

OPERATING INSTRUCTIONS



Wireless Temperature Station PTD 300 US



These operating instructions belong with this product. They contain important information for putting it into service and operating it. This should be noted also when this product is passed on to a third party. Therefore look after these operating instructions for future reference!



In this manual mentioned sensors are not included in delivery. For the installation, addressing and commissioning of this sensors, please refer to the operating instructions supplied with the unit.

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1. Introduction

Dear Customer,

Thank you for purchasing this product.

The product has been EMC-tested and thus meets the requirements of the valid national guidelines. See also FCC-Information.

In order to maintain this condition and ensure safe operation, you, as the user, have to observe this operating manual.

Prior to using the product for the first time, please read the entire operating manual and observe all operating and safety instructions.



We should already like to point out now the correct order for commissioning the products. Please also observe the installation and calibration instructions in this operating manual as well as the information about impairment of radio transmission between the sensors and base station.

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1.1. Intended use

The temperature station PTD 300 US is a high-quality temperature measuring system which processes a large quantity of temperature and air humidity data. All external sensors transmit their data per radio to the base station (433 MHz, range up to 300 ft. in open space, see chapter 14 on page 27).

You can use the following wireless sensors:

- Pool-Temperature sensor S 300PT-US (Water temperature)
- Combination sensor KS 300US (Temperature and air humidity)
- Combination sensor KS 200US (Temperature and air humidity)
- Temperature and humidity sensor ASH 2200US (Temperature and air humidity)

At all you can apply up to 9 of these sensors to the base station (e.g. 1 x KS 300US + 8 other sensors).

Additional a temperature and air humidity sensor for measuring the indoor temperature and air humidity is integrated in the base station.

The information of the base station serve only the purpose of orientation. The manufacturer does not assume any responsibility for incorrect displays, measuring values or any consequences which may result from these.

The product is intended for private use. It is not suited for medical purposes or public information.

The components of this product are not toys. Install all components in such a way that children have no access to them.

The product is battery-operated.



Any other use than that described above may lead to damage to the product or to other danger.

Read the complete operating manual carefully. It contains much important information about the installation and operation.

2. Scope of delivery

- Temperature station PTD 300 US
- Plastic base for temperature station
- Operating instructions
- 3 x 1.5 V AA cells

3. Terminology



An exclamation mark in a triangle indicates important instructions in the operating manual which must be observed under all circumstances.



You will see the “hand” symbol for special tips and instructions concerning operation.

4. Features and functions

4.1. Displaying the indoor temperature and air humidity

- Temperature display in °F, °C
- Can be switched to display internal dew point
- Storage of minimum/maximum temperature since last reset
- Storage of minimum/maximum air humidity since last reset
- Comfort zone indicator
- Temperature tendency

4.2. Display of one of a maximum of 9 outdoor sensors (temperature and air humidity)

- Display of the data of the combination sensor KS 300US/KS 200US or 8 outdoor sensors for temperature/air humidity (ASH2200US, S 300PT-US)
- Display of temperature or dewpoint
- Storage of minimum/maximum temperature since last reset (except S 300PT-US, here occurs the storage of the extremely values accessory for last day, last week and last month)
- Storage of minimum/maximum air humidity since last reset
- Comfort zone indicator, individual adjustable temperature comfort- range for the S 300PT-US

4.3. Frost warning

- Audible and visual alarm at temperatures below 39.2°F/+4°C at one of the actual displayed temperature sensors

4.4. Temperature alarm

- Audible and visual alarm at temperatures beyond a user defined temperature range. This range can be defined for every sensor separately.

5. Safety instructions



Damage caused by non-observance of this operating manual can lead to forfeiture of the warranty! We shall not assume any liability for subsequent damage!

We shall not assume any liability for damage to items or persons caused by improper handling or non-observance of the safety instructions! In such cases, any guarantee claims shall become null and void.

Dear Customer, the following safety and hazard notices not only serve the protection of your health but also the protection of the appliance. Please read the following points carefully!

- Do not use this product in hospitals or medical institutions. Although the outdoor sensor only emits relatively weak radio signals, these may cause interference to life-support systems. The same can also apply in other areas.
- The base station is only suited for dry, indoor premises. Do not expose it to direct sunlight, extreme heat, cold, dampness or humidity.
- For safety and licensing reasons, it is not permitted to convert or modify the product.
- Do not leave the packaging material lying around. Plastic foil and bags, polystyrene parts etc. are dangerous toys in the hands of children.
- Handle the product with care! Blows or impact, or dropping it even from a small height will damage it.

6. Battery and environment instructions

- Batteries do not belong in the hands of children.
- Observe the right polarity when inserting the batteries/rechargeable batteries.
- Do not leave batteries lying around. Pets or small children may swallow them. If they are swallowed, contact a doctor immediately.
- Leaking or damaged batteries/rechargeable batteries may lead to injury to the skin. For this reason, use suitable protective gloves when changing them.
- Make sure that batteries or rechargeable batteries are not thrown into the fire or short-circuited. There is a likelihood of explosion!
- Never dismantle batteries/rechargeable batteries!
- Do not recharge normal batteries. There is a risk of explosion!
- If the product is not used for longer periods of time (e.g. in case of storage), please remove the inserted batteries/rechargeable batteries in order to prevent damage caused by leaking batteries/rechargeable batteries.

7. Preparation for operation, commissioning



Please observe:

First of all, put all available outdoor sensors into operation (insert batteries) and then the base station itself.

If you proceed in the opposite order, it could occur that the base station does not detect all the existing outdoor sensors.

We always recommend you first of all try out the base station with all outdoor sensors in a room before installing the outdoor sensors in the open air. However, the distance between the base station and the outdoor sensors should be at least 6 ft. in order to avoid interference.

If you notice that one outdoor sensor is out of range after installation, you can assume that radio reception is not sufficient (and that there is no defect in the outdoor sensor).

This initial function test will save extensive and time-consuming error searches afterwards.

7.1. Commissioning the base station

- Open the battery compartment on the back of the base station.
- Insert three batteries (AA cells) with the correct polarity into the battery compartment. Use preferably alkaline batteries..



It is possible to use rechargeable batteries but these reduce the operational life due to their lower voltage / capacity.

- Close battery compartment.
- After you have inserted the batteries, all segments of the LCD are displayed briefly, followed by a version number.
- After that, the base station activates the synchronization mode for 10 minutes.

During this time the display shows "SY", thereunder appears a counter, that counts down the 10 minutes.

- After synchronizing the display shows the following data:

Upper row („Display panel A”, see next page):

- If no sensor received: Temperature of the integrated sensor (indoor temperature)
- If one sensor received: Temperature of this sensor
- If more than one sensor received: Temperature of the sensor with address 8 (this is the pool sensor S 300PT-US in factory setting), or with the lowest sensor address.



If you have changed the address on the pool sensor S 300PT-US, you have to change the display panel A to this address (1...8, see chapter 9.2.1.).

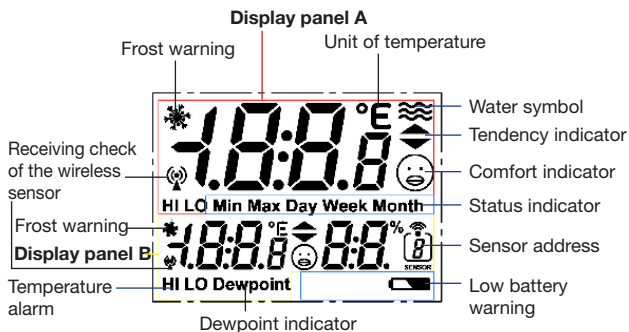
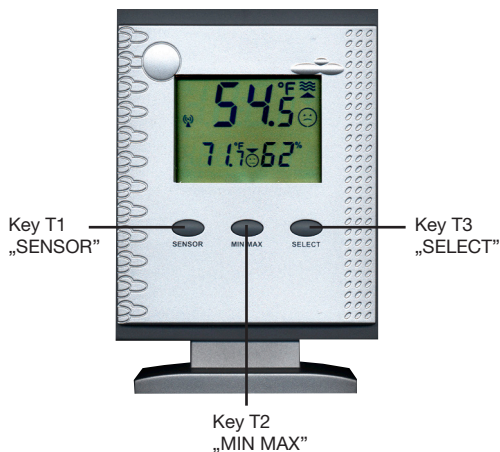
Lower row ("Display panel B", see next page):

- Temperature and air humidity of the integrated sensor

Additional you can see the associated comfort indicator and tendency indicator.

- You can either hang the base station on a wall (there is a corresponding opening on the back) or place it on a level surface with the installation base.
- If you want to use the foot, first put the booth lower spikes of the foot into the supports on the back side of the base station (below the battery compartment). Then, swing the foot a little bit to the front till the two other spikes lock into the catch supports at the bottom of the base station.

8. Controls and indicators



Description of the used symbols

Frost warning	The temperature at the location of the displayed sensor is below 39.2°F / +4°C
Unit	Alternatively display in °F or °C
Water symbol	Appears only by receiving the outdoor sensors with the address 1...8, appears not at displaying the indoor temperature or the combined sensor (Address 9)
Tendency indicator	Temperature tendency: rising or falling
Comfort indicator	In display panel A: Comfort range, only depends on temperature (see chapter 10) In display panel B: Comfort range, depends on temperature and air humidity (see chapter 17)
Status indicator	Marking of actual display-functions
Sensor address	Shows number (address) of the displayed outdoor sensor
Battery warning	Low battery warning of the base station
Dewpoint indicator	Indicate the dewpoint (alternatively to temperature, only for display panel B)
Temperature alarm	Indicator for exceeding the upper (HI) respectively lower (LO) limit value of the temperature
Receiving check	Marking of correct receiving the particular outdoor sensor

9. Operation

After Installation accordingly chapter 7 the base station is ready for operation with the essential functions. You can operate it accordingly the following operation instructions.

If you want to use the extended functions, please configure the unit like described in chapter 10.

9.1. Functions of the keys

Main functions

Key	Description	Main function
T1	SENSOR	Choice of sensors
T2	MIN MAX	Displaying of the Min/Max values
T3	SELECT	Switch for temperature/dewpoint; °F/°C

Basic operation

You can operate the unit with the three keys via short or long key-strokes:

- Short keystroke: Press for shorter than 1 second (et sqq.: "short")
- Long keystroke: Press for more than 3 seconds (et sqq.: "long")

If you don't press any key for 10 seconds during the configuration (see chapter 10), the unit goes back to normal mode, but the last adjustment remains in the display

9.2. Selecting of the sensors to display



- For allocation and configuration of the sensor addresses please read the manual of the concerned sensor.
- The combination sensor KS 200US/KS 300US have a fixed address, he is always displayed with address "9".
- At displaying the integrated sensor no address is indicated.

9.2.1. Display panel A - Pool sensor



The display panel A is usually intended for displaying the values of the pool sensor S 300PT-US.

If required, or, when you not use a S 300PT-US, you can allocate any sensor to this panel.

- To choose another sensor, press the key "SENSOR" long till the display in the display panel B disappears and at right the symbol for the sensor address is blinking.
- Now press the key "SENSOR" frequently short, till the required sensor address and in display panel A the data of this sensor is displayed.
- If you don't press any key for 10 seconds or shortly press the key "MIN/MAX" or "SELECT", the device goes back to normal mode. Now the data of display panel B appears again (indoor sensor or the selected outdoor sensor).



- You can only choose active sensors, that means, the base station must already received data from this sensor at earlier time. The unit skips not occupied addresses.
- By choosing sensors 1...8 the water symbol appears.
- By choosing the combination sensor the sensor address "9" appears.
- By choosing the indoor sensor no sensor address appears.

9.2.2. Display panel B - Indoor or outdoor sensor



In the base setting the panel B shows the indoor temperature and the indoor air humidity.
If required, you can allocate any sensor to this panel.

- For choosing a sensor, press the key "SENSOR" frequently short, till the required sensor address and in display panel B the data of this sensor is displayed.



- You can only choose active sensors, that means, the base station must already received data from this sensor at earlier time. The device skips not occupied addresses.
- By choosing the combination sensor the sensor address "9" appears.
- By choosing the indoor sensor no sensor address appears.
- If the device is still in the selection mode for display panel A, please wait either, till the panel B is displayed again, or press the key "SENSOR" long, till display panel B appears again. Now the sensor selection for display panel B is activated.

9.3. Displaying MIN/MAX values

For the measurement values of the indoor/outdoor temperature and indoor/outdoor humidity, the minimum and maximum figures reached since the last clearance (reset) of data are stored.

Accessory you can call the MIN/MAX values of the sensor, which is assigned to display panel A, within MIN/MAX values of the last day (24 hours, "Day"), the last week (7 days, "Week") and the last month (30 days, "Month").



If you assign another sensor to display panel A, the stored MIN/MAX values of the previously assigned sensor are deleted! The storage begins new from the moment of the new assignment!



If you have selected "Dewpoint" for display panel B, then the storage of the MIN/MAX values occurs as dewpoint!

- Press the key "MIN/MAX frequently short, till the required value appears.

The sequences of the display panels A and B:

	Sequence of display panel A (Pool sensor)	Sequence of display panel B
1	MIN value since reset	MIN value since reset
2	MAX value since reset	MAX value since reset
3	MIN value last day (Day)	MIN value since reset
4	MAX value last day (Day)	MAX value since reset
5	MIN value last week (Week)	MIN value since reset
6	MAX value last week (Week)	MAX value since reset
7	MIN value last month (Month)	MIN value since reset
8	MAX value last month (Month)	MAX value since reset
9	Current value	Current value



- While retrieving the MIN-/MAX values for display panel A, also the display panel B respectively changes between MIN- and MAX value, but only the MIN-/MAX values since last clearance (reset) are displayed!
- After choosing a storage display (MIN-/MAX value), you can successive call the particular extreme value of all sensors into display panel B by pressing the key "SENSOR" frequently short.
- The device goes back to the display of current value after "MAX value last month" in display panel A.

Deleting MIN-/MAX values



All stored MIN-/MAX values of all sensors will be deleted together!

- Press the key "MIN MAX" long.
- The hole display disappears, after this "rEs" appears for approx. 2 seconds.
- After this the display goes to the normal mode before clearance. The current values are immediately taken over as the new MIN-/MAX values.

9.4. Selecting temperature metered value (Temp./Dewpoint)

For the reading in display panel B you can switch between displaying the temperature and the associated dewpoint.

Change between temperature and dewpoint

- Press the key "SELECT" shortly. Temperature value in display panel B changes between temperature and dewpoint. At dewpoint choice accessorily "Dewpoint" appears in the display.

9.5. Frost warning

The frost warning is always active. This function warns, if the temperature of the sensor, which is displayed in the particular display panel, is below 39.2°F.

First time after temperature is below 39.2°F, the frost warning symbol ❄️ in the according display panel is blinking for 30 seconds, after this the frost warning symbol remains on permanently.

Frost warning is turned off after the temperature exceeds the value of 41°F.

If required, you can add the frost warning with an audible warning (how to activate, see chapter 10.3).



- The alarm value of 39.2°F is fixed and not adjustable.
- The frost warning is only active for the displayed sensors (in display panel A and B), that means, if the temperature of not displayed sensors fall below 39.2°F, no alarm will be activated.

9.6. Activate temperature alarm

For any sensor you can set up high and/or low temperature limit. If the temperature exceeds this high or low temperature limit, the temperature alarm is activated.

- Status indicator "**HI**": upper temperature limit is exceeded
- Status indicator "**LO**": lower temperature limit is fallen short

Are the limits occupied with values according chapter 10.2, the temperature alarm is automatically activated.

If you want to deactivate the alarm, you have to set the limit to "--.-" (see Chapter 10.2).

If required, you can add the temperature alarm with audible warning (how to enable, see chapter 10.3).



- The temperature alarm is only active for the displayed sensors (in display panel A and B), that means, if the temperature of not displayed sensors is below or higher than this limits, no alarm will be activated.

9.7. Switch off audio warning during alarm

- Press any key, the audible warning turns off immediately.



The function of audio warning remains also after turning off. The buzzer is blocked, till the reason of the alarm is eliminated for minimum one measuring. If eg. the frost warning permanent exists, the buzzer doesn't sounds after the next temperature measuring of the particular sensor. Only if the reason of the alarm does not longer exists (frost warning or temperature alarm) for minimum one measuring value, the audio alarm is enabled again.

10. Configuration



10.1. Selecting temperature unit

The temperature unit can be switched between displaying in °F or °C.

°F/°C switching

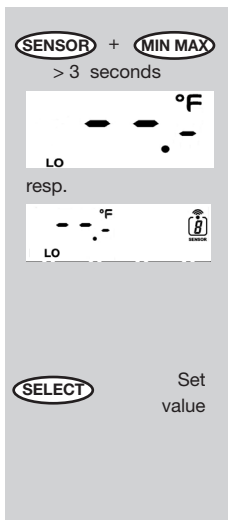
- Press the key "SELECT" for approx. 3 seconds. In both display panels the unit changes from °F to °C and vice versa.

10.2. Setting the temperature alarm values (limits)


For any sensor you can set-up a high and/or low temperature limit. If the limit is exceeded, a temperature alarm is activated.

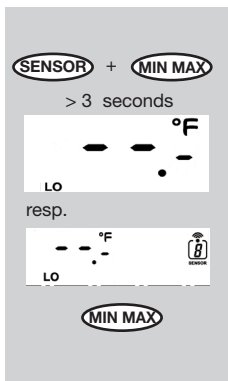


- In factory setting the temperature alarm is disabled (no limits set).
- The adjustable range is (independent of the sensor type) -21.8°F up to +175.8°F. Consider the measuring limits of the particular sensor when setting the alarm limits.
- If you want adjust only high or low limit, set the particular other limit to "– .–" (disabled). This setting follows the value "+175.8°F".
- The temperature alarm is only active for the displayed sensors (in display panel A and B), that means, if the temperature of not displayed sensors is below or higher than this limits, no alarm will be activated.



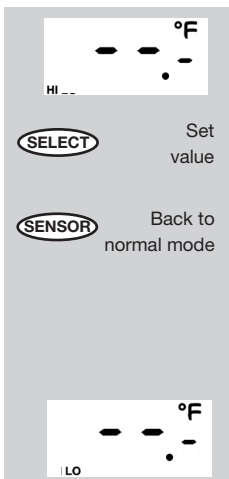
Adjust low temperature alarm limit

- Press the keys "SENSOR" and "MIN MAX" together for approx. 3 seconds.
 - Now the low limit of the sensor, which was assigned to the display panel A, and the symbol "LO" appears.
 - If you want to adjust the low limit of one of the other sensors, press the key "SENSOR" frequently short, till the required sensor address appears in display panel B.
-  In factory setting are no limits preset, this is marked with "- - .-".
- Adjust the required value for the low limit by pressing the key "SELECT" frequently (shortly or continued).
 - Go ahead with adjusting resp. checking the high limit.



Adjust high temperature alarm limit

- Press the keys "SENSOR" and "MIN MAX" together for approx. 3 seconds.
- Now the low limit of the sensor, which was assigned to the display panel A, and the symbol "LO" appears.
- If you want to adjust the limit of one of the other sensors, press the key "SENSOR" frequently short, till the required sensor address appears in display panel B
- Now press the key "MIN MAX" shortly. The status indicator changes to "HI".



In factory setting are no limits preset, this is marked with "--.-".

- Adjust the required value for the high limit by pressing the key "SELECT" frequently (shortly or continued).

- Go back to the normal mode by pressing the key "SENSOR" frequently short

or,

wait without any keystroke, till the device goes back to the normal mode.

Disable temperature alarm

Adjust the temperature limit of the particular sensor to "--.-" (follows after "+175.8°F").

10.3. Enable/Disable the audio warning

The integrated buzzer generates an audio warning, if the audio warning option is enabled and a frost warning or a temperature alarm is triggered. If alarm is triggered first time, the audio warning sounds for 30 seconds, thereafter in the rhythm of 30 Seconds for respectively approx. 3 seconds. The audio warning will be enabled/disabled together for all sensors.

SELECT + **MIN MAX**

> 3 seconds



SELECT + **MIN MAX**

> 3 seconds



Enable audio warning

- Press the keys "SELECT" and "MIN MAX" together for approx. 3 seconds.
- The display disappears shortly and thereafter "ON" appears in both display panels.

Thereafter the device goes back to the normal mode.

Disable audio warning

- Press the keys "SELECT" and "MIN MAX" together again for approx. 3 seconds.
- The display disappears shortly and thereafter "OFF" appears in both display panels.

Thereafter the device goes back to the normal mode.

10.4. Setting the comfort temperature range of display panel A

The display panel A is usually intended for displaying the values of the pool sensor S300PT-US. You can set an individual temperature range, which shall feel as comfortable.

The comfort symbol in display panel A shows, that the temperature is within the required range. The comfort range is defined by the adjustable high and low limits of temperature.

The meanings of the comfort indicator:

- ☺ Temperature is within the comfort range
- ☹ Temperature is less than 3.6°F beyond the comfort range.
- ☹ Temperature is more than 3.6°F beyond the comfort range.



- The factory setting of the comfort range is from 77°F to 82.4°F.
- The adjustable range is (independent of the sensor) 41°F up to 158°F. Consider the measuring limits of the particular sensor when setting the comfort range.

SENSOR + **SELECT**
> 3 seconds

LO 80.2°F ☺

SELECT

Set
value

- Press the keys "SENSOR" and "SELECT" together for approx. 3 seconds.
- The display shows the previous low limit of the comfort range, the comfort symbol ☺ and "LO" in panel A.
- Adjust the required value for the low limit by pressing the key "SELECT" frequently (short or continued).

MIN MAX

Change
to HI
Set
value

SELECT

SENSOR

Back to
normal mode

- Thereafter press the key "MIN MAX" shortly. The status indicator changes to "HI".
- Adjust the required value for the high limit by pressing the key "SELECT" frequently (short or continuing).
- Go back to the normal mode by pressing the key "SENSOR" frequently short

or,

wait without any keystroke, till the device goes back to the normal mode.

11. Other functions and settings

11.1. Commissioning of new sensors

You can add new sensors into the system at anytime.

Consider the maximum number of 9 radio sensors (incl. combined sensor) and avoid double addressing.

- The automatic apply of new sensors is carried out two times a day (at intervals of 12 hours) during a regular transmitter search.
- You can also assimilate new sensors by commissioning the base station once again.

In this case consider:

The device is setting back to the factory settings, all stored data will be deleted!

11.2. Reset to factory setting

The factory setting is:

- Display panel A: Pool sensor or other sensor with address 8
 - Display panel B: Indoor sensor
 - No alarm limits set
 - Comfort range at display panel A: 77°F to 82.4°F.
 - Audio warning: turned off
-
- Open the battery compartment, remove the batteries and insert the batteries again with the correct polarity.
 - All user settings will be set to the factory setting.
 - All stored MIN-/MAX data will be deleted.
 - The device starts now like described in chapter 7.

11.3. Receiving indicator

- If the selected sensor is received, the antenna symbol (see above) appears constant.
- If the device can't receive the selected sensor for more than 40 minutes, the antenna symbol blinks.
- If the device can't receive this sensor for more than 12 hours, the antenna symbol disappears and the associated value is displayed as "- - .-".

11.4. Frost warning ❄️


This function warns, if the temperature of the sensor, which is displayed in the particular display panel, is below 39.2°F/+4°C (see more in chapter 9.5). In the particular display panel the frost warning symbol (see above) appears.

12. Changing battery



Depending on which batteries or rechargeable batteries you use, the replacement interval can be very different. High-quality alkaline batteries keep the longest, rechargeable batteries or cheap zinc-carbon batteries require more frequent changing.

12.1. Base station

If the battery flat symbol appears in the display (), the batteries have to be replaced with new ones.

- Always replace the whole set of batteries.
- Do not mix full with “half-full” batteries.
- Always use four batteries of the same type and manufacturer.
- Do not mix batteries with rechargeable batteries.
- As already mentioned, rechargeable batteries operation is possible, the durability is, however, appreciably lower than with batteries.
- For changing the batteries, proceed as described in chapter 7. 1.



Please observe the following:

After replacing the batteries, all data, values stored in the base station (e.g. settings, MIN-/Max data etc.) are deleted and have to be entered again.

12.2. Combination sensor, outdoor sensors, pool sensor

When the display of the sensor concerned fails for more than 24 hours, the batteries are to be replaced with new ones as described in the particular manual.



Check as whether there is possibly some disturbance in the radio transmission which is the cause for the failure of the data transmission. In this case also, there will be no indication in the display of the base station.

The cause could be, for example, a metal object in the radio path (e.g., a parked vehicle).

13. Trouble shooting



Observe the safety instructions contained in these operating instructions!

Problem	Remedy
No reception	<ul style="list-style-type: none">• The distance between the base station and outdoor sensors is too great. Alter the position of the outdoor sensors.• Objects or shielding materials are obstructing the radio reception. Alter the position of the outdoor sensors and the base station.• The batteries of the outdoor sensors are too weak or flat. Insert new batteries into the sensors as an attempt.• Another transmitter on the same or neighboring frequencies is disturbing the radio signal of the outdoor sensors. This can be, for example, radio headphones, radio loudspeakers or similar devices. Such products are not usually operated constantly; the radio reception can, for example, be perfect the next day; this makes the search for the cause more difficult. If possible, set another frequency on the instruments which can eliminate the reception problems of the weather station.
Disturbance of other instruments through the outdoor sensors	<ul style="list-style-type: none">• The outdoor sensors transmit their data to the base station approx. every 3 minutes for a period of 0.1 (100 ms) seconds. In this short period, disturbances in other devices are also possible. For example, a very short disturbance signal can be audible from a radio head phone every 3 minutes.

(continuation see next page)

Problem	Remedy
Problems with the Synchronisation	<ul style="list-style-type: none"> <li data-bbox="360 176 895 375">• When inserting the batteries into the outdoor sensors and the base station (observe this order exactly), these devices are in synchronization mode. A data telegram is transmitted here every 4 seconds which accelerates the recognition and registration of the outdoor sensors at the base station. <p data-bbox="381 412 895 642">To enforce new synchronization, remove the batteries from the base station and outdoor sensors. After that, wait at least 60 seconds before you insert the batteries into the outdoor sensors again and, lastly, into the base station (observe this order without fail – first of all insert the batteries into all existing outdoor sensors, only then into the base station.</p> <p data-bbox="381 678 895 762">In doing so, however, all values/data which the base station has stored (e.g. minimum values, maximum values and settings etc.), are lost.</p> <ul style="list-style-type: none"> <li data-bbox="360 799 895 883">• Before you position the outdoor sensors, for example in your garden, carry out a function test as described in chapter 7.

14. Range

The transmission range of the radio signals to the base station is 300 ft. under optimum conditions. This is often described as the “free field range”.



This ideal arrangement (e.g. base station and outdoor sensor on a smooth, level field without trees, houses etc.) is, however, never found in practice.

Normally, the base station is set up in the house, the combination in the garden and further outdoor sensors, for example in ancillary buildings or garage.

The range can be reduced considerably partly through:

- walls, reinforced steel ceilings
- coated/layered insulation glass panes
- vehicles
- trees, bushes, earth, rocks
- closeness to metal & conductive objects (e.g. radiators)
- closeness to the human body
- broadband disturbances, e.g. in residential area (DECT telephones, mobile telephones, radio head-phones, radio loudspeakers, other radio weather stations, baby phones etc.)
- closeness to electric motors. Transformers, network parts pr computers
- closeness to poorly shielded or openly operated computers or other electrical devices



As the local circumstances are different at every place of set-up, a certain range cannot be guaranteed.

If the base station is receiving no data from the combination sensor or any additionally existing outdoor sensors (in spite of new batteries), reduce the distance between the outdoor sensors and the base station, change the place of set-up

Observe chapter 7 and 13 of these operating instructions..

15. Maintenance and cleaning

15.1. General

Check the technical safety of the product regularly, e.g. damage to the housing.

It can be assumed that operation is no longer ensured without risk if

- the device shows visible damage
- the device is no longer functional
- after longer periods of storage under unfavorable conditions or
- after heavy transport stress

Before cleaning or servicing the device, observe the following safety instructions without fail:



Remove the batteries before cleaning, servicing or carrying out repair work.

There are no parts in the interior requiring servicing; the device may not be opened.

Repairs may only be carried out by a specialist who is familiar with the associated hazards and relevant regulations for the device.

15.2. Cleaning base station

Dust can be removed very easily with a vacuum cleaner and a clean, soft brush. Keep the opening of the vacuum cleaner close to the base station (do not come into contact, scratching possible!) and remove the dust with the brush. The dispersed dust will be sucked in by the vacuum cleaner. Use a soft, dry, lint-free cloth for cleaning the exterior of the product.

For greater contamination, you can use a cloth slightly moistened with warm water.

Never use aggressive cleaners or chemical solutions as the surface of the device or its functionality could be damaged as a result.

16. Handling



Observe all the safety precautions in these operating instructions!

16.1. General

The product may not be opened or taken apart (except for the work described in these operating instructions, e.g. change of battery).

There are no parts to be maintained by the user in the inside of the product.

The product will be damaged even if dropped from a low height.

16.2. Base station

Avoid the following adverse ambient conditions during operation or transport:

- moisture or excessive humidity
- extreme cold or heat direct sunlight
- dust or flammable gases, vapours or
- heavy vibration
- strong magnetic fields, such as, for example, in the vicinity of machines or speakers

Never use the product immediately if it has been taken from a cold area to a warm area. The condensation developing could in certain cases destroy the device.

Wait until the base station has reached room temperature. This can take some hours!

A place for set-up has to be selected so that the base station stands securely and cannot fall down. There is danger of injury due to its extreme heaviness.

Valuable or easily scratched furniture surfaces should be protected from damage by suitable mats before setting up the base station.

17. Terminology

17.1. Comfort indicator (only display panel B)

The symbol of the comfort indicator (the three different “smiles” ☺ ☹ ☹) reflect the room climate whereby the weather station works according to the following table:

Temperature	air humidity (%)									
< 64,4°F	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹
64.4-67.9°F	☹	☹	☹	☺	☺	☺	☺	☺	☺	☹
68.0-71.5°F	☹	☹	☹	☺	☺	☺	☺	☺	☺	☹
71.6-75.1°F	☹	☹	☺	☺	☺	☺	☺	☹	☹	☹
75.2-78.7°F	☹	☺	☺	☺	☺	☺	☹	☹	☹	☹
78.8-82.3°F	☹	☺	☺	☺	☺	☺	☹	☹	☹	☹
over 82.4°F	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹

Dependent of the ratio temperature to humidity, there are clearly delimited areas which are defined as comfortable or uncomfortable climate.

For example, you feel humidity of under 30% to be too dry at a temperature of 77° F (e. g. heating air) and humidity of over approx. 60% to be humid.



- The comfort indicator in display panel A is controlled according to the defined comfort temperature range (see chapter 10.4.)
- For sensors, which don't transmit air humidity values, the display don't show the comfort indicator.

17.2. Dewpoint

This concerns a temperature which is dependent on the coincidence of a certain temperature and a certain humidity.

The condensation of the humidity begins at this temperature point, the humidity condenses and comes down as liquid (mist, vapour).

If the dewpoint for water vapour lies at below 32° F, condensation will take place as snow or frost.

18. Disposal

18.1. General

Dispose of the unusable product according to valid legal regulations

19. Specifications

Temperature range indoors: 32°F to 140°F (0°C to +59.9°C)
Resolution: 0.1 °F
Accuracy: ±1.4 °F
Measurement range rel. humidity indoor:.....0 % - 99 %
Resolution:1 %
Accuracy:±5 % (30 % to 70 %)
Measuring interval of the indoor sensor: 10 minutes
Number of external sensors:max. 9
Transmission interval of the outdoor sensors:.....approx. 3 minutes
Transmission frequency:..... 433.92 MHz
Range in the free field:..... up to 300 ft (see chapter 14)
Dewpoint displaying:for sensors with temperature and air humidity
Frost warning:.....at temperatures $\leq 39.2^{\circ}\text{F}/+4^{\circ}\text{C}$, automatic
Temperature alarm:
.....for every sensor, threshold adjustable
Comfort indicatorfor both display panels separately,
..... comfort temperature range for the pool sensor
..... (or other with address 8) adjustable
Voltage supply:3 x 1.5 V AA/LR6/Mignon cells
Environment temperature range:32 °F to 122 °C
Display viewing area (w x l):2.2 x 1.6 inch
Dimension (w x l x d):
.....4.1 x 5.7 x 2.2 inch (with base)
..... 4.1 x 5 x 1.3 inch (without base)

20. FCC information

FCC ID: RNT-PTD300US

Changes or modifications not expressly approved in writing by eQ-3 Limited may void the user's authority to operate the equipment.

NOTE: 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.

The internal antenna used for this mobile transmitter must provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

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.

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