

## 2752 Preliminary Instructions (W132-2)

### Items Required for Installation and Set Up

#### Items included in this package:

1. Home Receiver Unit (an indoor unit which displays temperature and other readings)
2. Remote Wind Gauge Sensor (an outdoor sensor unit which transmits wind, temperature & humidity data to the receiver unit)
3. Mounting hardware for the Wind Gauge Sensor (2 "U"-shaped metal plates, 4 sets of Hex screws & nuts)
4. Instruction manual

#### Additional items needed for installation (not included):

1. A 1" to 1 1/4" diameter mast and hardware (if mounting the Wind Gauge Sensor on a roof or other structure)
2. A small Phillips screwdriver (for the battery compartments and wind vane screws)
3. A Hexagonal Key screwdriver (for the remote Wind Gauge Sensor base screws)
4. A total of 4 AA batteries (Lithium batteries are recommended for the outdoor Wind Gauge Sensor, as lithium batteries will last longer and thus will not need to be replaced as often as alkaline batteries)

### Description of Parts

#### Main Features & How to Access Functions

##### 1 - LCD Readout (Receiver Unit):

Line 1: Displays Outdoor Temperature and Humidity, Heat Index, Wind Chill, and Wind Speed & Direction.

Line 2: Displays indoor temperature.

Line 3: Clock displays current time and date.

##### 2 - LED Indicator (Remote Wind Gauge Sensor):

Flashes when remote Wind Gauge Sensor transmits a reading.

##### 3 - Multi-Function Button (Receiver Unit):

###### A) "CHANNEL" Button

Press to view the readings of channel 1, 2, 3 or auto scroll (which will show each display for 10 seconds). Press and hold 3 seconds to search for a remote sensor signal.

###### B) "MEMORY" Button

Press once to view maximum temperature, humidity, heat index, and wind speed readings. Press again to view minimum readings. Press again to return to current readings.

While the min or max reading is displayed, press and hold for 3 seconds to clear the min or max memory.

###### C) "UNIT" Button

Press to toggle between wind speed measurement displays: miles per hour (mph), kilometers per hour (km/h), meters per second (m/s), knots, or Beaufort (bft).

###### D) "WIND" Button

Press to display average wind speeds and gust wind speed.

##### 4 – "Backlight" Button (on top of Receiver Unit):

Press to illuminate the receiver's LCD screen with an extended backlight.

##### 5 – "Clock" button (on back of Receiver Unit):

Press and hold 3 seconds to enter Clock & Calendar Setting mode.

6 – “Up” button (on back of Receiver Unit):

Press to advance settings one step forward. Press and hold 3 seconds to fast advance.

7 – C/F Button (on back of Receiver Unit):

Press to select °F or °C temperature scale.

8 - Battery Compartments (On back of Receiver Unit and on top of Wind Gauge Sensor base):

The home receiver unit and remote Wind Gauge Sensor each use 2AA batteries. Lithium batteries are recommended for the outdoor Wind Gauge Sensor, as lithium batteries will last longer and thus will not need to be replaced as often as alkaline batteries.

9 - Table Stand (Fits on back of Receiver Unit):

Allows stable placement of receiver unit on a flat surface. Insert table stand prongs into slots located at the lower back side of the receiver unit.

10 - Wall Mount (On back of Receiver Unit):

The receiver features a recessed key hole to secure each unit to a nail or other appropriate wall hanger.

### **Assembling the Wind Gauge Sensor**

The Wind Gauge Sensor ships in 2 pieces: the base unit and the compass/wind direction pointer. To attach the compass/pointer to the base unit, you will need a small Phillips screwdriver (not included).

1. Place the compass/wind vane on the metal prong on the top of the wind sensor base unit. Push gently on the compass/pointer until it is all the way on the prong. Before pushing down the wind vane, align and match the slot inside the wind and hole with the metal prong. Otherwise it won't fit and go all the way down.
2. There is a screw hole on the side of the compass/wind vane. Place the included screw into the hole and tighten. This will secure the compass/wind vane to the base unit.

### **Installing Home Unit Receiver Batteries**

**Important: install the receiver's batteries first, before installing batteries in the remote Wind Gauge Sensor:**

1. Remove the battery compartment cover, located on the back of the receiver unit.
2. Insert 2 AA alkaline batteries as indicated by the polarity symbols marked inside the battery compartment.
3. Replace the battery compartment cover.
4. After battery installation, the receiver unit will automatically search for remote sensors for 2 minutes. The displays on the LCD screen will flash during this Search mode.

### **Selecting and Testing a Location for the Remote Wind Gauge Sensor**

The Wind Gauge Sensor can measure temperature, relative humidity, and wind speed and direction. It will then transmit these readings back to the home receiver unit, up to a distance of 200 feet.

Before mounting the remote Wind Gauge Sensor, measure the distance between the monitor and the sensor to be sure they are within an effective transmission range (within 200 feet), and that there are no physical obstructions between the units (such as a shed or trees) that might block transmission signals. The Wind Gauge Sensor should not be blocked by anything on the top or sides, so that wind can freely reach the Sensor for accurate speed and direction reading.

Note: The effective range is vastly affected by the building materials and where the receiver and remote units are positioned. Try various set ups for the best results. Shorten the distance between receiver and remote units when necessary.

**Important: Though the remote unit is weather proof, it should never be submerged in water.**

**It is recommended to perform a transmission test before permanently mounting the remote Wind Gauge Sensor unit, in case it needs to be moved.** To test that the monitor can receive the remote sensor's transmissions:

1. First install batteries into the home receiver unit, as described in the previous section.
2. To install the Wind Gauge Sensor's batteries, first remove the 4 screws that secure the battery compartment cover (located on the top of the base) and then remove the cover.
3. Insert 2 AA batteries as indicated by the polarity symbols marked inside the battery compartment. **PLEASE NOTE: Lithium batteries are recommended, as they will last longer and thus will not need to be replaced as often as alkaline batteries.**
4. Replace the battery compartment cover, and replace and tighten the screws.
5. To test for a transmission connection, press and hold the "CHANNEL" button on the receiver for 3 seconds. The display will begin to flash as the receiver searches for the remote sensor signal.
6. When a transmission connection is established, the receiver's LCD screen will display the wind direction, wind speed, temperature and humidity readings broadcast by the remote Wind Gauge unit.
7. If these readings do not appear on the receiver within **10** minutes, the transmission has failed. Check that there are no physical obstructions between the units that might block transmissions, such as sheds or trees. If necessary, shorten the distance between the receiver and remote units. Remove all the batteries from the remote, wait at least 10 seconds, and then install the batteries again. Repeat steps 4-6 until a successful transmission is established.
8. **IMPORTANT:** Remove the batteries from the Wind Gauge Sensor before proceeding with mounting and calibration steps. The batteries will be reinstalled later, after the Wind Gauge's direction is calibrated North (see section on Calibrating the Wind Gauge Sensor & Installing Batteries).

### Mounting the Wind Gauge Sensor

**Important:** Before mounting, be sure the receiver unit and the wind gauge sensor are successfully transmitting readings to avoid having to move and remount the wind gauge sensor again. See the previous section on "Selecting and Testing a Location for the Sensor" on how to test for transmission signals.

#### Choosing a Location for the Wind Gauge Sensor

The Wind Gauge Sensor may be placed in a variety of places around the home or yard, as long as the sensor is able to transmit readings to the home receiver unit. Please keep in mind that objects such as trees and buildings may block wind gusts, and direct sunlight will raise temperature readings.

Thus, wind and temperature accuracy may vary between locations. Try to locate the Wind Gauge Sensor in an open area where the wind will be the least blocked. Possible locations for the Wind Gauge Sensor are:

1. On the roof of a house (best wind accuracy is most likely here, as there will be fewer obstacles at a high point).
2. On a wood post or garden shed (the more open the area, the better the wind accuracy).

3. A soft ground location in a yard (again, the more open the area, the better the wind accuracy, as a house or trees may block some wind gusts).

To mount the Wind Gauge Sensor to a mast, you will need:

- A 1" to 1 1/4" diameter mast (not included).
- Hardware to fasten the mast to the mounting location (not included).

1. If necessary, mount and ground a mast as directed in the instructions provided by the mast (not included).
2. Hold the Sensor base up against the mast (see illustration). The metal bar is horizontal to the mast. The Wind Vane Cups should point down, and the Compass/Wind Direction Indicator should point up.
3. Place 2 hex screws (included) into the 2 holes on the top of the base.
4. On the bottom of the base, place one of the "U" shaped metal plates (included) around the mast and through the screws. The mast will be between the plate and the sensor base.
5. Tighten 2 hex nuts (included) on the screws to hold the sensor to the mast.
6. Repeat with the bottom two holes to tightly secure the sensor to the mast.

Mounting Option: If another mast has been previously installed (for example, for mounting an antenna), the wind gauge sensor may be mounted on that existing mast.

To mount the Wind Gauge Sensor into the ground:

1. Place the Wind Sensor base on an open, flat area of ground, out of direct sunlight. Select an area with the fewest obstructions possible for best wind accuracy. The soil should be firm enough that the sensor will not tip over after being secured.
2. Place one of the 4 Hex screws (included) into one of the holes in the base. Push the screw into the ground. If necessary, use a hammer or mallet to gently tap the screw into the ground. Repeat with the other 3 screws.
3. If the Sensor seems wobbly and might tip over, you may wish to purchase longer screws or other hardware to mount the base into the ground.
4. A mast may also be used for a ground mount. This will raise the Wind Gauge Sensor higher off the ground and possibly away from potential wind obstacles.

Select an open area of land where there are no cables, pipes or other objects located under the ground. Choose a spot with soft soil, so as not to damage the mast when going into the ground. Push one end of the mast slightly into the ground. Place a wood block against the other end of the mast. Tap the block with a hammer or mallet against the block until the mast is buried deep enough in the ground to be stable. Then attach the remote Wind Gauge Sensor to the mast as previously described.

Important: for this wind gauge version, it cannot be mounted directly on the ground as the wind vane/compass should always face to the sun direction. ie. The metal bar should be in horizontal level.

#### **Calibrating the Wind Gauge Sensor & Installing Batteries**

After mounting the Wind Gauge Sensor, the wind vane needs to be calibrated due north so that the Sensor can properly measure the wind direction and transmit that reading to the home receiver. **Be sure the batteries are removed from the Wind Gauge Sensor before the calibration:** Since the Sensor will orient north right after the batteries are installed, the wind vane

needs to be pointing north first, otherwise the wind direction data transmitted to the home receiver will be incorrect.

**Important:** The same Wind Direction calibration procedure (steps 2 to 5) is needed for the first set up and after every battery replacement.

1. Mount the Wind Gauge Sensor in a proper location as previously described. If the batteries are still in the sensor, open the battery compartment cover and remove the batteries.
2. Use the compass on the top of the Sensor to determine due north. Turn the smaller, propeller-shaped pointer end of the Wind Direction Indicator so it is pointing due north. Hold the Pointer facing due north; do not allow it to turn.
3. Insert 2 AA batteries as indicated by the polarity symbols marked inside the battery compartment. (Important: As described in Step 2, be certain the Wind Direction Pointer on the Wind Gauge Sensor is pointing north before inserting the batteries. Also, lithium batteries are recommended for the Sensor, as they will last longer and thus will not need to be replaced as often as alkaline batteries).
4. The red LED indicator above the battery cover of the Wind Gauge Sensor will flash few seconds after battery installation, indicating Wind Direction calibration is complete.
5. Replace the battery cover and tighten the screws.
6. If the Wind Direction Indicator is not pointing due north when the red LED first flashes, calibration will not be accurate. Remove the Wind Gauge Sensor batteries and repeat steps 2 - 5.
7. Hold the "CHANNEL" button on the monitor to search for remote transmitter. If transmission is successful, readings will appear on the receiver within **10** minutes. If readings do not appear, reorient the units and repeat the above calibration steps.

#### **Setting up Additional Temperature/Humidity Sensors (not included)**

The remote Wind Gauge Sensor will transmit temperature and humidity readings from one location. With the purchase of an additional 1 or 2 temperature/humidity sensors, The Wind Gauge System can monitor temperature and humidity readings in 1 or 2 additional locations with the purchase of additional temperature/humidity sensors. These remotes can be used to monitor temperatures in a garage, basement, child's room, wine cellar, or any other location within the transmission range. Please note these sensors can only monitor temperature and humidity; wind-related readings can only be measured by the one Wind Gauge Sensor that is included in this package.

To add a temperature/humidity Sensor:

1. Select a location for the remote sensor that is within the effective transmission range.
2. Lift off the bracket stand, located on the back of the remote sensor, to access the battery compartment cover.
3. Remove the 4 screws that secure the battery compartment cover and then remove the cover.
4. Assign channel 2 or 3 to the remote sensor by setting the slide switch inside the battery compartment. (Channel 1 is already assigned to the Wind Gauge Sensor and should not be used by any other remote sensors).
5. Insert 2 AAA alkaline batteries as indicated by the polarity symbols marked inside the battery compartment.
6. Press the Tx button in the remote battery compartment to send a transmission to the receiver. The red LED Indicator light will flash when a signal is transmitted. Remote unit temperature updates will then be transmitted between 30 second and 2 minute 30 second intervals.
7. Replace the battery compartment cover, replace and tighten screws and reattach the bracket stand.
8. Press and hold the "CHANNEL" button on the front of the receiver unit to search for remote sensor signals. it will search for all channels at the same time and no particular searching sequence for different channels.

9. When transmission connection is established, the respective temperature and humidity of the selected remote channel will appear on the home receiver's LCD screen.

Note: If dashes are still displayed for that channel on the receiver unit, press the Tx button again to send another transmission.

10. Press the "CHANNEL" button to toggle between indoor and remote sensor temperature/humidity displays.

### **How to Set the Clock and Calendar**

The clock may be set to display in 12 or 24 hour format, and the calendar may be set to display in Month/Day or Day/Month format. To set the time and date:

1. Press and hold the "CLOCK" button, located on the back of the receiver unit. The time display will show the default year.
2. Press the "▲" button to select data in the following sequence:  
Year>Month>Date>Hour>Minute>12/24 hour format>Time Offset (Hr). (Keep the Time Offset at "0"). After each selection press the CLOCK button to enter.
3. Press the CLOCK button after the last entry to return to the time display.

### **How to Read Temperatures and Other Displays**

#### **INDOOR/OUTDOOR TEMPERATURE & HUMIDITY**

1. The current Remote Temperature display is located at the top of the LCD screen. The Humidity % display is in the middle of the screen. The current Indoor Temperature is located between the Humidity and Clock displays.

2. Press "C/F" button on the back of the receiver to select °F or °C temperature scale.

3. Press CHANNEL button to toggle between Ch1, Ch2, Ch3 or auto scroll (⌚) displays (if additional remote temperature/humidity sensors are in use).

The auto scroll option will display the remote sensor readings for 10 seconds each.

Note: Outdoor temperature & humidity sensors are built inside the Wind Gauge Sensor. These readings are automatically assigned to Channel 1. Additional remote temperature/humidity sensors may be purchased separately, and they should be assigned to Channel 2 or 3 only. See the section on Setting up Additional Temperature/Humidity Sensors.

#### **INDOOR/OUTDOOR HEAT INDEX**

The Heat Index combines temperature and relative humidity for an "apparent" temperature, or how hot the heat-humidity combination actually feels. The Heat Index reading appears on the right side of the LCD screen, between the Outdoor temperature and the Wind Chill reading.

If more than one remote sensor is in use, press the "CHANNEL" button to toggle between Ch1, Ch2, Ch3 or auto scroll (⌚) displays. The auto scroll option will display the indoor readings and remote sensor readings for 10 seconds each.

#### **OUTDOOR WIND CHILL**

Wind Chill combines temperature and average wind speed for an "apparent" temperature, or how cold air on exposed skin actually feels. The Wind Chill is the circular display on the right side of the LCD screen, between the Heat Index and the Outdoor temperature reading.

#### **WIND SPEED & DIRECTION**

The Wind Gauge Sensor samples the wind speed and direction and transmits these readings to the home receiver unit. The Wind Speed & Direction reading appears on the left side of the LCD screen, left of the Heat Index and Wind Chill displays.

The Wind Direction is indicated by the arrow pointer icons surrounding the Wind Speed reading. The receiver displays 16 wind directions. Eight of the wind directions are marked on the display: N for north, S for south, SW for Southwest, etc. If the wind direction is between North and Northwest, for example, the arrow will point to the dot between the two directions.

The Wind Speed appears in the center of the arrow icons. The Wind Speed can display in miles per hour (mph), kilometers per hour (km/h), meters per second (m/s), knots, or Beaufort (bft). Press the "UNIT" button on the front of the receiver unit to change the display units.

The Wind Gauge Sensor measures both an average wind speed and the greatest wind speed, or wind gust. The Average Wind Speed reported is an average of wind speed over the last 2 minutes. The Wind Gust reported is the maximum wind speed that occurred in the last 10 minutes. Press the "WIND" button on the front of the receiver unit to switch between Average ("AVG") and Wind Gust ("GUST") displays.

#### **MAXIMUM / MINIMUM MEMORY**

Press the "MEMORY" button on the front of the home receiver repeatedly to view the maximum & minimum values of temperature, humidity, heat index or wind speed readings. To clear the memory record, press and hold the "MEMORY" button while the respective values are displayed onscreen.

#### **TEMPERATURE & HUMIDITY TREND INDICATORS**

One of 3 Trend Indicator arrow icons display near the temperature and the humidity displays.

- indicates **Rising** Temperature or Humidity readings if the change is more than 1 degrees in an hour
- indicates **Steady** Temperature or Humidity readings
- indicates **Falling** Temperatures or Humidity readings if the change it is more than 1 degrees in an hour.

#### **BACKLIGHT**

Press the "BACKLIGHT" button for an extended green backlight to illuminate the receiver's LCD screen for easy viewing.

#### **LOW BATTERY WARNING**

When the batteries on the receiver unit or the remote unit are low, the Low Battery Indicator ("█") icon will light up on receiver unit. If the batteries for the indoor receiver are low, the Battery Icon near the indoor temperature display will light up. If the batteries for the remote Wind Gauge Sensor are low, the Battery Icon near the Ch 1 indicator will light up. If there are 1 or 2 additional temperature/humidity sensors in use, a Battery Icon appearing near "Ch 2" or "Ch 3" indicates the batteries in that remote sensor are low.

Please Note: Wind direction calibration is required before battery replacement in the Wind Gauge Sensor. See the section on "Calibrating the Wind Gauge Sensor".

#### **Trouble-Shooting**

##### **Disconnected Signals**

- If the receiver unit does not receive a transmission from a remote unit channel for **10 minute**, the display will show dashes. To correct this problem:

1. Go to the remote location of that channel to check that the unit is properly positioned, within the appropriate transmission range.
2. If new batteries are faulty on the initial installation, install fresh batteries. If you did not notice the Low Battery icon warning and the product performed correctly after initial set up, the batteries have lost their charge. Replace batteries (see the Power Sources section of this manual.)

3. Check to make sure the transmission path is clear of obstacles and interference.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or experienced ratio/TV technician for help.

Modifications not authorized by the manufacturer may void user's authority to operate this device.

For Wind sensor

FCC ID is L5CW132TX-2 (transmitter)

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Transmission Collision

Signals from other household devices, such as doorbells, home security systems and entry controls, may interfere. This is normal and does not affect the general performance of this product. The transmission will resume once the interference recedes.

Precautions

This Wireless Wind Gauge & Thermometer is engineered to give you years of satisfactory service if you handle it carefully, following these guidelines:

1. The home receiver is intended for indoor use only. It is not sealed against moisture and could be damaged if used outdoors.
2. Do not immerse the receiver in water. If you spill liquid on it, dry immediately with a soft, lint-free cloth.
3. The Wind Gauge Sensor is weather-resistant but not waterproof. Do not immerse it in water or allow snow to accumulate on it. If this accidentally occurs, dry it immediately with a soft, lint-free cloth.
4. Though the Wind Gauge Sensor is weather-resistant, it should not be left outdoors in snow, hail, heavy rainfall, extremely high wind conditions, or at temperatures at or below -4°F (-20°C). If these conditions become likely to occur, temporarily move the transmitter to an indoor area. Otherwise, permanent damage to the sensor's internal circuits or external wind vane may occur.
5. Do not mount the remote sensor on a metal surface.
6. Do not subject the remote sensor to extremely severe temperatures.
7. Do not clean either unit with abrasive or corrosive materials. This may scratch plastic parts and corrode electronic circuits.
8. Do not subject either unit to excessive force, shock, dust, temperature or humidity. This may result in malfunction, shorter electronic life span, damaged battery or distorted parts.
9. Do not tamper with either unit's internal components. Doing so will invalidate the warranty on this product and may cause damage. The unit contains no user-serviceable parts.

10. Do not mix old and new batteries. Do not dispose of batteries in fire. Batteries may explode or leak. Remove the batteries if the units will not be used for a long period of time.
11. Always read the instruction manual before operating this product.

**Important:** Though the remote Wind Gauge Sensor is weather proof, it should be placed away from direct sunlight, rain, snow and should never be submerged in water. If extreme weather conditions are likely to occur (such as heavy rainfall, hail, extremely high wind conditions, or very low temperatures), temporarily move the transmitter to an indoor area for protection.

#### Specifications

Range of temperature measurement:

Receiver unit (indoor only): 32°F to 122°F (0°C to 50°C)

Remote unit: 4°F to 140°F (-20°C to 60°C)

Indoor Humidity: 20% - 99% RH

Outdoor Humidity: 20% - 99% RH

Wind speed range: 0 – 30m/s

: 0 – 108 km/h

: 0 – 67 mph

: 0 – 58.3 knot

: 0 - 11 Beaufort

Transmission: Max. 200 feet (60M) open area, RF434 MHz

Channel: 1 Wind Gauge Sensor, max. 2 remote temperature/humidity sensors

Resolution: 0.1°F for temperature, 1% for humidity

Power: 2 AA alkaline batteries (not included) for receiver unit

AA batteries (not included) for remote Wind Gauge sensor, lithium recommended