# **O** BUSCH-JAEGER

Controlpanel 6136/100C-102 6936/100C-102 Controlpanel 6136/100CB-102 6936/100CB-102



**ENG** Operating Instructions

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# 2 Safety



Work on the 230 V supply system may only be performed by specialist staff! De-energize mains power supply prior to installation and/or disassembly!



A scratched screen surface will affect monitor handling.

Never use any hard or sharp-pointed objects for entries on the touch screen monitor. The screen surface may be damaged by such objects!



#### Do not spray any detergents directly on the screen surface.

Clean the screen using a soft cloth and commercially available glass cleaner.

# 3 Technical data

Rated voltage	230V ±10%, ~50 Hz/60 Hz
Power consumption	< 20VA
Operating temperature	0°C to +45°C
Storage	-20°C to +60°C
Bus connection (TP)	Bus terminal block
Room thermostat measuring range	0°C to +40°C
Dimensions incl. frame (W x H x D)	218 mm x 185 mm x 67 mm
Flush-mounting box	
Dimensions (W x H x D)	200 mm x 164 mm x 60 mm

# 4 Unit view

- 1 Display 320 x 240 pixels
- 2 MMC/SD card reader



5	Function overview	
	Function	6136/100C-102
		6936/100C-102
		6136/100CB-102
		6136/100CB-102
	Total of functions	210
	Scope of scenes	32 scenes, 40 actuator groups
	Scope of time programmes	20 channels with 20 switching times each
	Number of alarm/fault messages	50
	IR channels	16
	Presence simulation	yes
	Integrated room thermostat	yes
	Display 320 x 240 pixels	256 colours
	Message function	yes
	Info function	yes
	Alarm clock/timer function	yes
	Card reader	SD, MMC

## 6 Operation

#### 6.1 Touch screen

The screen has a surface which reacts when touched (touch screen). To navigate in the control system, touch the buttons on the operating surface. Use the supplied pen or a finger to do this.



6.2 Fundamentals

The functions of the control panel are software-dependent and are determined by the saved project.

Thus the appearance of the operating pages varies as well.

• Every page can be programmed individually. 5 or 10 touch buttons or up to 8 icons can be displayed.

Message s	ystem	Living room	
Workroom		Bedroom	
Cellar		Child's room	
Garage		Kitchen	
		Corridor	
System	24 °C	05.04.2004	Extra

The buttons "1" (Fig. 4) and "2" (Fig. 5) or any other buttons allow changing between the different screen views.



On the control panels 6136/xx and 6936/xx, up to 21 operating pages can be programmed.

All pages can be individually adapted to the project. A reasonable page structure may e.g. be room-oriented (Fig. 6) or function-oriented (Fig. 7). It is possible to initiate switching processes directly through touch buttons (depending on the programming) or to call up a pop-up window to initiate switching processes (Fig. 11).

Message system	Living room		Message s	ystem	Heating sys	tem
Workroom	Bedroom		Blind		Alarm syste	m
Cellar	Child's room		Outdoor lig	ghting	Central fund	ctions
Garage	Kitchen		Indoor ligh	ting		
	Corridor					
System 24 °C	05.04.2004 Extra	Fig. 6	System	24 °C	05.04.2004	Extra

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MediaAudio and video equipment may be<br/>controlled directly through icons if this has<br/>been implemented during the configuration<br/>of the room/control panel (Extra devices to<br/>execute the EIB-Telegramms are<br/>necessary).

CD-Player			<del>B</del>
CD1 C	D2 CD3	CD4 CI	05 CD6
CD7 C	D8 CD9	CD10 CD	11 CD12
•			
<b>M</b> -			+ 0
System	19 °C	11:13	Extra

Fig. 8

#### 6.3 Safeguarding the screen

To safeguard the unit against unauthorized or unintended use, call up the main page and press on the start page title on the top left in the display for more than 3 seconds.

At the top right of the display, the "Lock"



symbol appears being closed. The display is now safeguarded and cannot be operated any more.



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The display is only enabled by pressing long again.



Safeguarding the display is recommended whenever the unit is installed in areas where many people come and go or as a child lock.

Date

#### 6.4 System settings

Select the "System" button on the main page to access the basic unit settings and to adapt them if required or to transfer a new project.

- Å
  - Access to the system settings or operating
     pages can be safeguarded by a PIN code or completly blocked.

When the system settings are blocked, they cannot be accessed or modified by the user. In this case, please contact your electrician.

• Enter your PIN code if available.

### • Set the correct date using the arrow keys.

• Confirm your entry with "OK".



- Set the correct time using the arrow keys.
  - Confirm your entry with "OK".

Display

lighting

To save energy, the display lighting switches itself off automatically when the unit is not actuated.

- Select the desired "Lighting Off" time from the list or disable the automatic "Lighting Off" function.
- Confirm your entry with "OK".





## Caution!

These settings also apply to the alarm sounds.

- Set the volume of sound messages using the slider or the arrow keys.
- Confirm your entry with "OK".
- **Brightness** Set the screen brightness using the slider.
  - Confirm your entry with "OK".



- Alert messages
- Timer/Alarm clock
- Incorrect input
- Keypad tones



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• You may select the alert message ton	ne	Warning to	nes
		Alert mess	ages
<ul> <li>You may also test the selected tone if</li> </ul>	f vou	Timer/Aları	n c <b>l</b> ock
wish.	,	Incorrect in	nput
• Confirm your optry with "OK"		Keypad tor	nes
• Committi your entry with OK .			
		System	24 (
• You may select the timer/alarm clock	tone	Warning to	nes
from the list.	N	Alert mess	ages
• You may also tost the selected topo if	f vou	Timer/Alar	m clock
• Tou may also lest the selected tone in	you y		
WISH.			iput
<ul> <li>Confirm your entry with "OK".</li> </ul>		Keypad tor	nes
		System	24 9
<ul> <li>You may enable or disable the signal</li> </ul>	ling	Warning to	nes
tone for incorrect inputs.		Alert mess	ages
<ul> <li>Confirm your entry with "OK".</li> </ul>	N	Timer/Aları	n clock
	2		tuar

Alert messages Alarm 1 Alarm 2 Alarm 3 Alarm 4 \_ Alarm 5 Test  $\checkmark$  $\wedge$ ОК Fig. 17 ~ Timer/Alarm clock Timer 1 \_\_\_\_ Timer 2 Timer 3 Timer 4 Timer 5 Test  $\checkmark$ ^ ОК Fig. 18 °C Δ Incorrect input OFF ON И Keypad tones  $\checkmark$  $\wedge$ ΟК System 24 °C Fig. 19

Incorrect

input

Alert

message

- Keypad You may enable or disable the signalling tones tone for button actuation.
  - Confirm your entry with "OK".



Touch Adjusting the touch display will usually not be adjustment necessary. Should you still go wrong frequently with your pen or your finger, please adjust the touch display.

> To do this, point your pen exactly into the appearing target points.



05.04.2004

24 °C

Back

Home

Commis-Call up commissioning only if the unit is to be resioning programmed.

See chapter "Programming".



Fig. 23

Synchro-You can ensure (synchronise) the accuracy of nisation of the device-integrated clock either through the Clock power supply network or through a guartz crystal.

> A synchronisation through the internal guartz crystal is necessary when the room/control panels is used in conjunction with instable power supply networks (e.g. generator mode).

Confirm your entry with "OK".

#### 6.5 Room thermostat, climate

The integrated room thermostat ensures the set climate and the desired temperature inside the room. The user may modify the set room temperature and the thermostat operating mode at any time. E.g. a nighttime temperature reduction can be activated, i.e. the room temperature is reduced automatically at night.

This unit can also control room thermostats in other rooms and/or in the entire building, e.g. for realizing a central nighttime temperature reduction feature. Please refer to the chapter "External room thermostats"



#### 6.5.1 Integrated room thermostat

- Select the room temperature display button on the main page in order to call up or adapt the settings of the integrated room thermostat if necessary.
- The current operating mode of the room  $^{\circ}$
- thermostat (heating/cooling) is shown as a symbol on the main page.
- Room thermostat operating modes
- 1 Stand-by: The comfort temperature is slightly reduced.
- 2 Comfort: The set room temperature is permanently maintained.
  - 3 Nighttime temperature reduction: Reduction of room temperature.

Set room temperature is changed by using the arrow keys.





Fig. 26

Fig. 25



Setting the • Select the desired operating mode.

- room thermostat
- Set the desired set value using the arrow keys.
- Confirm your entry with "OK".



Fig. 28

#### 6.5.2 External room thermostats

- Select the "Heating system" button on an operating page (or another button as required).
- The operating page with the available room thermostats is opened



Fig. 29

Room thermostat operating modes

- 1 Stand-by: The room temperature is slightly reduced.
- 2 Comfort: The set room temperature is permanently maintained.
- 3 Nighttime temperature reduction: Reduction of room temperature.



Displaying and/or modifying the room thermostat

- Select the desired room thermostat.
- The current operating mode is displayed and can be changed if necessary.
- Select the operating mode to be changed.
  - Confirm your entry with "OK".



#### 6.6 Time programmes

All switching functions for lighting, blinds or the heating system can also be controlled automatically using time programmes. A consumer, e.g. a lamp can be switched ON or OFF on certain days, every day or during the weekend only if desired.

A maximum of 20 electrical units of the KNX/PN system can be controlled at 20 different times each. This allows up to 400 time functions.

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Access to the time programmes can be completely blocked or safeguarded by a PIN code. Now the time programmes cannot be opened or modified by the user. In this case contact your electrician (see also chapter "Setting of PIN code").

### 6.6.1 Calling up/modifying time programmes

- To call up and modify the time programmes, select the button displaying the date/time.
  - The possible time programmes are displayed.

- Select the desired time programme.
  - The possible switching times are displayed.

- Select a switching time.
  - The programmed parameters are displayed.



#### 6.6.2 Modifying switching times

· Setting the weekday



#### • Setting the switching status



### • Setting the switching time



Fig. 36

• Setting the switching function (see chapter 6/7)



### 6.6.3 Astro function

The astro function automatically adapts the switching times to the course of the year (e.g. the blinds open earlier during summer than during winter).

- To activate the astro function, select the "Astro Function" button.
  - The Astro Function is displayed.
- Enable the astro function.

Enabling "Restriction of Astro settings":

• In the first step, select the "Closing" button and enable your selection.



- In the second step, select the "Closing Time" button and enter the desired time.
- To enter further times, go back to the switching times and select the next switching time there.



#### 6.6.4 Setting of PIN code

Certain settings of the control panels can be safeguarded by a PIN (personal identification number). If required, enter your PIN on the keypad.

- 1. To modify the PIN, e.g. select the "Message system" page and open the "Change PIN-Code" menu and choose a PIN (1-4).
- 2. Now press the "Change" button. Now you will be requested to enter the current PIN.
- 3. Enter the current PIN code.
- 4. Confirm your entry with "OK" and enter the new PIN code.
- 5. Confirm your entry with "OK".
- 6. Enter the new PIN code one more time.
- 7. Confirm your entry with "OK".

Start Page		Char	nge PIN		
Change PIN	1				
Change PIN	2	7	8	9	
Change PIN	3	4	5	6	
Change PIN	4	1	2	3	
-		CLR	0	ок	
			Chang	e	
System	24 °C	100.01.	2004	Extras	
					Fig

#### 6.7 Holiday and presence simulation

If certain time programmes are to be carried out only during your holidays (e.g. temperature Holidav function reduction) or not during your holidays (e.g. automatic outdoor lights), the holiday function allows setting this in the time programmes, see chapter 6.6.2.

- First proceed as described in chapter 6.6.1.
- Enable the switching function as desired.



- For displaying time programmes see chapter: "Calling up/modifying time programmes".
  - To enable the holiday function, select the "Extra" page and go to the second page.
  - Enter the date of your holiday using the arrow keys.



• Enable the holiday function.

The time programmes which are only or not carried out during holidays are enabled or disabled at the set dates.



**Presence** To make your house appear as if there are people living in it although you are absent, enable the integrated presence simulation function. This function allows switching up to 10 units on and off during the day or opening and closing the blinds.

The presence simulation records the switching statuses of up to 10 units per day and stores them, e.g. switching-on of ceiling lighting in the living room at 8:00 p.m. on Monday. All switching statuses of one week are stored.

- To enable the presence simulation, select the corresponding operating page.
- Select "Presence simulation" and enable the function in the pop-up window.

The switching operations carried out during the previous week are now automatically repeated.



#### 6.8 Lights and light scenes

The individual and flexible configuration of the touch buttons allows switching all electrical units which are integrated into the KNX or Powernet system, especially lamps. The respective switching statuses are shown in the display either as plain text or as symbols (e.g. an incendescent lamp).

#### 6.8.1 Controlling light

- For light control, select e.g. one room button on the start page and then the lighting button.
- Here you can switch the light on and off.



#### 6.8.2 Calling up/modifying light scenes

Individual light atmospheres can be called up using light scenes, i.e. different lights are automatically set to different brightness values in a given room. At the same time, e.g. the blind or a linen is rolled down. In this way, individual lighting scenes for the most varied situations, e.g. reading, watching TV or for presentations and demonstrations can easily be realized.

All settings within a scene can be adapted and then saved.

Up to 32 light scenes can be realized within a project, with a total of 40 KNX units being controllable.

**Calling up Iight scenes** • To start a light scene, select a button for an area, e.g. "Living room" on the start page and then the button for a light scene.

• Start the light scene here using the corresponding button.

Modifying and saving light scenes

- Start the desired light scene.
- Now set the electric consumers so that the lighting complies with your wishes.

- Save the setting by touching the corresponding button long (approx. 4 s.).
- The button reads "Saving" as a feedback.



#### 6.9 **Controlling blinds/roller blinds**

All blinds and roller blinds integrated into your KNX/Powernet system can be controlled if this has been configured in your project.

- Manual control
- To control the roller blind, select e.g. the button "Roller blind" on the start page and then the corresponding button.
- Use the arrow keys to move the blinds/roller blinds up or down.
- Press briefly to stop and adjust slats.
- Press long to move up or down.
  - For information about roller blind control by time programme, see chapter: "Calling up/modifying time programmes".

Control by time programmes



#### 6.10 List of alerts

To notify faults in the KNX system or triggered alerts, the room/control panel can generate and manage messages and show them on the display, e.g. heating system failure or alarm system activation.

List of If there is an alert, a special window opens where the message is displayed in plain text with date and time.

Start page		Ŵ	€	2
List of alerts				
17.04.2004	E1 in	trouble	014	
06:01			OK	
System	24 °C	05.04.2004	Extra	Fig. 53

The displayed messages remain in the foreground until they are acknowledged by a user. This also applies if the reason for the alarm or the fault has meanwhile been removed and the normal condition has been restored.

This guarantees that an alarm or a fault will not go unnoticed.

An acoustic signal can indicate that there is a fault/alarm (see chapter: System settings).

Acknowledged messages appear in a list, you can call up by using the button "Extra" (Fig 54).

The "Clear list" button deletes all entries.

Start page		Ŵ	Ð	<u>}</u>
List of alerts				
Date	Time	State		
05.04.200	4 14:00 4 14:46	Detector in o Detector in o	corridor f corridor a	faulty ackn.
Clear	list		ОК	
System	24 °C	05.04.20	04 E>	ktra
			1	

Message<br/>functionThe control panel can be used as a message centre, i.e. windows and doors can be monitored<br/>using window contacts and rooms can be monitored by means of motion detectors.

(only for control panel) If a window is broken open or if a motion detector detects a motion inside a room while the message system is activated, a message is transmitted to the control panel which now triggers the internal alarm. In addition, e.g. an external horn or a siren can be switched on.

At the same time, the message is displayed in the display (see also "List of alerts"). If required, a message may also be transferred to a telephone interface which informs you or calls for further help by phone.

If a window contact of a motion detector is faulty, this is indicated by a corresponding fault message (see "List of alerts").

Activation and inactivation of the system can be directly on the control panel after entering a PIN code or by corresponding bar-type switching contacts, block locks, keylock switches or PIN code keypads, e.g. when leaving the house.

Activation/ inactivation of message centre

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- To activate/inactivate the message centre, select the "Message system" page and then the button "Activate/Inactivate Alarm System".
  - The operating status of the message system is shown by a symbol.
- After selecting "Armed" or "Disarmed", you will be requested to enter the PIN code.

 After confirming the entry with the "OK" button, the message centre is activated or inactivated.



The PIN code can be changed only when the message centre is inactive.

#### 6.11 Information

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You may leave a message for someone by using the info function. When enabling this function, an empty display page or the last saved information is shown.

Each message remains in the foreground until it is confirmed with "OK" or deleted with "Clear".

A symbol indicates when an information has arrived.

- To write an information, select the "Extra" page and then the "Infopage" button.
- The info page is displayed.

Extra			<b>&amp;</b> X
Timer			00:00
Alarm clock			00:00
Infopage			
Electricians	address		
Home	24 °C	05.04.2004	Next
Home	24 °C	05.04.2004	Next

Fig. 58

• Write a note using the PDA pen or edit a saved information.



#### 6.12 Timer/Alarm clock

The "Timer" function allows setting a space of time which is counted backwards after activation (hourglass).

A certain time is set using the "Alarm clock" function.

In both cases, your attention will be drawn to the expiry of the set time by an alarm sound.

- To set the time, select the "Extra" page and then the "Timer" or "Alarm clock" button.
- After setting the time, enable the timer/alarm clock with the "Start/Stop" button.

An enabled timer or alarm clock is shown by a symbol.



#### 7 **Remote control**

#### 7.1 Busch-Jaeger hand-held transmitter 6010-25

All control panels are equipped with an infrared receiver and may be remotecontrolled with the Busch-Jaeger hand-held transmitters 6010-25 and 6010-25-500.

- ĥ
  - For detailed information and operating information, please refer to the separate Instruction Manual of the hand-held transmitter.

	Π	
	M1 M2	
3 8 4 5 10		3 8 4 9 5 10 MEMO

TV LIGHT RADIO

V TAPE LIST A TAPE

3

В

Е

0 MENÜ

EXIT

7 8 9

TEXT

UST

STOP

Α

D

#### 7.2 Bang & Olufsen hand-held transmitter BEO4 $\hat{\parallel}$ The Bang & Olufsen hand-held transmitter BEO4 only works together with the control panels 6136/100CB and 6936/100CB. The IR hand-held transmitter provides the following possibilities for controlling the room panel: Light: Modification of lighting List: Saving a light scene 0 – 9: Selection of lamp 1 to 10 **A**: Selection of light scene 1 C: Selection of light scene 2 D: Selection of light scene 3 **F**: Selection of light scene 4 B: On or brighter E: Off or darker Stop: Everything off

#### 7.2.1 Switching and dimming of lamps

- Press "Light" button on remote control unit.
  - The word "LIGHT" appears in the remote control unit display. This mode is active for 25 seconds. After this, the display goes back to audio/video. Press the LIGHT key one more time if required.
- Switch the lamps according to the table below.
- "LIGHT+1+B" in the table means that these three keys must be pressed one after the other (not simultaneously).

Function	Keys to be pressed			
Lamp 1 ON	LIGHT+1+B			
Lamp 1 brighter	LIGHT+1+B (press B permanently)			
Lamp 1 OFF	LIGHT+1+E			
Lamp 1 darker	LIGHT+1+E (press E permanently)			
Lamps 2 – 9 are actuated in the same way as lamp 1.				
Lamp 10 ON	LIGHT+0+B			
Lamp 10 brighter	LIGHT+0+B (press B permanently)			
Lamp 10 OFF	LIGHT+0+E			
Lamp 10 darker	LIGHT+0+E (press E permanently)			

#### 7.2.2 Calling up and saving light scenes

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- Press "Light" button on remote control unit.
  - The word "LIGHT" appears in the remote control unit display. This mode is active for 25 seconds. After this, the display goes back to audio/video. Press the LIGHT key one more time if required.
- Switch the light scenes according to the table below.
- "LIGHT+A" in the table means that these two keys must be pressed one after the other (not simultaneously).

Function	Keys to be pressed	
Call up light scene 1	LIGHT+A	
Call up light scene 2	LIGHT+C	
Call up light scene 3	LIGHT+D	
Call up light scene 4	LIGHT+F	
Save light scene 1	LIGHT+ LIST*+GO+A	
Save light scene 2	LIGHT+ LIST*+GO +C	
Save light scene 3	LIGHT+ LIST*+GO +D	* The key LIST must be
Save light scene 4	LIGHT+ LIST*+GO +F	pressed until STORE appears in the display.

#### 7.2.3 Switching off the consumers

When pressing the "STOP" button, all consumers can be switched off with one single button.

## 8 Installation

- 8.1 Electric installation
  - Busch-Installationsbus<sup>®</sup> KNX connection



• Busch Powernet  $^{\ensuremath{\mathbb{R}}}$  connection



Fig. 64



Do not lay energized lines behind the unit through the flush-mounting box. Separate the TP bus from the mains lines!

#### 8.2 Installation of room/control panel



This unit may only be installed in flush-mounting box 6136/UP.

- 1. Fit terminals to the lines (230V, TP if required) (see chapter "Connection").
- 2. Connect terminals to the unit.
- 3. Insert unit into flush-mounting box and tighten screws (Fig. 65).

4. Attach the frame and secure it using the enclosed screw (Fig. 66).







1.3)

## 9 Software

#### 9.1 Installation

- **ETS** 1. Install the panel commissioning software from the current KNX database on a PC.
- (from V. 2. Import the product database into the ETS.
  - 3. Configure the unit and set the parameters.
- **Power-** 1. Install the panel commissioning software from the current KNX database or from the Power-**Projekt >4.5** Projekt CD.

2. Configure the unit and set the parameters (see above).

⊖ Th

The KNX database can be purchased directly from Busch-Jaeger or downloaded from the Internet at www.BUSCH-JAEGER.de.

#### 9.2 Programming

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Call up "Commissioning" in the "System" menu.

- See chapter "System settings".
- You may now program the unit using an SD-/MMC card or via the bus.

	System			Ð	$\gtrsim$	
	Warning tones					
	Touch adju					
5	Commissioning					
V	Synchronisation of clock Line frequency					
	Home	24 °C	05.04.2004	Back		Fig. 67

Programming via the bus may take several hours, depending on the configuration. Use bus progamming only for minor project changes!

We recommend programming with an SD/MMC card!

- Programm-<br/>ing with1. Create the new project with the<br/>commissioning software on a PC and save<br/>the project on an SD/MMC card.carda base title of the project with the<br/>the project on an SD/MMC card.
  - 2. Insert the SD card into the room/control panel and press the "Read Multimedia/SD card" button (Fig. 69).



- 3. Highlight the project in the project list and press the "OK" button
- 4. The project is transferred from the SD/MMC card into the room/control panel and starts automatically.
- 5. The units exits the programming mode automatically and the basic view is displayed.



- 1. Create the new project on a PC.
  - 2. Connect the computer with the bus via an RS 232 or a USB interface.
    - 3: Press the "KNX Programming Mode" button and enable it.
    - 4. Start programming from the PC.



This process may take several hours.



Screensaver During the configuration of the device, the use of pictures as screensavers can be activated (6136/100Cxxx).

In this case, pictures can be transferred to the control panels using an SD/MMC card.

- Insert the SD card into the control panel and press the "Screensaver" button (Fig. 71).
- 2. Select the file from the list and press the "OK" button.
- 3. Press the "KNX Programming Mode" button and enable it.

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Pictures **cannot** be transferred through the bus.

Macro recorder You can use the macro recorder to record switching process in order to repeat them just like scenes as often as desired.

You can record and save up to 32 macros with 20 switching processes each.







- 1. Activate the "Macro recorder" button by pressing the button for more than 3 seconds (cassette icon on the display).
- 2. Perform the switching processes to be recorded in the desired order.
- 3. Every switching process to be recorded has to be confirmed with "Yes". Press the button "Yes+Exit" to stop the recording.
- If you press the button "No" or "No+Exit", the switching process will not be recorded.

#### Activation

1. Activate the "Macro recorder" button by pressing the button briefly.

#### Delete

You can change macros by overwriting them.

1. Press selected key and record switching processes as shown above. By pressing the key "No+Exit" without recording any processes the macro ist deletet completly.



Fig. 73

