

MALIBU
WIRELESS POOL THERMOMETER
 Instructions Manual
 Cat. No. 30.3053.IT

Thank you for choosing this advice from TFA.

BEFORE YOU USE IT

Please be sure to read the instruction manual carefully. This information will help you to familiarise yourself with your new device, learn all of its functions and parts, find out important details about its first use and how to operate it, and get advice in the event of faults.

Following the instruction manual for use will prevent damage to the device and loss of your statutory rights arising from defects due to incorrect use.

We shall not be liable for any damage occurring as a result of not following these instructions. Likewise, we take no responsibility for any incorrect readings and for any consequences which may result from them. Please look after this manual for future reference. Please take particular note of the safety advice!

SCOPE OF SUPPLY:

- Temperature station (basic station)
- Outdoor transmitter
- Pool sensor
- Instruction manual

FIELD OF OPERATION AND ALL THE BENEFITS OF YOUR NEW INSTRUMENT AT A GLANCE:

- For pool and pond
- Water temperature wireless via pool sensor with 100 mm measuring depth
- Outdoor temperature wireless via outdoor transmitter
- Transmission range up to 100 m (free field)
- Indication of indoor temperature and humidity
- Maximum and minimum values
- Dew point
- Radio controlled clock
- Very simple installation, no cables required

FOR YOUR SAFETY:

- The product is exclusively intended for the field of application described above. The product should only be used as described within these instructions.
- Unauthorised repairs, modifications or changes to the product are prohibited.
- The product is not to be used for medical purpose or for public information, but is intended solely for home use.



Caution!
 Risk of injury:

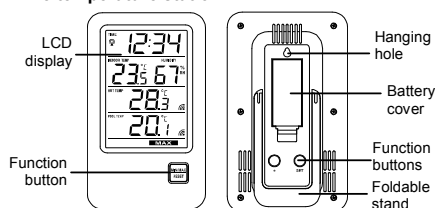
- Keep the instruments and the batteries out of reach of children.
- Batteries must not be thrown into the fire, short-circuited, taken apart or recharged. Risk of explosion!
- Batteries contain harmful acids. Low batteries should be changed as soon as possible to prevent damage caused by a leaking battery. Never use a combination of old and new batteries together or batteries of different types. Wear chemical-resistant protective gloves and glasses when handling leaked batteries.

! Important information on product safety!

- Do not expose the instrument to extreme temperatures, vibration or shock.
- The outdoor transmitter is protected against splash water, but is not watertight. Choose a shady and dry position for the outdoor transmitter.
- When water freezes remove the pool sensor.

ELEMENTS

The temperature station

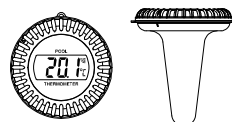


The outdoor transmitter



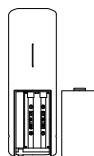
- Remote transmission of outdoor temperature to temperature station by 868 MHz signal
- Wall mounting case
- Mounting at a sheltered place. Avoid direct rain and sunshine

The pool sensor



- Remote transmission of water temperature in pool or pond to temperature station by 868 MHz signal
- Waterproof case

HOW TO INSTALL AND REPLACE BATTERIES IN THE OUTDOOR TRANSMITTER

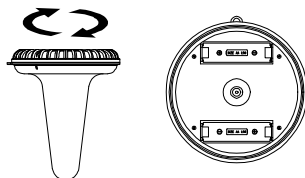


The outdoor transmitter uses 2 x AAA, IEC LR3, 1.5V batteries. To install and replace the batteries, please follow the steps below:

1. Slide the battery cover downwards and remove it.
2. Insert the batteries, observing the correct polarity (see marking).
3. Replace the battery cover.

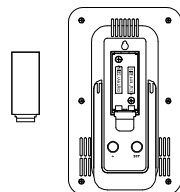
HOW TO INSTALL AND REPLACE BATTERIES IN THE POOL SENSOR

The pool sensor uses 2 x AA, IEC LR6, 1.5V batteries. To install and replace the batteries, please follow the steps below:



1. Hold the body of the pool sensor and unlock the upper part by turning it counter clockwise and separate it carefully from the body.
2. Insert batteries observing the correct polarity (see marking).
3. Screw the two parts together again. Ensure that the cover is flat and sufficiently tight secured (markings should correspond). This will prevent water from entering the battery compartment and subsequently damage the unit.

HOW TO INSTALL AND REPLACE BATTERIES IN THE TEMPERATURE STATION



The temperature station uses 2 x AAA, IEC LR3, 1.5V batteries. To install and replace the batteries, please follow the steps below:

1. Open the battery compartment by pushing the battery cover upwards with your thumb. Insert batteries observing the correct polarity (see marking). Replace compartment cover.
2. Replace compartment cover.

SETTING UP

1. First, insert the batteries in the outdoor transmitter (see "To install and replace batteries in the temperature transmitter" above).
2. Then, insert the batteries in the pool sensor (see "To install and replace batteries in the pool sensor" above)
3. Within 15 seconds of powering up the outdoor transmitter and pool sensor, insert the batteries in the temperature station (see "To install and replace batteries in the temperature station" above). Once the batteries are in place, all segments of the LCD will light up briefly. Following the indoor temperature/humidity and the time as 00:00 will be displayed. If this information is not displayed on the LCD after 60 seconds, remove the batteries and wait for at least 60 seconds before reinserting them. Once the indoor data is displayed user may proceed to the next step.
4. After the batteries are inserted, the temperature station will start receiving data signal from the outdoor transmitter and pool sensor. The outdoor temperature data should then be displayed on the temperature station. If this does not happen after 5 minutes, the batteries will need to be removed from all units and reset from step 1.
5. In order to ensure sufficient 868 MHz transmission however, the distance between the temperature station and the outdoor transmitter should not be more than 100 meters and 25 meters to the pool sensor (in water). (see notes on "Positioning" and "868 MHz Reception").

Note:

In the event of changing batteries of the units, ensure the batteries do not spring free from the contacts. Always wait at least 1 minute after removing the batteries before reinserting, otherwise start up and transmission problems may occur.

6. Once the outdoor data reception period is completed, the DCF tower icon in the clock display will start flashing in the upper left corner. This indicates that the clock has detected that there is a radio signal present and is trying to receive it. When the time code is received, the DCF tower becomes permanently lit and the time will be displayed.

RADIO-CONTROLLED TIME RECEPTION

The time base for the radio controlled time is a Cesium Atomic Clock operated by the Physikalisch Technische Bundesanstalt Braunschweig. It has a time deviation of less than one second in one million years. The time is coded and transmitted from Mainflingen near Frankfurt via frequency signal DCF-77 (77,5 kHz) and has a transmitting range of approximately 1,500 km. Your radio-controlled clock receives this signal and converts it to show the precise time. 'Changeover from summer time or winter time is automatically. The quality of the reception depends greatly on the geographic location. In normal cases, there should be no reception problems within a 1.500 km radius of Frankfurt.

DCF reception is done twice daily at 02:00 and 03:00 am. If the reception is not successful at 03:00 am, then the next reception takes place the next hour and so on until 06:00am, or until the reception is successful. If the reception is not successful at 06:00 am, then the next attempt will take place the next day at 02:00 am.

Please take note of the following:

- The recommended distance to any interfering sources like computer monitors or TV sets is a minimum of 1.5 - 2 meters.
- Within Ferro-concrete rooms (basements, superstructures), the received signal is naturally weakened. In extreme cases,

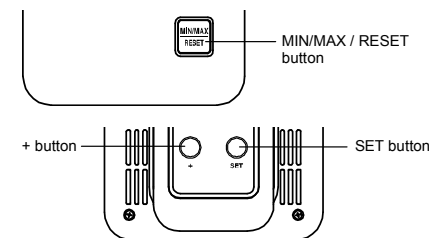
please place the unit close to a window and/ or point its front or back towards the Frankfurt transmitter.

- During nighttime, the atmospheric disturbances are usually less severe and reception is possible in most cases. A single daily reception is adequate to keep the accuracy deviation under 1 second.

FUNCTION BUTTONS:

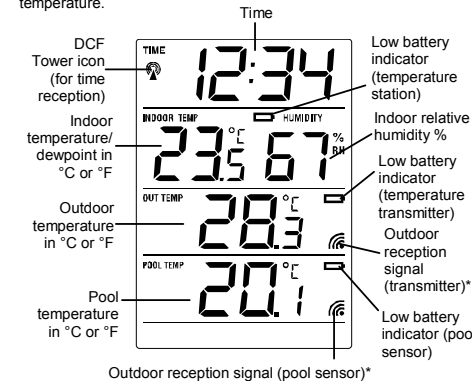
Temperature station:

The device has 3 easy to use function buttons: 1 button on the front, and 2 buttons on the back



LCD SCREEN

The LCD screen is split into 4 sections displaying the information for time, indoor temperature and humidity, outdoor temperature and pool temperature.



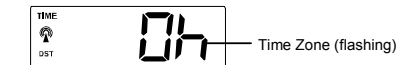
* When the signal is successfully received by the temperature station, the outdoor reception icon will be switched on. (If not successful, the icon will not be shown on LCD). The user can then easily see whether the last reception was successful (icon on) or not (icon off). On the other hand, the short blinking of the icon shows that a reception is currently taking place.

MANUAL SETTINGS

- Time zone setting
- Time reception ON/OFF setting
- 12/24-hour setting
- Manual time setting
- °C/°F temperature setting
- Factory reset setting (FAC)

Press and hold the SET button for about 3 seconds to enter the setting mode:

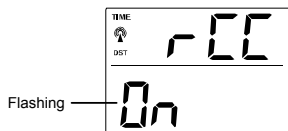
TIME ZONE SETTING



- The time zone default is 0h. To set a different time zone:
1. The value of the actual set time zone will be flashing.

- Using the + button, set the time zone. The range runs from -2h to +5h in consecutive 1 hour intervals.
- Confirm with the SET button and enter the "Time reception ON/OFF setting".

TIME RECEPTION ON/OFF SETTING

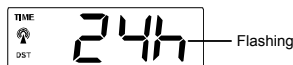


In areas where no DCF-77 time is possible, you also have the possibility to deactivate the DCF reception manually (OFF). The clock will then work as a normal quartz clock. (Default setting is ON).

- The symbol "ON" will be flashing on the LCD.
- Use the + button to deactivate (OFF) the time reception function.
- Confirm with the SET button and enter the "12/24-Hour Display setting".

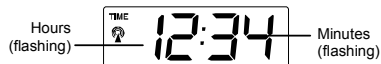
Note:
If the time reception function is deactivated (OFF) manually, the clock will not attempt any reception of the radio-controlled time (DCF time) as long as the time reception OFF function will be activated (ON) again. If the time reception is deactivated (OFF) the DCF symbol disappears.

12/24 HOUR TIME DISPLAY SETTING



- "24h" will be flashing.
- Press the + button to select the "12h" or "24h" display mode.
- Confirm with the SET button and to enter the "Manual Time setting".

MANUAL TIME SETTING



In case the device is not able to attempt the radio-controlled time (disturbances, transmitting distance, etc.), the time can be manually set. The clock will then work as a normal quartz clock.

To set the clock:

- The hour digits will be flashing on the display.
- Use the + button to adjust the hours.
- Press the SET button to go to the minute setting.
- Use the + button to adjust the minutes. Press and hold the button in the setting mode for fast running.
- Confirm with the SET button and enter the "°C/°F temperature unit setting".

Note:
By a successfully reception of the DCF signal and if the DCF reception is activated (ON), the manually set time will be overwritten. During the reception the DCF symbol will be flashing. If the reception is not successful received, the DCF symbol disappear. The next attempt will still be held.

°C/°F TEMPERATURE SETTING:



The default temperature is set to °C (degree Celsius). To select °F (degree Fahrenheit):

- During "°C" will be flashing, use the + button to toggle between "°C" and "°F".
- Once the desired temperature unit has been chosen, confirm with the SET button and enter the "Factory setting" or press the MAX/MIN / RESET button to exit the manual setting mode.

FACTORY RESET (FAC)



To reset the temperature station to the factory settings:

- Press and hold the + button for about 3 seconds to reset the manual settings to factory settings.
- Once the factory setting is done, all segments of the LCD will light up briefly, then the time, indoor temperature and humidity will be displayed.

Important:

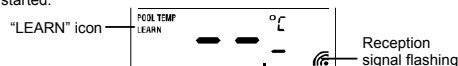
- During factory setting, all signals from the transmitters are lost. In order to receive the transmission signals from the transmitters, please refer to "Setting up" above to set the initial reception signal again.

TO EXIT THE MANUAL SETTING MODE

To exit the manual setting mode anytime during the manual setting, press the MAX/MIN / RESET button.

OUTDOOR TRANSMITTER AND POOL SENSOR SEARCH MODE

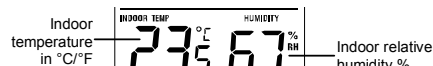
If the transmitters are lost due to disturbances, interferences, transmitting distance, etc., a manual transmitter search can be started.



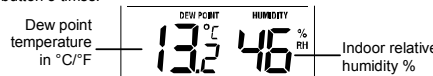
- Press the + button to select the transmitter.
- "LEARN" appears in the display of the selected transmitter.
- Press the SET button to start the search.
- The reception symbol will be flashing.
- As soon as the transmitter is found, the temperature appears and the reception symbol stays in the display.

INDOOR TEMPERATURE / HUMIDITY AND DEW POINT DATA

The indoor temperature and humidity are detected automatically and displayed on the second section of the LCD.



To display the dew point temperature, press the MAX/MIN / RESET button 3 times.



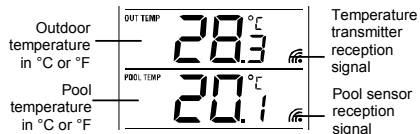
DEW POINT appears in the display. The device will automatically quit the dew point mode if no button is pressed for a lengthy period (30 seconds) or press the MAX/MIN / RESET button again to return to the actual display.

Note:

The dew point value is based on calculation of the indoor temperature and humidity data.

OUTDOOR TEMPERATURE AND POOL TEMPERATURE

The last two LCD section shows the outdoor temperature, pool temperature and reception signals.



TOGGLING AND RESETTING THE MIN/MAX DATA

TO VIEW THE MIN/MAX DATA AND DEW POINT

- Press the MAX/MIN / RESET button the indoor temperature and humidity and the outdoor temperature and pool temperature (MIN) appear.
- Press the MAX/MIN / RESET button again the maximum indoor temperature and humidity and the outdoor temperature and pool temperature (MAX) appear.
- Press the button MAX/MIN / RESET again the dew point appears (DEW-POINT).
- The instrument will automatically quit the MAX/MIN mode if no button is pressed for a lengthy period (30 seconds) or press the MAX/MIN / RESET button again to return to the actual display.

TO RESET THE MIN/MAX DATA

Press and hold MAX/MIN / RESET button for 3 seconds to reset all the indoor, outdoor and pool values to current values at the same time.

TRANSMITTERS

The outdoor data are measured and transmitted every 10 seconds. The range of the transmitter is may be affected by the outdoor temperature. At cold temperatures the transmitting distance may be decreased. Please bear this in mind when placing the transmitters.

868 MHz RECEPTION:

If the outdoor data are not being received within three minutes after setting up (or outdoor display always show "-.-" in the outdoor sections of the temperature station during normal operation), please check the following points:

- The distance of the temperature station or transmitters should be at least 2 meters away from any interfering sources such as computer monitors or TV sets.
- Avoid placing the transmitters onto or in the immediate proximity of metal window frames.
- Using other electrical products such as headphones or speakers operating on the 868MHz-signal frequency may prevent correct signal transmission or reception. Neighbors using electrical devices operating on the 868MHz-signal frequency can also cause interference.

Note:

When the 868MHz signal is received correctly, do not re-open the battery cover of either the transmitter or temperature station, as the batteries may spring free from the contacts and force a false reset. Should this happen accidentally then reset all units (see "Setting up" above) otherwise transmission problems may occur.

The transmission range is around 100 meters from the temperature station to the outdoor transmitter (in open space) and 25 meters to the pool sensor (in water). However, this depends on the surrounding environment and interference levels. If no reception is possible despite the observation of these factors, all system units have to be reset (see "Setting up" above).

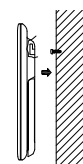
POSITIONING THE TEMPERATURE STATION

The temperature station comes attached with a folding stand, which provides the option of table standing or wall mounting the unit. Before wall mounting, please check that the outdoor temperature can be received from the desired locations.



Foldout table stand:

The foldout table stand leg is located on the backside. Pull the stand out from the bottom center edge of the temperature station, below the battery compartment. Once the foldout table stand is extended, place the temperature station in an appropriate location.

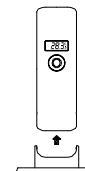


To wall mount:

- Fix a screw (not supplied) into the desired wall, leaving the head extended out by about 5mm.
- Place the temperature station onto the screw, using the hanging hole on the

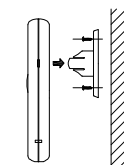
backside. Gently pull the temperature station down to lock the screw into place.

POSITIONING THE OUTDOOR TRANSMITTER



Mount the transmitter at a sheltered place. Avoid direct rain and sunshine.

The outdoor transmitter is supplied with a holder that may be attached to a wall with the two screws supplied. The outdoor transmitter can also be positioned on a flat surface by securing the stand to the bottom to the outdoor transmitter.



To wall mount:

- Secure the bracket onto a desired wall using the screws and plastic anchors.
- Clip the outdoor transmitter onto the bracket.

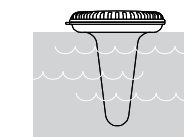
Note:

Before permanently fixing the outdoor transmitter wall base, place all units in the desired locations to check that the outdoor

temperature readings are receivable. In event that the signal is not received, relocate the remote outdoor transmitter or move them slightly as this may help the signal reception.

POSITIONING THE POOL SENSOR

Place the pool sensor in any pool or pond to detect the water temperature.



Note:

In event that the signal is not received, relocate the remote pool sensor or move it slightly as this may help the signal reception.

CARE AND MAINTENANCE

- Clean the instrument and the transmitters with a soft damp cloth. Do not use solvents or scouring agents. Protect from moisture.
- Remove the batteries if you do not use the product for a lengthy period.

BATTERY REPLACEMENT

- Replace the batteries of the temperature station when the battery symbol appears in the indoor values display.
- Replace the batteries of the outdoor transmitter when the battery symbol appears in the outdoor temperature display of the temperature station and/or in the display of the outdoor transmitter.
- Replace the batteries of the pool sensor when the battery symbol appears in the pool temperature display of the temperature station and/or in the display of the pool sensor.

Please note:

When the batteries are changed, the contact between outdoor transmitter, pool sensor and basic station must be restored – so always insert new batteries into the three devices or start a manual transmitter search.

- The manuals settings will remain unchanged.

MALFUNCTION

Problems	Troubleshooting
No indication on the temperature station	<ul style="list-style-type: none"> Ensure batteries polarity are correct Change batteries
No transmitter reception Display "----"	<ul style="list-style-type: none"> Start a manual transmitter search Check batteries of external transmitters (do not use rechargeable batteries!) Restart the transmitters and temperature station as per the

	manual <ul style="list-style-type: none"> Choose another place for the transmitters and/or the temperature station Reduce the distance between the transmitters and the temperature station Check if there is any source of interference
No DCF reception	<ul style="list-style-type: none"> Time reception setting "ON" Choose another place for the temperature station Manual time setting Wait for attempted reception during the night
Incorrect display	<ul style="list-style-type: none"> Change batteries

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 No part of this manual may be reproduced without written consent of TFA Dostmann. The technical data are correct at the time of going to print and may change without prior notice.

DECLARATION OF CONFORMITY

Herewith we declare, that this wireless transmission device does comply with the essentials requirements of R&TTE Directive 1999/5/EC.
 A copy of the signed and dated Declaration of Conformity is available on request via info@tfa-dostmann.de.
www.tfa-dostmann.de
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WASTE DISPOSAL

This product has been manufactured using high-grade materials and components which can be recycled and reused.

Never throw flat batteries and rechargeable batteries in household waste.



As a consumer, you are legally required to take them to your retail store or to appropriate collection sites according to national or local regulations in order to protect the environment.
 The symbols for the heavy metals contained are:
 Cd=cadmium, Hg=mercury, Pb=lead



This instrument is labelled in accordance with the EU Waste Electrical and Electronic Equipment Directive (WEEE).
 Please do not dispose of this product with other 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.

SPECIFICATIONS:

Recommended operating temperature range : 5°C to 40°C / +41°F to 104°F

Measuring range:

Indoor temperature : -9.9°C to +59.9°C with 0.1°C resolution / +14.2°F to +139.8°F with 0.2°F resolution ("OF.L" displayed if outside this range)
 Outdoor temperature : -39.9°C to +59.9°C with 0.1°C resolution / -39.8°F to +139.8°F with 0.2°F resolution ("OF.L" displayed if outside this range)
 Dew point temperature : -9.9°C to +59.9°C with 0.1°C resolution / 14.2°F to 139.8°F with 0.2°F resolution ("OF.L" displayed if outside this range)
 Pool temperature : 0°C to +59.9°C with 0.1°C resolution / +32°F to +139.8°F with 0.2°F resolution ("OF.L" displayed if outside this range)
 Indoor humidity range : 20% to 95% with 1% resolution (Display "-" if temperature is OL.F; display "19%" if < 20% and "96%" if > 95%)

Data checking intervals:

Indoor temperature : Every 16 seconds
 Indoor humidity : Every 16 seconds
 Outdoor temperature : Every 10 seconds

Transmission range:

Temperature transmitter : up to 100 meters (open space)
 Pool sensor : up to 100 meters in air (open space) : up to 25 meters in water

Power consumption (Alkaline batteries recommended):

Temperature station : 2 x AAA, IEC LR3, 1.5V
 Temperature transmitter : 2 x AAA, IEC LR3, 1.5V
 Pool sensor : 2 x AA, IEC LR6, 1.5V

Battery life cycle:

Temperature station : approximately 12 months
 Temperature transmitter : approximately 24 months
 Pool sensor : approximately 24 months

Dimensions (L x W x H) :

Temperature station : 94.6 x 20 x 157mm
 Temperature transmitter : 41 x 19 x 128mm
 Pool sensor : Ø 110.4 x 134mm (W)