SMARTRO

Instruction Manual

WIRELESS WEATHER STATION
Model: SC93

TIME	Moon Phase	In&Out Temp	In&Out Humidity	Adjustable Backlit
Dual Alarms	Weather Forecast	°C/°F Switchable	Snooze Function	DST Function

Content

1. Preface

Thank you for choosing this weather station from SMARTRO.

Before Use

● Make sure to read the instruction manual carefully. This information will help you to familiarize yourself with your new device, to learn all of its functions and get advice in the event of problems.
● Following the instructions will prevent damage to your device.
● We shall not be liable for any damage that occurs as a result of not following these instructions.
● Please keep this instruction manual for future reference.

2. Attention

● Please follow the instructions for operation.
● Please use the original or manufacturer specified attachments or accessories.
● To avoid safety hazards, do not disassemble the product.
● Do not place any items on top of the product that may damage it.
● Do not place the product near a water source or in a damp place.
● Please terminate use immediately upon damage, which is caused as a result of improper use or repair by a non-factory approved technician.
● Do not place the product in places that are exposed to direct sunlight and high temperatures such as a radiator, electric heater, stove, etc.
● Keep the product away from strong electromagnetic waves, strong static electricity, or moisture and condensation.
● Children below 10 years of age should be supervised by an adult when using this product.
● Clean your device with a soft damp cloth. Do not use solvents or scouring agents.

3. Package Content

● Color Weather Station*1
● Wireless Remote Sensor*1
● DC Power Adapter*1
● Instruction Manual*1

4. Product Specification

4.1 Color Weather Station

- DST function
- Weather forecast
- Low battery indicator
- Moon phases and tides
- Sunrise and sunset time
- Time in 12/24-hour format
- Tabletop stand/wall mount
- Dual alarms with snooze function
- Perpetual calendar up to the year 2099
- Adjustable backlight and night mode
- Indoor comfort indicator and mold risk display
- Maximum/minimum temperature and humidity record
- Frost alarm and settable outdoor temperature alert
- Barometric pressure
  — Barometric pressure measurement range: 600hPa/mb to 1100hPa/mb
  (17.72 inHg to 32.48 inHg)
- Indoor & outdoor temperature
  — Indoor temperature measurement range: +14°F (-9.9°C) ~ +122°F (+50°C)
  — Outdoor temperature measurement range: -40°F (-40°C) ~ +158°F (+70°C)
  — Indoor humidity measurement range: 20%RH~95%RH
- Power supply:
  Battery: 2 x AA batteries (not included)
  DC power adapter: 5V 1.2A
- USB charger output: 5V 1A

4.2 Wireless Remote Sensor

- °C/°F switchable
- Low battery indicator
- Tabletop stand/wall mount
- 3 channels available (one sensor included)
- Power supply: 2 x AA batteries (not included)
- Range of transmission: 200 feet in an open area
- Outdoor temperature measurement range: -40°F (-40°C) ~ 158°F (+70°C)
- Outdoor humidity measurement range: 20%RH ~ 95%RH

> ⚠ **Note:**
>
> Please choose the right battery according to the limit temperature of the wireless sensor:
> Alkaline zinc manganese battery can work at -4°F (-20°C) to 140°F (+60°C).
> Polymer lithium ion rechargeable battery can work at -40°F (-40°C) to 158°F (+70°C).

5.1 Screen
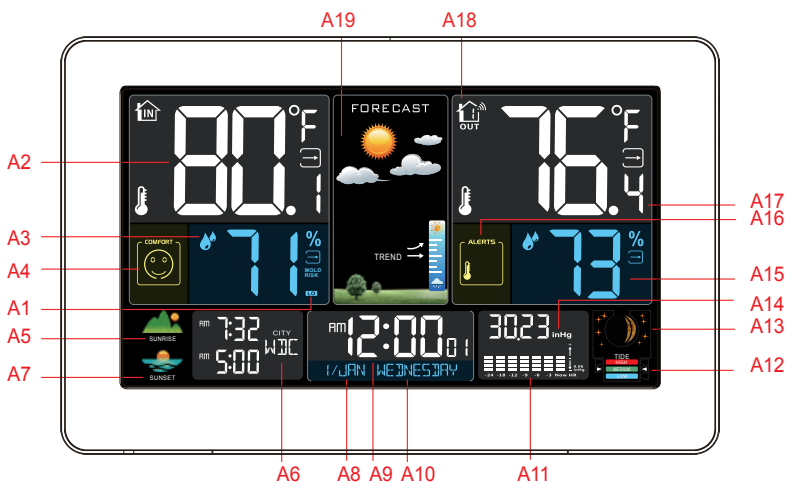
A1: Indoor mold risk

A2: Indoor temperature

A3: Indoor humidity

A4: Indoor comfort indicator

A5: Sunrise time

A6: City

A7: Sunset time

A8: Month and date

A9: Time

A10: Day of the week

A11: Historical pressure histogram

A12: Tide level

A13: Moon phase

A14: Barometric pressure

A15: Outdoor humidity

A16: Alert of outdoor temperature

A17: Outdoor temperature

A18: Outdoor temperature channel and reception icon

A19: Weather forecast

5.2 Buttons

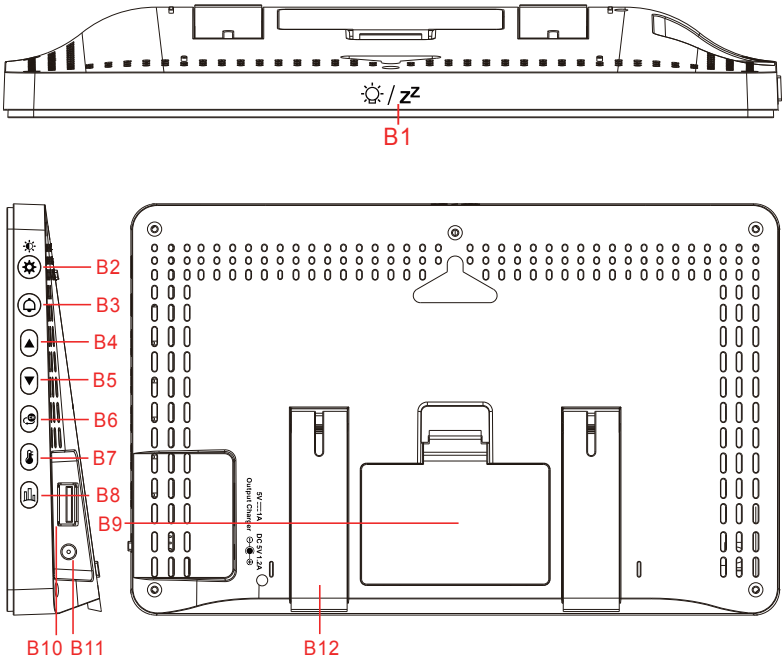B1: ☼ / z^z : Night mode setting (long press 2s to set)

B2: ✿ / ☀ : Time setting (long press 2s to set)

        Backlight setting

B3: ⌂ : Alarm setting (long press 2s to set)

B4: ▲ : For setup preference

B5: ▼ : For setup preference

     Max/min temperature and humidity check

B6: ⌨ : Channel switch

B7: 🌡 : Temperature alert setting (long press 2s to set, short press to turn on/off)
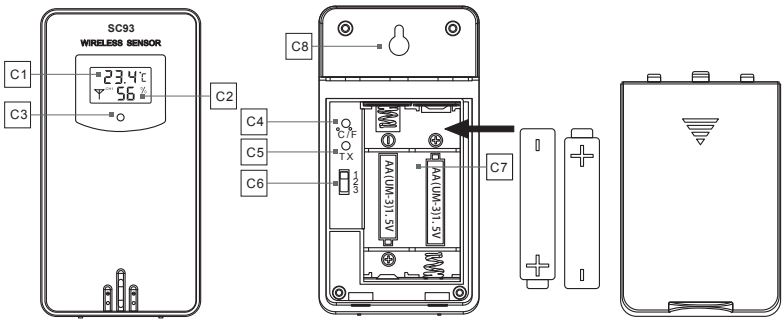
B8: 🏙 : City Setting

B9: Battery compartment

B10: USB charger socket

B11: Power supply socket

B12: Support stand

5.3 Wireless Remote Sensor

C1: Temperature

C2: Humidity

C3: Transmission signal light

C4: "°C/°F" switch button

C5: "TX" button

C6: Channel switch knob

C7: Battery compartment

C8: Wall-mount hole

6. Preparation

● Open weather station battery compartment cover, insert 2 x AA batteries, ensure correct battery polarities ["+" and "−"] and connect the DC adapter to power the weather station.

● The screen will light up, and the device will make a beeping sound. The weather station will start to detect indoor temperature and humidity.

● Open the wireless remote sensor battery compartment cover. Choose the same channel as the weather station through the numbered knob. Insert 2 x AA batteries, ensure correct battery polarities ["+" and "−"].

● The sensor will send out a red light which means that it's sending signals to the main unit.

● The weather station will start to make a connection with the outdoor remote sensor, a reception RF antenna symbol in the "OUT" display area will flicker on the screen. This procedure will take 3 minutes at most.

● After the unit has made a connection with the outdoor remote sensor, the detected temperature and humidity will be displayed on the screen.

7. Initial Time Setup

● Hold " ✿ / ☀ " button for 2 seconds.

● The "**OFF**" indicates the status of button sound, it will be flashing. If changed to "ON", a beep sound will be heard when pressing buttons on the device. Press "▲" or "▼" to choose whether to have beep sounds on or off and press " ✿ / ☀ " to confirm.

● The temperature unit "**°F**" will be flashing, press "▲" or "▼" to choose "°F" or "°C" and press " ✿ / ☀ " to confirm.

● The pressure unit "**INHG**" will be flashing, press "▲" or "▼" to choose "HPA" or "INHG" and press " ✿ / ☀ " to confirm.

● The **daylight saving time (DST)** function status "ON" will be flashing, press "▲" or "▼" to choose the function on or off and press " ✿ / ☀ " to confirm.

● The **12Hr** will be flashing, press "▲" or "▼" to choose 12Hr or 24Hr format and press "✿ / ☀ " to confirm.

● The **HOUR** will be flashing, press "▲" or "▼" to set the correct hour and press " ✿ / ☀ " to confirm.

● The **MINUTE** will be flashing, press "▲" or "▼" to set the correct minute and press " ✿ / ☀ " to confirm.

● The **YEAR** will be flashing, press "▲" or "▼" to set the correct year and press " ✿ / ☀ " to confirm.

● The **MONTH** will be flashing, press "▲" or "▼" to set the correct month and press " ✿ / ☀ " to confirm.

● The **DATE** will be flashing, press "▲" or "▼" to set the correct date and press "✿ / ☀ " to confirm.

● The **PRESSURE** value will be flashing, press "▲" or "▼" to set the correct pressure and press " ✿ / ☀ " to confirm.

● The **WEATHER** icon will be flashing, press "▲" or "▼" to set the current weather icon. Press " ✿ / ☀ " to confirm and to end up the time setting.

> ⚠️ **Note:**
>
> ● During the setup, if you want to exit, double click " ☼ / z^Z " button. If there is no operation of buttons within 20 seconds, the weather station will save the current settings and automatically return to the normal display.
> ● You can long press "▲" or "▼" button to quickly change values.
> ● The barometer has been calibrated during the manufacturing, it's not suggested to adjust the barometric pressure and weather forecast.
> ● When the DST function is activated, the time will automatically be adjusted to daylight saving time or standard time on the required date.

8. Dual Alarm Setting

8.1 Alarm Setting

● Hold " ♤ " button for 2 seconds.

● The hour of alarm 1 will be flashing, press "▲" or "▼" to set the required hour and press " ♤ " to confirm.

● The minute of alarm 1 will be flashing, press "▲" or "▼" to set the required minute and press " ♤ " to confirm.

● The cycle icon of alarm 1 (M-F, M-S or S-S) will be flashing, press "▲" or "▼" to set the alarm repeat date and press " ♤ " to confirm.

—**M-F**: The alarm will go off from Monday to Friday.

—**M-S**: The alarm will go off from Monday to Sunday.

—**S-S**: The alarm will go off from Saturday to Sunday.

● Default snooze time 00:05 of alarm 1 will be flashing, press "▲" to increase the snooze time or press "▼" to turn off the snooze function and press " ♤ " to confirm.

● The hour of alarm 2 will be flashing, press "▲" or "▼" to set the required hour and press " ♤ " to confirm.

● The minute of alarm 2 will be flashing, press "▲" or "▼" to set the required minute and press " ♤ " to confirm.

● The cycle icon of alarm 2 (M-F, M-S or S-S) will be flashing, press "▲" or "▼" to set the alarm date and press " ♤ " to confirm.

● Snooze time of alarm 2 will be flashing, press "▲" to increase the snooze time or press "▼" to turn off the snooze function and press " ♤ " to confirm and complete the setup.

> ⚠ **Note:**
> ● During the alarm setting, double clicking " ☼/z^z " or not operating any buttons within 20 seconds will cause the weather station to save the current settings and automatically return to the normal display.
> ● The snooze time can be set from 5 ~ 60MIN. It can also be deactivated by setting it to OFF.
> ● For quick setting of the values, long press "▲" or "▼".

8.2 How to Turn on/off the Alarms

● Press " ⌂ ", alarm 1 will be displayed on the screen, press "▲" to turn on or off alarm 1 and press " ⌂ " to confirm.
● Then, alarm 2 will be displayed on the screen, press "▲" to turn on or off alarm 2 and press " ⌂ " to confirm.

> ⚠ **Note:**
> — Only pressing "▲" can turn the alarm on/off.
> — When the alarms are activated, " ⌂ " and " ⌂ " icons and the alarm cycle icon(M-F, M-S or S-S) will be displayed on the screen.
> — When the alarms are deactivated, " ⌂ " or " ⌂ " with the alarm cycle icon will not appear on the screen.

8.3 How to Check the Alarms

● Press " ⌂ " button.
● Press once to check alarm 1.
● Press twice to check alarm 2.
● Press a third time and the display will return to the current time.

8.4 Turn off the Alarm Tone

The alarm will ring for 2 minutes and will change 4 times in total during that time. Pressing any button can stop the alarm tone. Short pressing " ☼/z^z " can activate the snooze function but long pressing " ☼/z^z " can stop both the ring and snooze function. Once turned off, the alarm will repeat at the same time the next day.

8.5 Snooze Function

● While the alarm is ringing, touch " ☼/z^z " to activate the snooze function. When the snooze function is activated, " ⌂ " or " ⌂ " will keep flashing on the display. The alarm will ring again after the snooze time.
● When the snooze function is activated, press any button except " ☼/z^z " or hold " ☼/z^z " area for 2 seconds to exit the snooze mode.
● If alarm 2 rings during the snooze mode of alarm 1, the snooze function of alarm 1 will automatically be deactivated.

9.1 Weather Station and Remote Sensor Pairing

Step 1:

— Insert 2 x AA batteries in the weather station and connect it with the adapter.
— Insert 2 x AA batteries in the remote sensor.

Step 2:

— Select a channel for the remote sensor through the numbered knob (1, 2, and 3). The indicator will light up once to indicate that the wireless remote sensor is sending out signals.
— Select the same channel with the remote sensor for the weather station. Press " " button to select CH1, CH2, CH3 or CH1 to CH3 (cycle mode).
— When the weather station successfully receives signals from the remote sensor, the temperature and humidity detected by the remote sensor will display in the "OUT" column of the weather station.
— The weather station can connect up to 3 wireless remote sensors at the same time. If multiple sensors are used simultaneously, please make sure these sensors are on different channels and press " " button on the weather station to view the readings of each channel.

9.2 Outdoor Channel Cycle Mode

This mode is applicable if multiple wireless remote sensors are used simultaneously.

— Press " " button on the weather station until " $\circlearrowright$ " is displayed above the outdoor channel. In this mode, the outdoor readings will display from CH1 to CH3 automatically every 5 seconds.
— To make the temperature and humidity on a fixed channel, just press " " button until " $\circlearrowright$ " disappears. Once it disappears, the outdoor readings will stop cycling.

9.3 Manual Signal Reception

If there is no outdoor temperature displayed on the weather station, or there is no change in the temperature and humidity for a long time, it indicates that the weather station is failing to receive signals from the wireless remote sensor. Please take the following actions:

— Please ensure that the channels of the weather station and sensor are the same.

— Long press " 🔄 " button to receive signals manually. A flashing RF antenna symbol will be displayed beside the channel. This means that the weather station is in a receiving state.

— Press "TX" button on the wireless remote sensor to send out signals manually, a red light will flash.

9.4 How to Check Maximum/Minimum Temperature/Humidity

● To toggle indoor/outdoor maximum, minimum temperature and humidity data, please press "▼" :

Press once to show the maximum temperature and humidity values.

Press twice to show the minimum temperature and humidity values.

Press three times to return to the current temperature and humidity values.

● To reset the maximum and minimum temperature and humidity, hold "▼" button for 2 seconds, dashes will be displayed on the screen and the recorded history of indoor maximum and minimum temperature, humidity and outdoor values of current channel will be cleared away. The weather station will start to re-record the maximum/minimum values.

● To clear the maximum and minimum temperature and humidity of the other channels, press " 🔄 " button to switch channels and repeat the steps above.

⚠ **Note:**

● In the case of using only one sensor, when the channel of the weather station is not the same as the channel of the sensor, there will be no outside temperature readings shown on the weather station.

● The wireless sensor can be placed anywhere (indoor or outdoor) you want to measure the temperature remotely.

● If you want to measure the outdoor temperature, place the sensor outside away from direct sunlight and rain such as under a roof or on a porch.

● If the temperature or humidity reading is below the ranges, "LL.L" will appear. If the temperature or humidity reading is above the ranges, "HH.H" will appear.

● Indoor temperature measurement range: +14°F (-9.9°C) ~ +122°F (+50°C)

● Outdoor temperature measurement range: -40°F (-40°C) ~ +158°F (+70°C)

● Indoor humidity measurement range: 20%RH~95%RH

10.1 How to Set Temperature Alert

● Firstly choose a channel you want to set the outdoor temperature and humidity alert on, then press " 🌡 " to activate the alert, " 🔺 " will be displayed in the ALERT column.

● Press and hold " 🌡 " button for 2 seconds to enter the temperature and humidity alert setting.

● The highest outdoor temperature and " 🔺 " will be flashing. Press "▲" or "▼" to set the required highest outdoor temperature alert of the selected channel and press " 🌡 " to confirm.

● The lowest outdoor temperature and " 🏆 " will be flashing. Press "▲" or "▼" to set the required lowest outdoor temperature alert of the selected channel and press " 🌡 " to confirm.

● To set the alert values of the other 2 channels, press " 🔘 " to change the channel and repeat the steps above.

● When the outdoor temperature exceeds the set highest alert temperature, the weather station will emit 3 beeps. The temperature, " 🔺 " and " 🔺 " will be flashing on the screen.

● When the outdoor temperature is below the set lowest alert temperature, the weather station will also emit 3 beeps. The temperature, " 🔺 " and " 🏆 " will be flashing on the screen.

● If the outdoor temperature is updated but still exceeds or is lower than the alert temperature, the weather station will beep once.

● To completely end the alert, just press " 🌡 " till " 🔺 " disappears. To turn off the alert of the other channels, press " 🔘 " button to switch the channel and press " 🌡 " to turn it off.

> ⚠ **Note:**
> ● Outdoor channel update frequency:CH1: 68S, CH2: 72S, CH3: 76S.
> ● The temperature and humidity alerts of the 3 channels can be set separately. The alert will only go off on the channel that is currently displayed on the screen. If the channels is switched to another channel, the main unit will not ring for the previous channel's set alert values.
> ● In any case, if " 🔺 " is displayed on the screen and the alert function is not needed, please press " 🌡 " to clear it away. Otherwise, it will ring at any time when the set temperature or humidity set value is reached. To avoid disturbance at the night, please turn it off.
> ● During the setup, if there is no operation of buttons within 20 seconds, the weather station will save the current settings and automatically return to the normal display from manual setting mode.
> ● When the detected indoor or outdoor humidity is below 20%RH, the weather station will only display 20%RH. When the humidity is beyond 95%RH, the weather station will only display 95%RH.

10.2 Frost Point Alert

When the outdoor temperature reaches +30.2°F (-1.0°C) ~ +37.3°F (+2.9°C), the frost alert will be automatically activated and the icon " ❄ice " will be flashing.

10.3 Comfort Indicator & Mold Risk

● Indoor comfort level is generated based on the indoor temperature and humidity, there are 5 levels as follows:

😄	🙂	😐	🙁	😫
Comfortable ⟶			too cold or too hot	
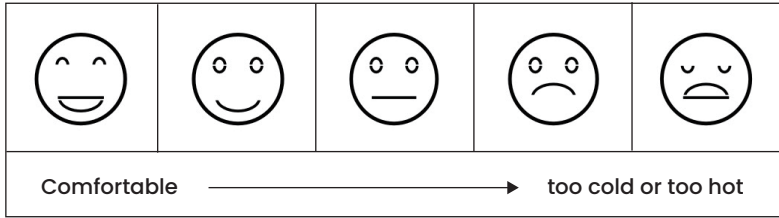
● The mold risk level is generated based on the indoor temperature and humidity. There are 4 levels: HI (high), ME (medium), LO (low) and no risk (no display).

10.4 Temperature & Humidity Trend

The weather station monitors the current temperature and humidity change.

▱ : The temperature/humidity is rising.
▱ : The temperature/humidity is falling.
▱ : The temperature/humidity is remaining constant.

11. Weather Forecast

11.1 Weather Forecast Statement

● The weather station calculates the weather forecast based on the historical recorded barometric pressure where you are located.
● The weather forecast cannot be compared with the professional weather services supported by satellites and high-performance computers.
● If the weather information on the device is different from the local weather forecasting service, please take the advice of the latter as authoritative.

11.2 The Symbols of Weather Forecast
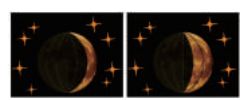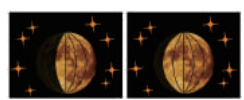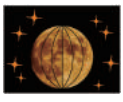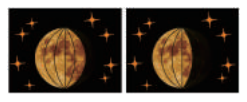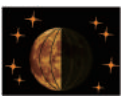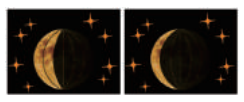
sunny	slightly cloudy	cloudy	rainy	stormy	snowy

> ⚠ **Note:**
> When the pressure change causes a rainy prediction, and the outside temperature is below +24.8°F (-4°C), the snow icon appears.

12. Moon Phase & Tide Indicator

When the calendar has been set, the weather station will display 3 tide levels and 12 different moon phases: New Moon, Waxing Crescent, First Quarter, Waxing Gibbous, Full Moon, Waning Gibbous, Last Quarter, Waning Crescent.

New Moon	Waxing Crescent	First Quarter	Waxing Gibbous
Full Moon	Waning Gibbous	Last Quarter	Waning Crescent

13. Air Pressure

The barometric pressure updates every hour. The weather station will record the pressure of the last 3, 6, 9, 12, 18, 24 hours and compare it with the current barometric pressure to generate a histogram.

14. Backlight & Night Mode

14.1 Backlight Setting

— When connecting the weather station with the DC adapter, the backlight will remain on. The backlight has 5 brightness levels for selection: level 1, level 2, level 3, level 4 and OFF. To adjust the backlight brightness, press " ☀ / ☀ " to choose a brightness that is comfortable for you.
— When the backlight brightness is not at the maximum brightness, touching " ☼ / z^z " can make the backlight light up to the maximum brightness for 15 seconds.
— Any restart or power break will cause a loss of the previous manual settings. In case of power failure, please insert 2 AA batteries in the weather station to protect saved manual settings.

> **⚠ Note:**
> ● The power of the batteries is not enough to support the dynamic lighting of the large display. It is recommended to connect the weather station with the DC adapter.
> ● When the weather station is only powered by batteries, touching " ☼ / z^z " will temporarily activate the backlight for 15 seconds, after which the screen will return to the dimmest brightness level and enter power-saving mode.

14.2 Night Mode Setting

In night mode, the backlight will automatically dim at the set entry time.

● To set night mode, press and hold the " ☼ / z^z " for more than 2 seconds. "OFF" (the state of the night mode) will be flashing, press "▲" or "▼" to turn on or off night mode and press " ☀ / ☀ " to confirm.
● The brightness level will be flashing, there will be 3 brightness levels for selection, press "▲" or "▼" to select a level and press " ☀ / ☀ " to confirm.
● The hour of the entry time of night mode will be flashing, press "▲" or "▼" to set the required hour and press " ☀ / ☀ " to confirm.
● The minute of the entry time of night mode will be flashing, press "▲" or "▼" to set the required minute and press " ☀ / ☀ " to confirm.
● The hour of the exit time of night mode will be flashing, press"▲" or "▼" to set the required hour and press " ☀ / ☀ " to confirm.

● The minute of the exit time of night mode will be flashing, press "▲" or "▼" to set the required minute and press " ✿ / ☀ " to confirm. After completing these steps the weather station will return to the original display.

> ⚠ **Note:**
> ● When night mode is on, the icon " ☾ " will be displayed on the screen. When reaching the set night mode entry time, the backlight will automatically get dim according to the set night mode brightness, and when reaching the set night mode exit time, the backlight will return to the original brightness.
> ● When night mode is off, the screen will be on constantly.
> ● In night mode, the backlight can be switched to the highest brightness for 15 seconds by touching " ☼ / z^z ".
> ● During setup, if you want to exit it, just double click " ☼ / z^z " and the weather station will save the current settings and return to the display.

15. City Setting for Sunrise & Sunset Time

When the city is selected, the sunrise and sunset time will be automatically generated.

● Press " 📊 " button once to enter the city selection mode, the city abbr will be flashing.
● Refer to the chart on appendix 1 on page 19.
● Press "▲" or "▼" button to select the city abbr or number and press " 📊 " to confirm. （for quick setting, long press "▲" or "▼"）

> ⚠ **Note:**
> ● If your city is not listed in the chart, please select a neighboring city.
> ● During the setting, if you want to exit it, double click " ☼ / z^z " or no operation of buttons within 20 seconds, the weather station will save the current setting and automatically return to the normal display.
> ● For quick setting, long press "▲" or "▼".

16. Low Battery

● If the battery icon " 🔋 " is displayed in the "INDOOR" column, it means that the weather station batteries are running out. Please replace the batteries as soon as possible.

● If the battery icon " 🔋 " displays in the "OUTDOOR" column, it means that the remote sensor batteries are running out. Please replace the batteries as soon as possible.

17. Troubleshooting

PROBLEM	CAUSE	SOLUTION
No backlight.	The weather station is only powered by batteries.	1. Press " ☼ / z^z " to temporarily activate the backlight for 15 seconds. 2. Connect DC adapter to power up the weather station, the backlight will remain on.
	DC adapter is connected, but the backlight is set on the dimmest level.	Press " ✿ / ☀ " button to adjust the backlight brightness.
No outdoor temperature displayed on the weather station.	The batteries of the sensor have run out.	Replace 2×AA batteries for the outdoor remote sensor.
	The channel displayed on the weather station is different from the channel of the remote sensor.	Adjust the channel of the weather station or the sensor to keep them paired. For detailed instructions, please refer to page 9.
	The weather station did not receive signals from the outdoor sensor.	Please refer to the instructions on page 9 to receive the signals manually.
The outdoor temperature on the weather station is different from that on the sensor.	There is a delay or interruption of transmission.	1. Place the sensor next to the weather station. 2. Long press " 🔄 " button on the weather station till the dashes appear. 3. Press "TX" button on the sensor to send signals.
	If the problem persists, please contact after-sales support at: support@smartro.co.	

The indoor and outdoor readings are different when putting the two devices together.	The device has some tolerance. Temperature range in 32°F~104°F(0-40°C), tolerance:±1.8°F. Other: ±3.6°F. Humidity range in 40%~80%, tolerance: ±5%. Other: ±8%.	If the difference is beyond the range, please please contact after-sales support at: support@smartro.co.
The alarm rings unexpectedly at night.	The time alarm function is activated.	Please check if the alarms are set correctly or turn them off.
	The temperature alert is activated. The temperature has reached the alert range.	Press " 🌡 " to turn off the alert.
The outdoor readings only occasionally appear on the display.	The display was set to loop mode.	Press " ⏻ " until the arrow icon disappears to cancel the loop mode.
	If the problem persists, please contact after-sales support at: support@smartro.co.	

18. After-sales Support

If your device fails to work despite these measures or your experience with us was less than perfect in any way, please do not hesitate to contact us.
For more products, please visit our website: https://www.smartro.co/
For further support and discount information, join our Facebook group or follow us on Instagram.

📞 : +1(323)287-5798

✉ : support@smartro.co

f : http://bit.ly/smartro_01

⊙ : smartro_01

19. Waste Disposal

● This product is manufactured with high-grade materials and components which can be recycled and reused.

● As a consumer, you are legally required to take them to your retail store or an appropriate collection site depending on national or local regulations in order to protect the environment.

● The symbols for the heavy metals contained are: Cd=cadmium, Hg=mercury, Pb=lead.

● Please do not dispose of this instrument in household waste.

The user is obligated to take end-of-life devices to a designated collection point for the disposal of electrical and electronic equipment, in order to ensure environmentally-compatible disposal.

Appendix 1: City Code of the United States

Country	City	Abbr	No.
United States(US)	Washington DC	WDC	164
	New York	NYC	165
	Los Angeles	LAS	166
	Chicago	CHI	167
	Houston	HOU	168
	Phoenix	PHO	169
	San Antonio	SAO	170
	San Diego	SDO	171
	Dallas	DAL	172
	San Francisco	SFO	173
	Philadelphia	PHL	174
	Charlotte	CHA	175
	Seattle	SEA	176
	Denver	DEN	177
	Boston	BOS	178
	Detroit	DET	179
	Nashville	NAS	180
	Memphis	MEM	181
	Portland	PTL	182
	Oklahoma city	OKC	183
	Las Vegas	LVG	184
	Milwaukee	MWK	185
	Kansas City	KAN	186
	Atlanta	ATL	187
	Miami	MIA	188
	Virginia beach	VAB	189
	Oakland	OAK	190
	Minneapolis	MIN	191
	New Orleans	NOL	192
	Cleveland	CLE	193
	Tampa	TAM	194
	Honolulu	HON	195
	St.Louis	SLS	196
	Pittsburgh	PIT	197
	Cincinnati	CIN	198
	Lincoln	LIN	199
	Orlando	ORD	200

	Buffalo	BUF	201
	Richmond	RMD	202
	Columbia	COL	203
	Little Rock	LRC	204
	Columbus	CLS	205
	Grand Rapids	GRS	206
	Salt Lake City	SLC	207
	Providence	PVD	208
	Manchester (NH)	MNH	209
	San Diego	SDG	210
	Santa Fe	SFE	211
	Bismarck	BIS	212
	Reno	REN	213
	New Haven	NHV	214
	Baltimore	BAL	215
	South Carolina (SC)	SCR	216
	Savannah	SAV	217

Appendix 2: City Code of other Countries

Country	City	Abbr	No.	City	Abbr	No.
Germany(DE)	Berlin	BER	1	Kiel	KIE	15
	Bremen	BRE	2	Leipzig	LEI	16
	Köln	KOE	3	Magdeburg	MAG	17
	Dortmund	DOR	4	München	MUN	18
	Dresden	DRE	5	Nürnberg	NUR	19
	Düsseldorf	DUS	6	Osnabrück	OSN	20
	Erfurt	ERF	7	Passau	PAS	21
	Frankfurt	FRA	8	Regensburg	REG	22
	Freiburg	FRE	9	Rostock	ROS	23
	Hamburg	HAM	10	Saarbrücken	SAA	24
	Hannover	HAN	11	Stuttgart	STU	25
	Hof	HOF	12	Ulm	ULM	26
	Kaiserslautern	KAI	13	Würzburg	WUR	27
	Kassel	KAS	14			
Austria(AT)	Bregenz	BRZ	28	Salzburg	SLZ	32
	Graz	GRZ	29	Vienna	WIE	33
	Innsbruck	INN	30	Villach	VIL	34
	Linz	LNZ	31	Wels	WEL	35
Belgium(BE)	Antwerp	ANT	36	Libramont	LIB	39
	Bruges	BRG	37	Liege	LIE	40
	Brussels	BRU	38			
Bosnia & Herzegovina(BA)	Sarajevo	SAR	41			
Croatia(HR)	Split	SPL	42	Zagreb	ZAG	43
Czech(CZ)	Brno	BRN	44	Prague	PRG	45
Denmark(DK)	Aalborg	ALB	46	Odense	ODE	48
	Copenhagen	KOB	47			
Finland(FI)	Helsinki	HEL	49			
France(FR)	Ajaccio	AJA	50	Metz	MET	60
	Biarritz	BIA	51	Nantes	NAN	61
	Bordeaux	BOR	52	Nice	NCE	62
	Brest	BRT	53	Orleans	ORL	63
	Cherbourg-Octeville	CHE	54	Paris	PAR	64
	Clermont-Ferrand	CMF	55	Perpignan	PER	65
	Dijon	DIJ	56	Rouen	ROU	66
	Lille	LIL	57	Strasbourg	STR	67
	Lyon	LYO	58	Toulouse	TOU	68
	Marseille	MRS	59			

Country	City	Code	No.	City	Code	No.
Greece(GR)	Athens	AHN	69			
Hungary(HU)	Budapest	BUD	70			
Ireland(IE)	Dublin	DUB	71			
Italy (IT)	Ancona	ANC	72	Naples	NAP	82
	Bari	BAR	73	Palermo	PAL	83
	Bolzano	BOZ	74	Parma	PRM	84
	Cagliari	CAG	75	Perugia	PEG	85
	Florence	FIR	76	Rome	ROM	86
	Foggia	FOG	77	San Remo	SRE	87
	Genoa	GEN	78	Triest	TRI	88
	Lecce	LEC	79	Turin	TUR	89
	Messina	MES	80	Venice	VEN	90
	Milan	MIL	81	Verona	VER	91
Liechtenstein(LI)	Vaduz	VDZ	92			
Luxemburg(LU)	Luxembourg	LUX	93			
Monaco(MC)	Monte Carlo	MCM	94			
Netherlands (NL)	Amsterdam	AMS	95	Groningen	GRO	98
	Arnhem	ARN	96	Rotterdam	ROT	99
	Eindhoven	EIN	97	The Hague	DHA	100
Norway(NO)	Bergen	BGN	101	Oslo	OSL	103
	Lillehammer	LLH	102			
Poland(PL)	Cracow	KRA	104	Poznan	POZ	106
	Gdansk	GDA	105	Warsaw	WAR	107
Portugal(PT)	Faro	FAR	108	Porto	POR	110
	Lisbon	LIS	109			
Russian Federation(RU)	St. Petersburg	PET	111	Kazan	KAZ	114
	Moscow	MOS	112	Volgograd	VOL	115
	Novosibirsk	NOV	113	Yekaterinburg	YEK	116
Serbia(RS)	Belgrade	BEO	117			
Slovakia(SK)	Bratislava	BRV	118	Kosice	KOS	119
Slovenia(SI)	Ljubliana	LUB	120			
Spain(ES)	Alicante	ALI	121	Leon	LEO	130
	Andorra	AND	122	Madrid	MAD	131
	Badajoz	BAD	123	Malaga	MAL	132
	Barcelona	BRC	124	Palma de Mallorca	PDM	133
	Bilbao	BIL	125	Salamanca	SAL	134
	Cordoba	COR	126	Sevilla	SEV	135
	Eivissa Ibiza	IBZ	127	Valencia	VAL	136
	La Coruña	LCO	128	Zaragoza	ZAR	137
	Las Palmas	LPA	129			

Sweden(SE)	Gothenburg	GOT	138	Stockholm	STO	140
	Karlstad	KAR	139			
Switzerland (CH)	Basel	BAS	141	Lugano	LUG	146
	Berne	BNE	142	Sion	SIO	147
	Chur	CHU	143	St. Gallen	SGL	148
	Geneva	GNV	144	Zurich	ZUR	149
	Lucerne	LUC	145			
United Kingdom(GB)	Aberdeen	ABD	150	London	LON	155
	Belfast	BEL	151	Manchester	MAN	156
	Birmingham	BIR	152	Newcastle upon Tyne	NEC	157
	Cardiff	CAR	153	Plymouth	PLY	158
	Glasgow	GLW	154			
Lithuania(LT)	Vilnius	VNO	159			
Bulgaria(BG)	Sofia	SOF	160			
Romania(RO)	Bucharest	BUH	161			
Cyprus(CY)	Nicosia	NIC	162			
Northen Ireland(NI)	Belfast	BFS	163			
Canada(CA)	Ottawa	OTT	218	Vancouver	VAN	222
	Quebec City	QUC	219	Montreal	MON	223
	Edmonton	EDM	220	Toronto	TOR	224
	Calgary	CLY	221			
Mexican	Mexico City	MEX	225			
Panama	Panama City	PAN	226			
Brazil(BR)	Brasília	BRA	227	Rio de Janeiro	RIO	230
	Belo Horizonte	BHZ	228	São Paulo	SPA	231
	Recife	REC	229	Salvador	SLV	232
Argentina	Buenos Aires	BUE	233	Mardel Plata	MAR	236
	Cordoba	CDB	234	Mendoza	MEN	237
	La Plata	LPL	235	Rosario	ROO	238
Chile	Santiago de Chile	SAN	239			
Colombia	Bogotá	BOG	240			
Australia(AU) and New Zealand(NZ)	Canberra	CBR	241	Darwin	DRW	247
	Melbourne	MEL	242	Hobart	HBA	248
	Sydney	SYD	243	Perth	PEH	249
	Wellington	WLG	244	Auckland	AKL	250
	Adelaide	ADE	245	Christchurch	CHC	251
	Brisbane	BRI	246			

FCC Statement:

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.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the

user is encouraged to try to correct the interference by one or more of the following measures:

—Reorient or relocate the receiving antenna.

—Increase the separation between the equipment and receiver.

—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

—Consult the dealer or an experienced radio/TV technician for help.

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

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.