WIRELESS THERMOMETER
Instruction manual

1.Description of parts

Fig. 1: Receiver front side

A1: Time/Alarm
A2: Date
A3: Outdoor temperature
A4: Outdoor low power index
A5: MAX and MIN temperature
A6: Indoor humidity
A7: Indoor temperature
A8: Indoor low power index
A9: Alarm symbol
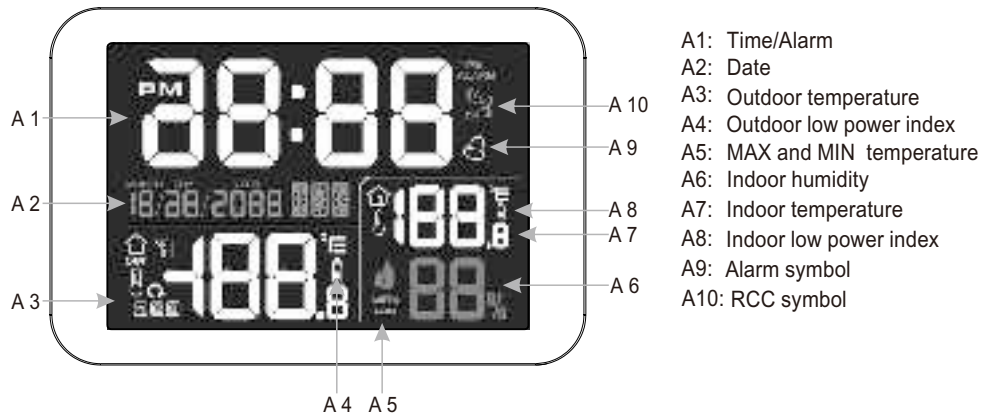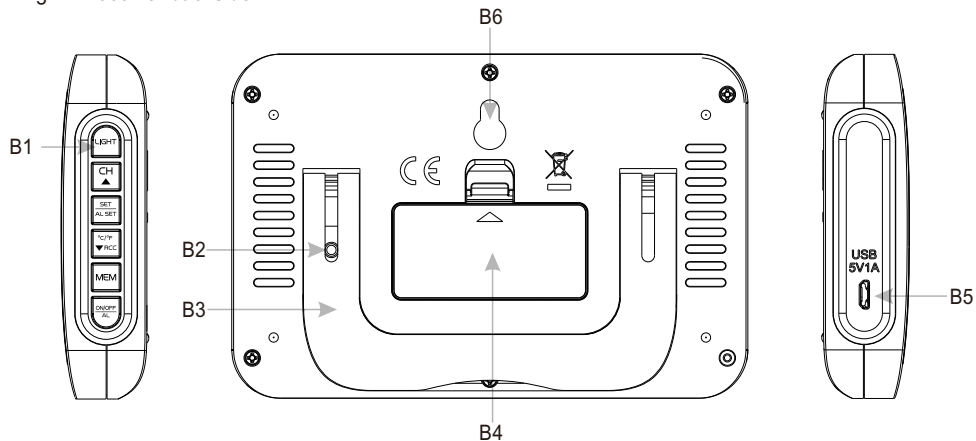A10: RCC symbol

Fig. 2: Receiver backside

B6

B1

B2

B3

B4

USB
5V1A

B5

B1: Buttons
B3: Support
B5: 5V micro usb input

B2: RESET button
B4: Battery door
B6: Hanging hole
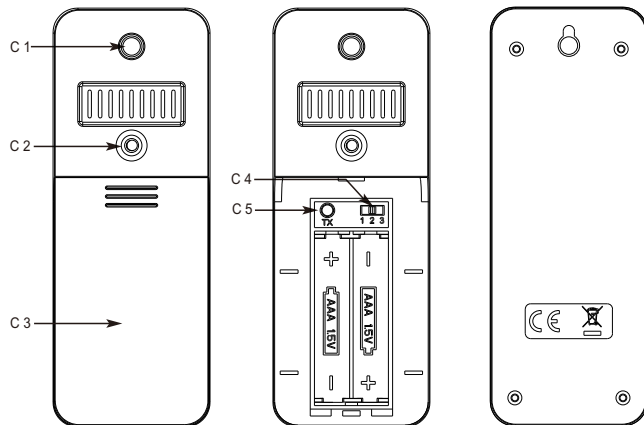
Fig. 3: Transmitter

Fig. 3
C1: Wall mounting hole
C2: LED index
C3: Battery compartment
C4: Switch 1-2-3 for channel selection
C5: TX button

2. Before you start using it

• Please make sure to read the instruction manual carefully.
 This information will help you to familiarise yourself with your new device, to learn all of its functions and parts, to find out important details about its first use and how to operate it and to get advice in the event of a malfunction.
• Following and respecting the instructions in your manual will prevent damage to your instrument 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 non following of these instructions. Likewise,we take no responsibility for any incorrect readings and for any consequences which may result from them.
- Please take particular note of the safety advice!
- Please keep this instruction manual for future reference.

3.Scope of delivery

- Wireless weather station (Receiver)
- Micro USB wire
- Outdoor transmitter (CH1)
- Instruction manual

4.Specifications

- Measuring range indoors:Temperature -10°C~+50°C(14°F~122°F)   Humidity 20%~95%.
- Measuring range outdoors: Temperature -40°C~+60°C(-40°F~140°F).
- Accuracy : Temperature +/-1°C(2°F) between 0°C to 50°C,otherwise +/-2°C(4°F).
              Humidity +/-5% between 30% to 70%,otherwise +/-8%.
- Working temperature and humidity : -10°C~+50°C (14°F~122°F) and 20%~95%.
- Storage temperature and humidity : -10°C~+60°C (14°F~140°F) and 10%~95%.
- Power Consumption: Receiver 2 X 1,5V AAA or 5V/1A micro usb input.
                     Transmitter 2 X 1,5V AAA.
- RCC function: DCF and WWVB choice.
- Transmission distance: 60m in free field.
- Transmission frequency:433.92MHZ.

- Time date display.
- Alarm function.

5. For your safety

- This product is exclusively intended for the field of application described above. It should only be used as described within these instructions.
- Unauthorized repairs, modifications or changes to the product are prohibited.

⚠️ *Caution!*
Risk of injury:

- Keep these instruments and the batteries out of the reach of children.
- Batteries must not be thrown into a 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 leaking.
- Never use a combination of old and new batteries together, nor batteries of different types.
- Wear chemical-resistant protective gloves and safety glasses when handling leaking batteries.

⚠️ *Important information on product safety!*

- Do not place your device near extreme temperatures, vibrations or shocks.
- Protect it from moisture.
- The outdoor transmitter is protected against splash water, but is not watertight. Choose a shady and dry position for the outdoor transmitter.

6.1 Inserting the batteries in the receiver

• Place both instruments on a desk with a distance of approximately 1.5 meter. Avoid getting close to possible interference sources (Electronic devices and radio installations).
• Remove the protective foil from the display of the receiver.
• Connect the basic station to the attached micro-usb wire,and put USB port into 5V/1A power part,like computer,the charger of phone,etc. (This way the backlight will be light all time.)
• Or remove the battery cover and insert two new batteries 1,5V AAA,polarity as illustrated,Close the battery compartment again. (This way the backlight will be not light all the time, it need press button to turn on the backlight,and the backlight will light few seconds then auto turn off.)
• The device will alert you with a beep and all LCD segments will be displayed for a short moment.
• The default:

DCF:	TIME:2020-1-1, 6:00	AL: 6:00, OFF
	Hour system: 24hr	Temperature unit: °C
WWVB:	TIME:2020-1-1, 12:00	AL: 12:00, OFF
	Hour system: 12hr	Temperature unit: °F

6.2 Inserting the batteries in the outdoor transmitter

• Open the battery compartment of the outdoor transmitter.
• The slide switch for channel selection is at position 1 (default).
• Insert two new batteries 1,5 V AAA, polarity as illustrated.
• Close the battery compartment again.

6.2.1 Reception of the outdoor values

• The outdoor values of the outdoor transmitter will be transmitted to the receiver. The displays of the outdoor values are flashing "--.-".
• On the display of the receiver appear the channel number.
• If receiver receive the signal, it will display the current temperature of transmitter in OUT position.
• If the reception of the outdoor values fails within three minutes, "- -"appears on the display. Check the batteries of the transmitter and try it again. Check if there is any source of interference.
• You can also start the outdoor transmitter search manually later on (for example when the outdoor transmitter is lost or the batteries are changed).
• Hold the $^{CH}_{\blacktriangle}$ button on the receiver for three seconds, "---" blinking on the display.
• Press the TX button in the battery compartment of the outdoor transmitter.
• The receiver receives the values from the outdoor transmitter.
• After successful installation close the battery compartment of the outdoor transmitter carefully.

6.3 Reception of the RCC frequency signal

• After the reception of the outdoor values, the device will now scan the RCC frequency signal and the RCC symbol will be flashing on the display.
• To avoid interference, the other buttons (except $^{°C/°F}_{\blacktriangledown RCC}$) will no function during the reception of the radio controlled clock.
• When the time code is received successfully after 2-12 minutes, the radio-controlled time and the RCC symbol are displayed steadily in the display. The other buttons are activated permanently.
• You can start the initialization manually.
• Press and hold the $^{°C/°F}_{\blacktriangledown RCC}$ button for 3 seconds. The RCC symbol will be flashing.
• Interrupt the reception by pressing the $^{°C/°F}_{\blacktriangledown RCC}$ button again. The RCC symbol disappears.

- The RCC reception always takes place hourly between 2:00 and 5:00 o'clock in the morning. If the reception is not successfully received until 5:00 o'clock, the next receive operation is again at 2:00 o'clock in the morning.

There are four different reception symbols:

 flashing - reception is active

 stays - reception is very good

 just tower - RCC function ON no reception

no symbol - RCC function OFF time is manually set

- If the clock cannot detect the RCC-signal (for example due to disturbances, transmitting distance, etc.),the time can be set manually. The RCC symbol disappears and the clock will then work as a normal quartz clock.(see: Manual settings).
- If do not need RCC ,it can turn off the function.(see:Manual settings).

6.3.1 Note for radio-controlled time DCF

The time base for the radio-controlled time is a caesium 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 automatic. In Daylight Saving Time "DST" is shown on the LCD. The quality of the reception depends mainly on the geographic location. Normally there should be no reception problems within a 1,500 km radius around Frankfurt.

Please take note of the following:

- The recommended distance to any interfering sources like computer monitors or TV sets at least 1.5-2 meters.
- Inside ferro-concrete rooms (basements,superstructures),the received signal is naturally weakened. In extreme cases, please place the unit close to a window to improve the reception.
- During night-time, the atmospheric interference is usually less severe and reception is possible in most cases.A single daily reception is adequate to keep the accuracy deviation under 1 second.

7. Operation

- During the operation, all successful settings will be confirmed by a brief beep tone.
- The device will automatically quit the setting mode if no button is pressed for a long period of time.
- Press and hold the $\frac{CH}{\blacktriangle}$ or $\frac{°C/°F}{\blacktriangledown RCC}$ button in the setting mode for fast running.

7.1 Manual settings

- Hold the $\frac{SET}{AL\ SET}$ button in normal mode for three seconds, to enter the setting mode.
- The setting sequence is shown as follows: Time Zone - DST on/off - 12 or 24 hours system
  - Hour - Minute - Year - Month - Day - Language of week.
- Press the $\frac{CH}{\blacktriangle}$ or $\frac{°C/°F}{\blacktriangledown RCC}$ button to increase or decrease for setting.
- Press and hold the $\frac{CH}{\blacktriangle}$ or $\frac{°C/°F}{\blacktriangledown RCC}$ button for fast running.
- Confirm the setting with the $\frac{SET}{AL\ SET}$ button or no button pressed in 15 seconds.
- The manually set time will be overwritten by the RCC time when the signal is received successfully.

7.1.1 Setting of the time zone

- In the setting mode you can make the time zone.
- The time zone correction is needed for countries where the RCC signal can be received.

7.1.2 Setting of the 12 and 24 hours display
- In the setting mode you can choose between the 12 - and 24 hour system.
- In the 12 HR system AM or PM (after 12 o'clock) appears on the display.

7.2 Setting of the alarm time
- Press the $\frac{SET}{AL\ SET}$ button into ALARM mode, "ALARM" words displayed.
- Hold the $\frac{SET}{AL\ SET}$ button for 3 seconds to set alarm time.
- The setting sequence is shown as follows: Hour - Minute.
- Press the $\overset{CH}{\blacktriangle}$ or $\overset{°C/°F}{\blacktriangledown{RCC}}$ button to increase or decrease for setting.
- Press and hold the $\overset{CH}{\blacktriangle}$ or $\overset{°C/°F}{\blacktriangledown{RCC}}$ button for fast running.
- Confirm the setting with the $\frac{SET}{AL\ SET}$ button or no button pressed in 15 seconds.
- Press $\frac{ON/OFF}{AL}$ button to turn on or off alarm function.
- When the bell icon is displayed, it means that alarm function is turn on.

7.3 Backlight
- Attention: Backlight in continuous operation only works with USB power connected.
- Press any button to turn on backlight for 8 seconds when use battery.

8. Micro-USB input

- 5V/1A power can input from Micro-USB part on the left side.

9. Thermometer and hygrometer

- If the measure values above the range,then temperature display "HH.H",humidity display "HH%".
- If the measure values below the range,then temperature display "LL.L",humidity display "LL%".

9.1 Maximum/Minimum function

- Press the MEM button in normal mode.
- MAX appears on the display.
- You can now get the highest values for the indoor temperature and humidity and outdoor temperature since the last reset.
- Press the MEM button again.
- MIN appears on the display.
- You can now get the lowest values for the indoor temperature and humidity and outdoor temperature since the last reset.
- Press the MEM button once more, to go back to the present values display.
- The device will automatically quit the MAX/MIN mode if no button is pressed.
- Press and hold the MEM button for two seconds while the maximum or minimum values are displayed to clear the recorded readings.

9.2 Setting of the temperature unit

- In the normal mode you can change between ° C (Celsius) or ° F (Fahrenheit) as temperature unit.
- Press the $^{°C/°F}_{\blacktriangledown RCC}$ button.

10. Additional outdoor transmitters

- For having more than one additional outdoor transmitter select with the 1/2/3 switch in the battery compartment of the outdoor transmitter for each single outdoor transmitter a different channel. The reception of the new transmitter will be transmitted automatically to the receiver. Press and hold the $^{CH}_{\blacktriangle}$ button on the receiver or restart the receiver according to the manual.
- The outdoor values will be shown on the display of the receiver. If you have installed more than one outdoor transmitter, press the $^{CH}_{\blacktriangle}$ button on the receiver to change between the channels 1 to 3.
- You can also choose an alternating channel display. After the third channel, press the $^{CH}_{\blacktriangle}$ button again, the numbers and temperature value of each channel will cycle display .
- Press the $^{CH}_{\blacktriangle}$ button again to deactivate the alternating channel and the first outdoor transmitter will be shown permanently.
- Once registered outdoor transmitters (channels),which are no longer needed,can be deleted manually by pressing the $^{CH}_{\blacktriangle}$ button for three seconds.Once a new outdoor transmitter is received, there will be another indicator.

Note:
1.Each channel can be individually registered.(e.g.:hold $^{CH}_{\blacktriangle}$ button for three seconds in channel 1, then channel 1 will deleted and re-register,channel 2 and 3 no changed).
2.After change the batteries of registered outdoor transmitters, it need hold $^{CH}_{\blacktriangle}$ button for three seconds to re-register the transmitter.

11. Positioning and fixing of receiver and the outdoor transmitter

- With the foldable leg at the back of the receiver, the receiver can be placed onto any flat surface or wall mounted at the respective location by the hanging holes at the back of the unit. Avoid the vicinity of any interfering field like computer monitors or TV sets and solid metal objects.
- With the hanging hole at the back of the outdoor transmitter, the transmitter can be wall mounted at the respective location. Choose a shady and dry position for the outdoor transmitter. (Direct sunshine falsifies the measurement and continuous humidity strains the electronic components needlessly).
- Check the transmission of the signal from the outdoor transmitter to the receiver (transmission range of up to 60 m free field). Within ferro-concrete rooms (basements, superstructures), the received signal is naturally weakened.
- If necessary choose another position for the outdoor transmitter and/or receiver.

12. Care and maintenance

- Clean the devices with a soft damp cloth. Do not use solvents or scouring agents.
- Remove the batteries and pull out the power adapter of the socket, if you do not use the products for a long period of time.
- Keep the devices in a dry place.

12.1 Battery replacement

- Change the batteries of the outdoor transmitter, when the battery symbol appears on the display of the outdoor values.
- Change the batteries of the basic station,when the battery symbol appears on the display of the indoor values.
- *Please note:* When the batteries are changed, the contact between outdoor transmitter and receiver must be restored,so always insert new batteries into both devices or start a manual transmitter search.

13. Troubleshooting

Pro	Solution
No indication at the receiver	→ Ensure that the batteries polarity are correct → Change the batteries
No RCC reception	→ Press and hold the °C/°F ▼RCC button for three seconds and start the initialization manually → Wait for attempted reception during the night → Choose another place for your product → Manual setting of the clock → Check if there is any source of interference → Restart the basic station according to the manual
No reception of the outdoor transmitter Indication "--" **for channel 1/2/3**	→ No outdoor transmitter is installed → Check batteries of external transmitter (do not use rechargeable batteries!) → Restart the outdoor transmitter and the basic station according to the manual → Start the outdoor transmitter search manually according to the manual → Choose another place for the outdoor transmitter and/or the receiver → Reduce the distance between the outdoor transmitter and the receiver → Check if there is any source of interference
Incorrect indication or low power symbol display ▭▬	→ Change the batteries

FCC 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 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.

IMPORTANT NOTE:

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.