

# Linx 5900 & 7900



## Quick Start Guide

**LINX**

THINKING ALONG YOUR LINES

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## Safety recommendation

Before attempting to use either the printer or its accessories, you should read the information contained in the Safety section. It is essential that you follow safe operating procedures at all times, and that the equipment is maintained according to the directions contained herein and as recommended by Linx or its authorized Distributors. It is strongly recommended that any maintenance tasks, other than those described in this guide and the *How To* guides for the printers, are performed only by Linx maintenance technicians or Linx-trained personnel.

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# Contents

|  |           |
|--|-----------|
| Copyright.....                           | i         |
| Guide content .....                      | i         |
| Safety recommendation .....              | i         |
| <b>Safety .....</b>                      | <b>v</b>  |
| Warnings and cautions .....              | v         |
| Warnings.....                            | v         |
| Cautions.....                            | vi        |
| Printer cover security .....             | vi        |
| Operating the printer .....              | vii       |
| Training.....                            | vii       |
| Safety precautions .....                 | vii       |
| Inks and solvents .....                  | viii      |
| First aid .....                          | ix        |
| Procedures .....                         | ix        |
| Emergency shutdown procedure .....       | x         |
| Noise emissions.....                     | x         |
| <b>About this Guide .....</b>            | <b>xi</b> |
| <b>1 Before you start .....</b>          | <b>1</b>  |
| 1.1 Overview.....                        | 1         |
| 1.2 User levels .....                    | 3         |
| 1.3 User interface.....                  | 4         |
| 1.3.1 Printer display .....              | 6         |
| 1.3.2 Stores .....                       | 11        |
| <b>2 Get started .....</b>               | <b>13</b> |
| 2.1 Turn on .....                        | 13        |
| 2.2 Create a message.....                | 15        |
| 2.2.1 Message fields.....                | 15        |
| 2.2.2 Create your message .....          | 16        |
| 2.2.3 Save your message .....            | 17        |
| 2.3 Print a message .....                | 19        |
| 2.3.1 Print trigger .....                | 19        |
| 2.3.2 Pause the print.....               | 21        |
| 2.3.3 Adjust the print position .....    | 21        |
| 2.3.4 Print Count.....                   | 23        |
| 2.4 Stop and turn off the printer .....  | 24        |
| 2.4.1 Power-Down configuration.....      | 24        |
| 2.4.2 To turn off .....                  | 24        |
| <b>3 Edit a message.....</b>             | <b>27</b> |
| 3.1 Add a new field .....                | 27        |
| 3.2 Edit a field .....                   | 30        |
| 3.2.1 Options page .....                 | 32        |
| 3.2.2 Save or discard your changes ..... | 33        |
| 3.3 Overlapping fields .....             | 34        |
| 3.4 Move a field.....                    | 35        |
| 3.5 Delete a field .....                 | 35        |

|   |           |
|---|-----------|
| <b>4 Insert a Date or Time</b>              | <b>37</b> |
| 4.1 Create the field                        | 37        |
| 4.1.1 Edit the message                      | 37        |
| 4.1.2 Select a format                       | 38        |
| 4.1.3 Set the Date Offset                   | 39        |
| 4.1.4 Set the Date Offset Units             | 39        |
| 4.1.5 Set the Time Offset                   | 39        |
| 4.1.6 Set the Print Style of the field      | 40        |
| 4.1.7 Save or discard your message          | 40        |
| <b>5 Manage your messages</b>               | <b>41</b> |
| 5.1 Copy a message or change the name       | 41        |
| 5.2 Delete a message                        | 42        |
| <b>6 Look after your printer</b>            | <b>43</b> |
| 6.1 Clean the printer                       | 44        |
| 6.1.1 Printer cover                         | 44        |
| 6.1.2 Printhead                             | 45        |
| 6.2 Refill the ink or solvent               | 47        |
| 6.3 Clean or replace the air filter         | 52        |
| 6.4 Flush the nozzle                        | 54        |
| 6.5 Clear the nozzle                        | 56        |
| <b>Appendix A: If the printer complains</b> | <b>59</b> |
| <b>Appendix B: Training</b>                 | <b>63</b> |
| <b>Appendix C: Glossary</b>                 | <b>65</b> |

# Safety

**Before you use the printer described in this guide or perform any maintenance tasks on it, you must read, understand and follow *all* the safety information in this section. You must pay particular attention to all Warnings and Cautions given in this section and throughout the guide.**

**If there is any part of this Safety section that you do not understand, DO NOT USE THE PRINTER.**

This section gives essential information about the safe use and handling of the printer, inks and solvents. First Aid information is also included.

For optimum safety the printer should be operated with Linx approved spares and consumables at all times. It is strongly recommend that any maintenance tasks, other than those described in this guide and the *How To* guides for the printers, are performed only by Linx maintenance technicians or Linx-trained personnel. The use of unapproved spares and consumables, and the performance of maintenance tasks by untrained personnel could make the printer unsafe to use.

## Warnings and cautions

Warning and Caution statements are given at relevant points in the text of this guide. These draw your attention to information about how to avoid hazards and how to safely use a product. Symbols accompany Warning statements.

The different types of safety statements and associated symbols are described below, along with the conventions used in this guide.

### Warnings

A Warning alerts you to a hazard that may cause loss of life, physical injury or illness. It is printed in bold upper-case type and is accompanied by a warning symbol that identifies the type of hazard.

The general Warning symbol (shown to the left) accompanies a Warning that has no specific symbol to indicate the hazard. The Warning alerts you to other harmful or potentially lethal activities.



The mandatory Eye Protection Warning symbol (shown to the left) means that you must wear safety eyeglasses when you perform any tasks that involve inks or solvents. The safety eyeglasses must conform to European and international safety standards.



The mandatory Hand Protection Warning symbol (shown to the left) means that you must wear solvent-resistant protective gloves when you perform any tasks that involve inks or solvents.





The Irritant Warning symbol (shown to the left) means that a particular substance may irritate the eyes and the respiratory system if the correct safety precautions are not taken.



The Highly Flammable Warning symbol (shown to the left) means that there is a risk of fire due to the highly flammable nature of a substance if the correct safety precautions are not taken.



The Lethal Voltage Warning symbol (shown to the left) means that there is a risk of electric shock from contact with potentially lethal voltages if the correct safety precautions are not taken.

## Cautions

A Caution alerts you to actions that may damage equipment or the environment, but are not a direct danger to personnel. It is printed in bold lower-case type and is not accompanied by a symbol.

## Printer cover security



**WARNING: LETHAL VOLTAGE HAZARD. DANGEROUS VOLTAGES EXIST IN THIS EQUIPMENT WHEN IT IS CONNECTED TO THE ELECTRICITY SUPPLY.**

**NEVER TRY TO OPEN THE PRINTER COVER, OR TRY TO REMOVE OR ADJUST ANY COMPONENTS FITTED INSIDE THE PRINTER. THERE IS A DANGER OF INJURY OR DEATH FROM ELECTRIC SHOCK IF YOU IGNORE THIS SAFETY WARNING.**

The printer has a lock fitted to the printer cover. This stops operators from opening the cover and touching potentially lethal electrical hazards inside the printer.

It is essential that operators do not try to open the printer cover, for any reason. Not only is there a danger of serious or fatal injury, but it may also void your Linx warranty. It is strongly recommended that the printer cover is opened only by Linx maintenance technicians or Linx-trained personnel.

Always make sure that the printer and printhead covers are correctly fitted before you use the printer. If you are not sure how to do this, ask your supervisor for guidance. Covers act as safety barriers and also make sure that the printer keeps its electromagnetic compatibility (EMC).

# Operating the printer

Linx ink jet printers have been designed to be as safe and easy to use as possible. However, you could cause harm to yourself or damage to the printer if you do not use it correctly.

## Training

Linx believes that to use the printer with maximum safety and effectiveness, you need good training. Linx or your local Linx Distributor can provide a range of training courses to suit all operators.

If you are in any doubt about your ability to operate the printer safely, **DO NOT USE IT.**

Appendix B, 'Training' lists the topics that, as a minimum, should be included in operator training.

## Safety precautions

Everybody who uses the printer must make sure that they know that ink jet printers can be dangerous if not used correctly. The following safety information must be made available to all personnel. The information is essential to anybody who works with, or near, the printer.

For your comfort, Linx recommends that the printer is situated at least 600 mm above the floor level.

The following precautions are essential:

- Take great care when you unpack or move the printer as it is very heavy. **ALWAYS** follow the standard guidelines for the safe manual handling of heavy objects when lifting the printer.
- Always place the printer on its feet and on a level surface. Do not turn the printer onto its side at any time.
- Make sure that the electricity supply cable for the printer is correctly connected to the supply and is well maintained.

**NOTE:** 5900 and 7900 printers supplied to India are fitted with a mains electrical supply cable with free wires of 50 mm in length. These wires must be connected by a suitably qualified person to an IS1293 3-pin plug with a minimum 6 A rating . The mains electrical supply cable must be connected to a power supply of 230 V AC 1 A. The printer must be earthed.

- **ALWAYS** make sure that the printer is disconnected from the electricity supply before you clean it or perform any maintenance tasks on it. When the electricity supply is connected lethal voltages are present in the printer cabinet and printhead, which can cause serious injury or death if the correct electrical safety precautions are not taken.
- **ALWAYS** disconnect the external alarm (if fitted) from the alarm output of the printer before any maintenance tasks are done.



# Inks and solvents



**WARNING: HAZARDOUS SUBSTANCES. MANY OF THE INKS USED WITH THIS PRINTER ARE SOLVENT-BASED AND CAN BE HAZARDOUS. THEY ARE HIGHLY FLAMMABLE, AND THE VAPOUR OR SPRAY CAN BE IRRITATING TO THE EYES AND RESPIRATORY SYSTEM.**

**YOU MUST WEAR SAFETY GLASSES AND SOLVENT-RESISTANT PROTECTIVE GLOVES WHEN YOU HANDLE INKS AND SOLVENTS, WHEN YOU WORK ON THE PRINTER, AND WHEN YOU CLEAN IT.**

**IF YOU IGNORE THIS SAFETY WARNING, YOU COULD EXPERIENCE SEVERE IRRITATION AND TEMPORARY (REVERSIBLE) DAMAGE TO THE EYES, AND NON-ALLERGIC CONTACT DERMATITIS.**

Solvents and inks are potentially harmful. Whenever inks and solvents are used, the following essential precautions must be taken:

- BEFORE YOU START, read the relevant ink and solvent Material Safety Data Sheets. If you do not fully understand the information, or are unsure, contact your supervisor for guidance.
- If the Material Safety Data Sheets have not been supplied or are not available, please contact your local Linx distributor. ALWAYS refer to the Material Safety Data Sheets before working with inks and solvents.
- DO NOT smoke or use naked flames near the printer as it contains flammable inks and solvents.
- Make sure that the printing area is adequately ventilated when the printer is in operation and when you work on the printer, or use inks or solvents.
- Wear safety eyeglasses when you use inks and solvents. The safety eyeglasses must comply with the appropriate European and International Directives. The Eye Protection Warning symbol is shown in this guide, where appropriate, to remind you of the mandatory requirement to WEAR SAFETY GLASSES.
- Wear solvent-resistant gloves when handling inks and solvents, or at any time when your hands may come into contact with inks or solvents. The Hand Protection Warning symbol is shown in this guide, where appropriate, to remind you of the mandatory requirement to WEAR SAFETY GLOVES.

Barrier creams may help to protect areas of exposed skin but they do not give as much protection as safety gloves. Barrier creams should not be applied once exposure to ink or solvent has occurred.

- Never look into the end of the printhead or point the printhead at anyone while the printer is switched on.
- Remove all spilt ink and solvent, or build-up of ink deposits immediately, using the correct solvent type for the ink being used.
- Store all inks and solvents in their original containers, which must be tightly closed. Store the containers in a well ventilated cabinet or in a recommended flameproof storage container. They must be kept away from any source of heat.

## First aid

Ideally, all operators should be trained in First Aid and should be aware of the possible effects of working with flammable and toxic substances.

All operators must have access to the ink and solvent Material Safety Data Sheets, which explain the hazards and the actions to be taken if First Aid is necessary.

You must ensure that the First Aid information is readily available in the event of ink and solvent contact with the eyes or skin, ingestion or inhalation.

## Procedures

The following paragraphs are the First Aid procedures for inks and solvents taken from the Material Safety Data Sheets. For more detailed information you should refer to the Material Safety Data Sheet for the relevant ink or solvent.

### Eye contact with inks or solvents

Remove contact lenses, if necessary, before flushing the eyes. Flush the eyes with clean running water and continue to do so for at least 10 minutes, holding the eyelids apart. Obtain medical attention.

### Skin contact with inks or solvents

Remove any contaminated clothing. Wash the affected area thoroughly with soap and water, or use a proprietary skin cleaner. Do NOT use solvents or thinners to remove ink from skin. Obtain medical attention if irritation occurs or persists after washing.

### Ingestion of inks or solvents

If accidentally swallowed, DO NOT INDUCE VOMITING. Obtain immediate medical attention. Rinse the mouth thoroughly with water and give large amounts of water to drink if the person is conscious. Keep at rest, and provide warmth and fresh air.

### Inhalation of solvent fumes

Remove the affected person to fresh air immediately. If breathing stops, administer artificial respiration and obtain immediate medical attention. Keep the affected person warm and at rest.

## Emergency shutdown procedure

If the printer needs to be stopped quickly due to an emergency, set the Mains Power Supply Switch on the rear panel of the printer to the '0' (off) position.



**Figure 1. Mains Power On/Off Switch on the rear panel**

If there is a hazard that prevents safe access to the Mains Power Supply Switch, operate the local electrical isolator switch for the printer.

## Noise emissions

The noise emission level from this printer does not exceed 70 dBA. This means that there is no hazard to hearing from long-term exposure to noise from the printer, and therefore no requirement for ear protection to be worn.

# About this guide

The Linx 5900 and 7900 Ink Jet Printers are specialist printer systems for use in production line environments for printing onto a wide range of substrates.

This guide is intended to help you operate the Linx 5900 or 7900 Ink Jet Printers safely and effectively.

The information contained in this edition of the *Linx 5900 & 7900 Quick Start Guide* is applicable to Version 1.0 System Software or later (5900 printer) or Version 5.0 System Software or later (7900 printer), until it is superseded by a new edition of the guide.

Linx will be pleased to receive any correspondence relating to this guide and the information contained herein; please write to us at the address below.

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# 1 Before you start

**NOTE:** Unless otherwise stated, all the information in this guide applies to both the 5900 and 7900 printers. The 5900 printer includes a sub-set of the features of the 7900. For example, some field types are only available on the 7900—these are noted in this guide. Other differences in functionality between the printers are noted in this guide and in the relevant *How To* guides for the printers.

By now we hope that you have read the safety information at the start of this guide. Do not begin to use the printer yet though.

This chapter describes how to navigate and use the printer display. If you take some time now to read these pages, you can save a lot of time later.

## 1.1 Overview

This document helps you do the most common jobs on the Printer. It describes the layout of the printer, the controls, and the displays. It shows you how to do the following tasks:

- Switch on the printer.
- Create a message to print.
- Select a font style and a font size for your message.
- Create a Date field or a Time field and edit the field.
- Edit a message.
- Print a message on a product.
- Pause printing.
- Change the print position on a product.
- Stop the printer and turn it off.

To perform other tasks on your Printer, refer to the *How To* guides for the printers for information. The tasks that are described in the *How To* guides include the following:

- Install and prepare the production line.
- Change the Message Type and the orientation.
- Change print settings.
- Change the system setup.
- Find the cause of a problem.
- Use the USB connection.
- Configure the parallel I/O and the multi-stage alarm outputs.
- Use the special characters and the extended keyboard.
- Use the keyboard short cuts and hints.

- Create more field types. For example, Shift Codes, Remote fields, Prompted fields, Logos (7900 only), Text sequences (7900 only), Orientation sequences (7900 only), Production Schedules (7900 only), Bar Codes (7900 only).
- Create a Date format or a Time format (7900 only).
- Use the Food Grade printer (7900 only).

## 1.2 User levels

There is a password system that protects the printer functions. There are three levels of access, which are called User Levels, protected by different passwords. These levels are as follows:

- Level A      This level provides access to basic functions. For example, select a message to print, start, pause and stop the printer. There is no password for Level A.
- Level B      This level provides access to a number of additional printer functions. For example, you can create and edit a message, but you cannot delete a message.
- Level C      This level provides access to more printer functions. For example, you can delete a message or change the Line setup.

To perform some of the activities described in this guide and in the *How To* guides for the printers, you need a User Level C password.

If you do not have a password to use with the printer, ask your supervisor or line manager to provide one.



## 1.3 User interface

The printer user interface includes:

- A keyboard that has standard alphanumeric keys and a number of special keys. For example:



**Figure 1-1. Special keys on the keyboard**

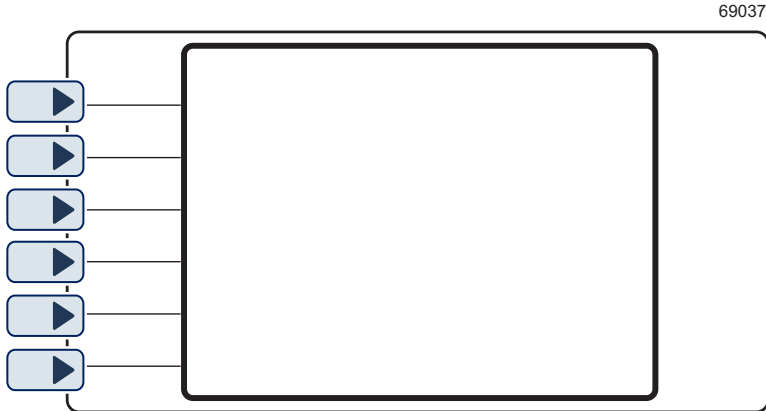
The names of these keys are shown in brackets in this guide. For example:

- ☐ The [ctrl] key
- ☐ The [shift] key
- ☐ The [enter] key

(Before you begin to use the printer, look at the keyboard and learn where to find all these special keys.)

Special keyboards are available for some countries that do not use the standard European keyboard.

- A display with six 'soft keys' on the left side:



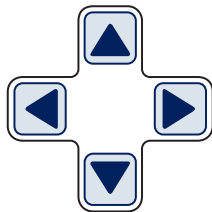
**Figure 1-2. Printer Soft keys and display**

The soft keys are keys that perform more than one function. The printer provides a label on the display next to each soft key that shows its function. The printer changes the label when the function changes.

The names of these keys are shown in **bold** characters in this guide. For example:

- ☐ The **Select** key
- ☐ The **Cancel** key

- Four arrow keys—Up, Down, Left, Right:



- A green [start] key:



- A red [stop] key:



- Four LED indicators:



The LED indicators give you useful information about the state of the printer.

| LED     | Colour | If the LED illuminates, it means:   |
|---------|--------|---|
| Fail    | Red    | A serious printer failure. The Printer Status area of the <b>Print Monitor</b> page tells you what caused the failure. You may need to contact your local Linx distributor. |
| Warning | Red    | Printer warning. The Printer Status area of the <b>Print Monitor</b> page tells you what caused the warning.  |
| Ready   | Green  | The jet runs and the printer is ready to print. The LED is turned off when printing stops, but the jet may continue to run.   |
| Power   | Green  | The printer is turned on.   |

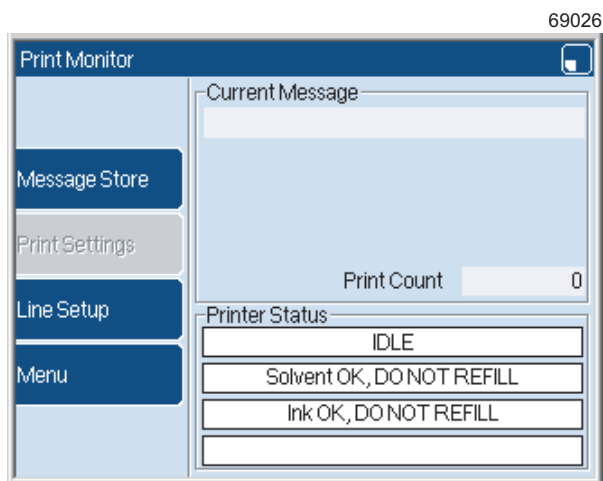
Figure 1-3. LED indicators

### 1.3.1 Printer display

When you turn on the printer, the display is blank until the printer completes its internal tests. Then the printer displays a *splash screen*. This screen shows you a progress bar for the power-up process.

The splash screen shows a number that tells you which software version is installed in the printer (for example, 'v1.1.1.1678' or 'v5.1.0.1469'). The number changes if new software is installed.

When the power-up is complete, the printer displays the **Print Monitor** page:



**Figure 1-4. Print Monitor**

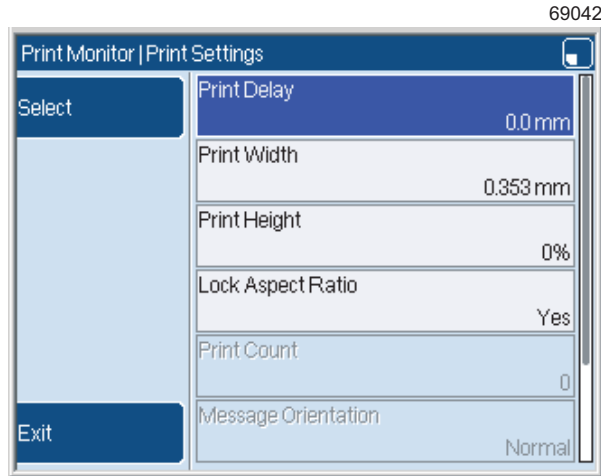
NOTE: The printer is simple to use and most of the instructions in this guide start and finish at the **Print Monitor** page. When you finish each task, you finish in the right area to start your next task. The display shown on your printer may be different to the display shown in Figure 1-4. The display depends on your User Level.

There are four basic types of page on the printer user interface:

- Menu pages
- Operator-entry pages
- Task pages
- Information pages

## Menu pages

Some of these pages are gateways to other pages. These pages also give information about the printer, or about the instructions that it has been given. For example, in the **Print Settings** page in Figure 1-5, you can see information about the current message.

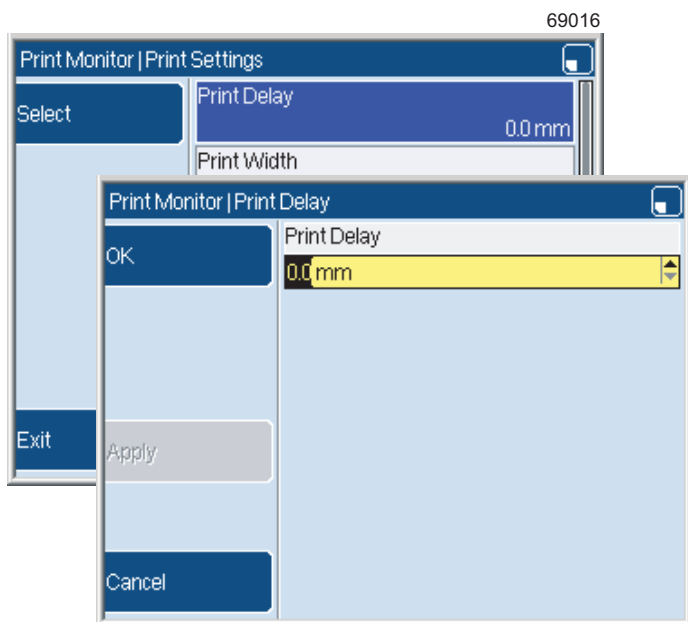


**Figure 1-5. Print Settings page**

To select an option in a page:

1. Press the Up arrow key or the Down arrow key until the item is highlighted—the text is white and the background is blue. For example, in Figure 1-5 the **Print Delay** option is highlighted.

2. Press the **Select** key to select the option. When you select the **Print Delay** option in Figure 1-6, the **Print Delay** page is displayed:



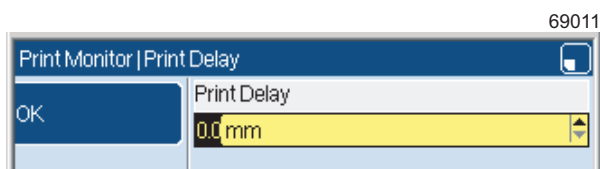
**Figure 1-6. Select a page item**

## Operator-entry pages

To enter or change information for the printer, you use the operator-entry pages. For example, the **Print Delay** page shown in Figure 1-6.

To provide information in an operator-entry page, you perform one of the following actions:

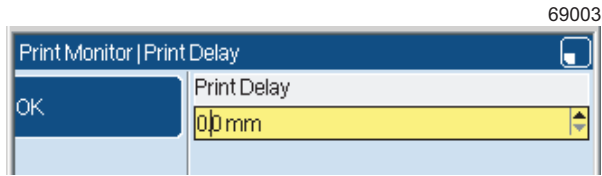
- You enter the information into a box:



**Figure 1-7. Text and cursor**

To change the information that is highlighted in black, use the keyboard keys to enter the new information. The highlighted text is overwritten when you begin to enter the new information.

To remove the black highlight, press the Left arrow key or the Right arrow key:

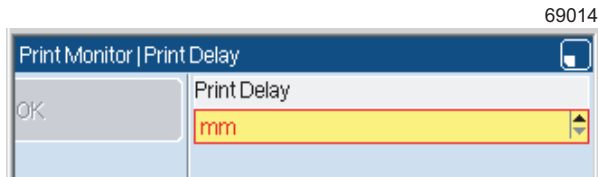


**Figure 1-8. Remove the highlight**

The vertical line in Figure 1-8 is the cursor. The cursor shows your current position in the box. Press the Left arrow key or the Right arrow key to move the cursor. Then you can add or insert some characters, or use the backspace key to delete a single character.

- You can also use the Up and Down arrow keys to increase or decrease the value in some text boxes. The arrow indicators at the far right of the box identifies this type of box (see Figure 1-8).

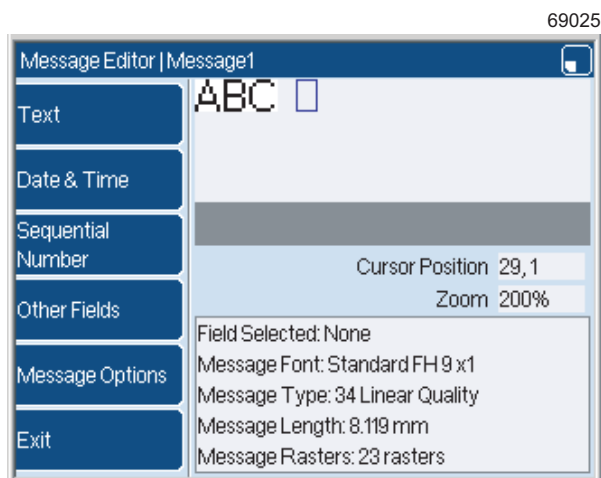
If the printer knows that the information that you entered is incorrect (for example, an invalid number), the information is shown in red. Some soft keys or options become unavailable. For example, the name of the **OK** soft key in Figure 1-9 is dimmed to show that the key is not available:



**Figure 1-9. Incorrect value entered**

## Task pages

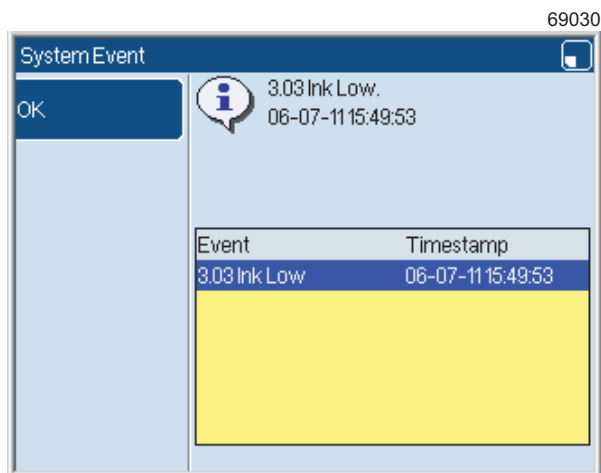
You can use the task pages to create, edit or print a message, or to perform other tasks. For example, at the **Print Monitor** page, you can start and pause a print job. You can use the **Message Store** page to create a message, and use the **Message Editor** page to edit the message:



**Figure 1-10. Message Editor**

## Information pages

If the printer needs attention (for example, because the ink or solvent levels are too low), it displays an information page:



**Figure 1-11. An information page**

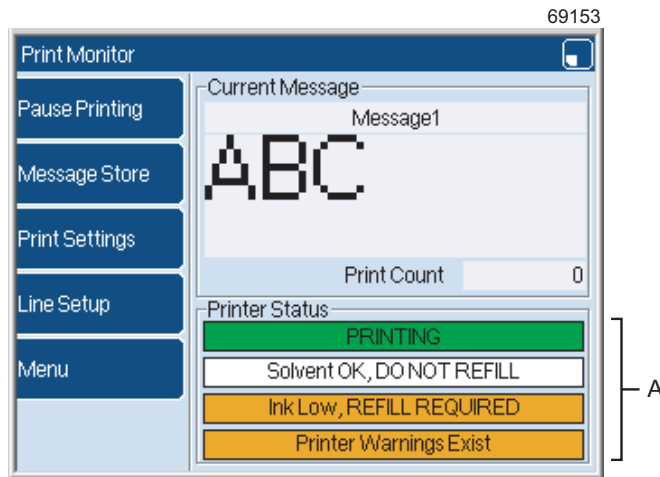
The information page contains a message about a system event. A system event can be a Warning, or a System Failure, or a Print Failure, or an Information event. These events are described in the *How To* guides for the printers.

To close an information page, press the **OK** key.

Most Warnings refer to an event that does not prevent normal operation—you can read the information page, then continue to use the printer. You should correct the problem as soon as you can. Press the **OK** key to close the information page, then correct the problem. For example, refill with ink or solvent. If you cannot correct the problem, speak to your supervisor, or contact your local distributor.

If the event is a Print Failure, you must correct the problem immediately—you cannot continue to use the printer.

You can check the Printer Status area on the **Print Monitor** page to make sure that there are no problems. The Printer Status area (labelled “A” in Figure 1-12) tells you about any events that need your attention:



**Figure 1-12. Printer Status area**

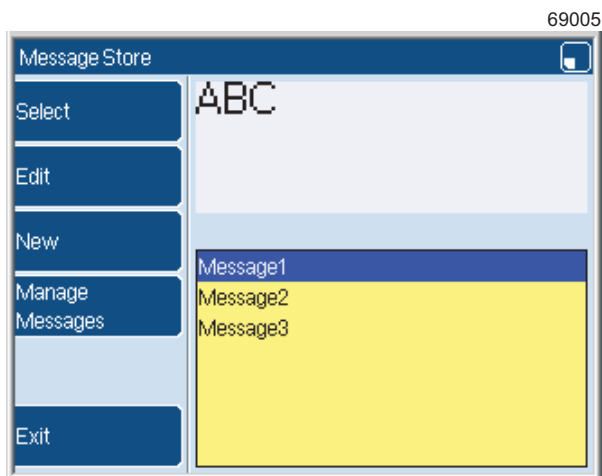
### 1.3.2 Stores

The printer has several stores:

- Message store
- Date and Time store
- Shift Code store
- Logo store
- Text Sequence store (7900 only)
- Orientation Sequence store (7900 only)
- Production Schedule store (7900 only)



In this guide we tell you how to use the **Message Store**:



**Figure 1-13. Message Store page**

The other stores are described in the *How To* guides for the printers.

The printer stores are like cupboards. When the printer is first installed, the stores are empty. You can create items to put into the stores. For example, you can create a message and then put the message into the **Message Store**. You can take the message from the store later, then print or edit or copy the message, and even change its name. When you do not need the message, you can delete the message from the store (if you use the correct User Level for these tasks).

# 2 Get started

Have you read all the details in ‘Before you start’? Are you confident that you understand all the Safety information? If so, you can now begin to use the printer, with the help of the instructions in this chapter.

By following the instructions you learn how to turn on the printer, and how to create and print a message. Also, you learn how to pause the print, stop the jet, and turn off the printer.

The printer system should already be unpacked, installed and set up by a Linx approved Service Engineer. The mains power supply should already be connected.



**WARNING: IF THE PRINTER IS NOT ALREADY CONNECTED AND YOU ARE IN ANY DOUBT AS TO YOUR ABILITY TO CONNECT POWER TO THE PRINTER, CONTACT YOUR SUPERVISOR FOR GUIDANCE.**

## 2.1 Turn on

To turn on the printer:

1. Set the mains power supply switch at the rear of the printer to the on (I) position, as shown in Figure 2-1:

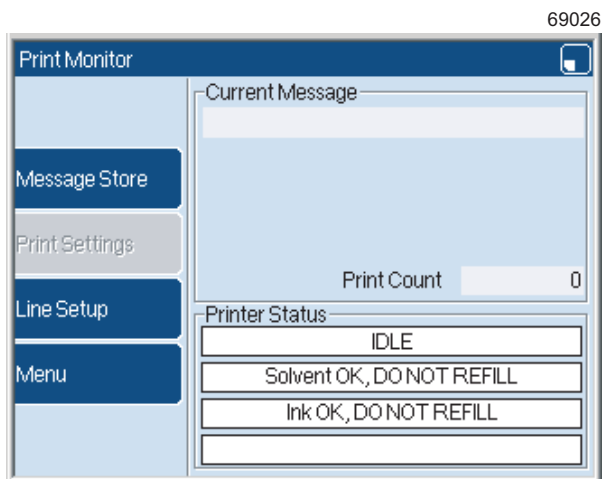


**Figure 2-1. Mains Power Supply Switch on the rear panel**

2. Press and hold the button on the front of the printer until the green **power** LED on the control panel illuminates. This LED shows that the printer is turned on.
3. Wait until the printer power-up is complete. The splash screen (see page 6) shows the progress of the power-up process.

4. When the printer completes the power-up sequence, the **Print Monitor** page is displayed, as shown in Figure 2-2.

NOTE: If you have a Linx 7900 Spectrum printer, the printer starts a mixing sequence. The printer mixes the ink to make sure that the pigment does not remain at the bottom of the ink tank. The **Printer Status** area on the **Print Monitor** page shows the message “MIX”. When the sequence is complete, the message changes to “IDLE”.



**Figure 2-2. Print Monitor page**

The soft key names on the **Print Monitor** page are dimmed for options that are not available. For example, you cannot use the **Print Settings** key if there is no Current Message, as shown in Figure 2-2.

Most of the instructions in this guide begin and end at the **Print Monitor** page. When you are more familiar with the printer, you may find that you do not need to go back to the **Print Monitor** page between tasks.

## 2.2 Create a message

In this section you learn how to create and save a new message.

### 2.2.1 Message fields

A message can contain several parts. Each part is called a *field*. You can put several different types of field into your message. For example:

- Text—a simple field that contains characters that do not change.
- Date and Time—used to print a Date field or a Time field.
- Sequential Number—prints a value that increases or decreases with each printed message.
- Remote—a field that contains data that the printer receives from a remote device. For example, a computer.
- Shift Code—a code that indicates different periods of the day or the week.
- Prompted—a field that requires the user to enter or select message text before a message is printed.
- Logo—used to print an image or pattern.

NOTE: 5900 only. You cannot create logo images on the printer, but you can copy logo images in bitmap (.bmp) file format to the printer from a USB memory stick (see *How To Use the USB Connection* for more information).

- Text Sequence—a series of text strings that can change for each message printed (7900 only).

This chapter shows you how to create a simple message that contains a Text field. If you need a Date field or a Time field in your message, first create the message by following the steps in this chapter. Then you can add the Date field or Time field (see Chapter 4, ‘Insert a Date or Time’).

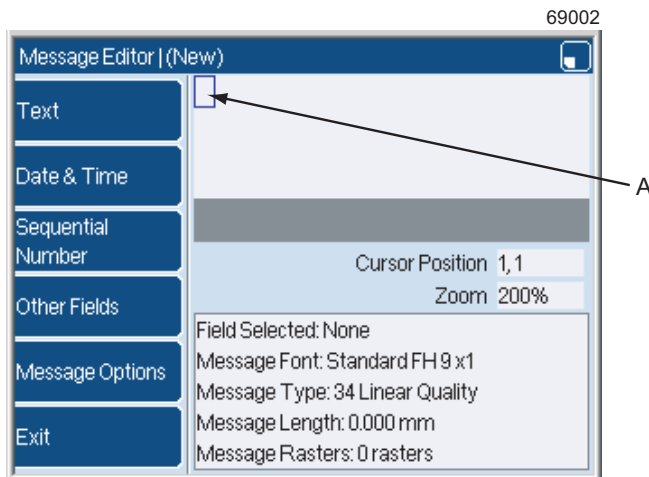
For information on how to add other types of field to your message, refer to the *How To* guides for the printers.

## 2.2.2 Create your message

You use the **Message Editor** to create a message, then save your message in the **Message Store**.

To create a new message:

1. At the **Print Monitor** page, press the **Message Store** key.
2. At the **Message Store** page, press the **New** key. The **Message Editor** page is displayed:



**Figure 2-3. Message Editor page**

The blue rectangle (labelled “A” in Figure 2-3) is the cursor.

There are two methods that you can use to insert a text field.

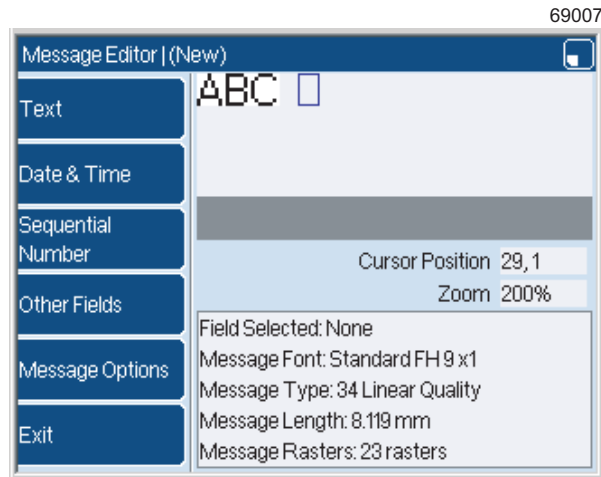
- You can enter the characters straight into the message. This method is the easiest method to create a text field.
- You can use the **Text** key to set the parameters of the text (for example, the font size) when you create the field. This method is described in Chapter 3, ‘Edit a message’.

This section describes how to enter the characters directly.

1. Use the arrow keys to move the cursor to the correct position for the new field. Make sure that the cursor is outside the boundaries of other fields that exist in the message.

**NOTE:** To move the cursor in small steps, hold the [ctrl] key down, then press the arrow keys.

- Use the keyboard to enter the characters for the Text field. The printer displays the characters in the message as you enter the text:

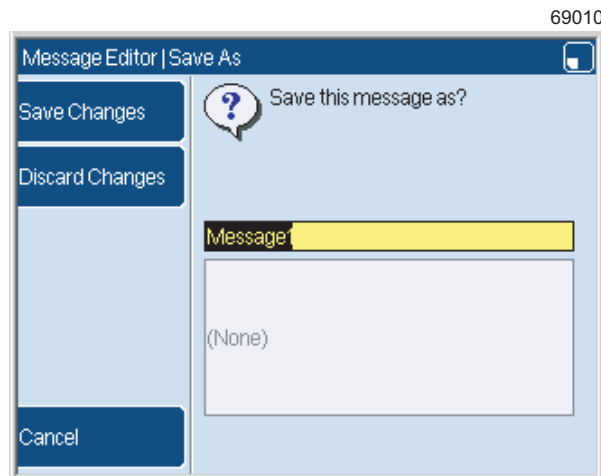


**Figure 2-4. Entering text**

- When the text is completed, press the [enter] key.

### 2.2.3 Save your message

To save your message, press the **Exit** key. The printer asks you if you want to save or discard the message, and asks you for a name for the message:



**Figure 2-5. Save or discard the message**

Do one of the following:

- To overwrite the old message, make sure that the correct name is displayed in the yellow box. Then press the **Save Changes** key to return to the **Message Store** page.
- To keep the old message and save the edited message under a different name, enter the new name. Then press the **Save Changes** key to return to the **Message Store** page.

To return to the **Print Monitor** page, press the **Exit** key.

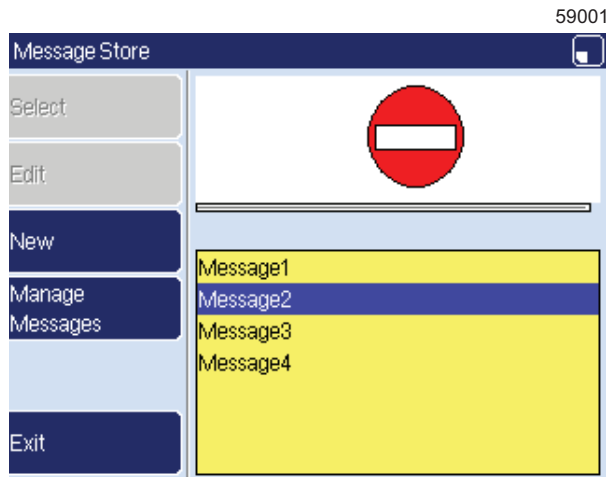
You can see in this example that it is easy to make a new message!

Now that your message is in the Message Store, you can leave the message there to use at some future date. However, now you probably want to print it. To print your message, see 'Print a message' on page 19. If you want to change your message first, follow the instructions in Chapter 3, 'Edit a message'.

## 2.3 Print a message

In this section you learn how to select and print a message from the **Message Store**, and pause or stop printing the message. This section also tells you how to change the print position.

**NOTE:** 5900 printer only. Imported messages that contain an unsupported field type (for example, barcode, data matrix, sequential text, or sequential number with multiple ranges in messages copied from a 7900 printer) are invalid. You cannot select, edit, copy or rename these messages on the **Message Store** page, but they can be deleted. Any invalid messages appear on the **Message Store** page preview as shown in Figure 2-6.



**Figure 2-6. Message Store: invalid message (5900 only)**

### 2.3.1 Print trigger

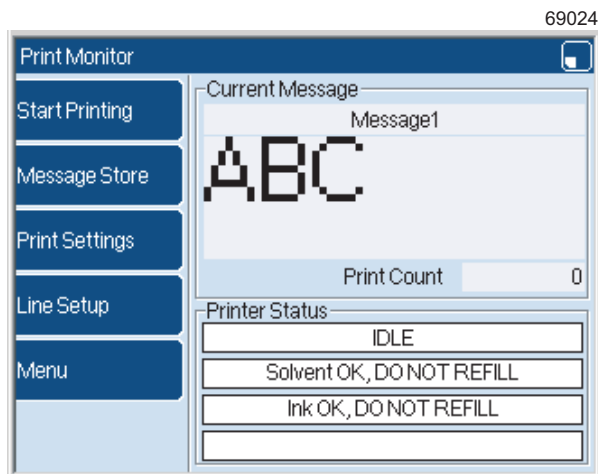
You can use a product sensor or other device to trigger a print, or you can set the printer to print continuously. The **Trigger** option in the **Line Setup** menu controls the action of the printer. The **Line Setup** menu is described in the *How To* guides for the printers.

In its default configuration the printer waits for a trigger signal before each message is printed.

**NOTE:** If you have a Linx 7900 Spectrum printer, you must wait until any mixing sequence is complete before you print a message. To see if the printer is performing a mixing sequence, look at the **Printer Status** area on the **Print Monitor** page. If the **Printer Status** area shows the message “MIX”, wait until the message changes to “IDLE”.

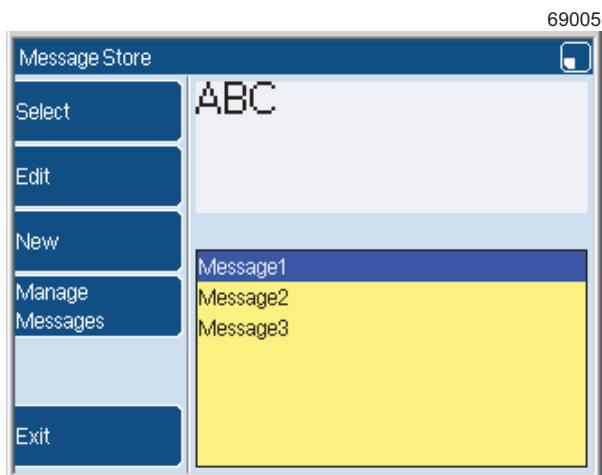


1. If a Current Message is selected, the **Print Monitor** page displays the message and its contents. Make sure that the **Print Monitor** page displays the correct message:



**Figure 2-7. Print Monitor and Current Message**

- If the correct message is displayed, go to step 2.
- If the correct message is not displayed, press the **Message Store** key to go to the **Message Store** page:



**Figure 2-8. Message store page**

Use the Up and Down arrow keys to highlight the required message in the list. Then press the **Select** key to return to the **Print Monitor** page.

2. Press the **Start Printing** key to start the jet. The Printer Status area displays the message “JET STARTING”. The jet does not start immediately. When the jet startup is complete and a trigger signal is received, the printer starts printing the message. The Printer Status area displays the message “PRINTING”.

### 2.3.2 Pause the print

To pause printing:

- At the **Print Monitor** page, press the **Pause Printing** key

Printing stops but the jet is not stopped. The Printer Status area displays the message “JET RUNNING”. You can press the **Start Printing** key to quickly restart the print, or you can select a different message to print.

Use the **Pause Printing** key to stop the print for a short time, or to change the Current Message. The **Pause Printing** key is only available when the printer is printing.

If the print job is completed and you want to turn off the printer, refer to ‘Stop and turn off the printer’ on page 24.

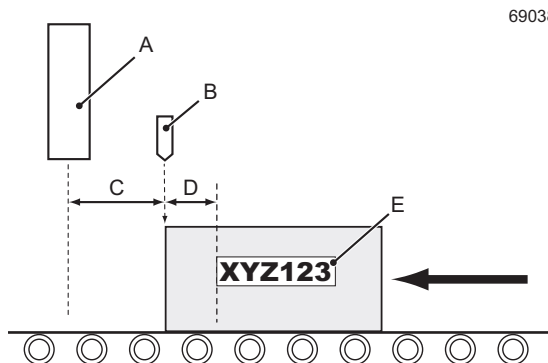
**NOTE:** When you pause the print, the printer saves any changes to the message. For example, if you use a sequential field, the print restarts at the correct position in the sequence. (The sequential field types are described in the *How To* guides for the printers.)

### 2.3.3 Adjust the print position

This section shows you how to make sure that the printed message appears in the right position on the product.

Figure 2-9 helps you understand the print position. The large arrow shows the direction of the movement of the product. In this example, there is a fixed distance (C) between the printhead (A) and the sensor (B) that detects the edge of the product. This distance is the same for all products and all messages. The distance is zero for some installations. The installation engineer enters this measurement into the printer during the installation, but you can change the value. Refer to the *How To* guides for the printers for more information.

In Figure 2-9, the trigger signal from the sensor occurs at the edge of the product, but the label (E) is not at the edge of the product. The distance between the sensor position and the print position (E) is the Print Delay (D).

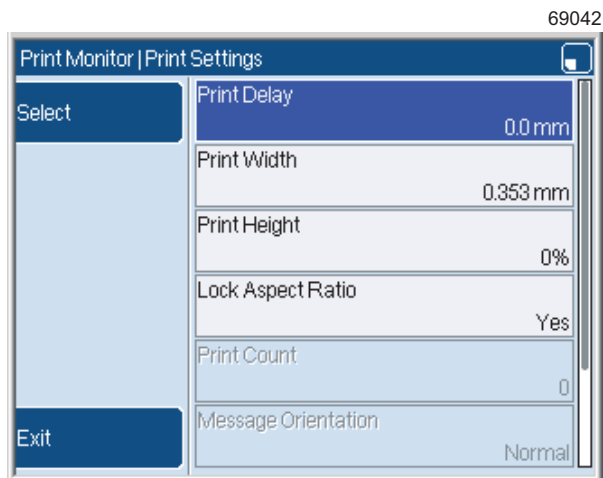


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**Figure 2-9. Print position**

To change the Print Delay, do the following:

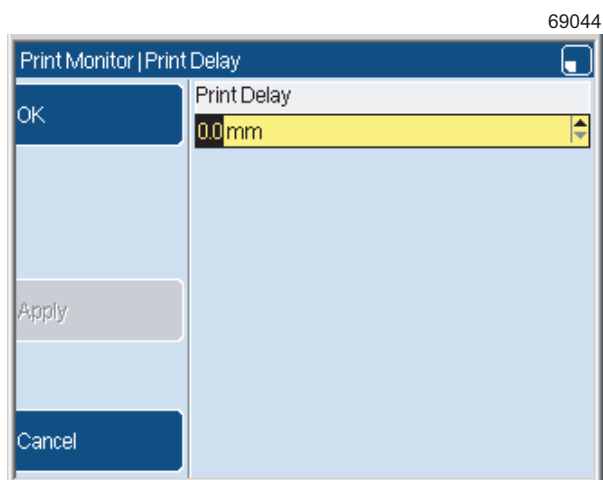
1. At the **Print Monitor** page, press the **Print Settings** key to display the **Print Settings** page:



**Figure 2-10. Print Settings page**

NOTE: The **Lock Aspect Ratio** option is not displayed for all messages.

2. Select the **Print Delay** option:

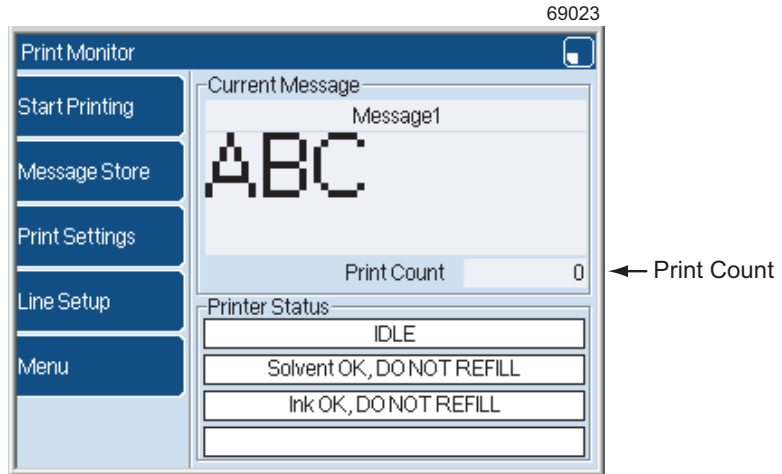


**Figure 2-11. Print Delay**

3. Use the keyboard or the arrow keys to enter a new value, then press the **OK** key.
4. At the **Print Settings** page, press the **Exit** key to return to the **Print Monitor** page.

### 2.3.4 Print Count

The Print Count tells you how many prints were done with this message. You can see the current Print Count on the **Print Monitor** page:



**Figure 2-12. Print Monitor and Print Count**

You can see this value increase as a message is printed.

#### Change the Print Count

Sometimes you need to change the Print Count. To change the **Print Settings** for the Current Message, do the following:

1. At the **Print Monitor** page, press the **Pause Printing** key to pause the print, then press the **Print Settings** key.

NOTE: The **Pause Printing** key is not available unless a Current Message is selected. The **Print Monitor** page shows the name of the Current Message.

2. Select **Print Count** to display the **Print Count** page.  
To change the count, use the keyboard to enter a new value, or press the arrow keys to increase or decrease the value by one for each key-press.
3. Press the **OK** key to store the new value and return to the **Print Settings** page.
4. To return to the **Print Monitor** page, press the **Exit** key.

## 2.4 Stop and turn off the printer

This section tells you how to safely stop the printer and turn off the electrical supply.

Use the red [stop] key to stop printing and turn off the printer. For example, if you do not need the printer until the next day. Do not use the red [stop] key to stop printing for a short time, because this key stops the jet.

**CAUTION: Always use the correct procedure (described below) to shut down and turn off the printer. Do NOT use the mains power supply switch to stop the printer, except in an emergency.**

**Use the correct procedure to make sure that any changes are saved and the printhead is cleaned. If you use the mains power supply switch to stop the printer, you can lose any changes and cause printhead problems. Thorough cleaning of the printhead will be necessary.**

### 2.4.1 Power-Down configuration

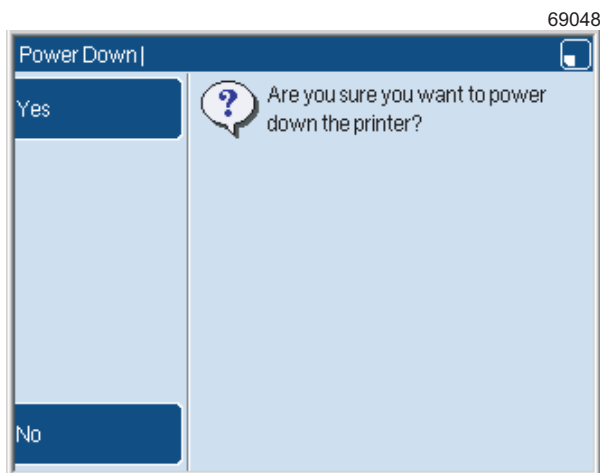
The printer can turn off automatically when the jet is stopped, or if the printer is idle for some time. The supervisor or maintenance engineer can configure the power-down options, and can disable the function if necessary. The default setting is that power-down is enabled.

### 2.4.2 To turn off

To stop print and turn off the printer, do the following:

#### If the jet is stopped (idle):

Press the red [stop] key. The printer displays a prompt message:



**Figure 2-13. Power-Down prompt screen**

Press the **Yes** key to turn off the printer.

**If the jet is running:**

Press the red [stop] key. The printer displays a prompt message similar to that shown in Figure 2-13 on page 24 that asks you to confirm that you want to stop the jet.

Press the **Yes** key to stop the jet. The Printer Status area displays the message “JET STOPPING”.

After approximately 4 minutes, the jet is stopped. The Printer Status area indicates that the jet is “IDLE”.

***If the power-down functions are not enabled:***

The printer remains in the “IDLE” state.

To turn off the printer, press the red [stop] key. The printer displays a prompt message (see Figure 2-13).

Press the **Yes** key to turn off the printer.

***If the power-down function is enabled:***

The printer displays the message:

**“You have 10 secs to cancel the power down.”**

The displayed number changes every second (9, 8, 7...) until it reaches 1.

- If you do not press a key, the printer turns off when the displayed number reaches 1.
- If you press any key before the displayed number reaches 1, the power-down sequence is cancelled and the printer does not turn off.

NOTE: You can leave the mains power supply switch at the rear of the printer in the on (**I**) position.

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# 3 Edit a message

This chapter tells you how to use the Message Editor to change an existing message, and describes:

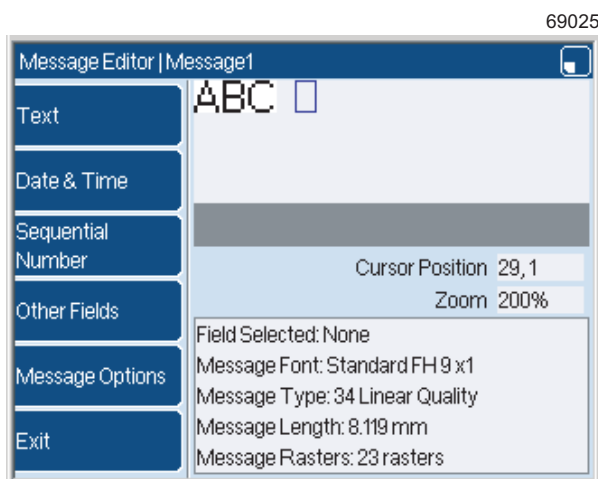
- How to insert a new text field into a message.
- How to edit or move a field.
- How to delete a field from a message.

## 3.1 Add a new field

This section describes how to add a new Text field. To add a Date field or a Time field, see Chapter 4, 'Insert a Date or Time'. To learn how you can add other types of field to your message, refer to the *How To* guides for the printers.

1. Go to the **Print Monitor** page and press the **Message Store** key.
2. Highlight the name of the required message and press the **Edit** key.

The printer displays the **Message Editor** page, which shows the content of your selected message. Use the arrow keys to move the cursor (the blue rectangle) into position to insert the new field. Make sure that the cursor is outside the boundaries of other fields in the message.

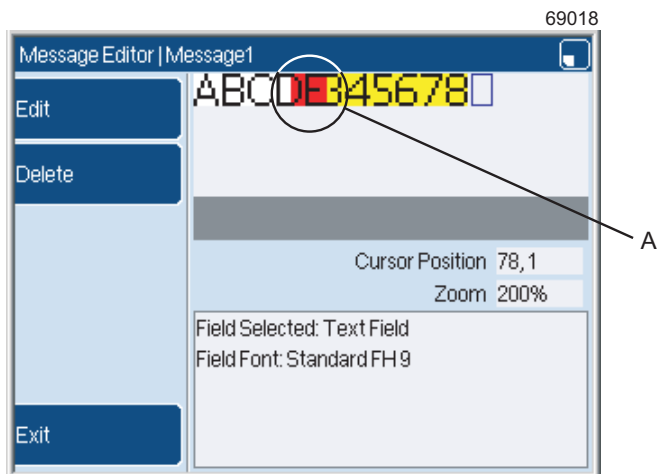


**Figure 3-1. Cursor Shown in the Message Editor**

3. Use the keyboard to enter the characters for the new Text field. The printer displays the characters in the message as you enter the text.



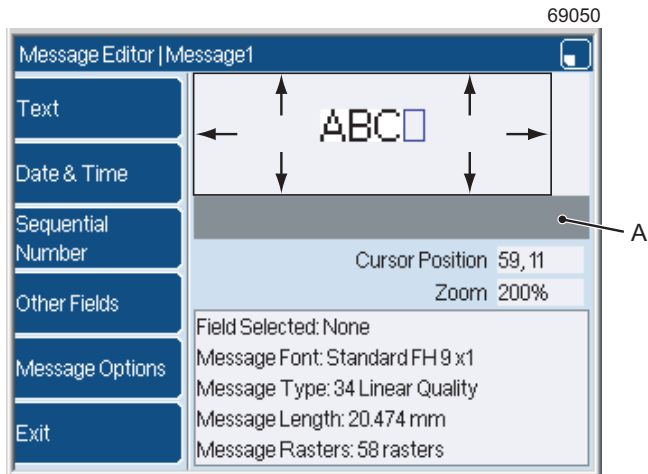
If the new field touches an existing field, the printer highlights the overlap ('A' in Figure 3-2) in red.



**Figure 3-2. Overlapped fields**

To correct the problem, you must move the new field (see 'Move a field' on page 35), or delete the field (see 'Delete a field' on page 35).

Make sure that the new field is within the message boundary. In Figure 3-3, the arrows indicate the message boundary (the white area). The grey area (A) is outside the boundary:



**Figure 3-3. Message boundary**

If a part of the field is outside the message boundary, that part of the field is not printed.

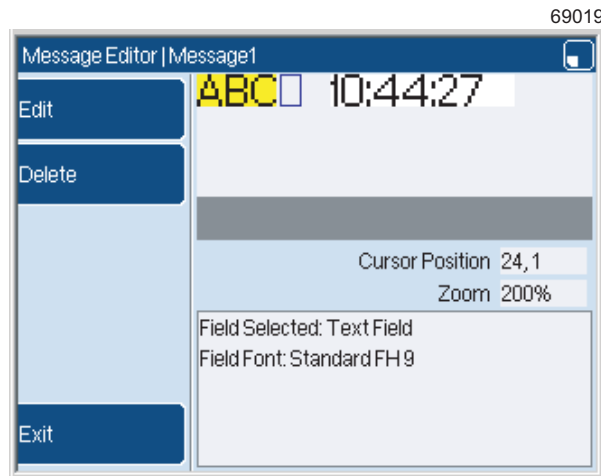
4. When your changes are completed, press the **Exit** key at the **Message Editor** page.
5. Now you can save your message or discard the changes (see 'Save your message' on page 17).
6. To return to the **Print Monitor** page, press the **Exit** key.

## 3.2 Edit a field

This section tells you how to change a field that exists in a message.

1. At the **Print Monitor** page, press the **Message Store** key.
2. At the **Message Store** page, highlight the required message and then press the **Edit** key. The **Message Editor** page is displayed, and shows the content of your message. The cursor shows your current position within the message.
3. Use the arrow keys to move the cursor over the required field, and then press the [enter] key. The field that you selected becomes highlighted.

If the field is a Text field, you can edit the Text field directly:



**Figure 3-4. Edit a Text field**

To change the text, use the Left arrow key or the Right arrow key to move the cursor.

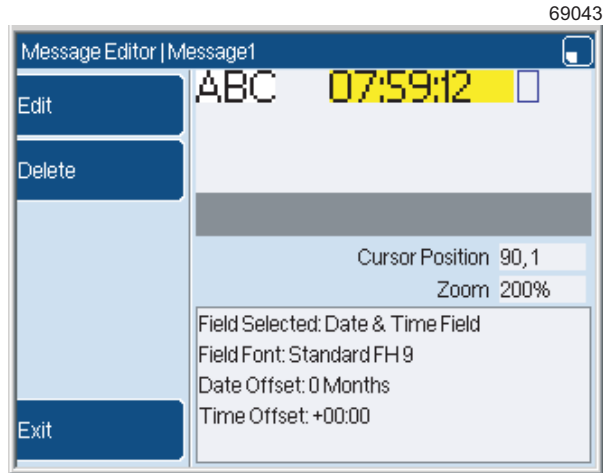
Use the keyboard to insert a character, or press the backspace key to delete a character:



**NOTE:** The backspace key deletes a character, the **Delete** key deletes the whole field.

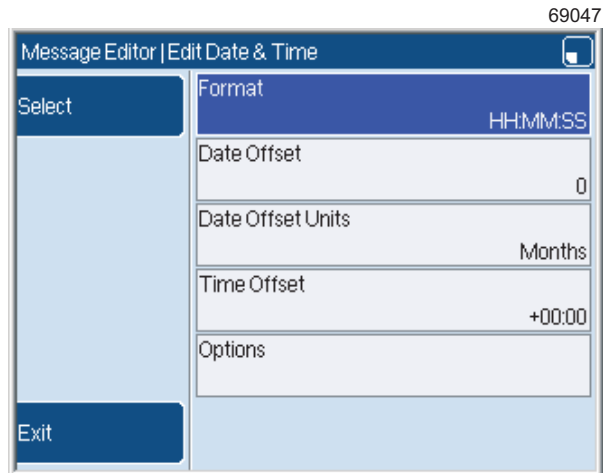
To complete your changes, press the [enter] key. The field highlight is removed.

If the field is not a Text field, you use a different method to edit the field—for example, a Date & Time field. Press the [enter] key to select the field:



**Figure 3-5. Select a Date & Time field**

Press the **Edit** key to edit the field. The printer displays the correct page that you need when you edit this type of field. For example, if the field is a Date field or a Time field, the printer displays the **Edit Date & Time** page:

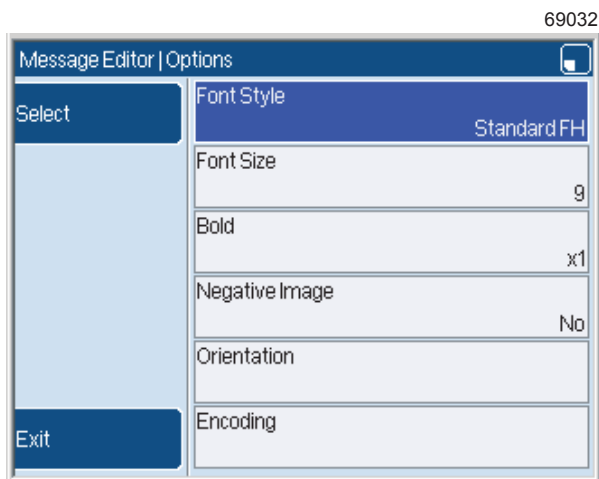


**Figure 3-6. Edit Date & Time page**

To learn about the **Edit Date & Time** page see Chapter 4, 'Insert a Date or Time'.

### 3.2.1 Options page

There is an **Options** page for each field type. You can use this page to control the appearance of the field. For example, you can change the font size. Use the arrow keys to highlight the **Options** item and then press the **Select** key to display the **Options** page:



**Figure 3-7. Options page**

You can use the **Options** page to set:

- **Font Style**—select a font style from a list. If you change the font style, you must also select a font size.
- **Font Size**—select a font size from a list. The available font sizes depend on the font style that you use.
- **Bold**—select a Bold value from x1 to x10.
- **Negative Image**—select **Yes** to print the field as a negative image. Figure 3-8 shows how a negative image is printed. The first field (a) is printed normally, the second field (b) is a negative image:



**Figure 3-8. Negative image**

- **Orientation**—you can set the orientation for each field in a message. Refer to the *How To* guides for the printers for information about this option.
- **Encoding**—this option is only available on the 7900 printer. Press the **Select** key to display the bar code **Encoding** page. You can use this option to encode the field into a bar code. Refer to the *How To* guides for the printers for information about this option.

- **Field Justification**—you can set the justification of any text in a field to either right justified or left justified. The default justification is **Left**. Refer to the *How To* guides for the printers for information about this option.

### Save the Options

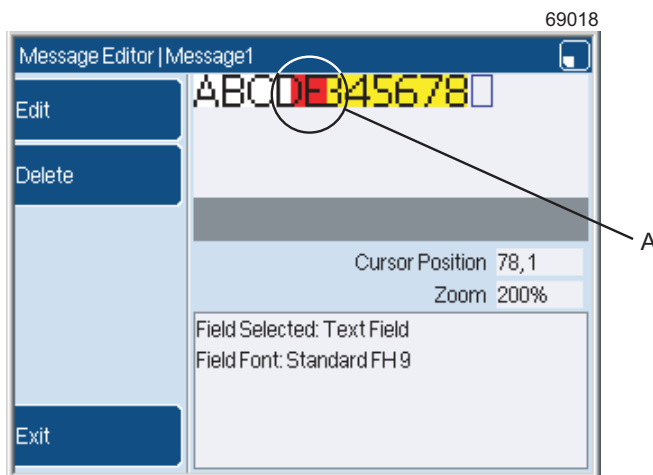
When your changes to the **Options** page are complete, press the **Exit** key.

### 3.2.2 Save or discard your changes

1. When your changes to the message are completed, press the **Exit** key until the printer displays the **Message Editor** page. The display shows you the updated message.
2. Press the **Exit** key. Now you can save your message or discard the changes (see ‘Save your message’ on page 17).
3. To return to the **Print Monitor** page, press the **Exit** key.

### 3.3 Overlapping fields

Sometimes when you create or change a message, a part of the message is shown in red (like the area 'A' in Figure 3-9). The red area indicates that one field overlaps another field:



**Figure 3-9. Field overlap**

Overlapped fields are caused when you insert a field within the boundary of another field. If fields overlap, the overlapped areas do not print correctly so you must move one of the fields (see 'Move a field' on page 35).

To prevent overlapped fields, you must move the cursor outside the boundary of the existing field before you insert the new field.

To make sure that the cursor is in an empty area, press the [enter] key. If the printer highlights a field, the cursor is within that field. The yellow highlight shows you the field boundaries:



**Figure 3-10. Cursor in a field**

Press the [enter] key again so that the field is not selected. Then move the cursor outside the field boundaries. When you press the [enter] key, the field is not highlighted:



**Figure 3-11. Cursor outside a field**

## 3.4 Move a field

Sometimes you must move a field within a message. For example, if you add a new field that overlaps an existing field, you must move the new field to correct the problem.

To move a field:

1. At the **Print Monitor** page, press the **Message Store** key.
2. At the **Message Store** page, highlight the name of the required message and then press the **Edit** key. The **Message Editor** page is displayed, and shows the content of your selected message.
3. Use the arrow keys to move the cursor (the blue rectangle) into the field, and then press the [enter] key to select the field. The field becomes highlighted in yellow.
4. Move the field in the required direction.
  - To move the field by approximately the width of one character, press and hold the [shift] key while you press an arrow key.
  - To move the field by the width of one ink drop, press and hold both the [ctrl] key and the [shift] key. Then press an arrow key.
5. When your changes are complete, press the **Exit** key.
6. Save your message or discard the changes (see ‘Save your message’ on page 17).

NOTE: You can move several fields in one action. The method is described in the *How To* guides for the printers.

## 3.5 Delete a field

This section tells you how to delete a field from an existing message.

To delete a field:

1. At the **Print Monitor** page, press the **Message Store** key.
2. At the **Message Store** page, highlight the name of the message and then press the **Edit** key. The **Message Editor** page is displayed, and shows the content of your selected message.
3. Use the arrow keys to move the cursor over the field you want to delete.
4. Press the [enter] key—the field becomes highlighted in yellow.
5. Press the **Delete** key. The printer asks you to confirm that you want to delete the field. To delete the field, press the **Yes** key. To cancel the operation and keep the field, press the **No** key.
6. Save your message or discard the changes (see ‘Save your message’ on page 17).



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# 4 Insert a Date or Time

In this chapter you learn how to use a Date field or a Time field in your message. These field types use the current date and time, which is stored in the internal clock in the printer. You can use an offset to change the printed date or time (see page 39).

## 4.1 Create the field

To insert a Date and Time field in a message, perform the following steps.

### 4.1.1 Edit the message

1. At the **Print Monitor** page, press the **Message Store** key.
2. At the **Message Store** page, use the arrow keys to highlight the required message, then press the **Edit** key. The **Message Editor** page is displayed, and shows the content of the message that you selected. The cursor (see Figure 2-3 on page 16) shows your current position within that message.
3. Use the arrow keys to move the cursor to the position where you wish to insert the field. Make sure that the cursor is beyond the boundaries of any existing field:

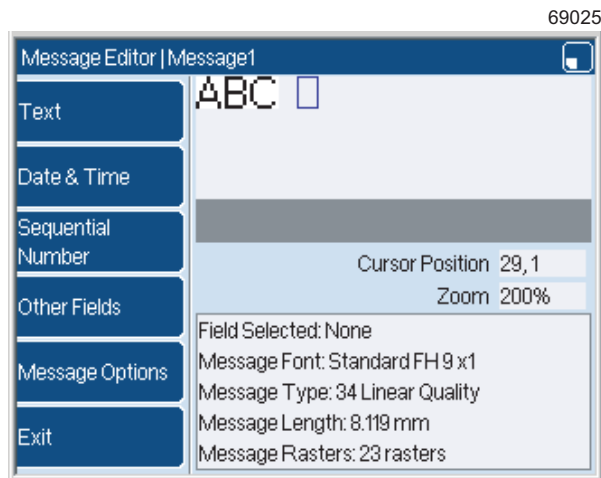


Figure 4-1. Message Editor and Cursor

4. Press the **Date & Time** key to display the **Insert Date & Time** page:

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**Figure 4-2. Insert Date & Time page**

### 4.1.2 Select a format

Select the **Format** option to display the **Date & Time Store** page. This page shows you a list of formats that you can use to create the field. The list that is displayed depends on the language that is selected for this field (see ‘Change Language’ below). The language is displayed at the top of the page. If you use the Down arrow key to scroll through the list, you can see that the list contains both Date formats and Time formats:

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**Figure 4-3. Date and Time formats**

Use the arrow keys to highlight the required format, then press the **Select** key to return to the **Insert Date & Time** page.

## Change Language

You can use this option to print a message that contains the text in one language, and the date in another language. The **Change Language** option changes the formats that are available in the list of formats.

The **Change Language** option is not needed for formats that contain only numbers—these formats do not depend on the language. For example “HH:MM:SS”.

To select a language, press the **Change Language** key to display a list of available languages. Use the arrow keys to select the language you require for the field. Then press the **OK** key to return to the **Date & Time Store** page.

### 4.1.3 Set the Date Offset

You can use this option to add or subtract a fixed number of days (or weeks, or months, or years) from the correct date. You can use this method to print a ‘Sell-by’ date. If the correct date is December 29 and the date offset is +2 days, the date that is printed in the message is December 31.

To set the date difference, select **Date Offset**, then press the **Select** key to display the **Date Offset** page.

Enter the required value from the keyboard, or use the arrow keys. Then press the **OK** key to return to the **Insert Date & Time** page.

### 4.1.4 Set the Date Offset Units

If you use a Date Offset, you can use any of the following units:

- Days
- Weeks
- Months
- Years

To set the units, use the arrow keys to highlight the **Date Offset Units** option. Then press the **Select** key to display the **Date Offset Units** page.

Use the arrow keys to select the required units from the list. Then press the **OK** key to return to the **Insert Date & Time** page.

### 4.1.5 Set the Time Offset

You can use the **Time Offset** option to add or subtract a fixed time difference from the correct time. If the correct time is 16:00 and the time offset is –2 hours, the time that is printed in the message is 14:00.

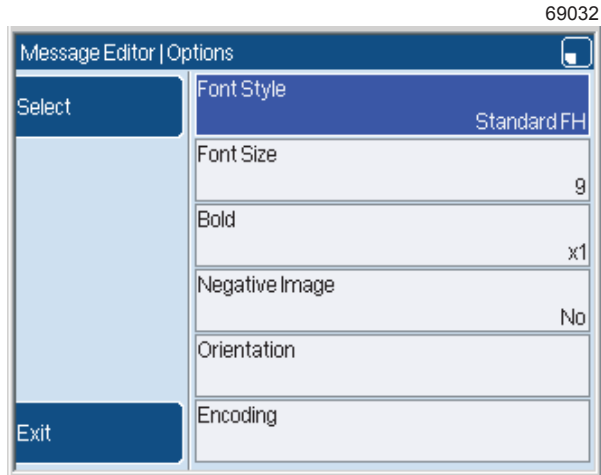
To set the time difference, select **Time Offset**, then press the **Select** key to display the **Time Offset** page.

Use the keyboard to enter the required value, then press the **OK** key to return to the **Insert Date & Time** page.

## 4.1.6 Set the Print Style of the field

### Set the Options

At the **Insert Date & Time** page, use the arrow keys to select **Options**, then press the **Select** key to display the **Options** page.



**Figure 4-4. Options page**

The options on this page are described in ‘Options page’ on page 32.

## 4.1.7 Save or discard your message

At the **Insert Date & Time** page, press the **Exit** key to return to the **Message Editor** page.

To leave the **Message Editor** page, press the **Exit** key to display the **Save As** page. Then save your message or discard the changes (see ‘Save your message’ on page 17).

# 5 Manage your messages

This section describes how to manage the messages that are stored in the printer. You can make a copy of a message and use the copy as a base for a new message. You can change the name of a message or delete a message that is not needed.

NOTE: You can use the USB connection of the printer to save messages from the printer to a USB memory stick and transfer messages to the printer from a memory stick. At the **Print Monitor** page, press the **Menu** key and select the **USB** option. See *How To Use the USB Connection* for more information.

If any of the following options are not available, you do not have the necessary User Level. Refer to your supervisor or line manager.

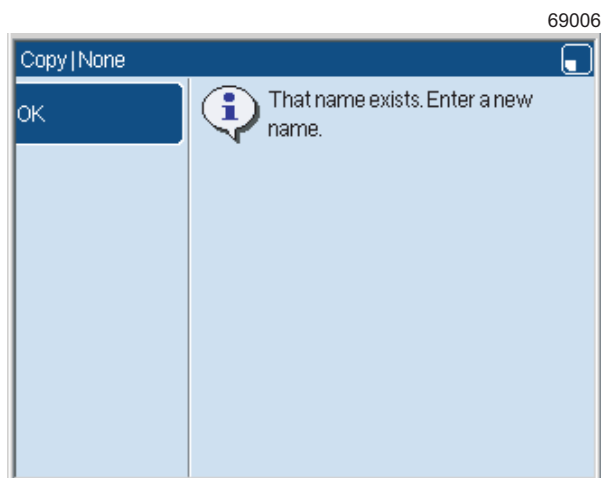
## 5.1 Copy a message or change the name

To copy an existing message or to change the name of an existing message, do the following:

1. At the **Print Monitor** page, press the **Message Store** key.
2. At the **Message Store**, press the **Manage Messages** key.
3. Highlight the name of the required message in the list.
  - To copy the message, press the **Copy** key. The printer asks you for a name for the new message.
  - To change the name of the message, press the **Rename** key. The printer asks you for the new name for the message.
4. Enter a name, then press the **OK** key.

You cannot use the name of an existing message or the name of a different type of field that exists in the printer. For example, the name of an existing logo or a sequential number.

If you try to use a name that exists, the printer displays an information page:



**Figure 5-1. Information page for an existing name**

Press the **OK** key to close the information page, then enter a different name.

The printer returns you to the **Manage Messages** page.

5. To return to the **Print Monitor** page, press the **Exit** key twice.

## 5.2 Delete a message

To delete a message from the **Message Store**:

1. At the **Print Monitor** page, press the **Message Store** key.
2. At the **Message Store**, press the **Manage Messages** key.
3. Highlight the name of the required message in the list, then press the **Delete** key.
4. The printer asks you to confirm that you want to delete the message.
  - To confirm and delete the message, press the **Yes** key.
  - To cancel the operation, press the **No** key.

The printer returns you to the **Manage Messages** page.

5. To return to the **Print Monitor** page, press the **Exit** key twice.

# 6 Look after your printer

The printer is a durable and reliable machine. However, you can help to keep it working at peak efficiency by performing some routine tasks. This chapter describes how you can help to keep your printer in good condition.



**WARNING: SAFETY. DO NOT ATTEMPT TO OPERATE THIS PRINTER UNLESS YOU HAVE READ AND UNDERSTOOD ALL THE INFORMATION IN THE 'SAFETY' SECTION OF THIS QUICK START GUIDE, AND YOU ARE SURE OF YOUR ABILITY TO OPERATE THIS PRINTER SAFELY.**

**DO NOT ATTEMPT TO OPERATE THIS PRINTER UNLESS YOU KNOW HOW TO STOP IT IN AN EMERGENCY, AS DESCRIBED IN 'EMERGENCY SHUTDOWN PROCEDURE' IN THE 'SAFETY' SECTION OF THIS QUICK START GUIDE.**

The printer needs minimal maintenance to operate without problems.

The maintenance requirement is shown in the table.

| Part            |           | Examine  | Clean   | Replace or Refill  |
|-----------------|-----------|--|---|--|
| Printer cover   |           | Daily or each time used, for general cleanliness.  | Weekly or as necessary.   | Not applicable.  |
| Printhead       |           | Daily or each time used, for ink build-up.   | Weekly or as necessary.   | Not applicable.  |
| Ink and solvent |           | At startup and during use: Check the ink and solvent level. (Use <b>Print Monitor</b> page). | Not applicable.   | Add ink or solvent when the printer displays the <b>SureFill</b> page. Add only <i>one</i> bottle. |
| Air filter      | 5900/7900 | Weekly for build-up of dust or debris, but daily in dusty or contaminated conditions.        | Weekly or as necessary.   | As necessary.  |
|                 | 7900 IP65 | Weekly for build-up of dust or debris, but daily in dusty or contaminated conditions.        | The filter cannot be cleaned, it must be replaced when necessary. | As necessary.  |

**Figure 6-1. Printer Maintenance**



## 6.1 Clean the printer



**WARNING: HAZARDOUS SUBSTANCES. MANY OF THE INKS USED WITH THIS PRINTER ARE SOLVENT-BASED AND CAN BE HAZARDOUS. THEY ARE HIGHLY FLAMMABLE, AND THE VAPOUR OR SPRAY CAN BE IRRITATING TO THE EYES AND RESPIRATORY SYSTEM.**

**YOU MUST WEAR SAFETY GLASSES AND SOLVENT-RESISTANT PROTECTIVE GLOVES WHEN YOU HANDLE INKS AND SOLVENTS, WHEN YOU WORK ON THE PRINTER, AND WHEN YOU CLEAN IT.**

**IF YOU IGNORE THIS SAFETY WARNING, YOU COULD EXPERIENCE SEVERE IRRITATION AND TEMPORARY (REVERSIBLE) DAMAGE TO THE EYES, AND NON-ALLERGIC CONTACT DERMATITIS..**



**WARNING: FLAMMABLE LIQUIDS. THE INKS AND SOLVENTS USED WITH THIS PRINTER ARE HIGHLY FLAMMABLE.**

**KEEP INKS AND SOLVENTS AWAY FROM SOURCES OF IGNITION. DO NOT SMOKE OR USE OPEN FLAMES NEAR THE PRINTER, OR INK AND SOLVENT STORAGE CONTAINERS. USE INKS AND SOLVENTS, AND OPERATE THE PRINTER, IN AN AREA WITH GOOD VENTILATION.**

**THERE IS A RISK OF FIRE OR EXPLOSION IF THIS SAFETY WARNING IS IGNORED.**

### 6.1.1 Printer cover

Use a clean, soft, lint-free cloth and the same solvent type that is used in the printer to clean ink spills from the printer cover.

Use the minimum of solvent. Observe the safety precautions when you handle the solvent.

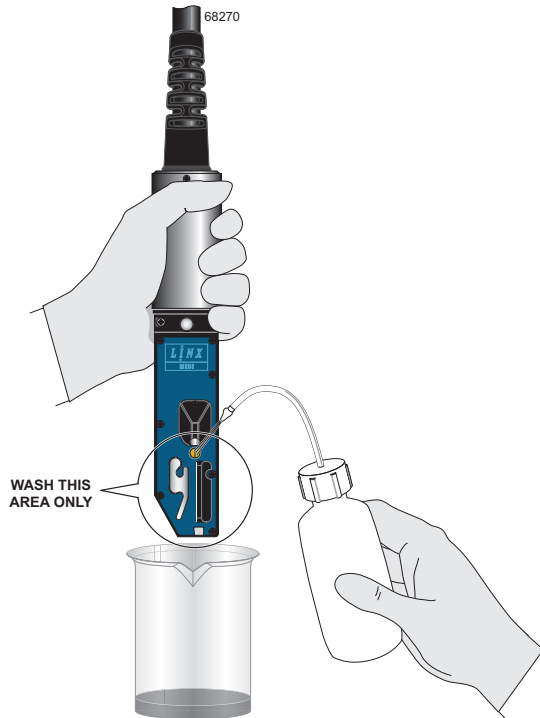
Do not use abrasive materials, which damage the equipment.

Use a lint-free cloth to prevent any contamination of the printhead.

## 6.1.2 Printhead

### To clean the printhead

1. Stop and turn off the printer (see page 24).
2. Loosen the securing screw of the printhead cover tube, then slide the cover off.
3. Hold the printhead as shown in Figure 6-2, or attach it to a wash station if you have one. Make sure that the cleaning solvent is the same type that is used in the printer.



**Figure 6-2. Wash the printhead with the solvent**

4. Put a container under the printhead and gently wash only the circled area with the solvent, as shown in Figure 6-2. Pause after every rinse to allow the ink to dissolve.

Collect the solvent in the container.

Dispose of the used solvent, according to local regulations.

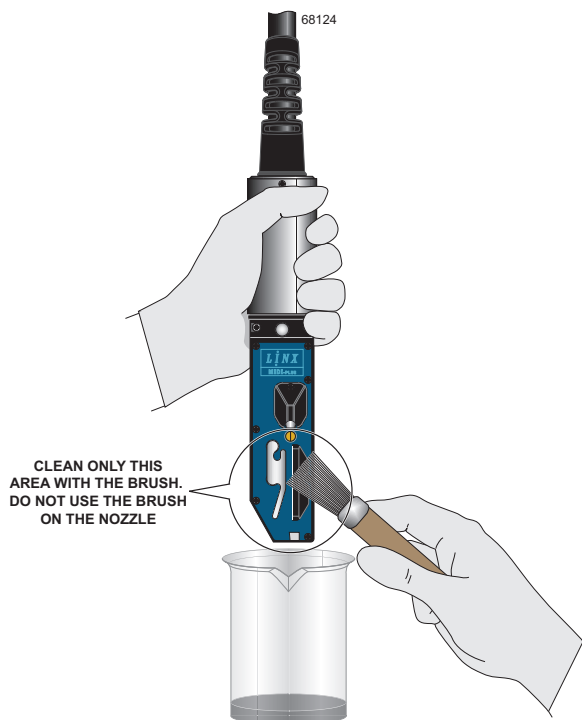
5. **If you use a pigmented ink in the printer, perform this step. If you do not use a pigmented ink, go to step 6.**

Use the brush supplied with the printer to carefully remove any ink deposits that do not wash off from the circled area only in Figure 6-3.

Brush the deflector plates carefully.

**Do not use the brush to clean the nozzle.**

**CAUTION:** Use **ONLY** the non-abrasive, solvent-resistant brush supplied with the printer (part number FA940053) to clean the printhead.



**Figure 6-3. Clean the printhead with the brush**

6. Allow the printhead to dry completely. Do not use a cloth to dry the printhead.  
You must make sure that the space between the nozzle and the charge electrode is free of solvent.
7. Refit the printhead into the cover tube and tighten the securing screw.

## 6.2 Refill the ink or solvent



**WARNING: HAZARDOUS SUBSTANCES. MANY OF THE INKS USED WITH THIS PRINTER ARE SOLVENT-BASED AND CAN BE HAZARDOUS. THEY ARE HIGHLY FLAMMABLE, AND THE VAPOUR OR SPRAY CAN BE IRRITATING TO THE EYES AND RESPIRATORY SYSTEM.**

**YOU MUST WEAR SAFETY GLASSES AND SOLVENT-RESISTANT PROTECTIVE GLOVES WHEN YOU HANDLE INKS AND SOLVENTS, WHEN YOU WORK ON THE PRINTER, AND WHEN YOU CLEAN IT.**

**IF YOU IGNORE THIS SAFETY WARNING, YOU COULD EXPERIENCE SEVERE IRRITATION AND TEMPORARY (REVERSIBLE) DAMAGE TO THE EYES, AND NON-ALLERGIC CONTACT DERMATITIS.**



**WARNING: FLAMMABLE LIQUIDS. THE INKS AND SOLVENTS USED WITH THIS PRINTER ARE HIGHLY FLAMMABLE.**

**KEEP INKS AND SOLVENTS AWAY FROM SOURCES OF IGNITION. DO NOT SMOKE OR USE OPEN FLAMES NEAR THE PRINTER, OR INK AND SOLVENT STORAGE CONTAINERS. USE INKS AND SOLVENTS, AND OPERATE THE PRINTER, IN AN AREA WITH GOOD VENTILATION.**

**THERE IS A RISK OF FIRE OR EXPLOSION IF THIS SAFETY WARNING IS IGNORED.**

**CAUTION: Use only Linx ink and solvent. Do not add ink or solvent until indicated by the printer.**

Every bottle of Linx ink or solvent has a nine-character SureFill® code printed on the label. You must enter this SureFill® code before you refill the ink and solvent.

The SureFill® code helps you to make sure that the ink or solvent used is the correct type for the printer and has not expired. If you use ink or solvent that has an expired use-by-date, you can lower the print quality.

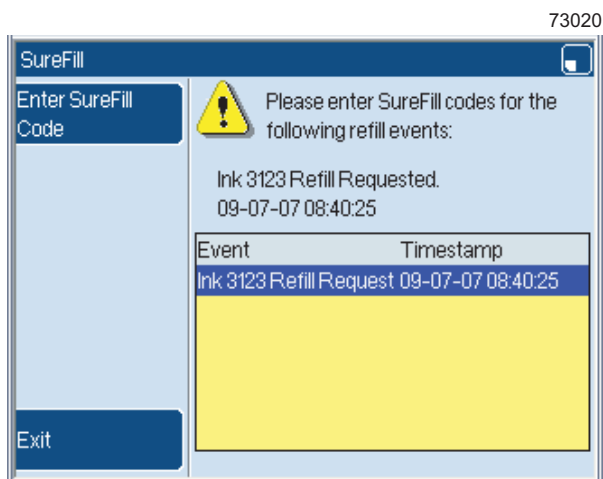
See the instructions on page 48 for more information.

**DO NOT** add more than one bottle of ink or solvent. If you add more than one bottle of ink or solvent, you can damage the printer.

If the ink is a pigmented ink, shake the bottle before use. Use the Linx Ink Shaker for Brilliant White inks 1305 and 1306 and High-opacity Grey inks 1310 and 1311 (these inks are for 7900 Spectrum printers only). Refer to the *Linx Ink Shaker User Guide* (FA65479) for instructions.

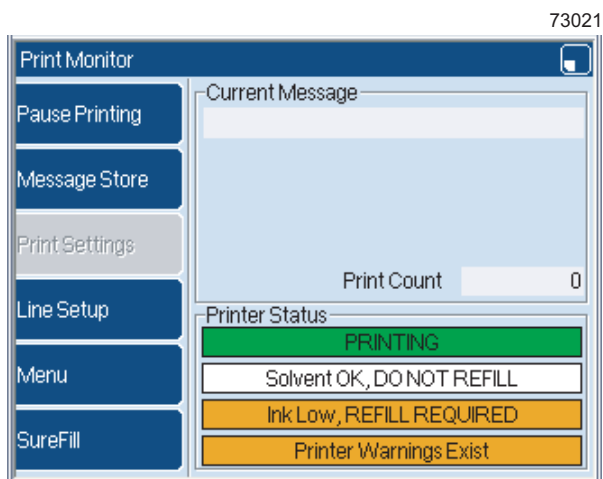
**Always read the instructions on the ink container before use.**

1. When the printer ink level or solvent level becomes low, the printer displays the **SureFill** page to show that you must refill the ink or solvent. The printer asks you to enter the SureFill® code that is on the label of the ink or solvent bottle.



**Figure 6-4. SureFill page (Ink Refill Requested)**

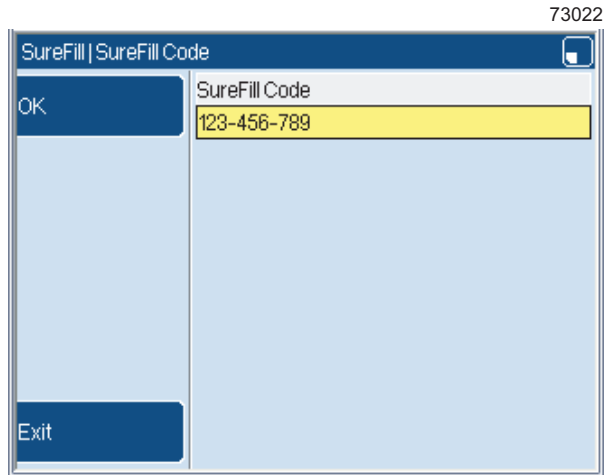
To cancel the ink or solvent refill, press the **Exit** key to return the **Print Monitor** page. The **Printer Status** area shows any ink or solvent low or refill event messages (for example, REFILL REQUIRED). The **SureFill** soft key on the left of the screen is enabled.



**Figure 6-5. Print Monitor page: Ink Low**

To now refill the ink or solvent, press the **SureFill** key to display the **SureFill** page and continue to step 2 on page 49.

2. Press the **Enter SureFill Code** key and enter the nine-character label code for the selected ink or solvent type.

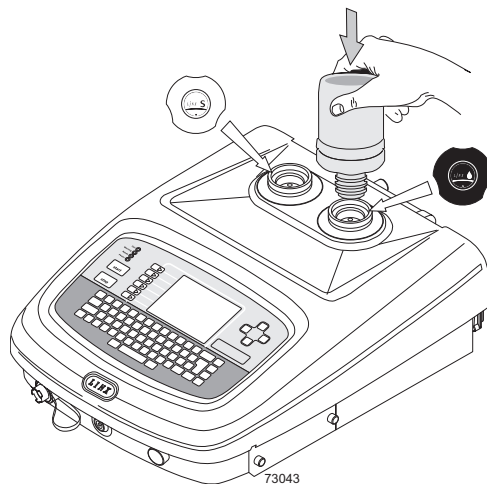


**Figure 6-6. SureFill Code page**

3. Press the **OK** key. A code that is valid identifies the configured ink type and solvent type for the printer, and refers to an ink or solvent with a shelf life that has not expired.

If you enter a valid code, the **Ink Refill** page is displayed. Follow the instructions on the screen (or in steps **4** to **7** below) to refill the ink or solvent.

4. Remove the solvent or ink filler cap, as required:
  - The white filler cap, marked “S”, for solvent.
  - The black filler cap, marked with an ink-drop icon, for ink.
5. Remove the cap from the bottle and then invert the bottle into the correct filler point, as shown in Figure 6-7.

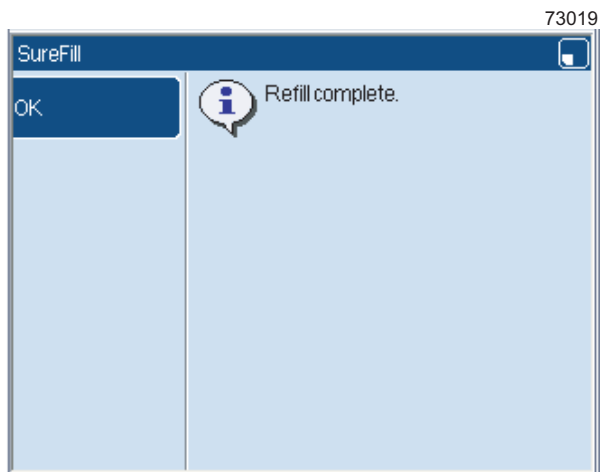


**Figure 6-7. Refill with ink and solvent**

6. Press the bottle to break the foil seal. Leave the bottle in position for a minimum of 15 seconds to drain into the system.
7. Make sure that the bottle is empty and then remove the bottle. Refit the filler cap to the printer.

NOTE: **7900 Spectrum printers only:** a mixing sequence can start when the ink is refilled. Wait until the mixing sequence has finished and the status changes to “IDLE” before you try to print.

8. When the ink or solvent tank is full, the printer displays a confirmation message.

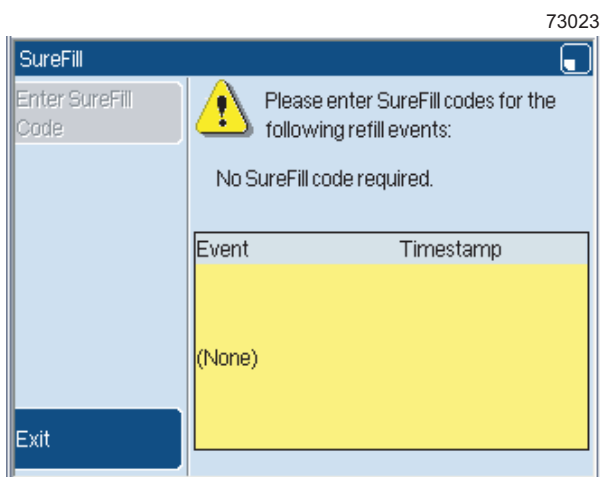


**Figure 6-8. Refill complete confirmation message**

See ‘SureFill code messages’ on page 51 for more information about SureFill® code messages.

Press the **OK** key to return to the **SureFill** page.

9. The **SureFill** page confirms that there are no current refill events.



**Figure 6-9. SureFill page (No SureFill code required)**

Press the **Exit** key to return to the **Print Monitor** page. The Ink Low or Solvent Low warnings and refill event messages disappear from the **Printer Status** area.

If there are current fluid events that require you to enter SureFill® codes, highlight the required refill event message at the **SureFill** page (see Figure 6-4 on page 48) and press the **Enter SureFill Code** key. Follow steps **2** to **9** above.

### **SureFill code messages**

The printer displays an information message:

- If you enter an incorrect SureFill® code.
- If you enter a SureFill® code that refers to an ink or solvent that is out of date (that is the ink or solvent shelf life has expired).
- If you enter a SureFill® code that is not correct for the ink or solvent types that the printer uses.
- If you enter a SureFill® code that was used previously.

Follow the instructions on the screen to continue to refill the ink or solvent.



## 6.3 Clean or replace the air filter

The method you use to clean or replace the air filter depends on:

- The type of printer—5900 and 7900 or 7900 (IP65 version).
- The operating conditions.

NOTE: The 7900 (IP65 version) includes the 7900 Spectrum printer.

Make sure that you use the correct replacement filter:

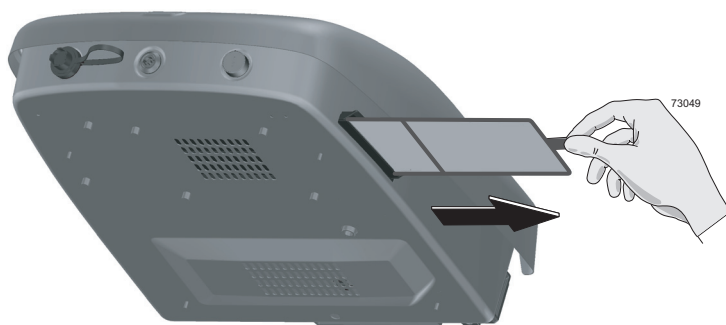
- For the 5900 and 7900, the filter part number is FA13178.
- For the 7900 IP65 version, the filter part number is FA13179.

### 5900 and 7900 printer

Clean the air filter every week. If the printer operates in dirty conditions, you must clean the filter every day.

To clean or replace the filter:

1. Use the nylon tab to remove the filter element. (Pressure can be necessary to release the filter from the housing.) Refer to the illustration below:



**Figure 6-10. Remove the air filter (5900 and 7900)**

2. Gently hit the filter to remove dirt, or use an air line to blow air through the filter in the opposite direction to the normal flow.
3. Check that the filter is clean and no dirt is visible in the filter housing. Replace the filter if you cannot clean it.
4. Fit the clean filter or new filter into the filter housing. Make sure that you correctly fit the filter:
  - The direction of the soft surface of the filter must be towards the top of the printer.
  - The direction of the wire mesh surface must be towards the base of the printer.
  - The direction of the tab must be away from the printer.

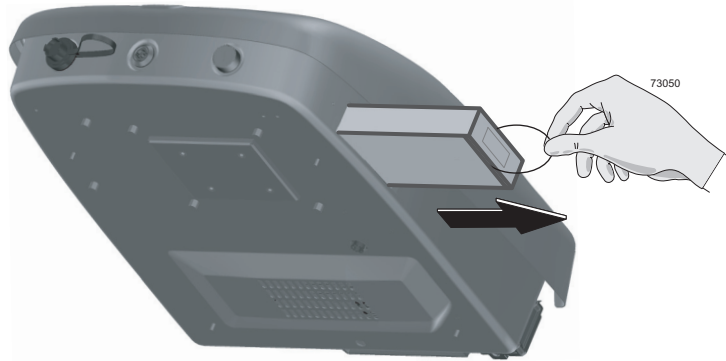
## 7900 (IP65 version) printer

The air filters in the *7900 (IP65 version)* and the *5900/7900* are in the same position. The *7900 (IP65 version)* has an access panel to make it resistant to water and dust.

You cannot clean the air filter of the *7900 (IP65 version)* printer. You must replace the air filter.

To replace the air filter:

1. Loosen the screw and release the filter access panel.
2. Pull the filter handle until the filter is removed from the filter housing. The filter fits tightly into the housing. Refer to the illustration below:



**Figure 6-11. Remove the air filter (7900 IP65 version)**

3. Make sure that the new filter is clean and the type of filter is correct. Make sure that there is no dirt in the filter housing.
4. Fit the new, Linx-approved, replacement filter into the filter housing. Make sure that you correctly fit the filter—the direction of the handle must be away from the printer, as shown in Figure 6-11.
5. Close and fasten the access panel.

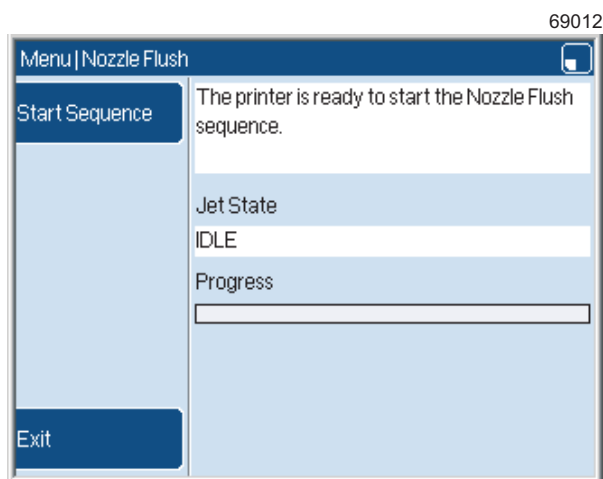
## 6.4 Flush the nozzle

You can use the **Nozzle Flush** sequence to clear the nozzle of dirt that can cause the ink jet to distort.

A **Nozzle Flush** uses the pump pressure to create a flow of solvent through the nozzle. The solvent returns to the ink system through the gutter.

To flush the nozzle:

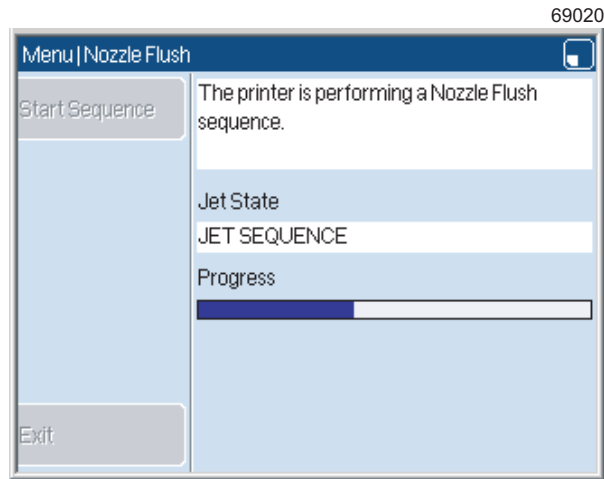
1. Make sure that the printer status is “IDLE”.
2. Put a container under the printhead to collect solvent.
3. At the **Print Monitor** page, press the **Menu** key.
4. Select **Nozzle Flush** to display the **Nozzle Flush** page:



**Figure 6-12. Nozzle Flush page**

NOTE: The **Nozzle Flush** option is not available unless the jet is stopped. Press the red [stop] key to stop the jet.

5. Press the **Start Sequence** key. A progress bar shows the progress of the flush sequence, which takes approximately 2 minutes 20 seconds. During the sequence, the soft keys are not available.



**Figure 6-13. Nozzle Flush sequence**

When the sequence stops, the printer displays the information page shown in Figure 6-12.

6. You can perform more flush sequences or return to the **Print Monitor** page.
  - To perform more flush sequences, repeat step 5.
  - To return to the **Print Monitor** page, press the **Exit** key twice.

**NOTE:** The Nozzle Flush sequence can correct an incorrect nozzle alignment. If the procedure is not successful, use the **Nozzle Clear** option to correct the problem.

## 6.5 Clear the nozzle



**WARNING: HAZARDOUS INKS AND SOLVENTS. SAFETY GLASSES AND SOLVENT-RESISTANT PROTECTIVE GLOVES MUST BE WORN THROUGHOUT THE FOLLOWING PROCEDURE. IGNORING THIS SAFETY WARNING COULD RESULT IN SEVERE EYE IRRITATION AND TEMPORARY (REVERSIBLE) EYE DAMAGE, AND NON-ALLERGIC CONTACT DERMATITIS.**

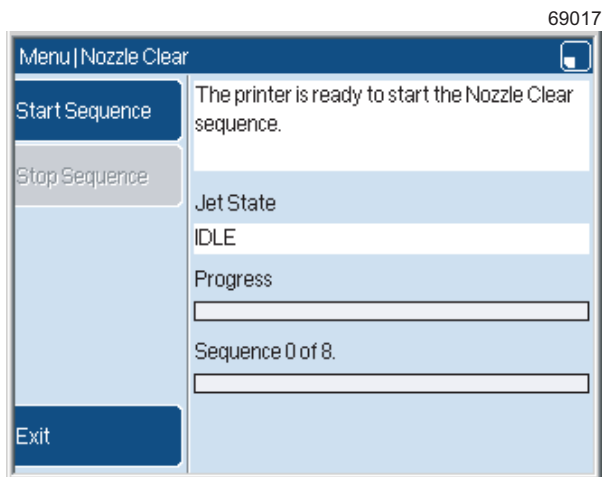
**WARNING: SOLVENT JET HAZARD. THE USE OF THE NOZZLE FLUSH FUNCTION MUST NOT BE CONFUSED WITH THE NOZZLE CLEAR FUNCTION. WHEN THE NOZZLE FLUSH SEQUENCE IS IN OPERATION, THE PRINthead MUST BE DIRECTED DOWN INTO A SUITABLE RECEPTACLE IN ORDER TO CONTAIN THE SOLVENT.**

The Nozzle Clear sequence uses the pump to create a vacuum in the nozzle while you apply solvent to the nozzle (see Figure 6-16). The vacuum pulls the solvent into the nozzle. The reversed solvent flow can clear a blockage behind the nozzle. The Nozzle Clear sequence takes approximately 20 seconds.

The printer can perform a series of eight Nozzle Clear sequences automatically. You can stop the Nozzle Clear before all eight sequences are performed, or repeat the sequence to make sure that the nozzle is clean.

### To clear the nozzle

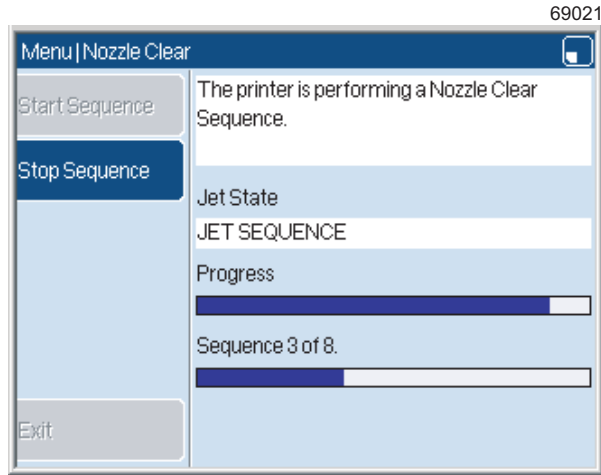
1. Make sure that the printer status is “IDLE”.
2. Remove the printhead cover tube.
3. At the **Print Monitor** page, press the **Menu** key.
4. Select **Nozzle Clear** to display the **Nozzle Clear** page:



**Figure 6-14. Nozzle Clear page**

**NOTE:** The **Nozzle Clear** option is not available unless the jet is stopped. Press the red [stop] key to stop the jet.

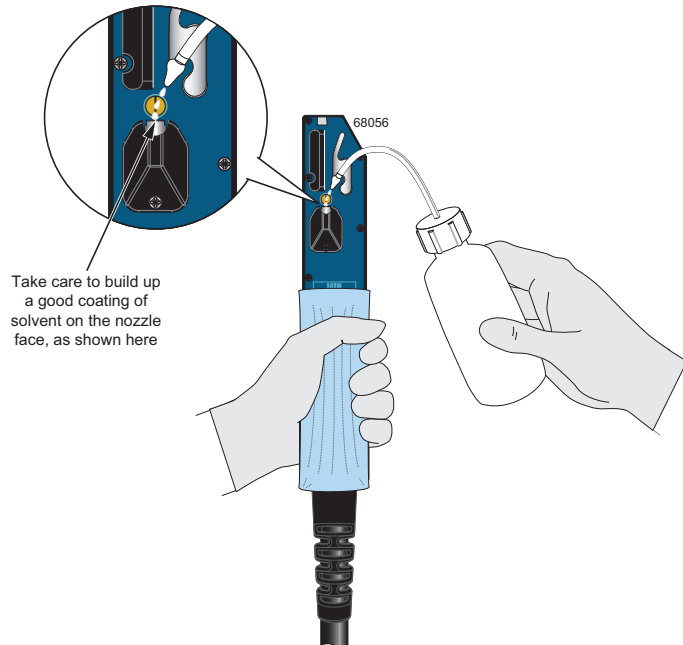
5. Press the **Start Sequence** key. The first Nozzle Clear sequence starts.



**Figure 6-15. Nozzle Clear sequence**

There are two progress bars:

- The upper bar shows the progress of each sequence.
  - The lower bar shows the number of Nozzle Clear sequences that have completed.
6. When the first sequence starts, turn the printhead upside down and apply the solvent to the nozzle face (see Figure 6-16). The solvent enters the nozzle:



**Figure 6-16. Apply the solvent to the nozzle**

7. To perform all eight sequences, continue to apply the solvent until both the progress bars are complete.

To stop the sequence, press the **Stop Sequence** key.

8. To return to the **Print Monitor** page, press the **Exit** key twice.

NOTE: To make sure that the nozzle is clear, start the jet. Make sure that the jet flows from the nozzle into the gutter. If the jet is not aligned correctly, contact your local Linx distributor.

# Appendix A: If the printer complains


This chapter describes some of the System Event messages and what to do if the printer displays a Warning or a Print Failure message. The printer displays these messages in the Printer Status area of the **Print Monitor** page if a problem occurs. Refer to the *How To* guides for the printers for more information on System Event messages.

If the printer displays an event message that is not described in this appendix, you should inform your supervisor or contact your local Linx distributor.



## Event messages

These event messages indicate problems that you can often easily correct. However, if any of the problems are not cleared after you perform the recommended action, contact your local Linx distributor.

| Event Message                           | Action  |
|---|---|
| 1.00 Internal failure                   | Contact your local Linx distributor.  |
| 1.01 Stack Overflow                     | Contact your local Linx distributor.  |
| 1.02 Corrupt Program Data               | Contact your local Linx distributor.  |
| 1.03 Internal Software Failure (ASSERT) | Contact your local Linx distributor.  |
| 2.00 Printhead Over Temperature         | <p>The temperature of the printhead is greater than approximately 60°C.</p>  <p><b>WARNING: HIGH TEMPERATURE. WHEN THIS FAULT IS REPORTED, THE PRINthead AND COVER TUBE CAN BE VERY HOT.</b></p> <p><b>EXTREME CARE MUST BE TAKEN TO PREVENT SKIN BURNS AND TO REDUCE THE RISK OF A FIRE. DO NOT TOUCH THE PRINthead, OR TRY TO REMOVE THE PRINthead COVER TUBE UNTIL THEY HAVE BECOME COOL NATURALLY.</b></p> <p><b>THERE IS A DANGER OF SEVERE BURNS TO THE HANDS IF THE PRINthead COVER TUBE IS REMOVED BEFORE IT HAS BECOME SUFFICIENTLY COOL. THERE IS ALSO AN INCREASED RISK OF FIRE CAUSED BY THE SUDDEN INCREASE OF AIR AROUND THE PRINthead.</b></p> <p><b>Do not touch the printhead.</b></p> <p>If it is safe to do so, power down the printer, or switch off the printer at the mains supply. <b>Without touching the printhead itself</b>, move the printhead assembly away from any source of heat. Contact your local Linx distributor.</p> |
| 2.01 EHT Trip                           | Clean the printhead and perform a <b>Nozzle Flush</b> . Make sure that the distance between the printhead and the substrate is 12 mm. If the failure persists, contact your local Linx distributor.   |
| 2.02 Phase Failure                      | Clean the printhead. Perform a <b>Nozzle Flush</b> and/or <b>Nozzle Clear</b> . If the failure persists, contact your local Linx distributor.   |
| 2.03 Time of Flight Failure             | Clean the printhead. Perform a <b>Nozzle Flush</b> and/or <b>Nozzle Clear</b> . If the failure persists, contact your local Linx distributor.   |
| 2.04 300V Power Supply                  | Contact your local Linx distributor.  |
| 2.05 Ink Tank Empty                     | Follow the SureFill® instructions.  |
| 2.06 Solvent Tank Empty                 | Follow the SureFill® instructions.  |
| 2.07 Internal Spillage                  | Turn off the printer. Contact your local Linx distributor.  |

**Figure A-1. System Events**

| Event Message                                     | Action  |
|---|---|
| 2.08 Printer Over Temperature                     | Clean or replace the air filter. If the failure persists, contact your local Linx distributor.  |
| 2.09 Misaligned Ink Jet                           | Clean the printhead. Perform a <b>Nozzle Flush</b> and <b>Nozzle Clear</b> . If the failure persists, contact your local Linx distributor.  |
| 2.11 Pressure Limit Reached                       | Perform a <b>Nozzle Clear</b> . If the failure persists, contact your local Linx distributor.   |
| 2.12 Viscosity                                    | Contact your local Linx distributor.  |
| 2.13 Hardware Safety Trip                         | Contact your local Linx distributor.  |
| 2.14 Pressure Override Circuit Tripped            | Contact your local Linx distributor.  |
| 2.15 Scheduled Maintenance is Overdue by 3 months | The printer is overdue for a service. Contact your local Linx distributor to arrange for a scheduled maintenance visit.   |
| 3.00 Shutdown Incomplete                          | <ol style="list-style-type: none"> <li>1. Clean the printhead.</li> <li>2. Press the green [start] key to start the jet.</li> <li>3. Press the red [stop] key to stop the jet.</li> <li>4. Power down the printer.</li> <li>5. Power up the printer.</li> </ol> |
| 3.01 Shutdown Incomplete (Failure)                | <ol style="list-style-type: none"> <li>1. Clean the printhead.</li> <li>2. Press the green [start] key to start the jet.</li> <li>3. Press the red [stop] key to stop the jet.</li> <li>4. Power down the printer.</li> <li>5. Power up the printer.</li> </ol> |
| 3.02 Memory Corrupt                               | Contact your local Linx distributor.  |
| 3.03 Ink Low                                      | Follow the SureFill® instructions.  |
| 3.04 Solvent Low                                  | Follow the SureFill® instructions.  |
| 3.05 Over Speed (Print Trigger)                   | Contact your local Linx distributor.  |
| 3.06 Over Speed (Synchronous Data)                | Contact your local Linx distributor.  |
| 3.07 Over Speed (Asynchronous Data)               | Contact your local Linx distributor.  |
| 3.08 Over Speed (Line Speed)                      | If the failure persists, contact your local Linx distributor.   |
| 3.09 Over Speed (Compensation)                    | If the failure persists, contact your local Linx distributor.   |
| 3.10 Under Speed (Line Speed)                     | Contact your local Linx distributor.  |
| 3.11 Printer Requires Scheduled Maintenance       | The printer is due for a service. Contact your local Linx distributor to arrange for a scheduled maintenance visit.   |
| 3.12 Printhead Cover Off                          | Refit the cover tube correctly. If the failure persists, contact your local Linx distributor.   |

Figure A-1. System Events (Continued)

| Event Message  | Action   |
|--|--|
| 3.13 Cover Override Link Fitted                              | Contact your local Linx distributor.   |
| 3.14 Power Off Override Active                               | Contact your local Linx distributor.   |
| 3.15 Safety Override Active                                  | Contact your local Linx distributor.   |
| 3.16 Gutter Override Active                                  | Contact your local Linx distributor.   |
| 3.17 Gate Array Test Mode Active                             | Contact your local Linx distributor.   |
| 3.18 Low Pressure  | Contact your local Linx distributor.   |
| 3.19 Valid UNIC Chip Not Found                               | Contact your local Linx distributor.   |
| 3.20 No Time of Flight                                       | Clean the printhead. Perform a <b>Nozzle Flush</b> and/or <b>Nozzle Clear</b> . If the failure persists, contact your local Linx distributor.  |
| 3.21 Ink Low Prevented Mix                                   | Refill the ink tank with ink.  |
| 3.22 Fault Prevented Mix                                     | 7900 Spectrum printers only.<br>This will be accompanied by another event message, describing the fault. If the fault is listed in this section, perform the necessary action. If the fault is not listed here, consult your supervisor or local Linx distributor. |
| 3.23 Power Off Occurred During Mix                           | 7900 Spectrum printers only.<br>Wait until the printer finishes the mix sequence before you power off the printer. (During a mix sequence, the printer status is shown as "MIX".)  |
| 3.24 Restart In Progress                                     | Press the <b>OK</b> key to acknowledge the event message. The printer should operate normally.   |
| 3.25 Ink Unmixed for 4 Weeks                                 | 7900 Spectrum printers only.<br>Wait until the printer finishes the mix sequence before you start to print. (During a mix sequence, the printer status is shown as "MIX".)   |
| 3.26 User Data Corrupt                                       | Contact your local Linx distributor.   |
| 3.27 Mix Disabled  | Contact your local Linx distributor.   |
| 3.28 Printhead requires cleaning at shutdown                 | Clean the printhead after the next shutdown. If the failure persists, contact your local Linx distributor.   |
| 3.29 Over Speed (No Remote Data)                             | Contact your local Linx distributor.   |
| 3.30 Remote Error  | Contact your local Linx distributor.   |
| 3.31 Restarted Print Delay                                   | Contact your local Linx distributor.   |
| 3.35 Printer Requires Scheduled Maintenance Within One Month | The printer is due for a service within the next month. Contact your local Linx distributor to arrange for a scheduled maintenance visit.  |

Figure A-1. System Events (Continued)

# Appendix B: Training

Before operators are allowed to use the printer, or any of its accessories, they should be trained to a level of competency that allows them to perform their tasks safely and effectively. It is recommended that, as a minimum, the training should include the following topics.

## Basic operations

### Safety

Warnings and cautions

Safety issues (hazard prevention and accident management) for:

- Ink and solvent flammability
- Eye and skin contact
- Inhalation
- Ingestion

Importance of keeping the printer cover fitted

Use the emergency stop

### Getting started

Switch on and start up

The keyboard and display

Use of soft keys

Use of passwords

Navigate the user interface

### Printing

**Printer Status** area and event messages

Select a message

Print a message

Pause the print

### Stop print and shut down

Use the **Stop** soft key and the red [stop] key, (to stop print, stop the jet, and power down)

What happens during the power-down sequence

Use the power switch to power down (only in an emergency)

## Look after the printer

Warning and Failure messages and appropriate actions

Ink and solvent level warnings

Ink and solvent dos and don'ts

Ink and solvent addition and SureFill® codes.

## Intermediate operations

Depending upon the tasks that operators may be asked to perform, they may need additional training in the following areas.

### Create a message

Find the parameters

Use the **Message Editor**

Use the arrow keys to put the fields in the correct position

Save and print a new message

Print position

### Routine maintenance

How and when to clean the printhead

How and when to clean or replace the air filter

Use the **Nozzle Flush** and **Nozzle Clear** functions

# Appendix C: Glossary

The glossary explains some of the terms that are used in this guide. If the explanation contains a term that is also described in the glossary, that term is shown in *italics*.

|                        |  |
|------------------------|--|
| <b>Auto Power Down</b> | A function that turns off the printer automatically when the correct conditions are met.   |
| <b>Current Message</b> | The message that is selected for printing.   |
| <b>Cursor</b>          | The marker that shows your current position in a field or a message (for example, the Message Editor). You can use the arrow keys to move the cursor to another position.                            |
| <b>Field</b>           | A section of a message that you can create and edit separately from other sections. You use one or more fields to build a message. The field types include Text, counters, and Date and Time fields. |
| <b>Message</b>         | The information that is printed.   |
| <b>Print Count</b>     | The number of times that a message was printed after the Print Count was reset.  |
| <b>Print Delay</b>     | The distance between the product sensor and the position at which the printer starts printing the message.   |
| <b>Print Height</b>    | The height of the characters that are printed. You can adjust the height of the printed characters.  |
| <b>Printer Status</b>  | The current state of the printer. The Printer Status area gives information about the jet state, and the levels of the ink and the solvent.  |
| <b>Soft key</b>        | A key that changes its name and its function according to which page in the software is displayed.   |
| <b>SureFill® code</b>  | A code you enter before you can refill the ink or solvent. The code confirms that the ink or solvent has not expired and is the correct type for the printer.  |
| <b>Text box</b>        | A box that accepts text that you enter from the keyboard.  |

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# Index

## A

Air filter 52  
Alignment 55, 58  
Arrow key 7

## B

Bold value 32  
Boundary of message area 28  
Brush for cleaning 46

## C

Caution statements v  
Change Language 39  
Cleaning solvent 45  
Control (ctrl) key 35  
Cover lock vi  
Current Message 14, 23  
Cursor 9, 16, 27, 34, 35

## D

Date & Time field 15  
Date & Time store 11, 38  
Date field 27, 31  
Date formats 38  
Deflector plates 46  
Delete a field 35  
Delete a message 42

## E

Edit Date & Time page 31  
Edit pages 31  
Edit Text page 30  
Electromagnetic compatibility vi  
EMC vi  
Encoding 32  
External alarm vii  
Eye contact ix  
Eye protection v  
Eyeglasses v

## F

Fail LED 5

Field 15  
Field boundary 34  
Field type 32  
Filter (air) 52  
Font size 32  
Font style 32

## G

Gutter 54, 58

## I

Information page 6  
Ingestion ix  
Inhalation ix  
Ink 47  
    level 10  
Insert a field 27  
Insert Date & Time page 39, 40

## L

Language 39  
LED indicators 5  
Line Setup menu 19  
Linx Ink Shaker 47  
Logo field 15  
Logo store 11

## M

Manage Messages 41  
Material Safety Data Sheet viii  
Menu page 6  
Message boundary 28  
Message Editor 10, 16, 27, 30, 35, 40  
Message name 17  
Message store 10, 11, 12, 16, 19, 27  
Mix 14, 19, 50  
Move a field 35

## N

Negative Image 32  
Noise emission x  
Nozzle 54, 57  
Nozzle Clear 55, 56



Nozzle Flush 54

## O

OK key 9  
Operator entry 6  
Options 32, 40  
Orientation 32  
Orientation Sequence store 11  
Overlapped fields 28, 34

## P

Password 3  
Pause printing 21, 23  
Power LED 5  
Power-down options 24  
Print Count 23  
Print Delay 8, 21, 22  
Print Monitor page 6, 10, 16, 30, 37  
Print position 21  
Print Settings 7, 22, 23  
Print Style 40  
Printer failure 5  
Printer Status area 25, 51, 65  
Printhead 21  
Product sensor 19, 21, 65  
Production Schedule store 11  
Progress bar 57  
Prompted field 15

## R

Ready LED 5  
Remote field 15  
Rename 41

## S

Save a message 17  
Save Changes 17  
Select key 8  
Sell-by date 39  
Sensor 19, 21, 65  
Sequential field 21  
Sequential Number field 15  
Shift Code field 15  
Shift Code store 11  
Shift key 35  
Shutdown x  
Skin contact ix  
Soft key 4  
Software version xi, 6  
Solvent 45, 47, 54, 57  
level 10

Spectrum printer 14, 19, 50, 52  
Splash screen 6, 13  
Start Printing key 21  
Start Sequence key 57  
Stop key 24  
Stop Sequence key 58  
Stores 11  
SureFill code 47  
SureFill page 48, 50  
System event 10

## T

Task page 6  
Temperature 60  
Text field 15, 27, 30  
Text Sequence field 15  
Text Sequence store 11  
Time field 27, 31  
Time Offset 39  
Trigger 19  
Trigger signal 21

## U

User Level 3, 6, 12, 41

## V

Ventilation viii

## W

Warning v  
LED 5  
Wash station 45