

WS-9119U

INTELLIGENT WEATHER STATION

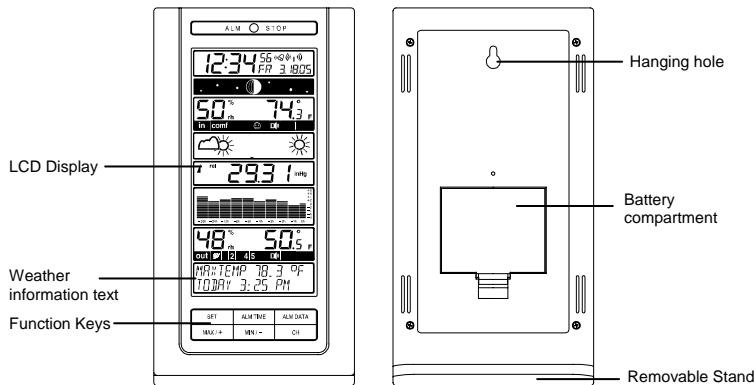
Instruction Manual

INTRODUCTION:

Congratulations on purchasing this state-of-the-art weather station as an example of excellent design and innovative measuring technique. Featuring radio controlled time, date, calendar, weather forecast, moon phase, indoor and outdoor temperature and humidity, air pressure and various alarm settings for different weather conditions, this weather station will never keep you guessing on current and future weather conditions. Operation of this product is simple and straightforward. By reading this operating manual, the user will however receive a better understanding of the Intelligent Weather Station together with the optimum benefit of all its features.

FEATURES:

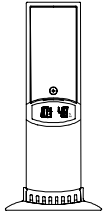
The Intelligent Weather Station



- WWVB Radio-controlled time with manual setting option
- WWVB reception ON/OFF (user selectable)
- 12/24 hour time display
- Time zone option ± 12 hours
- Calendar display (weekday, date, month, year)
- Time alarm settings
- 12 Moon phases display throughout the year
- Weather forecasting with 4 weather icons and weather tendency indicator
- Temperature display in $^{\circ}\text{F}/^{\circ}\text{C}$
- Humidity display as RH%
- Indoor temperature and humidity display with MIN/MAX and time/date of recording
- Indoor comfort indicator
- Low/High indoor temperature alarm
- Low/High indoor humidity alarm
- Outdoor temperature and humidity display with MIN/MAX and time/date of recording
- Low/High outdoor temperature alarm
- Low/High outdoor humidity alarm
- Relative air pressure unit in hPa, inHg, or mmHg
- Air pressure tendency indicator for last 36h (bar graph format)
- Low pressure alarm
- "Intelligent" weather information display
- Can receive up to 3 transmitters

- LCD contrast selectable
- Low battery indicator
- EL back-light
- Display in 3 languages selectable: English, German and French
- Wall mounting or table standing

The Remote Temperature/Humidity Sensor



- Remote transmission of outdoor temperature and humidity to weather station by 433 MHz signal
- Weather resistant casing
- Wall mounting case
- Mounting at a sheltered place. Avoid direct rain and sunshine

QUICK SET-UP GUIDE

Hint: Use good quality Alkaline Batteries and avoid rechargeable batteries.

1. Have the intelligent weather station and remote temperature/humidity sensor 3 to 5 feet apart.
2. Batteries should be out of both the intelligent weather station and remote temperature/humidity sensor units for 10 minutes.
3. Place the batteries into the **remote temperature/humidity sensor** first then into the **intelligent weather station**.
4. **DO NOT PRESS ANY BUTTONS FOR 15 MINUTES.**

In this time the intelligent weather station and remote temperature/humidity sensor will start to talk to each other and the display will show the intelligent temperature/humidity, outdoor temperature/humidity, heat index and dew point. If the intelligent weather station does not display all information after the 15 minutes please retry the set up as stated above. After all information has been displayed for 15 minutes you can place your sensors outdoors and set your time.

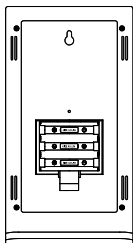
Important Notes on Set-up and Operation

- The remote temperature/humidity sensor should be placed in a dry, shaded area.
- Fog and mist will not harm your remote temperature/humidity sensor but direct rain must be avoided.
- The remote temperature/humidity sensor has a range of 330 feet. Any walls that the signal will have to pass through will reduce distance. An outdoor wall or window can have up to 30 feet of resistance and an interior wall can have up to 20 feet of resistance. Your distance plus resistance should not exceed 330 ft. in a straight line.
- The remote temperature/humidity sensor transmits a signal every minute. After the batteries have been installed, the intelligent weather station will search for the signal for a duration of 4 minutes. If there is no temperature or humidity reading in the OUTDOOR LCD after 4 minutes, make sure the units are within range of each other, or repeat the battery installation procedure.
- If a button is pressed before the intelligent weather station receives the signal from the remote temperature/humidity sensor, you will need to follow the battery installation procedure again.

To complete the set up of your new wireless weather station after the 15 minutes have passed please follow the steps that follow in the Detailed Set-Up Guide.

HOW TO INSTALL AND REPLACE BATTERIES IN THE INTELLIGENT WEATHER STATION

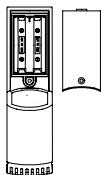
The intelligent weather station uses 3 AA (alkaline recommended) batteries. When the batteries need to be replaced the low battery symbol will appear on the LCD.



To install and replace the batteries, please follow the steps below:

1. Insert finger or other solid object in the space at the bottom center of the battery compartment and lift up to remove the cover.
2. Insert batteries observing the correct polarity (see battery compartment marking).
3. Replace battery cover.

HOW TO INSTALL AND REPLACE BATTERIES IN THE REMOTE TEMPERATURE/HUMIDITY SENSOR



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

1. Remove the battery cover at the front side with a small screwdriver.
2. Insert the batteries, observing the correct polarity (see battery compartment marking).
3. Replace the battery cover on the unit.

Note:

When changing the batteries in any of the units, all units need to be reset by following the setting up procedures. This is because the transmitter at start-up assigns a random security code and this code must be received and stored by the intelligent weather station in the first 3 minutes of power being supplied to it.

BATTERY CHANGE:

It is recommended to replace the batteries in all units on an annual basis to ensure optimum accuracy of these units.



Please participate in the preservation of the environment. Return used batteries to an authorized facility.

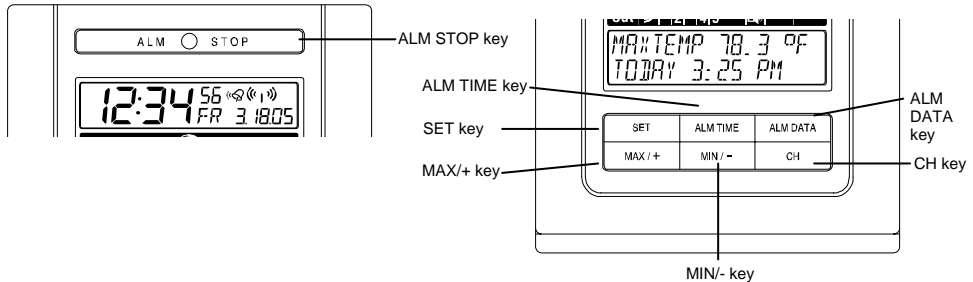
ABOUT WWVB (Radio Controlled Time)

The NIST (National Institute of Standards and Technology—Time and Frequency Division) WWVB radio station is located in Ft. Collins, Colorado, and transmits the exact time and date signal continuously throughout the United States at 60 kHz. The signal can be received up to 2,000 miles away through the internal antenna in the Weather Station. However, due to the nature of the Earth's Ionosphere, reception is very limited during daylight hours. The weather station will search for a signal every night when reception is best. The WWVB radio station derives its signal from the NIST Atomic clock in Boulder, Colorado. A team of atomic physicists is continually measuring every second, of every day, to an accuracy of ten billionths of a second per day. These physicists have created an international standard, measuring a second as 9,192,631,770 vibrations of a Cesium-133 atom in a vacuum. For more information on the atomic clock and WWVB please see the NIST website at <http://www.boulder.nist.gov/timefreq/stations/wwvb.htm>.

FUNCTION KEYS:

Intelligent Weather Station:

The intelligent weather station has 6 easy to use function keys on the bottom front and 1 key on the top front.



SET key

- Press and hold the key to enter manual setting modes: LCD contrast, 12/24 hour time display, time zone, manual time setting, calendar, WWVB ON/OFF, °F/°C temperature unit, pressure unit, relative pressure setting and language display
- Alarm time set inside alarm time setting mode
- Confirm key inside weather alarm setting mode
- Reset individual MIN/MAX temperature/humidity record
- Combine with the CH key to re-detect a new transmitter in displayed channel
- Stop the alarm during the time alarm or weather alarm ringing
- Back-light ON

CH key (Channel key)

- Select channel 1, 2, or 3 (if more than 1 transmitter is used)
- Exit setting mode
- Re-detect new transmitters signal for all channels
- Combined with the set key to re-detect a new transmitter in displayed channel
- Stop the alarm during the time alarm or weather alarm ringing
- Back-light on

MAX/+ key

- Display MAX indoor and outdoor temperature and humidity records with time of recording
- Activate/deactivate the time alarm
- Increase the alarm time (hour and minutes)
- Increase all values in manual setting modes
- Activate/deactivate the weather alarm
- Increase the weather alarm values
- Stop the alarm during the time alarm or weather alarm ringing
- Back-light on
- Reset all MIN/MAX records

MIN/- key

- Display MIN indoor and outdoor temperature and humidity records with time of recording
- Activate/deactivate the time alarm
- Decrease the alarm time (hour and minutes)
- Decrease all values in manual setting modes
- Activate/deactivate the weather alarm
- Decrease the weather alarm values
- Stop the alarm during the time alarm or weather alarm ringing
- Back-light on
- Reset all MIN/MAX records

ALM TIME key

- Enter the alarm time setting mode
- Stop the alarm during the time alarm or weather alarm ringing
- Back-light on

ALM Data key

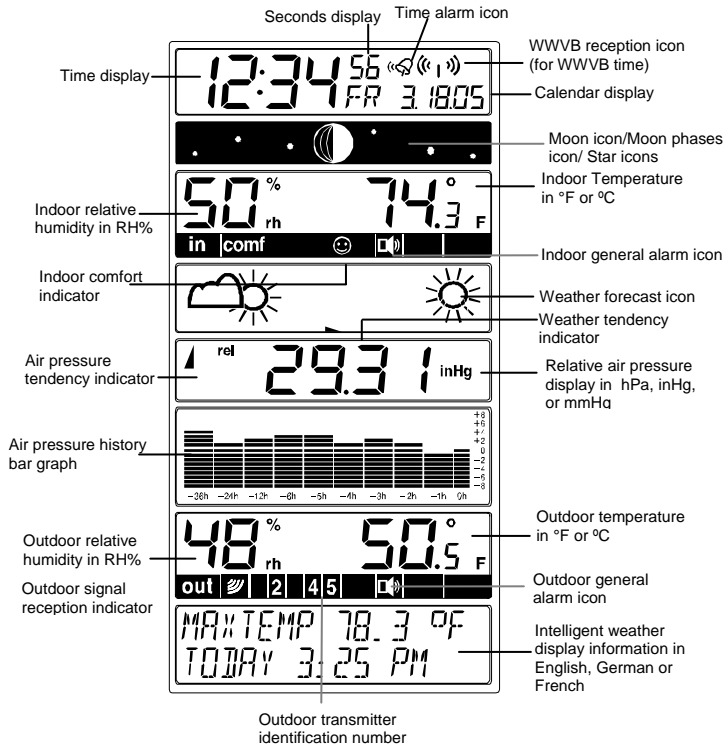
- Enter the weather alarm time setting mode
- Stop the alarm during the time alarm or weather alarm ringing
- Set next weather alarm in weather alarm setting mode
- Back-light on
- Read out alarm data info on text display after weather alarm occurred

ALM STOP key

- Stop the alarm during the time alarm or weather alarm ringing
- Back-light on
- Disable the weather alarm sound

LCD SCREEN

The LCD screen is split into 8 sections displaying the information for time and date, moon phase, indoor data, weather forecast, air pressure, air pressure history, outdoor data, "intelligent" weather information display.

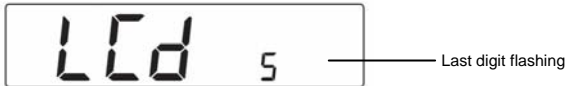


MANUAL SETTINGS:

The following manual settings can be changed when pressing and holding the SET key for approximately 4 seconds:

- LCD contrast setting
- 12/24 hour time display
- Time zone setting
- Manual time setting
- Calendar setting
- WWVB time reception ON/OFF setting
- °F/°C temperature unit setting
- Air pressure unit setting
- Relative pressure value setting
- Language display setting

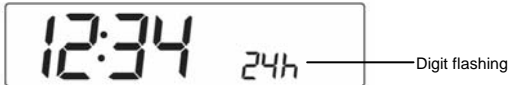
LCD CONTRAST SETTING



The LCD contrast can be set within 8 levels, from LCD 1 to LCD8 (default setting is LCD 5):

1. Press and hold the SET key for around 4 seconds until the digit start flashing.
2. Use the MAX/+ or MIN/- key to view all levels of contrast.
3. Select the desired LCD contrast. Confirm with the SET key and enter in the **12/24 Time Display setting**.

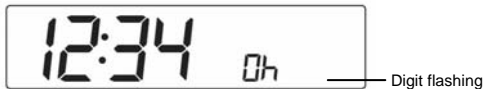
12/24 HOUR TIME DISPLAY SETTING:



The time display can be set to view time as 12/24-hour format. The default time display mode is "12h". To set to "24h" time display:

1. Use the MAX/+ or MIN/- key to toggle the value.
2. Confirm with the SET key and enter the **Time Zone setting**.

TIME ZONE SETTING



The time zone can be set ± 12 hour. The default time zone is set to Eastern Time zone ("EST"). To set a different time zone:

1. The current time zone value starts flashing.
2. Use the MAX/+ or MIN/- key to set the time zone. The MAX/+ key increases the value and the MIN/- key decreases the value in consecutive 1-hour intervals.
3. Confirm with the SET key and enter the **Manual Time setting**.

MANUAL TIME SETTING:

In case the intelligent weather station cannot detect the WWVB-signal (for example due to disturbances, transmitting distance, etc.), the time can be manually set. The clock will then work as a normal Quartz clock.



1. The hour digit will start flashing.
2. Use the MAX/+ or MIN/- key to set the hour.

3. Press again the SET key to switch to the minutes. The minute digits start flashing.
4. Use the MAX/+ or MIN/- key to set the minutes.
5. Confirm with the SET key and enter the **Calendar setting**.

Note:

The unit will still try to receive the signal between 2:00 and 6:00 am every day despite it being manually set, if the WWVB reception function has been set ON. When it does receive the signal, it will change the manually set time into the received time. During reception attempts the WWVB tower icon will flash. If reception has been unsuccessful, then the WWVB tower icon will not appear but reception will still be attempted the following hour.

CALENDAR SETTING:

Note:

Date, Month, Year (for 24h display)
 Month, Date, Year (for 12h display)



The date default of the intelligent weather station is 1. 1. in the year 2004. Once the radio-controlled time signals are received, the date is automatically updated. However, if the signals are not received, the date can also be set manually.

1. The year starts flashing.
2. Use the MAX/+ or MIN/- key to set the year. The range runs from 2004 to 2030.
3. Press the SET key again to confirm and to enter the month setting. The month starts flashing.
4. Use the MAX/+ or MIN/- key to set the month.
5. Press the SET key again to confirm and to enter the date setting mode. The date starts flashing.
6. Use the MAX/+ or MIN/- key to set the date.
7. Confirm all calendar settings with the SET key and enter the **WWVB Time Reception ON/OFF setting**.

WWVB TIME RECEPTION ON/OFF SETTING



In area where reception of the WWVB time is not possible, the WWVB time reception function can be turned OFF. The clock will then work as a normal Quartz clock. (Default setting is ON).

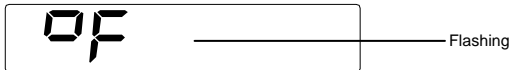
1. The digit "ON" will start flashing on the LCD.
2. Use the MAX/+ or MIN/- key to turn OFF the time reception function.
3. Confirm with the SET key and enter the **°F/°C Temperature Unit setting**.

Note:

If the WWVB time reception function is turned OFF manually, the clock will not perform any reception of the WWVB time as long as the WWVB OFF function is activated.

The WWVB reception icon  will not be displayed on the LCD.

°F/°C TEMPERATURE UNIT SETTING



The temperature display can be selected to show temperature data in °F or °C. (default °F)

1. Use the MAX/+ or MIN/- key to toggle between "°F" or "°C".
2. Confirm with the SET key and enter the **Air Pressure Unit setting**.

RELATIVE AIR PRESSURE UNIT SETTING



The relative air pressure unit can be set in inHg, hPa or mmHg unit. (default unit is inHg).

1. Use the MAX/+ or MIN/- key to toggle between “inHg”, “hPa” or “mmHg”
2. Confirm with the SET key and enter the **Relative Pressure Value setting**.

Note:

The default reference pressure value of the barometer is 29.91 inHg (1013 hPa). **For an exact measurement it is necessary to first adjust the barometer to your local relative air pressure (related to elevation above sea level).** Ask for the present atmospheric pressure of your home area (Local weather service, calibrated instruments in public buildings, airport).

RELATIVE PRESSURE VALUE SETTING

The default relative pressure value is 29.91 inHg (1013 hPa). This corresponds to the average air pressure. Pressure below this is referred to as low-pressure area (weather to become worse), pressure above as high-pressure area (weather to improve). The relative air pressure can be manually set to another value within the range of 28.35 to 30.72 inHg (960 – 1040 hPa or 720 – 781 mmHg) for a better reference.

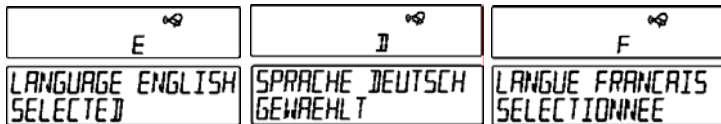


1. The current relative pressure value will start flashing
2. Use the MAX/+ or MIN/- key to increase or decrease the value. Keep holding the key allows the value to advance faster.
3. Confirm with the SET key and enter the **Language display setting**.

Note:

This calibration facility is useful for those users living at various elevations above sea level, but wanting their air pressure display based on sea level elevation.

LANGUAGE DISPLAY SETTING:



The language for the calendar and “Intelligent” weather information display can be set to view in English (E), German (D), or French (F). Default setting is English. To set another language:

1. Use the MAX/+ or MIN/- key to set the desired language.
2. Confirm with the SET key and exit the **Manual settings**.

TO EXIT THE MANUAL SETTING MODE

To exit the manual setting anytime during the manual setting modes, press the CH key anytime or wait for automatic timeout. The mode will return to normal time display.

TIME ALARM SETTING



The alarm time can be set when pressing the ALM TIME key.

1. Press and hold the ALM TIME key until the "ALARM" digits are shown and flash. Use the MAX/+ or MIN/- key to set the alarm ON/OFF. The time alarm icon "🔔" is shown to indicate that the alarm is ON.
2. Press the SET key to enter the alarm time set mode. The hour digit start flashing.
3. Press the MAX/+ or MIN/- key to set the hour.
4. Press the SET key to switch to the minutes. The minute digits start flashing.
5. Use the MAX/+ or MIN/- key to set the alarm minutes.
6. Confirm with the SET key and exit the **Time Alarm setting** or wait for automatic timeout.

Note: The maximum alarm ring duration is 2 minutes.
To stop the alarm, press any key during alarm ringing.

WEATHER ALARM SETTING

The intelligent weather station can be set to alert when a specific weather condition is reach.

The following Weather Alarm settings can be changed when pressing and holding the ALM DATA key for approximately 4 seconds:

- LOW indoor temperature alarm
- HIGH indoor temperature alarm
- LOW outdoor temperature alarm
- HIGH outdoor temperature alarm
- LOW indoor humidity alarm
- HIGH indoor humidity alarm
- LOW outdoor humidity alarm
- HIGH outdoor humidity alarm
- LOW air pressure alarm

Default alarm values:

Temperature	Low	32°F
	High	86°F
Humidity	Low	20%
	High	90%
Air pressure	Low	29.52 inHg

LOW INDOOR TEMPERATURE ALARM SETTING

Note:

After pressing the ALM DATA key within the LOW indoor temperature alarm setting there are the following individual sub-settings.

To set the LOW indoor temperature alarm (default OFF):


- I. **Buzzer ON/OFF (alarm sounding):**
 1. Press the ALM STOP key to set buzzer ON/OFF. The "🔔" icon will appear if the buzzer alarm is ON. No acoustic alarm signal will be heard when the weather alarm is triggered if buzzer is set OFF.
- II. **Set the alarm ON/OFF:**
 1. Press the MAX/+ or MIN/- key to activate the alarm ON/OFF.
- III. **Set the alarm value (default 32°F)**
 1. Press the SET key to enter the alarm value setting (alarm value flashing)

2. Use the MAX/+ or MIN/- key to set the alarm value.
 3. Press the SET key to confirm and enter the **HIGH indoor temperature alarm setting**.
- IV. If no LOW indoor temperature setting is needed, please press the ALM DATA key to enter the **HIGH indoor temperature alarm setting**.

HIGH INDOOR TEMPERATURE ALARM SETTING

Note:

Within the HIGH indoor temperature alarm setting there are optional sub-settings, which can be set individually. To set the HIGH indoor temperature alarm (default OFF):


- I. **Buzzer ON/OFF (alarm sounding):**
 1. Press the ALM STOP key to set buzzer ON/OFF. The "" icon will appear if the buzzer alarm is ON. No acoustic alarm signal will be heard when the weather alarm is triggered if buzzer is set OFF.
- II. **Set the alarm ON/OFF:**
 1. Press the MAX/+ or MIN/- key to activate the alarm ON/OFF.
- III. **Set the alarm value (default 86°F)**
 1. Press the SET key to enter the alarm value setting (alarm value flashing)
 2. Use the MAX/+ or MIN/- key to set the alarm value.
 3. Press the SET key to confirm and enter the **LOW outdoor temperature alarm setting**.
- IV. If no HIGH indoor temperature setting is needed, please press the ALM DATA key to enter the **LOW outdoor temperature alarm setting**.

LOW OUTDOOR TEMPERATURE ALARM SETTING

Note:

Within the LOW outdoor temperature alarm setting there are optional sub-settings, which can be set individually. Note: **The outdoor temperature alarm can only be set for channel 1 transmitter.**

To set the LOW outdoor temperature alarm (default OFF):


- I. **Buzzer ON/OFF (alarm sounding):**
 1. Press the ALM STOP key to set buzzer ON/OFF. The "" icon will appear if the buzzer alarm is ON. No acoustic alarm signal will be heard when the weather alarm is triggered if buzzer is set OFF.
- II. **Set the alarm ON/OFF:**
 1. Press the MAX/+ or MIN/- key to activate the alarm ON/OFF.
- III. **Set the alarm value (default 32°F)**
 1. Press the SET key to enter the alarm value setting (alarm value flashing)
 2. Use the MAX/+ or MIN/- key to set the alarm value.
 3. Press the SET key to confirm and enter the **HIGH indoor temperature alarm setting**.
- IV. If no LOW outdoor temperature setting is needed, please press the ALM DATA key to enter the **HIGH outdoor temperature alarm setting**.

HIGH OUTDOOR TEMPERATURE ALARM SETTING

Note:

Within the HIGH outdoor temperature alarm setting there are optional sub-settings. Note: **The outdoor temperature alarm can only be set for channel 1 transmitter.**

To set the HIGH outdoor temperature alarm (default OFF):

- I. **Buzzer ON/OFF (alarm sounding):**
 1. Press the ALM STOP key to set buzzer ON/OFF. The "" icon will appear if the buzzer alarm is ON. No acoustic alarm signal will be heard when the weather alarm is triggered if buzzer is set OFF.
- II. **Set the alarm ON/OFF:**
 1. Press the MAX/+ or MIN/- key to activate the alarm ON/OFF.

III. **Set the alarm value (default 86°F)**

1. Press the SET key to enter the alarm value setting (alarm value flashing)
2. Use the MAX/+ or MIN/- key to set the alarm value.
3. Press the SET key to confirm and enter the **LOW indoor humidity alarm setting**.

- IV. If no HIGH outdoor temperature setting is needed, please press the ALM DATA key to enter the **LOW indoor humidity alarm setting**.


LOW INDOOR HUMIDITY ALARM SETTING

Note:

Within the LOW indoor humidity alarm setting there are optional sub-settings.

To set the LOW indoor humidity alarm (default OFF):

I. **Buzzer ON/OFF (alarm sounding):**

1. Press the ALM STOP key to set buzzer ON/OFF. The " " icon will appear if the buzzer alarm is ON. No acoustic alarm signal will be heard when the weather alarm is triggered if buzzer is set OFF.

II. **Set the alarm ON/OFF:**

1. Press the MAX/+ or MIN/- key to activate the alarm ON/OFF.

III. **Set the alarm value (default 20%)**

1. Press the SET key to enter the alarm value setting (alarm value flashing)
2. Use the MAX/+ or MIN/- key to set the alarm value.
3. Press the SET key to confirm and enter the **HIGH indoor humidity alarm setting**.

- IV. If no LOW indoor humidity setting is needed, please press the ALM DATA key to enter the **HIGH indoor humidity alarm setting**.


HIGH INDOOR HUMIDITY ALARM

Note:

Within the HIGH indoor humidity alarm setting there are optional sub-settings.

To set the HIGH indoor humidity alarm (default OFF):

I. **Buzzer ON/OFF (alarm sounding):**

1. Press the ALM STOP key to set buzzer ON/OFF. The " " icon will appear if the buzzer alarm is ON. No acoustic alarm signal will be heard when the weather alarm is triggered if buzzer is set OFF.

II. **Set the alarm ON/OFF:**

1. Press the MAX/+ or MIN/- key to activate the alarm ON/OFF.

III. **Set the alarm value (default 90%)**

1. Press the SET key to enter the alarm value setting (alarm value flashing)
2. Use the MAX/+ or MIN/- key to set the alarm value.
3. Press the SET key to confirm and enter the **LOW outdoor humidity alarm setting**.

- IV. If no HIGH indoor humidity setting is needed, please press the ALM DATA key to enter the **LOW outdoor humidity alarm setting**.


LOW OUTDOOR HUMIDITY ALARM

Note:

Within the LOW outdoor humidity alarm setting there are optional sub-settings. Note: **The outdoor humidity alarm can only be set for channel 1 transmitter.**

To set the LOW outdoor humidity alarm (default OFF):

I. **Buzzer ON/OFF (alarm sounding):**

1. Press the ALM STOP key to set buzzer ON/OFF. The " " icon will appear if the buzzer alarm is ON. No acoustic alarm signal will be heard when the weather alarm is triggered if buzzer is set OFF.


- II. **Set the alarm ON/OFF:**
 - 1. Press the MAX/+ or MIN/- key to activate the alarm ON/OFF.
- III. **Set the alarm value (default 20%):**
 - 1. Press the SET key to enter the alarm value setting (alarm value flashing)
 - 2. Use the MAX/+ or MIN/- key to set the alarm value.
 - 3. Press the SET key to confirm and enter the **HIGH outdoor humidity alarm setting**.
- IV. If no LOW outdoor humidity setting is needed, please press the ALM DATA key to enter the **HIGH outdoor humidity alarm setting**.

HIGH OUTDOOR HUMIDITY ALARM

Note:

Within the HIGH outdoor humidity alarm setting there are optional sub-settings. Note: **The outdoor humidity alarm can only be set for channel 1 transmitter.**

To set the HIGH outdoor humidity alarm (default OFF):


- I. **Buzzer ON/OFF (alarm sounding):**
 - 1. Press the ALM STOP key to set buzzer ON/OFF. The " " icon will appear if the buzzer alarm is ON. No acoustic alarm signal will be heard when the weather alarm is triggered if buzzer is set OFF.
- II. **Set the alarm ON/OFF:**
 - 1. Press the MAX/+ or MIN/- key to activate the alarm ON/OFF.
- III. **Set the alarm value (default 90%):**
 - 1. Press the SET key to enter the alarm value setting (alarm value flashing)
 - 2. Use the MAX/+ or MIN/- key to set the alarm value.
 - 3. Press the SET key to confirm and enter the **LOW air pressure alarm setting**.
- IV. If no HIGH outdoor humidity setting is needed, please press the ALM DATA key to enter the **LOW Air Pressure alarm setting**.

LOW AIR PRESSURE ALARM SETTING



Note:

Within the LOW air pressure alarm setting there are optional sub-settings.

To set the LOW air pressure alarm (default OFF):

- I. **Buzzer ON/OFF (alarm sounding):**
 - 1. Press the ALM STOP key to set buzzer ON/OFF. The " " icon will appear if the buzzer alarm is ON. No acoustic alarm signal will be heard when the weather alarm is triggered if buzzer is set OFF.
- II. **Set the alarm ON/OFF:**
 - 1. Press the MAX/+ or MIN/- key to activate the alarm ON/OFF.
- III. **Set the alarm value (default 29.52 inHg)**
 - 1. Press the SET key to enter the alarm value setting (alarm value flashing)
 - 2. Use the MAX/+ or MIN/- key to set the alarm value.
 - 3. Press the SET key to confirm and exit the Weather Alarm settings.
- IV. If no LOW air pressure alarm setting is needed, please press the ALM DATA key to exit the Weather Alarm setting.

Note:

The alarm icon " " or " " will be shown in normal display when the weather alarm is set ON. To exit the weather alarm setting mode anytime, press the CH key or wait for automatic timeout. The mode will return to normal time display.

WEATHER ALARM OPERATIONS

WEATHER ALARMS

The Weather alarms are settable for when certain weather conditions are met according to the users requirements. For example, the user can set the thresholds for the outdoor temperature to +104°F (+40°C) (high) and +14°F (-10°C) (low), whilst only enabling the high alarm and disabling the low alarm (i.e. temperatures < +14°F (-10°C) won't trigger alarm, but temperatures > +104°F (+40°C) will).

Alarm setting	Minimum	Maximum
Air Pressure	27.16 inHg (920.0 hPa)	31.89 inHg (1080.0 hPa)
Outdoor Temperature	-22° F (-30.0°C)	+157.9° F (+69.9°C)
Indoor Temperature	+14°F (-10.0°C)	+139.9°F (+59.9°C)
Humidity (all)	1% RH	99% RH

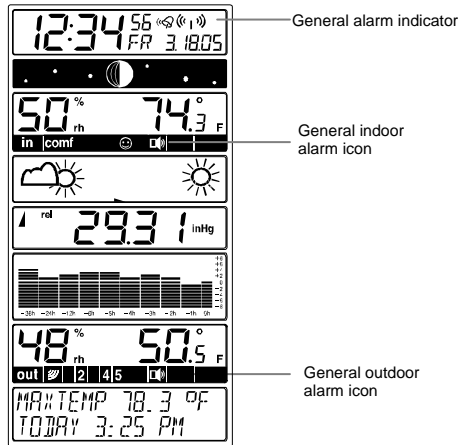
HYSTERESIS

To compensate for fluctuation of the measured data, which may cause the weather alarm to sound constantly if the measured reading is close to user set level, a hysteresis function has been implemented for each weather alarm. For example, if the high temperature alarm is set to +78°F (+25°C) and the current value moves to +78°F (+25°C), the alarm will be activated (if it has been enabled). Now when the temperature drops to +77.9°F (+24.9°C) or below and thereafter again increases to beyond +78°F (+25°C), the data will be blinking, but no alarm will be activated. It has to drop to below +77.9°F (+24°C) (with a pre-set hysteresis of 2°F (1°C)) so that the alarm can be produced again.

Hysteresis values for the various weather data types are given in the following table:

Weather data	Hysteresis
Temperature	2°F (1°C)
Humidity	3% RH
Air pressure	0.03 inHg (1 hPa)

GENERAL ALARM



The general alarm indicator (red LED) and the general alarm icon will flash when any Weather Alarm occurs.

General Alarm Indicator

The general alarm indicator is located at the top of the weather station. It will flash when any weather alarm occurs to indicate that a set weather condition has been reached.

To stop the general alarm indicator from flashing press the ALM STOP (or any other keys) to switch off the indicator.

General Alarm Icon

The general indoor alarm icon will flash when indoor temperature alarm, indoor humidity alarm or air pressure alarm occur. The general outdoor alarm icon will flash when the outdoor temperature and humidity alarm occurs.

To switch off the general alarm icon, press the ALM DATA key.

Additionally, the triggered alarm value and time will then be displayed briefly for 2 seconds on the bottom part of the weather station LCD.

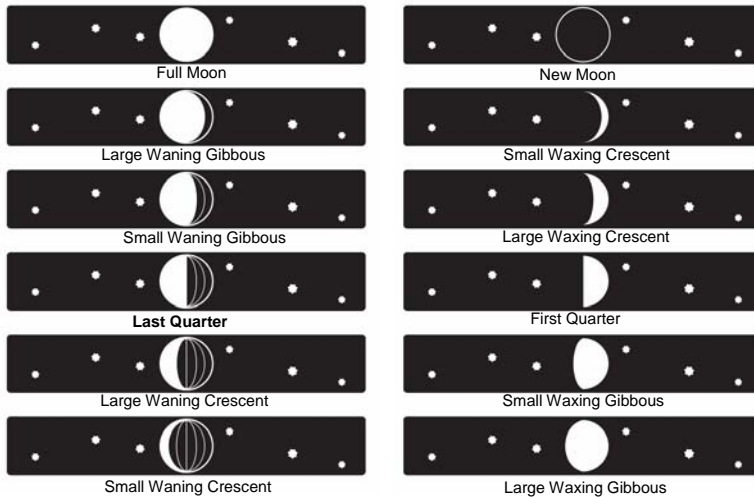
If more than one Weather Alarm occurred, each triggered alarm value and time can be viewed by pressing the ALM DATA key. Each Weather Alarm will be displayed for 2 seconds.

The general indoor (or outdoor) alarm icon will be switch off when all indoor (or outdoor) triggered alarms information are displayed.

MOON PHASE

The Moon icon of the weather station will also display 12 different Moon phases according to the set calendar.

Note: In the southern hemisphere, the phases of the moon are same but the shape of the moon is mirror inverted.



WEATHER FORECAST AND WEATHER TENDENCY:

WEATHER FORECASTING ICONS:

There are 4 weather icons in the fourth section of LCD that can be displayed in any of the following combinations:



Sunny

Cloudy with sunny intervals

Cloudy

Rainy

For every sudden or significant change in the air pressure, the weather icons will update accordingly to represent the change in weather. If the icons do not change, then it means either the air pressure has not changed or the change has been too slow for the intelligent weather station to register. However, if the icon displayed is a sun or rainy, there will be no change of icon if the weather gets any better (with sunny icon) or worse (with rainy icon) since the icons are already at their extremes.

The icons displayed forecasts the weather in terms of getting better or worse and not necessarily sunny or rainy as each icon indicates. For example, if the current weather is cloudy and the rainy icon is displayed, it does not mean that the product is faulty because it is not raining. It simply means that the air pressure has dropped and the weather is expected to get worse but not necessarily rainy.

The change of weather forecast icon is in accord to the relationship between current relative pressure and the pressure change since last three hours.

If the weather is changing, both old weather icon and new weather icon will be shown with weather tendency indicator (animated arrows). If the weather has not changed within 6 hours, only the new weather icon in the middle display will be shown.

Examples of changing weather icons:



Note:

After initial set up of the intelligent weather station with the setting of the relative value, readings for weather forecasts should be disregarded for the next 12-24 hours. This will allow sufficient time for the intelligent weather station to collect air pressure data at a constant altitude and therefore result in a more accurate forecast.

If the intelligent weather station is moved to another location significantly higher or lower than its initial standing point (for example from the ground floor to the upper floors of a house), set again the relative air pressure value, and discard the weather forecast for the next 12-24 hours. By doing this, the intelligent weather station will not mistake the new location as being a possible change in air-pressure when really it is due to the slight change of altitude.

AIR PRESSURE TENDENCY INDICATOR

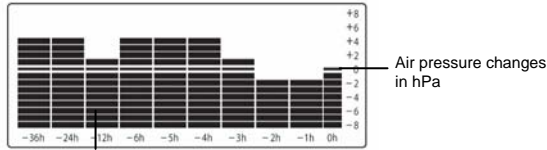
The air pressure tendency indicators are located on the left side of the air pressure display, below the weather icons, and they work independently from the weather forecast icons. The air pressure tendency indicator pointing upward or downward directions is displayed based on comparing the difference of the air pressure recorded during a full hour time frame.

Note:

- A single air pressure tendency indicator will point upward or downward when the difference in air pressure registered is between 0.03 and 0.09 inHg (1 and 3hPa) within 4 hours.
- Two air pressure tendency indicators pointing upward or downward will be displayed when the air pressure difference has increased or decreased by 0.09 inHg (3hPa) or more within 4 hours.

AIR PRESSURE

The 5th and 6th sections of the sections of the LCD show the relative air pressure and the air pressure history.



Air pressure over the last 12 hours

The reference relative air pressure can be set between 28.35 to 30.72 inHg (960 to 1040hPa). See "**Relative pressure value setting**" in manual setting.

BAR GRAPH DISPLAY

Depending on programming conditions, display of the history of air pressure in form of a graph consisting of vertical bars.

AIR PRESSURE HISTORY

The bar graph of the electronic barometer shows the air pressure history of the past 36 hours in 17 steps.

The horizontal axis represents the last 36 hours air pressure recording (-36, -24, -12, -6, -5, -4, -3, -2, -1, and 0 hour). The bars are plotted at each of the 17 steps and give the trend over the recorded period. The scale on the right compares the result. The "0" in the middle of this scale determines the current air pressure.

The vertical axis represents the air pressure changes in inHg (+8, +6, +4, +2, 0, -2, -4, -8. "0" represents the current air pressure). Each change (± 1 , ± 2 , ± 3 , ± 4 , ± 5 , ± 6 , ± 7 , ± 8 ; the odd values are not shown on the vertical axis but can be determined) shows in inches of mercury (inHg), how high or low the past air pressure was as compared to the current one. If the bars are rising it indicates that the weather is getting better due to an increase in air pressure. If the bars go down it indicates a drop of the air pressure and the weather is expected to get worse from the present time "0".

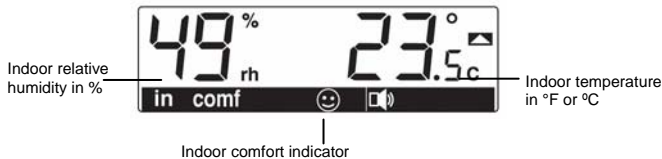
At every full hour the current air pressure is used as a basis for the display of a new graph bar. The existing graph is then moved one bar to the left.

Note:

For accurate barometric pressure trend, the intelligent weather station should operate at the same altitude. For example, it should not be move from the ground to the second floor of the house. Should the unit be moved to a new location, discard readings for the next 12 – 36 hours.

INDOOR RELATIVE HUMIDITY AND INDOOR TEMPERATURE:

The indoor temperature and humidity data are automatically updated and displayed on the third of the LCD.



COMFORT LEVEL INDICATOR:

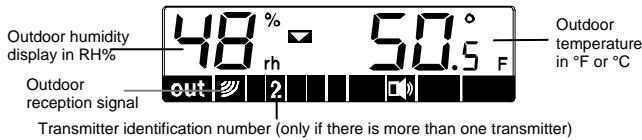
- Dry** : the "Dry" indicator will appear when the relative humidity range is lower than 45%.
Comfort : the "Comfort" indicator will appear when the relative humidity range is between 45% and 65% and the temperature range is between 68°F and 78.6°F (20.0°C and 25.9°C).
Wet : the "Wet" indicator will appear when the relative humidity range is higher than 65%.



HAPPY/SAD FACE COMFORT LEVEL INDICATOR:

- ☺ (happy face) : A happy face icon "☺" indicating a temperature level between 68°F and 78.6°F (20°C and 25.9°C) and relative humidity reading between 45% and 65%.
☹ (sad face) : A sad face icon "☹" indicating any value outside the comfortable range.

OUTDOOR TEMPERATURE AND HUMIDITY:



The seventh LCD section can show the outdoor temperature, the reception indicator, the minimum or maximum reading. A number in the bottom part will also be shown if more than one transmitter has been used.

TOGGLE BETWEEN MIN/MAX INDOOR AND OUTDOOR RECORDINGS:

To toggle between the current, minimum and maximum data and the times they were recorded, press the MIN/- key for viewing the minimum values, and press the MAX/+ key for viewing the maximum values (shown in MIN or Max displays).

When pressing the MIN/- or the MAX/+ key, the MIN and the MAX data will be displayed as following sequences:

1. MAX or MIN outdoor temperature data with time and date of recordings. Data will flash
2. MAX or MIN outdoor humidity data with time and date of recordings. Data will flash
3. MAX or MIN indoor temperature data with time and date of recordings. Data will flash
4. MAX or MIN indoor humidity data with time and date of recordings. Data will flash
5. Return to current indoor and outdoor data.

TO VIEW THE MIN/MAX DATA FROM DIFFERENT TRANSMITTERS

MIN/MAX data from other transmitters can only be displayed if there is more than 1 transmitter used.

1. To toggle between transmitters, press the CH key:
Once to show transmitter 2
Twice to show transmitter 3
Three times to return to transmitter 1
2. While the outdoor MIN/MAX humidity and temperature data is being displayed, press the CH key. The display will toggle between the different channels MIN/MAX data.

Note:

For example, when the MIN outdoor temperature data is displayed and the MAX/+ key is pressed, MAX data outdoor temperature will be displayed. If the MAX outdoor temperature data is displayed and the MIN/- key is pressed, MIN outdoor data will be displayed.

While MIN/MAX data is displayed, the channel can be changed by pressing the CH key.

TO RESET THE MIN/MAX VALUES TO CURRENT VALUES:

To reset individual indoor and outdoor MIN/MAX values to current values:

1. Press the MAX/+, MIN/- and CH key to select the desired MIN/MAX value.
2. Press the SET key to reset the selected value to current value

Note:

To reset all indoor and outdoor MIN/MAX values to current values, press and hold the MAX/+ or MIN/- key for 3 seconds.

OUTDOOR CHANNEL RE-LEARN MODE

In case the temperature data in a particular outdoor channel often shows "--." due to low battery level or false reset of a transmitter, that transmitter can be set up again individually or all (if more than 1 transmitter and the "lost" channel can be re-learned again by entering the channel re-learn mode.

To re-learn ALL channels:

1. Press and hold the CH key for 3 seconds (outdoor reception signal will show next to channel display).

To re-learn the CURRENT selected channel:

1. Press and hold the SET key while pressing the CH key (outdoor reception signal will show next to channel display).

Note: If the SET key is pressed too long, the intelligent weather station will enter the Manual Setting modes instead.

EL BACKLIGHT

The EL backlight is automatically switched ON when any keys are pressed. The EL backlight will be switched on for approximately 15 seconds before automatically switching OFF.

LOW BATTERY INDICATOR

The low battery indicator will be displayed in the LCD when the battery power of the intelligent weather station is low. It is recommended to replace the batteries in all units on an annual basis to ensure optimum accuracy of the intelligent weather station.

Note: After battery change, both the intelligent weather station and the transmitter(s) need to be reset (see note "Setting up")

“INTELLIGENT” WEATHER DISPLAY

The “Intelligent” weather text display located at the last section of the LCD will display the weather forecast based on data received from channel 1 and the air pressure.

The intelligent weather station will automatically display the following information:

- Minimum temperature of the day
- Maximum temperature of the day
- Time frame for the weather forecast
- Probability of the weather forecast
- Probability of snowfall
- Probability of fog
- Probability of glazed frost
- Probability of tempest
- Probability of strong wind
- Probability of storm

FORECAST PERIOD 12 HOURS	VORHERSAGEDAUER 12 STUNDEN	PERIOD PREVISION 12 HEURES
FORECAST INDE# 70%	PROGNOSE INDE# 70%	PREVISION INDE# 70%
MAXTEMP 25.7 °C TODAY 13:57	MAXTEMP 25.7 °C HEUTE 13:57	TEMPMA# 25.7 °C DU JOUR 13:57
MINTEMP 23.7 °C TODAY 3:57	MINTEMP 23.7 °C HEUTE 3:57	TEMPMIN 23.7 °C DU JOUR 3:57

DETAILED INFORMATION SHOWN IN THE WEATHER DISPLAY:

	Language selected		
	English	German	French
Timeframe for weather forecast	Forecast period 6 hours	Vorhersagedauer 6 Stunden	Period prevision 6 heures
	12 hours	12 Stunden 24 Stunden 36 Stunden 48 Stunden	12 heures 24 heures 36 heures 48 heures
Probability of weather forecast	Forecast Index 65%	Prognose Index 65%	Prévision Index 65%
	Index 70% Index 75% Index 80% Index 85%	Index 70% Index 75% Index 80% Index 85%	Index 70% Index 75% Index 80% Index 85%
Maximum temperature of the day	MaxTemp xx.x°F Today xx :xx	MaxTemp xx.x°F Heute xx :xx	MaxTemp xx.x°F Aujourd'hui xx :xx
Minimum temperature of the day	MinTemp xx.x°F Today xx :xx	MinTemp xx.x°F Heute xx :xx	MinTemp xx.x°F Aujourd'hui xx :xx
Probability of snowfall	Snowfall Index 65%	Schnee Index 65%	Neige Index 65%
	Index 75%	Index 75%	Index 75%
Probability of fog	Fog Index 80%	Nebel Index 80%	Brouillard Index 80%
	Index 85%	Index 85%	Index 85%
Probability of glazed frost	Glazed frost Index 75%	Raureif Index 75%	Givre Index 75%
Probability of tempest	Tempest Index 80%	Gewitter Index 80%	Orage Index 80%
Probability of strong winds	Strong wind Index 80%	Starkwind Index 80%	Vent Fort Index 80%
Probability of storm	Storm Index 75%	Sturm Index 75%	Tempête Index 75%

The forecast period, forecast index and today maximum/minimum temperature will always be show.

Other information will be show when a specific weather event happened that has been calculated by the unique algorithm of the intelligent weather station.

REMOTE TEMPERATURE/HUMIDITY SENSOR / 433MHZ RECEPTION CHECK

The outdoor temperature and humidity is measured and transmitted every 60 seconds.

The ambient temperature may affect the transmission range of the remote temperature/humidity sensor. At cold temperatures the transmitting distance may be decreased. Please bear this in mind when placing the transmitter.

To install the remote temperature/humidity sensor outside, choose a shady and dry place. Before fixing the remote temperature/humidity sensor with the enclosed screws, wait for 30 minutes to see if the indoor display is able to scan the signal from this location. Obstacles (walls, windows, trees) and interfering radio waves (PC, mobile phone, TV) can impede the reception or limit the range (about 300 feet (100 meters) in open space) considerably. Should interference occur, choose another location for the remote temperature/humidity sensor and/or the intelligent weather station.

If the outdoor temperature and humidity data are not being received within 1 minute after setting up (or the outdoor display show "--.-" in the outdoor section of the intelligent weather station after 3 failed attempts during normal operation). Please check the following points:

1. The distance of the intelligent weather station or remote temperature/humidity sensor should be at least 3 to 6 feet (1.5 to 2 meters) away from any interfering sources such as computer monitors or TV sets.

2. Avoid positioning the intelligent weather station onto or in the immediate proximity of metal doors or window frames.
3. Using other electrical products such as headphones or speakers operating on the same signal frequency (433MHz) may prevent correct signal transmission and reception.
3. Neighbors using electrical devices operating on the 433MHz signal frequency can also cause interference.
4. "Visibility" of intelligent weather station and remote temperature/humidity sensor (e.g. through a window) increases the range.

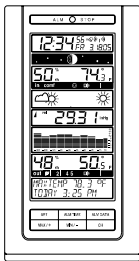
Note:

When the 433MHz signal is received, do not re-open the battery cover of either the remote temperature/humidity sensor or the intelligent weather 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.

If no reception is possible despite the observation of these factors, all system units have to be reset (see **Setting up**).

POSITIONING THE INTELLIGENT WEATHER STATION:

The intelligent weather station has been designed to hang on a wall or free standing.



For Free standing:

Simply attach the stand to the bottom of the unit and place onto a flat surface.



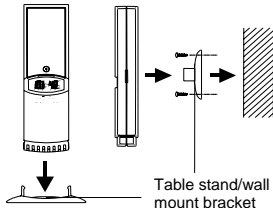
To wall mount

Choose a sheltered place. Avoid direct rain and sunshine.

Before wall mounting, please check that the outdoor temperature and humidity values can be received from the desired locations. To wall mount:

1. Fix a screw (not supplied) into the desired wall, leaving the head extended out the by about 5mm.
2. Fold the stand of the intelligent weather station by pushing inward and hang it onto the screw. Remember to ensure that it locks into place before releasing.

POSITIONING THE REMOTE TEMPERATURE / HUMIDITY SENSOR:



The remote temperature/humidity sensor can be placed onto any flat surface or wall mounted using the bracket which doubles as a stand or wall mount base.

To wall mount:

1. Secure the bracket onto a desired wall using the screws and plastic anchors.
2. Clip the remote temperature/humidity sensor onto the bracket.

Note:

Before permanently fixing the remote temperature/humidity sensor wall base, place all units in the desired locations to check that the outdoor temperature and humidity readings are receivable. In event that the signal is not received, relocate the remote temperature/humidity sensor or move them slightly as this may help the signal reception.

CARE AND MAINTENANCE:

- Extreme temperatures, vibration and shock should be avoided as these may cause damage to the units and give inaccurate forecasts and readings.
- When cleaning the display and casings, use a soft damp cloth only. Do not use solvents or scouring agents as they may mark the LCD and casings.
- Do not submerge the units in water.
- Immediately remove all low powered batteries to avoid leakage and damage. Replace only with new batteries of the recommended type.
- Do not make any repair attempts to the units. Return it to their original point of purchase for repair by a qualified engineer. Opening and tampering with the units may invalidate their guarantee.
- Do not expose the units to extreme and sudden temperature changes, this may lead to rapid changes in forecasts and readings and thereby reduce their accuracy.

SPECIFICATIONS:

Temperature measuring range:

Indoor	: +14°F to +139.8°F with 0.2°F resolution -10°C to +59.9°C with 0.1°C resolution ("OF.L" displayed if outside this range)
Outdoor	: -21.8°F to +157.8°F with 0.2°F resolution -29.9°C to +69.9°C with 0.1°C resolution ("OF.L" displayed if outside this range)

Relative humidity measuring range:

Indoor	: 1% to 99% with 1% resolution ("-.-" displayed if outside this range)
Outdoor	: 1% to 99% with 1% resolution ("-.-" displayed if outside this range)

Indoor temperature checking interval	: every 15 seconds
Indoor humidity checking interval	: every 20 seconds
Outdoor temperature reception	: every 5 minutes
Outdoor humidity reception	: every 5 minutes
Transmitter checking interval	: every 1 minute
Air pressure checking interval	: every 15 seconds
Transmission range	: up to 330 feet (100 meters) (open space)

Power supply:

Intelligent Weather Station	: 3 x AA batteries
Remote temperature/humidity sensor	: 2 x AA batteries
Battery life cycle	: approximately 12 months

Alkaline batteries are recommended

Dimensions (H x L x D)

Intelligent Weather Station	: 8.39" x 4.58" x 1.23" (213 x 116.3 x 31.2 mm) (including stand)
Remote temperature/humidity sensor	: 6.30" x 1.69" x 0.91" (160 x 42 x 23 mm) (including stand)

WARRANTY INFORMATION

La Crosse Technology, Ltd provides a 1-year limited warranty on this product against manufacturing defects in materials and workmanship.

This limited warranty begins on the original date of purchase, is valid only on products purchased and used in North America and only to the original purchaser of this product. To receive warranty service, the purchaser must contact La Crosse Technology, Ltd for problem determination and service procedures. Warranty service can only be performed by a La Crosse Technology, Ltd authorized service center. The original dated bill of sale must be presented upon request as proof of purchase to La Crosse Technology, Ltd or La Crosse Technology, Ltd's authorized service center.

La Crosse Technology, Ltd will repair or replace this product, at our option and at no charge as stipulated herein, with new or reconditioned parts or products if found to be defective during the limited warranty period specified above. All replaced parts and products become the property of La Crosse Technology, Ltd and must be returned to La Crosse Technology, Ltd. Replacement parts and products assume the remaining original warranty, or ninety (90) days, whichever is longer. La Crosse Technology, Ltd will pay all expenses for labor and materials for all repairs covered by this warranty. If necessary repairs are not covered by this warranty, or if a product is examined which is not in need or repair, you will be charged for the repairs or examination. The owner must pay any shipping charges incurred in getting your La Crosse Technology, Ltd product to a La Crosse Technology, Ltd authorized service center. La Crosse Technology, Ltd will pay ground return shipping charges to the owner of the product to a USA address only.

Your La Crosse Technology, Ltd warranty covers all defects in material and workmanship with the following specified exceptions: (1) damage caused by accident, unreasonable use or neglect (including the lack of reasonable and necessary maintenance); (2) damage occurring during shipment (claims must be presented to the carrier); (3) damage to, or deterioration of, any accessory or decorative surface; (4) damage resulting from failure to follow instructions contained in your owner's manual; (5) damage resulting from the performance of repairs or alterations by someone other than an authorized La Crosse Technology, Ltd authorized service center; (6) units used for other than home use (7) applications and uses that this product was not intended or (8) the products inability to receive a signal due to any source of interference.. This warranty covers only actual defects within the product itself, and does not cover the cost of installation or removal from a fixed installation, normal set-up or adjustments, claims based on misrepresentation by the seller or performance variations resulting from installation-related circumstances.

LA CROSSE TECHNOLOGY, LTD WILL NOT ASSUME LIABILITY FOR INCIDENTAL, CONSEQUENTIAL, PUNITIVE, OR OTHER SIMILAR DAMAGES ASSOCIATED WITH THE OPERATION OR MALFUNCTION OF THIS PRODUCT. THIS PRODUCT IS NOT TO BE USED FOR MEDICAL PURPOSES OR FOR PUBLIC INFORMATION. THIS PRODUCT IS NOT A TOY. KEEP OUT OF CHILDREN'S REACH.

This warranty gives you specific legal rights. You may also have other rights specific to your State. Some States do not allow the exclusion of consequential or incidental damages therefore the above exclusion of limitation may not apply to you.

For warranty work, technical support, or information contact:

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2809 Losey Blvd. S.
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Phone: 608.782.1610
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