



# 2

# Printer Overview

### Introduction

This chapter is intended to familiarize you with the AccuFlex Series printer.



### ATTENTION

Optional subassemblies are described in the *AccuFlex™ Options Guide*.

### In this chapter

This chapter is divided into the following sections:

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## Power Requirements

### Introduction

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The printer is factory configured to one of these voltages as stated on the rear panel label.

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### Electrical

Configuration	Current Load (Amperes)
110 - 115 V power	5
220 - 230 V power	3
220 - 230 V power with Vacuum Stencil Wiper	8

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### Pneumatic

A 90 psi/620 kpa clean air supply of 1 cfm (24 liters/minute) is required.

The optional vacuum system requires 25 cfm (600 liters/minute).

The pneumatic connection to the printer is via a bulkhead connector that accommodates a 1/2 inch (12mm) outside diameter nylon tube.

Air is internally filtered and regulated.

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## Option Licenses

### Introduction

A license is required to run the following AccuFlex options:

A timed license expires on a stated date.

An unlimited license is valid indefinitely.

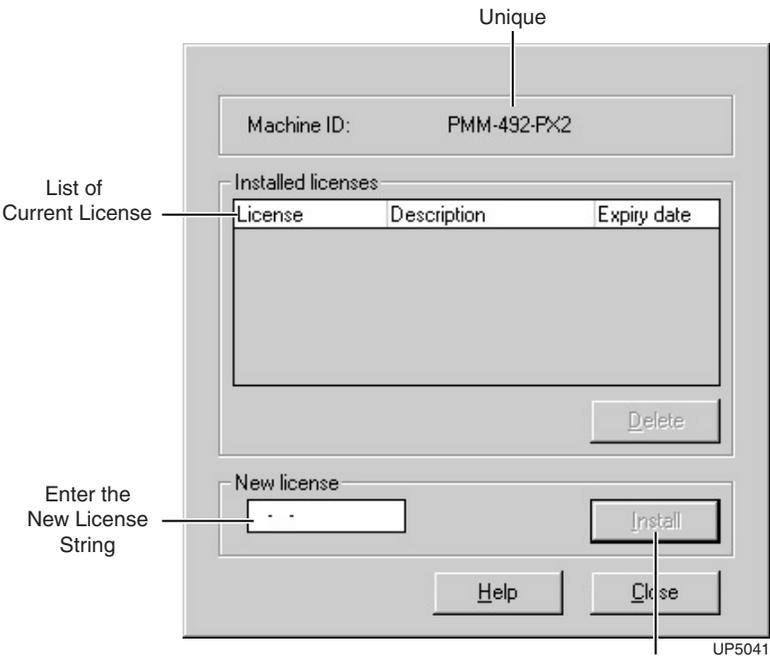
Each license is unique, generated from the serial number and unique system data, and it can only be used on the printer to which it was issued.

If a 90-day license has expired, a message appears and the license is deleted. Contact Speedline for a new license string.

It is a good idea to write down license numbers for future reference.

### Installing Licenses

To install software licenses:

Step	Action
1	<p>Click <i>Licenses</i> on the <i>Configure</i> menu.</p> 
2	<p>If you do not yet have a new license string to enter: Write down the unique Machine ID displayed on the dialog. Contact Speedline, provide the Machine ID, printer Serial number, and details of the access desired.</p>
3	<p>If you have a license string to install, click in the <i>New license</i> box.</p>
4	<p>Type the license string. Enter letters and numbers only. AccuFlex will enter the spacing characters in the correct locations.</p>
5	<p>Click <i>Install</i>.</p>



## Deleting Licenses

To delete a software license:

Step	Action
1	Click (in the <i>Installed licenses</i> box) on the license you want to delete so that it is highlighted.
2	Click <i>Delete</i> .
3	Click <i>Yes</i> to confirm the deletion.
4	To close the dialog, click <i>Close</i> .



## The Microsoft Windows 2000™ Operating System

Microsoft Windows 2000 is an easy-to-use system for controlling computer software. Each task that you perform appears inside its own rectangle, or window. You can open several windows at the same time, to keep track of multiple tasks.

You control the printer by using buttons, check boxes, scroll bars, or by typing specific information into areas called *fields*.

If you are familiar with Microsoft Windows and are comfortable entering information with a keyboard and trackball using dialog boxes and other system conventions, skip this section.

### Using the Trackball Controller

Use the trackball to move the pointer around the screen. Roll the ball in the direction you want the pointer to move.

In some cases, because we are using camera images in windows, this motion may be reversed. In such cases, rolling the ball in one direction will cause the pointer to move in the opposite direction.



UP5450

The trackball has three buttons. The left button is most commonly used. Use it to select all types of menu items, buttons, and check boxes.

The right button, in some cases, provides faster access to menu items. Right clicking certain items will cause sub menus to appear next to that item. This allows you to select the item and access its menu options in the same operation. It eliminates the separate step of selecting menu items or toolbar icons. This can be a handy time-saving step.

The center button and its wheel are not used.



## Trackball Operations

Common trackball operations are:

Operation	Description
Clicking	<p>Position the pointer on a button or check box, or in a field, and press the left button on the trackball.</p> <p>The object will change state:</p> <ul style="list-style-type: none"> <li>• a button will show a dot in its center,</li> <li>• a check box will show an x,</li> <li>• a command button will appear to be pushed in,</li> <li>• or an item in a list will appear on a white background.</li> </ul> <p>Clicking a selected object reverses its state.</p> <p>If you click in a data field, the pointer will change to a vertical bar, called a cursor. The cursor allows you to type information in that location.</p>
Double clicking	<p>Double clicking selects an object and executes an action associated with it. You could single click an item and press the OK button, or you could double click the object and accomplish the same thing.</p>
Dragging	<p>You may need to move an object or window on the screen so that you can see another object or window. To move an object by dragging:</p> <ol style="list-style-type: none"> <li>1. Position the pointer on the object and press and hold the left trackball button.</li> <li>2. While holding the left button, move the trackball to reposition the object.</li> <li>3. Release the left button on the trackball.</li> </ol>
Resizing a window	<p>If you need to change the size of a window to see or gain access to something beneath that window:</p> <ol style="list-style-type: none"> <li>1. Position the pointer at the lower right hand corner of the window. The pointer will change to a diagonal double arrow.</li> <li>2. Press and hold the left button on the trackball.</li> <li>3. Drag the corner diagonally until the window is the desired size.</li> <li>4. Release the left button on the trackball.</li> </ol>



Operation	Description
<p>Minimizing, maximizing or Closing a window using the window status buttons</p>	<p>You will find three icons in the upper right corner of every window. These are the window status buttons.</p> <p>At the left is the minimizing button. If you click this button, the window disappears, but an icon, with all or part of the window's name, appears at the bottom of the screen. If you click this icon, the window reappears.</p> <p>The middle icon is the maximizing button. Clicking this button makes a window fill the complete screen, or, if it already fills the screen, the button reduces its size. The window may then be manually resized.</p> <p>Windows are often closed by clicking an OK or Cancel button within that window. Another way is to click the X button, or Close box, which is the icon to the right at the upper right corner of the window.</p> <div data-bbox="857 747 1347 888" data-label="Image"> <p style="text-align: center;">UP5002</p> </div>
<p>Scrolling</p>	<p>When the quantity of information displayed exceeds the size of a window, a scroll bar appears to the right of that window. A scroll bar may also often appear at the bottom of a window. The right scroll bar allows you to move the contents of the window up or down, and the bottom scroll bar allows your to move the contents left or right.</p> <div data-bbox="792 1142 1453 1564" data-label="Image"> <p style="text-align: center;">UP5003</p> </div> <p>Move through the window an item at a time by clicking the scroll arrows, hold the arrows to scroll quickly. Click near the scroll box to move in large increments, or drag the scroll box to a desired area of the window.</p>



## Trackball Motion Control Modes

The following describes the motion control modes.

Mode	How to Activate	When to Use
Fine Adjust	Roll the trackball.	Use fine adjust to move axes/components slowly, in small increments, over short distances. Fine adjust provides precise motion control.
Velocity	Hold down the SELECT button and roll the trackball. <b>Note:</b> The further you roll the trackball the faster the axis/component travels.	Use the velocity mode to move axes/components quickly over long distances. Once you move the axis/component to the desired area, use the fine adjust mode to position it precisely.

## Selecting Menu Options

Position the pointer on an item in the menu bar at the top of the screen and click the left button on the trackball. Click the desired option in the drop-down menu that appears. This may take you to a dialog box, or cause more menu options to appear. Click on an option in the new menu in the same way.

## Entering Data in Dialogs

You will be required to enter data in various *fields* in dialog boxes. Click in the field. Replace existing data in the field by dragging to highlight the information, double clicking, or backspace to delete the information. Then type the new data.

## Numeric Keypad

To enter numeric data, the on-screen numeric keypad may be useful. Double clicking in a field that requires numeric data brings up the numeric keypad.

Use the backspace or delete button to correct mistakes.

Click OK when finished.



Delete Button

UP5004



## Units of Measurement

You may enter information with imperial (inches) or metric units of measurement.

### Changing Units of Measure

To change units of measure in the Windows operating system:

Step	Action
1	If the Accuflex software is running (if you have logged on), close down the software by logging off. This brings you back to the Windows operating system.
2	Click on the Windows <i>Start</i> menu in the lower left of the screen.
3	Click <i>Settings</i> .
4	Click <i>Control Panel</i> .
5	Double click on the <i>Regional Settings</i> icon. The Regional Settings Properties dialog appears. <div data-bbox="727 802 1455 1602" data-label="Image"> <p>The screenshot shows the 'Regional Settings Properties' dialog box with the 'Number' tab selected. The 'Appearance samples' section shows 'Positive: 123,456,789.00' and 'Negative: -123,456,789.00'. The 'Decimal symbol' is '.', 'No. of digits after decimal' is 2, 'Digit grouping symbol' is ',', and 'No. of digits in group' is 3. The 'Negative sign symbol' is '-', 'Negative number format' is '-1.1', 'Display leading zeroes' is 0.7, 'Measurement system' is 'Metric', and 'List separator' is '.'. A callout box points to the 'Measurement system' dropdown with the text 'Select U.S. (Imperial) or Metric'. The dialog has 'OK', 'Cancel', and 'Apply' buttons at the bottom.</p> </div>
6	Click on the <i>Number</i> tab.
7	Select <i>U.S.</i> , (imperial) or <i>Metric</i> in the Measurement system option list box.
8	Click <i>Apply</i> .
9	Click <i>OK</i> . Click the Close box on the Control panel window.
10	Restart the computer. The change will be in effect.



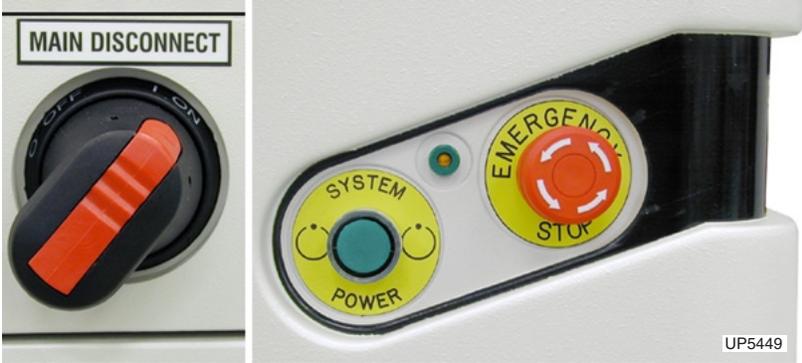
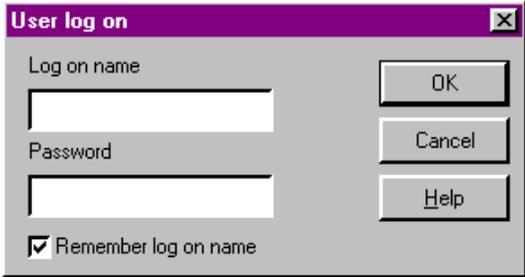
# Starting The AccuFlex Printer

## Introduction

This section explains how to turn on, log on, log off, and shut down the printer.

## Startup Procedure

To turn on and log on to the printer:

Step	Action
1	<p>Turn on the rotary isolator switch, located on the front of the printer.</p>  <p><b>! ATTENTION</b></p> <p>The Accuflex has two large EMERGENCY STOP buttons located on the front of the cabinet on either side. Push either of these buttons to remove system power and immediately stop all machine movement. To reset the button, turn it counter-clockwise.</p>
2	<p>Turn the computer monitor on, if it is not already on. The Accuflex displays the Windows Log On Screen. Press <i>OK</i>. No password is necessary.</p>
3	<p>If the printer is connected to a network, enter your password and press <i>OK</i>. The User log on dialog appears.</p>  <p style="text-align: right;">UP5001</p>



Step	Action
4	Enter your name and password. The password will appear as asterisks. Check <i>Remember log on name</i> , and click OK. The next time you log on, you will enter only your password.
5	A message appears telling you to be sure the EMERGENCY STOP buttons are released and to press the SYSTEM POWER button. Please press the green System Power switch. The red E-stop must be released.
6	Press the SYSTEM POWER button. It will illuminate. Click OK.
7	The AccuFlex initializes and the AccuFlex main window appears.

### Begin Log On Dialog Problems

If the begin log on dialog does not appear, check that:

1. The electricity mains are properly connected.
2. The computer and monitor are turned on with their own switches.
3. The monitor brightness and contrast controls are set correctly.

### Shutdown Procedure

To log off and turn off the printer:

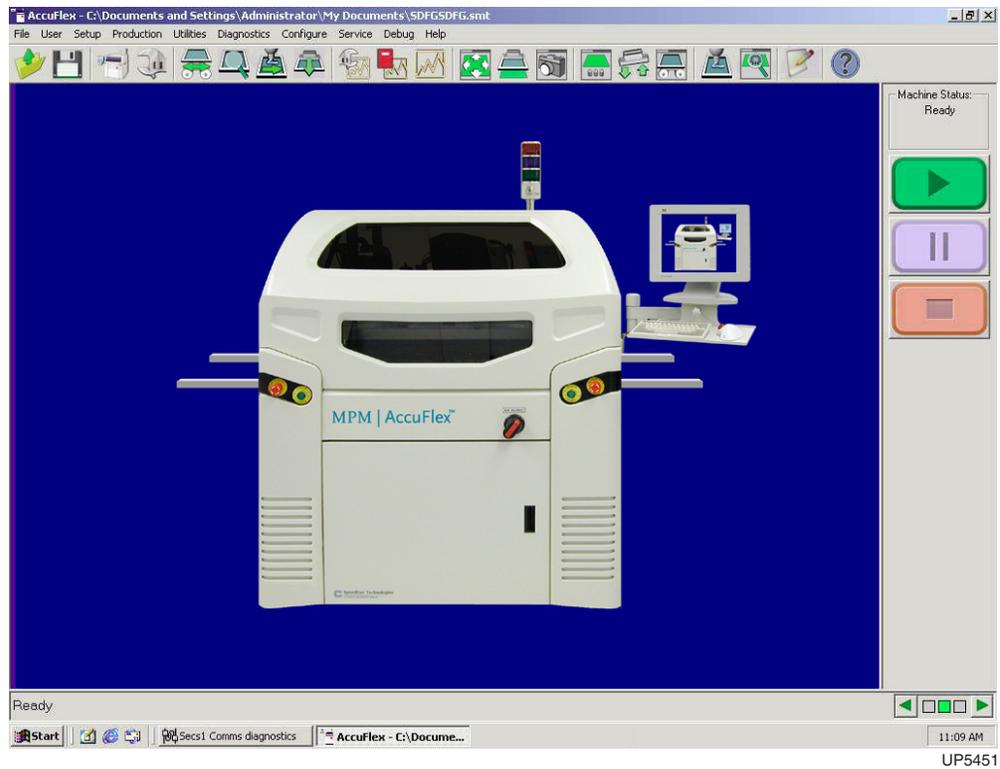
Step	Action
1	Select Exit from the <b>File</b> menu. You will be prompted to save any changes you have made. If an operation is in progress, you may stop it and close down or ignore and continue.
2	Click the Windows Start menu. Select <i>Shut Down...</i>
3	Select <i>Shut down the computer</i> . Click Yes.
	 <p><b>ATTENTION</b></p> <p>Always shut down the AccuFlex computer by using the Start menu, <i>Shut Down</i> command.</p>
4	Turn the rotary isolator switch to OFF.



## The AccuFlex Main Window

### Introduction

When you log on, the AccuFlex Main Window appears. This section explains the controls and features of this window.



### In this Section

Refer to the following:

Topic	See Page
<a href="#">Title Bar</a>	13
<a href="#">Machine Status / Message Bar</a>	13
<a href="#">Conveyor Control and Status Indicator</a>	13
<a href="#">Menu Bar</a>	14
<a href="#">Toolbar</a>	15
<a href="#">Process Operation Buttons</a>	18



## Title Bar

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### Description

The title bar shows the name of the program being run, the current PCB file, and its location on the computer hard drive or network.

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## Machine Status / Message Bar

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### Description

At the lower left of the main window, the Machine Status/Message Bar shows:

- Machine Status, what the machine is doing, or,
  - System prompts, the commands which will be carried out if you click at the present pointer position.
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## Conveyor Control and Status Indicator

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### Description

The conveyor control and status indicator uses a three block icon to represent the three-stage conveyor.

The single track conveyor is represented by a single square.

You can manually transfer boards left or right by clicking the direction arrows at either end of the status indicator.

If the indicators are red, you will be prompted to initialize the conveyor.

Press *OK* to initialize the conveyor.



UP5006

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## Menu Bar

### Description

The menu bar has ten drop-down menus. In many cases, commands in these menus are duplicated on the toolbar. The following explains the contents of the menus.

Menu	Description
File	Standard Windows operation such as <i>New, Open, Save, Save as..., Print Setup, Exit.</i>
User	The User menu allows you to log on and off the AccuFlex.
Setup	This menu contains parameters such as Product information, Print profile, Tooling, Vision, Squeegees, Configure machine, Stencil clean, Paste dispenser profile, 2D inspection, and the notebook file for a product.
Production	Use this menu to print boards. It contains Run, and Bypass print.
Utilities	This menu contains Printer utilities, Initialize machine, Clean stencil, Inspect paste, Dispense paste, Swap print position, SPC utilities, SPC reports, and SPC chart replay.
Diagnostics	This menu contains access to the diagnostic routines: Print head, Stencil cleaner, Stencil load, Board transfer, XYY table, XY camera, Paste dispenser, Powered rail, Interlocks, Tooling Input, and Rheometric pump.
Configure	This menu is used to define the configurations and calibrations of the Print table, Camera, Camera light meter, Product transfer, Beacon, Options, SPC, and Counters.
Service	This menu contains Crate diagnostics, Edit SigPro.ini file, Vision self test, Test sequence, Accuracy test, Burn in test, Camera stability test, Offsets calibration, and Jog.
Debug	This menu contains Simulation forms: <i>Show all..., Secs 1comm diagnostics</i> , and Log files: <i>General Error, Secs, SPC, Versions and Messages.</i>
Help	The Help menu provides access to the AccuFlex version and copyright information and the on-line Help system.



## Toolbar

### Introduction

You may find the toolbar easier to use than the pull-down menus. The icons represent general machine function and programming operations.

Right click the toolbar to set it to a two-row configuration. The bottom row is dedicated to programming, product file setup, and teaching functions. Work from left to right in the second row to program the machine.

If you right click the toolbar again, it returns to a single row configuration.

### In this section

Refer to the following:

Topic	See Page
<a href="#">General Machine Function Icons</a>	16
<a href="#">Programming Icons</a>	17



## General Machine Function Icons

### Descriptions

There are eleven icons used to initiate/control general machine functions:

Toolbar Icon	Description
Open 	Displays the <i>Open</i> file dialog. Equivalent to the <i>Open</i> command on the <i>File</i> menu.
Save 	Saves the current PCB file to disk. Equivalent to the <i>Save</i> command on the <i>File</i> menu.
Initialize the Machine 	Returns the machine mechanicals to their datum positions. Equivalent to the <i>Initialize</i> command on the <i>Utilities</i> menu.
Printer Utilities 	Displays the <i>Utilities</i> dialog. Equivalent to the <i>Printer utilities</i> command on the <i>Utilities</i> menu.
Clean the Stencil 	Initiates the stencil cleaning cycle. Equivalent to the <i>Clean stencil</i> command on the <i>Utilities</i> menu.
Inspect Paste on the Stencil 	Moves the squeegees away from the bead of paste on the stencil to allow inspection. Equivalent to the <i>Inspect paste</i> command on the <i>Utilities</i> menu.
Dispense Paste on the Stencil 	Initiates the paste dispensing cycle. Equivalent to the <i>Dispense paste</i> command on the <i>Utilities</i> menu.
Swap Print Direction 	Moves the squeegees to the opposite print start position and changes the direction of the next print to be performed. Equivalent to the <i>Swap print direction</i> command on the <i>Utilities</i> menu.
SPC Utilities 	Displays the <i>SPC utilities</i> dialog. Equivalent to the <i>SPC utilities</i> command on the <i>Utilities</i> menu.
SPC Reports 	Displays the <i>SPC reports</i> dialog. Equivalent to the <i>SPC reports</i> command on the <i>Utilities</i> menu.
SPC Chart Replay 	Displays the <i>SPC chart replay</i> dialog. Equivalent to the <i>SPC chart replay</i> command on the <i>Utilities</i> menu.



## Programming Icons

### Descriptions

There are ten icons used to initiate/control programming functions

Toolbar Icon	Description
Edit PCB Info 	Displays the <i>Product information</i> dialog. Equivalent to the <i>Product information</i> command on the <i>Setup</i> menu.
Edit Print Profile 	Displays the <i>Print profile</i> dialog. Equivalent to the <i>Print profile</i> command on the <i>Setup</i> menu.
Edit Tooling Profile 	Displays the <i>Tooling</i> dialog. Equivalent to the <i>Tooling</i> command on the <i>Setup</i> menu.
Edit Vision Profile 	Displays the <i>Setup vision</i> dialog. Equivalent to the <i>Vision</i> command on the <i>Setup</i> menu.
Calibrate Squeegees 	Displays the <i>Squeegees zero pressure calibration</i> dialog for the optional closed loop pressure system. Equivalent to the <i>Squeegees</i> command on the <i>Setup</i> menu.
Edit Stencil Clean Profile 	Displays the <i>Stencil cleaner parameters</i> dialog. Equivalent to the <i>Stencil clean profile</i> command on the <i>Setup</i> menu.
Edit Paste Dispense Profile 	Displays the <i>Paste dispense</i> dialog. Equivalent to the <i>Paste dispense profile</i> command on the <i>Setup</i> menu.
PCB Vision Inspection 	Displays the <i>PCB 2D Inspection</i> dialog. Equivalent to the <i>2D Inspection/PCB</i> command on the <i>Setup</i> menu.
Edit Setup Notes 	Displays the <i>Windows 2000 Notebook</i> dialog. Equivalent to the <i>Notebook</i> command on the <i>Setup</i> menu.
Help Contents 	Brings up the On-Line Help system contents page. Equivalent to the <i>Contents</i> command on the <i>Help</i> menu.



## Process Operation Buttons

### Descriptions

The **Start**, **Pause** and **Abort** buttons allow you to control a process program from the Machine screen. The buttons are on the right side of the screen, and are identified as follows:

Icon	Description
Start 	Appears green when the machine is idle and ready to run a process program. When the machine is running a program the button will be light green.
Pause 	Appears yellow when the machine is running a process program. When the machine is idle (not running a process program) the button will be light blue.
Stop 	Appears red when the machine is running a process program. When the machine is idle (not running a program), the button will be light red.



## User Access

### Introduction

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The AccuFlex requires that users identify themselves by name and password. When you do this for the first time, you create a user account.

System user accounts are part of the machine configuration, they are not part of a particular board configuration.

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### Permission Levels

A fully privileged user account is provided with each new machine. It allows you to setup the machine, and create other user accounts with varying permission levels.

Each user is assigned a permission level from 1 to 10.

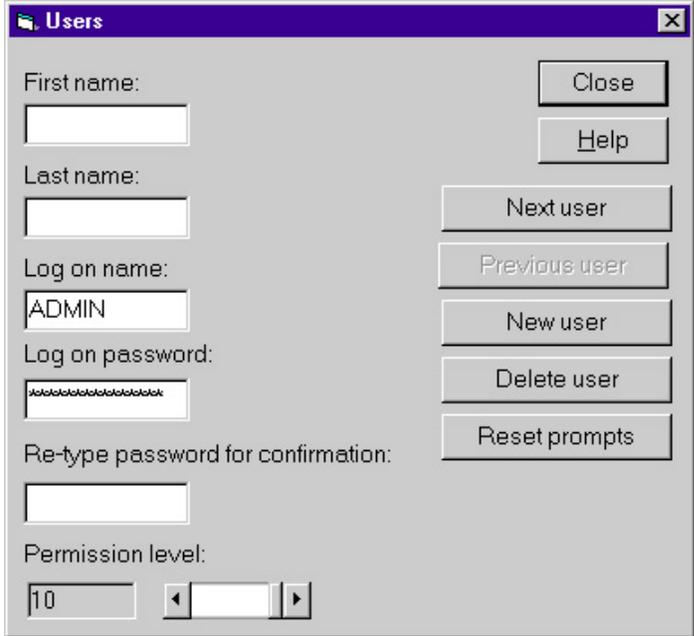
In addition, each user may have varying permission levels for each menu. The user must have a permission level equal to or greater than that of the menu to access the contents of that menu.

For example, if the Production menu is set to 1, the File menu to 3 and the Configuration to 5, a user with a permission level of 4 will be able to access the contents of Production and File menus, but not the Configuration menu.



## Creating a New User Account

To create a new account:

Step	Action
1	<p>Select <i>Users</i> from the <i>Configure</i> menu to view the Users dialog.</p>  <p style="text-align: right; font-size: small;">UP5047</p>
2	<p>Click <i>Next user</i>, or <i>Previous user</i> to view the details of existing user accounts. You may delete a user from this list by clicking the <i>Delete user</i> button.</p>
3	<p>Click <i>New user</i> to clear the user name and password fields.</p>
4	<p>Enter first and last names and a password. Retype the password for confirmation. If the passwords do not match, you will be prompted to retype them.</p>
5	<p>In addition to the user name and password, a default log on name, such as ADMIN, appears with a preset permission level. The default log on names and their access levels are shown in the table below.</p>
6	<p>To change the user's permission level: Select a level from 1 (lowest ) to 10 by using the scroll bar to the right of the permission level field.</p>
7	<p>Click <i>Close</i> to exit the dialog.</p>



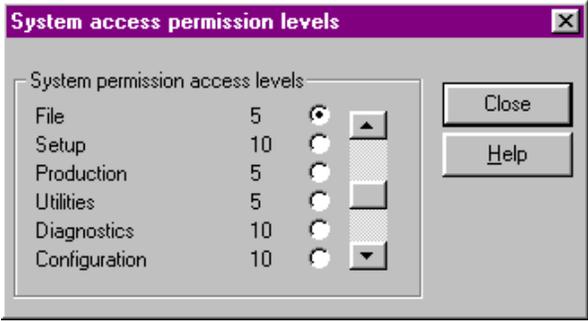
## Default Log On Names and Permission Levels

The default log on names and permission levels are:

Default Log on Name	Permission level
Operator	3
Setup	4
Supervisor	5
Administrator	10

## Setting Menu Permission Levels

To set a user's permission levels for individual menus:

Step	Action
1	Select <i>System Access</i> from the Configuration menu. The <b>System access permission levels</b> dialog appears.   <p style="text-align: right; margin-right: 20px;">UP5048</p>
2	Click the button next to a menu and use the scroll bar to adjust upwards or downwards. Refer to <i>Default Menu Permission Levels</i> for a list of recommended settings.
3	Repeat for each menu that you wish to change.
4	To save the changes, click <i>Close</i> .

## Default Menu Permission Levels

To prevent unauthorized changes, set high permission levels for users. The following permission levels are recommended:

Menu	Permission level
Production	1
Utilities	2
File	3
Setup	4
Configuration	5
Diagnostics	6



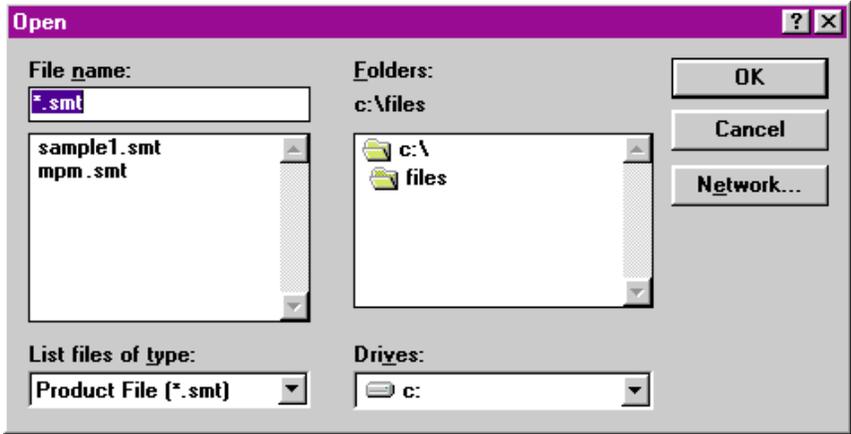
## Working With Product Files

### Introduction

The product file contains the specific details used to print a board.

### Opening a Product file

To open a product file:

Step	Action
1	<p>Click the <i>Open</i> icon on the toolbar, or choose <i>Open</i> from the File menu. The Open dialog appears.</p>  <p style="text-align: right;">UP5062</p>
2	<p>Scroll through the list of file names at the left and select the desired file.</p>
3	<p>Click <i>OK</i>.</p> <p>If a file is already loaded, you will be prompted to save any changes before it is replaced with the selected file. Choose <i>Yes</i> or <i>No</i>.</p> <p>The new file name appears in the title bar.</p>

### Creating a Default Product File

To create a product file that is based on the AccuFlex default settings:

Step	Action
1	<p>Select <i>New</i> from the File menu.</p>
2	<p>In the file name field, type a name that can be easily associated with the product so that it can be easily retrieved in the future.</p> <p>For example: A demonstration product file could be called DEMOPCB1. If you enter a name that has already been taken, you will be prompted to choose another or overwrite the existing name.</p> <p>The suffix .SMT is automatically added to the filename.</p>
3	<p>Click <i>OK</i>. The name appears on the status line at the bottom of the screen.</p>



## Creating a Product File Based on an Existing File

To create a product file that is based on an existing file:

Step	Action
1	Open the desired file and save it.
2	Select Save as... from the <b>File</b> menu.
3	In the file name field, type a name that can be easily associated with the product.
4	Click <i>OK</i> . The name appears on the status line at the bottom of the screen.

## Abandoning Changes

You can abandon any changes you have made since the last save, and use the previously saved version of the file to continue. Do this as follows:

Step	Action
1	Select <i>Open</i> from the <b>File</b> menu.
2	Click the name of the file you are currently working on.
3	Click <i>OK</i> . You will be prompted to save changes to the existing file.
4	Click <i>No</i> .

## File Naming Conventions

Files are stored on the hard disc of the computer. They may also be stored on a network. AccuFlex files may have any valid Windows file name, according to the following rules:

- File names may have from one to thirty two characters.
- The .SMT file name extension is added by the system and should not be added by the operator.
- Use any characters (including spaces) except: \*?;,[]+=\|<>.
- The period may only be used to separate the file name from the extension.
- Upper and lower case characters may be used interchangeably.



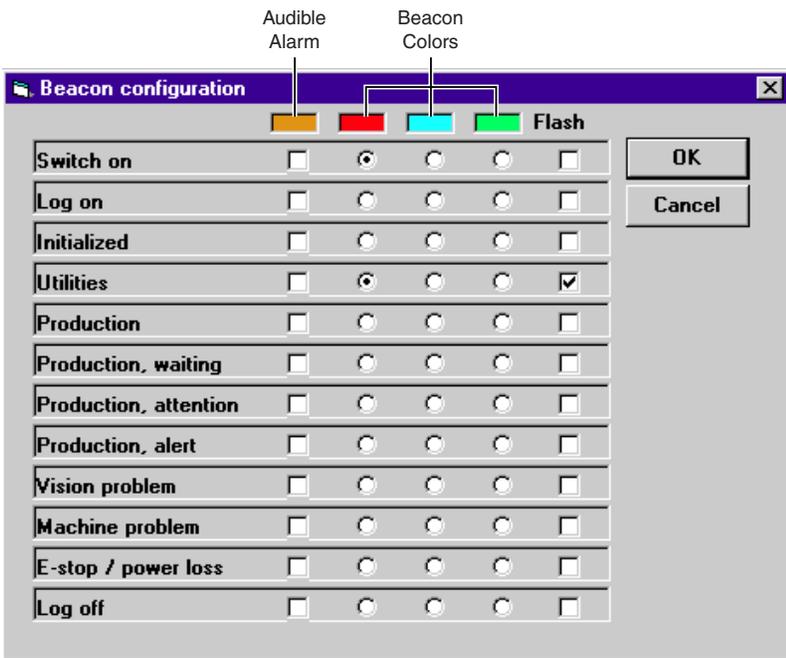
## Defining the Beacon Signals

### Introduction

The AccuFlex is fitted with a three-lamp beacon. The meaning of the beacon signals can be configured to suit your needs.

### Configuring the Beacon

To configure the Beacon:

Step	Action
1	<p>Select Beacon from the <b>Configure</b> menu. This displays the Beacon Configuration dialog.</p>  <p style="text-align: right; font-size: small;">UP5057</p>
2	<p>For each function listed, check in the first column, under the orange color, if the alarm is to be audible. A check mark in the box indicates that the condition will cause the alarm to sound. Clicking the box again changes its state.</p>
3	<p>For each function, choose one of the three colors, red, blue, or green, by clicking the button beneath that color. You can only check one color for each function.</p>
4	<p>For each function, check the box under <i>Flash</i>, if a flashing beacon is desired. Clicking the box again changes its state.</p>
5	<p>Repeat for each item in the list.</p>
6	<p>When finished click <i>OK</i>.</p>



## European Union Required Colors

The following shows the color and function regulations which must be followed if the printer is to be used in the European Union. The colors indicated refer to those in the **Beacon configuration** dialog.

Color	Function
Green	The machine is in a normal, safe state.
Red	The machine is in an abnormal, or unsafe state.
Blue (or White)	Other states (e.g., intervention required)
Orange	Audible Alarm



## Initializing

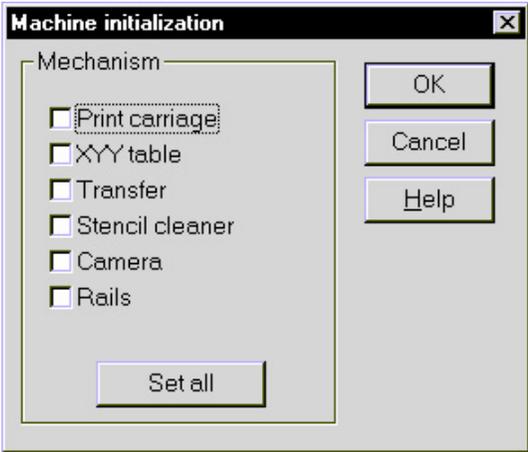
### Introduction

Initializing is the process which returns the mechanical assemblies of the machine to the default settings.

It is often necessary to initialize the machine before carrying out many processes.

### Initialization Procedure

To initialize the machine:

Step	Action
1	Select <i>Initialize</i> machine from the <i>Utilities</i> menu or click the Initialize Machine icon. <div style="text-align: center; margin-top: 20px;">  </div>
2	The Machine initialization dialog appears. The AccuFlex gives you a choice of items to initialize, with the items it considers necessary already checked. Check additional items as needed. <div style="text-align: center; margin-top: 20px;">  </div> <p style="text-align: right; margin-right: 50px;">UP5042</p> <div style="margin-top: 20px;">  <p><b>ATTENTION</b></p> <p>The Rails check box will not be displayed with manual rail setup.</p> </div>
3	To select all the items, click <i>Set all</i> .
4	To initialize the selected items, click <i>OK</i> . A number of messages appear as initialization takes place. When the dialogs cease, the machine is initialized. You can then proceed with other operations.



## Fitting Squeegees

### Introduction

In addition to fitting a new set of squeegees, you must set the point at which the squeegees contact the stencil.

### Figure

Refer to the following figure when fitting squeegees:





## Procedure

To fit a set of squeegees:

Step	Action
 <p data-bbox="570 352 781 390"><b>ATTENTION</b></p> <p data-bbox="570 411 1414 474">Damage to the stencil or squeegees may occur if the squeegees are mounted or angled incorrectly.</p> <p data-bbox="570 506 1398 600">Squeegee condition is important in obtaining a good print quality. Both squeegees must be clean and free from marks on the trailing edge that could result in uneven paste distribution.</p>	
1	Raise the front cover.
2	Place the screwed rods of the rear squeegee in the vertical slots, ensuring that the blade is angled away from you at the bottom.
3	Tighten the two thumbscrews.
4	Place the screwed rods of the front squeegee in the vertical slots, ensuring that the blade is angled toward you at the bottom
5	Tighten the two thumbscrews.
6	Confirm the squeegees are seated correctly.
7	Close the front cover.

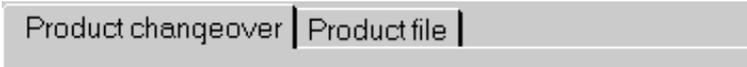


## Configuration Options

### Introduction

Options, under the Configure menu, is split into two tabs:

- Product changeover tab
- Product file tab



Product changeover | Product file |

UP5031

### In this section

Refer to the following:

Topic	See Page
<a href="#">Product Changeover Tab</a>	30
<a href="#">Product File Tab</a>	31



## Product Changeover Tab

### Introduction

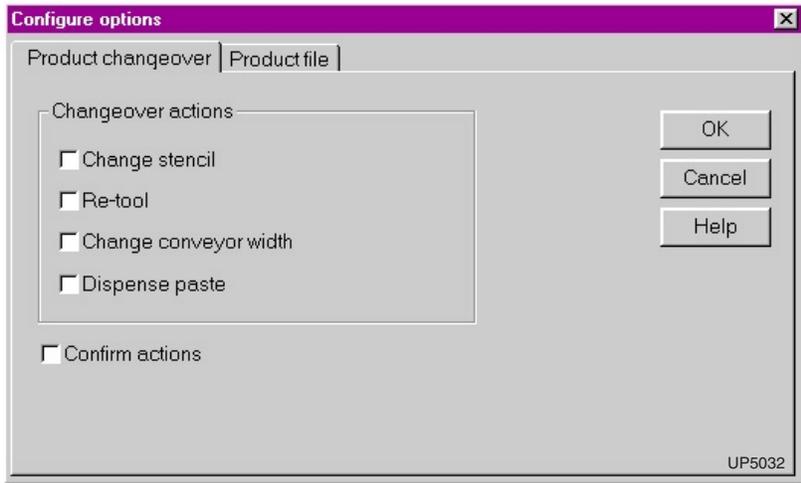
The Product changeover tab allows you to determine what actions take place automatically when the printer is first powered on and when the product file is loaded or changed.

You can determine:

- if the stencil is changed
- if the tooling is changed
- if the conveyor width is changed
- if a paste dispense cycle is performed
- if changeover operations must be acknowledged by the operator

### Using the Product Changeover Tab

To use the Product changeover tab:

Step	Action
1	Select the Product changeover tab.  
2	To set any of the four actions, check the corresponding box.
3	To unset the actions, clear the box by checking it again.
4	To prompt the operator to confirm each individual action prior to initiation, check the <i>Confirm actions</i> box.
5	To exit the dialog and confirm the changes you have made, click <i>OK</i> .
6	To exit the dialog and cancel changes you have made, click <i>Cancel</i> .



## Product File Tab

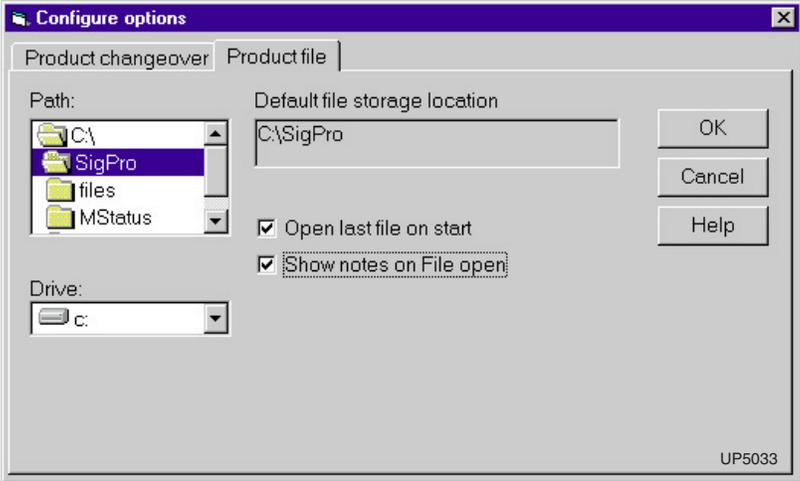
### Introduction

The Product file tab allows you to:

- select a default disk drive and directory for product files
- use the PCB file that was current at the end of the previous session as the default for the next session
- show product notes of a PCB file after a changeover

### Using the Product File Tab

To use the Product file tab:

Step	Action
1	Select the Product file tab. 
2	To define on which disk PCB files are stored by default, click the down-arrow at the right of the Drive box to display the available drives.
3	Click the drive letter to select a drive.
4	To select a default directory, note the path of the current default directory. To display the other directories which may be under a directory, double-click that directory. Alternatively, click in the <i>Default file storage location</i> box and type the path name.
5	If the <i>Open last file on start</i> box is checked, the product file which was most recently loaded is automatically reloaded when the system starts. If this box is not checked, the system starts with the Default product file loaded.
6	If the <i>Show notes on file open</i> box is checked, a system prompt asks if you want to display the product file notes. If this box is not checked, the system does not prompt you to choose to display the product file notes. The product file notes are still available on the Production Status screen under the <b>Notes</b> tab and from <i>Notebook</i> on the <i>Setup</i> menu.



## Utilities

### Introduction

This section contains descriptions of four basic utility menu functions.

To access the utilities dialogs, select *Printer utilities* from the **Utilities** menu, or click the Printer Utilities icon.



The options available under the Utilities menu item are split into four tabs:

- Printhead tab which provides controls to move the printhead.
- Paste tab which allows you to inspect the paste on the stencil, dispense paste, or position the paste dispenser to facilitate the changing of the paste cartridge.
- Stencil tab which provides for cleaning, loading, unloading and releasing the stencil, or for positioning the stencil cleaner in order to fit a new roll of cleaning paper.
- Tooling tab which can be used to manually control the rotational position of the tooling pin carousel enabling you to reload the tooling pins.



UP5034

### In this section

Refer to the following:

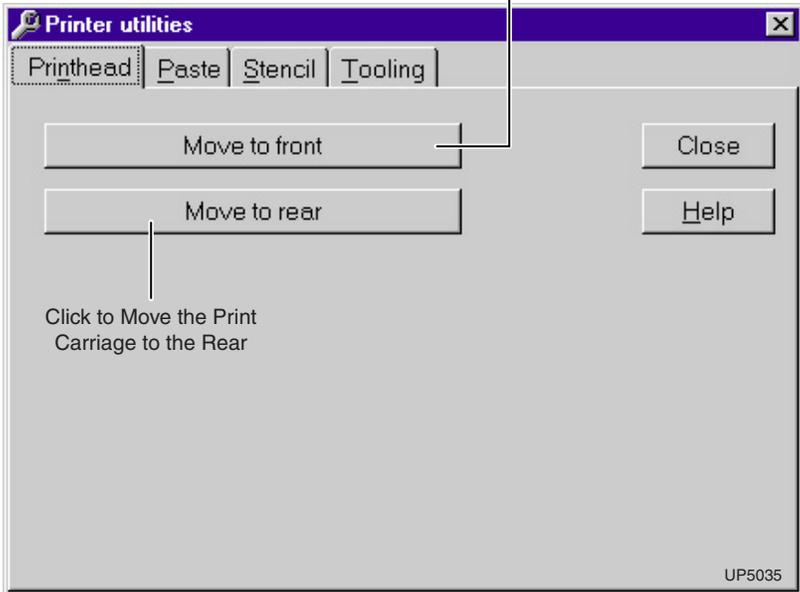
Topic	See Page
<a href="#">Printhead Utilities</a>	33
<a href="#">Paste Utilities</a>	34
<a href="#">Stencil Utilities</a>	37
<a href="#">Tooling Utilities</a>	39



## Printhead Utilities

### Using the Printhead Tab

To use the Printhead tab:

Step	Action
1	<p>Select the Printhead tab.</p> 
2	<p>Be sure the machine is initialized and click <i>Move to front</i> or <i>Move to rear</i>. These functions are useful for checking limits and putting solder paste on the stencil. If the printhead is already in the chosen position, no action results.</p>
3	<p>To move the print carriage to the front or rear limit, click <i>Move to front</i> or <i>Move to rear</i>. These functions are useful for checking limits and putting solder paste on the stencil.</p>
4	<p>If the printhead is already in the chosen position, no action results.</p>



## Paste Utilities

### Introduction

Refer to the following safety information when using the paste dialog:



### Chemical Hazard

Solder paste and other printing medium contain lead and are hazardous to your health and the environment. Review *Material Safety Data Sheet* before use. Always wear protective gloves and safety goggles when handling printing medium and make sure you properly dispose of all waste material according to manufacturer's instructions. Failure to comply could result in personal injury and/or damage to the environment.



### Flammable

Use of non-approved solvents poses a serious risk of fire. Although a variety of solvents are available on the market for use with stencil cleaning systems, Speedline/MPM authorizes only those which it has tested and approved for use.

It is imperative that only Speedline/MPM-approved materials be used, as certain others may have too low a flash point (below 100°F), are not compatible with parts used in our system, or have too strong an odor.

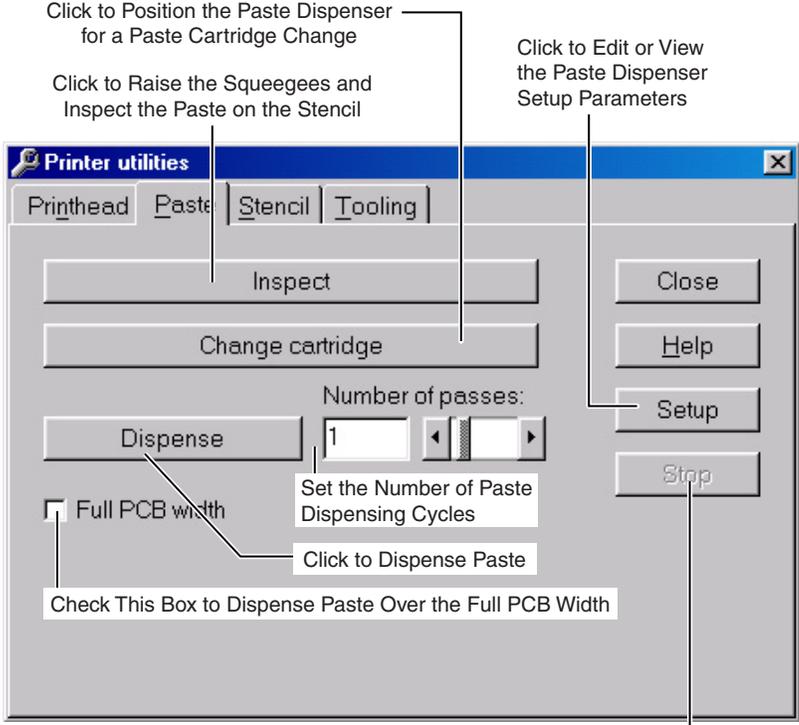
The approved list of solvents is continuously updated as existing materials are re-evaluated and new materials are tested and approved. Please contact your Speedline Service representative for an updated list of approved solvents prior to adding any solvent to the Speedline/MPM stencil cleaning systems.

Speedline/MPM will not be responsible for any damage and/or injury occurring as a result of using non-approved solvents

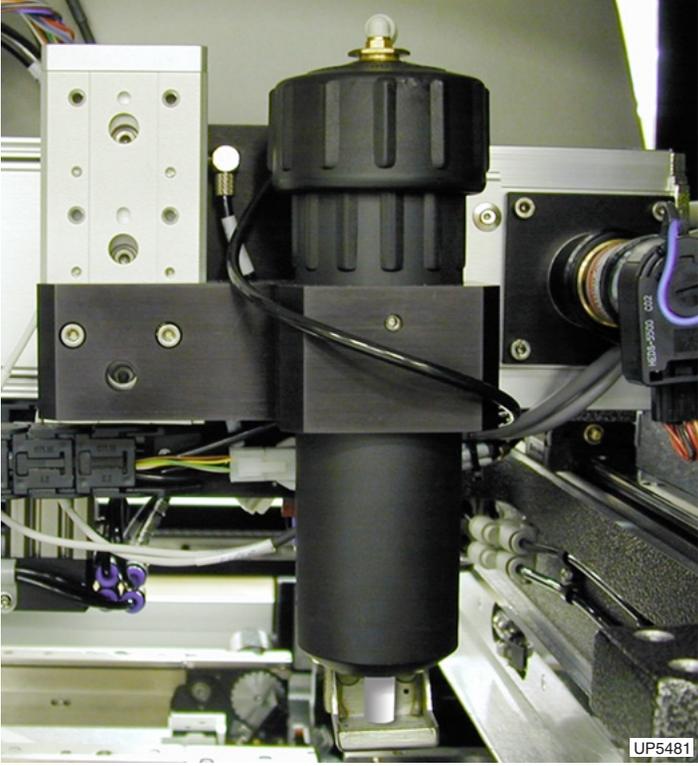


## Using the Paste Tab

To use the Paste tab:

Step	Action
1	<p>Click on the Paste tab. The use of the buttons in this tab is explained below.</p> <p>For example, to change the paste cartridge, click <i>Change cartridge</i> and continue with step 2.</p>  <p>Click to Position the Paste Dispenser for a Paste Cartridge Change</p> <p>Click to Raise the Squeegees and Inspect the Paste on the Stencil</p> <p>Click to Edit or View the Paste Dispenser Setup Parameters</p> <p>Click to Dispense Paste</p> <p>Set the Number of Paste Dispensing Cycles</p> <p>Check This Box to Dispense Paste Over the Full PCB Width</p> <p>Click to Stop the Paste Dispenser</p> <p>UP5511</p>
2	Lift the front cover.



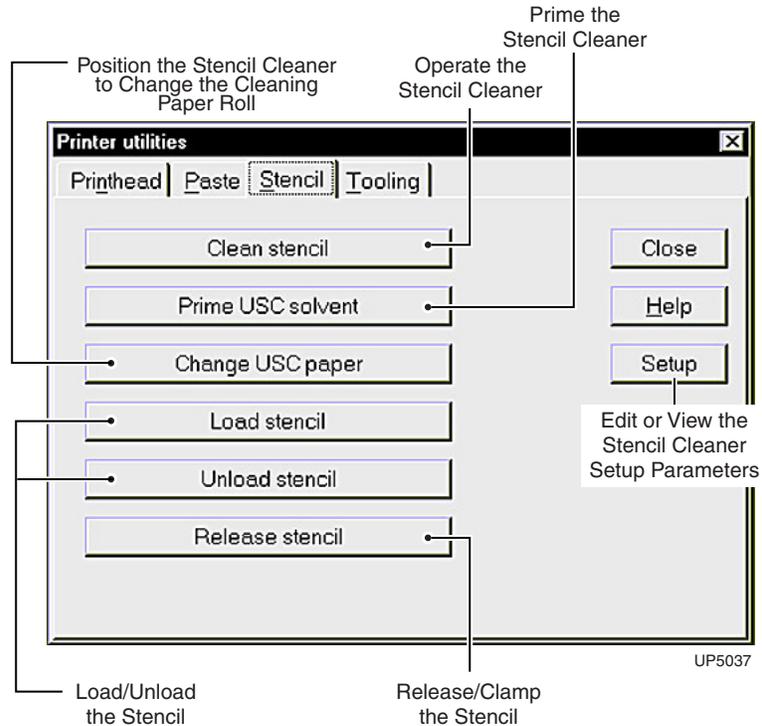
<b>Step</b>	<b>Action</b>
3	<p>Unscrew the top of the cartridge cover and lift out the empty paste cartridge.</p>  <p style="text-align: right; font-size: small;">UP5481</p>
4	Take off the nozzle. It is advisable to clean the nozzle at this point.
5	Remove the caps from the new cartridge and attach the nozzle.
6	Put the new cartridge in the holder and screw the cover back on.
7	Click the close box to exit the dialog.



## Stencil Utilities

### Stencil Dialog

Clicking Stencil displays the Stencil dialog:



### Stencil Dialog Description

The following functions are available:

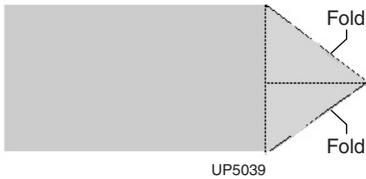
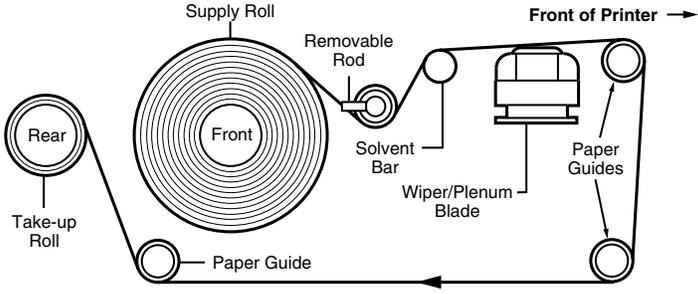
Part	Function
Clean Stencil Button	Initiates a cleaning cycle.
Prime USC solvent	Turns on the solvent pump for the duration of the prime cycle set in the Stencil Cleaner Setup, Advanced tab. The prime duration may be set from .1 second to 10 seconds.
Change USC paper	Initiates a change paper routine (see <i>Change Stencil Cleaner Paper</i> )
Load stencil button	Releases the stencil latches and moves the printhead to the front so a stencil may be loaded.
The Unload stencil button	Releases the stencil latches so that the stencil may be removed. Only available with Auto Stencil Positioning.
Release stencil button	Releases the stencil latches so that the stencil may be repositioned by hand.



## Changing Stencil Cleaner Paper

### Procedure

To change the paper:

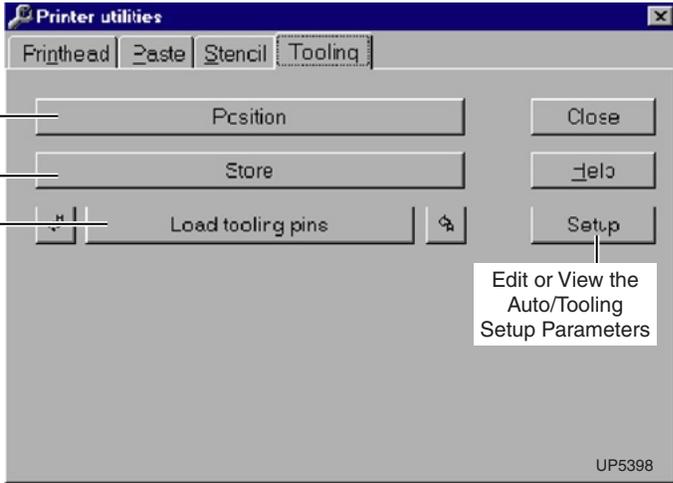
Step	Action
	<p><b>Chemical Hazard</b></p> <p>Used stencil cleaning paper contains solder paste and solvent residue. Consult solder paste and solvent <i>Material Safety Data Sheets</i> prior to handling used stencil cleaning paper. Properly dispose of all waste material according to manufacturer's instructions. Failure to comply could result in personal injury and/or damage to the environment.</p>
1	At the Printer utilities Stencil tab, click the <i>Clean stencil</i> button.
2	Click <i>Change USC (Under-Stencil Cleaner) paper</i> . The printhead moves to the rear, the stencil cleaner moves to the front, and the head latches release.
3	Lift the front cover.
4	Remove the stencil.
	<p><b>ATTENTION</b></p> <p>Reusing stencil cleaner paper on the opposite side is not advised.</p>
5	<p>Fold the end of the paper to make it easier to feed into the mechanism.</p> 
6	Fasten the end of the paper to the take-up roll with a small piece of sticky tape.
7	<p>Follow this path with the paper:</p> 
8	Close the printhead and click <i>OK</i> .



## Tooling Utilities

### Using the Tooling Tab

To use the Tooling tab:

Step	Action
1	<p>Click on the Tooling tab.</p> 
2	Press <i>Setup</i> to view the auto-tooling parameters.
3	Press <i>Store</i> to place board supports in the carousel.
4	Press <i>Position</i> to place board supports on the table.
5	Press <i>Load tooling pins</i> to rotate the carousel so that pins may be placed in it manually.



## Using the Help System

### Introduction

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The AccuFlex includes a Help system that is available with a single click.

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### Guidelines

Follow these guidelines to use the Help system:

- To open the help system at the topic relevant to the dialog you are currently using, click Help within that dialog.
- To open the Help system at the contents page, click the Help system icon on the toolbar in the AccuFlex main window.



- You can find further information by clicking on underlined text.
- Use the menu buttons to navigate within the system.



- To leave the Help system, click the close box or choose *Exit* from the *File* menu.
-