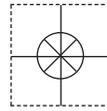


1 YEAR
WARRANTY



Ω OMEGA® User's Guide



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WMS831 **Wireless Data Logging** **Weather Station**



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The information contained in this document is believed to be correct, but OMEGA accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

WARNING: These products are not designed for use in, and should not be used for, human applications.



WMS831

WIRELESS DATA LOGGING WEATHER STATION

USER'S MANUAL



INTRODUCTION

Thank you for purchasing Omega's Weather Station with remote control. This compact and easy-to-use product features a wide variety of time and weather data, such as precise atomic time, perpetual calendar, air temperature, relative humidity, barometric pressure, wind speed and direction, rainfall, and etc.

PACKAGE CONTENTS

In this package you will find:

- One Main Unit (receiver)
- One Rain Gauge (remote rain sensor/transmitter)
- One Anemometer (remote wind sensor/transmitter)
- One Three-Channel Temperature & Humidity Sensor (transmitter)
- One 7.5V AC/DC Adapter
- Mounting Hardware with wrench tool
- One User's Manual

Components:

- Main Unit
- AC/DC 7.5V power adaptor
- Thermo Hygrometer Sensor
- Rain Gauge

Consists of:

Funnel shaped top with battery compartment
Rain Gauge bucket
Bucket see-saw mechanism
Protective screen

- Anemometer

Consists of:

Wind Cups
Wind Vane
Anemometer arm
Anemometer base

- Mounting hardware:

4 screws for securing rain gauge to the flat surface;
4 screws for securing anemometer to vertical surface

INSTALLATION

Our Omega's Full Weather Station #WS821 operates at 433MHz radio frequency, so no wire installation is required between the main unit (receiver) and the remote weather sensors (transmitters). The remote weather sensors include a thermo-hygrometer (temperature and humidity) sensor, anemometer (wind sensor) and a rain gauge (rain sensor). All data measured by these remote sensors is transmitted to the main unit wirelessly, with the operating range up to 328 feet (100 meters) in the open area. The Anemometer and a rain gauge must be placed outdoors to measure weather elements. Remote thermo-hygrometers can be placed indoors or outdoors, depending on the location where the temperature and humidity are to be measured. If you intend measuring outdoor temperature and humidity, place the remote sensor outdoors, preferably not in the direct sunlight.

NOTE: It is critical to assemble and power up all of the remote weather sensors BEFORE setting up the main unit.

NOTE: It is critical to power up and test communication between all of the weather sensors and the main unit BEFORE permanently mounting them outside.

BEFORE YOU BEGIN

- We recommend using alkaline batteries for the remote weather sensors and the main unit when temperatures are above 32°F (0°C). We recommend using lithium batteries for the remote weather sensors when temperatures are below 32°F (0°C).
- Avoid using rechargeable batteries. (Rechargeable batteries cannot maintain correct power requirements).
- ALWAYS install batteries in the remote weather sensors before the main unit.
- Insert batteries before first use, matching the polarity in the battery compartment
- Remove protective plastic screen from LCD display (if any).
- During an initial setup, place the main unit close to the remote weather sensors.
- After reception is established (all of the remote readings will appear on the main unit's display), position the remote sensors and the main unit within the effective transmission range of up to 328 feet (100 meters). Ideally they should be placed within the line of sight of the main unit. See placement tips in the user manual for each remote weather sensor separately.
- Transmission range may be affected by trees, metal structures and electronic appliances.
- The main unit must be placed indoors.
- The effective operating range may be influenced by the surrounding building materials and how the receiver (main unit) and transmitters (weather sensors) are positioned.
- Place the remote weather sensors so that they face the main unit (receiver), minimizing obstructions such as doors, walls, and furniture.

NOTE: When the temperature falls below freezing, the batteries in the outdoor remote weather sensors may have reduced voltage supply and a shorter effective range. We recommend using lithium batteries at temperatures of 32°F (0°C) and below.

IMPORTANT: Make sure that the remote weather sensors are easily accessible for cleaning and maintenance. We recommend cleaning the remote weather sensors periodically, as the dirt and debris may affect sensors accuracy.

THERMO-HYGROMETER SENSOR

FEATURES

- Remote data transmission to the main unit via 433 MHz signal
- 328 feet (100 meters) transmission range without interference
- LCD display of measured temperature and humidity
- Three (3) transmission channels selection
- Case can be wall mounted using built-in hanger
- Up to three T-H sensors per station are permitted

A. LED INDICATOR

- Flashes once when the remote sensor transmits a reading to the main unit.
- Flashes twice when battery power is low.

B. BATTERY COMPARTMENT

Holds 2 "AA" batteries

C. RESET

Resets all readings

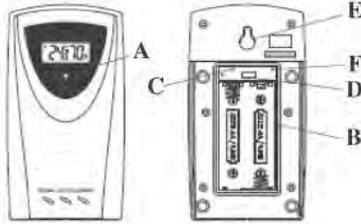
D. CHANNEL SWITCH

Selects the desired transmission channel from 1 to 3

E. WALL-MOUNT RECESSED OPENING

Attaches the remote sensor to the wall

NOTE: Install the batteries and select the channel before mounting the sensor.



BATTERY INSTALLATION

- Remove the screws from the battery compartment with a small Phillips screwdriver.
- Set the channel 1 through 3. The switch is located in the battery compartment. Channel 1 is typically selected if only one remote sensor is being used.
- Install 2 "AA" batteries (not included) matching the polarities shown in the battery compartment.
- Replace the battery compartment door and secure the screws.
- Secure the thermo-hygrometer remote sensor in the desired location.

MOUNTING

- The remote thermo-hygrometer sensor can be placed on the flat surface or mounted on the wall in vertical position.
- Use the wall mount hardware and screws provided when mounting the thermo-hygrometer sensor on the wall.

PLACEMENT TIPS:

- The remote thermo-hygrometer sensor should be placed in the area with a free air circulation and sheltered from the direct sunlight and an extreme weather conditions.
- Ideally, place the thermo-hygrometer sensor above the natural surfaces (such as a grassy lawn).
- Avoid placing the thermo-hygrometer sensor near sources of heat such as chimneys and heating elements.
- Avoid any areas collecting and radiating a heat from the sun, such as metal, brick or concrete structures, paving, patios and decks.
- The international standard for the valid air temperature measurements is 4 feet (1.25meters) above the ground.

RAIN GAUGE

FEATURES

- Precipitation measurement
- Remote rainfall data transmission to the main unit via 433 MHz signal
- 100 feet (30 meters) transmission range without interference
- Built-in installation level
- Non-corrosive protective screen



A. RAIN GAUGE BUCKET

Holds all rain gauge components

B. KNOB

Secures the top on the rain gauge bucket

C. RAIN GAUGE BUCKET FEET

Allows securing the rain gauge on its place

D. FUNNEL-SHAPED TOP WITH BATTERY COMPARTMENT

Contains battery compartment and rainfall counting electronics

E. BATTERY COMPARTMENT

Holds 2 "AA" size batteries

F. SCREWS

Secure battery compartment cover

G. BUILT-IN LEVELER

Allows leveling rain gauge on the surface

H. BUCKET SEE-SAW MECHANISM

Collects the rainfall in one of its containers and self-empties once full

I. PROTECTIVE SCREEN

Protects the rain gauge funnel from debris

BATTERY INSTALLATION

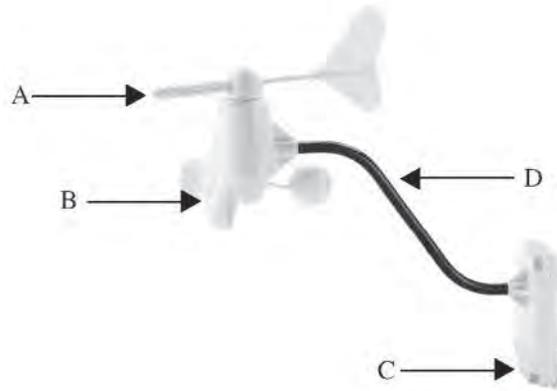
- Unlock the funnel-shaped top on the rain gauge by turning both knobs on the sides in a Counter-clockwise direction.
- Remove the funnel-shaped top lifting it off the rain gauge bucket.
- Remove 7 small screws from the battery compartment cover using a small Phillips screwdriver
- Insert 2 "AA" batteries (not included), matching the polarities as shown in the battery compartment.
- Replace the battery compartment door and secure the screws.
- Insert the funnel-shaped top into the rain gauge bucket and secure it into place by turning the knobs clockwise.

MOUNTING

- Make sure that the rain gauge bucket is level – check if the ball bearing inside the bucket is at the midpoint of the leveler.
- Place the protective screen over the top to protect the rain gauge from the debris.
- Mount the rain gauge in place using mounting hardware provided.
- Make sure that the rain gauge is in open area where precipitation falls directly into the gauge's bucket, ideally 2-3 feet above the ground.

PLACEMENT TIPS

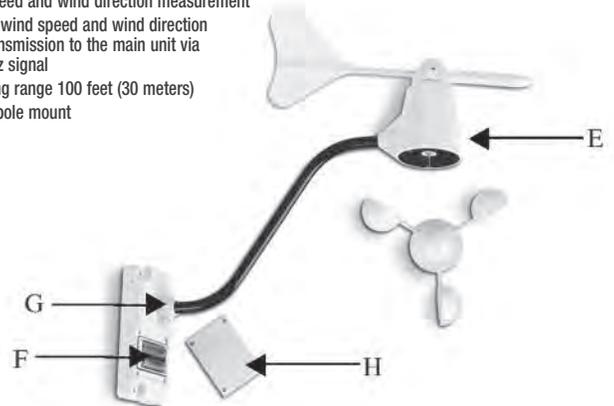
- The rain gauge should be placed in an open area away from walls, fences, trees and other coverings, which may reduce the amount of rain collected in the bucket. Additionally, trees and rooftops may be sources of pollen, leaves and other debris.
- To avoid rain shadow effects, place the rain gauge two to four times the height of any nearby obstruction.
- It is important that excess rain can flow freely away from the rain gauge.



ANEMOMETER (WIND SENSOR)

FEATURES

- Wind speed and wind direction measurement
- Remote wind speed and wind direction data transmission to the main unit via 433 MHz signal
- Operating range 100 feet (30 meters)
- Wall or pole mount



A. WIND VANE

Measures wind direction

B. WIND CUPS

Measures wind speed

C. ANEMOMETER BASE

- Holds battery compartment
- Allows mounting the anemometer vertically

D. ANEMOMETER ARM

Keeps anemometer assembly together

E. WIND CUPS SHAFT

Holds wind cups on the anemometer arm

F. BATTERY COMPARTMENT

Holds 2 "AA" batteries

G. WALL MOUNT SCREW OPENINGS

Allows securing the anemometer in place

H. BATTERY COVER

Allows securing 2 "AA" batteries on the anemometer base

ASSEMBLY

- With a flashlight, look into the mounting hole that will receive the anemometer axle shaft, on the back of the wind cups. Check that the set screw is backed off appropriately, not obstructing the opening.
- Place the wind cups over the axle shaft protruding from the anemometer housing and gently slide into place.
- Insert the Allen wrench tool provided into the wind cups opening and tighten the small set screw inside.
- Test to assure the wind cups are securely mounted on the anemometer shaft and spin freely

BATTERY INSTALLATION

- Remove four (4) screws from the battery compartment with a small Phillips screwdriver.
- Open the battery compartment and install 2 "AA" batteries (not included) matching the polarities shown.
- Replace the battery compartment door and secure the screws.

ALIGNING

- Point the wind direction vane to the North (use a compass or map if necessary).
- Press "SET" opening located inside battery compartment with a paper clip or similar tool. This will "SET" the local wind direction to North. Continued pressing of "SET" alternately toggles wind direction between the factory default preset or user set direction.

NOTE: Repeat this procedure every time after whenever changing the batteries.

MOUNTING

Securely mount the anemometer base to an appropriate vertical surface, using the fittings provided.

PLACEMENT TIPS:

- The anemometer should be mounted in an open area with unobstructed air flow; away from the nearby trees, buildings or other structures.
- Aim for a maximum exposure of the anemometer to the most common wind directions in the area.
- The suggested mounting height for the anemometer is 33 feet (10meters) above the ground.

MAIN UNIT

The main unit should be placed indoors. It measures: pressure, indoor temperature, humidity, and receives the US Atomic Clock data and data from each of the remote weather sensors.

FEATURES

Time

- Precise time and date set via RF signals from US Atomic clock
- Selectable 12 or 24 hour time format
- Manual adjustment of time and date
- Calendar displaying date with month and day in 6 languages: English, German, French, Italian, Spanish and Dutch
- Sunrise/set calculation for over 100 pre-programmed world cities in accordance with the geographical information entered by the user
- Moon Phase calendar and historical data for the past and future 39 days
- Dual crescendo alarms with programmable snooze

Weather

- Weather forecast for the next 12 to 24 hour in seven large icons: Sunny, Partly Cloudy, Cloudy, Light Rain, Heavy Rain, Snowy and Unstable.
- Barometric pressure in imperial or metric units
- Altitude adjustment for pressure compensation
- 24 hour barometric pressure history chart
- Multiple weather alarms
- Indoor/Outdoor Temperature & Humidity in up to 3 remote locations (additional sensors required)
- Dew point and comfort level indicators
- Wind speed and wind gust averages and memory
- Wind direction
- Rainfall amount with minimum and maximum memory
- Operating range from 100 feet (30 meters) up to 328 feet (100 meters)

Display

- Light sensor detects low light conditions and LCD lights up automatically when adapter is connected

Power

- 7.5 V AC/DC adapter for automatic remote control
- 4 "AA" batteries

BATTERY INSTALLATION

- Open the battery compartment door on the back of the main unit.
- Insert 4 "AA" batteries according to the polarities shown and replace the battery compartment door.
- Connect 7.5 V AC/DC adapter provided to the main display unit and plug into to the wall power outlet.

NOTE: The AC/DC adaptor connection is required for automatic backlight control function. When the main unit operates on battery power alone, the auto backlight control function is disabled.

- Connect the table stand to the back of main unit when placing on a table or other horizontal surface.
- When mounting the main unit on the wall or vertical surface, detach the table stand and use the mounting hardware provided.

Placement tips

- Make sure that the main unit is locating within the operating range of all remote weather sensors.
- Ideally the remote weather sensors should be mounted within the line-of-sight of the main unit.
- Transmission range may be affected by trees, metal structures and electronic appliances.
- Test reception before permanently mounting all the remote weather sensors.

Avoid placing the main unit in the following areas:

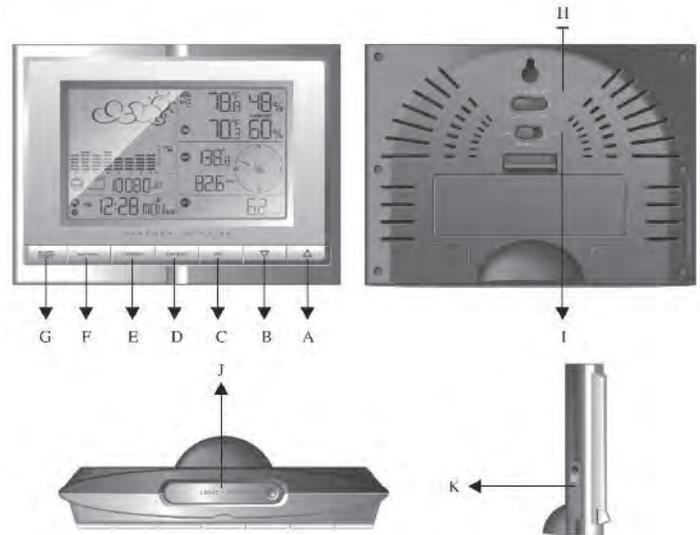
- Direct sunlight and surfaces emitting and radiating heat, such as heating ducts or air conditioners.
- Areas with interference from the wireless devices (such as cordless phones, radio headsets, baby listening devices) and electronic appliances.

OPERATION

Once the main unit is powered, the display will show all available LCD segments for a moment.

IMPORTANT: All of the display functions will be locked, allowing setting your local altitude or sea level pressure parameters.

The locked display will show the pressure and weather forecast icon  and abbreviation "hPa/mBar" flashing, indoor temperature and humidity readings and default time "12:00pm".



BUTTONS AND CONTROLS

A. UP ▲	- Mode Selection: selects the next available mode counter-clockwise - When programming: increases parameters
B. DOWN ▼	- Mode Selection: selects the next available mode clockwise - When programming: decreases parameters
C. SET	- Rotates display for current mode - Press and hold: to enter the programming mode - Locks in: set parameters
D. CHANNEL	- Manually selects the channel # for receiving temperature and humidity sensor data - Enables the temperature and humidity channel auto-scan mode
E. MEMORY	- Records: moon phase, temperature, humidity, rainfall and wind records. Then stores in memory - Moon phase: determined by the day of month interval - Sets and stores pressure & altitude units in Memory
F. HISTORY	- Allows displaying the sea-level pressure history
G. ALARM/CHART	- Displays alarm times and programmed alerts for temperature, rainfall and wind - Press and hold, to enter the alarm/alert programming mode - Press and hold in pressure and forecast window, to view different bar charts
H. LIGHT SENSOR - AUTO, ON, OFF	- Sets the light sensor to: automatic, on or off
I. SENSITIVITY - HIGH/LOW	- Adjusts the automatic light sensor sensitivity
J. LIGHT/SNOOZE	- Illuminates the display backlight for 5 seconds - Activates Snooze delay for alarms (programmable 1 to 15 minutes)
K. AC/DC ADAPTOR INPUT	- Connects main unit to the power outlet through the AC to 7.5V DC adapter provided

NAVIGATING THROUGH THE MODES

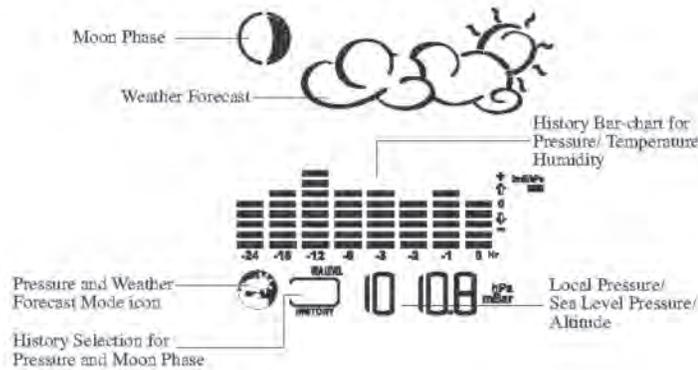
The main unit has five (5) different modes (windows) displaying separate data: Weather Forecast, Clock & Alarm, Temperature and Humidity, Rain, and Wind. When a specific mode is selected the corresponding icon begins flashing.

Press UP ▲ button to cycle through the modes clockwise or DOWN ▼ button for counter-clockwise.

PRESSURE AND WEATHER FORECAST WINDOW

Displays:

- Current pressure and history bar-chart
- Weather forecast
- Moon phase



CLOCK AND ALARMS WINDOW

Displays:

- US Atomic Time clock with time and calendar
- Single alarm, weekday alarm and ice warning alarm (pre-alarm)



TEMPERATURE AND HUMIDITY WINDOW

Temperature & Humidity are automatic features and no adjustments. IN or internal sensors reside within the main unit. Readings for CH1, Ch2 or Ch3 are provided by external sensor transmitters.

Displays:

- Temperature and humidity readings for indoor and selected external channel
- Comfort level indication (Predetermined level)
- Dew point temperature (Predetermined level)
- High and Low temperature alerts (Predetermined level)
- Remote Thermo-Hygrometer sensor battery status



RAIN WINDOW

Displays:

- Precipitation amount for the last hour, day, yesterday, last week and last month
- Rainfall alert (User adjustable level setting)
- Remote rain gauge battery status



WIND WINDOW

Displays:

- Wind Chill temperature
- Temperature at place of anemometer
- Wind direction
- Wind speed
- Wind gust speed
- Alert for wind speed and wind gust speed (User Adjustable setting)
- Remote anemometer battery status



CUSTOMIZING YOUR WEATHER STATION

It is required to program:

- The pressure parameters during Initial Setup (See Pressure and Weather Forecast Mode P.15)
- The time, the date and the weekday language (Clock and Alarm Mode: P.17)

Optional:

- The time alarms (Clock and Alarm Mode: P.17)
- The temperature alerts (Temperature and Humidity Mode P.19)
- Daily rainfall alerts (Rain Mode P.21)
- Wind alerts (Winds Mode: P.22)

LED BACKLIGHT OPTIONS

The main unit backlight can be turned on, off or automatically toggled depending on the environment light conditions. Use the light sensor switch at the back of the main unit to select a desired backlight setting.

For the automatic backlight control, the sensitivity of the light sensor can be adjusted to high or low using the switch, located on the back panel.

NOTE: For an automatic control function the main unit must be plugged into the wall power outlet via the AC/DC adaptor provided.

USING DIFFERENT WEATHER MODES

PRESSURE AND WEATHER FORECAST MODE

It indicates the current barometric pressure, the sea level pressure, the weather forecast and the moon phase.

A number of historical statistics can also be viewed, including the sea-level pressure for the past 24 hours, moon phase for the past and following 39 days, as well as a pressure/ temperature/ humidity history bar-chart.

Pressure can be displayed inHg, hPa/mBar or mmHg, and altitude can be displayed in meters or feet. (Altitude can be used to set or adjust barometric levels.)

ACCESSING PRESSURE AND WEATHER FORECAST MODE

From the main unit: Press UP ▲ or DOWN ▼ until the pressure and weather forecast icon  starts flashing.

SETTING PRESSURE PARAMETERS DURING INITIAL SETUP

IMPORTANT: During the main unit initial setup, after main unit powered up, all of the functions in Pressure and Weather.

Forecast mode will be locked for a short time, until the pressure settings are confirmed. The locked display will show the pressure and weather forecast icon and abbreviation "hPa/ mBar" flashing.

To correctly calibrate the sea level barometric pressure, you must program the correct local altitude.

- Store Units of Pressure: Press UP ▲ or DOWN ▼ button selecting the units of pressure in: inHg, hPa/mBar or mmHg.
- Press SET to confirm and move to the altitude unit selection mode.
- Store Altitude Units: Press UP ▲ or DOWN ▼ button selecting the altitude unit in feet or meters.
- Press SET button to confirm and move to the altitude programming mode.
- Press UP ▲ or DOWN ▼ to adjust the local altitude. Press and hold either button for the "Rapid" setting. (Local information is obtainable via GPS device or online services.)
- Press SET to confirm the programming.

VIEWING THE PRESSURE AND ALTITUDE INFORMATION

To view a pressure or altitude information, press SET button to alternate between the sea level pressure, local pressure and local altitude settings.

SEA LEVEL PRESSURE SETTING

- Press SET button until the sea level pressure with "SEA LEVEL" is displayed.
- Press and hold SET until the pressure digits are flashing.
- Set the sea level pressure by pressing UP ▲ or DOWN ▼ buttons. Press and hold either button for the quick digits advance.
- Press SET to confirm selection

CHANGING THE SEA LEVEL PRESSURE AND ALTITUDE UNIT

- Press **SET** until the local pressure with the word "SEA LEVEL" is displayed.
- Press and hold **MEMORY** until the pressure unit is flashing.
- Set the sea level pressure units by pressing the **UP ▲** or **DOWN ▼** buttons to adjust the pressure value.
- Press **MEMORY** to confirm your selection.
- Press **SET** button until the local altitude value will be displayed
- Press and hold **MEMORY** until the altitude unit is flashing.
- Set the altitude unit in meters or feet by pressing the **UP ▲** or **DOWN ▼**.
- Press **MEMORY** to confirm your selection.

VIEWING THE SEA LEVEL PRESSURE HISTORY

- In all modes, press **HISTORY** button entering the sea level pressure display.
- When the **SEA LEVEL** is displayed, press **HISTORY** repeatedly viewing the sea level pressure history for the past 24 hours in hour increments.
- If no buttons are pressed for 5 seconds, the unit will automatically return to the Pressure and Weather Forecast Mode.

VIEWING THE PRESSURE, TEMPERATURE AND HUMIDITY BAR CHARTS

The bar chart in Pressure and Weather forecast window can be configured to display a historical data for the sea level pressure and temperature or humidity for channel 1.

After selecting the Pressure and Weather Forecast Mode, press and hold **ALARM/CHART** button to toggle the bar chart between the sea level pressure with a word "PRESSURE" displayed at the right bottom corner of the chart, temperature with a thermometer icon and "CH1" and a humidity with "RH" icon and "CH1".

Viewing the Moon Phase History and Weather Forecast

- After selecting the Pressure and Weather Forecast Mode, press **MEMORY**, so "+ 0 days" is flashing.
- Press **UP ▲** or **DOWN ▼** selecting from today's date a future (+) or past (-) days and the corresponding moon phase will be displayed. Press and hold either button for a quick advance.
- To exit, press **MEMORY** button.

SEVEN UNIQUE WEATHER FORECAST DISPLAYS

Display	Weather Forecast
	Sunny
	Partly Cloudy
	Cloudy
	Light Rain
	Heavy Rain
	Unstable Weather
	Snow

NOTE: The weather forecast accuracy is approximately 70%.

Display shows forecasted, not current conditions. The **SUNNY** icon indicates clear weather, even when displayed during the night-time.

UNDERSTANDING THE MOON PHASE DIAGRAM



CLOCK AND ALARM MODE

MANUAL SETTING

The main unit can be manually set to display the time, calendar or UTC time. There are three time alarms available on the main unit: Weekday alarm (W), Single alarm (S) and Ice Warning Alarm (Pre-AL).

- If Weekday alarm is activated, it will sound at the set time and the alarm icon will flash Mondays through Fridays.
- If Single day alarm is activated, it will sound at the set time and the alarm icon will flash only for this specific day and will not activate on subsequent days.
- The Ice Warning Alarm is activated at programmed time interval (from 15 to 90 minutes) before the weekday or single alarm, if channel 1 temperature falling to freezing and below.

NOTE: Ice Warning Alarm can be set only if one or both-Weekday or Single alarm are programmed. The snooze duration for listed alarms can also be programmed up to 15 minutes.

ACCESSING CLOCK AND ALARM MODE

Press **UP ▲** or **DOWN ▼** until the clock icon  next to the time/date display will flash.

Setting the time, date and language

- In the Clock and Alarm Mode, press and hold **SET** button until the day of week language abbreviation "ENG" will flash.
- Press the **UP ▲** or **DOWN ▼** selecting the day of the week in English, German, French, Italian, Spanish or Dutch.

- Press **SET** to confirm selection.
- Select the City Code for your area by pressing **UP ▲** or **DOWN ▼**. Refer to P.25 for a list of available codes.
- Press **SET** to confirm the selection and enter to the latitude and longitude programming mode.

SETTING USR LATITUDE & LONGITUDE

If you selected the **USR** as a city code, you will be prompted to enter the latitude, longitude, Time Zone and select Daylight Savings Time on or off.

- Press **UP ▲** or **DOWN ▼** to adjust the latitude. Press and hold down either button for quick digits advance.
- Press **SET** to confirm the selection.
- Continue setting the longitude using the same steps.
- Set the Time Zone by pressing **UP ▲** or **DOWN ▼** to adjust the time in 30 min intervals. Press and hold down either button for quick digits advance.
- Press **SET** to confirm selection.

If the **USR** was selected as a city code or your city is located in the Daylight Savings zone you would need to set the Daylight Saving Time Option:

- Press **UP ▲** or **DOWN ▼** to enable or disable the DST option. Press and hold either button for quick digits advance.
- Press **SET** to confirm selection.
- Continue setting the year, month, day, calendar format (day/month or month/day), time format (12 or 24 hours), local hour and minutes, using the same steps.

After programming is complete the display will return to the default Clock and Alarm Mode.

NOTE: Press and hold **SET** anytime during the setup to return to normal Clock and Alarm Mode. All previous settings will be cancelled.

DIFFERENT CLOCK AND CALENDAR DISPLAYS

In the Clock and Alarm Mode press **SET** selecting either:

- Hour and Minutes with the Day of the week
- Hour and Minutes for UTC (Coordinated Universal Time)
- Hour and Minutes with the City abbreviation
- Hour and Minutes with the Seconds
- Month with the day and a year. Or day with month and a year.

ENABLING OR DISABLING THE TIME ALARMS

Press the **ALARM/CHART** to display the Weekday Alarm. If these alarms are not set, the abbreviation **OFF** will be displayed.

- To enable or disable any of these alarms, press **UP ▲** or **DOWN ▼**.

NOTE: Press **SET** anytime during alarm selection mode to return to the default clock display.

PROGRAMMING TIME ALARMS

- In the Clock and Alarm Mode, press the **ALARM/CHART** selecting the desired alarm.
- Press and hold **ALARM/CHART** button until the hour digit will flash
- Set the alarm hour using the **UP ▲** or **DOWN ▼**. Press and hold either button for quick digit advance.
- Press **ALARM/CHART** to confirm selection.
- Set the alarm minutes using **UP ▲** or **DOWN ▼**. Press and hold either button for quick digit advance.
- Press **ALARM/CHART** to confirm selection.
- Set a Snooze interval (all three alarms share same snooze time duration) using **UP ▲** or **DOWN ▼**. Press and hold either button for quick digit advance.
- Press **ALARM/CHART** to confirm your selection.

After programming is completed, the display will return to the alarm selection screen.

NOTE: Pre-alarm (Ice Warning Alarm) can be set only if the weekday alarm or single alarm is enabled.

DISABLING OR ENABLING SNOOZE FUNCTION

To enable a snooze function press **LIGHT/SNOOZE** button. Snooze duration is programmable and can set: from 1 to 15 minutes.

NOTE: When the alarm sounds for 2 minutes the clock will automatically Snooze if no buttons are pressed. This will occur for three consecutive snooze cycles.

TO DISABLE ALARM(S):

Press **ALARM/CHART** to disable the alarm (s).

NOTE: For weekday alarm, pressing **ALARM/CHART** will only disable the alarm for the current day. The alarm will activate again on the next day, Monday through Friday.

ATOMIC TIME RECEPTION

The main unit synchronizes the time and date with **WWVB** radio clock broadcasts maintaining the atomic time precision.

WWVB RADIO CONTROLLED TIME

The NIST (National Institute of Standards and Technology) radio station (**WWVB**) is located in Ft. Collins, Colorado. It transmits an exact time signal continuously throughout the most of the continental United States at 60 KHz frequency. The Atomic Time Clock in your weather station can receive this **WWVB** signal through the internal antenna from up to 2,000 miles away. Due to the nature of the Earth's ionosphere, reception can be limited during the daylight hours. The radio controlled clock will search for an alternate station that receives the atomic time signal from the NIST Atomic clock in Boulder, Colorado.

The **WWVB** tower icon on the unit's display will flash indicating a radio signal reception from the **WWVB** station. If the tower icon is not fully lit, or if the time and date are not set automatically, please consider the following:

- During night-time hours, atmospheric disturbances are typically less severe and radio signal reception may improve. A single daily reception is sufficient enough to keep the clock accuracy within 1 second.
- Make sure the unit is positioned at 8 feet (2 meters) distance from any interference source such as a TV, computer monitor, microwave, etc.
- Within concrete wall rooms such as basements or office buildings, the received signal may be weakened. Always place the Projection Clock near the window for better reception.

Once the atomic time signal is received, the date and time will be set automatically, and the  icon will appear.

After the clock is set manually, place the main unit by the window for the better reception. The atomic clock receiver is programmed that it will continue to search for the atomic time signal daily for every hour between 1:00 am and 4:30 am.

Once the time signal has been successfully received, the time and date will be updated automatically. To enable or disable the atomic time receiver:

- Press and hold UP  - if atomic time reception is activated, a triangular tower icon will start flashing next to the clock icon. If reception is disabled, the triangular tower icon will disappear.

Icon	Atomic Time Reception Strength
 (Flashing)	Undefined data
 (no circle)	Reception failed for 24 hours
 (one circle)	Weak signal, but can be decoded
 (two circles)	Strong signal

TEMPERATURE AND HUMIDITY MODE

The weather station supports up to 3 remote thermo hygrometers corresponding to a separate channel of the temperature and relative humidity display. The temperature can be displayed in Celsius (°C) or Fahrenheit (°F).

The main unit carries the temperature and humidity sensor and uses this indoors data to calculate an indoors comfort level - Wet, Comfort or Dry.

A temperature alert function is available for each channel. It can be programmed to sound if the channel temperature exceeds or falls below the pre-set upper and lower limit.

NOTE: The temperature alerts have a 0.5 °C deviation to prevent them from sounding due to small temperature fluctuations that are close to the set alert value. This means that after the temperature reaches the alert temperature, it will have to fall below the alert temperature plus the deviation (0.5°C) to activate the alert.

ACCESSING TEMPERATURE AND HUMIDITY MODE

From the main unit: Press UP  or DOWN  until the IN icon  on the upper right will flash.

VIEWING TEMPERATURE AND HUMIDITY FOR EACH CHANNEL

Static Display:

In Temperature and Humidity Mode, press the CHANNEL button to recall a different channel.

Channel Auto-Scan Display:

To enable automatic scan of the different channels, press and hold CHANNEL, until the icon  is displayed. Each valid channel will be alternately displayed with a 5 seconds delay.

RECALLING OF TEMPERATURE AND DEW POINT DISPLAYS

In Temperature and Humidity Mode press the SET button to recall temperature and relative humidity or dew point and relative humidity.

SET THE TEMPERATURE IN CELSIUS OR FAHRENHEIT. (Does not affect Wind Chill)

In Temperature and Humidity Mode, press and hold SET to toggle the temperature in Celsius (°C) or Fahrenheit (°F).

ACTIVATING/DEACTIVATING THE TEMPERATURE ALERTS

In Temperature and Humidity Mode, press the ALARM/CHART to recall a current temperature for the corresponding channel, the upper temperature alert with  icon (if disabled, displays OFF), or lower temperature alert with  icon (if disabled, displays OFF).

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

PROGRAMMING THE TEMPERATURE ALERTS

- In the Temperature and Humidity Mode, press ALARM/CHART selecting the desired alarm.
- Press and hold ALARM/CHART button until the remote temperature and  or  icon starts flashing.
- Adjust the temperature digits for the Temperature Alert using the UP  or DOWN . Press and hold either button for fast digits advance.
- Press the ALARM/CHART to confirm selection and return to the temperature alert selection screen.

DISABLING TEMPERATURE ALARM(S)

In the Temperature & Humidity Mode press the ALARM/CHART to disable the alarm(s).

VIEWING THE MAX/MIN CHANNEL TEMPERATURE AND HUMIDITY

In the Temperature & Humidity Mode press the MEMORY button to recall a current temperature and humidity, minimum temperature and humidity or maximum temperature and humidity at the remote location.

RESETTING THE REMOTE TEMPERATURE AND HUMIDITY MEMORY

In the Temperature and Humidity Mode, press and hold MEMORY button to clear memory for all channels.

REMOTE SENSOR STATUS

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

Icon	Status
	Searching for the signals from the remote sensor
	Corresponding remote sensor signal received successfully
No signals received for over 15 minutes	

ALL REMOTE SENSOR SIGNALS SEARCH ACTIVATION

The main unit can be manually activated to search for the signals from all remote sensors. Press and hold DOWN  button to enable the search.

RAIN MODE

The main unit records the total amount of the rainfall for the last hour, 24 hours, past day, past week and the past month. The rainfall can be displayed in mm or inches.

There is a daily rainfall alert that can be programmed in the unit if the daily rainfall exceeds a pre-programmed limit.

ACCESSING RAIN MODE

From the main unit: Press UP  or DOWN  until the RAIN icon  on the display starts flashing.

VIEWING RAIN STATISTICS

In the Rain Mode, press either SET or MEMORY button to recall a rain statistics for the past hour, past 24 hours, yesterday, past week or past month.

TIP: For the rain rate estimate the Last Hour rainfall value is understood as "inch/hr" or "mm/hr".

RESETTING THE RAINFALL STATISTICS MEMORY

In the Rain Mode, press and hold MEMORY to reset all rainfall statistics.

SETTING UNITS FOR THE RAIN DISPLAY IN INCHES OR MM

In the Rain Mode, press and hold SET button to toggle rainfall data units between mm and inches.

ENABLING OR DISABLING THE DAILY RAINFALL ALERT

- In the Rain Mode press the ALARM/CHART to display either the current rainfall statistics or the daily rainfall alert with "ALARM HI" displayed.
- If the alert is disabled, the "OFF" will be displayed; otherwise the rainfall alert value will be shown.
- When the rainfall alert is displayed, press the UP  or DOWN  to enable or disable it.

SETTING UP THE DAILY RAINFALL ALERT

- In the Rain Mode, press ALARM/CHART to display the rainfall alert.
- Press and hold ALARM/CHART until the rainfall alert "ALARM HI" will flash.
- Set the desired value for the Rainfall Alert by using the UP  or DOWN . Press and hold either button for fast digits advance.
- Press ALARM/CHART to confirm selection and the unit will return to the rainfall alert display.

DISABLING THE DAILY RAINFALL ALERT

In the Daily Rainfall Alert Mode press the ALARM/CHART to disable the alert.

WIND MODE

The wind direction is shown by an animated compass display. Its angle can be displayed as compass points (i.e. NW) or in bearings starting from north (i.e. 22.5°).

The upper left section of the wind mode can be programmed to display either a temperature at the place of anemometer or the temperature adjusted to the wind chill factor.

The lower left section of the wind mode indicates the average wind speed for the past 10 minutes, as well as gust, wind speed alert and gust alert information. It can also show records of the maximum wind speed and wind gust collected during the day.

The wind speed and gust alert functions can be programmed to alert you if the wind speed or gust exceeds a pre-configured limit. The wind speed can be displayed in km/h, mph, m/s or knots.

NOTE: The wind speed alert has a 5 mph deviation and the wind gust speed alert has a 7 mph deviation. It is set to prevent the alerts from sounding all the time due to small fluctuations close to the alert value. This means that after the wind speed reaches the alert value, it will have to fall below the alert value plus deviation to activate the alert.

ACCESSING WIND MODE

From the main unit: Press UP  or DOWN  until the  icon on the display starts flashing.

CONFIGURING WIND DISPLAY

In the Wind Mode press the SET button to recall either a wind chill temperature with wind direction in bearings, a wind chill temperature with a wind direction in compass points, a temperature at anemometer and wind direction in compass points or a temperature at anemometer and wind direction in bearings.

SETTING UNITS FOR THE WIND SPEED IN KM/H, MPH, M/S OR KNOTS

In the Wind Mode, press and hold SET to set the wind speed units in km/h, mph, m/s or knots.

VIEWING WIND STATISTICS

In the Wind Mode, press the **MEMORY** button to recall a current wind speed, a daily maximum wind speed with "DAILY MAX" displayed, a gust speed with a "GUST" displayed and a daily maximum gust speed with a "GUST DAILY MAX" displayed.

RESETTING THE WIND STATISTICS MEMORY

In the Wind Mode, press and hold **MEMORY** to reset all wind statistics.

ENABLING OR DISABLING THE WIND ALERTS

In the Wind Mode press the **ALARM/CHART** to recall a current wind speed, a wind speed alert with the "ALARM HI" displayed or gust alert with the "GUST ALARM HI" displayed.

If the alert is disabled, "OFF" will be displayed; otherwise the alert value is shown.

When a wind alert is displayed, press the **UP ▲** or **DOWN ▼** to activate or deactivate it.

WIND ALERTS PROGRAMMING

- In the Wind Mode, press **ALARM/CHART** to select the desired alarm.
- Press and hold **ALARM/CHART** button until alert and corresponding icon will flash.
- Set the alert using the **UP ▲** or **DOWN ▼**. Press and hold either button for fast digits advance.
- Press **ALARM/CHART** to confirm your selection and return to the wind alert selection screen.

DISABLING THE WIND ALERT

To disable wind alert press **ALARM/CHART**.

MAINTENANCE

Changing Batteries

The battery status of each weather sensor is checked every hour. If the low battery indicator lights up, replace the batteries in the corresponding unit.

Changing Batteries in the Main Unit

- First connect the AC/DC adaptor provided to the main unit to avoid losing any data. Remove the battery compartment door on the back and replace all batteries. Do not mix old and new batteries.
- Replace the battery compartment door.

Changing Batteries in Remote Weather Sensors

- Replace the batteries following the setup instructions for the corresponding sensor.
- When the batteries are properly installed, the remote weather sensor will resume sending signals to the main unit.
- To enforce an immediate remote signals search, press and hold **DOWN ▼** on the main unit.

Cleaning

The main unit and outer casings of the remote weather sensors can be cleaned with a damp cloth.

Small parts can be cleaned with a cotton tip or pipe-cleaner.

Never use any abrasive cleaning agents and solvents. Do not immerse any units with electronic parts in water or under running water.

Anemometer

Check if the wind vane and wind cups can spin freely and are free from dirt, debris and spider webs.

Rain Gauge

Checking and cleaning the rain sensor in a timely manner will maintain an accuracy of the precipitation measurements.

- Detach the protective screen and lid.
- Clean with soapy water and a damp cloth, removing dirt, leaves or debris
- Clean small holes and parts with Q-tips or pipe-cleaner.
- Watch out for spiders or insects that might have crawled into the funnel.
- Clean the swinging mechanism with a damp cloth.

TROUBLESHOOTING

Q: "The display shows dashes "---" for weather parameter(s)"

A: The display will show "- - -" when the wireless connection with the remote sensor is lost for the following periods:

Thermo-Hygrometer: 15 minutes

UV Sensor: 30 minutes

Anemometer (Wind Sensor): 15 minutes

Rain Gauge (Rain Sensor): 30 minutes

Check or replace the batteries for the corresponding sensor. Then press and hold **DOWN ▼** on the main unit or handheld remote to enforce a search for all remote signals.

If this does not work, check the wireless transmission path from the corresponding weather sensor to the main unit and change their locations if necessary.

Although wireless signals can pass through solid objects and walls, the weather sensor should ideally be within the line of sight of the main unit.

The following may be the cause of reception problems:

- The remote weather sensor and a main unit are too far from each other.
- The signal shielding materials, such as metal surfaces, concrete walls or dense vegetation, are in the path of transmission.
- There is interference from the wireless devices (such as cordless phones, radio headsets and baby listening devices) and electronic appliances.

Q: "The weather readings on my weather station are different from the TV, radio or official weather reports."

A: The weather data may vary considerably due to different environmental conditions and placement of the weather sensors.

Check the placement tips included in this manual to site your weather sensors in the best possible way.

Q: "The weather forecast is inaccurate."

A: The weather forecast predicts the weather for the next 12 to 24 hours, and does not reflect current weather conditions.

PRECAUTIONS

This product is engineered to give you years of satisfactory service if handled carefully. Here are a few precautions:

- Do not immerse the units in water.
- Do not clean the units with abrasive or corrosive materials. They may scratch the plastic parts and corrode the electronic circuits.
- Do not subject the product to excessive force, shock, dust, temperature, or humidity, which may result in malfunctions, shorter lifespan, damaged batteries, and damaged parts.
- Do not tamper with the product's internal components. Doing so will invalidate the warranty and may cause damage. The product contains no user-serviceable parts.
- Use only fresh batteries. Do not mix new and old batteries.
- Read the user's manual thoroughly before operating the product.

APPENDIX-CITY CODES

City codes are used for presetting setting Latitude and Longitude. These codes affect time zones and DST settings.

US AND CANADIAN CITIES

City	Code	Zone	DST	City	Code	Zone	DST
		Offset				Offset	
Atlanta, Ga.	ATL	-5	SU	Memphis, Tenn.	MEM	-6	SU
Austin, TX	AUS	-6	SU	Miami, Fla.	MIA	-5	SU
Baltimore, Md.	BWI	-5	SU	Milwaukee, Wis.	MKE	-6	SU
Birmingham, Ala.	BHM	-6	SU	Minneapolis, Minn.	MSP	-6	SU
Boston, Mass.	BOS	-5	SU	Montreal, Que., Can.	YMX	-5	SU
Calgary, Alba., Can.	YYC	-7	SU	Nashville, Tenn.	BNA	-6	SU
Chicago, IL	CGX	-6	SU	New Orleans, La.	MSY	-6	SU
Cincinnati, Ohio	CVG	-5	SU	New York, N.Y.	NYC	-5	SU
Cleveland, Ohio	CLE	-5	SU	Oklahoma City, Okla.	OKC	-6	SU
Columbus, Ohio	CMH	-5	SU	Omaha, Neb.	OMA	-6	SU
Dallas, Tex.	DAL	-6	SU	Ottawa, Ont., Can.	YOW	-5	SU
Denver, Colo.	DEN	-7	SU	Philadelphia, Pa.	PHL	-5	SU
Detroit, Mich.	DTW	-5	SU	Phoenix, Ariz.	PHX	-7	NO
El Paso, Tex.	ELP	-7	SU	Pittsburgh, Pa.	PIT	-5	SU
Houston, Tex.	HOU	-6	SU	Portland, Ore.	PDX	-8	SU
Indianapolis, Ind.	IND	-5	NO	San Antonio, Tex.	SAT	-6	SU
Jacksonville, Fla.	JAX	-5	SU	San Diego, Calif.	SAN	-8	SU
Las Vegas, Nev.	LAS	-8	SU	San Francisco, Calif.	SFO	-8	SU
Los Angeles, Calif.	LAX	-8	SU	San Jose, Calif.	SJC	-8	SU
Seattle, Wash.	SEA	-8	SU	Vancouver, B.C., Can.	YVR	-8	SU
St. Louis, Mo.	STL	-6	SU	Washington, D.C.	DCA	-5	SU
Tampa, Fla.	TPA	-5	SU	Vancouver, Canada	VAC	-8	SU
Toronto, Ont., Can.	YTZ	-5	SU				

WORLD CITIES

City	Code	Zone	DST	City	Code	Zone	DST
		Offset				Offset	
Addis Ababa, Ethiopia	ADD	3	NO	Cairo, Egypt	CAI	2	sg
Adelaide, Australia	ADL	9.5	SA	Calcutta, India (as Kolkata)	CCU	5.5	NO
Algiers, Algeria	ALG	1	NO	Cape Town, South Africa	CPT	2	NO
Amsterdam, Netherlands	AMS	1	SE	Caracas, Venezuela	CCS	-4	NO
Ankara, Turkey	AKR	2	SE	Chihuahua, Mexico	CUU	-6	SU
Asunción, Paraguay	ASU	-3	sp	Copenhagen, Denmark	CPH	1	SE
Athens, Greece	ATH	2	SE	Córdoba, Argentina	COR	-3	NO
Bangkok, Thailand	BKK	7	NO	Dakar, Senegal	DKR	0	NO
Barcelona, Spain	BCN	1	SE	Dublin, Ireland	DUB	0	SE
Beijing, China	BEJ	8	NO	Durban, South Africa	DUR	2	NO
Belgrade, Yugoslavia	BEG	1	SE	Frankfurt, Germany	FRA	1	SE
Berlin, Germany	BER	1	SE	Glasgow, Scotland	GLA	0	SE
Birmingham, England	BHX	0	SE	Guatemala City, Guatemala	GUA	-6	NO
Bogotá, Colombia	BOG	-5	NO	Hamburg, Germany	HAM	1	SE
Bordeaux, France	BOD	1	SE	Havana, Cuba	HAV	-5	SH
Bremen, Germany	BRE	1	SE	Johannesburg, South Africa	JNB	2	NO
Brisbane, Australia	BNE	10	NO	Kingston, Jamaica	KIN	-5	NO
Brussels, Belgium	BRU	1	SE	Oslo, Norway	OSL	1	SE
Bucharest, Romania	BBU	2	SE	Panama City, Panama	PTY	-5	NO
Budapest, Hungary	BUD	1	SE	Paris, France	PAR	1	SE
Buenos Aires, Argentina	BUA	-3	NO	Perth, Australia	PER	8	NO
Kinshasa, Congo	FIH	1	NO	Prague, Czech Republic	PRG	1	SE
Kuala Lumpur, Malaysia	KUL	8	NO	Rangoon, Myanmar	RGN	6.5	NO
La Paz, Bolivia	LPB	-4	NO	Reykjavik, Iceland	RKV	0	NO
Lima, Peru	LJM	-5	NO	Rio de Janeiro, Brazil	RIO	-3	sb
Lisbon, Portugal	LIS	0	SE	Rome, Italy	ROM	1	SE
Liverpool, England	LPL	0	SE	Salvador, Brazil	SSA	-3	NO
London, England	LON	0	SE	Santiago, Chile	SCL	-4	sc
Lyon, France	LYO	1	SE	São Paulo, Brazil	SPL	-3	sb
Madrid, Spain	MAD	1	SE	Shanghai, China	SHA	8	NO
Manila, Philippines	MNL	8	NO	Singapore, Singapore	SIN	8	NO
Marseille, France	MRS	1	SE	Sofia, Bulgaria	SOF	2	SE
Melbourne, Australia	MEL	10	SA	Stockholm Arlanda, Sweden	ARN	1	SE
Mexico City, Mexico	MEX	-6	SU	Sydney, Australia	SYD	10	SA
Milan, Italy	MIL	1	SE	Tokyo, Japan	TKO	9	NO
Montevideo, Uruguay	MVD	-3	SM	Tripoli, Libya	TRP	2	NO
Moscow, Russia	MOW	3	SK	Vienna, Austria	VIE	1	SE
Munich, Germany	MUC	1	SE	Warsaw, Poland	WAW	1	SE
Nairobi, Kenya	NBO	3	NO	Zürich, Switzerland	ZRH	1	SEA
Nanjing (Nanking), China	NKG	8	NO				
Naples, Italy	NAP	1	SE				
New Delhi, India	DEL	5.5	NO				
Odessa, Ukraine	ODS	2	SE				
Osaka, Japan	KIX	9	NO				

DST (DAYLIGHT SAVINGS TIME) DEFINITIONS:

- | | |
|---|---|
| SA = Australian DST. | SN = Namibia DST |
| SB = South Brazilian DST. Changes annually. | SP = Paraguay DST |
| SC = Chile DST | SQ = Iran DST maybe changed annually. |
| SE = Standard European DST. | ST = Tasmania DST |
| SG = Egypt DST | SU = Standard American DST. |
| SH = Havana, Cuba DST | SZ = New Zealand DST |
| SI = Iraq and Syria DST | NO DST = no = Places that do not observe DST; |
| SK = Irkutsk & Moscow DST | ON = Always add 1 hour to the local standard time |
| SM = Montevideo, Uruguay DST | |

SPECIFICATIONS

Radio Frequency: 433 MHz
RF Reception range: 100-328 feet (30 -100 m)

Barometric Pressure

Measuring Range: 14.75 inHg to 32.44 inHg (500 Hpa to 1100Hpa); (374.5 mmHg to 823.8 mmHg)
Resolution: 0.003 inHg (0.1 Hpa, 0.08 mmHg)
Accuracy: 0.015 inHg (5 Hpa; 0.38 mmHg)
Sampling interval: 20 minutes
Altitude Compensation Range: -657 ft to 16404 ft (-200m to +5000 m)

Temperature (Indoor)

Operating Range: 14.2° to 140°F (-9.9° to 60°C)
Resolution: 0.2°F (0.1°C)
Accuracy: 2°F (1°C)
Sampling Interval: 10 seconds

Temperature (remote)

Range: -40° to 176°F (-40° to 80°C)
Resolution: 0.2°F (0.1°C)
Accuracy: 2°F (1°C)
Transmitting Interval: around 47 seconds

Humidity (Indoor)

Operating Range: 0% to 99%
Resolution: 1%
Accuracy: 5%
Sampling Interval: 10 seconds

Humidity (Outdoor)

Operating Range: 0% to 99%
Resolution: 1%
Accuracy: 5%
Sampling Interval: 10 seconds
Transmitting Interval: around 47 seconds

Wind Direction

Range: 0° to 360°
Resolution: 22.5°
Accuracy: 11.25°
Starting Threshold: 3mph (4.8 Km/h)
Transmitting interval: 33 seconds

Wind Speed

Range: 0 to 199.9mph
(199.9 Km/h, 173.7 Knots, 89.3 m/s)
Resolution: 0.1mph (0.16 Km/h)
Accuracy: (2mph + 5%)
Starting Threshold: 3mph (4.8 Km/h)
Wind/Gust Speed Display Update Interval: 33 seconds
Wind/Gust Sampling Interval: 11 seconds

Rainfall

1h/24h/yesterday range: 0 to 78.73 inch (0 to 1999.9 mm)
Last week/ last month range: 0 to 787.3 inch (0 to 19999 mm)
Resolution: 0.03 inch (0.6578 mm)
Accuracy: +/- 5% +/- 0.03 inch (+/-5%mm +/-0.6875)
Transmitting Interval: 183 seconds

Battery life (alkaline)

Main unit: 2 month
Thermo-Hygrometer: over 12 months
Anemometer: 2 years
Rain Gauge: 2 years

Power

Main unit: 4 x UM-3 or "AA" batteries; 7.5V AC/DC power adaptor (200mA; center pin positive)
Remote Thermo Hygrometer: 2 x UM-3 or "AA" batteries
Remote Anemometer: 2 x UM-3 or "AA" batteries
Remote Rain Gauge: 2 x UM-3 or "AA" batteries

Weight (without batteries)

Main unit: 8.15oz (231g)
Remote Thermo-Hygrometer: 2.29oz (65g)
Remote Anemometer: 11.12oz (315g)
Remote Rain gauge: 10.24oz (290g)

Dimensions

Main unit: 7.31 (L) x 5.39 (H) x 1.26 (D) inches / 185.8 (L) x 136.9 (H) x 32 (D) mm
Remote Thermo - Hygrometer: 2.37 (L) x 4 (H) x 1 (D) inches / 60 (L) x 101 (H) x 25 (D) mm
Remote Anemometer: 19.16 (L) x 19.16 (H) x 15.35 (D) inches / 486.6 (L) x 486.6 (H) x 390 (D)mm
Remote Rain gauge: 6.49 (L) x 6.89 (H) x 4.72 (D) inches / 165 (L) x 175 (H) x 119 (D)mm

FCC STATEMENT

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.
Warning: Changes or modification to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment had 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, installed and used in accordance with the instructions, may cause harmful interference to radio communications. 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 improve or correct turning 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 to 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.

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- ☑ Communications-Based Acquisition Systems
- ☑ Plug-in Cards for Apple, IBM & Compatibles
- ☑ Data Logging Systems
- ☑ Recorders, Printers & Plotters

HEATERS

- ☑ Heating Cable
- ☑ Cartridge & Strip Heaters
- ☑ Immersion & Band Heaters
- ☑ Flexible Heaters
- ☑ Laboratory Heaters

ENVIRONMENTAL MONITORING AND CONTROL

- ☑ Metering & Control Instrumentation
- ☑ Refractometers
- ☑ Pumps & Tubing
- ☑ Air, Soil & Water Monitors
- ☑ Industrial Water & Wastewater Treatment
- ☑ pH, Conductivity & Dissolved Oxygen Instruments

WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by the company will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS/INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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