

## 7. Connections and special functions of the carriage

### 7.1 Cover of carriage



#### **! WARNING**

##### **Danger due to optical radiation!**

Looking into an LED at short range for an extended period may cause optical glare. This may temporarily reduce vision. This may cause serious or fatal accidents.

► Do not look directly into an LED.



#### **! WARNING**

##### **Danger due to hot surfaces!**

After frequent operation, parts of the carriage or the control unit may become hot. If the cover is removed and hot parts are touched, they may cause burns.

► Allow the opener to cool before removing the cover.

### Deinstalling cover of the carriage

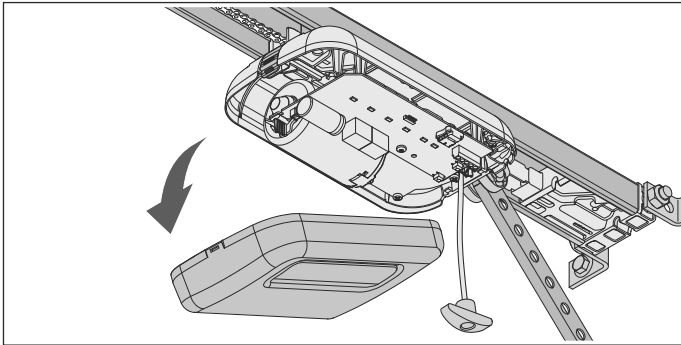


Fig. 1

1. Press on the cover lock at the back of the carriage and remove the cover.

### Installing cover of the carriage

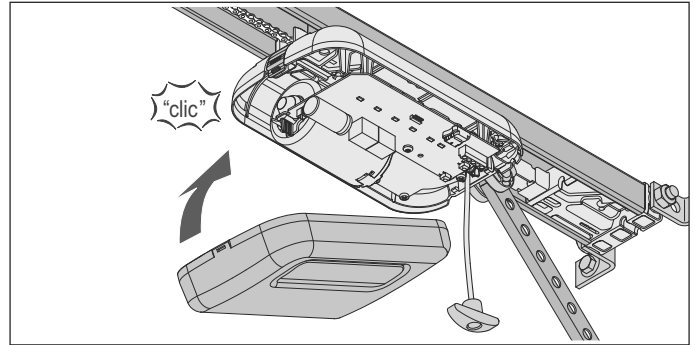


Fig. 1

1. Insert the cover from the front and lock it to the carriage at the back.

## 7. Connections and special functions of the carriage

### 7.2 Carriage pcb

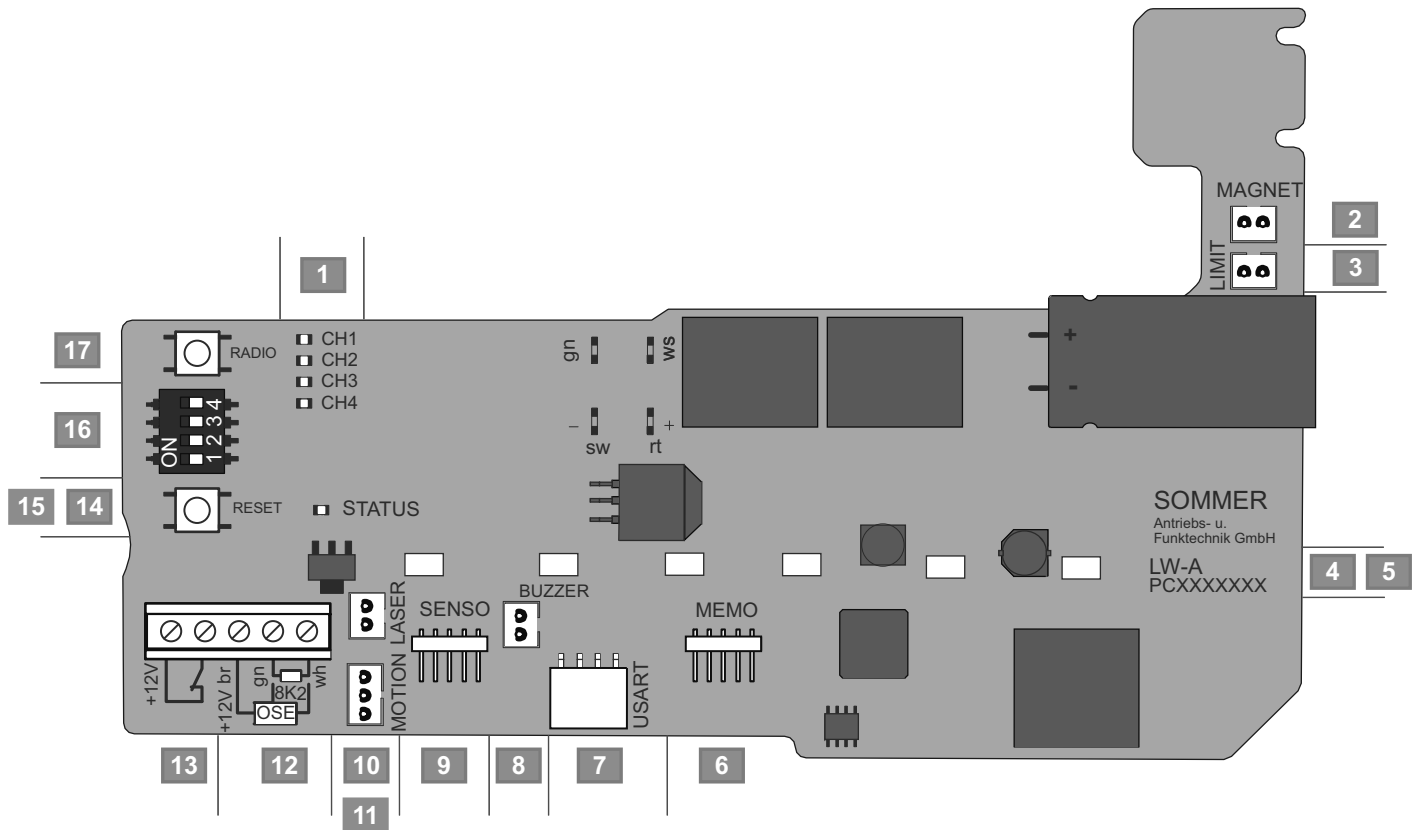


Fig. Carriage pcb

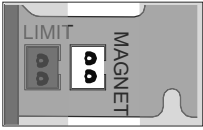
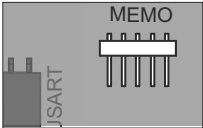
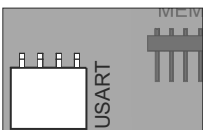
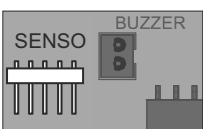
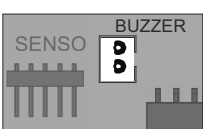

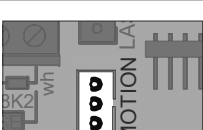
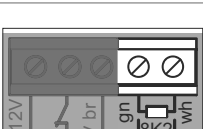

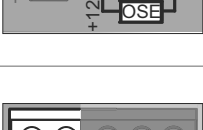
#### Connection options on the carriage

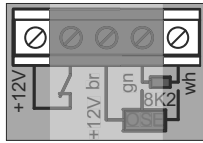
1	LED, CH 1 - CH 4, red Display for radio channel	10	LASER slot, white Parking position laser terminal
2	MAGNET slot, green Lock terminal	11	MOTION slot, white, 3-pin Terminal for movement sensor
3	Slot, blue Limit switch terminal (OPEN), limit	12	Terminal for safety contact strip 8k2/OSE
4	pcb label	13	Terminal for wicket door contact potential-free
5	LEDs, opener lighting	14	Status LED, green
6	MEMO slot Memo terminal	15	Reset button, green
7	USART slot Interface	16	DIP switches
8	BUZZER slot, black Warning or alarm buzzer terminal	17	Radio button, red (radio)
9	SENSO slot Senso terminal		

The version can vary depending on the type. This means the use of accessories can vary.

## 7. Connections and special functions of the carriage

### 7.3 Connection options on the carriage

pcb section	Function/application example
	<b>MAGNET slot, green</b> Lock terminal Locking magnet
	<b>MEMO slot</b> Memo terminal Memory expansion for 450 transmitter commands
	<b>USART slot</b> Terminal e.g. module Home Automation
	<b>SENSO slot</b> Terminal for Senso Humidity sensor
	<b>BUZZER slot, black</b> Terminal for warning or alarm buzzer
	<b>LASER slot, white</b> Terminal for parking position sensor
	<b>MOTION slot, white</b> Terminal for movement sensor 3-pin
	<b>Safety contact strip 8k2 terminal</b>
	<b>OSE safety contact strip terminal</b> + 12 V = br OSE = gn GND = wh
	<b>Wicket door fuse terminal</b> (wicket door switch, reed contact etc.) Contact command (12 V/10 mA) normally closed contact, potential-free

pcb section	Function/application example
	<b>Output 12 V DC</b> max. 100 mA, + 12 V, GND = wh Power supply for optional accessories, finger scanner or external lighting

The version can vary depending on the type. This means the use of accessories can vary.

For more information on the accessories, contact your qualified dealer or see:

[www.sommer-usa.com](http://www.sommer-usa.com)

Observe in particular the following safety instructions for this chapter.



#### **! DANGER**

##### **Danger due to electric current!**

Contact with live parts may result in electric current flowing through the body. Electric shock, burns or death will result.

- ▶ All work on electrical components may only be carried out by a **trained electrician**.
- ▶ The accessories must only be connected if the opener is disconnected from the power!
- ▶ Disconnect the mains plug before working on the opener. If a battery pack is connected, disconnect it from the wall control unit.
- ▶ Then check that the opener is disconnected from the power supply and secure it from switching on again.

### 7.4 Reducing illumination power of LEDs



#### **! WARNING**

##### **Danger due to optical radiation!**

Looking into an LED at short range for an extended period may cause optical glare. This may temporarily reduce vision. This may cause serious or fatal accidents.

- ▶ Do not look directly into an LED.

1. The illumination power of the LEDs can be reduced during adjustment work by pressing the reset button or radio button once briefly.

## 7. Connections and special functions of the carriage

### 7.5 Explanation of radio channels

LED	Radio channel	Setting/function
1	CH 1	Pulse mode
2	CH 2	Partial opening or lighting function
3	CH 3	Defined OPEN
4	CH 4	Defined CLOSED

### 7.6 Programming the transmitter

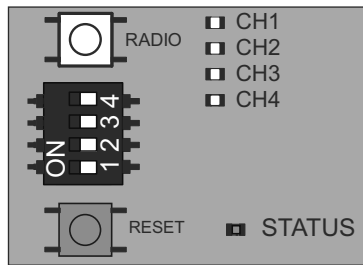


Fig. 1



#### INFORMATION

If a command is not sent within 30 seconds, the radio receiver switches to normal operation.



#### INFORMATION

The original transmitter is already programmed to the opener.

1. Press the radio button repeatedly to select the required channel.

LED	1 x	2 x	3 x	4 x
CH 1				
CH 2				
CH 3				
CH 4				

2. Press the desired button on the transmitter until the previously selected LED (CH 1, CH 2, CH 3, CH 4) is off.  
 ⇒ LED goes out – programming is complete.  
 ⇒ The transmitter has transferred the radio code to the radio receiver.
3. Repeat the above steps to program additional transmitters.



#### INFORMATION

Further transmitters cannot be programmed if all memory locations of the handheld transmitter are occupied.

### If the memory capacity has been reached

A total of 40 handheld transmitter commands are available for all channels. If an attempt is made to program additional transmitters, the red LEDs of radio channels CH 1 - CH 4 flash. If more memory positions are needed, see Chapter "7.7 Information on Memo".

### 7.7 Information on Memo

The use of the Memo depends on the version of the carriage control board.

The memory capacity can be extended to 450 transmitter commands using the optional Memo accessory part. When plugging in the Memo, all available transmitters are transmitted from the internal memory to the Memo and stored there. The Memo must remain plugged in on the wall control unit.

No more transmitters are stored in the internal memory.

Stored transmitters cannot be transmitted from the Memo back to the internal memory.

All radio channels, including the memory of the Memo, can be deleted, see Chapter "7.12 Deleting all radio channels in the receiver".



#### INFORMATION

Delete the Memo on a new opener.

Otherwise, all stored transmitters of an opener are deleted and must be reprogrammed.

### 7.8 Cancelling programming mode

1. Press the radio button until all LEDs are out or make no input for 30 seconds.  
 ⇒ Programming mode is cancelled.

### 7.9 Deleting a transmitter button from the radio channel

1. Press the radio button repeatedly to select the required channel.  
 Press and hold the radio button for 15 seconds.

LED	1 x	2 x	3 x	4 x
CH 1				
CH 2				
CH 3				
CH 4				

- ⇒ The LED flashes after 15 seconds.
2. Release the radio button.  
 ⇒ The radio receiver is in deletion mode.
  3. Press the transmitter button for which the command is to be deleted in the radio receiver.  
 ⇒ The LED goes out.  
 ⇒ The deletion procedure is ended.

Repeat for additional buttons as required.

## 7. Connections and special functions of the carriage

### 7.10 Deleting the transmitter completely from the receiver





















1. Press and hold the radio button for 20 seconds.
  - ⇒ The LED flashes after 15 seconds.
  - ⇒ After another 5 seconds, the flash sequence changes to flashing.
2. Release the radio button.
  - ⇒ The radio receiver is in deletion mode.
3. Press any button on the transmitter that is being deleted.
  - ⇒ The LED goes out.
  - ⇒ The deletion procedure is ended.
  - ⇒ The transmitter is deleted from the radio receiver.

Repeat for additional transmitters as required.

### 7.11 Deleting radio channel in the receiver

1. Press the radio button repeatedly to select the required channel.

Press and hold the radio button for 25 seconds.

	1 x	2 x	3 x	4 x
LED				
CH 1				
CH 2				
CH 3				
CH 4				

- ⇒ The LED flashes after 15 seconds.
  - ⇒ After another 5 seconds, the flash sequence changes to flashing.
  - ⇒ After another 5 seconds, the LED remains steady.
2. Release the radio button.
    - ⇒ The deletion procedure is ended.
    - ⇒ All programmed transmitters on the selected radio channel are deleted from the radio receiver.

### 7.12 Deleting all radio channels in the receiver

1. Press and hold the radio button for 30 seconds.
  - ⇒ The LED flashes after 15 seconds.
  - ⇒ After another 5 seconds, the flash sequence changes to flashing.
  - ⇒ After another 5 seconds, the LED of the selected channel is on.
  - ⇒ After another 5 seconds, all LEDs light up.
2. Release the radio button.
  - ⇒ All LEDs are off after 5 seconds.
  - ⇒ All programmed transmitters are deleted from the receiver.
  - ⇒ Settings are restored.

### 7.13 Programming a second transmitter by radio (HFL)

#### Prerequisites for teach-in by radio

A transmitter must already be programmed on the radio receiver. The transmitters used must be identical. So, for example, a Pearl can only be programmed on a Pearl and a Pearl Vibe on a Pearl Vibe.

The key assignment of transmitter (A) that put the radio receiver into teach-in mode by radio is used for the new transmitter (B) that is to be programmed. The already-programmed transmitter and the new transmitter to be programmed must be situated in the range of the radio receiver.

#### Example:

1. Button 1 on radio channel 1 and button 2 on radio channel 2 have been programmed by transmitter (A).
  - ⇒ The newly-programmed transmitter (B) adopts the key assignment of transmitter (A): Button 1 on radio channel 1, button 2 on radio channel 2.

#### Restriction

The following settings are **not** possible:

- This function is not possible with the Pearl twin handheld transmitter.
- The targeted teach-in of a selected transmitter button on a radio channel.

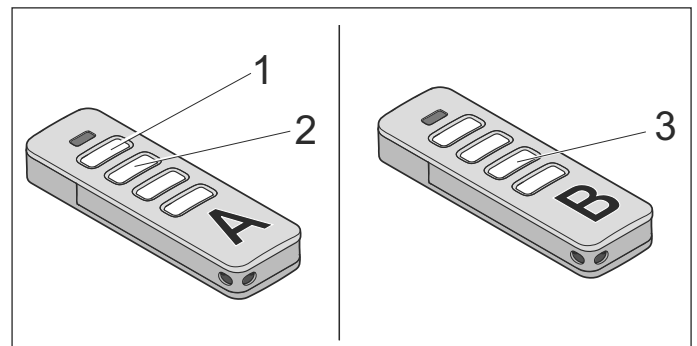


Fig. 1

1. Press buttons 1 + 2 of a programmed transmitter (A) for 3 - 5 seconds until the LED lights up on the transmitter.
  - ⇒ The opener lighting flashes.
2. Release buttons 1 + 2 of the transmitter (A).
  - ⇒ If a radio command is not transmitted within another 30 seconds, the radio receiver switches over to normal mode.
3. Press any key, e.g. (3) on the new transmitter (B) to be programmed.
  - ⇒ The opener lighting remains steady.
  - ⇒ Transmitter (B) has been programmed.

## 7. Connections and special functions of the carriage

### 7.14 Resetting the wall control unit

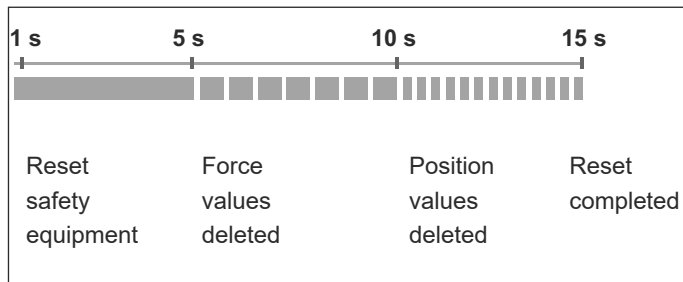


Fig. Overview of the time sequence of the carriage status LED during reset

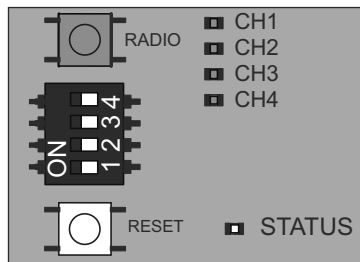


Fig. 1



#### INFORMATION

A SOMlink and a WiFi-enabled device are required to reset all parameters to the factory settings.



#### Reset of the safety equipment

1. Press the green reset button for 1 second.  
⇒ Reset of the safety equipment.

#### Deleting the force values

1. Press the green reset button on the carriage for 5 seconds until the green status LED flashes slowly.  
⇒ Force values are deleted.

#### Deleting force and position values

1. Press the green reset button on the carriage for 10 seconds until the green status LED flashes quickly.  
⇒ Force and position deleted.

#### Reset

1. Press the green reset button on the carriage for 15 seconds until the green status LED goes out.  
⇒ Reset settings are restored.

### 7.15 Setting the DIP-Switches on the carriage

Special functions can be set up with the DIP switches on the carriage.


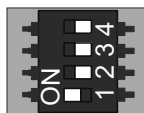
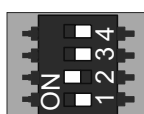
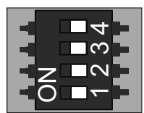
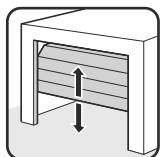
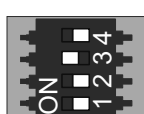
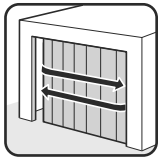
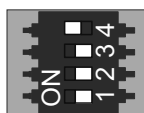
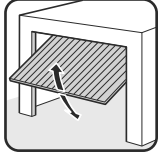
The factory setting of the DIP switches is OFF, which is applicable for sectional doors.



#### NOTE

Do not use a metal object to set the DIP switches, because this may damage the DIP switches or the pcb.

The DIP switches can be set with a narrow, flat plastic object.

DIP switch on motor carriage	ON	OFF 
1 	• Automatic closing function activated	• Automatic closing function deactivated
2 	• Partial opening activated/ • Lighting function deactivated	• Partial opening deactivated/ • Lighting function activated
3+4 		
3 		
4 		

### 7.16 Automatic closing function – defining basic values

When automatic closing is activated, the door is opened by a pulse.

Only enable automatic closing feature in conjunction with the **SOMMER** warning buzzer. Only original **SOMMER** accessories may be connected. Accessory parts can be obtained from your qualified dealer or via:

[www.sommer-usa.com](http://www.sommer-usa.com)

## 7. Connections and special functions of the carriage



### ⚠ WARNING

#### **Risk of injury during automatic closing!**

Automatically closing doors can injure people or animals in the movement area of the door when the door is closing. This may cause serious or fatal injury.

- ▶ Always keep the moving door in sight.
- ▶ Persons or animals must not be in the range of movement of the door.
- ▶ Never put your hand near the door or moving parts when it is moving. In particular, do not reach into the ceiling holder or the push arm.
- ▶ Do not drive through the door until it has been fully opened.



### NOTE

If the door is not in view and the opener is actuated, objects in the movement area of the door may be jammed and damaged.

Objects must not be in the range of movement of the door.



### INFORMATION

The door opens completely if it hits an obstacle.



### INFORMATION

An acoustic warning signal must be connected for the automatic closing function. Use only the original buzzer accessory part for this purpose.

1. Close the door.
2. Set DIP switch 1 to ON.
3. The hold open time of the door is 30 seconds. Every new command within 30 seconds restarts the open holding time. The door opens by pressing button 1 on the transmitter.  
The door movement cannot be stopped with the transmitter.
4. The door closes automatically after 30 seconds.  
The closing movement can be stopped by a command with the transmitter.  
⇒ Door opens completely - reversal of direction.
5. The door starts the closing process again after 30 seconds.  
⇒ Door is CLOSED.



### INFORMATION

The factory setting is semi-automatic closing with a preset hold open time of 30 seconds. The hold open time is started at the door OPEN end position and from partial opening. This setting and the selection of a fully automatic closing can be adjusted via SOMlink and with a WLAN-enabled terminal.



### 7.17 Adjusting the lighting function

The opener lights on the carriage can be switched on and off separately over radio channel CH 2. This function is available in the factory setting.

Program the desired transmitter button on radio channel CH 2.

The factory setting of DIP switch 2 is OFF, which is applicable for the lighting function.



### INFORMATION

The lighting function or partial opening can be operated.

1. Set DIP switch 2 on the carriage to OFF.
2. Press the radio button repeatedly to select the radio channel CH 2. Program the lighting function on the desired transmitter button.

⇒ The lighting function is available.

The opener lights on the carriage can be switched on and off with the transmitter button.



### INFORMATION

If the opener lights are not switched off manually, they switch off automatically after 60 minutes.



This value can be changed via SOMlink and a WiFi-enabled device.

Other lights and functions are available with the LUMI Strip and the relay accessories. They are similar to the carriage lighting functions. The relay offers additional lighting functions for inside and outside.

LUMI Strip and the relay are not included in the delivery. Both accessories can be purchased from your qualified dealer or see:

[www.sommer-usa.com](http://www.sommer-usa.com)

### 7.18 12 V output

The use of the 12 V output depends on the version of the carriage circuit board.

This output can be used for the power supply of external accessories. The 12 V output offers 2 operating modes. 12 V DC, max. 100 mA are available for them.

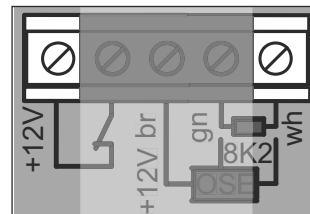


Fig. Output 12 V

#### Operating mode 1 (factory setting)

Power supply for external devices, for example finger scanners mounted in the door panel.

## 7. Connections and special functions of the carriage

### Operating mode 2 (external lighting)

In this operating mode, external lighting can be connected and switched via the CH2 radio channel, for example lighting with LEDs. This operating mode can only be activated via SOMlink and a WiFi-enabled device.

In the "External lighting" operating mode, the OSE/8K2 safety device can no longer be used on the carriage.



#### INFORMATION

If the "External lighting" operating mode is used, the opener lighting works with reduced illumination power.

### 7.19 Setting partial opening

This function partially opens the door.

#### Example:

A side-opening sectional door can be opened to allow a person to pass through. The partial opening can only be used by radio.



#### INFORMATION

The lighting function or partial opening can be operated.



#### INFORMATION

The specified partial opening can be from any position of the door.

1. Close the door completely up to the door CLOSE end position.
2. Press the radio button repeatedly to select radio channel CH 2 and to program the function to the desired transmitter button.
3. Set DIP switch 2 on the carriage to ON.
4. Press the desired button on the transmitter for the partial opening function.  
⇒ The door moves in door OPEN direction.
5. Press the desired button on the transmitter again to stop it.  
⇒ The door stops at the desired position.  
⇒ The partial opening function is programmed.

### 7.20 Deleting partial opening

1. Set DIP switch 2 on the carriage to OFF.
2. Open the door completely up to the door OPEN end position.  
⇒ Partial opening is deleted.

To program a new position, see chapter "7.19 Setting partial opening".

### 7.21 HomeLink programming

1. For the first time programming with a **SOMMER** pro+ opener, press and hold all 3 HomeLink buttons for approximately 30 seconds.

Release only when the HomeLink indicator light turns off.



#### INFORMATION

Do not perform this step when programming the additional HomeLink buttons.

2. To ensure HomeLink is in the proper training mode, press and hold each of the buttons individually.  
⇒ Indicator light blinks rapidly for 2 seconds and then turns to a continuous light.

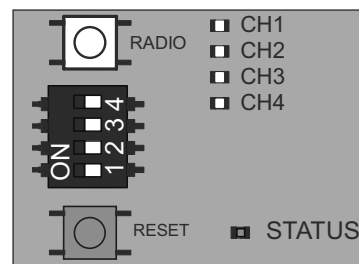


Fig. 1



#### DANGER

##### Danger of falling!

Unsafe or defective ladders may tip and cause serious or fatal accidents.

► Use only a non-slip, stable ladder.



#### INFORMATION

A second person makes the following steps quicker and easier.

3. At the carriage, locate the radio button.
4. Press and release the radio button.  
⇒ LED is activated.



#### INFORMATION

Once the button is pressed, there are approximately 30 seconds in which to initiate the next step.

5. Return the vehicle and firmly press and hold the desired HomeLink button to be programmed for two seconds and release.
6. Repeat the „press/hold/release“ a second time to activate the door.  
You may need to repeat this sequence for pressing the radio button on the carriage and then pressing the HomeLink button in the vehicle up to 3 times to complete the training process.  
⇒ HomeLink should now activate the rolling code equipped opener.

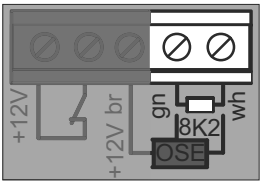
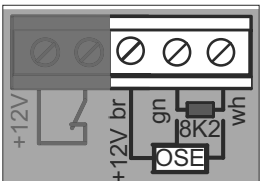
For more information please visit:

[www.homelink.com](http://www.homelink.com)

## 7. Connections and special functions of the carriage

### 7.22 Connecting the safety contact strip

Either an OSE (opto-electronic safety contact strip) or an 8k2 (electric safety contact strip) can be connected. During commissioning, the control unit automatically detects which version it is and sets itself to that version. If a safety contact strip is retrofitted on a programmed system, the control unit must be reset, see Chapter “10.13 Carrying out a reset”. As set at the factory, the safety contact strip is only effective in the Close direction. The direction of action can be changed with the SOMlink.

Terminal block	8k2
	gn wh
Terminal block	OSE
	+12 V = br OSE = gn GND = wh

The safety contact strip in the door CLOSE direction of motion is triggered:

- ⇒ Operator stops and opens the door slightly.
- ⇒ The obstacle is released.



#### INFORMATION

In automatic closing operating mode, the operator stops and opens the door completely. The door closes automatically after the hold open time. If the door encounters the obstacle again, the operator stops and reverses completely to the door OPEN end position. The door stops there and the automatic closing function is interrupted. The hold open time does not start again until a command is received. The door is then automatically closed.

### 7.23 Wicket door safety device

The wicket door safety device prevents operation of the door with open wicket doors.

1. The wicket door safety device must be installed so that the switch reliably detects the open doors. Do not install the wicket door safety device on the hinge side.
2. Connect the wicket door safety device on the terminal block on the carriage. The contact command is at 12 V/10 mA. The normally closed contact is potential-neutral.
3. Check the function.



#### INFORMATION

If the wicket door is opened, the opener lighting on the carriage switches on. If the door closes, the opener lighting lights up for the set lighting time and then switches off. The lighting time can be modified with SOMlink and a WiFi-enabled device.



#### INFORMATION

If the wicket door remains open longer than 60 minutes, the opener lighting switches off automatically after 60 minutes. This value can be changed via SOMlink and a WiFi-enabled device.



#### INFORMATION

If the wall control unit receives a new command with the wicket door open, the LEDs of the opener lighting change from permanent to blinking light.

### 7.24 SOMlink

SOMlink makes it possible for qualified specialists to change many functions and settings on the door opener. These include force and speed values as well as operating parameters and other convenient functions. If you would like to make changes, contact your specialist dealer.



#### INFORMATION

SOMlink is a combination of an additional device and a web-based application for changing door opener functions.



Since safety-relevant values can also be changed, SOMlink is only sold to qualified specialists.

All changes to settings by the SOMlink are logged.



#### INFORMATION

All opener parameters are reset to the factory settings by a factory reset.



All settings via SOMlink and WiFi-enabled device are also reset.

The DIP switches can only be manually reset.

## 8. Battery pack

### 8.1 Installing and removing battery pack

The battery pack can bridge approximately 5 cycles within 12 hours in the event of a power failure. Only a **qualified electrician** is permitted to install, test and replace the battery pack. See Chapter "6.1 Control unit cover of the wall control unit". Follow the instructions in the separate installation and operating manual for the battery pack.

#### NOTE

If a battery pack has been installed, it is connected to the circuit board.

Carefully remove the control unit cover and disconnect the connections to prevent damage to the wall control unit.

#### INFORMATION

Only an original battery pack from SOMMER may be used.

#### INFORMATION

Initial operation is not supported if the battery pack is the sole power supply.

Mains voltage is required for initial operation of the opener.

#### INFORMATION

The battery pack can only be recharged for a limited number of cycles. This depends on the use and settings.

### Installing the battery pack

1. Disconnect the opener from the mains voltage.  
Check that the opener is disconnected from the power supply.
2. Loosen the screw on the wall unit of the control unit cover and remove the control unit cover gently upwards, see chapter "6.1 Control unit cover of the wall control unit".
3. Unplug the connection cable for the membrane keypad from the wall control unit, t.

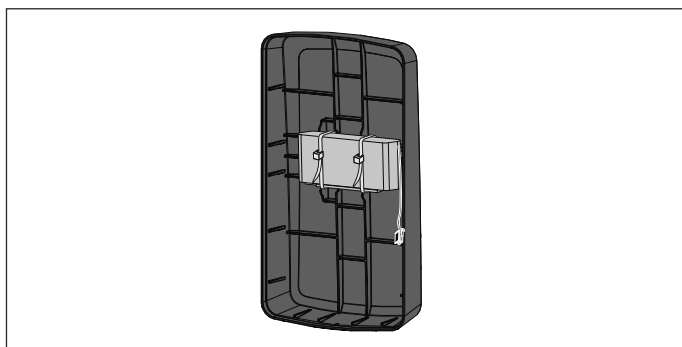


Fig. 4

4. Place the battery pack in the control unit cover and fasten with two cable binders.

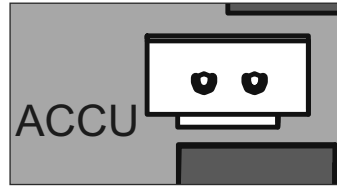


Fig. 5

5. Place the control unit cover on the bottom of the wall control unit and plug the connection cable for the battery pack into the ACCU slot.
6. Set DIP switch 3 on the wall control unit to "ON."
7. Plug the connection cable for the membrane keyboard into the circuit board, see chapter "6.1 Control unit cover of the wall control unit".
8. Place the control unit cover on the wall unit and screw on the cover.
9. Supply the opener with the mains voltage.  
Check that the power supply is connected.

### Removing the battery pack

The battery pack is removed in the reverse order, see chapter "8.1 Installing and removing battery pack".



#### DANGER

#### Danger of hazardous substances!

Improper storage, use or disposal of battery packs, batteries and opener components are dangerous for the health of humans and animals. Serious injury or death may result.

- ▶ Battery packs and batteries must be stored out of the reach of children and animals.
- ▶ Keep battery packs and batteries away from chemical, mechanical and thermal influences.
- ▶ Do not recharge old battery packs and batteries.
- ▶ Components of the opener as well as old battery packs and batteries must not be disposed of with household waste. They must be disposed of properly.

#### NOTE

Dispose of all parts in accordance with local or national regulations to avoid environmental damage.



#### INFORMATION

All opener components that have been taken out of service must not be disposed of with household waste, as they contain hazardous substances. The components must be disposed of correctly at an authorised recycling centre. The local and national regulations must be observed.



#### INFORMATION

Old battery packs and batteries must not be disposed of with household waste as they contain hazardous substances. These must be disposed of properly at municipal collection points or in containers provided by dealers. National guidelines must be observed.

## 9. Electrical connection

### 9.1 Connection to a power outlet

A power outlet is required for the electrical connection of the opener. This opener is not equipped for permanent wiring. Contact a licensed electrician to install a suitable receptacle if one is not available.

A power outlet must be installed by qualified electricians only. The power outlet must be protected by a fuse. Local and national regulations (e.g. NEC) must be observed. People under the influence of drugs, alcohol, or medications that can influence their ability to react may **not** work on the opener.

To reduce the risk of electric shock, this equipment has a polarized plug (one blade is wider than the other). This plug will only fit into a polarized outlet one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.



#### **⚠ DANGER**

##### **Danger due to electric current!**

Contact with live parts may result in electric current flowing through the body. Electric shock, burns or death will result.

- ▶ All work on electrical components may only be carried out by an electrician.
- ▶ Before connecting in the mains power plug, ensure that the voltage of the power source corresponds with the voltage listed on the opener type plate. Do not plug in the mains plug until the opener is completely installed.
- ▶ Disconnect the mains plug before working on the opener. If a battery pack is connected, disconnect it from the wall control unit.
- ▶ Then check that the opener is disconnected from the power supply.



#### **NOTE**

Do not connect the wall control unit to the power supply until the installation is complete to prevent damage to the opener.

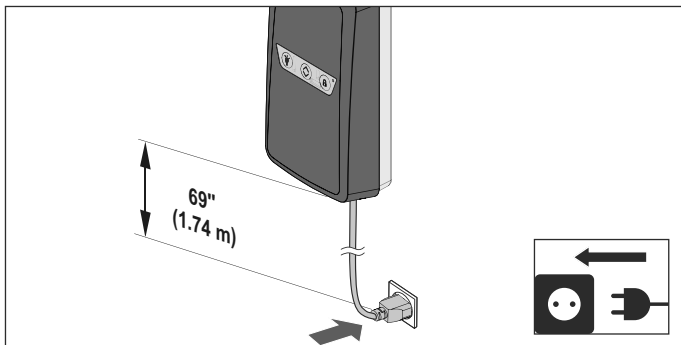


Fig. Distance between wall control unit and power outlet

Note that the distance between the wall control unit and the power outlet must not exceed 69" (1.74 m).



#### **INFORMATION**

The power outlet must be installed as follows:

- within easy reach of the wall control unit power cable
- easily visible and clear of obstacles



#### **INFORMATION**

The power cable is approx. 69" (1.74 m) long.



#### **INFORMATION**

The original power cord may not be shortened or extended.

All devices to be connected externally must have safe isolation of the contacts from the main power supply in accordance with IEC 60364-4-41.

Wiring for external devices must be installed in accordance with IEC 60364-4-41.

All electrical wiring must be firmly secured to prevent displacement.

## 10. Initial operation

### 10.1 Safety information for installation



#### **⚠ DANGER**

##### **Danger if not observed!**

If safety instructions are not observed, serious injury or death may result.

- ▶ All safety instructions must be observed to prevent serious injury or death.



#### **⚠ WARNING**

##### **Danger of entrapment!**

Persons or animals in the movement area of the door may be trapped and pulled along with the door. Severe injuries or death may result.

- ▶ Keep clear of the moving door.
- ▶ Wear tight-fitting clothing.
- ▶ Wear a hairnet over long hair.



#### **⚠ WARNING**

##### **Danger of crushing and shearing!**

If the door moves with persons or animals in the movement area, crushing and shearing injuries may be caused by the mechanism and safety edges of the door.

- ▶ Only use the opener in direct view of the door.
- ▶ Always keep the moving door in sight.
- ▶ Persons or animals must not be in the range of movement of the door.
- ▶ Never put your hand near the door or moving parts when it is moving. In particular, do not reach into the moving push arm.
- ▶ Do not reach into the ceiling mounting unit when the carriage runs along the rail.
- ▶ Do not drive through the door until it has been fully opened.



#### **⚠ WARNING**

##### **Danger due to optical radiation!**

Looking into an LED at short range for an extended period may cause optical glare. This may temporarily reduce vision. This may cause serious or fatal accidents.

- ▶ Do not look directly into an LED.

#### **➔ NOTE**

Objects in the movement area of the door may be jammed and damaged.

Objects must not be in the range of movement of the door.



#### **INFORMATION**

The control unit detects a short-circuit between chain and rail and then switches the opener off.



#### **INFORMATION**

If a safety sensor is used, it must not be actuated when starting the programming.

If a safety sensor is used as a frame safety sensor, move the door to the center position.



#### **INFORMATION**

Observe the sticker on the wall control unit.

### 10.2 Initial operation

Before initial operation, read this chapter with special care to ensure that you can make the adjustments to the opener safely and optimally.



#### **⚠ WARNING**

##### **Danger of entrapment!**

If the force setting is too high, persons or animals in the movement area of the door may be trapped and pulled along with the door. Severe injuries or death may result.

- ▶ The opener may only be operated if a non-hazardous force value has been set.
- ▶ The force setting is relevant to safety and must be carefully checked and if necessary adjusted by qualified specialists.
- ▶ The force setting must be low enough to ensure that the closing force poses no risk of injury.

#### **➔ NOTE**

Do not use a metal object to set the DIP switches, because this may damage the DIP switches or the pcb.

Use a suitable tool to set the DIP switches, such as a flat plastic object.



#### **INFORMATION**

The force setting must be checked after installation of the opener. See also chapter "11.1 Testing obstacle detection".



#### **INFORMATION**

Stay in the garage during initial operation, particularly when programming.



#### **INFORMATION**

The operating forces can be modified and adjusted with SOMlink and a WLAN-enabled terminal.



The factory setting of the DIP switches is OFF, which is applicable for sectional doors. The carriage has an automatic force setting. The carriage memorizes the required force during the OPEN and CLOSE door movements and stores it when the end position has been reached.

## 10. Initial operation

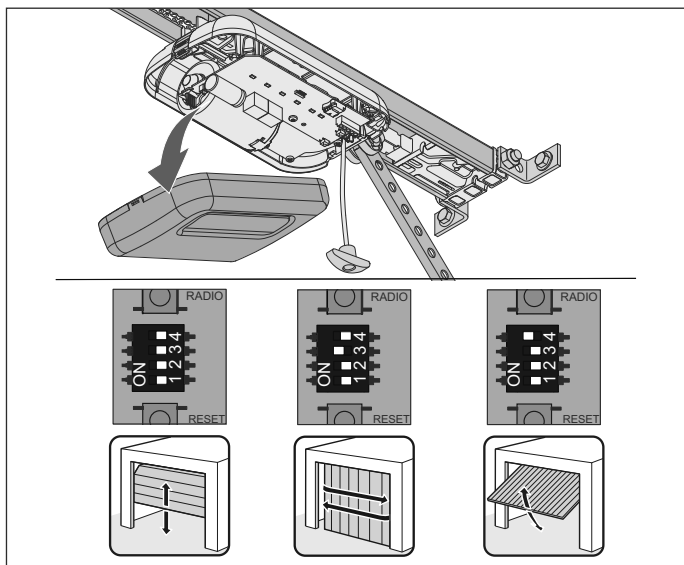


Fig. 1

1. Open the cover of the motor carriage. Set the DIP switches on the motor carriage depending on the door.

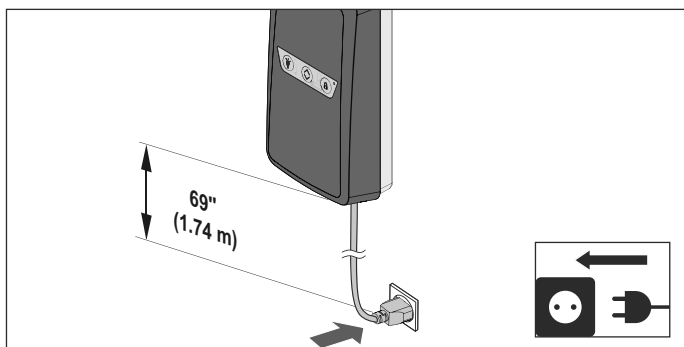


Fig. 2

2. Compare the existing power supply with the type plate. Plug the wall control unit power plug into the power outlet.

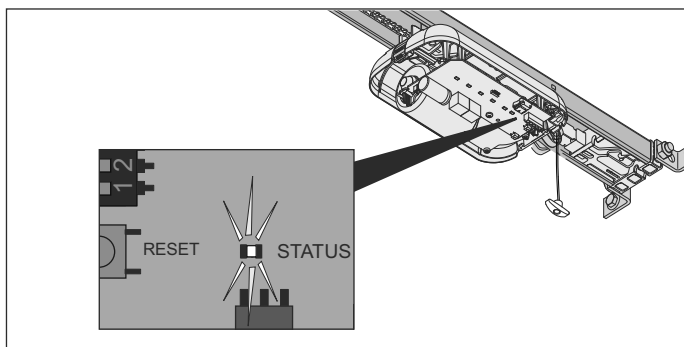


Fig. 2.1

- ⇒ The status LED of the carriage flashes green.

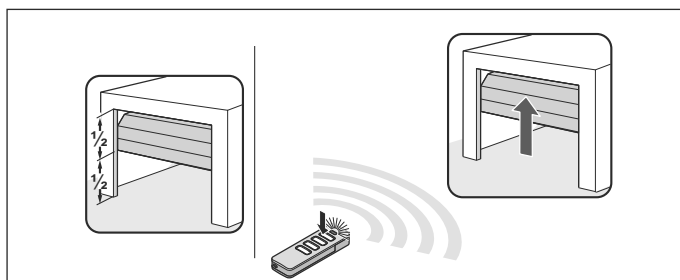


Fig. 2

3. After the opener has been connected to the power supply, its first movement after a pulse is always door OPEN.

Press button 1 **briefly** on the preprogrammed transmitter. See also the separate installation and operating manual for the transmitter.

- ⇒ The carriage moves slowly to the door OPEN end position and **automatically** switches off at the limit stop.

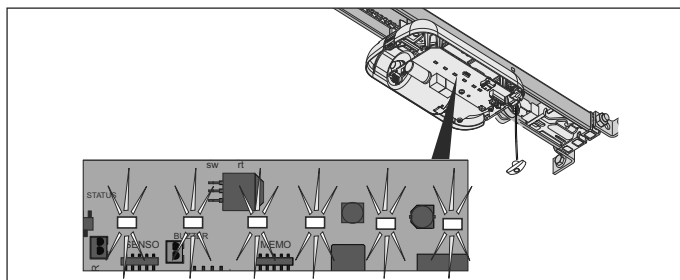


Fig. 3.1

- ⇒ The opener LEDs flash.

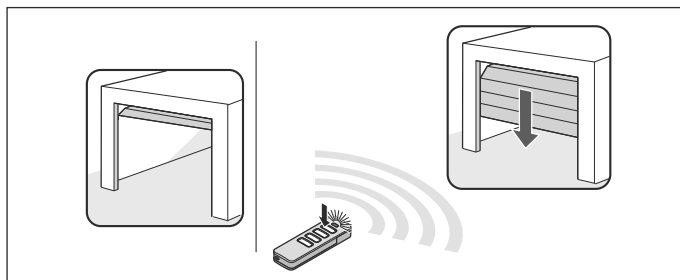


Fig. 4

4. Press button 1 on the transmitter again **briefly**.
  - ⇒ The carriage moves slowly in the door CLOSE direction.
  - ⇒ The opener LEDs flash.
  - The carriage switches off **automatically** when it reaches the factory-set closing force at the door CLOSE end position.
  - ⇒ The opener LEDs flash in a different sequence.

## 10. Initial operation

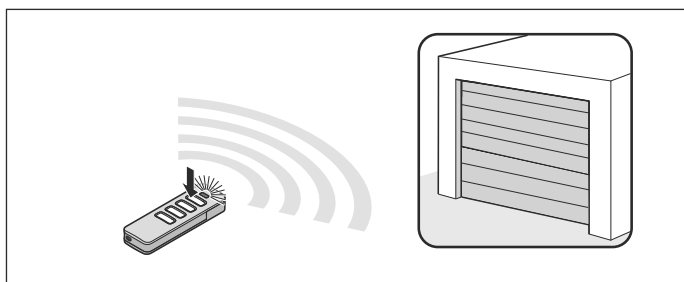


Fig. 5

5. Press button 1 on the transmitter **briefly** (< 1 second) to save the end position.  
⇒ The opener LEDs flash briefly in a fast sequence.  
**The opener automatically starts its programming process:**

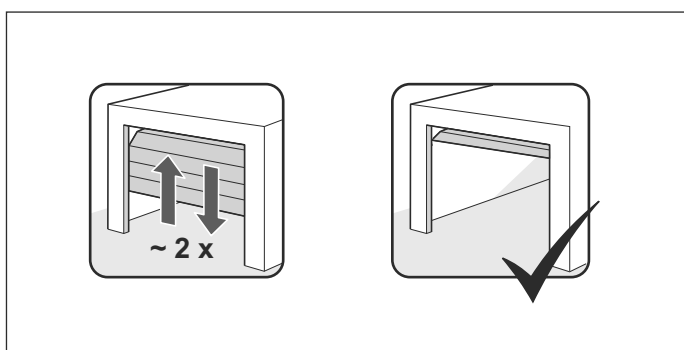


Fig. 5.1

- ⇒ The carriage moves **automatically** to the door OPEN end position and programs the required operating force.  
⇒ The carriage **automatically** moves to the door CLOSE end position.  
If necessary, the carriage moves over the path several times for programming with a greater door weight.  
⇒ The carriage **automatically** moves briefly in the door OPEN direction to program the soft running.  
⇒ The door **automatically** returns to the door CLOSE end position.  
⇒ The carriage **automatically** moves to the door OPEN end position.  
⇒ The opener LEDs remain **steady**.  
⇒ **Opener is programmed and ready for use.**



### INFORMATION

The carriage stops if the door is difficult to move. The door mechanism must be checked, see chapter "10.4 Detecting obstacles during force programming".



### INFORMATION

The carriage stops if the door is difficult to move. The door mechanism must be checked.



### INFORMATION

It may be necessary to adjust the end positions. See chapter "10.5 Mechanical adjustment of the end positions".

### 10.3 Carrying out manual initial operation

In the case of doors without lintel or without lintel panel, programming should be carried out manually. To do this, carry out steps 1 to 3 in Chapter "10.2 Initial operation" and then the steps below:

1. Press button 1 on the handheld transmitter briefly.  
⇒ The door begins to move toward the door CLOSE end position.
2. Before the door reaches the door CLOSE end position, press button 1 on the handheld transmitter again briefly.  
⇒ The door stops.
3. To approach the desired end position for door CLOSE, press and hold button 1 on the handheld transmitter until the motor carriage moves briefly. Release button 1 on the handheld transmitter.
4. The process can be repeated until the desired end position is reached.
5. Press button 1 on the handheld transmitter briefly (<1 second) to save the door CLOSE end position.
6. The door then starts the programming process; see Chapter "10.2 Initial operation", section The opener automatically starts its programming process.

## 10. Initial operation

### 10.4 Detecting obstacles during force programming

If the door detects an obstacle during its first door CLOSE movement and the force programming movements cannot be completed, the door stops.

#### NOTE

Check the movement path, mechanism, spring tension and the weight compensation to prevent damage to the door system.

1. **Press and hold** button 1 on the transmitter.
    - ⇒ The carriage **moves briefly, makes a short stop** and moves in the door CLOSE direction until the desired end position has been reached.
  2. Release button 1 on the transmitter.
  3. **Fine adjustment:**
    - Press and hold button 1 on the transmitter until the carriage **moves briefly**.
    - Release button 1 on the transmitter.
  - 3.1 The process can be repeated until the desired end position is reached.
    - Press button 1 on the transmitter **briefly** (< 1 second) to save the door CLOSE end position.
    - ⇒ The carriage starts the **automatic** force programming run to the door OPEN end position.
    - ⇒ The door starts the **automatic** door CLOSE force programming run.
- If an obstacle is detected again, the carriage stops and reverses.
1. **Press and hold** button 1 on the transmitter.
    - ⇒ The carriage starts without jerking, because the end position of door is already saved.
    - ⇒ The carriage moves to the end position, door CLOSE.
  2. Release button 1 on the transmitter.
  3. Press button 1 on the transmitter briefly.
    - ⇒ **Restart automatic force programming movements.**
    - ⇒ On completion of the force programming movements, the carriage **automatically** moves to the door OPEN end position.
    - ⇒ The opener LEDs remain **steady**.
    - ⇒ **Opener is programmed and ready for use.**

### 10.5 Mechanical adjustment of the end positions

#### Increasing the closing pressure of the end position for door CLOSE

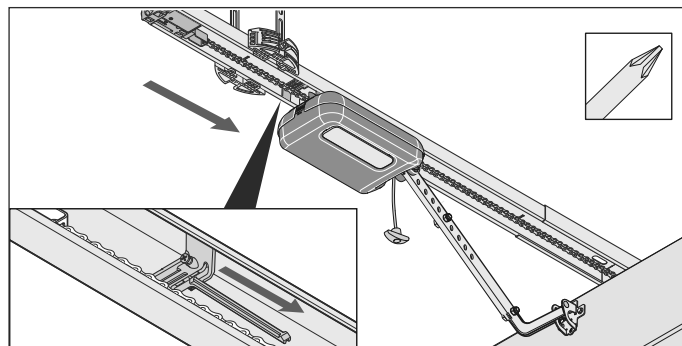


Fig. 1

1. Loosen the screw on the limit stop and move the limit stop a few inches towards door CLOSE. Tighten the screw again.

#### Reducing the closing pressure of the end position for door CLOSE

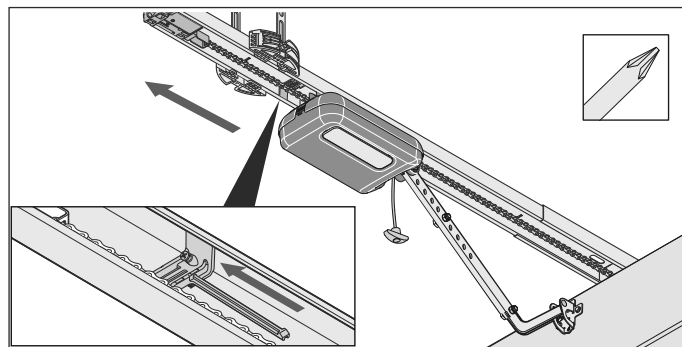


Fig. 1

1. Loosen the screw on the limit stop and move the limit stop a few inches towards door OPEN. Tighten the screw again.

### 10.6 Attaching information sign and warning sign

1. Run obstacle detection, see chapter “11.1 Testing obstacle detection.”

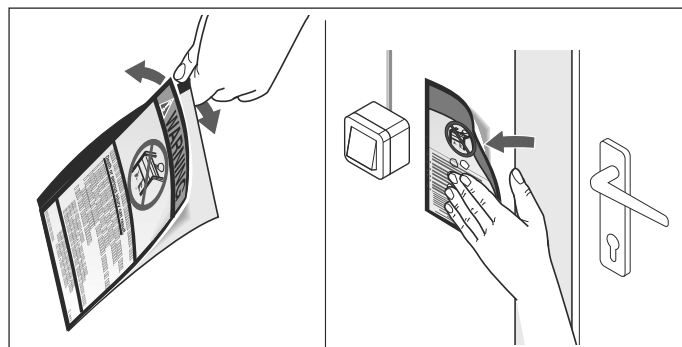


Fig. 2 Sticker near the stationary control or control unit

## 10. Initial operation



### **WARNING**

#### **Danger due to failure to observe instructions!**

Serious or fatal injury may result if the warning sign is not attached in a suitable position and the warning instructions are not heeded.

► Attach the warning sign:

- At eye level at a highly visible section of the door wing.
- Near the wall station.
- Far from moving parts.

2. Attach the warning sign at eye level next to the wall control.

If the warning sign does not stick on the wall surface, use staples or other mechanical means to fasten the sign.

⇒ Initial operation is complete.

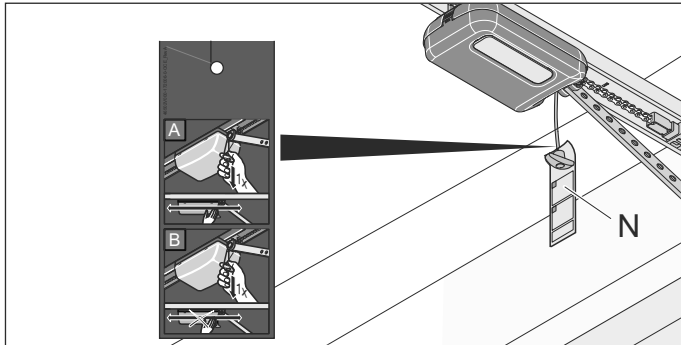


Fig. 3

3. Attach the hanging warning sign to the emergency release cord (N).

## 11. Final test / function test

### 11.1 Testing obstacle detection

After programming force values, the obstacle detection and force setting must be tested.



#### **WARNING**

##### **Danger due to projecting parts!**

Door wings or other parts must not project into roads or public footpaths. This also applies while the door is moving.

This may cause serious injury or death to persons or animals.

- ▶ Roads or public footpaths must be free of projecting parts.



#### **WARNING**

##### **Danger of crushing and shearing!**

Crushing or shearing injuries may result if the door does not reverse. This can lead to serious or fatal injury.

- ▶ The door must reverse when it meets an obstruction.
- ▶ Obstacle detection must be tested at monthly intervals using suitable means.
- ▶ Malfunctions or defects must be remedied immediately by an expert.



#### **WARNING**

##### **Danger of entrapment!**

If the force setting is too high, persons or animals in the movement area of the door may be trapped and pulled along with the door. Severe injuries or death may result.

- ▶ The force setting is relevant to safety and must be carefully checked and if necessary adjusted by a qualified specialist.



#### **WARNING**

##### **Danger of crushing and shearing!**

If the door moves with persons or animals in the movement area, crushing and shearing injuries may be caused by the mechanism and safety edges of the door.

- ▶ The force cut-off does not operate below 50 mm.
- ▶ The obstacle detection must be tested once a month.
- ▶ Only use the opener in direct view of the door.
- ▶ Always keep the moving door in sight.
- ▶ Persons or animals must not be in the range of movement of the door.
- ▶ Never put your hand near the door or moving parts when it is moving. In particular, do not reach into the moving push arm.
- ▶ Do not reach into the ceiling mounting unit when the carriage is running along the rail.
- ▶ Do not drive through the door until it has been fully opened.

#### **NOTE**

Observe the national standards, guidelines and regulations for cut-off of the operating forces.

#### **NOTE**

The obstacle detection must be tested once a month to prevent damage to the opener.



#### **INFORMATION**

Reversing: The opener stops when it meets an obstruction and then moves in the opposite direction for a short distance to free the obstruction.

In the automatic closing function, the door opens completely if an obstacle is detected.



#### **INFORMATION**

The operating forces can be modified and adjusted with SOMlink and a WLAN-enabled terminal. For more information, ask your qualified dealer.



The door must reverse if it hits a 1 1/2" (38 mm) object (or 2 x 4 laid flat) high obstacle.

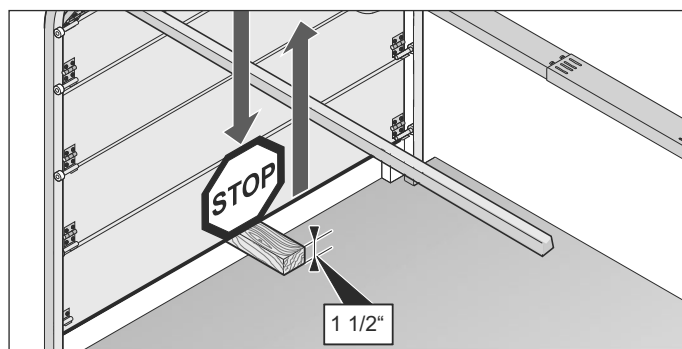


Fig. 1 Obstacle detection

1. Open the door with the opener.
2. Place an 1-1/2" object or 2 x 4 laid flat and centered in the running path of the door.
3. Close the door with the opener.
  - ⇒ If the door hits the obstacle, the opener must stop immediately, reverse and open completely the door.
  - ⇒ If the opener does not reverse, a position reset is required, see chapter "7.14 Resetting the wall control unit". The positions and the forces must be reprogrammed.

## 11. Final test / function test

### 11.2 Testing the safety sensor function

1. Close the door with the opener.

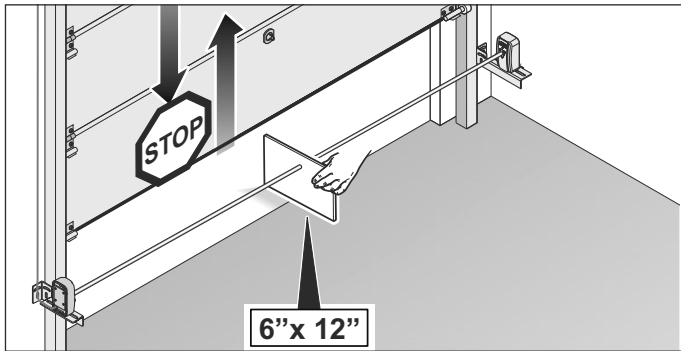


Fig. 2

2. Hold a 6" high white object in between the safety sensors during the closing procedure to disrupt the infrared sensor. The door must stop immediately and then reverse entirely.

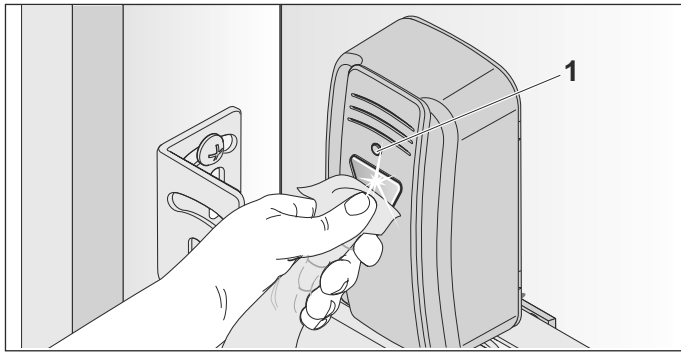


Fig. 3

3. The safety sensors are functioning properly if the LED lights of both safety sensors are solid.
4. If the door does not stop, check the following:
  - if the housing of the safety sensors is dirty,
  - whether transmitter and receiver are correctly aligned with each other,
  - whether the cables are damaged or loose.
5. The complete installation and operating manual must be handed over to the user.

## 12. Operation

### 12.1 IMPORTANT SAFETY INSTRUCTIONS

Read the following chapter to ensure safe operation.

The opener must not be used by children or persons with restricted physical, sensory or mental capacity or who lack experience and knowledge. All users must be specially instructed and have read and understood the Installation and Operating Manual.

Children must never play with or use the opener, even under supervision. Children must be kept clear of the opener. Transmitters or other control devices must never be given to children.

In particular, observe the following safety instructions and the safety instructions in chapter “13. Maintenance and care” and “14. Troubleshooting.”

#### WARNING

**WARNING – to reduce the risk of severe injury or death:**

1. READ AND FOLLOW ALL INSTRUCTIONS.
2. Never let children operate or play with door controls. Keep the remote control away from children.
3. Always keep the moving door in sight and away from people and objects until it is completely closed. **NO ONE SHOULD CROSS THE PATH OF THE MOVING DOOR.**
4. **NEVER GO UNDER A STOPPED, PARTIALLY OPEN DOOR.**
5. Test door opener monthly. The garage door **MUST** reverse on contact with a 1-1/2-inch high object (or a 2 by 4 board laid flat) on the floor. After adjusting either the force or the limit of travel, retest the door opener. Failure to adjust the opener properly increases the risk of severe injury or death.
6. For products having an emergency release, when possible, use the emergency release only when the door is closed. Use caution when using this release with the door open. Weak or broken springs are capable of increasing the rate of door closure and increasing the risk of severe injury or death.
7. **KEEP GARAGE DOORS PROPERLY BALANCED.** See user's manual. An improperly balanced door increases the risk of severe injury or death. Have a qualified service person make repairs to cables, spring assemblies, and other hardware.
8. This operator system is equipped with an unattended operation feature. The door could move unexpectedly. **NO ONE SHOULD CROSS THE PATH OF THE MOVING DOOR.**

#### 9. SAVE THESE INSTRUCTIONS.



#### DANGER

##### **Danger if not observed!**

If safety instructions are not observed, serious injury or death may result.

- ▶ All safety instructions must be observed to prevent serious injury.



#### DANGER

##### **Danger due to use of the opener with incorrect setting or when it is in need of repair!**

If the opener is used despite incorrect settings or if it is in need of repair, severe injury or death may result.

- ▶ The opener may only be used with the required settings and in the proper condition.
- ▶ Faults must be repaired professionally without delay.



#### WARNING

##### **Danger due to falling parts of doors!**

Actuating the emergency release can lead to uncontrolled door movement if

- springs are weakened or broken.
- the door has not been optimally weight-balanced.

Falling parts may cause a hazard. Severe injuries or death may result.

- ▶ Check the weight balance of the door at regular intervals.
- ▶ Pay attention to the movement of the door when the emergency release is actuated.
- ▶ Keep clear of the movement area of the door.



#### WARNING

##### **Danger of entrapment!**

Persons or animals in the movement area of the door may be trapped and pulled along with the door. Severe injuries or death may result.

- ▶ Keep clear of the moving door.



#### WARNING

##### **Danger of crushing and shearing!**

If the door moves with persons or animals in the movement area, crushing and shearing injuries may be caused by the mechanism and safety edges of the door.

- ▶ Only use the opener in direct view of the door.
- ▶ Always keep the moving door in sight.
- ▶ Persons or animals must not be in the range of movement of the door.
- ▶ Never walk under a stopped or a partially opened door.
- ▶ Never put your hand near the door or moving parts when it is moving. In particular, do not reach into the moving push arm.
- ▶ Do not reach into the ceiling mounting unit when the carriage is running along the rail.
- ▶ Do not drive through the door until it has been fully opened.

## 12. Operation



### **WARNING**

#### **Danger due to optical radiation!**

Looking into an LED at short range for an extended period may cause optical glare. This may temporarily reduce vision. This may cause serious or fatal accidents.

► Do not look directly into an LED.



### **NOTE**

If the weight compensation of the door is incorrectly adjusted, the opener may be damaged.

- The door must be stable.
- It must not bend, rotate or twist when opening and closing.
- The door must move easily in its rails.



### **NOTE**

Objects in the movement area of the door may be jammed and damaged.

Objects must not be in the range of movement of the door.



### **INFORMATION**

Keep this installation and operating manual accessible at all times at the place of use.

### 12.2 Handover to the user

The user checks whether the UL mark and the type plate for the door system have been attached to the door by the qualified specialist.

The qualified specialist must instruct the user:

- on the operation of the opener and its dangers
- on the handling of the emergency release
- on regular maintenance which the user can execute

The user must be informed about which work must only be performed by a qualified specialist:

- installation of accessories
- settings
- regular maintenance except that described in Chapter “13. Maintenance and care” and which must be performed by a qualified specialist.
- repairs
- troubleshooting, except that described in Chapter “14. Troubleshooting” and which must be performed by a qualified specialist. This installation and operating manual as well as the Declaration of Conformity created for the door system must be given to the user.

The user is responsible for:

- the intended use of the opener
- its good condition
- operation
- instructing all users how to use the door system and on the associated hazards
- care and maintenance
- tests by a qualified specialist
- troubleshooting in case of faults by a qualified specialist

The user must always keep this installation and operating manual ready for consultation in the vicinity of the door

system.

### 12.3 Operating modes of door movement



### **WARNING**

#### **Danger of crushing and shearing!**

The door can be actuated by a keypad or another control device.

- Persons who cannot see the door and are in the range of movement of the mechanism or the closing edges may be injured by crushing or shearing.
- Keypads or other control devices may be used only if the movement of the door can be viewed directly.
- Keep persons and animals clear of the range of movement of the door.
- Never stand under the opened door.



### **INFORMATION**

All functions can be programmed for all buttons.

## 12. Operation

### Button 1 (CH 1)

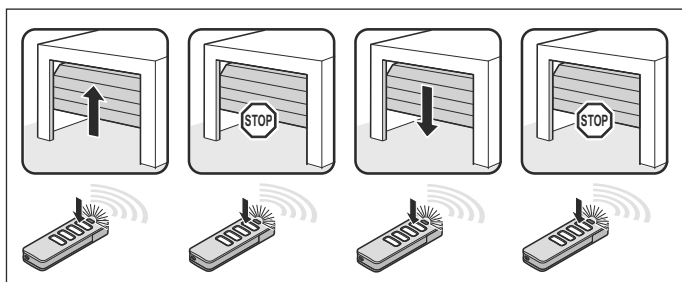


Fig. Pulse sequence door OPEN, door stop, door CLOSE, door stop

### Button 2 (CH 2)

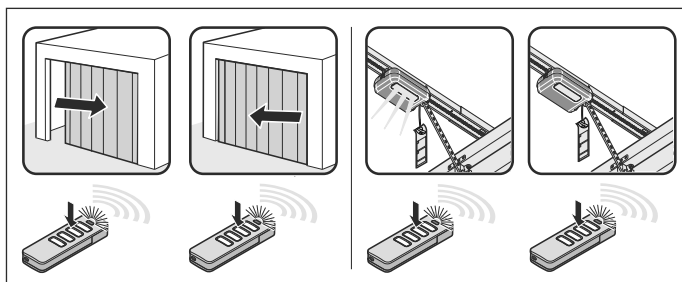


Fig. Pulse sequence for  
Partial opening: DIP switch 2 ON  
Lighting function: DIP switch 2 OFF

### Button 3 (CH 3)

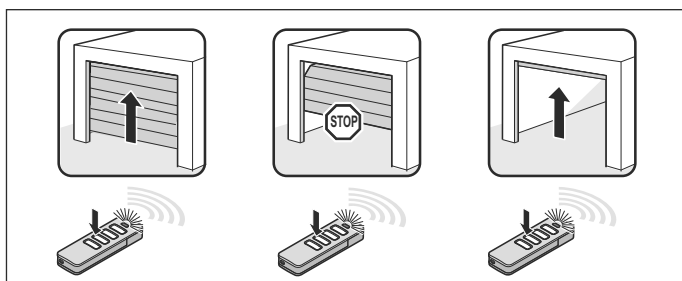


Fig. Pulse sequence for defined door OPEN

### Button 4 (CH 4)

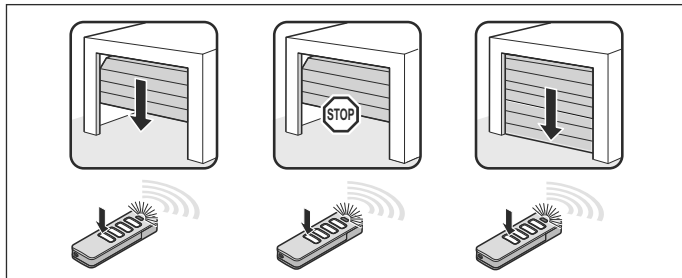


Fig. Pulse sequence for defined door CLOSE

## 12.4 Obstacle detection



### WARNING

#### Danger of crushing and shearing!

The door can be actuated by a button or another control device.

Persons who cannot see the door and are in the range of movement of the mechanism or the closing edges may be injured by crushing or shearing.

- ▶ Buttons and other control devices must be installed and actuated within view of the door only.
- ▶ Buttons or other control devices may be used only if the movement of the door can be viewed directly.
- ▶ Persons or animals must not be in the range of movement of the door.



### INFORMATION

Reversing: The opener stops when it hits an obstacle. Then the opener moves slightly in the opposite direction to release the obstacle. In the automatic closing function, the door opens completely.



### INFORMATION

If the safety sensor is interrupted, the door runs on for a short distance.

The following safety devices are installed to detect obstacles:

- Safety sensors (object protection)
- Safety contact strips (personal protection)
- Force cut-off of opener (personal protection)

See also chapter “13. Maintenance and care.”

## 12.5 Function of the emergency release

In the event of a power failure, the door can be opened from the inside using a mechanical emergency release.

Observe in particular the following safety instructions for this chapter.



### DANGER

#### Danger of trapped persons!

Persons may be trapped inside the garage. If trapped persons cannot free themselves, severe injury or death may result.

- ▶ Check the function of the emergency release at monthly intervals, particularly from inside in the door CLOSE end position and if necessary, also from outside.
- ▶ Faults must be repaired without delay.

## 12. Operation



### ⚠ WARNING

#### **Danger due to falling parts of doors!**

If the emergency release is actuated, weak or broken springs may cause the door to close suddenly and unexpectedly. This may cause serious or fatal injury.

- ▶ The emergency release should be used with the door closed.
- ▶ Use the emergency release with great caution if the door is open.
- ▶ Persons or animals must not be within the door's range of movement.

### NOTE

The emergency release is only suitable for opening or closing the door in an emergency. For example, a power outage or opener fault.

The emergency release is not suitable for regularly opening or closing the door.

This could cause damage to the opener or door.

### NOTE

In an emergency release, the door could independently open or close itself due to a broken spring or incorrect setting of the weight balancing.

The opener could be damaged or destroyed.

### NOTE

After the opener is locked back in, move the door into the door OPEN end position.

Otherwise the limit stop will be hit with too much force.

### NOTE

Objects in the movement area of the door may be jammed and damaged.

Objects must not be in the range of movement of the door.



### INFORMATION

The function of the emergency release must be checked particularly in the door CLOSE end position and if necessary, also from outside. Unlocking must be possible.



### INFORMATION

The emergency can be locked and released in any door position.



### INFORMATION

The emergency release must be easy to operate in all necessary positions.

1. Disconnect the opener from the mains voltage.  
Check it is disconnected from the power supply.

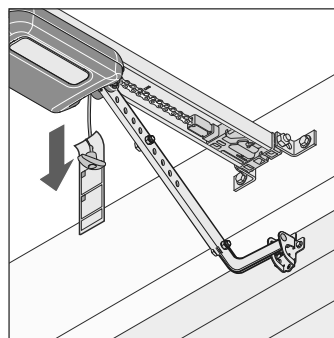


Fig. 1

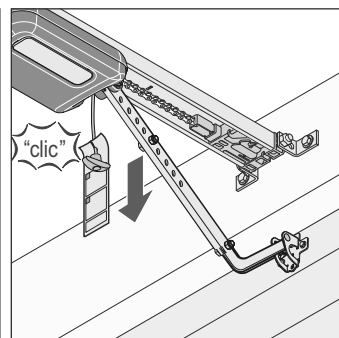


Fig. 2

2. Pull once on the emergency release cord.  
⇒ **The carriage is released.**  
⇒ Door can be moved by hand
3. Pull the emergency release cord once more.  
⇒ **The carriage is locked.**  
⇒ The door can only be moved by the opener.
4. Connect the opener to the main power supply.  
Check that the power supply is connected.
5. Give the opener a command.  
⇒ After a power failure, the first pulse of the opener is always in the door OPEN direction.  
⇒ The opener must drive completely to the door OPEN end position.

## 13. Maintenance and Care

### 13.1 Safety instructions for maintenance and care

Service the opener regularly as directed below. This ensures safe operation and a long service life for your opener.



#### **⚠ DANGER**

##### **Danger if not observed!**

If safety instructions are not observed, serious injury or death may result.

- ▶ All safety instructions must be observed to prevent serious injury.



#### **⚠ DANGER**

##### **Danger due to electric current!**

Contact with live parts may result in electric current flowing through the body. Electric shock, burns or death may result.

- ▶ All work on electrical components may only be carried out by an electrician.
- ▶ Disconnect the mains plug before working on the opener.
- ▶ If a battery pack is used, it must be disconnected.
- ▶ Then check that the opener is disconnected from the power supply.



#### **⚠ DANGER**

##### **Danger of falling!**

Unsafe or defective ladders may tip and cause fatal or serious accidents.

- ▶ Use only a non-slip, stable ladder.
- ▶ Ensure that ladders are safely positioned.



#### **⚠ WARNING**

##### **Danger of trapped persons!**

Persons may be trapped inside the garage. If trapped persons cannot free themselves, severe injury or death may result.

- ▶ The operation of the emergency release must be tested regularly from inside and if necessary also from outside.
- ▶ Faults must be repaired without delay.



#### **⚠ WARNING**

##### **Danger due to falling parts of doors!**

Parts of the door may become detached and fall. If persons or animals are hit, this may cause serious injury or death.

- ▶ Always keep the moving door in sight.
- ▶ Keep all persons and animals away from the door until it is completely opened or closed.



#### **⚠ WARNING**

##### **Danger of crushing and shearing!**

If the door moves with persons or animals in the movement area, crushing and shearing injuries may be caused by the mechanism and safety edges of the door.

- ▶ Only use the opener in direct view of the door.
- ▶ Always keep the moving door in sight.
- ▶ Never put your hand near the door or moving parts when it is moving. In particular, do not reach into the moving push arm.
- ▶ Do not reach into the ceiling mounting unit when the carriage is running along the rail.
- ▶ Persons or animals must not be in the range of movement of the door.
- ▶ Do not drive through the door until it has been fully opened.



#### **⚠ WARNING**

##### **Danger due to hot surfaces!**

After frequent operation, parts of the carriage or the control unit may become hot. If the cover is removed and hot parts are touched, they may cause burns.

- ▶ Allow the opener to cool before removing the cover.



#### **NOTE**

The carriage is supplied with safety low voltage via the chain and the rail.

The use of oil or grease will greatly reduce the conductivity of the chain, rail and carriage. This may result in faults due to inadequate electrical contact.

The chain and rail are maintenance-free and must not be oiled or greased.



#### **NOTE**

The use of unsuitable cleaning agents may damage the surface of the opener.

Clean the opener with a dry lint-free cloth only.

# 13. Maintenance and Care

## 13.2 Maintenance schedule

How often?	What?	How?
Once a month	• Test the emergency release	• See chapter "12.5 Function of the emergency release"
	• Test the obstacle detection	• See chapter "11.1 Testing obstacle detection"
	• Test the safety sensors	<ul style="list-style-type: none"><li>• Interrupt the active safety sensors while the door is closing. The door must stop and open slightly or completely if automatic closing is activated.</li><li>• If necessary clean the safety sensors, see chapter "13.3 Care"</li></ul>
Once a year	• Test the door and all moving parts	• As directed by the door manufacturer
	• Check screws on door, ceiling or header	• Check that screws are tight and tighten if necessary
As needed	• Chain and rail	• Maintenance-free
	• Rail	• See chapter "13.3 Care"
	• Clean wall control unit and carriage housing	• See chapter "13.3 Care"

## 13.3 Care

### Clean rail, carriage and wall control unit

1. Pull the power plug out of the power outlet.  
If a battery pack has been installed, remove the wall control unit cover and disconnect the battery pack from the wall control unit. See also chapter "8.1 Installing and removing battery pack".  
Then check that the power is disconnected.
2. Remove loose dirt with a moist, lint-free cloth:
  - from the carriage and the wall control unit
  - from the rail and the inside of the rail
3. If applicable, install the battery pack in reverse order of removal.  
⇒ Plug the power plug into the power outlet.

### Clean safety sensors

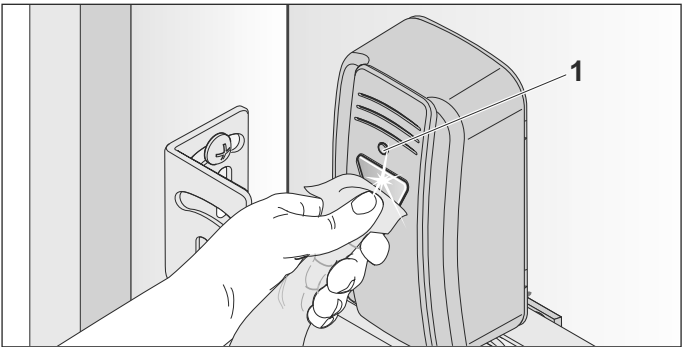


Fig. 1

- ➔ **NOTE**  
Do not change the position of the safety sensors when cleaning them.
1. Clean the housing reflectors with a moist, lint-free cloth.

## 14. Troubleshooting

### 14.1 Safety instructions for troubleshooting

Follow the basic safety instructions listed below.



#### **⚠ DANGER**

##### **Danger if not observed!**

If safety instructions are not observed, serious injury or death may result.

- ▶ All safety instructions must be observed to prevent serious injury.



#### **⚠ DANGER**

##### **Danger due to electric current!**

Contact with live parts may result in electric current flowing through the body. Electrical shock, burns, or death may result.

- ▶ All work on electrical components may only be carried out by an electrician.
- ▶ Disconnect the mains plug before working on the opener.
- ▶ If a battery pack is used, it must be disconnected.
- ▶ Then check that the opener is disconnected from the power supply.



#### **⚠ DANGER**

##### **Danger of entrapment!**

Persons may be trapped inside the garage. If trapped persons cannot free themselves, severe injury or death may result.

- ▶ Check the function of the emergency release at **monthly intervals**, particularly from inside in the door CLOSE end position and if necessary, also from outside.
- ▶ Faults must be repaired without delay.



#### **⚠ WARNING**

##### **Danger of falling!**

Unsafe or defective ladders may tip and cause serious or fatal accidents.

- ▶ Use only a non-slip, stable ladder.
- ▶ Ensure that ladders are safely positioned.



#### **⚠ WARNING**

##### **Danger due to falling parts!**

Parts of the door may become detached and fall. Persons may be hit. This will cause injury or death.

- ▶ Always keep the moving door in sight.
- ▶ Keep all persons and animals away from the door until it is completely opened or closed.
- ▶ Do not drive through the door until it has been fully opened.



#### **⚠ WARNING**

##### **Danger of entrapment!**

Loose clothing or long hair may be trapped by moving parts of the door.

- ▶ Keep clear of the moving door.
- ▶ Wear tight-fitting clothing.
- ▶ Wear a hairnet over long hair.



#### **⚠ WARNING**

##### **Danger of crushing and shearing!**

If the door moves with persons or animals in the movement area, crushing and shearing injuries may be caused by the mechanism and safety edges of the door.

- ▶ Only use the opener in direct view of the door.
- ▶ Always keep the moving door in sight.
- ▶ Persons or animals must not be in the range of movement of the door.
- ▶ Never put your hand near the door or moving parts when it is moving. In particular, do not reach into the moving push arm.
- ▶ Do not reach into the ceiling mounting unit when the carriage is running along the rail.
- ▶ Do not drive through the door until it has been fully opened.



#### **⚠ WARNING**

##### **Danger due to optical radiation!**

Looking into an LED at short range for an extended period may cause optical glare. This may temporarily reduce vision. This may cause serious or fatal accidents.

- ▶ Do not look directly into an LED.



#### **⚠ WARNING**

##### **Danger due to hot surfaces!**

After frequent operation, parts of the carriage or the control unit may become hot. If the cover is removed and hot parts are touched, they may cause burns.

- ▶ Allow the opener to cool before removing the cover.



#### **NOTE**

If the door is not in view and the radio remote control is actuated, objects in the movement area of the door may be jammed and damaged. Objects must not be in the range of movement of the door.



#### **INFORMATION**

The control unit detects a short-circuit between chain and rail and then switches the opener off.