopper 11	_SIHopper=Hopper 11
	Set 'Hopper' Item to 'Hopper 12'	<SetItemPrefix> Hopper=Hopper 12	_SIHopper=Hopper 12
Outlet	Set 'Outlet' Item to 'Outlet 1'	<SetItemPrefix> Outlet=Outlet1	_SIOutlet=Outlet1
	Set 'Outlet' Item to 'Outlet 2'	<SetItemPrefix> Outlet=Outlet2	_SIOutlet=Outlet2
	Set 'Outlet' Item to 'Outlet 3'	<SetItemPrefix> Outlet=Outlet3	_SIOutlet=Outlet3
Default User Items	Set 'Accession #' value	<SetItemPrefix> Accession #=<Value>	_SIAccession #=5
	Set 'BlockSuffix' value	<SetItemPrefix> BlockSuffix=<Value>	_SIBlockSuffix=BS12
	Set 'CaseNo' value	<SetItemPrefix> CaseNo=<Value>	_SICaseNo=12345
	Set 'Cassette #' value	<SetItemPrefix> Cassette #=<Value>	_SICassette #=10
	Set 'Patient Name' value	<SetItemPrefix> Patient Name=<Value>	_SIPatient Name=R.Smith
	Set 'Position' value	<SetItemPrefix> Position=<Value>	_SIPosition=5
	Set 'Prefix' value	<SetItemPrefix> Prefix=<Value>	_SIPrefix=S09
	Set 'Quantity' value	<SetItemPrefix> Quantity=<Value>	_SIQuantity=10
	Set 'SlideSuffix' value	<SetItemPrefix> SlideSuffix=<Value>	_SISlideSuffix=PM
	Set 'Specimen' value	<SetItemPrefix> Specimen=<Value>	_SISpecimen=Kidney
	Set 'Specimen Letter' value	<SetItemPrefix> Specimen Letter=<Value>	_SISpecimen Letter=H
	Set 'Specimen Suffix' value	<SetItemPrefix> Specimen Suffix=<Value>	_SISpecimen Suffix=TS
	Set 'Sub Letter' value	<SetItemPrefix> Sub Letter=<Value>	_SISub Letter=B
	Set 'Sub Number' value	<SetItemPrefix> Sub Number=<Value>	_SISub Number=15
Set 'Year' value	<SetItemPrefix> Year=<Value>	_SIYear=2009	
Autos	Set 'From' value (textbox field)	<SetItem Prefix> txtFrom<ItemName> =<Value>	_SItxtFromCaseNo=100
	Set 'To' value (textbox field)	<SetItem Prefix> txtTo<ItemName> =<Value>	_SItxtToCaseNo=105
	Set 'From' value (dropdown list)	<SetItem Prefix> cbFrom<ItemName> =<Value>	_SIcbFromPrefix=A
	Set 'To' value (dropdown list)	<SetItem Prefix> cbTo<ItemName> =<Value>	_SIcbToPrefix=F
	Note:- If filling a field with a dropdown list of values, the value after the '=' must be in the list.		

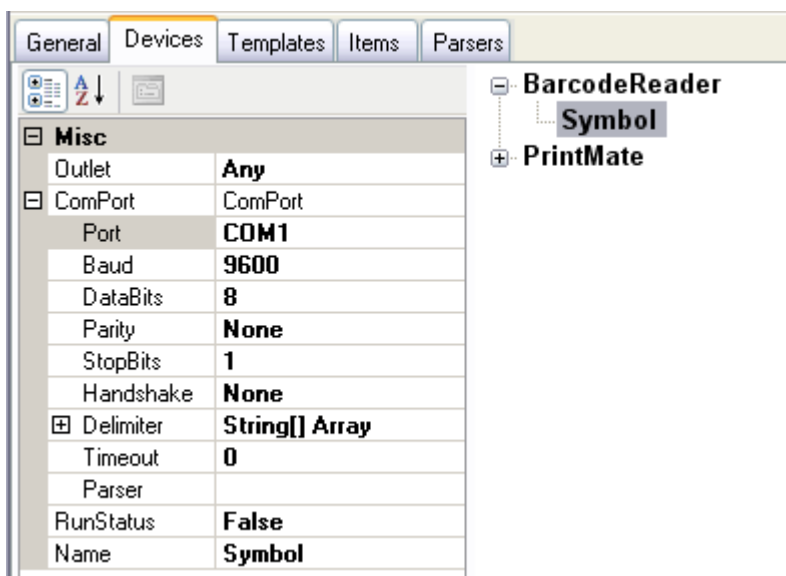
Appendix E - Barcode Reader Setup

It is possible to set up a Barcode Reader to read data directly into LabWriter using the COM Port method of data input - see *Processing COM Port Data*.

Tutorial Exercise

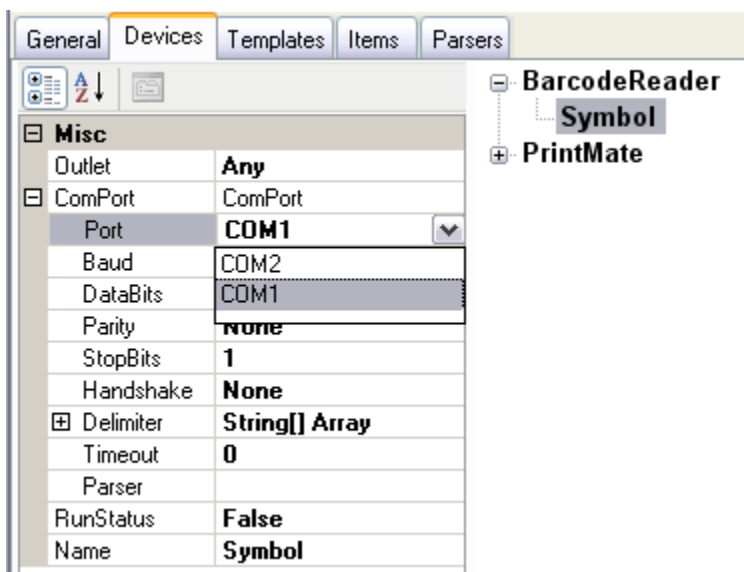
To set up a Barcode Reader for use with LabWriter:

- Enter the Admin Area as described in Chapter 2 - Admin Setup.
- In the Devices tab, click on 'Barcode Reader' and then the large 'Add' button in the top, left-hand corner.
- In the dialog box which appears, enter an appropriate name for the Barcode Reader.
- Click on the newly created device and then expand the 'ComPort' property.



Add a barcode reader

- Click on the drop-down list next to 'Port' to determine the number of COM Ports currently recognized by LabWriter.



Currently recognized COM ports

- Connect the Barcode Reader to the PC running LabWriter, and set it up to act as a COM Port.

Note

It may be necessary to install COM Port Emulation Software in order to allow your Barcode Reader to function as a COM Port - If in doubt, consult the documentation supplied with your Barcode Scanner.

The LabWriter CD includes COM Port Emulators for Symbol and Cognex Barcode Readers.

- In addition to setting up the Barcode Reader as a COM Port, the following settings are also normally required to allow a Barcode Reader to function correctly with LabWriter:
- Automatic Carriage Return and Line Feed
- Baud Rate - 9600
- DataBits - 8
- StopBits - 1
- Handshake - None

Note

The settings listed above are standard values only - no guarantee can be given that the specific Barcode Reader used will operate on these settings - If in doubt, consult the documentation supplied with your Barcode Scanner.

- It may be necessary to scan particular barcodes in order to setup the Barcode Reader as a COM Port and to activate the 'Carriage Return / Line Feed' function.
- For Symbol Barcode Readers the following barcodes must be scanned:



Simple COM Port Emulation

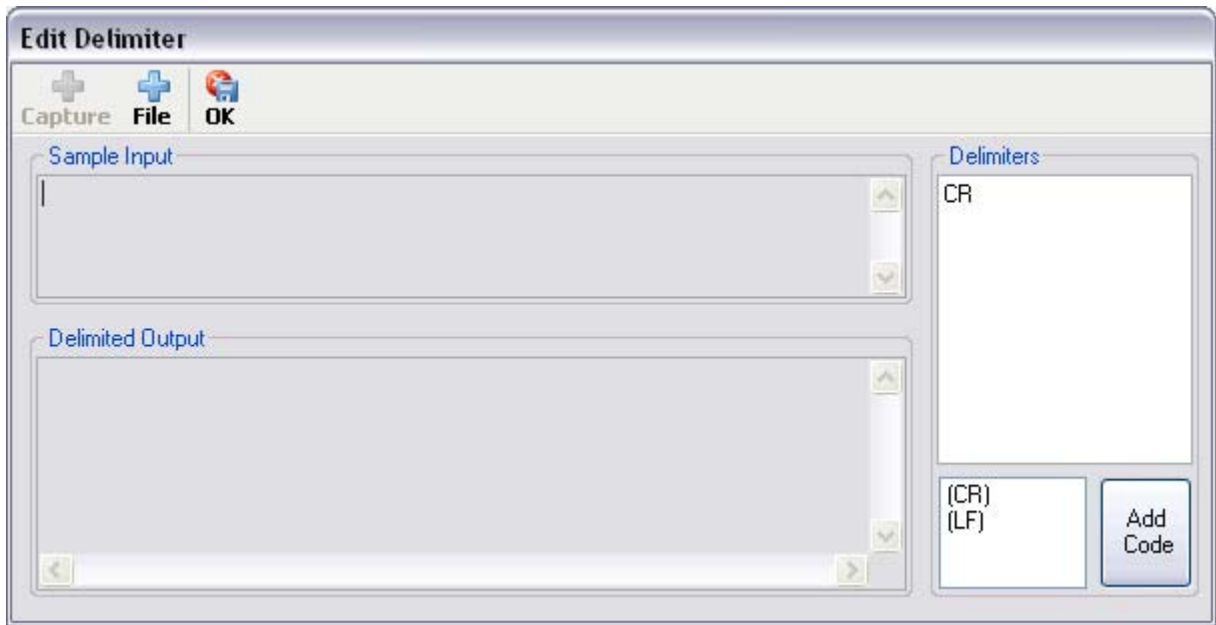


<DATA><SUFFIX 1>

Symbol Setup Barcodes Required

- Other Barcode Readers may have setup applications associated with them which are used to activate the appropriate functions.
- For Cognex Barcode Readers see Appendix F - Cognex Barcode Reader Setup.
- Once the Barcode Reader has been setup, click on the 'Port' drop-down list again.
- There should now be an extra COM Port listed - select this new COM Port.

- Click on 'Delimiter' and then on the  button to display the Edit Delimiter window.



Edit delimiters window

- Delete the 'CR' shown in the 'Delimiters' list and then double-click on the '{CR}' delimiter in the lower box.
- Click 'OK' and then 'Yes' when asked to save settings.
- Click on 'RunStatus' and then select 'True' from the drop-down list.
- The Barcode Reader should now be configured for use as a COM Port Input Device.
- Click the 'Save and Logoff' button to exit the Admin Area.

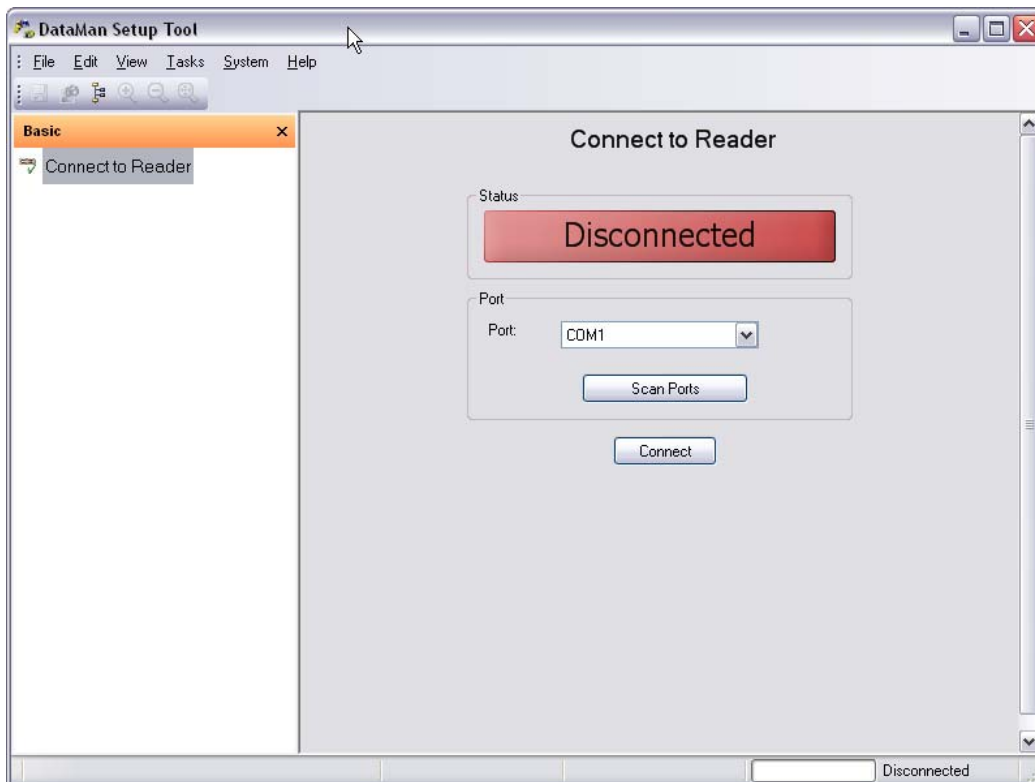
Note

If using the Barcode Reader for LIS input, all other automatic data processing settings must be active, and an appropriate parser and template available, otherwise the Barcode Reader may not function as intended.

Appendix F - Cognex Barcode Reader Setup

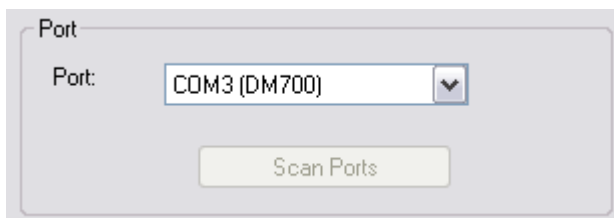
To set up the Cognex Barcode Reader to act as a COM Port:

- Open the LabWriter Desktop and select 'Run' and then 'Cognex DataMan Setup'.
- Follow the on-screen instructions to complete the install of the Cognex 'DataMan' software.
- Run 'DataMan' and wait for the following screen to appear.



DataMan main screen

- Plug in the Barcode Reader and wait for the system to recognise it - the Barcode Reader will beep when it is ready.
- Click the 'Scan Ports' button and wait for the program to detect the Barcode Reader.



COM Port detection

- When the COM Port has been detected, make a note of the number and then click 'Connect'.

- Once the connection has been made the Status bar will turn green and say 'Connected'.



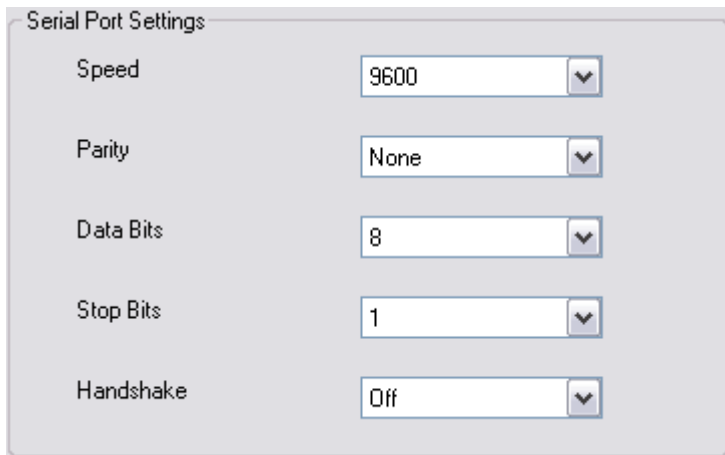
Connected to COM Port

- From the list on the left-hand side of the screen, select 'Communication Settings'.



Select 'Communication Settings'

- Change the default settings, where necessary, to those shown below:



Communication Settings required

- From the list on the left-hand side of the screen, select 'Data Formatting'.



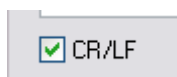
Select 'Data Formatting'

- Check the 'Standard Formatting Enabled' box to activate the formatting options.



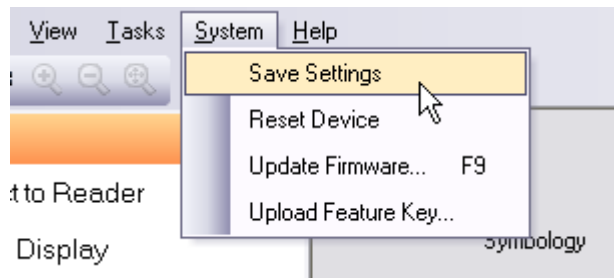
Check 'Standard Formatting Enabled' box

- Check the 'CR/LF' box.



Check 'CR/LF' box

- Click on 'System' and then select 'Save Settings'.



Save settings

- Exit 'DataMan' and switch to LabWriter.
- Create a new Barcode Reader Device as described in Appendix E - Barcode Reader Setup.

Appendix G - The LabWriter Desktop Applet

The LabWriter Desktop Applet is a small application which allows easy access to the various additional items which are included on the LabWriter CD.

To run the LabWriter Desktop:

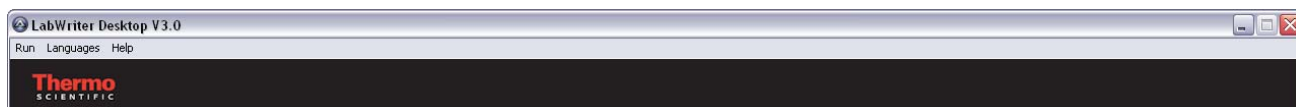
- Double-Click on the 'LabWriter Desktop' icon.



LabWriter
Desktop

*LabWriter
Desktop Icon*

- The following screen will appear:



LabWriter Desktop menu

From this menu, it is possible to:

- Run the LabWriter Application - see Running the Application.
- View documentation for LabWriter, PrintMate and SlideMate.
- Create Barcode Sheets for use with the Barcode Control feature of LabWriter.
- Change the displayed language.
- Install COM Port Emulators for both Cognex and Symbol Barcode Readers.
- Search for PrintMate devices connected via USB ports.

Appendix H - PrintMate Collection System

Installation

- Ensure the PrintMate is turned off.



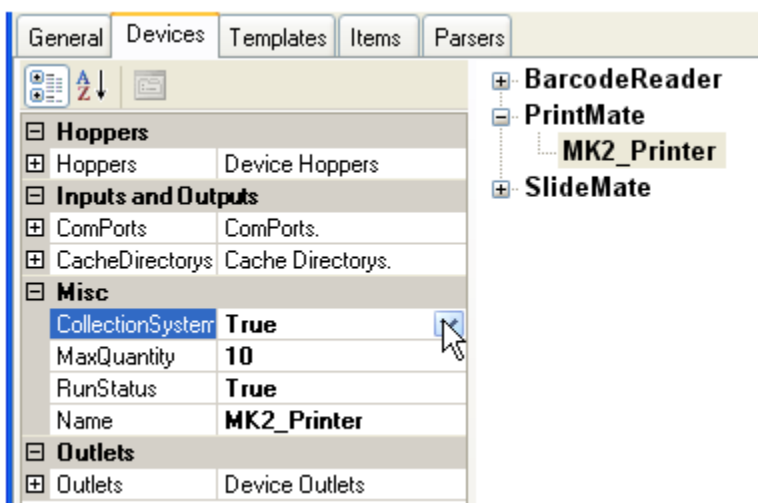
Connecting or disconnecting the collection system to the PrintMate while turned on will damage the PrintMate.

- Place the collection system on a level work surface and position the PrintMate on top using the cut outs for the PrintMate feet.
- Once the PrintMate is sitting correctly on the collection system, plug in the connecting cable.
- Turn on the PrintMate.
- Run the LabWriter software.
- Click on the setup button.



Setup Button

- Enter the password.
- Select the Devices Tab.



Devices Tab

- Select the PrintMate device.
- Change the CollectionSystem parameter to True.
- Click on the Save and LogOff button.



Save and LogOff Button

Operation



Collection System Buttons

The collection system buttons will be displayed if a collection system is connected.

Buttons



Index - Clicking on the Index buttons will index the selected rack by one position. If the next position is not found the belt will move forward for a period looking for another rack. The Index button can also be used to load a new rack. Place the new rack on the required belt and click on the Index button. The belt will move the rack into position.



Eject - Clicking on the Eject button will eject the selected rack.



IndexCollection - The IndexCollection button is used to insert an index after a selected cassette. The user selects the row in the grid and then clicks on the IndexCollection button.

TimeStamp	Template	Label	Hopper	Outlet	PostPrintCollection
7/30/2009 12:10...	Cell Block	SMD 01 Smith 1007	Hopper 1	Outlet2	None
7/30/2009 12:10...	Cell Block	SMD 01 Smith 1006	Hopper 1	Outlet2	Index
7/30/2009 12:10...	Cell Block	SMD 01 Smith 1005	Hopper 1	Outlet2	None

You will notice that the PostPrintCollection column now has the word Index for the selected row. The collection rack will be indexed by one slot after the cassette selected has been loaded.



EjectCollection - The EjectCollection button is used to insert an eject rack after a selected cassette. The user selects the row in the grid and then clicks on the EjectCollection button.

MK2_Printer Session								
TimeStamp	Template	Label		Hopper	Outlet	PostPrintCollectionf		
7/30/2009 12:10...	Cell Block	SMD 01 Smith	1007	Hopper 1	Outlet2	None		
7/30/2009 12:10...	Cell Block	SMD 01 Smith	1006	Hopper 1	Outlet2	Eject		
7/30/2009 12:10...	Cell Block	SMD 01 Smith	1005	Hopper 1	Outlet2	None		

You will notice that the PostPrintCollection column now has the word Eject for the selected row. The collection rack will be ejected after the cassette selected has been loaded.

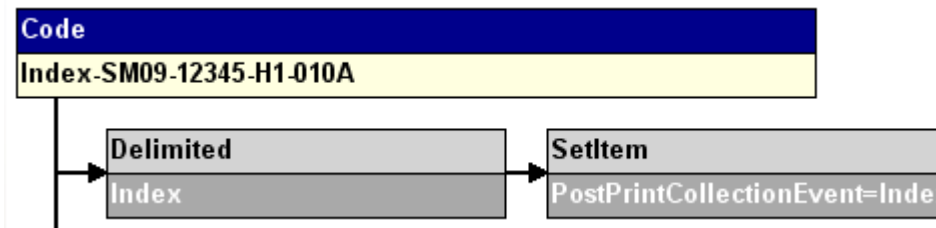
LIS and Collection System Operation

The Collection system can be controlled via the LIS interface. The data item 'PostPrintCollectionEvent' should be set to one of the three commands below using the 'SetItem' process within the Parser.

None = Do nothing

Index = Index the rack for the selected outlet after printing the cassette.

Eject = Eject the rack for the selected outlet after printing the cassette.



Example

No Rack Found Error

If no rack is loaded on the selected outlet belt, the following error will be displayed:



No Rack Error

You can select any of the three outlets (Default is 3).

Before doing so, a rack should be placed onto the desired belt - if you want to collect the cassette in a rack on Belt 2 (the belt nearest to the front) then place a rack on Belt 2 and select Outlet 2.

Once you have selected the required Outlet click on the OK button.

The rack will move to the collection system or the cassette will be ejected through Outlet 3.

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