Acknowledgements

We would like to thank you for choosing a TISSOT watch, a Swiss brand among the most highly renowned in the world. Your T-TOUCH SOLAR E81 watch has the most recent technical innovations. It gives you a constant analogue time display and a variety of digital displays. In addition, the following functions can be accessed simply by touching the glass: Weather, Altimeter, Chronograph, Compass, Alarm and Countdown.
WARNING

TISSOT TACTILE WATCHES MUST ONLY BE SERVICED BY TISSOT’S AUTHORIZED CUSTOMER SERVICE CENTERS, WHICH ARE LOCATED IN OVER 160 COUNTRIES.
Internal display,

Battery type:
ML2016 accumulator

10 bar
(100 m / 330 ft)

(Water resistance: 10 bar)

FUNCTIONS

Activate touch-sensitive glass / Activate light

- CENTRE – Date
- CENTRE – Time 1
- CENTRE – Time 2
- CENTRE – Battery charge level
- CENTRE – Options
- METEO – Weather, relative pressure
- METEO – Weather, absolute pressure

ALTIMETER – Altimeter

CHRONO – Chronograph

COMPASS – Compass

COMPASS – Calibration

ALARM – Alarm 1

ALARM – Alarm 2

TIMER – Countdown

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GENERAL USER INFORMATION

Activating the touch-sensitive glass

When the glass is activated, the 4-petal symbol will flash on the digital display.

If the glass is not touched, it will automatically deactivate after 20 seconds.

Exception: In time-setting mode, the glass will deactivate after 60 seconds.

Activating the light

The display light will stay on for 5 seconds.

Setting mode

Select a function

Touch one of the 7 touch-sensitive areas of the glass to activate the corresponding function.

Display mode

Activate glass

The display light will stay on for 5 seconds.

Date display = Default display

Time 1 display: T

Time 2 display: T2

Battery charge level display (see page 5)

Options display (see page 6)

Back to Date display

DATE > SETTING

The calendar is perpetual, i.e. the number of days per month is predefined. The date units are linked, so completing a full cycle of the months will move the year forward.

Activate glass

Date display

Setting mode, select year

Select month

Select day

Validate setting

: forward 1 month
: back 1 month

: forward 1 year
: back 1 year

: forward 1 day
: back 1 day
TIMES T & T2 > SETTING
Pressing and holding or will move the hands forward or backward. Time T2 is set in steps of 15 minutes.

Activate glass

Time T or T2 display (example: T)

Enter hour setting mode

Validate the hour setting and switch to minute setting mode.

Validate the minute setting and switch to seconds synchronisation mode (T1).

Seconds synchronisation (T1).

a) If the seconds are between 0 and 30 when the push-button is pressed, the minute is unchanged and the seconds restart at zero.

b) The seconds continue.

BAT (BATTERY) > READING THE CHARGE LEVEL
If the watch is in this mode, the battery charge state is indicated by the last 3 digits.

The light can no longer be activated.
“bat” is displayed in alternation with the regular function.
The watch must then be exposed to light to exit this mode.

Battery drained

In this state, the watch can no longer operate correctly.
All the functions are deactivated, except for time T1 and the date.
The watch will enter energy saving mode (see page 8).
The watch will need to be exposed to light to obtain sufficient charge to run normally.

Battery flat

The watch is stopped.
It automatically exits this state after prolonged exposure to light.
The time and date must be reconfigured when exiting this state.

Normal operation

Recharge indicator

Battery charged

Battery at 2/3 charge

Battery at 1/3 charge

Battery drained display

Battery charged display

Battery at 2/3 charge display

Battery at 1/3 charge display

Battery flat display

Battery charge level display

Normal operation display

Recharge indicator display
**BAT (BATTERY) > CHARGE INDICATOR**

If the watch is exposed to a light intensity equal to or greater than a fluorescent light and the battery is not fully charged, then it will be recharged by means of the solar cell.

![Battery charge level display](image)

- **Battery drained or flat**
- **Battery at 1/3 charge**
- **Battery at 2/3 charge**
- **Battery charged**

**Note 1:** The battery charge is checked periodically (1x/min), and continually when the light is activated.

**Note 2:** You are advised to recharge the battery within a few days of the “bAt” symbol appearing.

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**BAT (BATTERY) > GLOSSARY**

A micro-controller manages the watch’s consumption and the battery charge state display. According to this state, it deactivates certain functions, or switches the watch to energy saving mode (see page 8).

**Note 1:** The battery charge is checked periodically (1x/min), and continually when the light is activated.

**Note 2:** You are advised to recharge the battery within a few days of the “bAt” symbol appearing.

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**OPTIONS > READING**

- **Activate glass**
- **Options display** (see page 4)
- **Switch to sub-menus:** Time zone swap T1 to T2 display (see page 7)
- **Synchronisation mode display** (see page 7)
- **Units display** (see page 8)
- **Beep display** (see page 8)
- **Energy saving mode display** (see page 8)
- **Automatic switch to standby mode after 10 seconds**
- **Climate zone display** (see page 9)
- **Back to time zone swap display**
- **At any time: exit sub-menu – back to date display**

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**Battery charge time**

The table below indicates the charge time recommended for daily use.

<table>
<thead>
<tr>
<th>Exposure level</th>
<th>Daily use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunlight outdoors</td>
<td>7 minutes</td>
</tr>
<tr>
<td>Sunlight through a window</td>
<td>18 minutes</td>
</tr>
<tr>
<td>Daylight with cloudy sky</td>
<td>26 minutes</td>
</tr>
<tr>
<td>Daylight indoors</td>
<td>2 hours</td>
</tr>
<tr>
<td>Fluorescent light indoors</td>
<td>5 hours</td>
</tr>
</tbody>
</table>

**Note:** If the battery is completely flat, the watch must be exposed to at least 18 hours of light before it can be used.
**SWAP (TIME SWAP) > SETTING**

SWAP mode is used to switch from time T to time T2 and vice versa. For example: before setting off, you can set under T2 the local time zone for the country you are going to visit.

- **SWAP mode display**
- **Setting mode**
- **Validate setting**

Times T and T2 are swapped

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**SWAP (TIME SWAP) > EXAMPLE OF A TRIP ABROAD**

10:10: Local time where you live / 18:10: Local time for the country you are going to visit.

- **Outward trip**
  - Mode "SWAP y"
  - The analogue display and the time T indicate the time for the country you are visiting
  - Time T2 indicates the time where you live

- **Return trip**
  - Mode "SWAP y"
  - The analogue display and the time T indicate the time where you live
  - Time T2 indicates the time for the country you are visiting

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**SYNCHRO (SYNCHRONISATION) > SETTING**

The watch needs to be synchronised if the watch hands do not display the same time as the digital display, or if they are not correctly superimposed when accessing the functions.

The watch is desynchronised when its electric motor’s mechanism is disturbed due to heavy impacts for example.

N.B.: The glass must be active to access synchronisation mode.

- ✓ Synchronised
- X Desynchronised

- **Synchronisation mode display**
- **Synchronisation setting mode**
  - The hands should be perfectly superimposed in the 12 o’clock position

- **Position the minute hand at 12 o’clock**
- **Validate setting**

- **Position the hour hand at 12 o’clock**
- **Validate setting Back to Time T mode**

- 2 sec.
UNITS > SETTING

Units display

Setting mode

Select 12/24-hour mode

Validating setting. Selecting 12-hour mode displays the date in the format 12.27.2007 (month, day, year), and 24-hour mode in the format 27.12.2007 (day, month, year).

BEEP > SETTING

Beep display

Setting mode

Validate setting

Deactivating the sound silences adjustment beeps but not the alarms.

ECO (ENERGY SAVING MODE) > SETTING

This mode saves the battery if the watch is not operated for one hour, if time T1 is between 22:00 and 05:48. The digital display is deactivated and the analogue display indicates time T1. The chrono or countdown are not stopped if they are running. It is not possible to enter energy saving mode if the Altimeter function is active.

Energy saving mode display

Setting mode

Validate setting

Entering energy saving mode

Exiting energy saving mode

With ECO on, the watch automatically switches to energy saving mode if no operations or movements are detected for 1 hour between 22:00 and 05:48 or if the battery is drained (see page 5).

With ECO off, the watch never switches to energy saving mode.

Energy saving mode

a) Back to time & date mode.

b) Activation of an alarm makes the watch exit energy saving mode.
**SLEEP (STANDBY MODE) > SETTING**

Standby mode is a battery economy mode. All the functions are deactivated, with only the time & date counters updated. This mode economises the battery when the watch is not being worn.

a) The watch is in standby mode. Automatic switch to standby mode after 10 seconds. Beep every second.

b) + / -: stop the count, the watch does not switch to standby mode.

Back to time & date mode.

**HEMISPHERE AND CLIMATE ZONE > SETTING**

To get the best from the altimeter function, it is possible to adjust the hemisphere and climate zone to your geographic location. Select your climate zone according to the simplified Köppen climate classification (see illustration on right).

If the watch is not set ("No Set"), the standard atmosphere model is used: set temperature at sea level = 15°C, mean pressure at sea level: 1013.25 hPa

Note: It is not possible to select a polar local climate for the South Hemisphere.
**METEO (WEATHER) > READING**

In weather mode, the hands are superimposed to indicate the weather trend.

- **Activate glass**
- **Relative pressure display in hPa**
- **Absolute pressure display in hPa**

**METEO (WEATHER) > RELATIVE PRESSURE PRESETTING**

Setting this pressure changes the altitude displayed. The possible relative pressure is deliberately limited between 950 hPa and 1100 hPa.

- **Setting mode**
- **Validate setting**

**METEO (WEATHER) > GLOSSARY**

**Description of function**

In weather mode, the hands are superimposed to indicate the weather trend.

**Explanations**

Weather changes are related to variations in atmospheric pressure. When atmospheric pressure increases, the sky clears. The area is then referred to as a “high pressure” area or “anticyclone” (A). When atmospheric pressure decreases, the sky clouds over. The area is then referred to as a “low pressure” area or “depression” (D). The T-TOUCH SOLAR E81 watch measures these pressure variations and indicates the weather trend with the hands, which can adopt the following 7 positions according to the weather developments:

- **-6°**: Big pressure drop, rapid deterioration
- **-4°**: Moderate pressure drop, probable deterioration
- **-2°**: Small pressure drop, probable slight deterioration
- **12 o’clock**: No notable weather change
- **+2°**: Slight pressure rise, probable slight improvement
- **+4°**: Moderate pressure rise, probable improvement
- **+6°**: Big pressure rise, rapid improvement

The T-TOUCH SOLAR E81 program takes account of atmospheric pressure variation over the last 6 hours to calculate the trend to indicate. Furthermore, the pressure variation caused by a rapid change in altitude is detected by the watch and compensated for automatically. So it only has a minimal impact on the barometric trend.

The T-TOUCH SOLAR E81 digital display indicates the absolute and relative atmospheric pressure values in hectoPascals (hPa). Absolute atmospheric pressure is the actual pressure at the time and place of measurement, and cannot be altered. Relative pressure is a value relative to sea level, based on local absolute atmospheric pressure. Barometers and weather charts show relative pressure values. The relative pressure value depends on the climate zone set, and can be preset on the watch. The relative pressure presetting is in line with the altitude.

**Characteristics of function**

- **Measurement range**: absolute pressure: 300 hPa to 1100 hPa
  - relative pressure: 950 hPa to 1100 hPa
- **Accuracy**: absolute pressure: ± 3 hPa
  - relative pressure: varies with altimeter
- **Resolution**: 1 hPa
- **Unit conversion**: 1 hectoPascal [hPa] = 1 millibar [mb]
ALTIMETER > READING

The altitude is displayed on the digital screen for 10 hours continuously. After 10 hours, altimeter mode is deactivated, and the date is displayed.

The favourite altitude unit system for displaying the altitude (m or ft) depends on the 12/24-h unit configuration (see page 8)

For example: Units in 24-h = altitude in metres.

ALTIMETER > ALTIMETER PRESETTING

Description of function
In altimeter mode, your T-TOUCH SOLAR E81 becomes a barometric altimeter, displaying the altitude relative to mean sea level.

Explanations
This is a barometric instrument, which calculates the altitude as a function of absolute pressure (atmospheric). As the altitude rises, pressure drops, and vice versa. So the altimeter measures the difference between absolute pressure (atmospheric) and relative pressure (relative to sea level) to display the altitude. Your T-TOUCH SOLAR E81 is temperature compensated, and you can adjust your geographic location (hemisphere and climate zone). The altitude displayed is therefore corrected automatically.

Note 1: "Presetting" an altimeter means setting the actual altitude of a known point (see presetting procedure on page 11). The actual altitude values are indicated on various media: signposts, contour lines and spot heights on maps. The altitude "presetting" is in line with relative atmospheric pressure.

Note 2: In an airliner, since the cabin is pressurised, your altimeter will not indicate an accurate altitude.

Note 3: To optimise the accuracy of your altimeter, you are advised to select the climate zone, see page 9.

Characteristics of function

<table>
<thead>
<tr>
<th>Measurement range</th>
<th>-400 m to +8000 m</th>
<th>-1333 ft to +30,000 ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Altimeter resolution</td>
<td>1 m</td>
<td>3 ft</td>
</tr>
<tr>
<td>Unit conversion</td>
<td>1 metre [m] = 3.281 feet [ft]</td>
<td>1 foot [ft] = 0.305 metres [m]</td>
</tr>
</tbody>
</table>

NB!
Due to the use of pressure to calculate altitude, the altimeter is sensitive to variations in atmospheric pressure in weather changes. It is not uncommon to observe altitude differences of 100 m in a night. So the value displayed may vary without the altitude having actually changed.
**CHRONO > READING**

Resolution: 1/100 sec / Measurement range: 99 hrs 59'59" and 99/100 sec

- **Activate glass Chrono display**
- **Start chrono**
- **Stop chrono**
- Restart the chrono from the elapsed time (cumulative time)

**Split (partial time)**

- **Start chrono**
- a) Flashing stop with partial time displayed, and chrono running in background
- b) Restart the chrono counting the elapsed time

**Reset**

- **Stop chrono**
- **Reset chrono**

**COMPASS > READING**

The minute hand points to True North, factoring in the magnetic declination setting. In compass mode, the digital screen displays the angle between 12 o’clock and the minute hand.

- **Activate glass Compass display**
- **Compass display**
- **User compass calibration (see page 13)**
- **Back to compass display**

**COMPASS > MAGNETIC DECLINATION SETTING**

- **Compass display**
- **Magnetic declination display (1 sec.) and setting mode (2 sec.)**
- **Validate setting**
- **Magnetic declination display (1 sec.) and setting mode (2 sec.)**
- **Magnetic declination display (1 sec.) and setting mode (2 sec.)**
- **Validate setting**
- **Magnetic declination display (1 sec.) and setting mode (2 sec.)**
- **Validate setting**
- **Magnetic declination display (1 sec.) and setting mode (2 sec.)**
- **Validate setting**
**COMPASS > CALIBRATION**

Compass calibration display

Activate calibration mode – glass deactivated during calibration

Turn the watch more than a complete revolution on a horizontal surface (e.g. a table) in an environment free from magnetic interference, at a rotation speed of around 30° per second. Total time: 20 seconds maximum

- **a)** Calibration successful – data stored
- **b)** Calibration failed – repeat calibration

Back to compass display

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**COMPASS > GLOSSARY**

**Compass**

In compass mode, your T-TOUCH SOLAR E81 indicates the True North Pole, factoring in magnetic declination.

**Compass explanations**

The vertical lines (meridians) on the Earth converge at the True North Pole (Ng), indicating its direction. The hand of a conventional compass indicates the direction of the Magnetic North Pole (Nm).

The angle (α) between these two directions Ng and Nm is known as magnetic declination. The magnetic declination value depends on your location on Earth. Furthermore, the Magnetic North Pole is constantly moving. So the magnetic declination value also depends on the date. If the correct magnetic declination value (for the location and date) is set (see the setting procedure on page 12), the minute hand of your T-TOUCH SOLAR E81 will point to True North (Ng). If the magnetic declination is set to 0, your T-TOUCH SOLAR E81 will point to Magnetic north (Nm). The magnetic declination values and dates are indicated on topographic charts, or can be found using special software available on the Internet.

For Switzerland: [http://www-geol.unine.ch/geomagnetisme/Representation.htm](http://www-geol.unine.ch/geomagnetisme/Representation.htm)

**Note 1**

For a correct indication of North, it is extremely important to hold the watch as level as possible.

**Note 2**

The compass function, like any other compass, should not be used near a metal or magnetic mass. In case of doubt, you can recalibrate your compass.

**Characteristics of function**

- **Accuracy:** ± 8°
- **Resolution:** 2°
ALARM > READING
The 2 alarms are associated with time T. An alarm lasts 30 seconds, without repeating. When the programmed time is reached, you can stop the alarm by pressing one of the push-buttons.

Stop alarm

ALARM > SETTING

Validate the hour setting and switch to minute setting mode

Validate the minute setting
**TIMER (COUNTDOWN) > READING**

Measurement range: 99 hrs 59'59"

1 sec.

Activate glass

Countdown display

Start or stop the countdown

The countdown sounds as soon as it reaches 0

Beep every second for the last 5 seconds of the countdown

Stop the sound using one of the push-buttons

Reload the last countdown starting value

a) When the countdown has stopped, the last countdown starting value is reloaded.
b) When the countdown is running, pressing the push-button rounds the counter to the nearest minute (Between 0 and 30 seconds, seconds deducted. Between 31 and 59 seconds, seconds added).

**TIMER (COUNTDOWN) > SETTING**

Measurement range: 99 hrs 59'59"

2 sec.

Countdown display

Switch to hour setting mode

Validate setting and switch to minute setting mode

겼: forward 1 hour

켜: back 1 hour

Validate setting and switch to seconds setting mode

겼: forward 1 minute

켜: back 1 minute

Validate setting

겼: forward 1 second

켜: back 1 second
The brightness of the digital display decreases when the hands are in motion. In fast continuous setting mode, the display moves at a faster rate than in non-continuous or normal speed setting mode. To exit fast continuous setting mode, you need to release the push-buttons for 1 second to continue in normal speed setting mode.

The T-TOUCH SOLAR E81 is water resistant to 10 bar (100 m / 330 ft) at 25°C / 77°F, but it is not an instrument suitable for sports diving. You must not use push-buttons when the watch is underwater. None of the functions can be activated if the glass is in contact with a liquid.

Do not expose the watch to places where high temperatures might be reached (e.g. under a car windscreen in direct sunlight).

Watch operating range: -5°C to +55°C / 23°F to 131°F

Additional information in the "International Warranty – Service centres" booklet.

WARNINGs
Battery type: ML2016 accumulator.

To activate the functions on your T-TOUCH SOLAR E81 a gentle press on the push-buttons or touch on the glass is all that is required. Excessive force may damage the watch.

SENSOR FAULT
When a function is selected and the display is cleared, it is probably due to a failure of the selected function’s sensor.

Error: the display is cleared

Back to time T1 display

If this happens, please contact your retailer.