



# INSTALLATION

## Cabinet Lock **SAFE-O-TRONIC**

up from Firmware 4.00 (with real time clock)

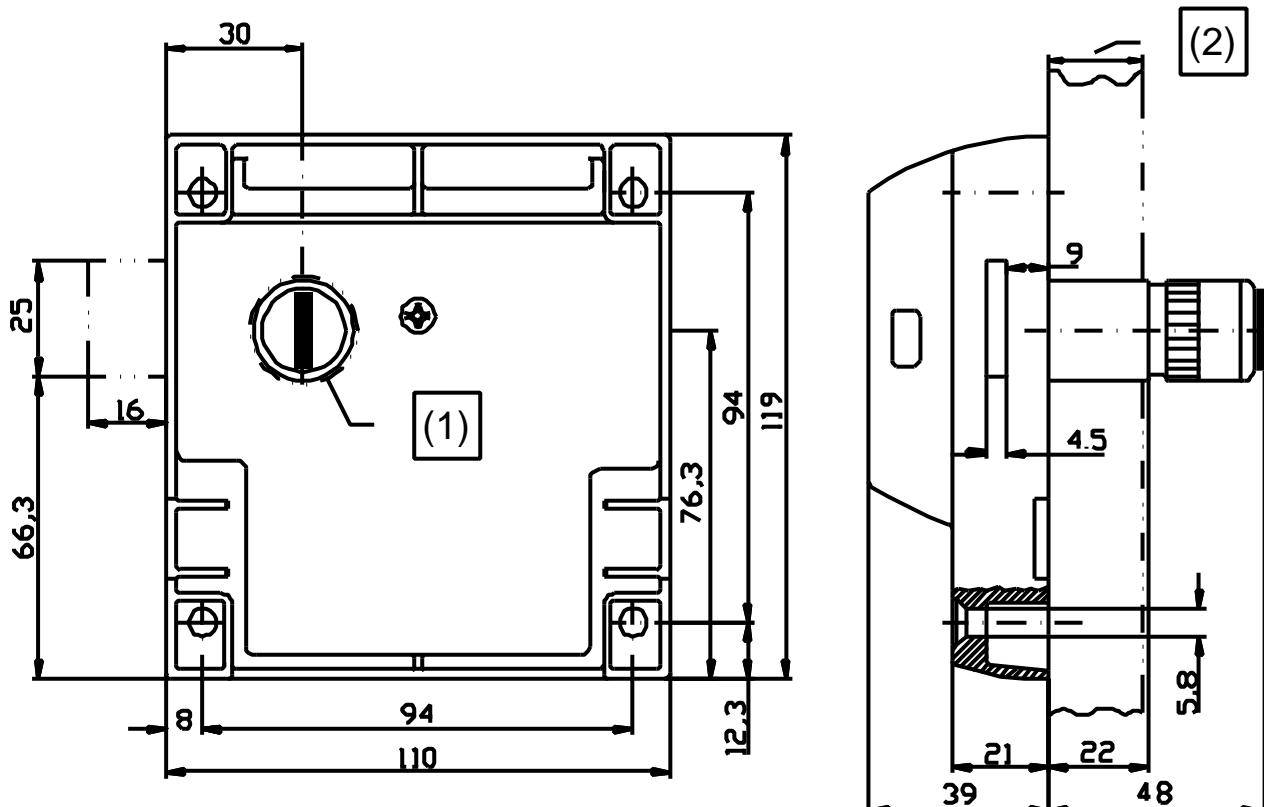


Fig. 1: **SAFE-O-TRONIC** layout right (layout left = mirror image)

- (1) Recommended door hole diameter 23 mm
- (2) max. door thickness 21.5 mm

## Note

© Copyright 1998 - 2004 by  
Schulte-Schlagbaum AG  
Nevigeser Straße 100  
D-42553 Velbert  
Tel.: +49 20512086155

With the edition of this document, all previous editions become void. Indications made in this manual may be changed without previous notice.

**Copying of this document, and giving it to others and the use or communication of the contents thereof are forbidden without express authority. Offenders are liable to the payment of damages. All rights are reserved in the event of the grant of a patent or the registration of a utility model or design.**

Composition of the information in this document has been done to the best of our knowledge. Schulte-Schlagbaum AG does not guarantee the correctness and completeness of the details given in this manual and may not be held liable for damages ensuing from incorrect or incomplete information. Since, despite all our efforts, errors may not be completely avoided, we are always grateful for your useful tips.

The instructions given in this manual are based on advantageous boundary conditions. Schulte-Schlagbaum AG does not give any guarantee promise for perfect function in cross environments.

Schulte-Schlagbaum AG assumes no responsibility for the use of any information contained in this document and makes no representation that they free of patent infringement. Schulte-Schlagbaum AG does not convey any license under its patent rights nor the rights of others.

## Contents

<b>1. Safety and warning notices – read before commissioning .....</b>	<b>4</b>
<b>2. Basic functions of the <i>SAFE-O-TRONIC</i>.....</b>	<b>5</b>
2.1. Locking the <i>SAFE-O-TRONIC</i> .....	5
2.2. Unlocking the <i>SAFE-O-TRONIC</i> .....	5
<b>3. Installation.....</b>	<b>6</b>
<b>4. Start-up procedure .....</b>	<b>6</b>
4.1. Function testing with the "TestKey" .....	6
4.2. Configuring the <i>SAFE-O-TRONIC</i> with the "SetupKey" .....	7
4.3. Configuring for standard/daylight saving time "DSTKey" .....	8
4.4. . Setting time of day and date "ClockSetKey" .....	8
<b>5. Resetting a <i>SAFE-O-TRONIC</i> with the "ResetKey" .....</b>	<b>10</b>
<b>6. Replacing a <i>SAFE-O-TRONIC</i>.....</b>	<b>10</b>
<b>7. Battery.....</b>	<b>11</b>
7.1. Battery replacement.....	11
<b>8. Service / Maintenance.....</b>	<b>11</b>
<b>ANNEX A Technical Data .....</b>	<b>12</b>
<b>ANNEX B:.....</b>	<b>13</b>
Europe (CE).....	13
USA (FCC).....	13
<b>ANHANG C: LED Blink-Codes.....</b>	<b>14</b>

---

**1. Safety and warning notices – read before commissioning**

---

- The device may only be used for the purpose intended by the manufacturer.
- The operating instructions have to be handed out to every user and kept in an easily accessible place.
- Unacceptable changes as well as the use of spare parts and special features which are not sold or recommended by the manufacturer, may cause fire, electric shocks and injuries. Therefore, such measures lead to nonliability of the manufacturer and a lapse of all warranty claims.
- The appliance is subject to the manufacturer's guarantee regulations in the version valid at the time of purchase. We cannot be held liable for improper or faulty manual or automatic adjustment of parameters resp. improper use of the appliance.
- Repair work may only be carried out by the manufacturer.
- The user has to make sure that the appliance is installed and operated according to the technical rules of the country of installation as well as other regional regulations.

---

## 2. Basic functions of the SAFE-O-TRONIC

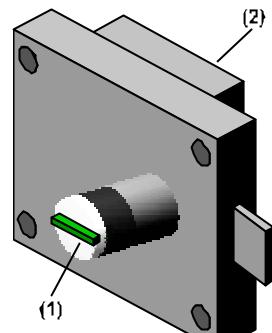
---

### (1) Rotary knob:

With integrated LED display (red / green) and antenna for exchange between SAFE-O-TRONIC and megaKey.

### (2) Battery compartment:

Use special screwdriver to open (Type: ID MS.SSD-A).



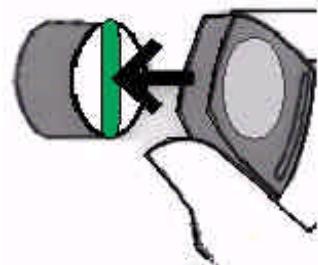

---

## 2.1. Locking the SAFE-O-TRONIC

---

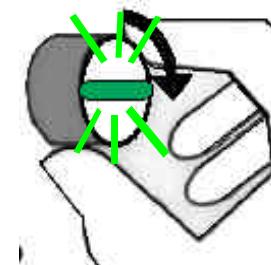
### 1. Push rotary knob

SAFE-O-TRONIC is activated for 8 sec. (no indicator)



### 2. Present megaKey:

The green LED flashes for a max. of 8 sec. As long as the green LED is flashing, the rotary knob can be turned 90° and the SAFE-O-TRONIC locked.



### 3. Rotate knob 90°

Turning the knob locks the SAFE-O-TRONIC, which acknowledges this by turning on the green LED for several seconds.

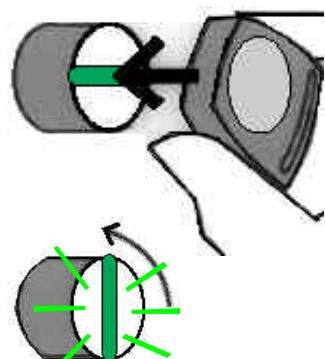
---

## 2.2. Unlocking the SAFE-O-TRONIC

---

### 1. Push rotary knob

SAFE-O-TRONIC is activated for 8 sec. (no indicator)



### 2. Present megaKey:

As soon as a valid megaKey is recognized by the SAFE-O-TRONIC the green LED begins to flash and the rotary knob turns itself back to „unlocked“ position.

---

### 3. Installation

---

**Installing:**

The electronic cabinet lock **SAFE-O-TRONIC** is attached on the inside of a cabinet door using four screws.

**Start-up:**

Once the installation work is complete and all the locks tested, they are configured according the start-up procedure.

**Applying the reference plate:**

Stick the user reference plate only to a flat, grease- and dust-free surface.

---

### 4. Start-up procedure

---

The following Start-up procedure is recommended.

---

#### 4.1. Function testing with the "TestKey"

---

**Lock **SAFE-O-TRONIC**:**

1. Activate **SAFE-O-TRONIC** (push rotary knob)
2. Hold TestKey directly in front of the rotary knob.
3. When the green LED flashes, turn knob 90°.

***Unlock the **SAFE-O-TRONIC**:***

1. Activate **SAFE-O-TRONIC** (push rotary knob)
- 2 Hold TestKey directly in front of the rotary knob.
3. **SAFE-O-TRONIC** unlocks itself.

***NOTE:***

**The TestKey is used to test the function of factory-new or non-configured **SAFE-O-TRONIC**. Once the SetupKey has been used to configure the **SAFE-O-TRONIC** for the system, the **SAFE-O-TRONIC** can no longer be locked or unlocked using the TestKey!**

## 4.2. Configuring the SAFE-O-TRONIC with the "SetupKey"

The SetupKey is used to configure the System-ID, the cabinet number, the operating mode and the group number in the SAFE-O-TRONIC. Only then can the SAFE-O-TRONIC be used in the system.

An already configured SAFE-O-TRONIC will no longer accept the SetupKey. To change the configuration of a SAFE-O-TRONIC, the latter must first have been cleared using a valid ResetKey.

**CAUTION:**

**Use only a SetupKey having the correct Group No. and System-ID.**

**Operation:**

1. Set the parameters on *megalock Admin* or on the *megalock* Programmer and program them into the SetupKey.

Set the following data:

- Next SAFE-O-TRONIC number to be programmed (cabinet number)
- Operating mode (free cabinet select / fixed cabinet assignment / multi-user mode)
- Group No. to which the SAFE-O-TRONIC is to be assigned.

2. Go to the first SAFE-O-TRONIC with the SetupKey, waken up the lock and configure it by presenting the SetupKey.

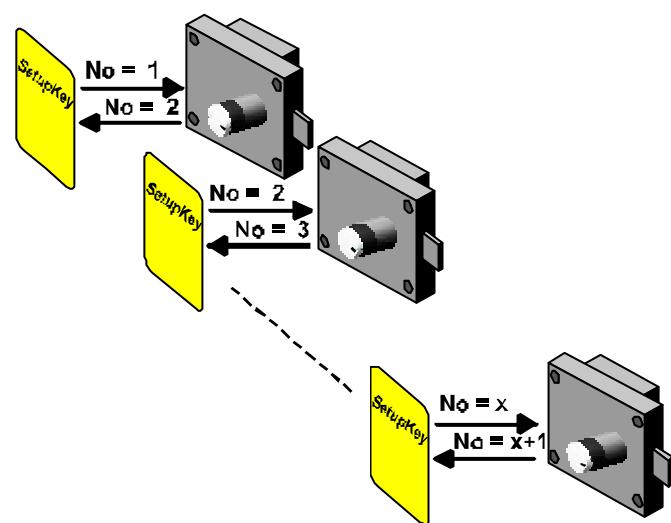
**The SetupKey must be held in front of the rotary knob until the SAFE-O-TRONIC acknowledges this by causing the green LED to flash.**

3. Now the next SAFE-O-TRONIC can be configured with a sequential cabinet number.

**Assigning the *megalock* number is done according to the same principle.**

Once the SAFE-O-TRONIC has uploaded the number, it increments the number on the SetupKey by +1.

Now the number for the next SAFE-O-TRONIC is stored on the SetupKey, and as many *megalocks* as desired can be initialized with a sequential number without having to first reprogram the SetupKey.



**NOTE:**

**If a gap in the sequential numbering of the SAFE-O-TRONICs is desired, such as at the end of a row of cabinets, the new cabinet number will have to be programmed into the SetupKey.**

---

#### 4.3. Configuring for standard/daylight saving time "DSTKey"

---

The DSTKey (Daylight Saving Time Key) is used to configure both switchover points for daylight saving/standard time as well as the type of switchover in the SAFE-O-TRONIC. The switchover rule for the time change is programmed on the DSTKey.

By default the time change rule of Central Europe (Begin: last Sunday in March; End: last Sunday in October) are programmed on DSTKey.

For Changing the time change rule please ask you authorised *megalock* system partner.

**Operation:**

1. Activate *megalock* (push rotary knob)
2. Present DSTKey. The *megalock*-s stores the changeover points and indicates this by flashing the green LED

**NOTE:**

*When starting up the SAFE-O-TRONIC, be sure that the time change is configured using the DSTKey before the internal clock is set by the ClockSetKey. Otherwise the time of day may be changed according to the specified changeover rule after the DSTKey is used.*

---

#### 4.4.. Setting time of day and date "ClockSetKey"

---

The ClockSetKey is used to set the real time clock integrated into the SAFE-O-TRONIC to the current date and time of day.

**NOTE:**

- *The megalock-s only accepts the ClockSetKey if the internal realtime clock was activated when configuring using the SetupKey*
- *After replacing the battery in a SAFE-O-TRONIC you must reset its realtime clock if it is active.*
- *After the clock in the megalock-s has been set the megalock-s reaccepts the ClockSetKey only after an additional 2 minutes have expired.*

**Operation:**

1. Program the time and date you want to set in the *SAFE-O-TRONIC* on the *ClockSetKey*.
2. When the programmed time of day is reached the *SAFE-O-TRONIC* is "wakened" and you present the *ClockSetKey*.

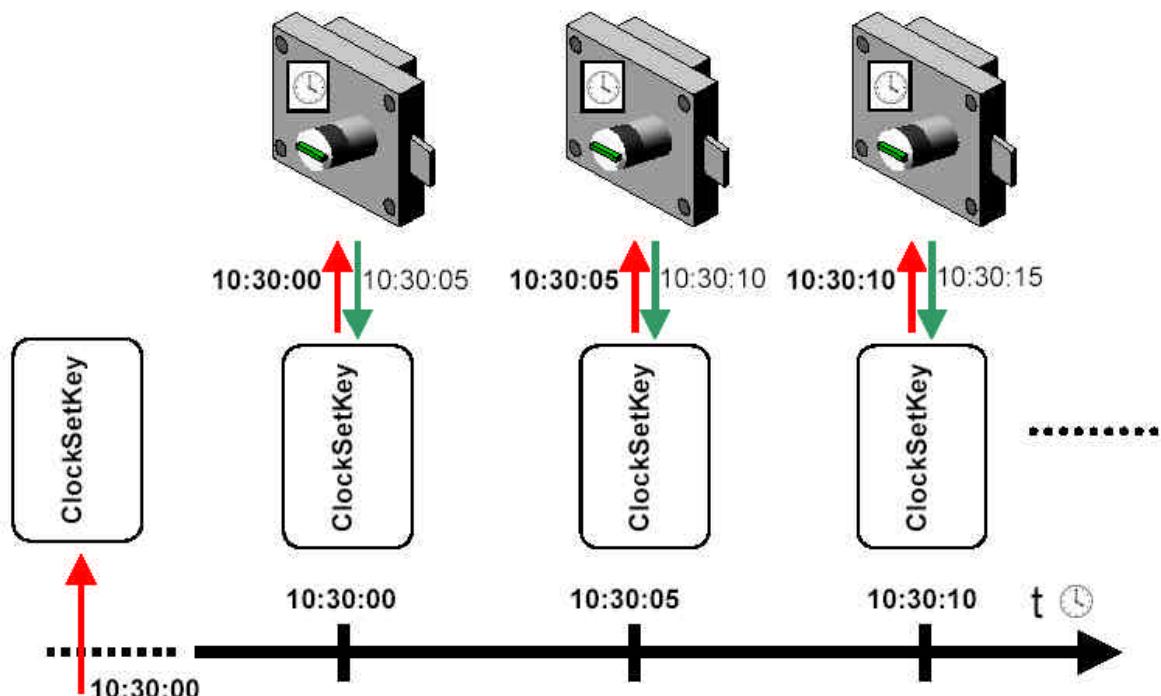
A time 5 seconds later than the actual time of day is written back to the *ClockSetKey*.

After the clock is set the new time of day programmed into the *ClockSetKey*, the *SAFE-O-TRONIC* acknowledges by flashing the green LED.

3. 5 seconds after setting the first *SAFE-O-TRONIC* you can waken the next one and set the clock using the *ClockSetKey*.

This procedure can be repeated on any number of *SAFE-O-TRONIC* as long as the 5 second rhythm is kept for setting the clocks.

If you cannot maintain the 5-second intervals, you must reprogram the *ClockSetKey* with the actual time of day (as described in Step 1).



---

## 5. Resetting a **SAFE-O-TRONIC** with the "ResetKey"

---

Clearing a **SAFE-O-TRONIC** may be necessary for example if a mistake was made in initialising (e.g. wrong cabinet number) or if a **SAFE-O-TRONIC** needs to have a different configuration.

**NOTE**

**The ResetKey is only accepted by the **SAFE-O-TRONIC** if it is unlocked!**

**Operation:**

1. Activate *megalock* (push rotary knob)
2. You have 8 seconds to hold the ResetKey in front of the rotary knob in the sensing zone of the **SAFE-O-TRONIC** antenna.

Once the parameters in the **SAFE-O-TRONIC** have been cleared, the **SAFE-O-TRONIC** acknowledges the process by causing the green LED to come on for a brief time followed by simultaneous flashing of the green and red LED.

3. Now the **SAFE-O-TRONIC** can be reconfigured with a SetupKey  
(see: 4.2. Configuring the **SAFE-O-TRONIC** with the "SetupKey").

---

## 6. Replacing a **SAFE-O-TRONIC**

---

If it becomes necessary to replace a **SAFE-O-TRONIC**, the new **SAFE-O-TRONIC** must first:

1. be configured with the *megalock* number and other parameters using the SetupKey  
(see: 4.2. Configuring the **SAFE-O-TRONIC** with the "SetupKey") and
2. be actuated with a MasterKey to ensure that the new **SAFE-O-TRONIC** accepts only MasterKeys having the currently valid MasterKey-Generation.

---

## 7. Battery

---

The battery in the *SAFE-O-TRONIC* is designed for at least 40 actuations daily within a period of 3 years. The time when the battery needs to be replaced will depend however on the self-discharging of the battery and by climatic effects, especially cold temperatures.

To summarize, the time to replace the battery depends on the following factors:

1. the number of actuations,
2. how long the battery has been installed, and
3. the ambient temperature in which the *SAFE-O-TRONIC* is operated.

---

### 7.1. Battery replacement

---

The battery compartment integrated into the lock body is only accessible when the cabinet is opened, and can only be opened using a special screwdriver (Type: ID ML.SSD-A).

- After opening the battery compartment, disconnect the discharged battery pack at the connector and plug in the new battery pack.
- Once the new battery pack has been installed, the *SAFE-O-TRONIC* is ready for immediate use. Use the ClockSetKey to set the internal real time clock after the battery was replaced or disconnected.
- **The discharged battery pack must be properly disposed of according to prevailing environmental regulations!**

**NOTE:**

- ***The discharged battery pack must be properly disposed of according to prevailing environmental regulations!***
- ***Use only batteries recommended by the manufacturer (Type: ID ML.BP-A). The use of non-approved batteries may cause malfunctions and result in damage to the *SAFE-O-TRONIC*.***

---

## 8. Service / Maintenance

---

The mechanical parts of the *SAFE-O-TRONIC* are maintenance-free. Under no circumstances use mineral oil based lubricants or greases.

Clean only using non-sticky, non-residue cleaners and disinfectants. Do not use harsh solvents, acids or lye for cleaning.

**NOTE:**

***Cleaning with water-jet or steam jet could occur irreparable damage!***

## ANNEX A Technical Data

Dimensions (W x H x D):	approx. 110 x 119 x 84 mm
Weight:	approx. 350 g (incl. battery)
Protection class	IP 43
Temperature range	0 °C to 60 °C -25 °C to 60 °C
Relative humidity	10 % to 90 % (non-condensing)
Battery	Battery Pack (4 x Alkali Mignon-Cell (AA))
Battery life expectancy	3 years assuming 40 operations daily (43.800 operations) Unlocking is possible for 6 weeks after reaching battery alarm level
Key-Medium	Transponder: Hitag 1
Operating frequency	125 kHz
Indicators:	1 x LED red 1 x LED green
Real Time Clock	Date function from 01.01.2000 to 28.02.2100 auto. Daylight saving time configurable
Operation Modes	free cabinet selection fixed cabinet assignment Multi-user mode Matrix mode

Replacement parts / Tools:

- **Battery:** Type: ID ML.BP-A  
Article No.: 1152.001.00
- **Special screwdriver for replacing battery:** Type: ID ML.SSD-A  
Article No.: 1153.001.00

---

**ANNEX B:**

---

---

**Europe (CE)**

---

When properly used this radio equipment conforms to the basic requirements of Article 3 and the other relevant provisions of the R&TTE Directive 1999/5/EG of March 99.



Equipment Classification according ETSI EN 300 330: Class 2

---

**USA (FCC)**

---

**FCC ID: Q3ISOT02**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## ANHANG C: LED Blink-Codes

LED Signal	Description
🕒 1 x green (3 Sec)	<ul style="list-style-type: none"> <li>Reset-Indicator (e.g. first activation after battery replacement)</li> </ul>
🕒 1 x green	<ul style="list-style-type: none"> <li>OK (Action was successfully completed)</li> </ul>
🕒 1 x red	<ul style="list-style-type: none"> <li>Unknown megaKey Type</li> <li>Action is only allowed on unlocked SAFE-O-TRONIC e.g. ResetKey or SetupKey.</li> <li>The present free-megaKey has locked another SAFE-O-TRONIC.</li> <li>fixed-megaKey, multi-megaKey or ProgKey is not assigned to this SAFE-O-TRONIC</li> </ul>
🕒 2 x red	<ul style="list-style-type: none"> <li>SAFE-O-TRONIC is in new or in reset state (e.g. after using ResetKey)</li> <li>TestKey or SetupKey was used at an initialised SAFE-O-TRONIC</li> </ul>
🕒 3 x red	<ul style="list-style-type: none"> <li>megaKey is admitted at another SAFE-O-TRONIC System.</li> <li>megaKey or MasterKey are assigned to another group</li> </ul>
🕒 4 x red	<ul style="list-style-type: none"> <li>Time limit or valid period exceeded</li> <li>The megaKey is in moment not admitted at this SAFE-O-TRONIC</li> </ul>
🕒 5 x red	<ul style="list-style-type: none"> <li>The Key-Generation stored on the MasterKey or multi-megaKey or SystemKey is no longer valid for this SAFE-O-TRONIC.</li> </ul>
🕒 6 x red	<ul style="list-style-type: none"> <li>Handling error: SAFE-O-TRONIC was not locked after a actuation with a valid megaKey</li> <li>Mismatched type of megaKey and <i>megalock</i> operating mode (e.g. free-megaKey at SAFE-O-TRONIC in fixed cabinet assignment or fixed-megaKey at SAFE-O-TRONIC in free cabinet selection, etc. ....).</li> <li>ProgKey at a SAFE-O-TRONIC which doesn't work in Matrix-Mode.</li> <li>ClockSetKey or DSTKey at SAFE-O-TRONIC with disabled real time clock.</li> <li>Data on megaKey are incorrect or corrupt (e.g. megaKey was to short in detection range of the SAFE-O-TRONIC)</li> </ul>
🕒 ... 🕒 3 x red .. green ....	<ul style="list-style-type: none"> <li>Battery alarm Before SAFE-O-TRONIC could be used again the battery must be replaced.</li> </ul>
🕒 & 🕒 3 x red & green	<ul style="list-style-type: none"> <li>SAFE-O-TRONIC is blocked after MasterKey I was used. Use MasterKey II to unblock SAFE-O-TRONIC for further activation's</li> </ul>
🔴 & 🟢 constant red&green	<ul style="list-style-type: none"> <li>Internal Failure</li> </ul>