

Part 3: Programming Instructions Class 550-12-23; -24; -26

Program Version: 55023A01

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1. General

These programming instructions contain important information to the safe, proper and economical use of the new generation of "**DAC**" (Dürkopp Adler Control) controls.

Ease of Programming

The user can program 998 freely-programmable models with up to 99 steps each. 2650 steps are impossible.

- Base stitch length 3, 4, 5, 6 mm can be accessed.
- 5 different stretch values for smooth seams.
- Additional thread tension after a specific crimping value.
- Additional tape tension can be switched on.
- 31 crimping values can be selected.
- Original loading of all parameters (Reset).
- All base parameters can be set via the key cluster.
- All sewing drive parameters can be set via the key cluster.
- Comprehensive model programming.
- The sewing drive is controlled directly through the pedal.

Setting and Testing Programs

The **DAC** includes the integrated comprehensive **MULTITEST** testing and monitoring system.

A microcomputer assumes the control tasks, monitors the sewing process and signals operating faults and malfunctions.

Errors and test results are shown in a LCD display.

Under normal working conditions the display shows information to operation and the sewing process.

When an operating error or malfunction occurs the functions are interrupted.

In some cases the main switch must be turned off during error correction for safety reasons.

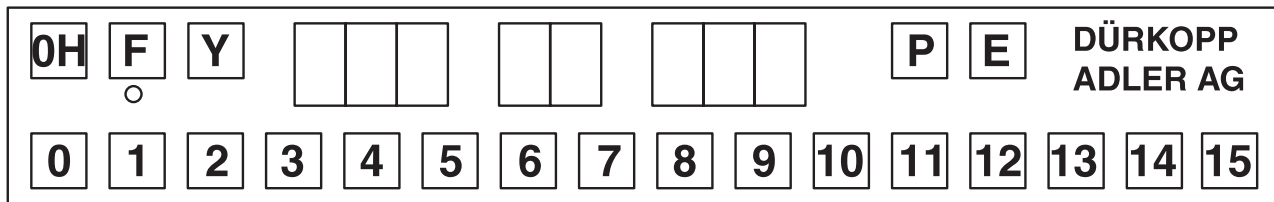
A portion of the error messages are meant only for the service personnel.

Special programs facilitate mechanical adjustments and make possible a rapid testing of the input and output elements without additional measuring apparatus.



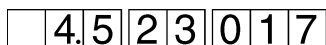
2. Operating Elements of the Key Cluster

The entry and indicating of data occurs via a key cluster with an 8-digit display which is divided into 3 blocks.



Display

During the normal program runThe display is built up as follows:



Left 3 digits : Display of the crimping value

Middle 2 digits : Step display

Right 3 digits : Display of the model number

When a testing program (or similar) is activated, a number of other parameters are shown in the display.

Key/Key Groups	Function
1 to 15	Setting crimping values
0H	0-distance with tape (straight seam)
0	0-distance without tape (straight seam)
F	Activating the tape tensioner (the activation of this function is indicated by the green LED)
Y	Special functions
P	Programming key
	Entry of the program numbers
E	Entry of the part numbers
Y and F	Turning the Parameter menu on and off (Base Machine Settings)
Y and E	Turning the Sewing drive parameters on and off
Y and P	Turning the programing mode on and off Turning the editing mode on and off



3. Types of Operation

3.1 Normal Operation (without programming)

With the following key sequence, the normal operation is switched on.

- Press the "P" key.
The display shows :

-	-	-	P				
---	---	---	---	--	--	--	--

- Enter "000".
Model 0 is called up.

or

- Hold down the "P" key and tap the "E" key.

0	0						
---	---	--	--	--	--	--	--

In normal operation the step and model number displays are turned off.

3.2 Automatic Operation

In automatic operation the step and model number displays show the selected model and the current step.

The automatic operation is divided into the functions :

- Automatic run
- Programming operation (teach in) for generating a new model
- Editing operation for modify existing models.

Up to 998 programs are possible. By insufficient memory, programs must be deleted from the program memory.

A program (model) consists of 1 to 99 parts.

A part consists of 1 to 99 steps.

A step can have assigned any number of allowable functions.

The program length is determined by the amount of memory still available in the controls. The program memory has dynamic management.



3.3 Program Selection

3.3.1 Direct Model Selection

If the model number is known, it can be entered directly.

Order of operations

- Press the "P" key.
The following display appears :

-	-	-	P			
---	---	---	---	--	--	--

- Enter the model number.
The numeric entry occurs with the 0 to 9 keys. After the entry of the third number, the entry is automatically concluded. The model number entry is concluded after less than three digits by pressing the "E" key. If the model exists in the memory, the following appears in the display :

-	-	-	P		5	6	7
---	---	---	---	--	---	---	---

- After a program is activated, the step 01 is set after 2 seconds. The program is immediately ready for operation. The automatic mode is activated.
- If the model is not in the memory, the left display blinks. By holding down the "Y" key and tapping the "P", the entry of a new program can now begin (see Chapter 4.3). The program selection is aborted by pressing the "E" key.



3.3.2 Model Selection via Menu

If the model number is not known, all programmed models can be run through in the following manner.

Order of operations

- Press the "P" key.
The following display appears :

-	-	-	P			
---	---	---	---	--	--	--

- Press the "Y" key.
The first stored program is shown.
Each pressing of the "Y" key shows the next model.

If no models currently exist, the following appears :

-	Y	-	P		-	-	-
---	---	---	---	--	---	---	---

If there are no programs in the memory, the following display appears :

-	Y	-	P		-	n	o
---	---	---	---	--	---	---	---

- If the displayed program is to be selected,
Press the "E" key.
The following display appears.

-	Y	-	P		5	6	7
---	---	---	---	--	---	---	---

After approx. 2 seconds the display changes to the step 1.



3.3.3 Direct Part Selection in a Model

In the automatic operation a specific part of the selected model can be called up at any time.

- Press the "E" key.
@BLICKFANG-STR = Enter a two-digit part number with the 0 to 9 keys. The number is shown in the model number display.
After entry of the second digit the first step number of the part is displayed.
If the part does not exist, the last program step 'E' is called up.

Note

After direct part selection only the steps of this part will be conducted. The first step of this part of the current model is displayed. With each operation of the hand switch there is an advance of one step until the end of the part or model is reached. Thereafter this part starts at the first step again.

The normal program sequence can only be achieved by the renewed calling-up of a program.

3.3.4 Model Variations

For the adaption to different types of fabric with the same model style, the crimping values can be changed by +1.0 and -1.0 (crimping value-offset). This setting is only temporary and is cancelled by the turning-on of the tension and calling up a new model.

Turning off the crimping value-offset

- Press the "P" key and additionally tap the "0" key.
The display shows :

	0		OF			
--	---	--	----	--	--	--

Crimping value-offset -1.0

- Press the "P" key and additionally tap the "7" key.
The display shows :

-	1		OF			
---	---	--	----	--	--	--

Crimping value-offset +1.0

- Press the "P" key and additionally tap the "8" key.
The display shows :

	1		OF			
--	---	--	----	--	--	--

3.3.5 Special programs

Program 999

With this program the machine is reprogrammed as an edge trimming machine without crimping value entry.

The maximum speed is increased to 3500 rpm. The keys for the crimping values have no function.

After calling the program 999 turn OFF and ON the main switch.



4. Programmable Functions

With each program (=model) the machine settings described in the following are also stored. The model settings must be set before starting the programming mode.

4.1 Model Settings

Along with a model the following base machine settings are stored:

- Model-CRC(checksum)
- Base stitch length (3, 4, 5, 6 mm) (see Chapter 6.1.5)
- Stretch value (0-5) (see Chapter 6.1.2)
- Crimping value as of which a higher thread tension is switched on (0-15) (see Chapter 6.1.6)
- Stitch condensation generally turned on / off (see Chapter 6.1.4)
- Tape advance turned on / off (see Chapter 6.1.3)
- Tape advance mechanics existing / switched off (see Chapter 6.1.16)
- Number of steps in the model
- Model number

4.2 Step Settings

In each step the following settings are stored :

- Crimping value (0-15) incl. 1/2 values
- Additional tape tensioner on / off
- OH - distance with / without tape
- High lift on / off
- Stitch condensation on / off
- Part end marking



4.3 Generating a New Model

Before generating a new model it is essential to make the model specific parameter settings (see Chapter 4.1).

- Press the "P" key.

- - - P

- Enter the 3-digit program number.
The left display must blink.
If the left display does not blink, the selected program already exists.

- - - P 5 6 7

- Hold down the "Y" key and tap the "P" key.

"01" appears in the middle display.
The dots in the middle display blink.

0.1. 5 6 7

- Enter the crimping value by pressing one of the 0 to 15 keys.
Activate possible additional functions for the step by pressing one of the following keys :

- **F** : Additional tape tensioner
- **OH/0** : OH - distance with / without tape
- High lift
- Stitch condensation

- If a part end is to be set, press the "E" key.
The display shows:

05.005 e01

- Press the hand switch.
The entry value is saved.
The next value can be entered.
- This programming sequence is continued up to the step 99. Then the programming mode is automatically ended.
- If the program has less than 99 steps, end the programming mode by holding down the "Y" key and tapping the "P" key.
The program end marking is set, this means that an "e" entered in the last step is converted to an "E".
The display shows the first step of the new program.
The model is now saved in the memory and is called up for automatic operation.



4.4 Temporary Alterations in a Step

Every function in a step can be changed as required. This alteration is only valid for this program run. These alterations are lost if the step is exited. Parameter alterations can also be made.

- Press the key for the desired crimping value.
The new crimping value appears in the left display.
The original value is active again when the program is run next.

4.5 Saving Alterations in the Program

If the program is to be permanently changed, proceed as follows :

- Selecting the step to be changed.
- Hold down the "Y" key and tap the "P" key.

The editing mode is switched on.

The decimal points in the step display blink.

	4	.	5	2	.	3	5	6	7
--	---	---	---	---	---	---	---	---	---

- Enter the new crimping value.
- Enter possible other parameters, such as e.g. additional thread tension.
- Hold down the "Y" key and tap the "P" key.

The complete program is stored.

The program is continued with the altered step.

4.6 Deleting a Step

In the editing mode individual steps can be deleted.

- Hold down the "Y" key and tap the "P" key.

The editing mode is switched on.

The decimal points in the step display blink.

	4	.	5	2	.	3	5	6	7
--	---	---	---	---	---	---	---	---	---

- Hold down the "Y" key and hold down the "P" and "E" keys approx. 2 seconds.
The displayed step is deleted.
The following steps are advanced one position forward.
- After the release of all keys the step now in this position and its data will be displayed.

1	4	.	5	2	.	3	5	6	7
---	---	---	---	---	---	---	---	---	---

- Hold down the "Y" key and tap the "P" key.
The editing mode is switched off.



4.7 Inserting a Step

In the editing mode individual steps can be inserted.

- Hold down the "Y" key and tap the "P" key.

The editing mode is switched on.

The decimal points in the step display blink.

4.5 2.3 5.6 7

- Hold down the "Y" key and tap the "E" key.

A step is inserted in the model.

Insertion occurs immediately upon key operation.

To mark the new step, the display for the crimping values remains dark.

2.3. 5.6 7

- The previously chosen step is moved to the back.
- Enter a new crimping value.
- Enter possible other parameters, such as e.g. additional thread tension.
- Hold down the "Y" key and tap the "P" key.
The editing mode is switched off.

4.8 Deleting a Program

If an active program is to be deleted, this is possible with the following key entry :

- Hold down the "Y" key and tap the "P" and "E" keys.
The following display with a blinking model number appears.

- - - P 5.6 7

- The keys must be held down for 2 seconds, then the model number disappears. After release of all keys the controls branch to the model number entry.

- - - P

- The model number display blinks for 10 seconds. A new model number can be entered.
- If no new model number is entered the program changes to normal operation.



5. Multitest with the Key Cluster

If the "Y" is held pressed when the machine is turned on, the test mode is activated.

The following test programs can be selected :

1. Display of the machine class
2. Display of the software date
3. Input change
4. Switching of the individual outputs
5. Display of the pedal positions
6. Display of the current rpm
7. Display of the current counter status (position)

Order of operations

- When turning on the sewing machine, hold the "Y" key down.
The test mode is activated.
The following display appears:

t e s t - - -

- Release the "Y" key.
The first test display appears.
- With each pressing of the "Y" key there is an advance to the next test program.
After the 7th test program the first test program appears again.
- The testing program is ended by turning off and on.

5.1 Display of the Machine Class

No entries can be made in this test program. It only shows the machine class, e.g.:

5 5 0 2 3 A 0 1

Order of operations

- Turn on the test mode (see Chapter 5).
- Advance to the desired program by pressing the "Y" key.

5.2 Display of the Software Date

No entries can be made in this test program. It only shows the date of the software, e.g.:

2 7 . 1 1 . 9 7

Order of operations

- Turn on the test mode (see Chapter 5).
- Advance to the desired program by pressing the "Y" key.



5.3 Display of Input Change

This test program monitors all inputs. Every change in the status of an input is shown in the display.

No.	Description
1	Stitch condensation key
2	Vertical cutter key
3	Lift adjustment key
4	Needle high key
5	Speed Limitation 2600 switch
6	Speed Limitation 2380 switch
7	Knee switch for crimping interruption
9	Next step
14	Tape advance forward switch
15	Tape advance rear switch
16	Tape monitor

Order of operations

- Turn on the test mode (see Chapter 5).
- Advance to the desired program by pressing the "Y" key.
- Operate an input manually.
The display shows e.g.:

E 1 6 = OFF

E 0 1 = on



5.4 Switching of Individual Outputs

In this test program all outputs can be switched individually. The change of a switch is shown in the display.

No.	Description
1	Lifting the pressure foot
2	Thread tension solenoid valve
3	Vertical cutter solenoid valve
4	Lift adjustment solenoid valve
5	Tape brake solenoid valve
6	Needle cooling
9	Tape advance / blower solenoid valve
10	Tape clamp solenoid valve
11	Tape cutter solenoid valve
13	LED for the lift adjustment
14	LED for the vertical cutter
15	LED for stitch condensation
20	Multiposition cylinder II position 1
21	Multiposition cylinder II position 2
22	Multiposition cylinder II position 4
23	Multiposition cylinder II position 8
24	Multiposition cylinder II position 16
25	Multiposition cylinder I position 16
26	Multiposition cylinder I position 8
27	Multiposition cylinder I position 4
28	Multiposition cylinder I position 2
29	Multiposition cylinder I position 1

Order of operations

- Turn on the test mode (see Chapter 5).
- Advance to the desired program by pressing the "Y" key.
- The outputs can be run through consecutively with the "P" key.
- Individual outputs can be selected directly with the **0** to **9** keys.
- Press the "E" key.
The switching status of the selected output changes.
The display shows e.g.:

A11 = on



5.5 Display of the Pedal Positions

With this test it can be checked if the pedal signals all positions to the EFKA motor correctly.

Order of operations

- Turn on the test mode (see Chapter 5).
- Advance to the desired program by pressing the "Y" key.
- Press the "E" key.
The display shows:

P e d A l 0 0

- Bring the foot pedal into the desired position.
Dependent on the foot pedal position, the following values appear in the display :

Display	Position
-2;-1	Pedal stepped back
0	Rest position
1	Pedal stepped slightly forward
...	
13	Pedal stepped completely forward

5.6 Display of the Current Rpm

With this test the motor rpm can be checked.

Order of operations

- Turn on the test mode (see Chapter 5).
- Advance to the desired program by pressing the "Y" key.
- Press the "E" key.
The motor is initialized and then runs into position 1.
- Set the motor rpm with the pedal.
The display shows e.g.:

n - t 1 6 5 3

5.7 Display of the Count Position of the Synchronizer

With this test the count position of the synchronizer of the needle can be checked.

Order of operations

- Turn on the test mode (see Chapter 5).
- Advance to the desired program by pressing the "Y" key.
- Press the "E" key.
The motor is initialized and then runs into position 1. The arm shaft can now be turned with the pedal or by hand.
The position can be read in the display.

P O S 0 7 0



6. Parameter Settings

6.1 Base Machine Settings

The base settings may only be made when the sewing drive is idle.
They apply to all types of operation.

Order of operations

- Hold down the "Y" key and tap the "F" key.

The parameter menu is turned on.



- Briefly operate the "Y" key.
This advances the parameters one at a time.
- Hold down the "Y" key and tap the "F" key.

The parameter menu is turned off.

6.1.1 Parameter List

No.	Name	Value Range	Original Value
0	CRC	0-255	0
1	reserved		0
2	Stretch value	0-5	0
3	Tape advance	0-1	0
4	Stitch condensation	0-1	0
5	Base stitch length	3,4,5,6	5
6	additional thread tension	0-15	4,0
7	Needle stop position	1-2	1
8	Foot stop position	1-2	1
9	Speed limitation 1	100-10000	1500
10	Speed limitation 2	100-10000	2000
11	Speed limitation 3	100-10000	2500
12	Maximum rpm	100-10000	3000
13	LED brightness	0-15	8
14	Needle cooling after-running (*10ms)	0-10000	200
15	Control panel 1 activation	0-1	0
16	Tape operation	0-1	0
17	Lift height	0-1	0



6.1.2 Stretch Value

The stretch value for smooth seams with sensitive materials is set here.

0 0 Y F - 0 2

Order of operations

- Hold down the "Y" key and tap the "F" key.

The parameter menu is turned on.

- Advance to the desired parameter through repeated pressing of the "Y" key.
- Press the appropriate key for the desired stretch value.
 - Key 0: Stretch value 0
 - Key 1: Stretch value 1
 - Key 2: Stretch value 2
 - Key 3: Stretch value 3
 - Key 4: Stretch value 4
 - Key 5: Stretch value 5

The stretch value is displayed with smooth seams ('0' or '0H').

6.1.3 Tape Advance

With this parameter the tape advance is turned on or off generally.

If, with the 550-12-26, all seams are to be executed with tape, then the tape advance must be turned off.

0 Y F - 0 3

Order of operations

- Hold down the "Y" key and tap the "F" key.

The parameter menu is turned on.

- Advance to the desired parameter through repeated pressing of the "Y" key.
- Press the appropriate key for the desired function of the tape advance.
 - Key 0: Tape advance is turned off.
 - Key 1: Tape advance is turned on.



6.1.4 Stitch Condensation

With this parameter the switching of the stitch condensation is set.

Parameter = 0 : The stitch condensation can be turned on and off via the "Stitch Condensation" key.

Parameter = 1 : The stitch condensation is always turned on by smooth seams. The "Stitch Condensation" key has no function.

 0 YF-04

Order of operations

- Hold down the "Y" key and tap the "F" key.

The parameter menu is turned on.

- Advance to the desired parameter through repeated pressing of the "Y" key.
- Press the appropriate key for the stitch condensation.
 - Key 0: Stitch condensation is turned off. It can be turned on with smooth seams via the stitch condensation key.
 - Key 1: Stitch condensation is always turned with smooth seams.

The stitch condensation is only effective with smooth seams.

6.1.5 Base Stitch Length

With this parameter the base stitch length is set. 3, 4, 5, 6 mm can be set.

 5 YF-05

Order of operations

- Hold down the "Y" key and tap the "F" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Press the appropriate key for the desired stitch length.
 - Key 3 : Stitch length 3 mm
 - Key 4 : Stitch length 4 mm
 - Key 5 : Stitch length 5 mm
 - Key 6 : Stitch length 6 mm



6.1.6 Additional Thread Tension

With this parameter the crimping value as of which the additional thread tension is automatically turned on can be set.

Order of operations

- Hold down the "Y" key and tap the "F" key.

The parameter menu is turned on.

- Advance to the desired parameter through repeated pressing of the "Y" key.

- Press the key of the crimping value as of which the additional thread tension is to be turned on.

Key 1 : As of crimping value 1

to

Key 15 : As of crimping value 15

6.1.7 Needle Position during Drive Stop

With this parameter the position in which the needle stops when the drive stops is set.

Order of operations

- Hold down the "Y" key and tap the "F" key.

The parameter menu is turned on.

- Advance to the desired parameter through repeated pressing of the "Y" key.

- Press the appropriate key for the desired needle position.

Key 0 : Unpositioned

Key 1 : Position 1 (low)

Key 2 : Position 2 (high)

Key 3 : Position neutral point EFKA

6.1.8 Foot Position during Drive Stop

With this parameter the position in which the pressure foot stops when the drive stops is set.

Order of operations

- Hold down the "Y" key and tap the "F" key.

The parameter menu is turned on.

- Advance to the desired parameter through repeated pressing of the "Y" key.

- Press the appropriate key for the desired pressure foot position:

Key 1 : Position 1 (low)

Key 2 : Position 2 (high)



6.1.9 Speed Limitation 1

With this parameter the rpm of the speed limitation 1 is set.

1 5 0 Y F - 0 9

The display of the speed limitation is to be multiplied by a factor of 10. Only the upper three digits of the value are entered. (e.g. Rpm 1000 - Display 100).

Order of operations

- Hold down the "Y" key and tap the "F" key.

The parameter menu is turned on.

- Advance to the desired parameter through repeated pressing of the "Y" key.
- Enter the rpm with the 0 to 9 keys of the key cluster.
After the entry of the third number the entry is automatically concluded.
If fewer than 3 numbers are to be entered, conclude the entry with the "E" key.

6.1.10 Speed Limitation 2

With this parameter the rpm of the speed limitation 2 is set.

2 0 0 Y F - 1 0

The display of the speed limitation is to be multiplied by a factor of 10. Only the upper three digits of the value are entered. (e.g. Rpm 1000 - Display 100).

Order of operations

- Hold down the "Y" key and tap the "F" key.

The parameter menu is turned on.

- Advance to the desired parameter through repeated pressing of the "Y" key.
- Enter the rpm with the 0 to 9 keys of the key cluster.
After the entry of the third number the entry is automatically concluded.
If fewer than 3 numbers are to be entered, conclude the entry with the "E" key.



6.1.11 Speed Limitation 3

With this parameter the rpm of the speed limitation 3 is set.

250 Y F - 1 1

The display of the speed limitation is to be multiplied by a factor of 10. Only the upper three digits of the value are entered. (e.g. Rpm 1000 - Display 100).

Order of operations

- Hold down the "Y" key and tap the "F" key.

The parameter menu is turned on.

- Advance to the desired parameter through repeated pressing of the "Y" key.
- Enter the rpm with the 0 to 9 keys of the key cluster.
After the entry of the third number the entry is automatically concluded.
If fewer than 3 numbers are to be entered, conclude the entry with the "E" key.

6.1.12 Maximum Rpm

With this parameter the maximum rpm is set.

300 Y F - 1 2

The display of the speed limitation is to be multiplied by a factor of 10. Only the upper three digits of the value are entered. (e.g. Rpm 1000 - Display 100).

Order of operations

- Hold down the "Y" key and tap the "F" key.

The parameter menu is turned on.

- Advance to the desired parameter through repeated pressing of the "Y" key.
- Enter the rpm with the 0 to 9 keys of the key cluster.
After the entry of the third number the entry is automatically concluded.
If fewer than 3 numbers are to be entered, conclude the entry with the "E" key.



6.1.13 LED Intensity

With this parameter the brightness of the LED display can be set.

08 YF - 13

Order of operations

- Hold down the "Y" key and tap the "F" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Choose the appropriate key for the desired brightness.
Key 0 : Dimmest
to
Key 15 : Brightest

6.1.14 After-running of the Needle Cooling

With this parameter the after-running time of the needle cooling is set.

200 YF - 14

The displayed value is in time units, one time unit is 10 ms.

Order of operations

- Hold down the "Y" key and tap the "F" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Enter the desired value for the needle cooling with the 0 to 9 keys. After the entry of the third number the entry is automatically concluded.
If fewer than 3 numbers are to be entered, conclude the entry with the "E" key.

6.1.15 Terminal Activation

With this parameter a possibly existing control panel 1 (Monitor) can be activated.

0 YF - 15

Order of operations

- Hold down the "Y" key and tap the "F" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Press the appropriate key :
Key 0 : Inactive
Key 1 : Active



6.1.16 Tape Operation

With this parameter the tape advance mechanics and the tape monitor can be turned on and off.

	0		Y	F	-	1	6
--	---	--	---	---	---	---	---

Order of operations

- Hold down the "Y" key and tap the "F" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Press the appropriate key :
Key 0: No tape advance mechanics (550-12-23/ -24)
The tape monitor is turned off.
Key 1: With tape advance mechanics (550-12-26)
The tape monitor is turned on, when sewing with tape occurs.

6.1.17 Catch for the High Lift Key

With this parameter the manner in which the "High Lift" key functions is set.

	0		Y	F	-	1	7
--	---	--	---	---	---	---	---

Order of operations

- Hold down the "Y" key and tap the "F" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Choose the appropriate key for the desired function:
Key 0: Key operation
Key 1: Catch operation



6.2 Base Parameters

The meaning and the influence on function of the individual parameters are to be found in the operating instructions of the sewing drive.



ATTENTION !

The changes may only be made by trained, skilled personnel.

It is necessary to restart the controls after changing these parameters in order for all alterations to become effective.

- Hold down the "Y" key and tap the "E" key.
The following display appears :



The sewing drive parameters can be displayed and altered.

- Briefly operate the "Y" key.
This advances the parameters one at a time.
- Hold down the "Y" key and tap the "E" key.
This switches back into the normal mode.

6.2.1 Sewing Drive Parameter List

No.	Name	Standard Value
0	CRC	0
1	reserved	0
2	Direction of rotation	0
3	Rpm 10	1000
4	Rpm 20	2000
5	Rpm 30	3000
6	Rpm 40	4000
7	Max. rpm	3000
8	Positioning speed	500
9	Max. brake flank	25
10	First position running-in	10
11	First position running-out	30
12	Second position running-in	160
13	Second position running-out	180
14	Third position running-in	430
15	Third position running-out	470
16	Idle brake	5
17	Stop flank	32
18	First brake flank	10
19	Second brake flank	250
20	P divider	1
21	I divider	160
22	Lead angle	0
23	Targeted positioning	0



6.2.2 Direction of Rotation

With this parameter the direction in which the sewing drive turns is set.

	1		Y	n	-	0	2
--	---	--	---	---	---	---	---

Order of operations

- Hold down the "Y" key and tap the "E" key.

The parameter menu is turned on.

- Advance to the desired parameter through repeated pressing of the "Y" key.
- Press the appropriate key for the desired direction of rotation :
Key 0 : Right
Key 1 : Left

6.2.3 Rpm 10

With this parameter the rpm 10 can be set :

1	0	0	Y	n	-	0	3
---	---	---	---	---	---	---	---

The display of the rpm is to be multiplied by a factor of 10. Only the upper three digits of the value are entered. (e.g. Rpm 1000 - Display 100).

Order of operations

- Hold down the "Y" key and tap the "E" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Enter the desired rpm with the 0 to 9 keys.
After the entry of the third number the entry is automatically concluded.
If fewer than 3 numbers are to be entered, conclude the entry with the "E" key.



6.2.4 Rpm 20

With this parameter the rpm 20 can be set :

200Yn-04

The display of the rpm is to be multiplied by a factor of 10. Only the upper three digits of the value are entered. (e.g. Rpm 1000 - Display 100).

Order of operations

- Hold down the "Y" key and tap the "E" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Enter the desired rpm with the 0 to 9 keys.
After the entry of the third number the entry is automatically concluded.
If fewer than 3 numbers are to be entered, conclude the entry with the "E" key.

6.2.5 Rpm 30

With this parameter the rpm 30 can be set :

300Yn-05

The display of the rpm is to be multiplied by a factor of 10. Only the upper three digits of the value are entered. (e.g. Rpm 1000 - Display 100).

Order of operations

- Hold down the "Y" key and tap the "E" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Enter the desired rpm with the 0 to 9 keys.
After the entry of the third number the entry is automatically concluded.
If fewer than 3 numbers are to be entered, conclude the entry with the "E" key.



6.2.6 Rpm 40

This value is temporarily used by the EFKA sewing drive for the speed limitation. This value is therefore altered by the control program.

With this parameter the rpm 40 can be set :

1 0 0 Y n - 0 6

The display of the rpm is to be multiplied by a factor of 10. Only the upper three digits of the value are entered. (e.g. Rpm 1000 - Display 100).

Order of operations

- Hold down the "Y" key and tap the "E" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Enter the desired rpm with the 0 to 9 keys.
After the entry of the third number the entry is automatically concluded.
If fewer than 3 numbers are to be entered, conclude the entry with the "E" key.

6.2.7 Maximum Rpm

With this parameter the maximum rpm can be set :

1 0 0 Y n - 0 7

The display of the maximum rpm is to be multiplied by a factor of 10. Only the upper three digits of the value are entered. (e.g. Rpm 1000 - Display 100).

Order of operations

- Hold down the "Y" key and tap the "E" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Enter the desired rpm with the 0 to 9 keys.
After the entry of the third number the entry is automatically concluded.
If fewer than 3 numbers are to be entered, conclude the entry with the "E" key.



6.2.8 Positioning Speed

With this parameter the positioning speed can be set.

500Yn-08

The display of the positioning speed is to be multiplied by a factor of 10. Only the upper three digits of the value are entered. (e.g. Rpm 1000 - Display 100).

Order of operations

- Hold down the "Y" key and tap the "E" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Enter the desired rpm with the 0 to 9 keys.
After the entry of the third number the entry is automatically concluded.
If fewer than 3 numbers are to be entered, conclude the entry with the "E" key.

6.2.9 Maximum Brake Flank

With this parameter the speed limitation for the brake flank can be set.

025Yn-09

The display of the speed limitation is to be multiplied by a factor of 10. Only the upper three digits of the value are entered. (e.g. Rpm 1000 - Display 100).

Order of operations

- Hold down the "Y" key and tap the "E" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Enter the desired rpm with the 0 to 9 keys.
After the entry of the third number the entry is automatically concluded.
If fewer than 3 numbers are to be entered, conclude the entry with the "E" key.



6.2.10 First Position Entry

With this parameter the first position of the entry can be set.

0 1 0 Y n - 1 0

The display of the position refers to 512 impulses per rotation.

Order of operations

- Hold down the "Y" key and tap the "E" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Enter the position with the 0 to 9 keys.
After the entry of the third number the entry is automatically concluded.
If fewer than 3 numbers are to be entered, conclude the entry with the "E" key.

6.2.11 First Position Exit

With this parameter the first position of the exit can be set.

0 3 0 Y n - 1 1

The display of the position refers to 512 impulses per rotation.

Order of operations

- Hold down the "Y" key and tap the "E" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Enter the position with the 0 to 9 keys.
After the entry of the third number the entry is automatically concluded.
If fewer than 3 numbers are to be entered, conclude the entry with the "E" key.



6.2.12 Second Position Entry

With this parameter the second position of the entry can be set.

1 6 0 Y n - 1 2

The display of the position refers to 512 impulses per rotation.

Order of operations

- Hold down the "Y" key and tap the "E" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Enter the position with the 0 to 9 keys.
After the entry of the third number the entry is automatically concluded.
If fewer than 3 numbers are to be entered, conclude the entry with the "E" key.

6.2.13 Second Position Exit

With this parameter the second position of the exit can be set.

1 8 0 Y n - 1 3

The display of the position refers to 512 impulses per rotation.

Order of operations

- Hold down the "Y" key and tap the "E" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Enter the position with the 0 to 9 keys.
After the entry of the third number the entry is automatically concluded.
If fewer than 3 numbers are to be entered, conclude the entry with the "E" key.



6.2.14 Third Position Entry

With this parameter the third position of the entry can be set.

4	3	0	Y	n	-	1	4
---	---	---	---	---	---	---	---

The display of the position refers to 512 impulses per rotation.

Order of operations

- Hold down the "Y" key and tap the "E" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Enter the position with the 0 to 9 keys.
After the entry of the third number the entry is automatically concluded.
If fewer than 3 numbers are to be entered, conclude the entry with the "E" key.

6.2.15 Third Position Exit

With this parameter the third position of the exit can be set.

4	7	0	Y	n	-	1	5
---	---	---	---	---	---	---	---

The display of the position refers to 512 impulses per rotation.

Order of operations

- Hold down the "Y" key and tap the "E" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Enter the position with the 0 to 9 keys.
After the entry of the third number the entry is automatically concluded.
If fewer than 3 numbers are to be entered, conclude the entry with the "E" key.



6.2.16 Idle Brake

With this parameter the braking force of the idle brake can be set.

0 0 5 Y n - 1 6

Order of operations

- Hold down the "Y" key and tap the "E" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Enter the force of the brake with the 0 to 9 keys.
After the entry of the third number the entry is automatically concluded.
If fewer than 3 numbers are to be entered, conclude the entry with the "E" key.

6.2.17 Stop Flank

With this parameter the stop flank of the sewing drive can be defined.

0 3 2 Y n - 1 7

Order of operations

- Hold down the "Y" key and tap the "E" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Enter the stop flank with the 0 to 9 keys.
After the entry of the third number the entry is automatically concluded.
If fewer than 3 numbers are to be entered, conclude the entry with the "E" key.

6.2.18 First Brake Flank

With this parameter the first brake flank of the sewing drive can be defined.

0 1 0 Y n - 1 8

Order of operations

- Hold down the "Y" key and tap the "E" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Enter the first brake flank with the 0 to 9 keys.
After the entry of the third number the entry is automatically concluded.
If fewer than 3 numbers are to be entered, conclude the entry with the "E" key.



6.2.19 Second Brake Flank

With this parameter the second brake flank of the sewing drive can be defined.

250Yn-19

Order of operations

- Hold down the "Y" key and tap the "E" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Enter the second brake flank with the 0 to 9 keys.
After the entry of the third number the entry is automatically concluded.
If fewer than 3 numbers are to be entered, conclude the entry with the "E" key.

6.2.20 P_Divider

With this parameter the P-divider of the sewing drive can be defined.

001Yn-20

Order of operations

- Hold down the "Y" key and tap the "E" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Enter the P-divider with the 0 to 9 keys.
After the entry of the third number the entry is automatically concluded.
If fewer than 3 numbers are to be entered, conclude the entry with the "E" key.

6.2.21 I_Divider

With this parameter the I-divider of the sewing drive can be defined.

160Yn-21

Order of operations

- Hold down the "Y" key and tap the "E" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Enter the I-divider with the 0 to 9 keys.
After the entry of the third number the entry is automatically concluded.
If fewer than 3 numbers are to be entered, conclude the entry with the "E" key.



6.2.22 Lead Angle

With this parameter the lead angle of the sewing drive can be defined.

0 0 0 Y n - 2 2

Order of operations

- Hold down the "Y" key and tap the "E" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Enter the lead angle with the 0 to 9 keys.
After the entry of the third number the entry is automatically concluded.
If fewer than 3 numbers are to be entered, conclude the entry with the "E" key.

6.2.23 Targeted Positioning

With this parameter the targeted positioning of the sewing drive can be turned on and off.

0 Y n - 2 3

Order of operations

- Hold down the "Y" key and tap the "E" key.
The parameter menu is turned on.
- Advance to the desired parameter through repeated pressing of the "Y" key.
- Press the appropriate key for the targeted positioning.
Key 0 : Targeted positioning turned off
Key 1 : Targeted positioning turned on



7. RESET

With the key combination **0H**, **F** and **Y** when the machine is turned on, an original loading of all parameters at the standard values is conducted.

- Hold down keys **0H**, **F** and **Y** when turning on the machine.
The display shows "**Urladen**".

U r l a d e n

- If the parameters are to be reset to the standard values :
Briefly operate the "**E**" key.

With the 550-12-26 the tape advance unit must be turned on again after a reset. The machine parameters 3 and 16 must be set to the value 1.

- Hold down the "Y" key and tap the "F" key.
The parameter menu is turned on.
- Advance to parameter 3 through repeated pressing of the "Y" key.
- Press the "1" key.
The tape advance is turned off.
- Advance to parameter 16 through repeated pressing of the "Y" key.
- Press the "1" key.
The tape advance mechanics are turned off.
- Hold down the "Y" key and tap the "F" key.
The parameter menu is turned off.