



MODEL SERIES 656/657



*Sinn*


SPEZIALUHREN ZU FRANKFURT AM MAIN





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## DEAR CUSTOMER,

we know from numerous conversations that the people who buy our watches do so out of conviction. This includes people with a pronounced affinity to technology who are fascinated, for example, by the solutions we have devised for magnetic field protection and scratch-resistance. Some of our customers, such as divers, pilots or the German GSG 9 special police unit, need to rely on their watch in their respective careers because their life depends on it.

They all swear by the high performance, resilience and durability, as well as the quality and precision of these timepieces. The water and pressure-resistance

data are reviewed and authenticated at regular intervals, as is the case with our diving watches, for instance. We, for our part, give absolute priority to functionality, which ultimately determines the design. Our watches only feature technological attributes that really make sense. All the while, we remain committed to our guiding principle that products have to speak for themselves.

The basic question that we ask ourselves is: which innovative technologies and materials can be employed for our craft and provide solutions for rendering our watches even more practical for everyday use? It is often worth indulging in a little lateral thinking to see what is going on in other industrial sectors or fields of science. We repeatedly go to the limits of physical resources to upgrade our watches – with the aim of making what's good even better. Most of our best developments are yet to come!

I am delighted that you have decided to buy a SINN timepiece and hope that it will continue to give you pleasure for many years to come.

Yours sincerely, Lothar Schmidt

A handwritten signature in black ink, appearing to read 'L. Schmidt', with a stylized flourish at the end.

## SINN SPEZIALUHREN ZU FRANKFURT AM MAIN

It was back in 1961 that the pilot and blind-flying instructor Helmut Sinn founded the company. Since then, we have been committed to producing high-specification mechanical watches. In 1994, the graduate engineer Lothar Schmidt took control. This marked the beginning of a new era for the SINN brand, because the new owner took a decisive step towards more innovation. Under his leadership, new technologies and materials were introduced, thus providing the crucial incentives for our company's evolution and gradual emergence as an insiders' tip for lovers of fine watches. Today, our name stands for technical innovations, much to the delight of both the trade and our customers alike.



## All developments thoroughly tested

Take, for instance, the absolutely condensation-free and anti-reflective diving watch made of stainless steel – designed with HYDRO Technology. Other examples include a chronometer chronograph fashioned from a 22-carat gold alloy, which is as hard as stainless steel, and a chronometer whose resistance to magnetic interference is 20 times greater than normal. Or those watches filled with protective gas and featuring an integrated dehumidifying capsule to counteract moisture infiltration and the ageing of the watch movement. This list would not be complete without mentioning the development of so-called Einsatzzeitmesser (EZM) watches for special police units and border guards, and the Temperature Resistance Technology that allows mechanical watches to perform at temperatures ranging from  $-45^{\circ}\text{C}$  to  $+80^{\circ}\text{C}$ . The 303 KRISTALL model passed the fire and ice test during the 1998 Yukon Quest sledge dog race that crosses the icy wilderness of Canada and Alaska, where temperatures are known to plunge to  $-40^{\circ}\text{C}$ . The watch was strapped to the arm of some of the participants on top of their protective clothing. This was followed in 1999 by the 203 ARKTIS model. This diving chronograph passed its field test in the North Polar Sea with flying colours.



## Innovations and authentications

One of our most important inventions is the oil-free DIAPAL Technology, based on low-friction materials for the key functional parts of the watch, enabling them to run without lubrication. This technology was first employed in our jubilee watch, the palladium alloy/white gold Frankfurt Financial District Watch. TEGIMENT Technology, with which SINN achieves a virtually scratch resistance surface for its watches, represents another milestone. Other innovations include diving watches made from original submarine steel, as used in the construction of the outer shell of German class 212 submarines. Germanischer Lloyd, the world's biggest classification society providing marine safety services, has been testing the aspects of water and pressure resistance since 2005. Moreover, an official authentication process conducted by Germanischer Lloyd in 2006, SINN diving watches as diving gear for the very first time in the watch making sector and tested them in keeping with European diving equipment standards. The result: these timepieces passed the temperature resistance and functionality tests with a sensational success. All test results are authenticated with signature and seal.





## Ongoing advancement in technology and quality

Our top priority is always to develop watches which offer superior performance – both in daily and in professional use. Which is why our engineers are working continually to identify which innovative methods, materials and technologies are best suited for optimising our watches. Each new development first has to undergo rigorous practical tests before being incorporated. And no watch leaves our workshops before it has been subjected to thorough checking and fine adjustment by our master watchmakers.

## Workshop modifications and hand-engraving

From the robust case and the polished crystal through to elaborate refinements: we make sure that each and every detail in our watches is fit for purpose. The same applies to our workshop modifications. Only the perfect interaction of all components and technologies ensures that our watches can meet all its design specifications in full. For example: the SZ02 calibre of our U1000 diving chronograph. The 60 minute scale of the stop-minute counter is much simpler and more intuitive to read than the 30 minute scale commonly found in other watches. The hand engraving represents a highly personal form of refinement. If required, our specially trained master engraver can etch a name, initials, monograms or symbols onto the rotor, movement bridge and case back.





## MODEL SERIES 656

**Just how functional can a watch be? This is a question we've been asking ourselves since founding the company. And the answer? Our cockpit navigation clocks. Conceived for the instrument panels of aeroplanes and helicopters, and optimised to provide rapid and clear readability, they are specifically designed to offer time measurement in its purest form. And they have now inspired us to create a watch with these same characteristics (and Magnetic Field Protection of up to 80,000 A/m) to complement our range of instrumental chronographs.**

The dial design ensures especially clear readability:

- Maximum contrast of the hands, indices and numerals against the glare-free black dial.
- Extremely large numerals for intuitive orientation even in low light levels.
- Striking hand profiles.
- Special long-lasting, luminous paint on the minute and hour hands and indices to ensure accurate reading even in adverse conditions.



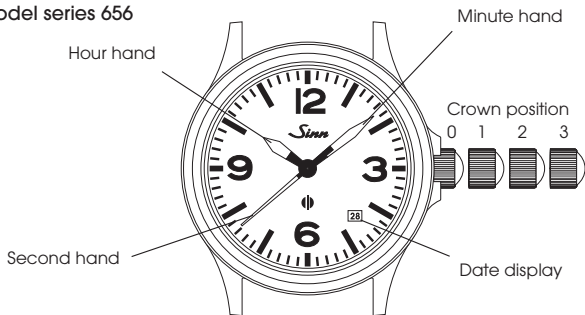
## MODEL SERIES 657

**Based on the 656 model range, and designed as a functional instrument watch in the tradition of our cockpit navigation clocks, this pilot's watch also features a pilot's bezel which permits its wearer to measure or check set time intervals. This is a decisive criterion particularly in aviation — reason enough for us to give this important function a superior design.**

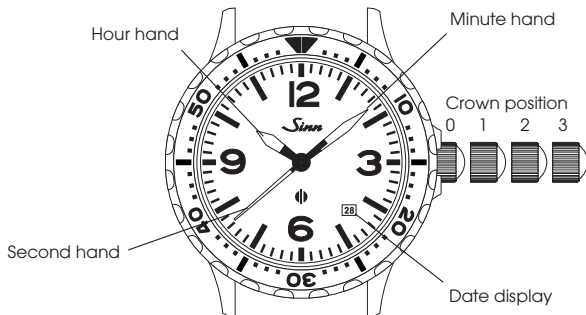
The stainless steel pilot's bezel with minute ratcheting can be rotated on both sides and features a special mechanical system developed by Sinn to protect against loss. The labelling is silver on an inset, black anodised aluminium ring to ensure optimal scale readability. A luminous triangle serves as the 0/60 minute mark.

# INSTRUCTIONS FOR USE

## Model series 656



## Model series 657



### **To wind the watch (crown position 1)**

The crown is screwable (crown position 0). To loosen the crown, turn it *counter-clockwise*. The movement is wound by turning the crown *clockwise*. About 40 winds of the crown are generally enough to ensure its reliable functioning. Under normal circumstances, simply wearing the watch every day should suffice to keep the self-winding mechanism wound. The power reserve allows you to take off your watch overnight without having to rewind it.

### **Time adjustment (crown position 3)**

In crown position 3, the motion is paused. This helps you to set the watch precisely. For accurate time setting, we recommend moving the hand past the desired minute marker and then adjusting it *counter-clockwise*. Please make sure that the date changes at midnight and not at midday when adjusting the time. Move the hand forward until the date changes before you attempt to set the time. The movement restarts as soon as you leave crown position 3.

### **Quickset date adjustment (crown position 2)**

Set the crown in the position 2 and turn it *counter-clockwise* until the correct date appears in the date display window.

**Please take care to fasten the crown after making adjustments.**

## ADJUSTING THE LENGTH OF THE WATCH STRAPS

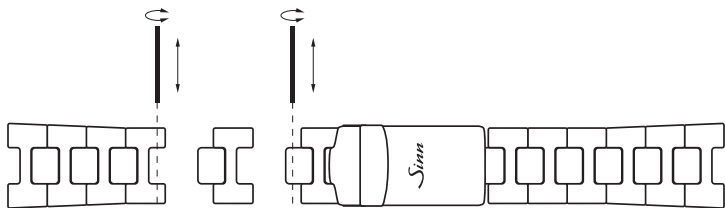
If you don't know how to shorten or lengthen the solid bracelet, please contact your SINN dealer or the watchmakers in our customer service department in Frankfurt am Main. Our customer service employees are also happy to help you on the telephone.

### **Adjusting the length of the solid bracelet**

For optimal comfort, each side of the watchband should contain the same number of links. If you choose to remove an uneven number of links, the upper portion of the watchband (on the 12 o'clock side) should be longer. For example: If you want to shorten the bracelet by removing a total of three links, you should remove two from the 6 o'clock side and just one from the 12 o'clock side. When they leave the factory, the solid bracelets have the same number of links on the 12 o'clock side and the 6 o'clock side. If you have requested a shorter length, please be sure to check the number of links on each side before making any additional changes.

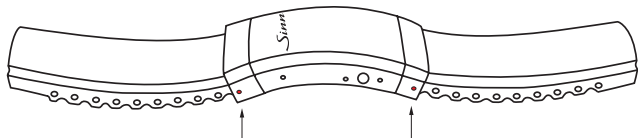
1. Remove the screws on the side of the link you wish to remove, or at the point where you wish to add a link.
2. Remove the excess link or insert the new one.
3. Before replacing the screw, add a small drop (not too much!) of the threadlock (AN 302-42 medium-strength) adhesive to the screw thread.



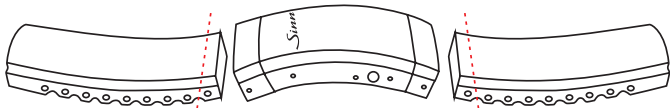


## Adjusting the length of the silicone strap

1. Release the silicone band from the clasp. To do so, using the pointed end of the band replacement tool to push the spring bar out of the fastener. The other side of the spring bar can be removed while the fastener is open, enabling you to remove the silicone band.



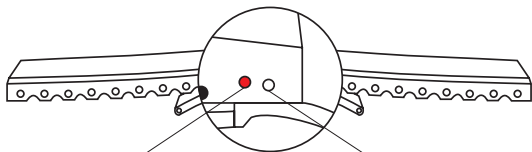
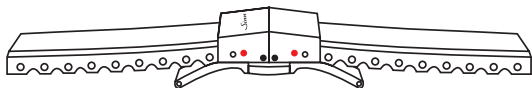
2. Using a knife or scissors, cut the silicone band in the middle between two metal pins. You should shorten the band symmetrically and little by little, starting from the clasp, until you have reached the desired length. Test the length from time to time before proceeding. Shortening both ends by the length of one metal pin results in a total difference of 10 mm in the length of the strap; shortening one end reduces the length by 5 mm.



3. Remove the first metal pin and replace it with the spring bar. Then reattach the clasp to the band.

## How to install the strap with a small butterfly clasp

There are two ways of installing the spring bar using the small butterfly clasp. We recommend inserting the bar in the opening shown here in red. Should the silicone strap be too tight, use the second option (shown here in white).



Option 1

Option 2

If you want to shorten the overall length of the silicone strap, refer to steps 1 to 3.



656 S/656: luminous

# TECHNICAL DETAILS MODEL SERIES 656

## **Mechanical Movement**

- ETA 2824-2
- Self-winding mechanism
- 25 bearing jewels
- 28,800 semi-oscillations per hour
- Seconds stop function
- Shock resistant as per DIN 8308
- Anti-magnetic as per DIN 8309

## **Case**

- Stainless steel, bead-blasted
- 656 S: matte black chrome-plated
- Sapphire crystal glass in front, anti-reflective on both sides
- Case back screw-fastened, nickel-free
- Crown screwable
- Water-resistant as per DIN 8310
- Pressure resistant up to 20 bar (= 200 m water depth)
- Low pressure resistant
- Band lug width: 20 mm
- Case diameter: 38,5 mm

## **Functions**

- Hours, minutes, seconds
- Date display

## **SINN Technologies**

- Magnetic Field Protection up to 80,000 A/m



657 S/657: luminous

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## **Mechanical Movement**

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- Case back screw-fastened, nickel-free
- Crown screwable
- Water-resistant as per DIN 8310
- Pressure resistant up to 20 bar (= 200 m water depth)
- Low pressure resistant
- Band lug width: 20 mm
- Case diameter: 41 mm

## **Functions**

- Hours, minutes, seconds
- Date display
- Pilot's bezel with minute ratcheting and luminous key mark

## **SINN Technologies**

- Captive bezel
- Magnetic Field Protection up to 80,000 A/m



## SERVICE

### **General advice**

To preserve the water resistance for as long as possible, the watch should be rinsed whenever it has been in contact with seawater, chemicals, etc. If your watch is frequently worn in/under water, we recommend having its water resistance checked at yearly intervals.

The watch is designed to withstand high levels of mechanical wear and tear and is shock resistant as per DIN 8308. Nevertheless, it goes without saying that continual mechanical stress in the form of impacts or vibration will affect its durability. Care should therefore be taken to protect your watch from unnecessary wear and tear. It is only possible to judge how well the watch keeps time after it has been in operation for approximately eight weeks, since it takes that long for the working mechanism to become adjusted, especially in view of the fact that everybody has different lifestyles and habits. In the event of any excessive deviation, please keep a day-to-day record of its timekeeping over a period of about one week, for example.

### **Do you have any questions?**

Our employees will be pleased to advise you. Simply get in contact with us. We look forward to talking to you.

Telephone: + 49 (0) 69 / 97 84 14 - 400

Telefax: + 49 (0) 69 / 97 84 14 - 401

E-mail: [kundendienst@sinn.de](mailto:kundendienst@sinn.de)





**Should you send your watch in to customer service, we need to ensure the process goes smoothly, the following information:**

- Name, address, e-mail address and fax number (where applicable) and a daytime telephone number.
- A detailed description of the problem: Exact nature of the defect? At what time does the problem arise? How often does the problem occur?
- Wherever possible, please state the date of purchase and your customer no. (indicated on the invoice) or enclose a copy of the invoice.

For information about the process, please refer to the section entitled "Repairs" in our "General Terms and Conditions of Business". You'll find our "General Terms and Conditions of Business" on our website [www.sinn.de/en](http://www.sinn.de/en). We will be pleased to send you a copy of the "General Terms and Conditions," or you can contact our customer service department directly. For insurance reasons, we strongly recommend sending us any return goods by registered parcel post. As an alternative for customers in Germany, there is also the option of a collection service covered by transport insurance, on request. To ensure your request is dealt with smoothly, please call our customer service department! We regret that we are unable to accept deliveries with unpaid postage!

**Please send your watch to the following address:**

Sinn Spezialuhren GmbH  
Kundendienst  
Im Földchen 5-7  
60489 Frankfurt am Main  
Germany

You can also find comprehensive information about SINN, our watches and technologies at [www.sinn.de/en](http://www.sinn.de/en).

FREQ

METERS

FUEL SYSTEM

*Sinn*

SPEZIALUHREN ZU FRANKFURT AM MAIN

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Technische Änderungen vorbehalten.  
Subject to changes technical specifications.





Navigation-Borduhrenchronograph Modell 15 ES  
in einer Boeing 727.

Navigation cockpit clock NaBo 15 ES in the  
cockpit of Boeing 727.