

# **Barometric Weather Station with Radio Controlled Clock and In/ Out Thermometer**

USER MANUAL  
(TE368XNL)

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KSPO:  
NIL TE368XNL&TS01 MANUAL(Eng)  
SIZE:W100 x H100(mm)  
BY Lai HZ 13/03/15

## **1. INTRODUCTION**

Thank you for selecting the TE368XNL. In your hands, you hold a high-quality weather station which we have equipped with additional functions that have above-average design and functionality in a market comparison.

Please keep this manual handy as it contains practical instructions, technical specifications and precautions.

In this package, you will find:

- One main unit (receiver)
- One separate table stand
- One single-channel remote sensor (transmitter)
- One user manual

### ***FEATURES OF THE MAIN UNIT***

#### **Time**

- Precise time and date set via radio controlled time signals (DCF 77) from the time transmitter in Frankfurt
- 12 or 24 hour time format selectable
- Manual adjustment of time and date (ideal if no DCF77 reception)
- Calendar date with month and day in 7 languages English, German, French, Italian, Spanish, Dutch and Swedish
- Separate weekday and single alarm with crescendo function
- Programmable per alert alarm in case of potential ice on the road

#### **Weather**

- Weather forecast for the next 12 to 24 hour in seven large icons: sunny, slightly cloudy, cloudy, rainy, heavy rainy, snowy and heavy snowy.
- User-defined high/low temperature alarm
- Indoor/outdoor temperature in up to 3 remote locations (Channel 1 sensor included, additional sensors required for Ch 2 and 3)

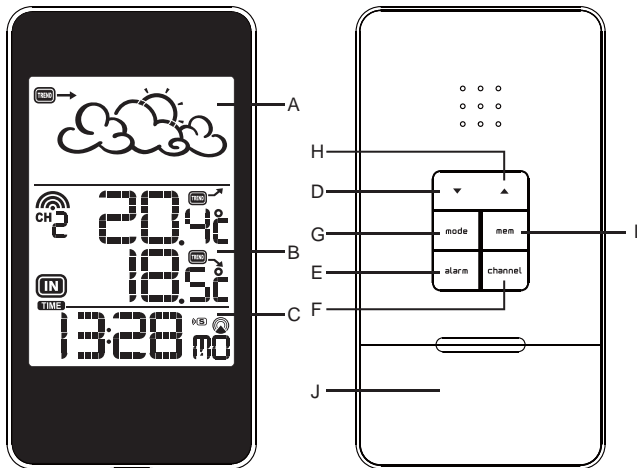
### ***FEATURES OF THE REMOTE SENSOR***

- Remote data transmission to the main unit via 433 MHz frequency

## 2. OPERATING ELEMENTS

### **2.1 LCD (DISPLAY) AND KEYS / FRONT VIEW / REAR VIEW**

All functions are depicted on the liquid crystal display (LCD) in 3 windows.



**A. WEATHER** window

**B. TEMPERATURE** window

**C. CLOCK** window

**D. ▼ (DOWN)** button

- Select the other window (Clock or Temperature)
- Press and hold for 2 seconds to search for wireless signal from remote sensor.
- Decrease parameters in the setting mode.

**E. ALARM** button

- When clock window has been selected, press once to display the alarm time of weekday alarm (W), single alarm (S) and pre-alarm (Pre-AL).  
---> Hold for 2 seconds, set weekday, single or pre-alarm's alarm time.
- When temperature window has been selected, press once to display the highest or lowest temperature alarm's value.  
---> Hold for 2 seconds, set the highest or lowest temperature alarm's value.
- When alarm (time or temprature) is on, press once to stop the alarm .

**F. CHANNEL** button

- Press to display the outdoor temperature readings of Channels 1, 2 and 3. (additional remote sensors are required)
- Hold for 2 seconds, enter into the circulation mode and outdoor temperature readings of Channels 1, 2 and 3 will be displayed automatically in every 5 seconds.

**G. MODE** button

- When clock window has been selected, press once to toggle between time with seconds display or time with weekday display.  
---> Press and hold for 2 seconds, set language of the day of the week, year digit, month digit, date digit, hour format (12/ 24 hours), calendar format, hour digit and minute digit.
- When temperature window has been selected, press and hold for 2 seconds to toggle the temperature unit between Celsius or Fahrenheit.

#### **H. ▲ (UP) button**

- Select the other window (Clock or Temperature)
- Increase the parameters in setting mode
- Press and hold for 2 seconds to activate/ deactivate radio controlled time signal search manually.

#### **I. MEM (HISTORY) button**

- When temperature window has been selected, press to recall the minimum or maximum temperature readings of main and remote units.
- Press and hold for 2 seconds, collected memories will be cleared.

#### **J. BATTERY COMPARTMENT**

- Accomodate two (2) AAA batteries

### **2.2 STAND**



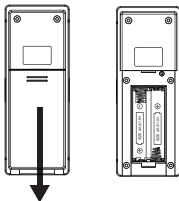
#### **K. TABLE STAND**

- In addition you will find a separate table stand, giving the unit a special elegance when positioned in a shelf or on a table

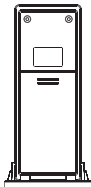
## 2.3 REMOTE TEMPERATURE SENSOR



**A. BATTERY COMPARTMENT:** Holds two AAA-size batteries



**B. WALL-MOUNT RECESSED HOLE:** Mount the sensor using the clip on the wall



### **3. PUTTING INTO OPERATION**

The communication between the main unit (receiver) and the remote sensor (transmitter) is wireless, thus simplifying the installation. The remote temperature sensor transmits data to the main unit, with an operating range of up to 30 meters in opened area.

The remote temperature sensor can be placed indoors or outdoors, depending on the area where the temperature is intended to be measured. If you intend to measure outdoor conditions, place the remote sensor outdoors.

#### **Start-up the transmitter-receiver communication:**

- It is important to power-up the remote sensor **BEFORE** powering-up the main unit. Immediately after batteries are installed, the remote sensor will start transmitting a temperature data to the main unit.
- It is strongly recommended to power up and **test** communication between the remote sensor and the main unit **BEFORE** permanently mounting the sensor outside.
- During initial set up, place the remote sensor within a range of 1m to the main unit in the same room, both receiver and transmitter far from any other electric product.
- After reception is established (remote readings will appear on the main unit's display), position the remote sensor and the main unit within the maximum transmission range of up to 30 meters.

#### **NOTE:**

- Avoid pressing any button on the main unit before the remote readings are displayed.
- Transmission or reception range may be affected by trees, metal structures, electronic appliances, surrounding building materials and how the main unit and transmitter are positioned.

## Placement of sensor and main unit

- Place the remote sensor so that it faces the main unit (receiver), minimizing obstructions such as doors, walls and furniture.
- Though the remote sensors are weather-resistant, they should be placed away from direct sunlight, rain or snow. The optimal location for the outdoor sensor is under the eaves on the north side of a building with free air circulation.
- The remote sensor can be placed on the flat surface or mounted on the wall in vertical position by using the included stand. For fixing the stand, use a screw, rather than a nail.
- Ideally, place the remote sensor over soil, rather than asphalt which may affect the correct measurement.
- Avoid placing the remote sensor near sources of heat, such as chimneys and heating elements
- Avoid areas that collect heat from the sun and radiate heat, such as metal, brick or concrete structures, paving, and patios
- The international standard for the valid air temperature measurements is 1.25meters above the ground
- Make sure that the main unit is locating within the operating range of all remote sensors.
- Ideally the main unit should be placed within line of sight of remote sensors. Avoid placing the main unit where surfaces emitting and radiating heat (e.g. heating ducts or air conditioners) and areas with interference from wireless devices (e.g. cordless phones, radio headsets, baby monitoring devices and other electronics).

## Important notice about batteries

- The TE368XNL is delivered with batteries to make the start-up easy for you. These batteries may not last as long as fully new batteries may. Once you have to replace the batteries on the outside sensor, we recommend to use **alkaline batteries**. Advantage of this is a better performance in case the outside temperature falls below 0° (32°F). For optimum performance, we recommend even lithium batteries.
- Avoid using rechargeable batteries. (Rechargeable batteries cannot maintain correct power requirements.)
- **ALWAYS** install batteries in the **remote** sensor *before* the main unit.
- Insert batteries before first use, matching the polarity in the battery compartment.



#### 4. OPERATION

Immediately after batteries are installed, the remote sensor will start transmitting the temperature data to the main unit in regular intervals.

Once the main unit is powered-up by activating the batteries, the display will show all available LCD segments for a moment.








**IMPORTANT:** After this, the unit will scan the remote sensors (Ch 1 to Ch 3) in the **Temperature Window**. There is no immediate need to press any button during this process.

After this, the unit will start to scan the DCF77 time transmitter in the **Clock Window**. Thereby, the default time the unit has started with at the beginning is 12:00. Here too, there is no immediate need to press any button during this process.

**Recommendation:** Allow the unit to receive the sensors and the time **without touching ANY button** for about 6-8 minutes during the main unit initial set up. This will give the unit time to synchronize with remotes, stabilize pressure readings and settle with default settings.

#### 4.1 WEATHER FORECAST




This unit is capable of detecting the atmospheric pressure changes. Based on collected weather data, it forecasts the weather for the next 12 to 24 hours.

When the display shows...							
Forecast is...	Sunny	Partly Cloudy	Cloudy	Rainy	Heavy Rainy	Snowy	Heavy Snowy

**NOTE:** The weather forecast accuracy is approximately 70%. The TE368XNL shows the forecasted (predicted), not the current conditions. The SUNNY icon indicates clear weather, even when displayed during the night-time.

## ATMOSPHERIC PRESSURE

The atmospheric pressure indicator, in the weather forecast window, uses arrows to indicate if the atmospheric pressure is increasing, remaining stable, or decreasing


Arrow indicator			
Pressure Trend	Rising	Steady	Falling

## 4.2 TEMPERATURE WINDOW

The main unit supports up to 3 remote sensors, each corresponding to a separate channel of the temperature display. The temperature can be displayed in Celsius (°C) or Fahrenheit (°F).

A temperature alert function is available for all channels. It can be programmed to sound once one of the remote temperatures exceeds or falls below the pre-set upper and lower limits.

## OPERATION OF THE TEMPERATURE WINDOW




For all operations described in Chapter 4.2, press **UP (▲)** or **DOWN (▼)** until the  icon, to the left of the indoor temperature value, begins to flash.

## ***FORCED SEARCH FOR REMOTE SENSORS***

Select the TEMPERATURE window.

The main unit can be manually activated to search for the signal from the selected remote sensor by pressing and holding the **DOWN (▼)** button for 3 seconds.

The wave icon above the current channel icon shows the connection status of the corresponding remote sensor:

Icon	Status
	Searching for the signals from the remote sensor
	Corresponding remote sensor signal received successfully
	No signals received for over 1 hour

With this search procedure the device searches the same sensor that was already previously logged in. If you replace the batteries in the sensor, the sensor gives itself a new code and will then no longer be recognized by the display unit. You can resolve this problem by:

- removing the batteries from the display unit and replacing them with new ones
- or
- if the batteries are still O.K., repeating the logging in procedure as described above by pressing and holding the ▼ button for 3 seconds and while the wave icon is blinking, press and hold the ▼ button again for 3 seconds. The temperature indicator will start to blink indicating that a new sensor is being searched for and will be logged in.

## TEMPERATURE TREND


The trend indicator shows the trend of temperatures collected at that particular remote sight. Three trends: rising steady and falling will be shown.

Arrow indicator			
Temperature Trend	Rising	Steady	Falling

## ***VIEWING REMOTE (CHANNEL) TEMPERATURE***

Select the TEMPERATURE window.

Static Display: Press the **CHANNEL** button to select measurements from different remote sensors (channel 1, 2 or 3).

Channel Auto-Scan Display: To enable an automatic scan of all present channels, press and hold **CHANNEL**, until the  icon is displayed. The measurements from each remote channel will be alternately displayed with a 5 seconds viewing.

**NOTE:** the channel auto-scan feature can be activated only if there **are more than one** remote sensors operating and are set to different channels.



## ***PROGRAMMING TEMPERATURE IN CELSIUS OR FAHRENHEIT***



Select the TEMPERATURE window.

Press and hold **MODE** button for 3 seconds to toggle the temperature unit in Celsius (°C) or Fahrenheit (°F).



## ***TEMPERATURE ALARM***

Select the TEMPERATURE window.

Press **ALARM** button selecting the desired alarm, the upper temperature alert with  icon (if disabled, display shows **OFF**), or lower temperature alert with  icon (if disabled, display shows **OFF**).

Press and hold **ALARM** button until the temperature digits flashing. Adjust the temperature digits using the **UP** () or **DOWN** (). Press and hold either button for fast setting. Press the **ALARM** to confirm selection and return to the temperature alarm selection screen

**ACTIVATING OR DEACTIVATING TEMPERATURE ALARMS:**

Once the above alerts are displayed, press the **UP** () to enable or **DOWN** () to disable the alert.

### ***VIEWING MAX/MIN READINGS***

Select the **TEMPERATURE** window.

Press the **MEM** button to read the minimum temperature of all sensors (indoor and remote) with the **MIN**, next **MEM** press the maximum values with the **MAX** icon and then back to the current values.

### ***RESETTING TEMPERATURE MEMORIES***

Select the **TEMPERATURE** window.

Press and hold the **MEM** button for 3 seconds to clear all max/min memories.

## **4.3 CLOCK WINDOW**

For all operations described in Chapter 4.3, press **UP (▲)** or **DOWN (▼)** until the **TIME** icon, in the left corner of the time window, begins to flash.

### **4.3.1 TIME FUNCTION**

The radio controlled time signal (DCF 77) is transmitted from the central atomic clock in Frankfurt/Main. It has a reception range of approx. 1500 km. If the tower icon is not fully lit, or if the time and date are not set automatically, please consider the following:

During night-time hours, atmospheric disturbances are typically less severe and radio signal reception may improve. A single daily reception is sufficient enough to keep the clock accuracy within 1 second.





Make sure the unit is positioned at least 2 meters distance from any interference source such as a TV, computer monitor, microwave, etc.



Within concrete and /or metal wall rooms, such as basements or office buildings, the signal may be weakened. In such a case, place the main unit near the window for better reception. Sometimes it also helps to turn the unit by 90°

**NOTE:** In any of below described settings, the unit will automatically exit any programming mode if it does not detect a button press for about 2 minutes. Any setting made before this will not be taken over by the unit. Therefore, as long you are in a setting and you have made changes, close the setting mode as described in below chapters.

### **HOW TO SET THE RADIO CONTROLLED CLOCK**

1. After the batteries are installed. The clock will search the radio signal automatically (DCF77 from Germany). It takes about 3-10 minutes to finish this process.
2. If you wish to disable the auto-reception feature, hold **UP (▲)** for 3 seconds to disable it. Having done that, the tower icon will disappear.
3. To enable the auto-reception feature again, hold **UP (▲)** for 3 seconds again to start the reception and the regular synchronization (daily at 0:00, 3:00, 6:00 and 12:00).

ICON	Time Signal Reception Strength
 (Flashing)	Undefined data
	No Reception for the past 24 hours
	Weak signal, but can be decoded
	Strong signal

4. If the radio signal is received, the date & time will be set automatically and the radio control signal icon [  ] turns on.
5. If the clock fails to receive the time signal, it will show the [  ] icon. If the time is not correct, you may set the time manually.

### ***HOW TO SET THE CLOCK MANUALLY***

To set the clock manually, make sure the display shows the time (**not** the **ZONE**) and then press and hold **MODE**.

Now it will show the language. You may choose among English (En), German (DE), French (Fr), Italian (IT), Spanish (SP), Dutch (Du) and Swedish (SW). Press **UP (▲)** or **DOWN (▼)** to change it.

Press **MODE** to confirm. Repeat the same procedure to set the year, month, day, day-month format, 12/24 hour format, hour and minute. During the setting, press and hold will change the value rapidly.

If there is an item you do not wish to change, simply press **MODE** to bypass the item. After the last setting, pressing **MODE** will exit the setting mode and return to the clock mode.

### ***HOW TO SET THE TIME ZONE***

To set the time zone, make sure the display shows the time with the **ZONE** icon. Then press and hold **MODE**.

Press **UP (▲)** or **DOWN (▼)** to adjust value in steps of 30 min. Press and hold either button for fast advance. Press **MODE** to confirm your selection.

### ***SELECT THE CLOCK/CALENDAR DISPLAY***

Each time you press **MODE**, you may rotate from one of the following displays to the next:

- Hour: Minute: Second
- Hour: Minute: Weekday
- Hour: Minute: Weekday of the Time Zone
- Hour: Minute: Second of the Time Zone
- Day: Month

### 4.3.2 WAKE-UP ALARM FUNCTION

There are three time alarms available on the main unit:

\* **Weekday Alarm** **W**

The alarm sound will be activated and the icon will flash on weekdays (Mo-Fr) when it is armed and the alarm time is reached.

\* **Single Alarm** **S**

The alarm sound will be activated and the icon will flash when it is armed and the alarm time is reached. Once it finished, it will be disabled automatically

\* **Pre-Alarm** **PRE-AL**

The pre-alarm will be activated and the icon will flash if the temperature of channel 1 is falling to +0 °C or below.

It is programmable 15, 30, 45, 60 or 90 minutes earlier than the weekday alarm or single alarm time.

### ***ACTIVATING / DEACTIVATING THE TIME ALARMS***

1. Press **ALARM** to rotate between:

- Weekday Alarm Time (displays OFF if weekday alarm deactivated)
- Single Alarm Time (displays OFF if single alarm deactivated)
- Pre-Alarm Time (displays OFF if pre-alarm deactivated)

2. When the above alarms are displayed, pressing **UP (▲)** will activate, pressing **DOWN (▼)** will deactivate the corresponding alarm.

Note: Press **MODE** anytime during above alarm selection mode to return to normal clock display.



## **SETTING THE TIME ALARMS**

1. Press **ALARM** to select the alarm which you wish to configure.
  2. Press and hold **ALARM** until hour starts flashing in the display
  3. Set Alarm Hour:  
Press **UP (▲)** or **DOWN (▼)** to adjust. Press and hold either button for fast changes.  
Press **ALARM** to confirm your selection.
  4. Set Alarm Minutes:  
Press **UP (▲)** or **DOWN (▼)** to adjust. Press and hold either button for fast changes.  
Press **ALARM** to confirm your selection
  5. Upon completion the display will be returned to the alarm selection screen.
- Note: Pre-alarm cannot be activated if weekday alarm or single alarm is not enabled.

## ***STOP THE ALARM SOUND***

The alarm will sound for 2 minutes with increasing intensity.

To stop it, press **ALARM** during the Alarm Sound to disable the alarm.

Note: For weekday alarm, pressing **ALARM** will only disable the alarm for the current day. The alarm will be activated again the next day (if it falls within Monday to Friday). If the Alarm is not interrupted by pressing the ALARM key while the sound is active, it will repeat itself after 8 minutes for 3 times. If you want to stop the alarm in one of the 8 minute periods, you have to do as described in "Activating/Deactivating the Time Alarms".

## **5. TROUBLESHOOTING**

In case of a malfunction, always check the batteries and replace them in the main unit **and** in the sensor(s) with new ones.

Please also check below issues before contacting customer service.

<b>Issue</b>	<b>Symptom</b>	<b>Solution</b>
Main unit	Radio Controlled Time signal is not received	Place unit by the window and keep it there overnight
Remote sensor	Cannot locate remote sensor	Check batteries
		Check location
		Press and hold <b>DOWN ( ▼ )</b> button on the main unit to search for the signal from the remote sensor
		Read sections 3 and 4.2

## **6. CARE INSTRUCTIONS**

- Do not expose the device to extreme temperatures or direct sunlight over longer periods.
- Avoid blows and shocks of any kind to the device.
- For cleaning use a dry soft cloth that you have moistened with water and a mild cleaning agent. Never use volatile substances such as benzene, thinner, cleansing agents in spray cans etc.
- When the device is not being used store it in a dry area and out of the reach of small children.
- If the device is activated under extreme coldness it may occur that the display becomes illegible. As soon as it is returned to a warm environment the device will function normally.
- Please keep the user's manual and other documents delivered with the device stored carefully so that you can reference them at a later point if necessary.
- Please use only new batteries and never mix old and new batteries.
- Please also remember that old batteries should not be disposed of with household waste but should be handed in at the designated collection centres.

## **7. TECHNICAL DATA**

### **MAIN UNIT**

#### ***Indoor Temperature***

Operating range: 0°C to +50°C

Temperature resolution: 0.1°C / 0.2°F

#### ***Power***

2 x AAA size 1.5V batteries

#### ***Dimensions***

70(L) x 130(H) x 14(W) mm

### **REMOTE SENSOR**

#### ***Temperature***

Operating range with alkaline batteries: -20°C to + 60°C

Temperature resolution: 0.1°C / 0.2°F

Sampling Interval: 10 seconds

RF Transmission Frequency: 433 MHz

RF range: Maximum 30 meters

Temperature transmission cycle: approximately 45 seconds

Table stand

#### ***Power***

2 x AAA size 1.5V batteries

