



ERWIN SATTLER
MÜNCHEN

TROJA LUNARIS M

Precision pendulum clock with
date and moonphase, 16 extendible
watch winder and safe



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Setting up the clock

The Troja will be shipped in one box

1. Unpacking the case top

- a. Remove the cover and the upper side section from the case, remove the upper part of the case to the side
- b. Remove the pendulum and accessories below the removable floor

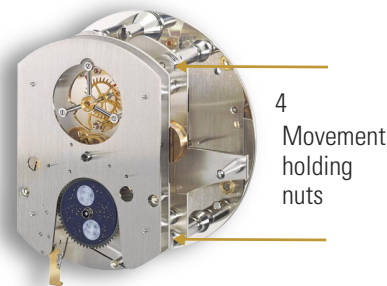
2. Unpacking the safe, the case bottom and the safe drawers

The safe is bolted to the box through the back wall and the bottom. The safe can only be opened in upright position.

- a. Unscrew the lower side of the box
- b. Remove the case bottom and the safe drawers
- c. Open the safe (Code = 123456)
- d. Unscrew the connection between the safe and the box (tool=17 mm bolt nut)
- e. Tip over the box, unbolt and remove the screws from the bottom, straight up the box
- f. Unbolt the screws at the back wall between safe and box
- g. Remove the safe forward out of the box

Take out the movement

1. Unscrew the four knurled movement holding nuts, pull the movement up to the front out of the case and put it carefully down on an even and firm underground with the dial downwards.
2. Unscrew the cover of the movement holding plate with enclosed special tool.
3. Place the safe at the final position.



4. Secure the safe to the wall or floor, taking into account any pipes or cables running through the wall or floor, such as electricity, water, or underfloor heating. The metal dowels provided can be used for this purpose (a 14 mm hole is required).
5. Place the case top on the case bottom and connect it with 6 screws from below.
6. Plug the two connectors on the back of the lower case into the corresponding sockets on the upper case.
7. Push the complete case over the safe.
8. By using the adjustable feet you can level the case, if needed and the POM tube behind the cover plate (therefore you need the side of the special tool with the two pins).
9. The case must be fixed to the wall as follows:
 - a. Mark drilling position with special tool
 - b. Move case aside
 - c. Drill (14 mm) and insert wall plug
 - d. Connect the AC-adaptor to the power plug (located in the case bottom)
 - e. Bring the case back into final position and secure it with the supplied screw
10. Fitting the movement and starting the clock , see the following pages

Caution!

With the clock, there is a protecting cover that has to be laid inside the bottom of the case! The cover has to be used, to avoid damages of the case! Please remove the cover only after the installation is complete!

How to hang in the pendulum

Caution!

Do always hold or carry the pendulum at the free pendulum rod, never at the adjusting-table or the plate of the barometer-instrument.

Since the movement is already removed, the nickel plated protection tube can be pulled off from the suspension spring block (located between the two upper movement holding pillars).

Remove the suspension spring and keep in reach. Now unscrew the protection cap from the tip of the pendulum. To avoid damage of the delicate suspension spring we recommend to insert it into the slot of the pendulum rod first, hold it in place and then hang the pendulum together with the suspension spring into the suspension spring block.

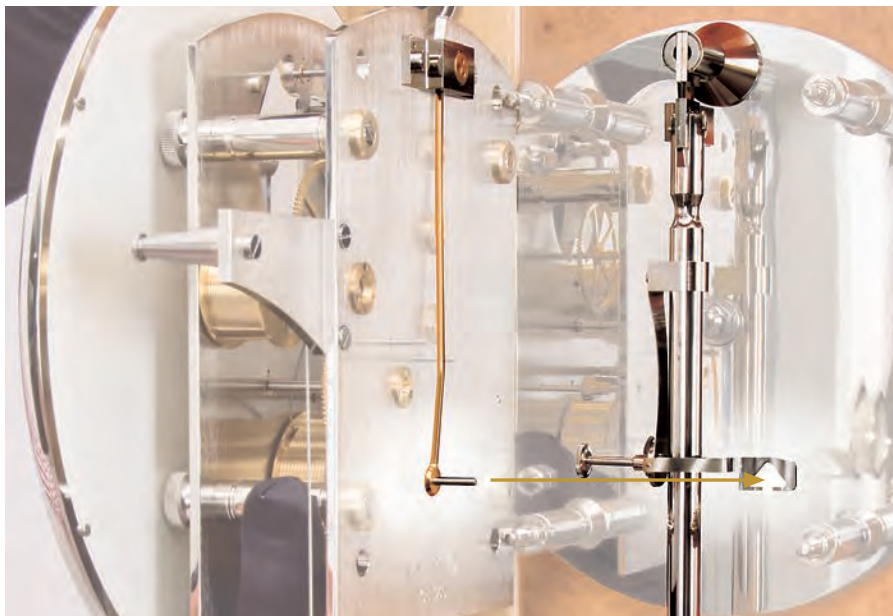


Push back the protection tube on the suspension spring block. Because of the lateral mounted air pressure compensation, the pendulum is pushed slightly from the centre position to the side. By turning the nuts at the sides of the pendulum scale you can adjust the pendulum scale in a position that the tip of the pendulum points exactly to »0«.

How to fit in the movement

Remove the safety rubber band from the pallet lever. Push the movement on the 4 pillars and screw it down with the four knurled nuts. Remove the transport protection of the escapement lever.

So that motion can be transmitted from the movement to the pendulum, the driving pin of the pallet lever must be inserted in the triangular cut-out in the safety flap on the beat adjuster. To do so, reach behind the movement from the side, carefully press the lever with the cut-out backwards and upwards until the driving pin slots into the triangular cut-out.



How to set the barometer hand

The scale of the barometer does not correspond to the display of changes of pressure measured in hectopascal, as is nowadays the case with barometers. The scale does rather display the changes of pressure, as it was formerly done, in millimetre mercury column. When the pressure at the destination of the clock is »normal« adjust the display by setting the hand of the barometer to zero by turning the knurled-head screw above the aneroid boxes.

You can now read the reactions of the barometer to changes of pressure as follows: High pressure is displayed in the upper half of the scale, in the »positive« range, low pressure is displayed in the lower half of the scale, in the »negative« range. If the pressure increases the period of oscillation of the pendulum lengthens, thus the clock is slow. By the compression of the aneroid boxes however, the weight located on them sinks towards the centre of the pendulum, resulting in the acceleration of the pendulum. The change in speed caused by the change of pressure is thus compensated.

How to start the clock

Before hanging the weight into the pulley, make sure the cable runs in the front groove of the guide pulley.

Wind the clock with the crank one turn counter clock wise. Deflect the pendulum until a »tick«, caused by the drop of the escapement wheel tooth on the pallet, is audible. Watch the pendulum scale and note the angular minutes, indicated by the tip of the pendulum, exactly in the moment where the »tick« occurs. Now deflect the pendulum to the other side and again note the angular minutes when the »tick« is audible. It is ideal, when the angular minutes are equal on both sides.

If the pendulum has to be deflected more to the right side than to the left to hear the »tick«, you can correct this by turning the adjustment screw on the pendulum rod behind the movement to the right side.

Then wind the clock only so far that the upper end of the rope pulley remains approx. 1 cm below the dial ring.

How to set the time

When setting the time, the minute hand may be turned forwards as well as backwards. The second hand shall not be turned. In order to synchronise the second hand to that of another clock (e.g. a radio clock) stop the pendulum when the second hand has reached the mark of the sixtieth second. Let the pendulum go when the second hand of the clock of comparison reaches the sixtieth second.

How to set date, day and moonphase

Date and day can be set by turning manually the hands clockwise.

Caution: Don't set day and date between 11pm and 3am.

The moonphase can be set by pushing the moonlever behind the dial at the "6.30 o'clock" position. Push the lever upwards so many times until the desired position is indicated. Don't set the moonphase between 9am and 11am.

How to adjust the accuracy

Your clock has been exactly adjusted in our workshop. The transport, the sea level and the geographic latitude of the place where the clock is hung up may however lead to a variation in the period of oscillation of the pendulum. You will therefore most probably have to adjust your clock once again.

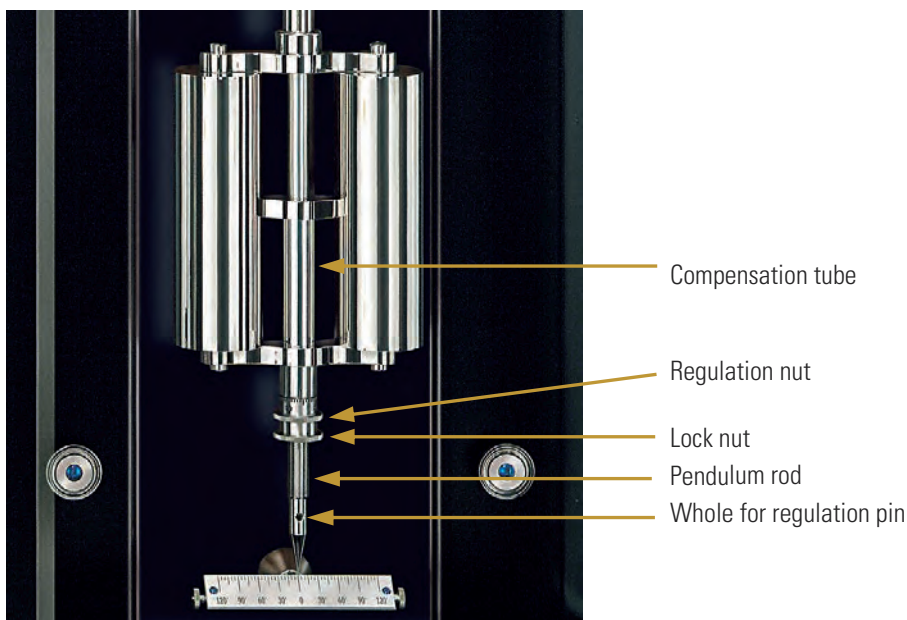
Adjust your clock as follows:

a) Coarse adjustment:

Should the accuracy deviate by more than one second per day it is necessary to adjust the clock by the adjusting nut.

Please stop the pendulum first. Now put the regulation pin enclosed in the case into the hole below the counter nut in the pendulum rod to avoid a twisting of the suspension spring during adjustment.

Loosen the lower nut, the lock nut, and then screw the adjusting nut one line to the left per second gained per day, i.e. one line to the right per second lost per day. Afterwards screw the lock nut slightly up again. After having watched the accuracy a couple of days you may readjust the clock as described above.



a) Precision adjustment:

For precision adjustment of the clock, i.e. for the correction of small deviations of accuracy, you don't need to stop the pendulum.

Precision adjustment is done by means of the timing weights in the case. Place them on the adjusting-table situated at the middle of the pendulum rod.

The heavier the timing weight, the greater the acceleration of the pendulum, i.e. the faster runs the clock.

By taking away a timing weight, the period of oscillation of the pendulum is lengthened, i.e. the clock goes slower.

b) How to correct deviations of 1 - 2 seconds from standard time:

You can correct deviations of 1 - 2 seconds from standard time with the aid of the two stainless steel regulation weights also enclosed in the case. You neither need to stop the pendulum, nor the second hand. One of the weights should thus always be located on the adjusting table.

In case the second hand deviates approx. minus 1 second from standard time, place the second weight onto the adjusting table as well. As soon as the deviation is recovered, take the weight off again.

A deviation of approx. plus 1 second shall be corrected by occasionally taking away the weight permanently located on the adjusting table.

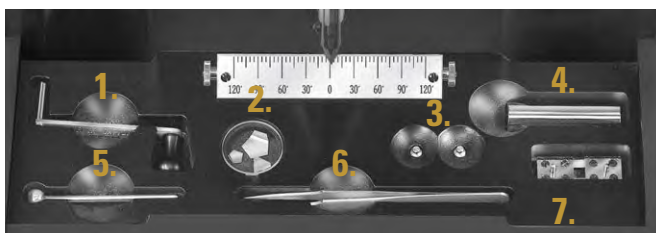
Due to the fact that every place on earth has a different gravitation, a clock that runs +/- 0 sec in Munich/Germany will gain or loose time if it is located somewhere else.

As an example see the list below:

Place	Gravitation g in cms^{-2}	Fast in sec./day	Slow in sec./day
Bangkok	978,321		106,2
Berlin	981,288	24,4	
Budapest	980,852	5,2	
Bukarest	980,554		7,9
Göttingen	981,176	19,5	
Hamburg	981,375	28,2	
Madrid	979,981		33,1
Munich	980,733	0	0
Nürnberg	980,942	9,2	
Rom	980,347		17,0
St. Petersburg	981,925	52,5	
Stockholm	981,843	48,8	
Stuttgart	980,901	7,4	
Tokio	979,805		40,9

The accessory box

When the front door is completely opened, you can pull out the box cover. In the bottom of the case you find the accessories as shown in the picture below.



1. Crank
2. Timing weights
3. Regulation weights
4. Pendulum protection cap
5. Regulation pin
6. Tweezers
7. Spare pendulum spring

Technical specifications

Precision pendulum clock Calibre 1915

- Plates of 4mm thick, rolled brass
- Nuts of stainless steel
- Complete geartrain in ballbearings (9 Stainless steel ballbearings)
- 6 jewelled bearings
- 2 agate pallets
- Pinions with high number of teeth, made of hardened steel and polished
- Gears finely crossed out, milled, precision-ground, and gold-plated
- Graham escapement with improved transmission system
- Gold-plated escapement lever
- Hand painted moonphases-disc
- Suspension spring of rolled spring stainless steel
- Pendulum rod of heat treated super invar
- Pendulum weight turned of solid brass, nickel-plated
- Temperature compensation
- Barometric-error compensation with 5 aneroids
- Fine regulation table
- Base plate of 6mm thick brass, nickel-plated
- Rope pulley with ball bearings
- Weight in nickel-plated brass tube, 4500 g
- Steel hands, hand-made and blued
- Milled dial, silver-plated and printed
- Bezel turned of solid brass, nickel-plated or gold-plated
- Winding period of 30 days
- Achievable accuracy: under optimal conditions +/-3 sec. / month
- Clock case of solid fine wood
- 4 bevelled crystal glass plates
- Beat rate: 3600/h = 60/min

Technical data case

- Height: 218 cm, width: 48 cm, (watch winders extended: 70 cm), depth: 39 cm,
- Requires wall mounting at the dial height
- Door with magnetic closure
- Power supply:
Operating voltage: 110 - 230V
Netzfrequenz: 50/60 Hz
- Only with appropriate power supply adapter

Starting up your Troja Lunar M watch winder

Please plug in the power supply. The Troja Lunar M will start automatically.

The Troja Lunar M's intelligent control system is pre-programmed in such a way that over 80% of all automatic movements will be reliably and carefully wound with no further settings being necessary.

If you desire to optimize the settings for your watch, you can do so by using the software »Smart interface«. How to use the software is described in chapter »Manual for software smart interface« .

The intelligent control of the Erwin Sattler watch winders runs an active phase and sleeping phase.

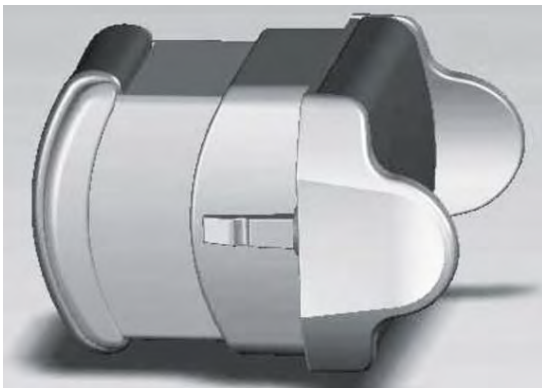
If you start up the Troja Lunar M (connect it to the power supply) for the first time at 8.00 a.m., for example, the watch winder begins moving at 8.00 a.m. every day.

From this point on, the watch winder units will start from 8 a.m. till 12 p.m. every day so then have they a stationary phase lasting 10 hours. During this stationary phase, the mainspring in the wristwatch is slackened to allow the watch to function in an optimum operating range.

Inserting watches

Before inserting the wristwatches, please make sure that the motor is stopped. Now you can place the watch on its watch holder.

To remove the watch from the watch winder unit, grab the watch holder at both levers and pull off from the holding mechanism.



Now you can push the watch with closed bracelet over the watch holder. For better handling the watch holder can be compressed. In order to secure the watch, the watch holder will expand to the width of the wristband.

Replace the watch holder in the housing of the winder.

Please make sure that the watches are always set **at 12 o'clock position** when inserted. They will return to this position after each winding interval.

Integrated drawer with control element

Holding on the drawer with both hands left and right and pull it out



Left button:

Light on: Press briefly once

Open the base door: Press and hold the button 3-4 seconds

Fingerprint reader:

Watch winder units open up

Right button:

Close the watch winder units:

Press and hold the button

Maintenance and care of the clock

The following care instructions will ensure that you enjoy your Troja Lunarix M for many years.

The high-quality movement should be protected from dust particles. We therefore recommend that you never leave the case open for long periods of time to prevent dust from settling in the movement. Please do not clean the case with "harsh" or abrasive cleaning products, but only with a damp, soft cloth that has been lightly moistened with a lukewarm mixture of water and neutral soap, if necessary.

After 10 years at the latest, you should take your pendulum clock to a competent watchmaker to have the movement cleaned and re-oiled. This should be a matter of course for a pendulum clock that keeps precious time accurate to the second, 24 hours a day, for years on end. Then it will serve you tirelessly for decades and be passed down from generation to generation as a valuable timepiece to be proud of.

The Software »SMART INTERFACE«

Starting the watch winder

The SMART INTERFACE is the user interface via which all functions of your watch winder can be controlled.

Before this can be used, the following settings must be made:

1. Connect your WIFI-enable device (smartphone, tablet, PC etc.)

to the with the watch winder by selecting the Wi-Fi network (SSID),
e.g. »ES_Troja_035«, in the Wi-Fi settings of your device.

The network name is made up as follows:

ES_watch winder short name_serial number

Watch winder short names:	Troja 16 M	ES_TROJA _ (Serial number*)
	Troja Lunaris M	ES _TROJA _ (Serial number*)
	Troja Sonata M	ES_TROJA _ (Serial number*)
	Troja Opus Temporis	ES_TROJA _ (Serial number*)

(*Serial number: see certificate)

It will take up to one minute to establish the connection.

2. At the prompt, enter the required password

Now you should be connected to the watch winder network

3. Start your browser (Microsoft Edge, Mozilla, Safari, etc.)

and enter the IP address of the watch winder.

It is as follows:192.168.2.1/index.php

4. Open the search function of your browser

The image of the start screen should appear according to your watch winder model.

This interface shows a clear overview of all functions. For ease of use, functions that are not required are only shown when necessary.

The following functions can be selected directly

1. **Database:** Enter the first three letters of the desired watch brand, e.g. ERW, the automatic sort function is started and all watches beginning with the relevant letters are listed.

The screenshot shows a watch selection interface. At the top, there is a 'Database' search bar with the text 'Erw'. Below it, a list of watches is displayed, including 'ERWIN SATTLER Regulateur Classica Secunda', 'ERWIN SATTLER Regulateur Grigio Secunda', 'ERWIN SATTLER Regulateur Nero Secunda', 'ERWIN SATTLER 50 Jahre ERWIN SATTLER', 'ERWIN SATTLER Trilogie', 'GLASHUTTE ORIGINAL Senator Kalenderwoche', 'MERCEDES BENZ Kalenderwoche', 'NIVREL 52 Kalenderwochen', 'NIVREL N401 52 Kalenderwochen Perpetual Calendar', and 'NIVREL N410 52 Kalenderwochen'. Below the list, there are eight motor selection options, each with a motor number, a watch model, a price, and a direction selector (left or right). The motors are: Motor 01: ETERNA Kontiki Diver 2006 1596 (600, left or right), Motor 02: KAZIMON Eintausendfuenfhundert (650, left or right), Motor 03: ROLEX Oyster Perpetual Sea-Dweller 166 (650, left or right), Motor 04: ROLEX Oyster Perpetual Cosmograph D (650, left or right), Motor 05: OMEGA Seamaster Planet Ocean Kaliber (800, left or right), Motor 06: ERWIN SATTLER Regulateur Classica Se (800, right), Motor 07: SINN Modell 756 (800, right), and Motor 08: BELLUWO Chrono Black Dial12 (800, right). At the bottom, there is a keyboard with German characters and a 'Weiter' button.

Motor	Watch Model	Price	Direction
Motor 01:	ETERNA Kontiki Diver 2006 1596	600	left or right
Motor 02:	KAZIMON Eintausendfuenfhundert	650	left or right
Motor 03:	ROLEX Oyster Perpetual Sea-Dweller 166	650	left or right
Motor 04:	ROLEX Oyster Perpetual Cosmograph D	650	left or right
Motor 05:	OMEGA Seamaster Planet Ocean Kaliber	800	left or right
Motor 06:	ERWIN SATTLER Regulateur Classica Se	800	right
Motor 07:	SINN Modell 756	800	right
Motor 08:	BELLUWO Chrono Black Dial12	800	right

2. Edit Motor 01 – Edit Motor 16

the values selected from the database can be assigned to the relevant motor here.

Troja:

The 16 watch winder are divided into 2 panels, top left to bottom left and top right to bottom right.

e.g. top left = Motor 1

top right = Motor 9

3. **Motor 01 – Motor 16**, text and the direction of rotation (left, right, left or right, off) and tpd (turns per day) can be changed here manually.
4. **Light**, the light of the watch winder can be set to on, off and interval (the light switches on automatically when the winders are turning) here.
5. **Restart**, this button can be used to preset a desired start time for the watch winder, and the WIFI module can be switched off if active WIFI is no longer required after the data transfer.
Please note that data transfer is not possible with the WIFI module switched off. This can be reactivated after a brief interruption in voltage (disconnect and reconnect the power pack).
6. **Open**, the laterally extendable watch winders units of the Troja models can be opened via WIFI here.
7. **Data**: With this button, the settings are transferred to the watch winder and saved.
8. **Attention:**
If the settings are changed and the data transfer has not been completed, the data in the control unit may not be the same as is shown on the screen.

Setting the Rotalis by using a practical example

Activate the »Database« field, the keyboard for your smartphone or tablet PC is shown automatically.

Enter the first three letters of the desired watch brand, e.g. ERW, the automatic sort function is started and all watches beginning with the relevant letters are listed.



Database: Erw

- ERWIN SATTLER Regulateur Classica Secunda » 800
- ERWIN SATTLER Regulateur Griglo Secunda » 800
- ERWIN SATTLER Regulateur Nero Secunda » 800
- ERWIN SATTLER 50Jahre ERWIN SATTLER » 800
- ERWIN SATTLER Trilogie » 800
- GLASHÜTTE ORIGINAL Senator Kalenderwoche » 850
- MERCEDES BENZ Kalenderwoche » 650
- NIVREL 52 Kalenderwochen » 650
- NIVREL N401 52 Kalenderwochen Perpetual Calendar » 650
- NIVREL N410 52 Kalenderwochen » 650

Edit Motor 01

Edit Motor 06

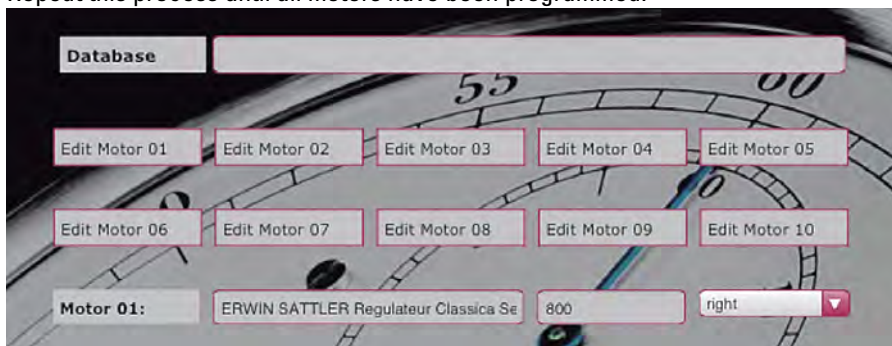
Motor 01: ETERNA Kontiki Diver 2006 1596 600 left or right

Select the desired watch

The selected watch is copied into the »Database« field and can now be assigned to any motor by pressing the »Edit Motor 01« – »Edit Motor 16« button (in the example, Motor 01 is being edited).

The data for the watch now includes a description, tpd (turns per day) and direction of rotation in the relevant field.

Repeat this process until all motors have been programmed.



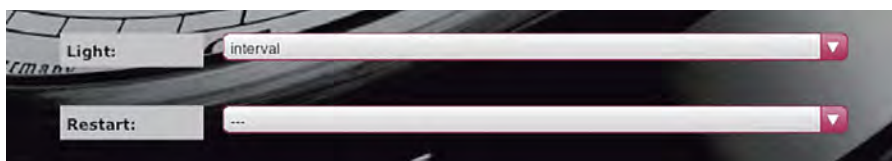
Database: ERW

Edit Motor 01 Edit Motor 02 Edit Motor 03 Edit Motor 04 Edit Motor 05

Edit Motor 06 Edit Motor 07 Edit Motor 08 Edit Motor 09 Edit Motor 10

Motor 01: ERWIN SATTLER Regulateur Classica Se 800 right

Once all watches have been set, you can transfer the data to the Rotalis by pressing the »Save« button.



Light: interval

Restart: ...

Manual – Fingerprint reader



Overview of all functions

Masterfinger enrollment	Define Masterfinger	Deliefery condition → 6 x scan Masterfinger
Userfinger enrollment	Enrollment of new users in combination with an ID	M → E → ID → OK→ scan userfinger → M
Open drawers		Scan userfinger
Delete userfinger	Distinct deletion via ID	M → D → ID → OK → M
Delete all fingers (Reset)	Reset to deliefery condition	DA → Mastercode → OK

M = scan Masterfinger

Caution:

Every time you press any button on the remote control, the green LED of the fingerprint reader must light up (to check a correct connection)!



Before start-up

What does ID mean?

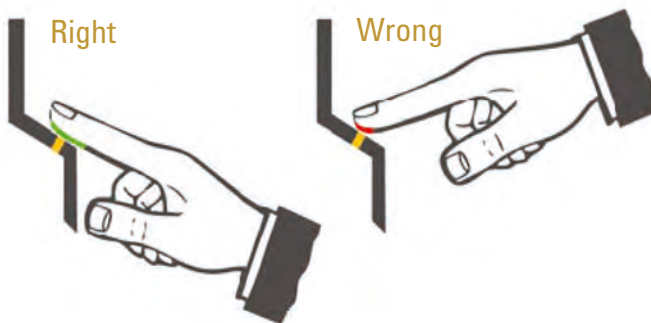
A unique ID must be assigned to each new user finger when it is taught in. This has a maximum of 3 digits and is entered by pressing the corresponding digits on the keyboard.

Which finger should be used?

- Fingertips with many scars, injuries or an extremely poor structure are not suitable for »user fingers«
- Fingers that are prone to be injured (e.g. while working manually) should not be used
- If the fingers are very strong, the forefinger or little finger can be a good choice
- If the fingers are very thin or of children, the thumb should be preferred
- The fingertips of the left hand of left-handed persons are usually more nagged than those of the right hand of right-handed persons
- It is recommended to save 2 different fingers for each person to still have one available in case of an injury
- If only a few persons use the device, more fingers for each person could be acquired because it figures out later which finger is the favorite

Please notice

- The blue LED indicates that the device is powered on (blue LED is on permanently)
- Some useful hints for getting better fingerprint when scanning the finger over the sensor:
Slide your finger with a constant speed and slightly pressure over the sensor.
The area of the finger that contacts with the line sensor should be as large as possible (refer to the figure below).



All functions in detail

1. Masterfinger enrollment

After switching on for the first time or restoring the delivery settings, a master finger must first be programmed 6 times (scan the same finger 6 times).

Delivery settings: red, green and blue LEDs light up continuously

Swipe your master finger over the sensor; the red and green LEDs will briefly go out and then light up again constantly.

Once the master finger has been successfully programmed 6 times, the green LED will flash briefly to confirm completion.

Once the master finger has been programmed, the device is ready for operation. User fingers can now be programmed. The blue LED lights up continuously.

If a finger was swiped over the sensor during the programming process and was not accepted as a master finger, the red and green LEDs will continue to light up. Simply repeat the master finger programming process.

Timeout: after 60 seconds: Do not allow more than 60 seconds to elapse between individual master finger programming processes, otherwise the programming must be repeated.

Alternative to the master finger:

Enter the master code on the remote control and press OK.

Master code: can be found on the back of the remote control.

2. Enrollment of userfingers associated with an ID

Please note: Master fingers cannot be programmed as user fingers!

- The user finger programming mode is activated by scanning the master finger; the red and green LEDs light up briefly.
- Press button »E« (Enrollment) on the remote control.
- Enter an ID between 1 and 150 using the remote control.
- Press the OK button to confirm.
- Register one or more user fingers (swipe them over the sensor several times).
- If the programming is successful, the green LED lights up; if the quality is insufficient, the red LED lights up.
- Before scanning your finger again, always wait until the green LED goes out. It is recommended that you scan each user finger 6–10 times to optimise the recognition rate.
- The programming process is completed by waiting approximately 7 seconds (until the red and green LEDs flash three times to confirm).
- Timeout 10 seconds: after opening the programming process with the master finger, do not allow more than 10 seconds to elapse, otherwise the programming must be repeated.

Example:

Scan master finger -> E -> 8 -> OK -> swipe your right index finger (user finger) across the sensor 6 times -> wait approx. 7 seconds

3. Watch winder units / Glass panels open

With the user finger:

Scan user finger

- if the finger is recognised, the green LED lights up and the relay is switched
- if the finger is not recognised, the red LED lights up

With the user code:

- Enter the user code into the remote control and press OK.

Configure the user code:

Master finger scan -> Button E -> User-Code (6-digit) -> OK -> User-Code (Repetition) -> OK

If master finger recognition is difficult:

- Enter master code -> OK (as an alternative to master finger)

4. Delete individual user fingers

- Scan master finger, red and green LEDs light up briefly
- Press button D (Delete) on the remote control (bottom left), green LED lights up briefly
- Enter the ID of the user finger to be deleted -> OK, green LED lights up briefly
- The delete process is completed by scanning the master finger again; the red and green LEDs light up briefly

5. Delete all fingers (incl. masterfinger)

Delete with the master finger

- Scan master finger three times.
- After the second scan, the red LED flashes to indicate that the deletion process will start with the next scan.
- After the third scan, the green LED flashes to indicate that the delete process is in progress.
- Once all data has been deleted, the fingerprint reader will be in its factory default state and the red, green and blue LEDs will be lit continuously.

Delete with the master code

Master code: see back of remote control

- Hold the infrared remote control directly in front of the blue LED:

Enter: DA -> Mastdercode -> OK

The fingerprint reader will then return to its factory default state, the red, green and blue LEDs will remain lit.

If there is no master finger/master code,

the device can only be reset to default setting in the interior of the watch winder. This procedure should only be carried out by qualified personnel.

6. Setting the relay switching time

- Scan master finger
- Enter relay assignment: R1
- Enter digit(s) for the relay switching time in seconds (1 to 65 seconds)
- Confirm with the OK button

Example:

Scan master finger -> RT -> R1 -> 17 -> OK, the relay switching time for relay (R1) is changed to 17 seconds.

7. Adjusting the sensitivity of the fingerprint reader

Scan master finger -> Level input (between 1 and 5, where 1 is the lowest level) -> OK

Example:

Master finger -> 3 -> OK, the sensitivity is now set to level 3 out of 5.

8. Lock mode (lock/unlock the fingerprint reader)

Blocking:

If an unregistered finger is swiped over the sensor four times in succession, the red LED lights up and the finger sensor switches to lock mode. This prevents unauthorised persons from attempting to gain access undisturbed over a longer period of time.

The lock mode is initially limited in time; after a further 5 failed attempts, the lock time is extended (lock intervals: 1 minute, 5 minutes, 30 minutes, 1 hour, then permanent lock).

Unlocking:

Lock mode can be ended at any time by swiping a registered finger (master or user finger) once over the sensor.

9. Check ID

Checking whether an ID has already been assigned

Press the OK button -> enter the ID to be checked -> press the OK button

- If the ID has already been assigned, the red and green LEDs light up.
- If the ID has not yet been assigned, only the red LED lights up.

Safe: Assembly and operating instructions

for a free-standing safe from the »MÜNCHEN« series

Euro/VdS-Category I - German test institute for fire protection and security

Insurance cover for private use up to €65,000.00*

Insurance cover for commercial use up to €20,000.00*

By purchasing this safe, you have chosen a high-quality product which offers anti-burglary protection defined according to Euro/VdS category I.

Please take a moment of your time to read through these instructions carefully.

1. Security

According to Euro/VdS category I, guaranteed anti-burglary protection exists only when safes with a dead weight of less than 1000 kg are fixed to the floor properly in their place of installation. The safe is fixed to the floor by the two holes in the floor using size M12 heavy-duty plugs.

The diameters of the holes in the floor are designed in such a way that installation can be carried out according to the push-through method, i.e. the plug hole can be created and the plug can be installed directly through the holes in the floor.

For example, TOX knock-in anchors type E M 12x50, Upat USA M 12 knock-in anchors or an equivalent fixing element from another manufacturer are suitable for this purpose. Observe the installation instructions of the relevant plug manufacturer, as this is the only way to guarantee the minimum required extraction forces for these fixing elements.

* Please discuss all issues relating to insurance with your property insurer.

If it is not possible to fix the safe to the floor properly for technical reasons (underfloor heating, etc.), please speak to your property insurer in this case as well.

Please note: If the safe is not fixed to the floor or is fixed to the floor improperly, your property insurer is not liable for any material or property damage which may occur.

2. Operation

Your safe is equipped with an electronic code lock.

A double signal is emitted when a valid code is entered and a long beeping signal is emitted when an invalid code is entered. If you pause for more than 10 seconds between each press of a button, the code that you started to enter will be deleted.

3. Open and locking

Open:

Enter code (factory code = 1-2-3-4-5-6), unlock the door and open it. If not opened within 3 seconds, the lock secures automatically. If code entry failed on first attempt wait 20 seconds before re-entering. Three long beeps indicate the lock bolt is jammed. Release the handle and re-enter code.

Locking:

Close door and turn handle fully to closing position. The lock is secured. Control blocking status by trying to turn handle back.

Manipulation protection:

Entry of four consecutive invalid codes – keypad is blocked for 5 minutes. During this period, the light flashes every 10 seconds and any key press causes a long signal. After expiration, entry of two more in-valid codes , restarts the 5 minute blocking period.

Safety reference:

All codes are to be securely stored. If you lose your password, there is no emergency opening option. The safe can only be opened by destroying it. Do not use personal data (e.g. birthdays, telephone numbers, etc.) as a code. When putting the safe into operation, we recommend that you change the factory code!



4. Changing the master code

Caution: Only when the safe door is open!

Press and hold key »0« until double signal!

The light remains on during the following action:

- Enter old code (double signal)
- Enter new code (double signal)
- Enter the new code again (double signal)

Caution: If mistakes are made (long signal) the old code remains active.

5. Activate the second opening code

Caution: Only when the safe door is open!

Press and hold key »1« until double signal.

The light remains on during the following actions:

- Enter master code (double signal)
- Enter secondary code twice (double signal after each)
- Enter secondary code again (double signal)

The secondary code can be changed in the same way as the main code. The secondary code can be deleted using the main code, but not vice versa.

Caution: If mistakes are made (long signal) the old code remains active.

6. Delete the secondary code

Press and hold key »3« until double signal.

The light remains on during the following actions.

- Enter master code
- The secondary code is deleted.

7. What to do in case of

- **You hear a long beep after your combination last digit and the lock does not open?**
You entered a not valid code. Repeat the operation, but pay attention for enter the right code.
- **LED flashes every 10 sec., and, when you push a button you hear a long beep?**
You entered 4 times a wrong code and the lock is in time penalty. Wait 5 minutes and try again.
- **You do not hear any beep when you push a button?**
Replace the battery. If the problem is not solved, call your service centre.
- **You can open, but you hear a long sequence of beeps after your code last digit?**
Immediately replace the battery. Use only 9 V Alkaline or energizer batteries!



- **Battery empty with closed door:**

In case the battery is drained completely, uncover the power terminals in the front of the Entry Unit and power with fresh 9 V Alkaline battery. The battery compartment is located inside the safe. (see figure above)

Attention: Keep battery pressed against the terminals until lock is completely open.



Maintenance and care

- It is necessary to re-lubricate the door hinges depending on how frequently the safe is used. Spray the hinge with commercially available penetrating oil (e.g. »BALLISTOL«) and wipe away oil that is dripping off.
- The locking pins can be oiled easily when they are in their extended position.
- The interior and exterior can be cleaned using a moistened cloth.

Operational reliability and warranty

- The manufacturer does not assume any liability for damage to material or property resulting from the non-observance of maintenance guidelines, as well as improper handling and operation.
- **Keep the password in a safe place;** if you lose it, the only way you can access the contents is by opening the safe using force. We would like to explicitly point out that tampering with the safe even to the slightest degree voids any guarantee in terms of safety and function. This is especially true in the case of fires and break-in attempts.

Important note for qualified personnel carrying out maintenance and repair work on the lock and locking mechanism:

To remove and fit the fire-protection panel, bend the panel's bending limb only as far as necessary. If the bending resistance is noticeably reduced in this case, the fire-protection panel must be replaced.



ERWIN SATTLER

MÜNCHEN

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