# **Quick Reference Guide**



## **T8 control unit**

Version 1.2

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## Primary assignment menu keys

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## Primary assignment menu keys

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Menu keys Uxx basic screen - move in design N	VT - 8
Alternative key assignment for [L4] - [L7] if [R5] Edit stitch	
was previously selected N	VT - 8
Menu keys Uxx basic screen - Edit stitch level 1a N	VIT - 8

## Primary assignment menu keys

## editor basic screen - design graphic MT - 8

Alternative key assignment for [L4] - [L7] if [R5] Edit stitch	
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Menu keys Uxx basic screen - Edit stitch level 1b MT -	. 8



## Primary assignment submenu keys -

edit design	MT - 8
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## 1. Basic information – T8 control unit

## **1.1 Operating elements and connectivity**

#### 1.1.1 Operating elements

The front panel of the T8 control unit comprises three distinct areas that are colored pale gray.

1. The display area with the menu keys, information key for calling help text, and the shift key for shortcuts and accessing functions with dual-assigned keys.

- 2. The cursor pad with keys for confirming (OK), exiting (ESC) and deleting (DEL), the cursor keys and the TAB key for navigating in dialogs.
- 3. The machine control keypad with keys for moving the pantograph, starting and stopping the machine, reverse embroidery and jogging.



Figure 1.1: T8 control unit, operating elements

Display area

Menu keys

Shift button Information key

Machine control keypad

Cursor pad



#### Menu keys

The menu keys are located to the left and right of and below the display; they are not inscribed. The keys are assigned various functions, depending on the context, by way of a symbol or text that appears next to the relevant key on the display. The symbol or text indicates the function that is triggered by the key in the current situation.

For the purposes of this guide and to facilitate a description of the operating procedures and associated keystrokes, the menu keys are also numbered.



The keys to the left of the display are numbered, from top to bottom **[L1]-[L8]**. The keys to the right of the display are numbered, from top to bottom **[R1]-[R8]**. The keys below the display are numbered, from left to right **[U1]-[U0]**.

Figure 1.2: T8 control unit, numbering of keys







#### Machine control keypad

There are two sides to the keypad, only one of which is active at a time. The keys on the left start and stop the machine, and those on the right control the movement of the pantograph. A green telltale indicates which side is active.

Press the **[ZSK]** key on the right keypad to switch between the start/stop and pantograph movement modes.

#### Left side activated (pantograph movement)



Arrow keys for moving the pantograph to set up the embroidery frame.

Blue appliqué key:

Moves the pantograph to the last embroidery position, typically after taking out the frame to change the embroidery material.

#### Right side activated (start/stop mode)



Figure 1.4: T8 control unit, machine control keypad





Figure 1.5: T8 control unit, machine control keypad









Starts the machine.

Stops the machine.

Embroiders back within the selected design.



Executes individual stitches (jogging).

#### NOTE



Some machines, especially large multi-head machines, have additional machine control keypads located between the heads. These offer only the functions assigned to the right side of the keypad described before.

Only the [ZSK] key on the control unit switches between the two keypad modes. When the start/stop mode is active, either the keypads between the heads or the keys on the control unit can be used to start and stop the machine.

Some larger machines are also equipped with an operating lever underneath the work table, which also supports the start/stop mode if the right side of the machine control keypad has been activated at the control unit.

#### **Operating lever functions:**

Move lever to the right:	Starts the machine
Move lever back and to the right:	Executes individual stitches (jogging)
Move lever to the left:	Stops the machine
Move lever back and to the left:	Executes reverse embroidery



## 1.2 Menu components and their use

The user software employs several typical components in its menus and dialogs. These are briefly described below and their use is illustrated by some typical dialogs.

#### Menu dialogs

The menu dialogs take you to the various sections of the user interface. The buttons in these dialogs are assigned either symbols or text or a combination of symbols and text.



Use the menu keys next to the symbols to trigger functions or open menus.



Keys **[L1]-[L8]** 



Keys [U1]-[U10]

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Keys [R1]-[R8]

The shortcut **[i] + [menu key]** calls a help function relating to the individual symbol. (For explanation see *Displaying help text for symbol buttons*).

Figure 1.6: T8 control unit, machine basic screen



Figure 1.7:

#### Machine setup submenu

Figure 1.7:			
machine basic screen,		Machin	e setup
submenu selection		Speeds setup	Operating modes setup
		Tools setup	Ribbon device
		Sequin device	
			vious
	To open an	other submenu:	
	Menu keys	[L1]-[L8]	







Menu keys [R1]-[R8]

To exit a submenu, press the [ESC] key or the menu key next to [L8/ **R8 Previous]**.

i



#### Setup dialogs with number inputs and options

The setup dialogs influence the responses of the machine and control unit. The operator is typically presented with choices that are made by entering numbers or selecting and deselecting options.



Figure 1.8: T8 control unit, machine basic screen, setup dialog



Press menu key [L7 Defaults] to reset the menu to the ZSK works settings.



[	ESC	
-	00987030	

Press the **[OK]** key or menu key **[L8 Confirm]** to accept entries.

Press the [ESC] key or [R8 Previous] to abort an entry without saving.



## Basic information - T8 control unit





Figure 1.11: T8 control unit, machine basic screen,

letter inputs

#### Entering text in setup dialogs

Text has to be typed in dialogs to enter design and directory names, use the search function in the directory, and to make entries when working in a network.



Press the **[OK]** key to accept entries.



OK

Press the **[ESC]** key to abort an entry without saving.



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Press the **[TAB]** key to change the characters assigned to the menu keys.





## Basic information - T8 control unit

DEL
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Press the **[DEL]** key to delete characters.

Use the **[cursor key left]/[cursor key right]** to move among the individual characters of the text entry.

#### **Dialogs with lists/tables**

Lists or tables are used whenever several text or picture items are to be selected in a dialog. Examples include the directory displays, the design table in the editor and design repetition environments, and individual setup dialogs.

The **[cursor keys]** in combination with the **[SHIFT]** key are used to navigate within the lists or tables:



**[Cursor key up]/[cursor key down]** for selecting the previous/next row or line in the list/table.



**[SHIFT] + [cursor key up]/[SHIFT] + [cursor key down]** for scrolling page by page in the list/table.



[Cursor key left]/[cursor key right] for selecting the previous/next column in the list/table.



**[SHIFT] + [cursor key left]/[SHIFT] + [cursor key right]** for scrolling the display of lists/tables horizontally.



## 1.3 Displaying help text for symbol buttons

Especially in the basic screen, the T8 control unit depicts numerous symbol buttons. A help function has been implemented to help the user learn the symbols' meaning. The function of the individual buttons is described in plain text.

#### Activating help text

- Press and hold down the information key[i].
- At the same time, press the menu key [L1]-[L8], [R1]-[R8] or [U1]-[U0] next to the symbol for which you require an explanation.

**Example** - Help text for the symbol next to menu key **[R1]** in the basic screen.



- Then press menu key **[R1]** (1.12-1).
  - $\rightarrow$  The help text (1.12-3) remains in the display until the keys are released.

Figure 1.12: T8 control unit, example: On-screen help text

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## 1.4 Interfaces and connectors

#### disk drive

Inserting a disk in order to load design data:

The disk drive is situated near the top of the housing on the right side; it is protected by flap.

Push back the flap and insert the disk with the sticker facing the front.



#### Back panel of the T8 control unit



Figure 1.13: T8 control unit, disk drive

Figure 1.14: T8 control unit, rear view

Disk drive Connector for service purposes only

Mouse/trackball connector (optional)

2x USB port (USB 1.1)

1x Ethernet connector 10/100 MBIT with RJ45

Machine interface



#### Inserting USB memory devices

The USB memory

can be inserted and removed while the control is operational. (Similar to disk media)



Inserting an Ethernet cable with an RJ45 connector:

The type of Ethernet cable depends on the application:

- Direct network connection, e. g. with a laptop:
  - $\rightarrow$  use a crosslink cable
- Use in a larger network with several users; control unit is connected to a network hub:
  - $\rightarrow$  use a regular patch cable

The full manual contains further information on working with networks.



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Figure 1.15: T8 control unit, USB connector

Figure 1.16: T8 control unit, RJ45 connector



## 2. Switching on – basic screen

• Switch on the machine with the main switch.



Figure 2.1:



## 2.1 Basic screen structure and status displays

Once the system is running, the machine software's basic screen appears on the display. It shows the design that has been selected for embroidering and the current machine status. By way of the menu keys, the basic screen gives access to the principal machine control functions:



Figure 2.3: Basic screen, devision Number of completed design passes Design number of selected embroidery design

Name of selected design

Current stitch number

Total number of stitches in design

Current needle number Current needle assignment and corresponding design colors

Current embroidery speed

Display of current machine mode

Display of current machine operations and faults



## Switching on - basic screen

#### Symbols used in the mode display and their meaning



















Machine keypad for start/stop/reverse/jog active.

Machine keypad for pantograph positioning (fast) active.

Machine keypad for pantograph positioning (slow) active.

Machine keypad for pantograph positioning (10 INC steps) active.

Machine keypad for pantograph positioning (1 INC steps) active.

Machine configured for border frame embroidery.

Machine configured for tubular system.

Machine configured for cap embroidery.

Machine configured for ribbon device.

Machine configured for cylinder frame.



## Switching on – basic screen

# Normal embroidery. Sequin embroidery. Boring Loop embroidery. Embroidering with the W head (only for special machine types) Cord/tape stitch type. Zigzag stitch type. Coiling stitch type. Embroidery stitch type.

Embroidering with the F head



















## Switching on – basic screen

#### Embroidering with the K head

(only for special machine types)





Chain stitch type.

Moss stitch type.



Monogram machine mode is activated.

The machine obtains monograms or design data from third-party software (e. g. GiS BasePac)



#### Display area for current machine operations and faults

Depending on their type, the messages displayed here are depicted in different colors.

Green background:	Normal embroidery
Machine is embroidering	During normal embroidery
X7 11 1 1 1	m · i · i · · · · .
Yellow background:	I ypical special machine situation
Machine standstill	After switching on the machine.
Machine stopped	When the machine is stopped by the operator.
End of design	Upon reaching the end of the embroidery design.
Design: stop	Upon reaching a stop function in the design data.
Trimming	During automatic trimming.
Needle change	During a change to a different nee- dle.
Waiting for next design	When the monogram machine mode is activated.
Red background:	Fault situation
No design data available	Machine start initiated before an embroidery design was selected.
Frame limitation	Embroidery frame has reached one of the travel limits.
Thread break	Upon detection of a thread break.

More status and fault messages are contained in the full manual.



For selecting the embroidery design from disk, USB, memory or network by

way of media selection submenus

#### Overview of functions and menus in basic screen

#### Right menu keys [R1] to [R7]





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	[ <b>U1</b> ] to <b>[U0]</b> .
<b>[R2]</b> Design head	Displays the design head of the cur- rently selected embroidery design. Shows parameters, such as dimen- sions, functions used etc.
<b>[R3]</b> Approach stitch	Positioning within the design to a different stitch number. Setup dialog for entering/editing the current stitch number.
<b>[R4]</b> Manual needle change	Manual selection of a different em- broidery needle; the available nee- dle changes are presented by keys <b>[U1]</b> to <b>[U0]</b> . The needle change is performed the next time the ma- chine is started.
<b>[R5]</b> Needle assignment	For assigning the embroidery de- sign needles to the machine needles. The relevant setup dialog appears in the display.
[R6] Speed	Changes the embroidery speed for the current stitch type; the available speed control options are presented by keys <b>[U1]</b> to <b>[U0]</b> .
<b>[R7]</b> Switch off	Closes the user software before the machine is shut down.



#### Bottom menu keys [U1] to [U0]

















<b>[U1]</b> Trimming upper/bobbin	

**[U2]** Trimming bobbin only

[U3] Design range

Manual activation of the trimming function (upper and bobbin threads). The trimming operation is performed the next time the machine is started.

Manual activation of the trimming function (bobbin thread only). The trimming operation is performed the next time the machine is started.

For checking whether the embroidery frame (pantograph) is properly set up for the design.

Activates, selects, resets job/user stitch counters.

For selecting manual pantograph positioning speed and embroidery application (border, tubular system, cap etc.).

Saves current position of embroidery frame.

Moves the embroidery frame to the most recently saved position.

Raises the needle (may not be available, depending on machine type). [SHIFT] + [raise needle] = raises needle to travel limit, otherwise incrementally.

**[U4]** Machine data acquisition MDA

[U5] Pantograph configuration

**[U6]** Define reference point

[U7] Approach reference point

[U8] Raise needle



## Switching on – basic screen





[U9] Lower needle

[U0] More

Lowers the needle incrementally (may not be available, depending on machine type).

Gives access to additional machine functions, in particular for special devices such as rotary hook changer and bobbin changer etc.



## Switching on – basic screen

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1		Ì,
	00987109	



Left menu keys [L1] - [L7]	
<b>[L1]</b> Machine informations	Version display and display/input of machine information.
[L2] Machine setup	Menu for selecting/editing special machine settings, such as modes, speed, ribbon device, sequins etc.
[L3] Service	Menus for service personnel and ZSK engineers. Machine device/hardware testing, machine configuration.
<b>[L4]</b> Design manager	Menus for loading/saving/deleting design data from/to disk, USB, net- work and memory during embroi- dery.
<b>[L5]</b> Editor	Editor menus for editing design da- ta, modify, optimize, move start/end point, edit stitches.
<b>[L6]</b> Design repetition	Menus for creating/editing design repetition tables automatically or manually. Automatic: one design; manual: several designs can be combined.
<b>[L7]</b> Software/hardware settings	Menus for customizing the control unit software/hardware. Adjust- ments: Language, system clock, network, user interface settings.



#### Additional menu keys

Depending on the machine type and installed special devices, these keys are presented either on the top tier in the basic screen or when menu key **[U0]** More is pressed.

Changes rotary hooks at all embroidery heads.

Changes Bobbin cases at all embroidery heads.

Position bobbin changer for magazine change.

Main shaft engaged by the main shaft brake.

Releases the main shaft; deactivates main shaft brake









Bobbin change

Bobbin change

Magazine change

Rotary hook changer

Main shaft brake ON

Main shaft brake OFF



#### Changing language in basic screen

The basic screen has a concealed function for changing the language of dialog texts. If a language that you do not wish to use is set when the control is switched on, use this shortcut to activate the dialog that enables you to change it:

• Press and hold down the [SHIFT] key and then press menu key [U1].



- $\rightarrow$  The dialog enabling you to change the language appears in the display.
- Select the desired dialog language with the cursor keys.
- Press the **[OK]** key to confirm.
  - $\rightarrow$  All texts now appear in the selected language.

The availability of various languages in this dialog depends on the software installed in the machine.

Chinese is available only in conjunction with the appropriate operating system.



Figure 2.4: T8 control unit, languages, changing





NOTE


# 3. Work procedures

# 3.1 Embroidering a design

The explanation below describes the procedure from loading a design from a ZSK transport code disk to the embroidery operation. If you wish to use a design from a USB memory device instead of a disk , the procedure is identical apart from the initial selection of the medium and design.

### Step 1: Selecting medium from which design is to be loaded

ZSK	Machine	18.03.2007	23:41
			<mark>\$</mark> -€
			<b>*0</b>
		0 / 0	***
		V 1	<b>!!</b>
		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 1 2 0 4 5 6 7 8 9 9 9 9 9 9 9 9 9	<b>\$</b> ])
\$\$\$\$ \$\$\$\$		0 RPM	(C)
		🔹 🤌 🛡	<b>2</b>
	Machine standstill		
*		<b>.</b>	MORE
00988116			

The machine basic screen indicates that no design is currently selected for embroidering.

If a design is still assigned to the machine, it must be closed before you can follow the procedure described here.

Key sequence for closing a design: [R1], [U8], [L8].

Figure 3.1: Machine basic screen (empty)





- Insert (disk) or connect (USB stick) the medium from which the design is to be loaded.
- Press key **[R1]** to select the design for the machine.

The assignment of menu keys **[U1]-[U0]** below the display changes to enable you to select the medium from which the design is to be loaded.

- For the disk drive, press key **[U3]**.
- For the USB stick, press key [U4].



Step 2:

Figure 3.2:				_		
Dialog:		Select pantogra	ph configuration	_		
Check pantograph		>> * Border frame	No.: 001 Vers.: 02			
configuration		* Tubular frame	No.: 002 Vers.: 02			
configuration		* Border frame with single frame	NO.: 003 Vers.: 02			
		* Cylinder frame	No.: 006 Vers.: 00			
		-				
		· · · · · · · · · · · · · · · · · · ·				
		Axis override				
		(manging)	-	ר ר		
		Confirm	Previous			
		00000110				
		00988119				
		<b>X7 1 1 1 1 1</b>				
	$\rightarrow$	You are asked whether the se	elected pantograph configura	tion matches		
		the current machine setup (be	order, tubular system, cap etc	c.). The most		
		recently used configuration is	highlighted in hlue and ean l	ha confirmed		
		recently used configuration is	s nightighted in blue and can t	be confirmed		
		straight away.				
	10	1.00		1		
	• If you	wish to use a different config	uration, select it with the curs	sor keys.		
00987029						
	<ul> <li>Confirm</li> </ul>	m either the most recently use	ed configuration or the new o	ne		
OR	by pressing <b>[OK]</b> oder den Tasten <b>[L8]</b> or <b>[R8]</b> .					
00987029	oj proc					
NOTE	The num	iber of entries available f	for selection in the dialo	g depends		
	on the m	achine type and its conf	iguration. In some case.	the dialog		
	aces not	appear for one of the fol	llowing reasons:			
	The mae	hing supports only one i	antograph configuration	n in which		
	The mac	inne supports only one j	Santograph configuration			
	case the	dialog is superfluous.				
	The dialo	og has been deactivated ו	under Software/hardware	e settings >		
	Software	settings > Inquiry panto	graph configuration			
	continuite	, cottingo + niquity punto	graph comgatation			
	$\rightarrow$	Once the disk format has been	n verified, the contents of the	disk or USB		
		stick are displayed in a directo				
		stor are displayed in a difecto	чу.			
	l					

Checking pantograph configuration



Figure 3.3:
Dialog:
Loading disk design (table)



	Load dis	k design:					
00000001.200	Kreuzstich	StitchData	8781	⇔	37	\$	38
00000010.z00	TUT ENCH AMUN	StitchData	22799	⇔	105	\$	151
00000035.z00		StitchData	1946	÷	38	\$	35
00000202.z01	4 EULEN	StitchData	9406	⇔	33	\$	53
00000209.200		StitchData	17094	⇔	206	\$	110
00000405.Z00	Bärchen	StitchData	6899	⇔	85	\$	103
00000417.200	KM15 Motorradfahrer	StitchData	3077	÷	78	\$	66
00000417.205	Motorrad	StitchData	8112	÷	65	\$	54
00000423.200	KM20 Triumphmotorrad	StitchData	5148	÷	117	\$	9(
00001043.Z00	Abzeichen44	StitchData	1413	÷	32	\$	29
00002076.200	Leisure Time 5N 95%	StitchData	16961	÷	77	\$	71
00020022.200	Tier2 Tiger	StitchData	17993	⇔	145	\$	184
00020038.200	Vögel	StitchData	9496	÷	270	\$	12
00021303.200		StitchData	7021	÷	92	\$	9(
09700886.Z00		StitchData	3386	⇔	50	\$	41
09900558.z02	3 coccinelles	StitchData	8622	⇔	60	\$	158
10000213.Z01	Cap claw	StitchData	5291	÷	219	\$	36
		Designs and	design t	abl	85		
pesigns and design casies							
Select design	Select design Previous						
	●●●         ●					123	
00988120							

- ОК 00987029
- NOTE

Figure 3.4: Dialog: Loading disk design (picto directory)

- Use the cursor keys to select the design.
- Confirm the selected design with the **[OK]** or **[L8]** key.

With ZSK transport code disks and other ZSK transport code media (USB, memory, network), the directory display can be switched from a table to a series of pictograms.

Press menu key [U1] to toggle between the table and pictogram directories.



Step 4: Selecting number for saving design in memory				
	Load desi	gn from disk	1	
	Selected design: 00000405.Z00 Bärchen			
	New number/name for design:			
	New number: 00000405.z00			
	Free design number	)		
	Free design version	Capacity:		
	New name: Bärchen			
	( <u> </u>	J		
	Confirm	Previous		
		,		
	00988122			
• If the [L8] I →	new number has not been allow key. If the number is not availabl you have to search for or ent	cated previously, confirm with th le, a red highlighted message is i ter an unallocated number.	e <b>[OK]</b> or ssued and	
The box is activated; enter the design number with numeral keys [U1]-[U0].				
[L4] Free design number Triggers		ext unassigned design number.		
[L5] Free design version Triggers dicated of		gers an automatic search for the next unassigned design version under the in- ted design number.		
This ind Softwar activate To simp scribed	quiry can be automated u re se <i>ttings &gt; Always ask</i> ed, the design number is i olify the loading operation under Step 4 can be omit	under Software/hardware se for design number. If this o ssued automatically. n, therefore, the inquiry rou tted.	ettings > option is utine de-	
	Step 4: Step 4: St	Step 4: Selecting number for     Selected design:   0000405.200   Bachen   We number/name for design:   We number:   Pree design number   Free design version   Wew name:   Barchen   Output   Output   Pree design version   We name:   Barchen   Output   Barchen   Output   Output	Step 4: Selecting number for saving design in memory          Step 4: Selecting number for saving design in memory         Image: selecting number is general in the image: selecting number is in the number is not been allocated previously, confirm with the [L6] key.         Image: selecting number is not been allocated previously, confirm with the [L6] key.         Image: selecting number is not available, a red highlighted message is is you have to search for or enter an unallocated number.         The box is activated; enter the design number with numeral keys [U1]-         Triggers an automatic search for the next unassigned design version under cated design number.         This inquiry can be automated under Software/hardware set Software settings > Always ask for design number. If this for the locating operation, therefore, the inquiry real set in the locating operation, therefore, the inquiry real set inquiry real set in the locating operation, therefore, the inquiry real set inquiry can be omitted.	

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## NOTE

This inquiry can be automated by selecting the appropriate ... Optimization ... option under Software/hardware settings > Software settings>. You can thus select the optimization method to match the design data that you typically use.

To simplify the loading operation, therefore, the inquiry routine described under Step 5 can be omitted.



## NOTE

This inquiry can be automated by selecting the appropriate *modification* option under *Software/hardware settings* > *Software settings* >. You can thus select the modification method to match the design data and embroidery applications that you typically use. To simplify the loading operation, therefore, the inquiry routine described under Step 6 can be omitted. Confirming acceptance of loaded and, if applicable,



Figure 3.8:

Dialog:

Step 7:



optimized/modified design

OK



Figure 3.9: Machine basic screen, with loaded design

- Press the **[OK]** or **[R7]** key to accept the design for embroidery. •
- Pressing [ESC] or [R8] aborts the loading operation; the design is not transferred to the machine.

Upon completion of the loading operation, the machine basic screen appears and depicts the selected design.



#### Step 8: Assigning needles

Here you need to check whether the yarn colors assigned to the needles on the machine correspond to the needle numbers used in the design. If this is not the case, you can use the needle assignment function to allocate the needle numbers contained in the design to the needles/yarn colors on the machine more appropriately.





The current assignment is depicted in the machine basic screen and in the setup dialog.



In the present example, which contains three needle change commands (needle numbers highlighted in black in the first row), the assignment of the needles is to be changed as follows:



#### Figure 3.12: Dialog: Needle assignment



Needle 1 in the design is to correspond to needle 5 on the machine.

Work procedures

Needle 3 in the design is to correspond to needle 8 on the machine.

Needle 5 in the design is to correspond to needle 9 on the machine.

- To make these changes, enter the new needle numbers with the numeral keys **[U1]-[U9]**.
- To move to the next box, press **[TAB]** or key **[L3]**.
- Confirm the new settings with the **[OK]** or **[L8]** key.

TAB 00987031

OK





Figure 3.13: Machine control keypad





Figure 3.14: Dialog: Design range

The status display shows the currently selected needle

Status symbol (green)

# Step 9: Setting up embroidery frame and checking position with design range function

On the machine control keypad, press the **[ZSK]** key to activate the pantograph positioning keys on the left side.



• Use the pantograph positioning keys to position the embroidery frame underneath the embroidery head.

In the basic screen, press key **[U3]** to initiate the design range dialog.



→ A frame is drawn around the embroidery design. After a short delay, the design range operation can be initiated. This is indicated by the green symbol in the dialog status box.





Figure 3.15: Machine control keypad





• On the machine control keypad, press the **[ZSK]** key again to activate the machine start/stop mode (right side).



- Press the machine **[Start]** key to initiate the design range operation.
  - → The machine traces the outline of the design with the embroidery frame. Watch carefully to check whether the position of the current needle (needle 1 in this case) coincides with the embroidery frame at any time while the frame is in motion.
- The operation can be interrupted at any time by pressing the **[Stop]** key.
  - $\rightarrow$  If you do not intervene, the contouring operation is concluded once the outline has been traced.
- To change the setup position, activate the left side of the machine control keypad again.
- Use the pantograph positioning keys to adjust the position of the frame. Then switch the machine control keypad back to the start/stop mode and perform the contouring operation again.
- Repeat the procedure as many times as necessary to eliminate all critical frame/ needle positions when the machine traces the outline of the design.
  - Press **[OK]**, **[ESC]** or the **[L8]** key to exit the design range dialog.



•

	ation if applicable.
	The coarser or finer outline can be defined with <b>[R1]</b> and <b>[R3]</b> respectively.
[R1]	Create coarser outline (contour coarser).
[R2]	Create finer outline (contour finer).
	The tracing or framing speed can be reduced or increased with <b>[R3]</b> and <b>[R4]</b> respectively. This allows you to examine the critical positions more closely.
[R3]	Increase tracing speed (framing faster)
[R4]	Decrease tracing speed (framing slower)
[U8]	To facilitate a closer examination of critical positions, the embroidery needle can be lowered and raised with keys <b>[U8]</b> and <b>[U9]</b> respectively. Raise needle incrementally; <b>[SHIFT]+[U8]</b> to raise to travel limit.
[U9]	Lower needle incrementally.
	Use keys <b>[U1]-[U4]</b> to adjust the speed and increments with which the embroidery frame is positioned.
[U1]	Pantograph positioning at normal speed.
[U2]	Pantograph positioning at slow speed.
[U3]	Pantograph positioning in 10 INC steps.
[U4]	Pantograph positioning in 1 INC steps.

The design range dialog offers auxiliary functions to simplify the checking oper-



Figure 3.16:

Machine control keypad

# Step 10: Embroidering loaded design, speed changes, repairing thread breaks

The start/stop mode (right side of machine control keypad) must be activated when the design is being embroidered.

• Pressing the green **[Start]** key initiates embroidering.



- Pressing the red **[Stop]** key interrupts embroidering.
  - $\rightarrow$  The current machine statuses are continuously updated in the relevant areas of the basic screen during the embroidery operation.

#### Adjusting the embroidery speed

In some circumstances, different materials and designs can require the embroidery speed to be adjusted. The basic screen offers various speed functions for this purpose.

- Press key **[R6]** to activate the speed functions.
  - → This changes the assignment of functions to the menu keys [U1]-[U0].





#### The speed function keys are assigned as follows:

















- [U1] Maximum speed
- [U2] Minimum speed
- [U3] Increase speed

[U4] Decrease speed

[U5] Activate special speed

[U6] Normal speed

**[U7]** Speeds setup dialog

[U0] Previous

Sets the maximum available embroidery speed.

Sets the minimum embroidery speed (200 rpm).

Incrementally raises the embroidery speed from the current speed.

Incrementally reduces the embroidery speed from the current speed.

Decreases the speed to the set special speed. The special speed is typically set to 400 rpm; it can be adjusted.

Deactivates the special speed and activates the normal set speeds

Calls the speed control dialog for setting individual speed limits for different embroidery situations.

Resets keys **[U1]-[U0]** to their default assignment in the main screen.



### Repairing thread breaks

The upper or bobbin thread can break while the machine is embroidering. The machine monitors thread breaks and activates a special display when one is detected:



Indication of the head number (3.17-1) at which a thread break has occurred. If a break has occurred at several heads, the head number is followed by a +.

Symbolic representation (3.17-2) of the affected head, indicating whether the upper or bobbin thread is broken.

- Yellow rectangles represent the heads.
- Red rectangles mark thread breaks.

Indication of the stitch number (3.17-3) at which a thread break has been detected.

Once the thread break(s) has (have) been repaired at the head(s), the embroidery operation can be restarted straight away with the **[Start]** key. The dialog is automatically cleared from the display.

Figure 3.17: Dialog: Thread break





NOTE

Alternatively, the dialog can be terminated be pressing **[OK]**, **[ESC]**, **[L8]** or **[R8]**.

A thread break is also indicated by the relevant embroidery head's lamp.

Head lamp flashing rapidly:  $\rightarrow$ Head lamp flashing slowly:  $\rightarrow$ 

- Upper thread break detected
- Bobbin thread break detected



# 4. Machine setup

The machine setup section describes the current machine setting data as a function of the available embroidery heads.

# 4.1 General settings

- Press [L2] Machine setup in the basic screen
  - $\rightarrow$  The selection dialog for configuring the embroidery heads is opened.

The appearance of the *Settings for ... heads* dialog differs according to the type of machine.

Depending on the specification and previous machine setup, it is possible that the setup dialog that first appears is one for different heads, in this case the *Settings for F heads* dialog, for example.

Se	ttings for F heads
Operating modes setup	Pantograph
Speeds setup	Sequin device
Tools setup	Ribbon device
Thread break setup	
Trimming setup	
	Previous
00965B31	

To change the setup data to a different head type, press one of the **[U1] - [U3]** selection keys at the bottom left of the screen.



Figure 4.1: Dialog, Settings for F heads







Press **[U1] F heads** to display the dialog *Settings for F heads*.

Press **[U2] W heads** to display the dialog Settings for W heads.

Press **[U3] K heads** to display the dialog Settings for K heads.

4.1.1 General explanation of recurrent key functions and dialog options

# NOTE

The following recurrent options, key functions and input routines are contained in all setup dialogs for F, W and K embroidery heads. Their settings and effect are therefore explained here only once.

## 4.2.1.1 Key functions

### [L7] Defaults

Press the **[L7] Defaults** key/dialog option to reset all displayed option values to the works default settings. Then press the **[L8] Confirm** key to accept the reset option values.

## [L8] Confirm

Press the **[L8] Confirm** key/dialog option to accept the changes to the displayed option values (including default) and, in most cases, to return to the entry dialog of the function.

### [R8] Previous

Press the **[R8] Previous** key/dialog option in all dialogs to close the relevant setup dialog without accepting the changes made and, in most cases, to go back to the previous dialog level.

#### Activating/deactivating tools and options

• To activate/deactivate tools and options, press the appropriate **[Lx]/[Rx]** operator key.





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### **Entering letters and symbols**

Once an input option has been selected, a sub-dialog for entering text appears on the screen and the assignment of all the keys changes.





[L1] - [L8]		
[U1] - [U0]		
[R1] - [R8]		
[TAB]		
[介]		
[DEL]		

These keys are used to enter letters (a-h).

These keys are used to enter letters (i-r).

These keys are used to enter letters (s-z).

Press the **[TAB]** key to switch to symbol inputs.

Press the [î] key to switch to upper-case inputs (capital letters).

Press the **[DEL]** key to delete the character to the left of the cursor.



Figure 4.5: Example of number and letter inputs

a Z b Y c X d JAFA 0609-400 V f U g TAB Switching to other characters t c C Y f Switching to capital letters t	Machine version:	
b y c x d y f JAFA 0609-400 v f u g TAB Switching to other characters t c y f f f y f f f f f f f f f f f f f f f	a	z
c       x         d       w         e       JAFA 0609-400         e       v         f       u         g       TAB         Switching to other characters       t         f       u	b	У
d g TAB Switching to other characters f G Switching to capital letters	C	x
e     JAFA 0609-400     v       f     u       g     TAB     Switching to other characters       image: the system of the syste	d	W
f     u       g     TAB     Switching to other characters       f     f       f <td>e</td> <td>v</td>	e	v
g     TAB     Switching to other characters       t     Image: Switching to capital letters	f	u
	g TAB Switching to other characters (1) Switching to capital letters	t
h DEL Delete character left of cursor s	h Delete character left of cursor	s
i j k l m n o p q r	i j k l m n o p (	q r

[L1] - [L8]	These keys are used to enter symbols.
[R1] - [R7]	These keys are used to enter symbols.
[U1] - [U0]	These keys are used to enter symbols/numbers (1-0).
[TAB]	Press the <b>[TAB]</b> key to switch to letter inputs.
[介]	Press the [î] key to switch to upper-case inputs (capital letters).
[DEL]	Press the <b>[DEL]</b> key to delete the character to the left of the cursor.



# 4.3.1.2 Operating modes setup

The dialog Operating modes setup enables the user to activate and modify additional aspects of the embroidery machine's operating behavior.

Press [L1] Operating modes setup to start the *Operating modes setup* dialog. ٠

Figure 4.6: Dialog:		Operating modes setup				
Operating modes setup	<b>N</b>	Machine home funct:	ion	Starting n	leedle	
		Appliqué travel		Continue e	mbroid. immedi	ately
		Positioning		Continue e	mbroid. immedi	ately
	x pa	th 🕇	0 MM	Y path	<b>→</b> 0	MM
	ء 🗋	Snap in back stitc	ning			
	Defa	ults				
	Conf	irm		Previous		
		_				
	00988B4	3				
	Home function					
[L1] Machine Activates/deactivates the home function mode.						
	With Machine home function selected, the pantograph automatically returns design start point on completion of the design, so that no positioning is require the same motif is to be embroidered again. The design does not have to be optimized. Activating the machine home function does not edit the design memory.					lly returns to the ing is required if have to be home the design in the
NOTE	The default setting is Machine home function off.					
• To activate/deactivate the home function, press the appropria key.			ite [L1] operator			



	Appliqué travel
[L2] Appliqué travel	Activates/deactivates the appliqué travel mode.
	With <i>Appliqué travel</i> switched on, the machine stops to attach an appliqué when a design stop command is encountered. Once the appliqué has been attached, the pantograph can be moved manually to cut off/tidy the appliqué. After this operation, use the appliqué button to move the pantograph back to its position before cutting/tidying and then resume embroidering. Further information on appliqué embroidery is contained in the chapter of the same name in the operator's guide that accompanies the machine.
NOTE	The default setting is Appliqué travel off.
	<ul> <li>To activate/deactivate the home function, press the appropriate [L2] operator key.</li> </ul>
	Further information on <i>appliqué embroidery</i> is contained in the chapter of the same name in the operator's guide that accompanies the machine.
[R2] Continue embroid. immediately	Activates/deactivates the <i>Continue embroid. immediately</i> function.
	• To activate/deactivate the function, press the appropriate <b>[R2]</b> operator key.
	<b>Deactivated:</b> The machine responds in the usual way. The machine stops after reverse travel. Embroidering is then resumed by pressing the <b>[Start]</b> key or with the operating lever.
	Activated: The machine starts automatically after reverse travel and embroidery resumes immediately.



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	positioning
[L3] Positioning	Activates/deactivates the positioning mode.
NOTE	The default setting is Positioning off.
	<ul> <li>To activate/deactivate the positioning function, press the appropriate [L3] operator key.</li> </ul>
[R3] Continue embroid. immediately	Activates/deactivates the <i>Continue embroid. immediately</i> function.
	• To activate/deactivate the function, press the appropriate <b>[R3]</b> operator key.
	<b>Deactivated:</b> The machine responds in the usual way. The machine stops after reverse travel. Embroidering is then resumed by pressing the <b>[Start]</b> key or with the operating lever.
	Activated: The machine starts automatically after reverse travel and embroidery resumes immediately.
[L4] X path [R4] Y path	Determining the path to be traversed by the pantograph at the end of the design: Enter the X path in mm here. Enter the Y path in mm here.
[U1], [U2] [U3] 09	Switches the entered path direction. Shows the U key assignments again for entering numerical values.

Example -	positioning
-----------	-------------



In the example, the design is moved from embroidering position (A) to service position (B). The following distances have to be entered:

• X DIRECTION  $\downarrow$  200 mm

• Y DIRECTION  $\leftarrow$  080 mm

The next time the machine is started, the work is moved back from position B to position A.

Enter the path to be traveled by the pantograph after embroidering; that is to say, the distance from the embroidering to the service position.

The positioning function is useful only if the design start and end points are identical. To make these points coincide, switch on the machine home function.

#### Snap in back stitching

Activates/deactivates the Snap in back stitching function.

To activate/deactivate the function, press the appropriate **[L5]** operator key.

**Deactivated:** While the **[Back stitching]** key is pressed, the pantograph moves back towards already machined stitches. Release the **[Back stitching]** key to end this operation.

Activated: If the **[Back stitching]** key is pressed briefly, the pantograph moves back towards already machined stitches. Release the **[Back stitching]** key to end this operation. If the **[Back stitching]** key is held down for longer than approx. 0.5 s, the status is stored and back stitching continues to be executed even after the key has been released. To end back stitching, press one of the following keys: **[Stop]**, **[Jog]** or **[Back stitching]**.

NOTE

[L5] Snap in back stitching



#### Start needle

This option is envisaged for older designs that do not contain a change to the needle (color) for the first design section either at the start or at the end of the design.

#### [R1] Start needle

Activates/deactivates the start needle mode.

NOTE

If not already determined by the user, a start needle is usually added to designs that are loaded with normal optimization.

Using the start needle mode for normal designs gives rise to unexpected needle change operations at the beginning and end of designs.

For this reason, use this option only if the design does not correctly specify the start needle.

For designs that do not specify a start needle, the required needle has to be set manually at the start of the design.

The *Start needle* option provides support for such designs initially by saving the needle number set at the start of the design when the *Start needle* mode is activated. When the end of the design is reached after subsequent passes, the machine changes to the stored needle. This ensures that the correct needle is selected again for the following pass.

#### Example - start needle

The envisaged embroidery design is to use needle 3 from the start of the design. The design, however, contains only the subsequent needle changes to needle 4, 5, 6 etc..

- Select the design.
- Execute a manual needle change to needle 3.
- Activate the start needle mode.

 $\rightarrow$  The current needle = N3 is stored as the start needle.

• Embroider the design



As the design progresses, needles 4, 5, 6 etc. are used. When the end of the design is reached, the activated Start needle mode causes the machine to switch back to the stored needle 3, so that a new pass can be started correctly.

The functions **[L7] Defaults**, **[L8] Confirm** and **[R8] Previous** are explained under *General explanation of recurrent key functions and dialog options*.



## 4.4.1.3 Pantograph

The way in which the pantograph moves has to be adjusted according to the selected mode (border frame, tubular system, cap attachment etc.). The adjustment is made by selecting the appropriate pantograph configuration. The *Select pantograph configuration dialog* includes an *axis override* option as well.

#### The settings described below can be made only if a design is not selected in the machine.

• Press [R1] Pantograph to start the Select pantograph configuration dialog.

· Border Irame	No.: 001	Vers.: 02	
* Tubular frame	No.: 002	Vers.: 02	
> * ZSK 99 cap attachment	No.: 003	Vers.: 02	
* Border frame with single frames	No.: 004	Vers.: 03	
* Cylinder frame	No.: 006	Vers.: 00	
Axis override	Previous		
Axis override	Previous		

Select an appropriate pantograph application (in this example: Border frame Fig. 4.8).

NOTE

Figure 4.7: Dialog: Select pantograph configuration







# NOTE

→ Once the transfer of setup data has been completed, the *Settings for F heads Fig. 4.1* dialog appears. Failing this, the previously active setup dialog for the F/W/K heads is shown again, depending on the head type.

If axis override values have been edited for one or more pantograph configurations, you have to create a recovery disk after pressing [R8] *[Previous]*, selecting [L8] *[Confirm]* and completing the setup data download (see Saving recovery data).

Detailed instructions on creating a recovery disk are contained in chapter *Recovery disk* of this manual.



# Axis override procedure The axis override procedure harmonizes the finished embroidery for different ZSK machine types, including the alignment of ZSK machines with other manufacturers' machines. Besides the various pantograph configurations (border/cap/ single frame) available to the user, he now has a further means of influencing the embroidered work. Figure 4.10: Select pantograph configuration Dialog: No.: 001 Select pantograph \* Border frame Vers.: 02 No.: 002 Tubular frame Vers.: 02 configuration \* ZSK 99 cap attachment No.: 003 Vers.: 02 \* Border frame with single frames No.: 004 Vers.: 03 \* Cylinder frame No.: 006 Vers.: 00 Axis override Confirm Previous 00988B47 [L7] Axis override Starts the Axis override dialog. The settings described in this manual are intended only as examples NOTE for illustrative purposes. The machine settings required to produce satisfactory embroidery work are to be determined by trial and error. The functions [L8] Confirm and [R8] Previous are explained under General explanation of recurrent key functions and dialog options.
### Modifying axis override parameters

Starts the Axis override dialog
---------------------------------

Figure 4.11:

[L7] Axis override

Axis override

Dialog:

Information bar

Axis override settings for pantograph confi * Border frame No.: 001 Override value height for stitches up to length	guration: Vers.: 02
* Border frame No.: 001 Override value height for stitches up to length	Vers.: 02
Override value height for stitches up to length	0 INC
for stitches up to length	127 INC
Override value width	+ 0 INC
for stitches up to length	127 INC
Defaults	
Confirm	
+ - 09	

The information bar in the setup dialog again indicates the pantograph configuration selected for the axis override parameter modifications that are about to be performed.

	Override value height
[L2]/[R2] Override value height	The override value height lengthens or shortens the satin stitches in the design in the front-to-back embroidery direction.
	In the first column of the dialog enter the appropriate sign to indicate the type of change you wish to implement. The + sign has the effect of lengthening and the - sign the effect of shortening the satin stitches in the front-to-back embroidery direction.
	In the second column of the dialog enter the dimension by which the satin stitches are to be lengthened or shortened in the front-to-back embroidery direction. Enter the value in increments (INC) (1 INC = $0.1$ mm).
	The axis override value must be within the range -10 INC to +10 INC.
	"For stitches up to" dialog
[L3]/[R3] for stitches up to	In this dialog enter the stitch length up to which the two previous settings are to be effective when the design is subsequently calculated. Stitches that exceed the dimension you enter here are not changed when the design is calculated. The valid range is from 5 INC to 127 INC.
	Override value width
[L4]/[R4] Override value width	The override value height lengthens or shortens the satin stitches in the design in the side-to-side embroidery direction.
	In the first column of the dialog enter the appropriate sign to indicate the type of change you wish to implement. The + sign has the effect of lengthening and the - sign the effect of shortening the satin stitches in the side-to-side embroidery direction.
	In the second column of the dialog enter the dimension by which the satin stitches are to be lengthened or shortened in the side-to-side embroidery direction. Enter the value in increments (INC) (1 INC = $0.1 \text{ mm}$ ).
	The axis override value must be within the range -10 INC to +10 INC.





### "For stitches up to" dialog

[L5]/[R5] for stitches up to

NOTE

In this dialog enter the stitch length up to which the two previous settings are to be effective when the design is subsequently calculated. Stitches that exceed the dimension you enter here are not changed when the design is calculated. The valid range is from 5 INC to 127 INC.

The parameter modifications required to produce the desired embroidery results are to be determined by trial and error.

In view of the variety of applications, there is no generally applicable default setting for the axis override parameters. For this reason these settings are not modified even in the event of a machine reset.

The parameters can be edited only if a design is not selected for the machine. If a design is assigned to the machine, the Axis override function can be used only to view the set parameters.

The set axis override parameters are used for the embroidering operation when the next design is selected.





[R3] Sequins	Setup menu for the sequin devices.
[R4] Ribbon device	Setup menu for the ribbon device.



### 4.5.1 Speeds setup (F heads)

The **[L3] Speeds setup** function initiates a dialog in which the speed response of the machine with active F heads can be modified and adjusted according to the different embroidery situations and special needs.

• Press [L3] Speeds setup to open the Speeds setup dialog.

Speed	s setup
Needle independent	100 % 900 RPM
Veedle specific	
Constant speed	Max. 47 INC
Boring 800 RPM	Loop embroidery 500 RPM
Sequins setup	Jogging 100 KFM
Defaults	Special speed 400 RPM
Confirm	Previous
1 2 3 4 5	6 7 8 9 0

The input fields for establishing the maximum speed limits for certain embroidery situations are described below. In the relevant circumstances the machine cannot exceed the speed limit stipulated here. The actual speed largely depends on additional factors, such as the stitch length, so that the entered maximum speed is not always reached.

Enter the maximum speed for normal embroidering, valid for all needles. The value range is up to the maximum permissible speed of the machine (depends on machine type). Excessive values are not accepted.

Activates/deactivates the function or opens the *Needle specific speeds setup* dialog.

The chapter entitled *Needle specific speed* contains a detailed description of the function.

Figure 4.13: Dialog: Speeds setup (F heads)

> [L1]/[R1] Needle independent

[L2]/[R2] Needle specific

[L3]/[R3] Constant speed	Activates/deactivates constant machine speed. The chapter entitled <i>Constant speed</i> contains a detailed description.
[L5] Boring	Enter the maximum speed for boring sequences.
[L6] Sequins	Enter the maximum speed for attaching sequins. The maximum speed value that can be entered here depends on the version of the installed sequin attachment.
[R5] Loop embroidery	Enter the maximum speed for loop embroidery.
[R6] Jogging	Enter the jogging speed for the F head (manual slow speed).
[R7] Special speed	Enter a special speed for the F head. At any time during the embroidery operation the special speed can be selected with the function key sequence <b>[R6] Speeds</b> setup, <b>[U5] Special speed on</b> and deselected with <b>[R6] Speeds setup</b> , <b>[F6] Special speed off</b> .
NOTE	We recommend that you work with the default speeds. Press the [L7] Defaults button to reset all the speeds to their default values.
	The functions <b>[L7] Default, [L8] Confirm</b> and <b>[R8] Previous</b> , together with the input of numbers, letters and symbols for variable setting options, are explained under <i>General explanation of recurrent key functions and dialog options</i> .



#### Needle specific speed

Figure 4.14: Dialog: Needle specific speeds setup (F heads)

				Ne	eare	speci		speed	s set	up				
Needl	e:													
1	2	з	4	5	6	7	8	9	10	11	12	13	14	1
800	800	800	800	800	800	800	800	800	800	800	800	800	800	80
<b>6</b> 11 - 1	a.				_									
spee						100 9								
Spee	a:					100 %								
Spee	α:					100 %								
Spee	a:					100 %								
	a:					100 %								
Defa	ults					100 %								
Defa	ults					100 %								
Defa	d: ults irm					100 %		Previ	ous					
Defa Conf	d: ults irm					100 %		Previ	ous					
Defa Conf	a: ults irm	2	3		4	100 *		?revi	ous 7		8	9		0

Enter the maximum speed for normal embroidering, valid for individual needles. The value range is up to the maximum permissible speed of the machine (depends on machine type). Excessive values are not accepted.

This method of setting speeds enables you to adjust the speed as best suited to different yarn types at the individual needles. By setting the speed appropriately for the individual needles, sensitive yarns such as lurex can be embroidered at reduced speed, while less sensitive yarns continue to be processed at high speed.



#### **Constant speed**

For compatibility reasons, this function remains available in the more recent software releases as well. It no longer corresponds to the state of the art, however, and is therefore to be used only in exceptional cases.

Once activated, the machine operates at a constant embroidery speed. Only designs with the maximum embroidery speed shown can be processed. Designs containing larger stitch lengths must be optimized in the editor to comply with the maximum stitch length before embroidering.

### NOTE

Select and deselect the *Constant speed* function only if the Machine module has not been assigned a design.

If a design is optimized when read in, a max. stitch length modified by selecting the constant speed is disregarded.



# 4.5.2 Tools setup (F heads) The [L4] Tools setup function selects and deselects the machine's special attachments for the F heads. ٠ Press [L4] Tools setup to open the *Tools setup dialog (F heads)*. Figure 4.15: Tools setup (F heads) Dialog: Tools setup (F heads) ✓ Trimming Boring Sequins Ribbon device ✓ Loop embroidery Cord embroidery Defaults Confirm Previous 00988B65 Only the tools that are available on the machine can be selected. NOTE [L1] Trimming Activates/deactivates the thread trimmer. With the thread trimmer selected, the machine executes all the thread trimming commands that are contained in the design. [L2] Sequins Activates/deactivates the sequin attachment for embroidering designs with sequins. [L3] Loop embroidery Activates/deactivates the loop attachment for embroidering designs with loops. [R1] Boring Activates/deactivates the borer for embroidering designs with bored holes.

SK	Machine setup
[R2] Ribbon device	Activates/deactivates the reel-to-reel tape attachment for embroidering belt band, twill tape and Velcro tape.
[R3] Cord embroidery	Activates/deactivates the cord attachment for embroidering designs with cord.
	The functions <b>[L7] Default, [L8] Confirm</b> and <b>[R8] Previous</b> , together with the input of numbers, letters and symbols for variable setting options, are explained under <i>General explanation of recurrent key functions and dialog options</i> .



	<b>4.5.3 Thread break setup (F heads)</b> The <b>[L5] Thread break setup</b> function determines the machine's response in case of a thread break at the F heads.
	<ul> <li>Press [L5] Thread break setup to open the <i>Thread break setup dialog</i> (<i>F heads</i>).</li> </ul>
Figure 4.16: Dialog:	Thread break setup (F-head)
Thread break setup (F heads)	Selective embroidery
()	Autom. reverse embroid. stitches
	End of selective embroidery 3 Stitch
	Vpper thread sensing
	✓ Bobbin thread sensing
	Thread sensing min. st.length 10 INC
	Defaults
	Confirm Previous
	1 2 3 4 5 6 7 8 9 0
[L1]/[R1] Selective embroidery	Activates/deactivates the selective embroidery function.
	When the selective embroidery function is active, only the F heads affected by the thread break carry out embroidering when the machine restarts after a thread break and the subsequent reverse embroidery operation. The other F heads are reengaged automatically when the restart point (end of selective embroidery) is reached. The thread trimmer is out of action during selective embroidery.
[L2]/[R2] Autom. reverse embroid. stitches	Enter the number of stitches to be automatically embroidered back by the machine when a thread break is detected.
[L3]/[R3] End of selective embroidery	Enter the number of stitches before a thread break location from which all switched-on heads are to embroider again after a selective embroidery operation.
[L4]/[R4] Upper thread sensing	Activates/deactivates the upper thread sensor.
	If upper thread sensing is deactivated, the machine does not stop in the event of an upper thread break.

# Machine setup



[L5]/[R5]	Activates/deactivates the bobbin thread sensor.
Bobbin thread sensing	If bobbin thread sensing is deactivated, the machine does not stop if the bobbin is empty or in the event of an upper thread break.
[L6]/[R6] Thread sensing Min. stitch length	Enter the stitch length from which the thread sensing is to be activated.
	Stitches in the design that are shorter than the set value in the X and Y direction (embroidery coordinates) are not monitored for thread breaks by the thread sensors.
	The functions <b>[L7] Default, [L8] Confirm</b> and <b>[R8] Previous</b> , together with the input of numbers, letters and symbols for variable setting options, are explained under <i>General explanation of recurrent key functions and dialog options</i> .
	Simulating a thread break to exclude an embroidery head from selective embroidery
	Simulating a thread break to exclude an embroidery head from selective embroidery You can also simulate a thread break and thus activate an embroideryhead for reverse embroidering at which no thread break has occurred:
	<ul> <li>Simulating a thread break to exclude an embroidery head from selective embroidery</li> <li>You can also simulate a thread break and thus activate an embroideryhead for reverse embroidering at which no thread break has occurred:</li> <li>Switch on the embroidery head switch on the relevant head and then switch it off again.</li> </ul>
	<ul> <li>Simulating a thread break to exclude an embroidery head from selective embroidery</li> <li>You can also simulate a thread break and thus activate an embroideryhead for reverse embroidering at which no thread break has occurred:</li> <li>Switch on the embroidery head switch on the relevant head and then switch it off again.</li> <li>Start the machine.</li> </ul>
	<ul> <li>Simulating a thread break to exclude an embroidery head from selective embroidery</li> <li>You can also simulate a thread break and thus activate an embroideryhead for reverse embroidering at which no thread break has occurred:</li> <li>Switch on the embroidery head switch on the relevant head and then switch it off again.</li> <li>Start the machine.</li> <li>The selected head engages in the selective embroidery operation along-side those at which an actual thread break was detected.</li> </ul>
	<ul> <li>Simulating a thread break to exclude an embroidery head from selective embroidery</li> <li>You can also simulate a thread break and thus activate an embroideryhead for reverse embroidering at which no thread break has occurred:</li> <li>Switch on the embroidery head switch on the relevant head and then switch it off again.</li> <li>Start the machine.</li> <li>The selected head engages in the selective embroidery operation along-side those at which an actual thread break was detected.</li> </ul>
	<ul> <li>Simulating a thread break to exclude an embroidery head from selective embroidery</li> <li>You can also simulate a thread break and thus activate an embroideryhead for reverse embroidering at which no thread break has occurred:</li> <li>Switch on the embroidery head switch on the relevant head and then switch it off again.</li> <li>Start the machine.</li> <li>The selected head engages in the selective embroidery operation along-side those at which an actual thread break was detected.</li> </ul>
	<ul> <li>Simulating a thread break to exclude an embroidery head from selective embroidery</li> <li>You can also simulate a thread break and thus activate an embroideryhead for reverse embroidering at which no thread break has occurred:</li> <li>Switch on the embroidery head switch on the relevant head and then switch it off again.</li> <li>Start the machine.</li> <li>The selected head engages in the selective embroidery operation along-side those at which an actual thread break was detected.</li> </ul>
	<ul> <li>Simulating a thread break to exclude an embroidery head from selective embroidery</li> <li>You can also simulate a thread break and thus activate an embroideryhead for reverse embroidering at which no thread break has occurred:</li> <li>Switch on the embroidery head switch on the relevant head and then switch it off again.</li> <li>Start the machine.</li> <li>The selected head engages in the selective embroidery operation along-side those at which an actual thread break was detected.</li> </ul>



#### Example - thread break response

Schematic explanation of the terms "selective embroidery", "automatic reverse embroidery stitches" and "restart point" (end of selective embroidery):



- 1. The machine detects a thread break at stitch 1510. The machine stops.
- 2.- The machine automatically embroiders back by the number of *auto. rev. embr. stitches* (in this example set to 6) and thus reaches stitch number 1504.
- 3.- If the **Selective embroidery** function is active, only the heads at which a thread break was detected execute embroidery the next time the machine is started. Selective embroidery takes place until the set restart point is reached (in this example the set value is 3) at stitch number 1507.
- 4.- From the *Restart point* (end of selective embroidery), all of the machine's heads engage in embroidering again.

The range of the selective embroidery can be enlarged with additional manual reverse embroidery stitches.

If *Selective embroidery* is deactivated, all of the heads re-engage in embroidering immediately the next time the machine starts after a thread break.

Figure 4.17: Schematic, Thread break setup (F heads)



### 4.5.4 Trimming setup (F heads)

The **[L6] Trimming setup** function determines the machine's response in case of trimming at the F heads.

• Press [L6] Trimming setup to open the *Trimming setup dialog (F heads)*.

Trimming setup       (F heads)         Start stitches after trimming       Stitches         Disable thread sensing       8 stitches         Displacement after trimming       0 INC         Defaults       Confirm         1       2       3       4       5       6       7       8       9       0				
Number of start stitches executed before the machine returns to maximum speed after trimming.				
Number of stitches for which thread break sensing remains disabled after trim- ming in order to avoid erroneous stops caused by threads that have not yet been stitched.				
Path traversed by pantograph when trimming takes place. This function is employed to avoid the false detection of bobbin thread breaks after thread trimming. In some circumstances (typically in case of small stitches before a trimming operation), bobbin thread breaks can be incorrectly identified after a trimming operation has been performed (bobbin thread becomes caught around the thread monitor wire). These incorrect stops can be avoided by setting a pantograph displacement path to be executed in a to-and-fro motion after the trimming operation. The functions <b>[L7] Default, [L8] Confirm</b> and <b>[R8] Previous</b> , together with the input of numbers, letters and symbols for variable setting options, are explained under <i>General explanation of recurrent key functions and dialog options</i> .				



	<b>4.5.5 Sequins (F heads)</b> The <b>[R3] Sequins</b> function sets the machine's F head sequin devices.
Figure 4 19	Press [R3] Sequins to open the <i>Sequins settings</i> dialog.
Dialog: Sequins settings (F heads)	Sequins settings
	Sequin size left 7 mm Sequin size right 7 mm
	Defaults Confirm Previous 1 2 3 4 5 6 7 8 9 0 00988868
[L3]/[R3] Sequin size left	Enter the sequin size for the left sequin attachment.
[L4]/[R4] Sequin size right	Enter the sequin size for the right sequin attachment.
	The functions <b>[L7] Default, [L8] Confirm</b> and <b>[R8] Previous</b> , together with the input of numbers, letters and symbols for variable setting options, are explained under <i>General explanation of recurrent key functions and dialog options</i> .



### 4.5.6 Ribbon device (F heads)

The **[R4] Ribbon device** function sets the machine's F head reel-to-reel tape attachments.

• Press [R4] Ribbon device to open the *Ribbon device* dialog.

Figure 4.20:		Pibbon derrice						
Dialog: Ribbon device		KIDDON GEVICE						
(F heads)								
(,		Ribbon width	<b>25</b> mm					
		Ribbon length	180 mm					
		Embroider cutting mark						
		Overlap mode						
	Defa	nults						
	Conf	Previous						
	<b>1</b> 00988B6	2 3 4 5 6 7 <sup>8</sup>	89	0				
[L2]/[R2] Ribbon width	Enter the wid	th of the belt (tape) material that is to	be used.					
	For mechanic	al reasons, the area available for embr	ilable for embroidery is:					
	available area	$a = tape width - (2 \cdot 4 mm)$						
	This provides backing mate	a safety allowance of 4 mm at both thrial.	ne top and botto	om edge of the				
	If the belt ban	d (tape) width is set to 25 mm, therefor	e, the maximur	n design width				
	The check pe	rformed when the design is selected	assumes that th	he design start				
	r is situat							
[L3]/[R3] Ribbon length	Enter the leng	gth of the belt (tape) material that is to	be used.					
	In the case of dery. The leng of a design.	the belt band length, the whole of the gth indicates the distance traveled by the	e area is availab ne belt (tape) up	ble for embroi- on completion				









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• Press **[U2] W heads** to display the setup dialog for the W heads.

00965109								
E. ( 00								
Figure 4.22: Dialog:		Settings f	or W heads					
Settings for W heads		Operating modes setup	Pantograph					
		Speeds setup	Stitch type cord/tape					
		Tools setup	Stitch type coiling					
		Thread break setup	Stitch type zigzag					
		Trimming setup	Stitch type embroidery					
		Pret	vious					
		00988B32						
[L1] Operating modes setup	Setup me behavior	Setup menu allowing additional aspects of the embroidery machine's operate behavior to be activated and modified.						
[R1] Pantograph	Setup dia	alog allowing the way the panto	ograph moves to be adjusted.					
	Given th [L1] Ope chapters	eir general applicability to all energy and <b>[R1</b> Prating modes setup and <b>[R1</b> Operating modes setup and Pa	mbroidery head types (F, K, W), and types (F, K, W), and the set of the set o	functions detail in al				
[L3] Speeds setup	Setup me	enu for speed response of W he	eads.					
[L4] Tools setup	Setup me	enu for activating/deactivating th	ne available special attachments.					
[L5] Thread break setup	Setup me W heads	enu to determine the machine	response in case of a thread bre	ak at the				
[L6] Trimming setup	Setup me	enu for response of the W-head t	hread trimmers.					





[R3] Stitch type cord/tape	Setup menu for the cord/tape stitch type for the W heads.
[R4] Stitch type coiling	Setup menu for the coiling stitch type for the W heads.
[R5] Stitch type zigzag	Setup menu for the zigzag stitch type for the W heads.
[R6] Stitch type embroider	Setup menu for the embroidery stitch type for the W heads.



**.**...

## 4.6.1 Speeds setup (W heads)

The [L3] Speeds setup function initiates a dialog in which the speed response of the machine with active W heads can be modified for the different stitch types and adjusted according to special requirements.

Press [L3] Speeds setup to open the Speeds setup dialog (W heads). ٠

Figure 4.23: Dialog:					Spe	eds set	up		(	(W hea	ds)				
Speeds setup (W heads)			Cord / ta	ape / e	embroid	er					600	RPM			
	Zigzag										400	RPM			
			Coiling								400	RPM			
			Jogging								100	RPM			
			Special :	speed							400	RPM			
		Defa	ults				)								
		Conf	irm				] (	Previ	ous						
		1	2	3	4	5	) (	6	7		8	9	) 🚺		
		JU900B34	ł												
[L1]/[R1] Cord / tape / embroider	Enter the W head.	spee	ed for the	e cord	l/tape	stitch	ı ty	vpe o	r for	norr	nal e	embr	oider	ring	g with the
[L2]/[R2] Zigzag	Enter the	spee	d for the	e zigz	ag sti	tch tyj	pe	with	the '	W he	ead.				
[L3]/[R3] Coiling	Enter the	spee	d for the	e coili	ing sti	itch ty	pe	with	n the	W h	ead.				
	The speed ratio.	The speed for the coiling stitch type depends to a large extent on the set coiling ratio.											et coiling		
	For this retion in the	easor chap	n, pay sp oter entit	ecial led Co	attent oiling	tion to s <i>titch</i>	o th i ty	ie ins <i>pe (</i>	struct W he	tions (ads)	con	cerni	ing th	ie c	oiling ra-
[L4]/[R4] Jogging	Enter the	jogg	ing spee	ed for	the V	V head	d (1	nanı	ial sl	ow s	peec	l).			
[L5]/[R5] Special speed	Enter a sp the specia setup, [ [F6] Spec	becial al sp U5] \$ cial s	l speed f eed can Special speed o	or the be se <b>spe</b> ff.	e W he electe <b>ed or</b>	ead. A d with and	ta htl	ny tii he fi desel	me du inctio ecteo	uring on ko d w	g the ey so ith	emb eque <b>[R6]</b>	roide nce [ <b>Spe</b>	ery R6 eds	operation ] Speeds s setup,

### NOTE

We recommend that you work with the default speeds. Press the [L7] Defaults button to reset all the speeds to their default values.

### 4.6.2 Tools setup (W heads)

The **[L4] Tools setup** function selects and deselects the machine's special attachments for the W heads.

• Press [L4] Tools setup to open the *Tools setup dialog (W heads)*.

	Tools setup	(W heads)	
Trimming			
Defaults			
Defaults			
Defaults Confirm	Previo	15	
Defaults Confirm	Previo	15	

### NOTE

Figure 4.24: Dialog: Tools setup (W heads)

[L2]/[R2] Trimming

#### Only the tools that are available on the machine can be selected.

Activates/deactivates the W-head thread trimmer. With the thread trimmer selected, the machine executes all the thread trimming commands that are contained in the design when the W heads are activated.

The functions **[L7] Defaults**, **[L8] Confirm** and **[R8] Previous** are explained under *General explanation of recurrent key functions and dialog options*.





## 4.6.3 Thread break setup (W heads)

The **[L5] Thread break setup** function determines the machine's response in case of a thread break at the W heads.

• Press [L5] Thread break setup to open the *Thread break setup dialog* (*W heads*).

Figure 4.25: Dialog:				Thread break se	tup	(W head	ds)	
thread break response			Selective	embroidery				
(w heads)			End of selec	tive embroidery		3 Stit	ches	
			🕑 Upper thr	ead sensing				
			Bobbin th	read sensing				
			Thread break	counter		3 Stit	ches	
			Thread sensi	ng min. st.length		10 INC		
		Defa	ults					
		Conf	irm		Previous			
		1	2 3	4 5	6 7	8	9 0	
		00988B3	6					•
[L1]/[R1]	Activates	s/dea	ctivates the	selective embr	oidery fun	ction.		
Selective embroidery		_			5			
	When th the thread	i <b>e sel</b> d bre	ective embi eak carry ou	roidery functions t embroidering	on is active when the	e, only the machine r	W heads a restarts after	iffected by er a thread
	break and	d the	subsequent	reverse embroi	dery opera	tion. The c	other W he	ads are re-
	engaged reached.	auto The	matically w thread trim	then the restar	t point (er	nd of selec g selective	etive embi embroide	ry.
								5
[L2]/[R2] End of selective embroidery	Enter the switched	e nu -on h	mber of stineads are to	tches before a embroider aga	a thread b in after a se	reak locat elective em	tion from	which all operation.
[L3]/[R3] Upper thread sensing	Activates	s/dea	ctivates the	upper thread s	ensor.			
	If upper an upper	threa threa	id sensing is ad break.	s deactivated, t	he machin	e does not	t stop in th	e event of

# Machine setup



[L4]/[R4] Bobbin thread sensing	Activates/deactivates the bobbin thread sensor.
	If bobbin thread sensing is deactivated, the machine does not stop if the bobbin is empty or in the event of an upper thread break.
[L5]/[R5] Thread break counter	Thread break counter for W heads.
	The machine is stopped and the <i>Thread break</i> message is issued if a thread break at one of the W heads is detected for the number of consecutive stitches entered here.
[L6]/[R6] Thread sensing Min. stitch length	Enter the stitch length from which the thread sensing is to be activated.
	Stitches in the design that are shorter than the set value in the X and Y direction (embroidery coordinates) are not monitored for thread breaks by the thread sensors.
	The functions <b>[L7] Default, [L8] Confirm</b> and <b>[R8] Previous</b> , together with the input of numbers, letters and symbols for variable setting options, are explained under <i>General explanation of recurrent key functions and dialog options</i> .



### 4.6.4 Trimming setup (W heads)

The **[L6] Trimming setup** function determines the machine's response in case of trimming at the W heads.

• Press [L6] Trimming setup to open the *Trimming setup dialog (W heads)*.

	Tri	mming setup	(W heads)
C			
ទ	tart stitches after	trimming	3 Stitches
	ighte thread genein		8 Stitsbog
Ľ	Isable thread sensiti		o stitenes
D	isplacement after tr	imming	0 INC
Defaul	ts	]	
Defaul	ts		
Defaul Confir	ts m	Previous	
Defaul Confir	ts m 2 3 4	Previous	89

Number of start stitches executed before the machine returns to maximum speed after trimming.

Number of stitches for which thread break sensing remains disabled after trimming in order to avoid erroneous stops caused by threads that have not yet been stitched.

Path traversed by pantograph when trimming takes place.

This function is employed to avoid the false detection of bobbin thread breaks after thread trimming. In some circumstances (typically in case of small stitches before a trimming operation), bobbin thread breaks can be incorrectly identified after a trimming operation has been performed (bobbin thread becomes caught around the thread monitor wire). These incorrect stops can be avoided by setting a pantograph displacement path to be executed in a to-and-fro motion after the trimming operation.

Figure 4.26: Dialog: Trimming setup (W heads)

> [L2]/[R2] Start stitches

[L3]/[R3] Disable thread sensing

[L4]/[R4 Displacement after trimming Fahrstrecke **N** SK



The **[R3] Stitch type cord/tape** function transfers parameters for the desired stitch type to the machine.

• Press **[R3] Stitch type cord/tape** to open the *Parameters for stitch type cord/tape* dialog.

			teen eype		-	
Presser	foot	height			20	INC
Defaults						
Defaults						
Defaults						
Defaults Confirm			Previot	15		
Defaults			Previou	15		

[L2]/[R2] Presser foot height

Figure 4.27: Dialog:

cord/tape

Parameters for stitch type

Enter the presser foot height for the cord/tape stitch type.

Mit der Stoffdrückerhöhe wird eine Anpassung des Stickablaufes an die Höhe des Stickmaterials durchgeführt.

### **N** SK

# 4.6.6 Coiling stitch type (W heads)

The **[R4] Stitch type coiling** function transfers parameters for the desired stitch type to the machine.

• Press **[R4] Stitch type coiling** to open the *Parameters for stitch type coiling* dialog.

Figure 4.28: Dialog:				Parameter	s for st	itch t	ype coil	ling			
Parameters for stitch type coiling		PI	resser fo	ot height				20	INC	]	
5		Ac	lditional	angle				45	DEG	]	
		Co	oiling ra	tio	;	stitch	1:1	Coiling	]		
			Coiling	direction :	right					]	
			) Coiling	direction 3	left					)	
	(	Default	s								
		Confirm	n			Prev	ious				
		1	2	3 4	5	6	7	8	9	0	
	00	0988839									
[L1]/[R1] Presser foot height	Enter the	presse	r foot h	eight for t	he coil	ing st	itch ty	pe.			
	The press to the heig	er foot ght or t	t height thicknes	t function ss of the e	modifi mbroid	es the lery n	e embr nateria	oiderin l.	g opera	ation	according
[L2]/[R2] Additional angle	Enter the	additic	onal (of	fset) angle	e for co	iling.					
[L3]/[R3] Coiling ratio	Enter the	coiling	g ratio f	or coiling							
[L4]/[R4] Coiling direction right	Sets the co	oiling	directio	on for the	W head	l to cl	ockwi	se.			
[L5]/[R5] Coiling direction left	Sets the co	oiling	directio	on for the	W head	l to co	ounter-	-clockw	vise.		



The functions **[L7] Default, [L8] Confirm** and **[R8] Previous**, together with the input of numbers, letters and symbols for variable setting options, are explained under *General explanation of recurrent key functions and dialog options*.

### Pressure height

The height of the presser foot has a major influence on the embroidery width. The lower the presser foot, the wider the material once it is applied (embroidery width). (Embroidery width)

### Additional (offset) angle

When using regular materials (not leather, foil, gauze etc.), set the additional (offset) angle to 45 (default setting). The additional (offset) angle governs the frequency of coiling in all stitch directions.

### **Coiling ratio**

The coiling ratio (stitches:windings) can be set in the range from 9:1 to 1:3. Example: if the ratio is set to 9:1, the winding is completed after the ninth stitch. If the ratio is set to 1:3, one stitch is encircled three times. The greater the number of windings per stitch, the tighter the embroidery material is wrapped. Set the coiling ratio according to the effect you wish to achieve.

### NOTE

Note that the coiling head has a maximum speed of 400 rpm. In other words, a coiling ratio of 2:1 can be executed only with an embroidery speed of up to 200 rpm.

The parameters for the coiling stitch type must be set to match the circumstances (design, embroidery materials and fabric). You can either make the settings manually or press button [L7 Defaults] to obtain the standard settings. Note that the default function simply calculates an average value for the relevant parameter/stitch type. In view of the variety of available embroidery materials and fabrics, good quality cannot be ensured with this method of automatic parameterization.

Only the parameters of the selected stitch type can be modified.



## 4.6.7 Zigzag stitch type (W heads)

The **[R5] Stitch type zigzag** function transfers parameters for the desired stitch type to the machine.

• Press **[R5] Stitch type zigzag** to open the *Parameters for stitch type zigzag* dialog.

		-						
Figure 4.29: Dialog		Parameters for s	titch type zigzag					
Parameters for stitch type		Presser foot height	20 INC					
Zigzag		Start angle	135 DEG					
		Stroke (Zigzag)	160 INC					
		Stroke (Pantograph)	20 INC					
		Zigzag design						
		Defaults						
		Confirm	Previous					
		1 2 3 4 5	6 7 8 9 0					
		00988B40						
[L1]/[R1] Presser foot height	Enter the	e presser foot height for the zig	zag stitch type.					
	The pres to the he	ser foot height function modif ight or thickness of the embroi	ies the embroidering operation accord dery material.					
[L2]/[R2] Start angle	Determines the timing of the zigzag lever movement relative to the needle mov							
	By modi of materi of the en	fying this parameter, you can a ial, such as beaded tape, sequin abroidery process. This can red	adjust the start angle according to the to tape etc., and thus increase the reliab duce the number of thread breaks.					
[L3]/[R3] Stroke (zigzag)	Adjustm	ent for different material weigh	hts.					
01010 (19249)	Small str Large str	roke: thin material/light weight roke: thick material/heavy weig	ght					
	1							

# Machine setup



I									
[L4]/[R4] Stroke (pantograph)	For producing various effects in connection with the selected zigzag design.								
	Having the pantograph assist the zigzag movement can prevent puckering of the tape that is being embroidered.								
[L5]/[R5] Zigzag design	Selects a zigzag design (algorithm) for attaching the tape.								
	The functions <b>[L7] Default, [L8] Confirm</b> and <b>[R8] Previous</b> , together with the input of numbers, letters and symbols for variable setting options, are explained under <i>General explanation of recurrent key functions and dialog options</i> .								
	Zigzag design								
Figure 4.30:	Zigzag design								
Dialog: Zigzag design									
	00988B41								
[ESC] Escape	Press the <b>[ESC]</b> key to abort the <i>Zigzag design</i> dialog and display the <i>Parameters for stitch type zigzag</i> dialog again.								
	• To select a zigzag design, press the appropriate <b>[Lx]/[Rx]</b> operator key.								



## 4.6.8 Embroidery stitch type (W heads)

The **[R6] Stitch type embroider** function transfers parameters for the desired stitch type to the machine.

• Press **[R6] Stitch type embroider** to open the *Parameters for stitch type embroider* dialog.

			LOL D	titen t	уре	empror	lder			
										_
Presser	foot	height						20	INC	
efaults				J						
efaults				)						
efaults >nfirm				)	viou	s				
efaults onfirm				) Pre	viou	S				

#### [L2]/[R3] Presser foot height

Figure 4.31: Dialog:

embroider

Parameters for stitch type

Enter the presser foot height for the embroidery stitch type.

The presser foot height function modifies the embroidering operation according to the height or thickness of the embroidery material.





ЩКþ

# 4.7 Machine setup for K heads

• Press **[U3] K heads** to display the setup dialog for the K heads.

Figure 4.32:									
Dialog:		Settings f	or K heads						
Settings for K heads		Operating modes setup	Pantograph						
		Tools setup	Stitch type chain stitch						
		Thread break setup	Stitch type moss stitch						
		Prev	rious						
		00988B58							
[L1] Operating modes setup	Setup menu allowing additional aspects of the embroidery machine's operating behavior to be activated and modified.								
[R1] Pantograph	Setup dialog allowing the way the pantograph moves to be adjusted.								
	Functions <b>[L1] Operating modes setup</b> and <b>[R1] Pantograph</b> are explained in detail in chapters <i>Operating modes setup</i> and <i>Pantograph</i> of this operating manual.								
[L3] Tools setup	Setup menu for activating/deactivating the available special attachments.								
[L4] Thread break setup	Setup menu to determine the machine response in case of a thread break at the K heads.								
[R3] Stitch type chain stitch	Setup menu for the chain stitch type for the K heads.								
[R4] Stitch type moss stitch	Setup menu for the moss stitch type for the K heads.								



4.7.1 Tools setup (K heads) The [L3] Tools setup function selects and deselects the machine's special attachments for the K heads. Press [L3] Tools setup to open the *Tools setup (K heads)* dialog. ٠ Figure 4.33: Tools setup (K heads) Dialog: Tools setup (K heads) Trimming Defaults Confirm Previous 00988B59 Only the tools that are available on the machine can be selected. NOTE [L2]/[R2] Activates/deactivates the K head thread trimmer. With the thread trimmer select-Trimming ed, the machine executes all the thread trimming commands that are contained in the design when the K heads are active. The functions [L7] Defaults, [L8] Confirm and [R8] Previous are explained under General explanation of recurrent key functions and dialog options.


The machine is stopped and the *Thread break* message is issued if a thread break at one of the K heads is detected for the number of consecutive stitches entered here.

The functions **[L7] Defaults, [L8] Confirm** and **[R8] Previous** are explained under *General explanation of recurrent key functions and dialog options*.



# 4.7.3 Chain stitch type (K heads)

The **[R3] Stitch type chain stitch** function transfers parameters for the desired stitch type to the machine.

• Press **[R3] Stitch type chain stitch** to open the *Settings stitch type chain stitch* dialog.

Figure 4.35: Dialog: Parameters for stitch type chain stitch	Settings stitch type chain stitch
	Needle height (loop)
	Needle height (interim position)
	Presser foot height
	Defaults Confirm Previous 1 2 3 4 5 6 7 8 9 0 00988B61
[L2]/[R2] Needle height (loop)	The needle height (loop) function is used to adjust the needle stroke according to length of the chain stitches. The needle height influences the size of the loop. The greater the value, the larger the loop.
	Small stitches (approx. 10 INC): use low needle height value. Large stitches (approx. 30 INC): use high needle height value.
[L3]/[R3] Needle height (interim position)	After each stitch the needle moves down and stops briefly in an interim position; the reduction in thread tension allows the loop to drop off the needle. The value entered for the needle height (interim position) must be lower than the value entered for the needle height (loop).
	Guide to setting: The value entered for the needle height (interim position) should be about 10% lower than that entered for the needle height (loop).
[L4]/[R4] Presser foot height	Enter the presser foot height for the chain stitch type.

The presser foot height is adjusted according to the type of material in order to exclude the risk of damage.

Low set values (e.g. 0 or 1): low presser foot position, for thin materials.



Higher set values (e.g. 2 or 3): higher presser foot position, for thicker materials.

→ Taut chain stitch

### Checking the mechanical setting without embroidery material:

If the value "0" is entered for the presser foot height, a 0.05 mm feeler gage should fit tight between the presser foot and stitch plate.

The functions **[L7] Default, [L8] Confirm** and **[R8] Previous**, together with the input of numbers, letters and symbols for variable setting options, are explained under *General explanation of recurrent key functions and dialog options*.

# 4.7.4 Moss stitch type (K heads)

The [R4] Stitch type moss stitch function transfers parameters for the desired stitch type to the machine.

• Press [R4] Stitch type moss stitch to open the Settings stitch type moss stitch dialog.

iguro 4.26.																	
vialog: arameters for stitch type noss stitch				Se	ttings	stitch	typ	e mos	s sti	tch							
		Needle height (loop)					22										
			Needle	height (	interim	positi	ion)					20					
			Presser	foot he	ight							2					
		Defa	ults														
		Conf	irm				B	revio									
		1	2	3	4	5		6	7	) [ [	3	9					
		00988B62	2		<u> </u>	<u> </u>			<u> </u>								
[L2]/[R2] Needle height (loop)	The needle height (loop) function is used to adjust the needle stroke accordin length of the moss stitches. The needle height influences the size of the loop. greater the value, the larger the loop. Changing the value influences the drop st or loop height.							ng <sup>-</sup> . Tł stite	to he ch								
	Small sti Large sti	tches tches	(appro (appro	ox. 10 I ox. 30 I	NC): u NC): u	se lo se hi	w n gh 1	leedl need	e hei le he	ight eight	val t va	lue. alue.					
[L3]/[R3] Needle height (interim position)	After each the reduce entered for tered for	ch stir ction for the the n	tch the in threa e needl needle h	needle ad tens le heigh neight (	moves ion all it (inte loop).	s dow ows t rim p	n a he i osi	nd s loop tion)	tops to d mus	brie lrop st be	fly off e lo	in and the ower	n inte need than	rim le. 7 the	posi The v valu	itio valu e ei	n; ue n-
	Guide to be about	settii 10%	ng: The lower	e value than th	enterec at ente	l for t red fo	the i or th	need he ne	le he eedle	eight e hei	t (ii gh	nterir t (loo	n pos p).	sitio	n) sł	nou	ld
[L4]/[R4] Presser foot height	Enter the	e pres	ser foo	ot heigh	t for th	e mo	ISS S	stitch	ı typ	e.							

Fi D Pa m

l

The presser foot height is adjusted according to the type of material in order to exclude the risk of damage.

Low set values (e.g. 0 or 1): low presser foot position, for thin materials.



Higher set values (e.g. 2 or 3): higher presser foot position, for thicker materials.

→ Taut moss stitch

### Checking the mechanical setting without embroidery material:

If the value "0" is entered for the presser foot height, a 0.05 mm feeler gage should fit tight between the presser foot and stitch plate.

The functions **[L7] Default, [L8] Confirm** and **[R8] Previous**, together with the input of numbers, letters and symbols for variable setting options, are explained under *General explanation of recurrent key functions and dialog options*.



## 4.8 Recovery disk

### 4.8.1 Create recovery disk

The purpose of the recovery disk is to save the individually edited axis override parameters for reloading to the T8 control unit if, for example, it is renewed. Reloading is also necessary if the full installation routine needs to be performed on the T8 control unit, including formatting the storage medium and reinstalling the operating system and control software. The program automatically proposes the creation of a recovery disk only after axis override parameters have been modified.

If you do not create a recovery disk, the modified axis override parameters can only be reproduced manually, by carrying out time-consuming embroidery trials, if the T8 control unit is exchanged or the full installation routine needs to be performed. For this reason it is essential that you back up the data on the recovery disk.

You are strongly recommended to create a recovery disk once you have identified the appropriate settings for the machine. It is not essential that you create a disk while still performing various embroidery trials for test purposes.

• Press **[L3] Service** in the basic screen to display the *Service* dialog.



• Press [Shift]+[U0] to extend the Service dialog.

NOTE

Figure 4.37: Dialog: Service



#### Figure 4.38: Dialog: Service, extended view

			Se:	rvice
Thread	trimmer	cleaning	position	Create service disk
Resume	design _	_stitch		Test machine attachment
ZSK en	gineer			
ZSK en	gineer			
ZSK en	gineer			
ZSK en	gineer			
ZSK en	gineer		Pre	vious

Press [L5] ZSK engineer to display the *Service functions ZSK engineer* dialog.

Degrees	Input signals
DIP switches	Status of KSP boards
Machine optimizations	Status of sequin devices
Timing K heads	Status of W heads
	Status of K heads
Create recovery disk	Load recovery disk
	Previous

### 4.8.2 Saving recovery data

Press **[L6] Create recovery disk** to start the backup process in the *Service functions ZSK engineer* dialog.

		CLE	ale reco	very disk			
P	leace incert	the recover	ry disk	for this m	achine:		
-	10400 100010		Ly ulbe				
T f	o create a ne ormat:	ew recovery	disk, i	nsert an e	mpty disk	with the	
z	SK transport	code format	1.44 MB	HD			
W	indows/DOS fo	ormat 1.44 1	MB HD				
Form	nat disk						
Form	nat disk						
Form	nat disk						
Form	Mat disk	disk		Previous			
Form	at disk te recovery o	disk		Previous			
Form	at disk te recovery (	disk		Previous			

- Follow the instructions on the screen.
- Insert a blank disk or a previously created recovery disk for the same machine.
- If a blank or formatted 1.44 MB disk is not available, function **[L7] Format disk** can be used to clear or prepare a disk for use.
- Press [L8] Create recovery disk to start the recovery disk backup operation.
  - → Once the recovery disk has been completely loaded, the Settings for F heads Fig. 4.1 dialog reappears. Failing this, the previously active setup dialog for the F/W/K heads is shown again, depending on the head type.

Figure 4.40: Dialog: Create recovery disk

### 4.8.3 Loading recovery data

• Press [R6] Load Recovery disk to start the restoring process.

Load recovery disk
Please insert the recovery disk for this machine:
If the incorrect diskk is inserted, incorrect setting data will
be read in.
Make certain that the correct recovery disk for this machine is
inserted.
Load recovery disk
Previous
00988856

- Note the instruction on the screen and ensure absolutely that it is followed.
- Insert the recovery disk for the machine in the disk drive.
- Press **[L8] Load recovery disk** to start the loading operation from the recovery disk.
  - → Once the recovery disk has been completely created, the Service functions for ZSK engineer Fig. 4.39 dialog reappears.

Figure 4.41: Dialog: Load recovery disk



### Α

SK

Appliqué travel
Appliqué travel, activating
Appliqué travel, deactivating
Assigning, needles

### В

Back stitching, snap in
Back stitching, snap in, activating
Back stitching, snap in, deactivating
Background, green
Background, red
Background, yellow
Basic screen , devision
Belt band attachment, belt length
Belt band attachment, belt width
Bobbin cases, changing
Bobbin changer

### С

0
Contents
Contents, picto directory
Contents, table
Continue embroid. immediately deactivating
Continue embroid. immediately, activating
Continue embroid. immediately, deactivating

Contour, symbol Cursor key Cursor key, down Cursor key, left Cursor key, right Cursor key, up Cursor keys Cursor pad

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4 - 10 2 - 6 2 - 6	Display area Displaying help text, activating	1 - 1 1 - 12
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4 - 20



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	4 - 33	K head, machine setup	4 - 51
F head, ribbon length	4 - 33	K head, moss stitch type	4 - 51
F head, ribbon width	4 - 33		4 - 57
F head, selective embroiderv	4 - 28	K head, needle height (interim position)	4 - 55
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F head, sequin size left	4 - 32	renead, needle neight (leep)	4 - 57
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Filead, sequins	4 - 23	K head, prosper fact height	4-51
r nead, sequins	4 - 21	K head, presser loot height	4 - 55
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F head, thread break setup, schematic	4 - 30	Key functions, defaults	4 - 3
E head thread sensing min stitch length	4 - 29	Key functions explanation	4 - 3
F head tools setup	4 - 20	Key functions, previous	4 - 3
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E head trimming	4 26	Key back stitching	1 10
E head, trimming actur	4 - 20	Key, DEL	4 - 10
F fiead, tillining setup	4 - 20	Rey, DEL	1 - 9
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F nead, upper thread sensing	4 - 28	Key, ESC	1 - 7
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			1 - 12
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Keys, SHIFT + cursor right Keys, SHIFT + cursor up Keys, SHIFT + menu Keys, U1-U0

### L

Language, changing Letter and number inputs Letter inputs

Letter inputs, (a-h) Letter inputs, (i-r) Letter inputs, (s-z) Letter inputs, capital letters Letter inputs, delete character Letter inputs, example

Letter inputs, symbols Lists, dialogs Load design Lower needle

#### Μ

Machine operations Machine operations, display Machine settings

Machine setup Machine start Machine status, current Machine stop Machine, switching on Magazine change Main shaft Main shaft brake Main shaft brake, OFF Main shaft brake, ON Menu components, use of Menu keys Menu keys, L1-L8 Menu keys, left Menu keys, R1-R8 Menu, dialogs Menu, keys Modification, method Modification, none Modification, rotate design Modification, settings

#### Ν

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Needle assignment, dialog Needle change, commands

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Outline, fine

•••		
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