# EN WEATHER STATION Solight TE81

## User's Manual

User's Manual Dear customer, thank you for purchasing our product. If you want to safely make full use of the features, please carefully read these instructions and follow them. This way, you will avoid incorrect use or damage. Prevent unauthorized use of this device and always respect all rules regarding the handling of electrical devices. Please, keep the manual for future use. The main unit should be as close to a window as possible.

# **TECHNICAL SPECIFICATIONS**

Room Temperature Measurement	0°C to +50°		
Room Humidity Measurement	20% to 95%		
Outside Temperature Measurement	-20°C to +60°C		
Outside Humidity Measurement	20% to 95%		
Device comply	2x AA 1.5V alkaline battery		
Power supply	AC/DC adapter 5V/1200mA		
Temperature Measurement Accuracy	1°C		
Humidity Measurement Accuracy	5%		
Atmospheric Pressure Measurement Range	600 hPa/mb – 1,100h Pa/mb		

We recommend using alkaline batteries with a nominal voltage of 1.5 V to achieve the correct luminosity of the LCD display. NiMh accumulators usually have a voltage of 1.2 V causing the LCD luminosity to be inferior.

#### Main Unit

If the unit is to be **powered by batteries** open the battery compartment cover and insert two alkaline AA batteries (not included). Mind the indicated polarity. When powering up, for a moment, all of the LCD segments light up and the device makes a beep sound. It then goes into the standard temperature and humidity measurement mode.

When the device is **powered by an AC/DC adapter** connect the power connector to the input socket on the weather station and then connect the adapter to a power socket.

To reset the device, remove and reinsert the batteries or disconnect the adapter for at least five seconds. This will delete all settings and memory. When powered by batteries, the display stays lit for eight seconds after each activation. When powered by the adapter, it stays lit continuously.

The main unit can be paired with up to three sensors. Each sensor is powered by two alkaline AA batteries (not included).

Default Settings: 24-hour time format showing 00:00, pressure in mb/hPa and temperature in °C.

# 1. BUTTON FUNCTIONS

Controls Functions			$\bigcirc$		$\langle \! \rangle$		-Ò	MEM	on/off ((🌲))	ڮ ڒ
Standard mode	Brief push	Display date / sec	Display alarm time / date	Toggle between ℃/°F	Toggle individual sensors / cyclical sensor display mode	Turns the temperatu re alarm on/off	Change the backlight intensity	Display stored max. and min. temperature s and humidity	Turn alarm on/off	Turn on display backlight / snooze
	HOLD	Access time setting mode	Access alarm clock setting mode	RCC reception mode activation	Sensor signal reception activation	Access temperatu re alarm setting mode	Enter pressure: unit change mode/forecast change mode	Delete data about max. and min. temperature s and humidity		
Setting Time	Brief push	Confirm setting		One step forward	One step back					
	HOLD			Fast forward	Fast backward					
Setting the Alarm Clock	Brief push			One step forward	One step back					
	HOLD			Fast forward	Fast backward					
Setting the temperatur e alarm	Brief push			One step forward	One step back	Toggling the max. and min. temperatu re settings				
	HOLD			Fast forward	Fast backward					

# 2. MAIN FUNCTIONS

• 6 graphic levels of weather forecast: sunny, scattered clouds, cloudy, rainy, heavy rain, snow

RCC Signal Reception Mode: DCF

• Calendar Span: 2000-2099, displaying date and day of the week

Time format 12/24 hours

- Temperature in °C or °F
- 3-digit room temperature display. Measurement Accuracy: +/- 1°C, measurement range 0°C + 50°C
- 2-digit room and outside humidity display. Measurement Accuracy: +/- 5%, measurement range 20% 95%
- 3-digit outside temperature display. Measurement Accuracy: +/- 1°C, measurement range -20°C + 60°C
- When an alarm goes off or when the device is in RCC signal reception mode (Radio Clock Control Signal), the device stops measuring temperature.
- The high frequency receiver is capable of receiving data from up to three channels (transmitters)
- Memory for storing maximum and minimum inside and outside temperature and humidity
- Main unit and outdoor transmitter battery depletion indication on the display using the **F** symbol
- Units for air pressure measurement: mb/hPa, inHg
- Alarm clock
- Temperature alarm for outside temperature
- 5V USB output, supply power 1200 mA
- Snooze function (5 minutes)
- Daylight Saving Time (DST)
- Moon phase indication
- Environmental comfort function
- Icing indication the symbol (for temperatures between -1°C and +3°C)
- The device operates at a frequency of 433.92 MHz

#### 3. DEVICE FEATURES AND OPERATION

## 3.1 Setting Time

In standard mode, press the  $\bigcirc$  button for at least 2 seconds to get to the time setting mode. The active segment starts blinking. Setting sequence: 12/24Hr  $\rightarrow$  time zone shift  $\rightarrow$  hours  $\rightarrow$  minutes  $\rightarrow$  date format DD/MM or MM/DD  $\rightarrow$  year  $\rightarrow$  MM/DD or DD/MM date setting (according to

setting sequence:  $12/24 \text{ Hr} \rightarrow \text{time zone shift} \rightarrow \text{hours} \rightarrow \text{minutes} \rightarrow \text{date format DD/MiN of MiN/DD} \rightarrow \text{year} \rightarrow \text{MiN/DD} or DD/MiN date setting (according to the date format)} \rightarrow \text{days of the week language (GE, FR, SP, IT, DU, DA, EN). Setting the values can be exited by pressing the <math>\bigcirc$  button, resulting in the segments stopping to blink. Pressing the  $\bigcirc$  or  $\bigcirc$  button brings you one step forward or backward; holding the buttons allows for quicker progression.

# 3.2 Setting the Alarm Clock

In standard mode, press the O button, the time display section shows the set alarm time. In standard mode, press the O button for at least 2 seconds to go to the alarm clock setting mode, the main segment starts blinking. Setting sequence: hour  $\rightarrow$  minute  $\rightarrow$  exit. Pressing the O or O button brings you one step forward or backward; holding the buttons allows for quicker progression. The snooze value is permanently set to 5 minutes. Setting the values can be ended by moving through the menu, using the O button, until the set segments stop blinking. Unless a button is pressed within 20 seconds, the device leaves the setting mode and stores the currently set alarm time. If you want to turn off the alarm completely, move the alarm switch it to the **off** position.

#### 3.3 Alarm Settings

Turning the alarm on or off is done using the on/off switch ( ). When the alarm goes off, a Z<sup>Z</sup> symbol starts blinking on the display. If you press

 $\dot{D}$  / Z<sup>Z</sup> when the alarm is sounding, the alarm will be postponed by 5 minutes. Pressing any other button turns the alarm off. Using the snooze function, an alarm may be postponed indefinitely. When the alarm is sounding, the RCC signal is not being received. Reception resumes after the alarm is turned off. After two minutes, the alarm is shut off automatically. The progression of the alarm sound is as follows: a) 0-10 seconds: one beep per second, b) 10 – 20 seconds two beeps per second, c) after 20 seconds – three beeps per second.

#### 3.4 Sensor Toggle Function

In standard mode, pressing the  $\odot$  button will toggle channels (CH1, CH2, CH3 or the option of cycling through all three channels). When cycling is on, the display shows the  $\mathbf{C}$  symbol. In the cyclical three channel display mode the values change on their own. In the cyclical mode, when fewer than three outdoor sensors are connected, the channels with no sensors connected will show no data.

#### 3.5 Sensor Pairing Function

First, separate channels must be selected on the individual sensors. Open the battery compartment cover and move the position switch to the desired channel number 1, 2, or 3. Reinsert the batteries and close the cover. When powering up for the first time, an automatic sensor pairing is conducted. If, however, you want to change the pairing, change the channel by pressing the value of the first time and hold it for at least two seconds. The pairing process takes approximately three minutes. If the pairing process is unsuccessful, the weather station is probably out of signal range.

#### 3.6 Temperature Alarm Settings Functions

A temperature alarm can be set at the outdoor sensor side only. To access the temperature alarm settings mode, hold the  $\bigcirc$  button for at least 2 seconds. First, the part of the display for setting the max. alarm temperature starts blinking. Using the (a) or (b) buttons, set the maximum temperature alarm value. By briefly pressing the  $\bigcirc$  button, move on to setting the minimum alarm temperature. Using the (a) or (b) buttons set the minimum temperature alarm value. Another brief pressing of the  $\bigcirc$  button will exit the temperature alarm settings mode. The range for the temperature alarm is from -20 °C to 60 °C. The temperature alarm is activated by briefly pressing the  $\bigcirc$  button, what is indicated by the ALERTS notification being displayed:  $\begin{bmatrix} ALERTS \\ ALERTS \\$ 

When the minimum or maximum set temperature is exceeded, an alarm sounds, the value of the temperature exceeded starts blinking and a more symbol is displayed. The alarm will sound for 5 seconds, unless it is shut off by pressing any button. If the sound alarm is terminated, but the temperature alarm is not deactivated, the value of the temperature exceeding the preset range will keep blinking. The temperature alarm can be disabled by briefly pressing the button. If the alarm is not disabled, it will be reactivated every minute, as long as the temperature stays outside of the preset range.

#### 3.7 RCC Control Signal Reception

- RCC signal reception is activated automatically upon powering up or resetting.
- Forced RCC signal reception: press the button.
- Once signal reception is activated, a three-minute synchronization period commences. While the synchronization is in progress, it is not possible to access any functions and the weather station is not taking any measurements, The charging USB output is also deactivated.
- Daily automatic signal reception.

- The automatic reception takes place daily, at: 1:00, 2:00 and 3:00. If errors occur, signal reception is attempted again at 4:00 and 5:00. If the signal is successfully received at 4:00, for the given day, reception is not repeated. If signal reception at 4:00 is unsuccessful, another attempt is made at 5:00 and regardless of whether it is successful or not, no other attempt is made that day. The control signal reception process lasts 7 minutes.
- In the RCC reception mode an right icon is blinking. If the signal is weak or if the device is not able of isolating the correct signal, the tower symbol starts blinking, but the radio wave symbol is not displayed.
  - If the control signal has been received successfully, the full RCC reception icon is displayed and the device leaves the reception mode.
    - If you want to exit the reception mode, briefly press the  $\bigcirc$  button.
    - Unless a control signal is received within three days, the last reception attempt is made at 1:00 the next day.
    - If, in the RCC signal reception mode, the alarm is set off, the device leaves the reception mode and enters the alarm mode.
    - After reception of the DST signal, the a DST icon is displayed.
    - After a reset, the RCC and DST symbols disappear.

#### 3.8 Weather Forecast Function

The weather station generates weather forecasts for the next 12 hours. The measurement is based on monitoring the development of atmospheric pressure. The forecast information is only of an indicative value. This weather station is not comparable to professional equipment or to satellite and computing technology. To get objective weather forecasts, consult official sources.

Six-level graphic weather forecast:

FORECAST	FORECAST	FORECAST	FORECAST	FORECAST	FORECAST
sunny	scattered clouds	cloudy	rainy	heavy rain	snow

Note: The forecast can be accurate under conditions of natural ventilation; errors occur when the device is placed in a room or an air-conditioned environment.

Three temperature and humidity development levels:



- Temperature/humidity has an raising trend
- Temperature/humidity stays at a constant value Temperature/humidity has an decreasing trend

## 3.9 Lighting up the Display

When the weather station is powered by batteries, pressing the touch sensor  $\dot{Q}$  /Z<sup>Z</sup> lights the display for 15 seconds. If the display backlight is too weak, replace the batteries. When powered by the adapter, the display is lit continuously.

#### 3.10 Moon Phases

Depending on the correct setting of the current year, month and day, the phases of the Moon, as it is lit by the Sun, are displayed. Moon phases are displayed in six increments.

#### 3.11 Perceived Comfort Function



The perceived comfort function depends on the measurement of temperature, pressure and humidity. Based on these measurements, the station determines the expected perception of the interior environment by selecting one of five options (see picture).

Press and hold the "\*\* button for 2 seconds to enter the air pressure unit and weather settings, the pressure units will be flashing display, Use the "▲" and

"▼" button to set the pressure unit to display in the "hPa/mb" or "inHg".

Press the "🛠" key to confirm the settings and switch to the weather, the weather graphics will be flashing display, Use the " 🔺 " and " 🔻 " button to set the

current weather conditions, so that the weather forecast is more accurate.

A CE Declaration of Conformity is issued to the product in accordance with applicable regulations. On request from the manufacturer: info@solight.cz, or to download at https://www.solight.cz/documents/te81\_prohlášení o shodě.pdf

The maximum radiated power of the device in the working frequency band 433.92MHz is 10mW (+ 10dbm).

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