

Linx 5900 & 7900



How To Create Text and
Orientation Sequences



THINKING ALONG YOUR LINES



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1 Introduction

This document describes the Text and Orientation sequences in the 7900 printer and shows how you create new Text and Orientation sequences.

NOTE: You cannot create or edit text or orientation sequences for the 5900 printer, but the four standard orientations (Horizontal + Vertical Flip, Horizontal Flip, Normal, and Vertical Flip) are available in the Orientation Sequence Store (see 'Orientation sequence' on page 3). These orientations are used for basic traversing applications for the 5900 Dairy Coder printer. Refer to *How To Use Dynamic Message Orientation* for more information.

You need a User Level C password to perform all the tasks that are described in this document.

1.1 Health and Safety

Make sure that you read and understand the Health and Safety information in the 'Safety' section of the *Linx 5900 & 7900 Quick Start Guide*.



2 Sequences

Two types of sequence are described in this document:

- Text sequence
- Orientation sequence

You use the same procedure to create and customize each type of sequence. Most of the pages and options are the same but the page names are different.

2.1 Text sequence

Use this type of sequence when you need a series of messages that contain different text. You can use a text sequence to print a batch code on a product, like the following example.

Batch	Batch Code	Quantity
1	"AAA"	300
2	"BBB"	200
3	"CCC"	400

Figure 1. Batch Code sequence

The printer prints the batch code "AAA" on the first 300 products, then prints the batch code "BBB" on 200 products, and "CCC" on 400 products. The sequence automatically restarts when the sequence of 900 messages is complete.

Normally the printer updates the counter each time it prints a message. However, you can also use an external trigger signal to update the counter.

2.2 Orientation sequence

An Orientation sequence is a list of orientations that the printer applies to a text field when you print the message. The following orientations are available:

- Normal:

TEST ⁶¹⁰⁹

- Vertical Flip:

TEST ⁶¹¹¹

- Horizontal Flip:

TEST ⁶¹¹⁰

- Horizontal + Vertical Flip:

TEST ⁶¹¹³

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You can use this type of sequence if the printhead changes its direction during the print process (this process has the name 'traversing'). The following example prints a message on 15 items. The items are in a box that has three rows with five items in each row. The printhead changes direction after each row.

Step	Orientation	Quantity
1	Normal	5
2	Horizontal Flip	5
3	Normal	5

Figure 2. Orientation sequence

The printer reverses the message on the second set of five items because the printhead direction is reversed. The sequence automatically restarts when the sequence of 15 messages is complete.

Normally the printer updates the counter when it prints a message. You can use an external trigger signal to update the counter.

NOTE: For details of how to use these orientations in traversing applications for the 5900 Dairy Coder printer, refer to *How To Use Dynamic Message Orientation*.

2.3 Create a sequence

To create a Text sequence:

At the **Print Monitor** page select **Menu > Stores > Text Sequence Store** to display the **Text Sequence Store** page.

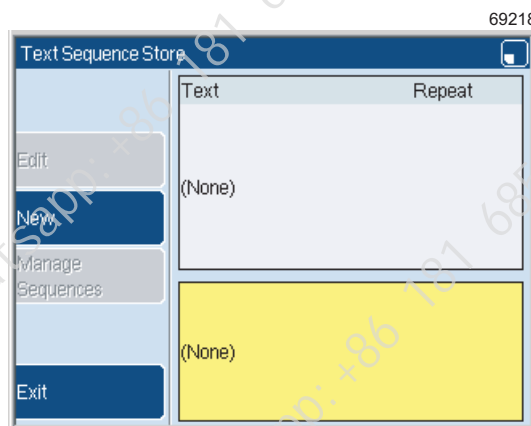


Figure 3. Text Sequence Store page

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To create an Orientation sequence:

At the **Print Monitor** page, select **Menu > Stores > Orientation Sequence Store** to display the **Orientation Sequence Store** page.

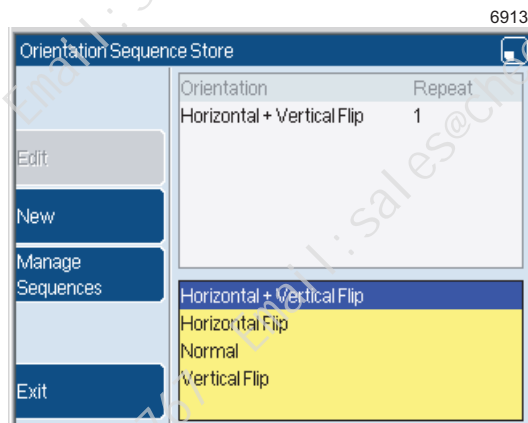


Figure 4. Orientation Sequence Store page

The **Edit** and the **Manage Sequences** keys are available only when there are items in the Store.

The Orientation Sequence Store is never empty because it always contains the four orientation sequences shown in Figure 4. The **Manage Sequences** key is always available when you display the **Orientation Sequence Store** page. The **Edit** key is available if you select an Orientation Sequence that you can edit.

The Text Sequence Store is empty until you create and save a Text sequence. The **Manage Sequences** key is available in the **Text Sequence Store** page only when the Text Sequence Store contains at least one Text sequence. The **Edit** key is available if you select a Text sequence.

2.3.1 Manage Sequences

You can use the **Manage Sequences** key to copy a sequence, change a sequence name, or delete a sequence. The **Copy** option, the **Rename** option, and the **Delete** option are not described in this document. These options are like the options in the **Message Store > Manage Messages** page, which is described in the *Linx 5900 & 7900 Quick Start Guide*.

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2.3.2 Example sequences

The following example shows how you create both types of sequence. Many of the next steps are the same for both types of sequence. The figures show the pages that are displayed for both types of sequence.

- 1 Press the **New** key to begin. The printer displays the **Text Sequence Editor** page or the **Orientation Sequence Editor** page.

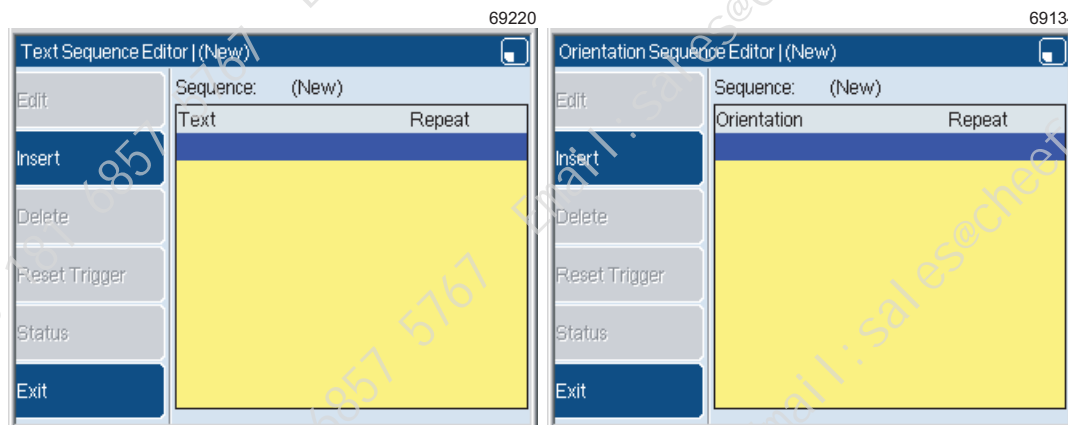


Figure 5. Editor pages

This page shows you that the sequence is empty.

- 2 Press the **Insert** key to display the **Insert Item** page.

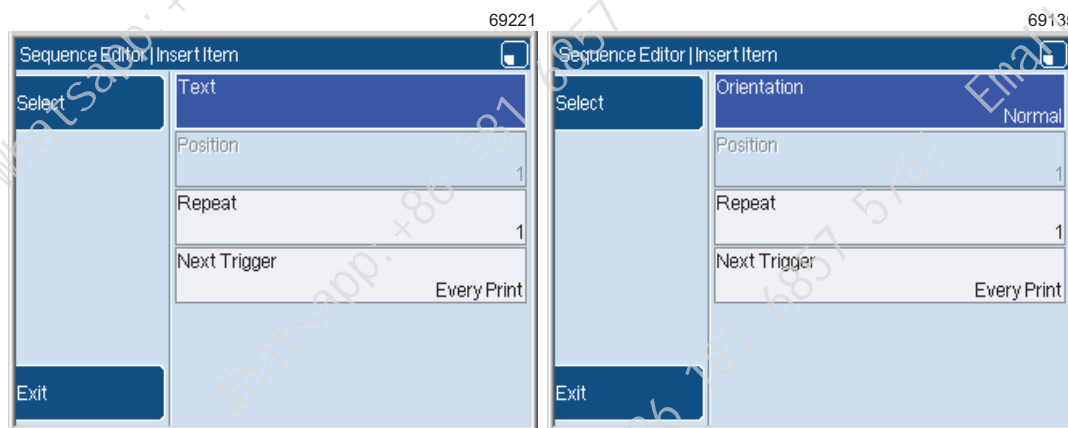


Figure 6. Insert Item pages

The **Position** option, the **Repeat** option, and the **Next Trigger** option are described on page 11.

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- 3 To insert an item in a sequence, perform one of the following steps.

For a Text sequence:

Select the **Text** option to display the **Text** page.

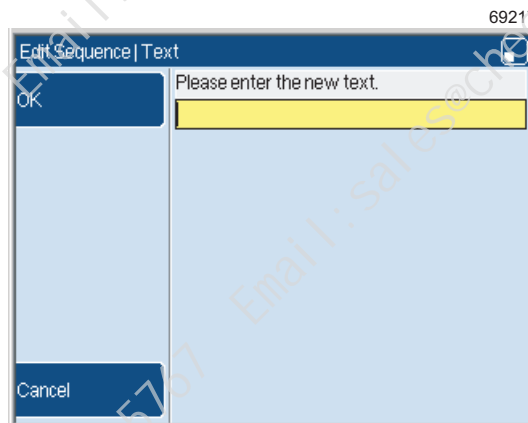


Figure 7. Edit Sequence: Text page

Use this page to enter the text for the first item. For this example, enter “AAA”.

For an Orientation sequence:

Select the **Orientation** option to display the **Orientation** page.

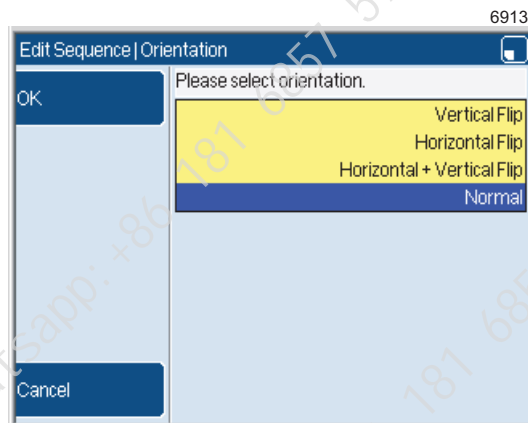


Figure 8. Edit Sequence: Orientation page

Highlight the first orientation for the sequence. For this example, select “Horizontal Flip”.

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- Press the **OK** key to return to the **Insert Item** page. The **Insert Item** page shows the first item in the sequence.

69219

Sequence Editor | Insert Item

Select	Text
	AAA
	Position
	1
	Repeat
	1
	Next Trigger
	Every Print
Exit	

69222

Sequence Editor | Edit Item

Select	Orientation
	Horizontal Flip
	Position
	1
	Repeat
	1
	Next Trigger
	Every Print
Exit	

Figure 9. Insert Item pages: first item

- Press the **Exit** key to display the sequence. This page is like Figure 5 on page 6 but now the sequence contains one item.

69223

Text Sequence Editor |(New)

Edit	Sequence: (New)
	Text
	Repeat
	AAA
	1
Insert	
Delete	
Reset Trigger	
Status	
Exit	

69224

Orientation Sequence Editor |(New)

Edit	Sequence: (New)
	Orientation
	Repeat
	Horizontal Flip
	1
Insert	
Delete	
Reset Trigger	
Status	
Exit	

Figure 10. Sequence with first item

- To insert the next item in the sequence, use the Down arrow key to move the highlight into the empty position below the first item.

69225

Text Sequence Editor |(New)

Edit	Sequence: (New)
	Text
	Repeat
	AAA
	1
Insert	
Delete	
Reset Trigger	
Status	
Exit	

69226

Orientation Sequence Editor |(New)

Edit	Sequence: (New)
	Orientation
	Repeat
	Horizontal Flip
	1
Insert	
Delete	
Reset Trigger	
Status	
Exit	

Figure 11. Empty position

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- 7 Repeat steps 2 to 6 to add two more items to each sequence, as follows:
- In the Text sequence, add the text strings “BBB” and “CCC”.
 - In the Orientation sequence add the orientations “Vertical Flip” and “Normal”.

For this example, the completed sequences are like Figure 12.

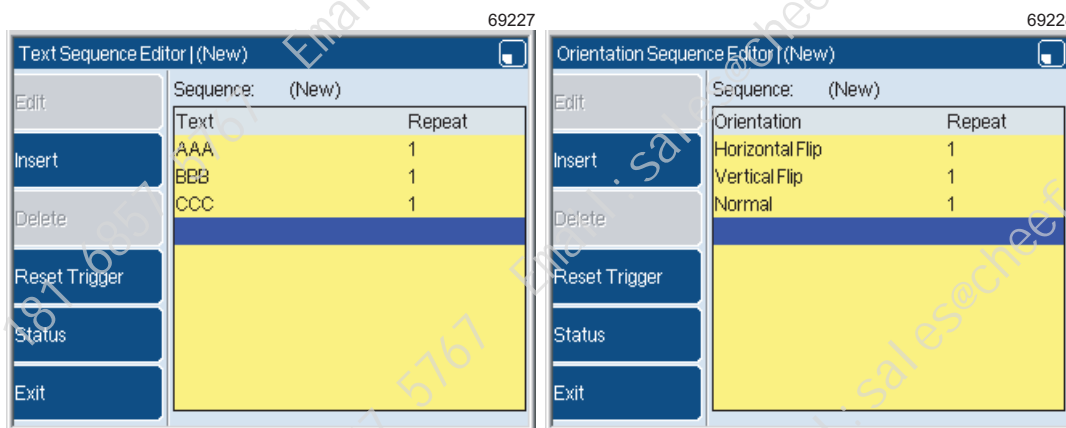


Figure 12. Sequence completed

Save your changes

To save your sequence, press the **Exit** key. The printer displays one of the following pages.

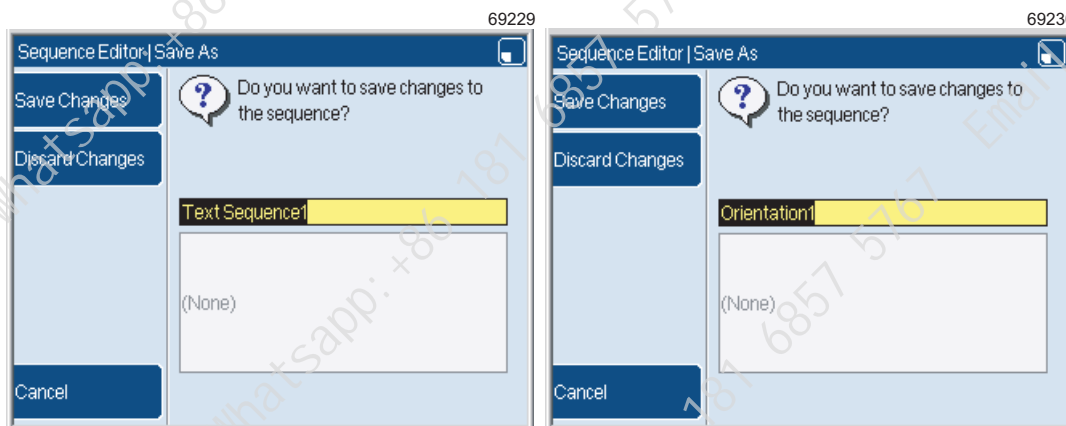


Figure 13. Save the sequence

Change the default name if necessary, then save your changes, discard the changes, or cancel the process and return to the editor page.

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If you press the **Save** key, the printer displays the store page and displays your completed sequence in the list of sequence names. The upper part of the screen displays the contents of the sequence.

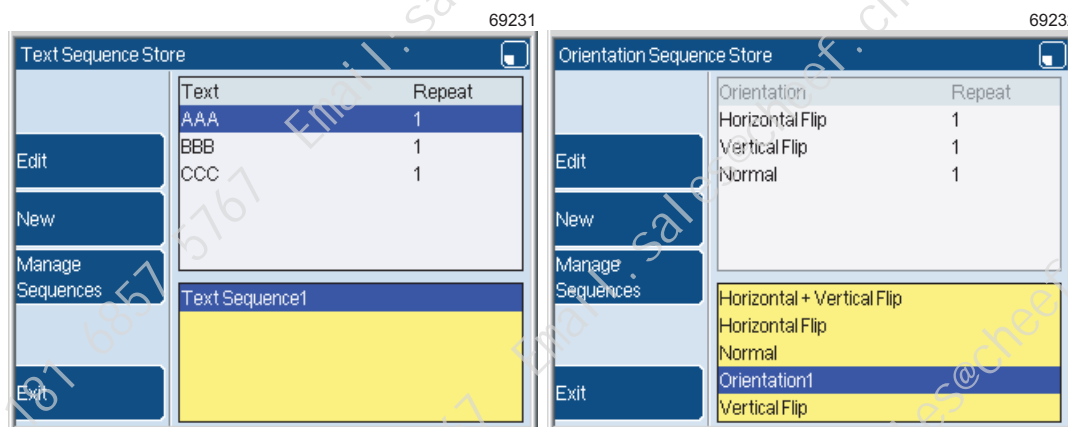


Figure 14. Sequence Store pages

2.3.3 Edit an item in a sequence

To change one of the items in a sequence, highlight the sequence in the store page, as shown in Figure 14. Press the **Edit** key to display the items in the sequence.

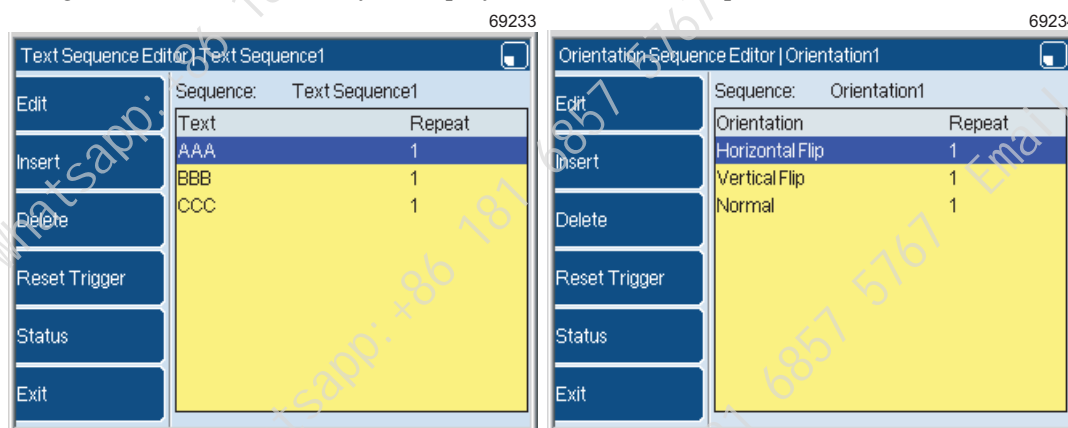


Figure 15. Sequence Editor pages

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To edit an item, highlight the required item, as shown in Figure 15 on page 10, and press the **Edit** key again. The printer displays the **Edit Item** page.

Figure 16. Edit Item pages

The **Edit Item** page is like the **Insert Item** page, and the options are the same.

2.3.4 Position

You can use the **Position** option to set the position of an item in the sequence.

Figure 17. Position page

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If you change the setting to “3” for the text item “AAA” in the example Text Sequence, the item moves to the end of the sequence.

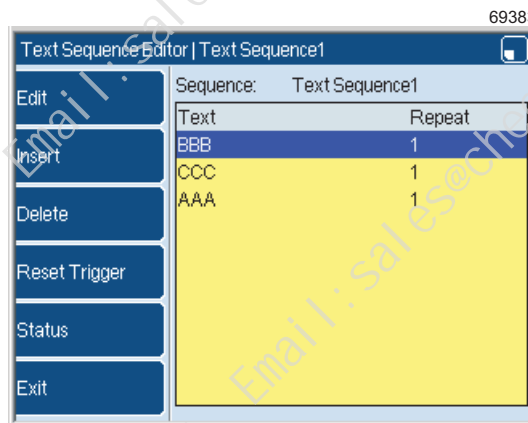


Figure 18. Text sequence with order changed

You can also drag the item to a new position. Use the arrow keys to highlight an item, then press the [alt] key and the Up or Down arrow key to move the item.

2.3.5 Repeat

This option controls the number of occurrences of each item. In the example Text sequence, the printer makes one print of each Text item. In the example Orientation sequence, the printer makes one print with each orientation.

To create a batch code sequence like the example in Figure 1 on page 3, which is repeated in Figure 19 below, select the **Repeat** option for each item in the Text sequence. Enter the correct quantity (for example 300, 200, or 400 in this example).

Batch	Batch Code	Quantity
1	“AAA”	300
2	“BBB”	200
3	“CCC”	400

Figure 19. Batch Code sequence

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The complete sequence is shown below.

69243

Text Sequence Editor Text Sequence1	
Sequence: Text Sequence1	
Text	Repeat
AAA	300
BBB	200
CCC	400

Figure 20. Text sequence: batch code example

2.3.6 Next Trigger

Use this option to define the trigger signal that the printer uses to count the occurrences of each item. You can use a different **Next Trigger** setting for each item in the sequence.

When you select the **Next Trigger** option, the printer displays the **Trigger** page.

69239

Trigger Editor Trigger	
Select	Trigger Type
	Every Print
Exit	

Figure 21. Trigger Editor page: Every Print

How To Create Text and Orientation Sequences



Select the **Trigger Type** option to display a list of the trigger types that are available.

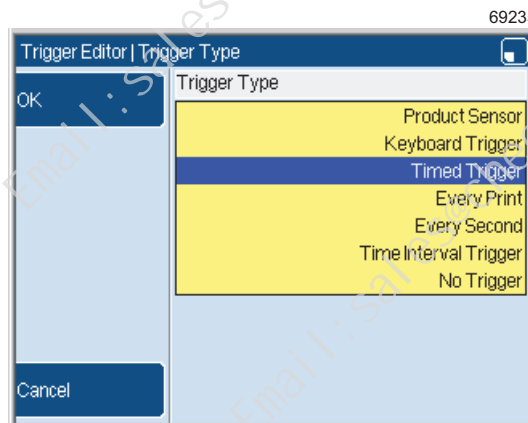


Figure 22. Trigger Type page

The trigger type that you use controls the printer operation as follows:

Product Sensor

If the **Repeat** option is set to 5, the printer prints the message “AAA” until 5 pulses are received from the product sensor.

For many applications the **Product Sensor** trigger and the **Every Print** trigger give the same result. This is because the product sensor starts a print for each product that it detects.

If you use this type of trigger, the printer displays an additional option.

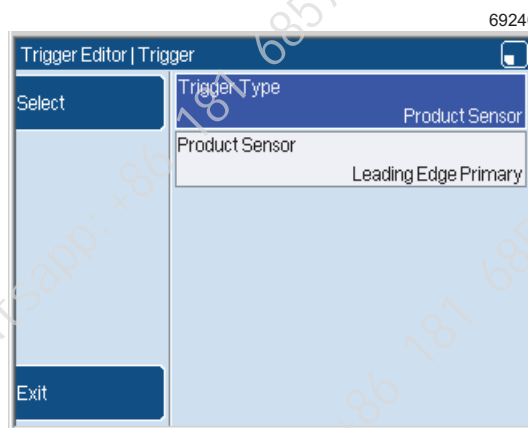


Figure 23. Trigger page: Product Sensor

How To Create Text and Orientation Sequences



Product Sensor

Use the **Product Sensor** option to select the product sensor setup that you use.

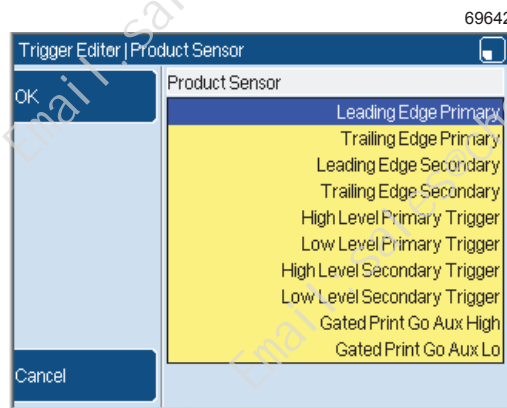


Figure 24. Trigger Editor: Product Sensor page

Leading Edge Primary

The printer updates the message when the primary product sensor detects the leading edge of a product.

Trailing Edge Primary

The printer updates the message when the primary product sensor detects the trailing edge of the product.

Leading Edge Secondary

The printer updates the message when the secondary product sensor detects the leading edge of a product.

Trailing Edge Secondary

The printer updates the message when the secondary product sensor detects the trailing edge of the product.

High Level Primary Trigger or High Level Secondary Trigger

The printer continuously prints or updates the message while the product sensor detects the presence of a product (the signal is active).

Low Level Primary Trigger or Low Level Secondary Trigger

The printer continuously prints or updates the message while the printer does *not* detect the presence of a product (the signal is not active).

Gated Auxiliary Input Triggers

You can use an auxiliary input (the Secondary Trigger input) to control the operation of a sequence in the Current Message. The example in Figure 25 on page 16 shows a Text sequence or Orientation sequence in the Current Message. The labels N, N+1, N+2... show the state of the sequence, and the 'Print Go' signal is the signal that starts each print.

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The printer checks the state of the Secondary Trigger input at the start of every message. The printer does not update the sequence for the next message unless the Secondary Trigger input is in the correct state.

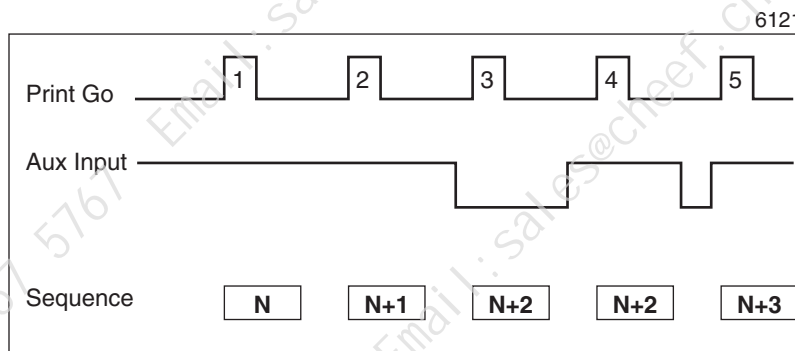


Figure 25. Sequential field

Gated Print Go Aux High

The printer updates the sequence for the next message if the Secondary Trigger input signal is in the high state.

Figure 25 shows how the printer updates the sequence when you use the Gated Print Go Aux High trigger setting.

- When the Print Go signal number 2 occurs, the Secondary Trigger input is in the high state. The printer updates the sequence to prepare the message for Print Go number 3.
- When the Print Go signal number 3 occurs, the Secondary Trigger input is in the low state. The printer does *not* update the sequence to prepare the message for Print Go number 4.

Gated Print Go Aux Low

The printer updates the sequence for the next message if the Secondary Trigger input is low.

Keyboard Trigger

If the **Repeat** option is set to 5, the printer prints "AAA" on every product until you generate a keyboard trigger signal 5 times. (To generate a keyboard trigger signal, press the [alt] key and the [T] key together.)

Timed Trigger

The printer increases the count at the same time every day, every week, every month, or every year.

If you use this type of trigger, the printer displays an additional option:

Timed Trigger

You can set this option to Daily, Weekly, Monthly, or Yearly. The operation of the sequence is as follows.

Daily

The sequence changes every day at the same time of day. If the **Repeat** option is set to 5, the printer uses the same sequence item for five days, then changes to item 2.

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Weekly	The sequence changes on the same day of every week, and at the same time of day. If the Repeat option is set to 5, the printer uses the same sequence item for five weeks, then changes to item 2.
Monthly	The sequence changes on the same day of every month, and at the same time of day. If the Repeat option is set to 5, the printer uses the same sequence item for five months, then changes to item 2.
Yearly	The sequence changes on the same day of every year, and at the same time of day. If the Repeat option is set to 5, the printer uses the same sequence item for five years, then changes to item 2.

If you use this type of trigger, the printer displays additional options that you must set. These additional options are described below.

Time

Use this option to set the time of day at which the trigger occurs.

Day of Week

If you set the **Timed Trigger** option to “Weekly”, use this option to set the day of the week and the time of day for the trigger.

Day of Month

If you set the **Timed Trigger** option to “Monthly” or “Yearly”, use this option to set the day of the month for the trigger. The range of values allowed for the day of the month is 1 to 31, or “End Of Month”.

NOTE: If a month does not include the day you set for the Monthly trigger, the trigger does not occur in that month. For example, if you set **Day of Month** to 31, the trigger does not occur in February, April, June, September, and November.

Month

If you set the **Timed Trigger** option to “Yearly”, use this option to set the month of the year for the trigger.

Every Print

In the batch code example, you use the **Every Print** option as shown in Figure 22 on page 14. The printer increases the batch count at every print. The printer makes 300 prints with the first item (“AAA”), then changes to the second item (“BBB”).

Every Second

The count increases every second. In the batch code example, the printer prints “AAA” on every product that passes the printhead within 300 seconds. (The number of products is not defined.)

Time Interval Trigger

The printer begins the sequence at the Start Time that you set. The Time Interval that you set defines the times at which the sequence moves to the next step.

How To Create Text and Orientation Sequences



You can set any Start Time between 00:00:00 and 23:59:00. You can set any Time Interval from 00:01:00 until 23:59:00. If you set a Time Interval of 00:00:00, the printer uses 00:01:00 for the Time Interval.

NOTE: When a sequence finishes, the printer starts the sequence again. If you start the print before or after the sequence Start Time, the printer adjusts the sequence position for the Current Message. This adjustment sets the sequence to the correct position for the current date and time.

No Trigger

The count is disabled and the printer always prints the first item.

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2.4 Edit a sequence

NOTE: If the printer status is 'PRINTING', you cannot edit an orientation sequence that is used in the Current Message.

To make changes to a sequence, highlight the sequence in the store page, as shown in Figure 14 on page 10. Press the **Edit** key to display the sequence.

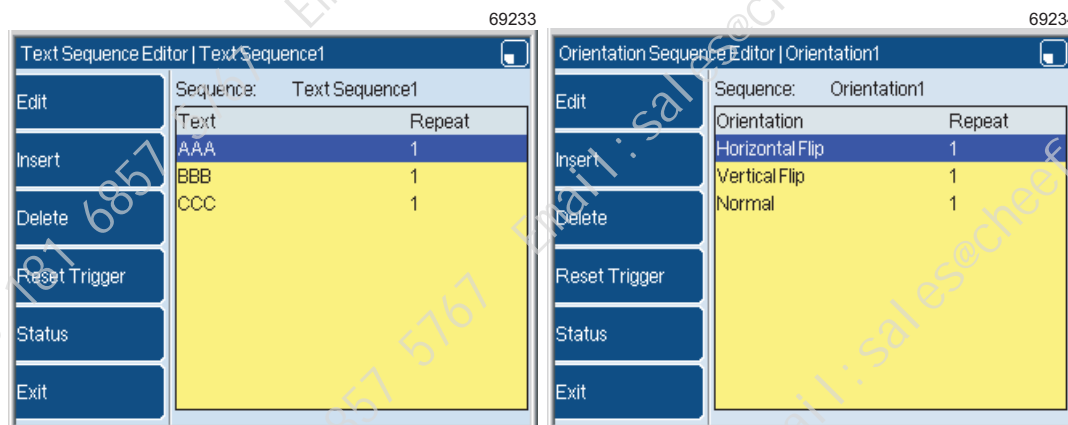


Figure 26. Edit the sequence

2.4.1 Insert

Use this option to insert a new item into the sequence. The new item is inserted before the highlighted item.

2.4.2 Delete

Use this option to delete the highlighted item from the sequence. The printer displays a confirmation page before the item is deleted.

2.4.3 Reset Trigger

You can use a trigger signal to reset the sequence to the start before the sequence is complete. Use the **Reset Trigger** option to define the type of trigger signal that you use to reset the sequence.

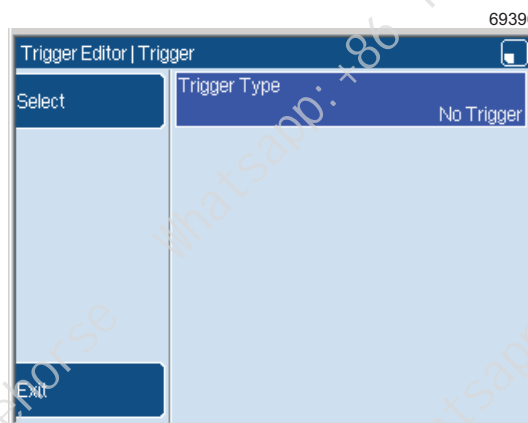


Figure 27. Trigger Editor page: No Trigger

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Select the **Trigger Type** option to display a list of the trigger signals that are available.

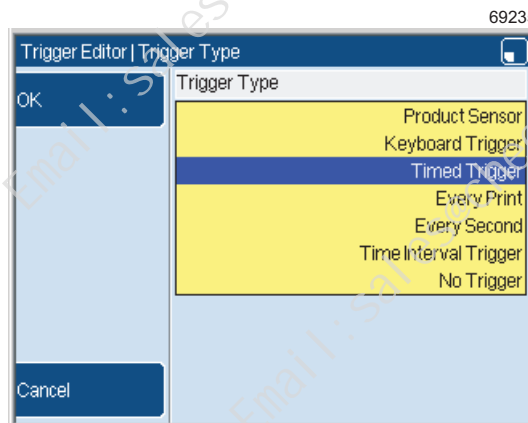


Figure 28. Trigger Type page

You can use any of the following trigger types:

Product Sensor

The printer resets the sequence when a signal is received from the product sensor. If you use this type of trigger, the printer displays an additional option.

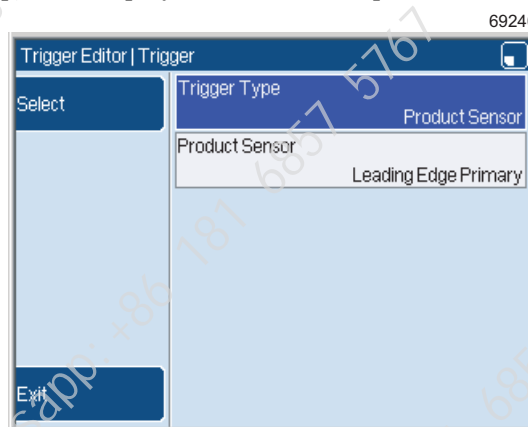


Figure 29. Trigger Editor page: Product Sensor

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Product Sensor

Use the **Product Sensor** option to select the product sensor setup that you use.

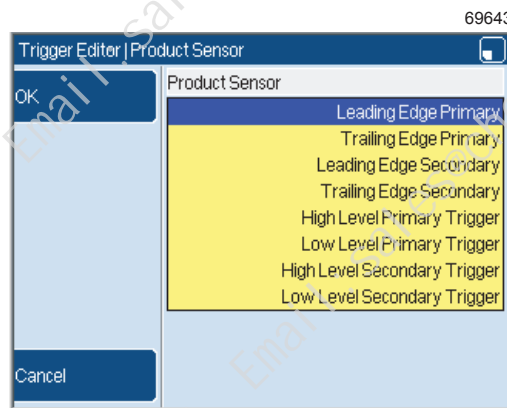


Figure 30. Product Sensor page

Leading Edge Primary

The printer resets the sequence when the primary product sensor detects the leading edge of a product.

Trailing Edge Primary

The printer resets the sequence when the primary product sensor detects the trailing edge of the product.

Leading Edge Secondary

The printer resets the sequence when the secondary product sensor detects the leading edge of a product.

Trailing Edge Secondary

The printer resets the sequence when the secondary product sensor detects the trailing edge of the product.

High Level Primary Trigger or High Level Secondary Trigger

The printer continuously prints or updates the message while the product sensor detects the presence of a product (the signal is active).

Low Level Primary Trigger or Low Level Secondary Trigger

The printer continuously prints or updates the message while the printer does *not* detect the presence of a product (the signal is not active).

Keyboard Trigger

The printer resets the sequence when you generate a keyboard trigger. (To generate a keyboard trigger signal, press the [alt] key and the [T] key together.)

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Timed Trigger

The printer resets the sequence at the same time every day, every week, every month, or every year.

If you use this type of trigger, the printer displays an additional option:

Timed Trigger

You can set this option to Daily, Weekly, Monthly, or Yearly.

The **Timed Trigger** settings for the **Reset Trigger** option are like the **Timed Trigger** settings for the **Next Trigger** option. Refer to 'Timed Trigger' on page 16 for a description of these settings.

Every Print

The printer resets the sequence at every print. The sequence does not move forward.

Every Second

The printer resets the sequence every second.

Time Interval Trigger

The printer resets the sequence at the Start Time that you set. The Time Interval that you set defines the times at which the printer resets the sequence again.

You can set any Start Time between 00:00:00 and 23:59:00. You can set any Time Interval from 00:01:00 until 23:59:00. If you set a Time Interval of 00:00:00, the printer uses 00:01:00 for the Time Interval.

No Trigger

The sequence is not reset—the printer always prints the whole sequence.

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2.4.4 Status

Select this option to display the **Status** page.

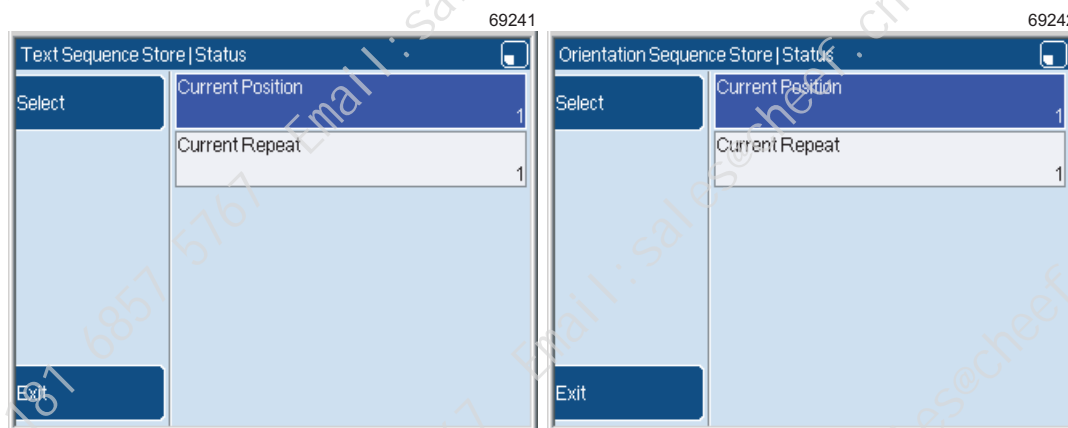


Figure 31. Sequence: Status pages

This page contains the following options:

Current Position

This option displays the item number of the current item in the sequence. You can change the value to make the printer change to a different item in the sequence. For example, if a problem occurs and some products are not marked, you can repeat a part of the sequence and try again.)

Current Repeat

This option displays the number of prints that the printer made with the current item. You can change the value to any number from 1 to the maximum value.

In the batch code example (see Figure 20 on page 13), the maximum value is 300 for item 1 ("AAA"). The maximum value is 200 for item 2 and 400 for item 3. The minimum value for any item is 1.

NOTE: If the printer status is 'PRINTING', you cannot change the status of a text sequence that is used in the Current Message.