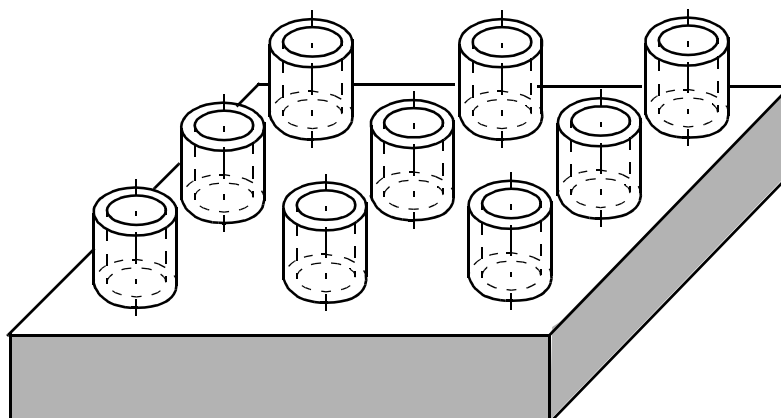


# UMESS

## Option 5

## One button operation



## Operating Instructions



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**Carl Zeiss**  
Corporate division  
Industrielle Meßtechnik  
D-73446 Oberkochen

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# Preface

It is here assumed that the user is familiar with the coordinate measuring machine and its components. Please keep all printed materials delivered with the measuring machine ready to hand at all times.

## Principles in this operating manual

Before starting to work with this manual, the user has to familiarize himself with the applied principles.

In the following, you will find information on the used font types, signs and symbols.

### Typographic principles

The font types and font schemes used in this manual have the following meaning:

- **bold face**
  - Dialog element on the screen  
Example: "... the button <**TERMIN**>"
  - Term  
Example: "During calculation, the location of a **measuring element** in relation to a **reference element** is determined."
  - File and directory names  
Example: **/home/zeiss/UB**
- *italic*
  - Highlighted text of which the content is very important  
Example: "Click with the *right* mouse button ..."
  - Cross reference  
Example: "..., see also ► „*Entering key assignment*“ on page 2-4"
- Courier  
Program code, file contents
- **Courier bold face**  
Text in dialog windows and protocols

## Signs and symbols

Special signs and symbols are used in this manual:

### Symbols for warnings and information



#### **Danger!**

In this case, special care is called for. The warning triangle indicates risk of injury. Non-observance of this warning may cause personal injury.



#### **Attention!**

This symbol warns against situations which may lead to loss of data, measuring errors, errors in the measuring run, collisions or damage to the machine and workpiece.



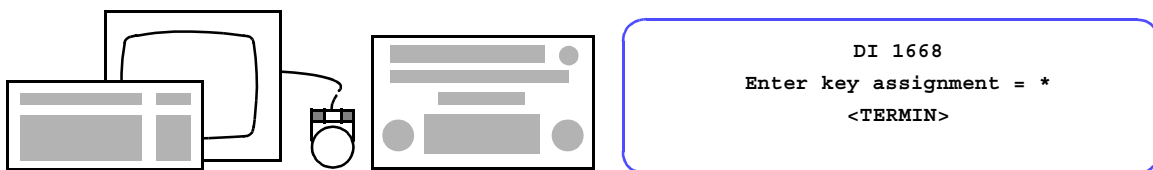
The **Note** symbol is shown next to important text and helpful additional information.

### Symbol for function call

There are several possibilities:

- Direct input by means of the DI number
- Function selection by means of the pull-down menu
- Selection by means of icons

Example:



### Symbol for softkey

Reference to softkeys in dialogs.

# Overview of chapters

This manual describes the function and operation of the one button operation UMESS UX 5.

The following subjects are described:

- *„Overview of the one button operation“ on page 1-1*
- *„Setting up/modifying the one button operation (DI 1668)“ on page 2-1*
- *„One button operation“ on page 3-1*



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## **Chapter 1 Overview of the one button operation**

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# Chapter

# 1

## Overview of the one button operation

---

### **This chapter contains:**

Phases of the one button operation . . . . .	1-2
Softkey assignment and softkey levels . . . . .	1-3

# Phases of the one button operation

## One button operation means

After clamping the test pieces, the keys on the control panel or computer must be pressed only a few times to start CNC measuring runs or batches. Two phases must be differentiated:

### 1. Setting up or modifying one button operation

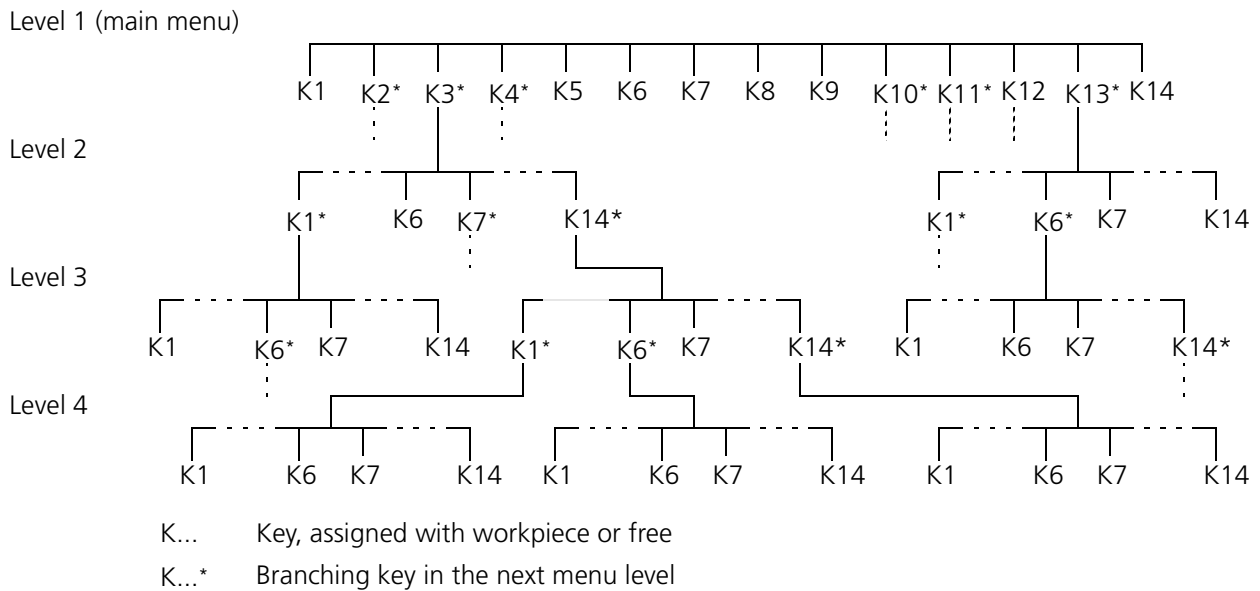
First you must determine (once) with **<DI 1668>** which workpieces or batches are to be started with which keys (► „*Setting up/modifying the one button operation (DI 1668)*" on page 2-1). The key assignment is retained if no modifications are undertaken.

### 2. Measuring workpieces with one button operation

The one button operation is started with **<DI 1669>** and by entering the password. You, or another operator, can now start the assigned measuring runs by pressing a button and without further inputs (► „*One button operation*" on page 3-1). Use softkey and correctly entered password to switch off.

## Softkey assignment and softkey levels

A maximum 14 of the 16 softkeys can be assigned. If you require more keys, you can determine more key levels (maximum 4 levels). In this case you must define branching keys in the upper levels to reach the lower levels. A tree structure results:



Workpieces can be permanently assigned, however more softkeys must probably be activated for the workpiece selection :

Max. no. of levels	Max. no. of workpieces	Max. no. of times key to be pressed at start
1	14	once
2	196	twice
3	2744	3 times
4	7045	4 times



# Chapter

# 2

## Setting up/modifying the one button operation (DI 1668)

---

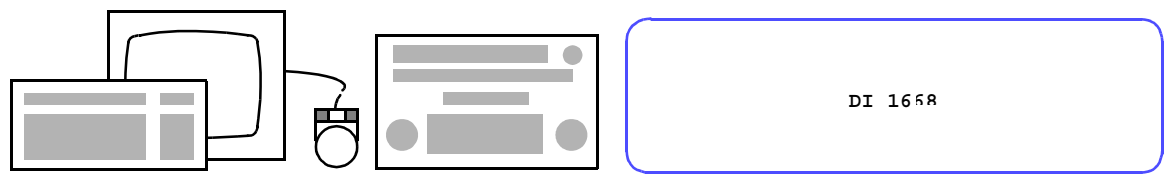
### **This chapter contains:**

General .....	2-2
Entering key assignment .....	2-4
Entering a comment .....	2-10
Modifying the run data .....	2-12

# General

The function **<DI 1668>** must always be called to set up or modify the key assignments.

## Function call



## Dialog window

Enter key assignment

J

Enter key assignment  
or Enter comment  
or Modify run data

\*

\* YES

NO

\*

TERMIN

BACK

INFO

## Softkeys

- \* YES / NO

Acceptance/refusal of YES/NO field currently highlighted (<YES> = input of \*).
- TERMIN

Branching to the task selected.
- BACK

Return to calling menu.
- INFO

More information.

### Input fields

<b>Enter key assignment</b>	Enter/modify the assignment of the keys to the workpieces (➤ „Entering key assignment“ on page 2-4).
<b>Enter comment</b>	Comment on the key assignment if required, e.g. to explain operation in the one button mode (➤ „Entering a comment“ on page 2-10).
<b>Modify run data</b>	To modify the run data of a CNC run already assigned, e.g. modify part number, limit CNC run to defined control data lines etc. (➤ „Modifying the run data“ on page 2-12).

### Operation

Select the required task with **<\*YES>/<NO>** and call the corresponding input mask with **<TERMIN>** .

Return to UMESS with **<BACK>**.

## Entering key assignment

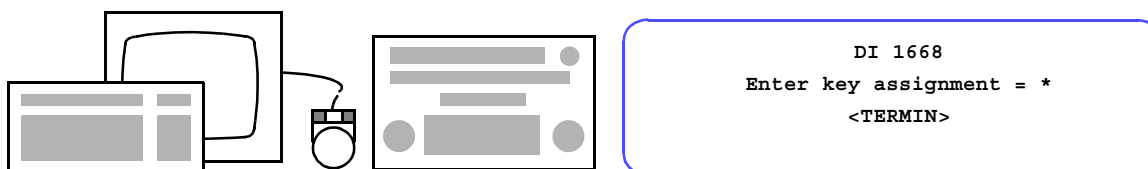
In the Enter key assignment **input mask** you enter the keys with which you want to start the workpieces or batch.

### Preparations

- Workpieces must be in a catalog.
- Batches must be defined.
- A-positions must be defined under corresponding numbers.

Make entries in the key assignment plan.  
This appears when the input mask is called.

### Function call



### Dialog window

Enter key assignment

Modify

	Key no.	Identif	ID	Workpiece or batch	A pos.
	E1	E2	E3	E4	
	-----				
1					
2	1	1		*Cube	
3					
4					
5					
6					
7					
8					

I

\* YES

NO

MODIFY

\*

INSERT

SELECT L

TERMIN L

TERMIN

BACK

COPY

SHIFT

DELETE

COLUMN

INFO



## Softkeys

**\* YES / NO**

To accept/decline the highlighted YES/NO field.

**MODIFY**

To modify the line of the key assignment plan currently selected; after pressing the key the cursor jumps to the **key No. E1** column, if you have not requested another with **<COLUMN>**. Now you can perform inputs or modifications in this column.

**INSERT**

To insert blank line(s) in the key assignment plan, e.g. in order to insert further key assignments; after the key is pressed the program requests with dialog **Insert no. of lines** and **before line**. Enter the required values, **<Return>**. The blank line block subsequently appears behind the cursor.

**-SELECT L**

To select a certain line of the key assignment plan for looking at or to modify; after the key is pressed the program requests with dialog **Line** (line numbers are in the first column of the list). Enter the line number required **<Return>**. The line requested subsequently appears behind the cursor.

**-TERMIN L**

To accept the line selected with the entries which you can currently see on the screen. Accept each column of the line to be modified with **<Return>**. If all entries are correct, the cursor subsequently jumps to the next line (if one exists).

Please see also the note on entering workpiece numbers in the column **workpiece or batch**

**TERMIN**

To conclude input mask and return to **Enter key assignment**.

Please note: You must conclude the lines re-entered or modified last with **<-TERMIN L>** or **<Return>**. Otherwise the program will accept this line in its old state or not at all.

**BACK**

Return to **Enter key assignment** without accepting the modifications or new entries which may have been made

**COPY**

To copy one or several lines of the key assignment plan, e.g. for the purpose of overwriting; after the key has been pressed the program requests with dialog **Copy from line, to line** and **before line**. Enter the values required, **<Return>**. The copied lines then appear at the required position.

**SHIFT**

To transfer one or several lines to another position of the key assignment plan; procedure analogous to **<COPY>**.

**DELETE**

To delete one or several lines of the key assignment plan, hence to delete the key assignment; after pressing the key the program requests per dialog **Delete from line, to line**. Enter the values required, **<Return>**. The lines specified subsequently disappear.

### COLUMN

If you only want to modify certain columns, you can inform the program of these beforehand. After the key has been pressed, the program enables a maximum of 4 column numbers to be entered by dialog.

You determine the column numbers by counting.

Key no.				Identif	ID	Workpiece or batch				A-position		
E1	E2	E3	E4									
-----												
Column numbers												
	1	2	3	4	5	6		7			8	
1	1				*Cube	1						
2	1	2			*Cube	1						
3	1	2	3		*Cube	1						
4	1	2	3	1	Measure.	2	KD1	MEASUREMENT	A88		1	
5	1	2	3	2	Alignm.	2	KD1	ALIGNMENTS	A88		1	
6	1	2	3	3	Evaluat.	2	KD1	EVALUATIONS	A88		1	

After **<MODIFY>** the program now enables input/modification in the columns required. In this way extensive inputs are made easier for you and ensures against error inputs.

To disable the column limitation: Call **<COLUMN>** again and enter a blank for the 4 column numbers. Disabling also occurs after **<TERMIN>** and **<BACK>**.

### INFO

Further information as well as the possibility to print the lines of the key assignment plan currently displayed.

## Input fields

### Key no.

Here you enter the number of the key which you want to assign, for the respective level E1 to E4 (► „Overview of the one button operation“ on page 1-1). Keys 1 to 14 are available, distributed as follows:

1	2	3	4	*	5	6	7	8
BACK	9	10	11		12	13	14	INFO

As you can see from the above sketch, the outer softkeys of the lower row are permanently assigned.

Example under "Operation".

### Identif

The identification entered here from a maximum of any 8 keyboard characters appears later in the one button operation on the softkey. Select a meaningful term or abbreviation to facilitate the identification for the operator (e.g. workpiece name with clear abbreviation). Use simple terms for the branching keys, e.g. **LEVEL** with the number of plane which can be reached, **BRANCH**, preceding \* to differentiate them from the workpiece/batch keys.

### NOTE

You must define a submenu for every branching key.

Example under "Operation".

### ID

Here you must specify whether a branching key is meant or a workpiece/batch key.

Branching key: **ID = 1.**

Workpiece/batch key: **ID = 2.**

Example under "Operation".

### Workpiece or batch

For keys with **ID = 2** you must enter the workpiece (or batch) to be started with the number or the name from the workpiece catalog. The softkey **<-TERMIN L>** replaces the entered workpiece number by the name.

### NOTE

You can comprise workpieces from various catalogs in one run. To do this you specify the corresponding catalog code in brackets with the workpiece name, as for "EXCALL", see UMESS operating instructions .

### A-position

This column remains blank for keys with **ID = 1** (branching keys).

For keys with **ID = 2** you must enter here the A-position with which the workpiece (or batch) is to run.

This column remains blank for keys with **ID = 1** (branching keys).

### Operation

- With **<-SELECT L>** select the line in which you want to make entries.
- Generate additional lines with **<INSERT>** or **<COPY>**.
- If necessary specify the columns to be modified with **<COLUMN>**.
- Initiate entries or modifications with the **<MODIFY>** softkey. Modify or accept the highlighted columns in succession, conclude with **<Return>**. You can also jump between the (enabled) columns of a line with the  $\vee$  and  $\wedge$  cursor keys.
- Replace the entered workpiece number by the name with **<-TERMIN L>**.
- Accept each line processed with **<-TERMIN L>** or each column with **<Return>** if you want to store the entries/modifications after **<TERMIN>**.
- To delete, copy or transfer lines, use the appropriate softkeys.
- After concluding all entries and transfer of the last line entered or changed, conclude the input mask with **<TERMIN>**.

If the key assignment plan contains workpiece names and A-positions not existing or if submenus are missing for branching keys, the input mask and key assignment plan appear after **<TERMIN>** with a corresponding message for renewed correction.

You can enter the key assignment in any order. The program sorts the key assignment plan after **<TERMIN>**; this may take a few minutes.

### Example

**Key no. = 4 5 14 9** means

- in level E1 softkey **4** must be pressed (branching key),

- in level E2 softkey **5** must be pressed (branching key),
- in level E3 softkey **14** must be pressed (branching key),
- in level E4 softkey **9** must be pressed (workpiece or batch).

This key should start the workpiece **BORE PLATE** with the W-position 27.

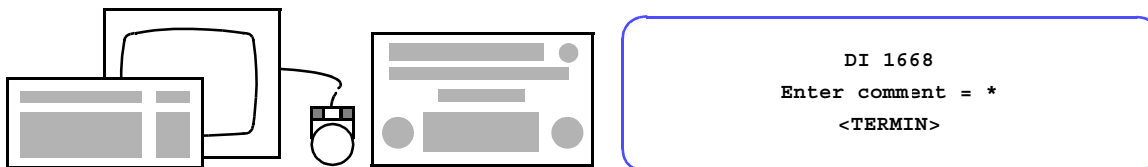
For this the key assignment plan must contain the following 4 lines (enter in any sequence, the program does the sorting):

Key no.	Identif	ID	Workpiece or batch	A-position
E1 E2 E3 E4				
1	1		*bra E2 1	
2	1	2	*bra E3 1	
3	1	2	3	*bra E4 1
4	1	2	3	1 BORE PL 2 BORE PLATE 27

## Entering a comment

In the **Enter comment** input mask you can comment on the workpiece or the key assignment. The comment later appears in the one button mode. You therefore have an opportunity to include user and operating notes.

### Function call



### Dialog window

Enter comment

	Key no.	Identif	Comment
	E1	E2	E3 E4
<input type="checkbox"/>	1	1	*Cube 1. - x. Control data line*Cube 1
	2	1 2	*Cube x. - Last control data line
	3	1 2 3	*Cube Control data line x - y
	4	1 2 3 1	Measure. Control data line 46 - -78
	5	1 2 3 2	Alignm.
	6	1 2 3 3	KD1
	7	1 2 3 4	

\* YES

NO

MODIFY

\*

SELECT L

TERMIN L

TERMIN

BACK

INFO

## Softkeys

If existing, analogous to input mask **Enter key assignment** ,  
 ➤ „Entering key assignment“ on page 2-4.

## Input fields

### Key No., Identif

Meaning same as for **Enter key assignment** , ➤ „Entering key assignment“ on page 2-4 input mask. These columns are now read only, they cannot be modified.

### Comment

Enter a comment from a maximum of any 36 keyboard characters. The comment later appears in the one button mode, ➤ „Starting the workpieces“ on page 3-4.

## Operation

- With **<-SELECT L>** select the line in which you want to make entries.
- Initiate entries or modifications with the **<MODIFY>** softkey. Modify or accept the comment column, conclude with **<Return>**.
- Accept each line processed with **<-TERMIN L>** or **<Return>**.
- After concluding all entries and transfer of the last line entered or changed, conclude the input mask with **<TERMIN>**.

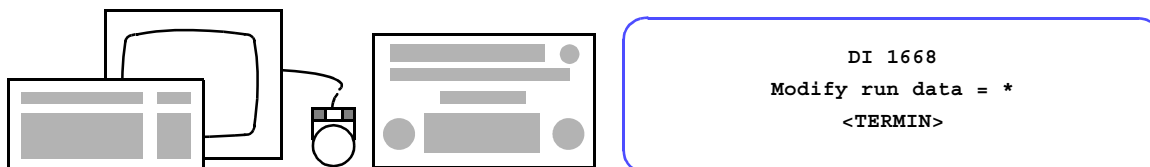
## Modifying the run data

In the **Modify run data** input mask you can modify the following run data of the workpieces to be started with the one button mode:

- Part number,
- start line of the CNC run,
- end line of the CNC run.

The program ignores unintentional input with the branching keys.

### Function call



### Dialog window

Modify run data									
	Key no.				Identif	Part number	Start-	End-	
	E1	E2	E3	E4			line	line	
<input type="checkbox"/>	1	1			*Cube				
	2	1	2		*Cube				
	3	1	2	3	*Cube				
	4	1	2	3	1 Measure.	234-678xyz	46	78	
	5	1	2	3	2 Alignm.	234-678xyz			
	6	1	2	3	3 Evaluat.	234-678xyz			
	7	1	2	3	4 KD1	234-678xyz			

* YES	NO	MODIFY		*		SELECT L	TERMIN L	TERMIN
BACK						COLUMN		INFO



## Softkeys

If existing, analogous to input mask **Enter key assignment** ,  
 ➤ „Entering key assignment“ on page 2-4.

## Input fields

### Key No., Identif

Meaning same as for **Enter key assignment** , ➤ „Entering key assignment“ on page 2-4 input mask. These columns are now read only, they cannot be modified.

### Part number

Input of a maximum of any 14 keyboard characters. They appear under the part number in the record of the workpiece started with this key. By entering a number, the part number is increased by 1 with each CNC run.

The program ignores the input with branching keys.

### Start line, End line

**Start line** enables any position of the program to be jumped to. If in doing this program parts are jumped, please refer to the corresponding notes in the UMESS operating instructions.

**End line** enables the end of the CNC run before the last program line. In this case check whether collision-free travel is guaranteed to the next workpiece.

## Operation

- With **<-SELECT L>** select the line in which you want to make entries.
- If necessary specify the columns to be modified with **<COLUMN>**.
- Initiate entries or modifications with the **<MODIFY>** softkey. Modify or accept the highlighted columns in succession, conclude with **<Return>**. You can also jump between the (enabled) columns of a line with the  $\vee$  and  $\wedge$  cursor keys.
- Accept each line processed with **<-TERMIN L>** or each column with **<Return>** if you want to store the entries/modifications after **<TERMIN>**.



# Chapter 3

## One button operation

---

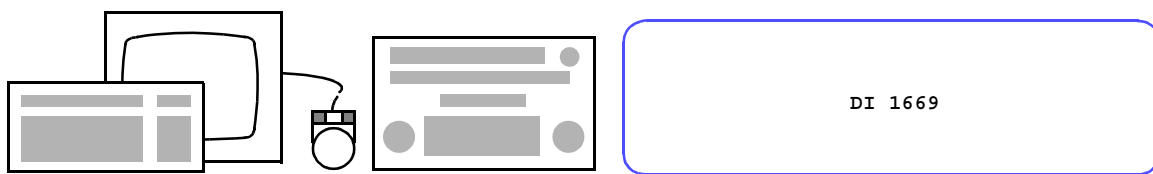
### **This chapter contains:**

Switching on the one button operation <DI 1669> . . . . .	3-2
Starting the workpieces . . . . .	3-4
Switching off the one button operation . . . . .	3-6

## Switching on the one button operation <DI 1669>

With this function call, you switch on the one button operation. After this you or another operator can start CNC runs and batches by way of the keys previously defined with <DI 1668> .

### Function call



### Dialog window

Switch on one button operation

☐ Password

Main menu after CNC run  
or display last runs

☐ \*

☐

* YES	NO			*				TERMIN
BACK								INFO

### Softkeys

**\* YES / NO**

To accept/decline the highlighted YES/NO field.

**TERMIN**

To conclude the input mask. Level 1 of the softkey assignment defined by you subsequently appears, if the password is correct (► „Starting the workpieces“ on page 3-4).

**BACK**

Return to calling menu.

**INFO**

More information.

### Input fields

#### Password

The password ensures the one button operation against unauthorized enabling and disabling. Enter the preset password "**ZEISS**" and accept with **<Return>**.

#### Main menu after CNC run

If you select this option, after CNC end one of the workpieces started in the one button operation appears again in level 1 of your softkey assignment.

#### or display last runs

With this option you can comprise the last 14 workpieces in a special softkey menu which appears at the end of the CNC run. The program enters in this menu every workpiece started in the one button operation: the workpiece started last to key 1, the one before to key 2 etc. After each CNC run all the workpieces move one key back in order to clear key 1 for the workpiece started last.

With this procedure

- you facilitate for the operator verification of workpieces already run and those still to be started,
- you simplify the operation if workpieces are to run several times,
- you can comprise a limited number of workpieces in one softkey menu to save the operator using branching keys.

### Operation

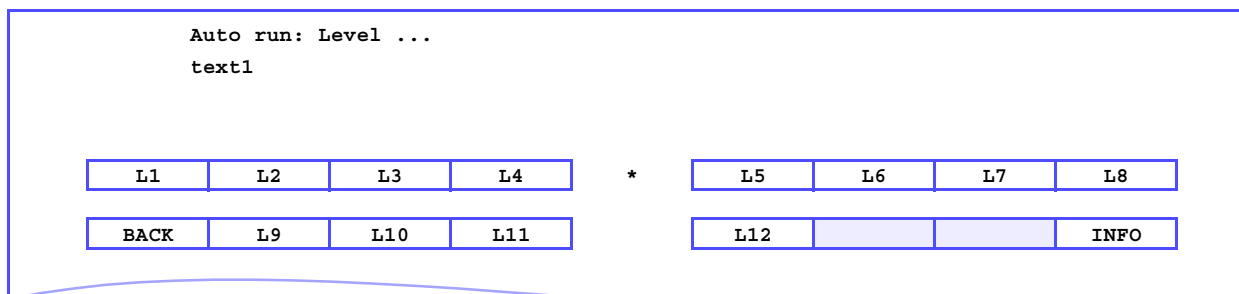
Enter password and determine which menu is to appear after the CNC end. Level 1 of your softkey assignment ► „Starting the workpieces“ on page 3-4 appears after concluding with **<TERMIN>**.

## Starting the workpieces

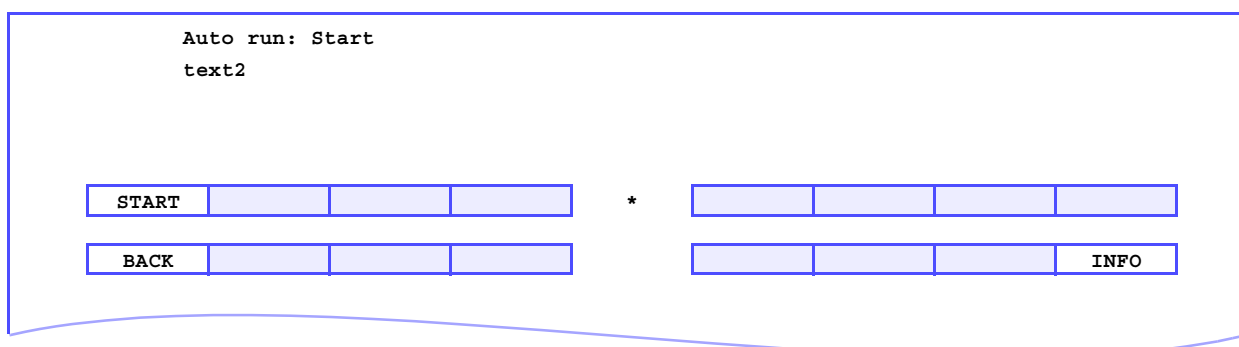
As soon as you have started the one button operation (> „Switching on the one button operation <DI 1669>“ on page 3-2), the main menu of your special softkey assignment appears, e.g.



After pressing a branching key you reach the corresponding submenu, e.g.



After pressing a workpiece/batch key you reach the start menu:



After the CNC end, in the case of

- **Main menu after CNC run** the menu determined in **<DI 1669>** appears (► „Switching on the one button operation **<DI 1669>**“ on page 3-2),
- **or display last runs** the input mask **Auto run: Runs selected last**, where the last runs occupy the softkeys, e.g.:

Auto run: Runs selected last

W14	W13	W12	W11	*				
BACK								INFO

### Softkeys

**START**

To confirm the start of the workpiece selected. The CNC run begins immediately after.

**BACK**

In **Auto run: Basic menu**: Call of the input mask for disabling the one button operation, ► „Switching off the one button operation“ on page 3-6.

In **Auto run: Level ...**: Return to higher menu.

In **Auto run: Start**: Return to the softkey level in which you have selected the run displayed.

In **Auto run: Runs selected last**: Return to **Auto run: Basic menu**.

**INFO**

More information.

The other softkeys are shown here as examples of branching or workpiece softkeys.

### Operation

- Select workpiece or branching key.
- Confirm start with **<START>**.
- Select higher menus with **<BACK>** or request the input mask to disable the one button operation.

## Switching off the one button operation

You can exit (only with password) or interrupt the one button operation with this function call.

## Function call

Softkey **<BACK>** of the input mask **Auto run: Basic menu**, **▶** „Starting the workpieces“ on page 3-4.

### Input mask

Switch off one button operation

☐ Password

				*	SYS END			TERMIN
BACK								INFO

## Softkeys

**SYS END**

You end UMESS without password with the one button operation still enabled. After you log on again, you are directly in the one button operation.

With the password you reach the UMESS basic functions.

## TERMIN

Without the password you reach **Auto run: Basic menu.**

With the password you reach the UMESS basic functions.

**BACK**

Return to **Auto run: Basic menu.**

## INFO

Further information.



### Password

#### Input fields

Enter the same password as for **Switch on one button operation** and confirm with **<Return>**. You cannot exit the one button operation without the password.

#### Operation

Enter password and request the UMESS main menu with **<TERMIN>** or interrupt the one button operation with **<SYS END>** or return to **Auto run with <BACK>**. Return to basic menu.



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