RadioShack®
www.radioshack.com℠

Wireless Weather Station

with ACCU WEATHER® Software

Owner's Manual

Please read before using this equipment.

❒ Contents

❒ The FCC Wants You to Know

FCC DECLARATION OF CONFORMITY

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.

Product:	Wireless Weather Station
Model:	63-1016
Responsible Party:	RadioShack 100 Throckmorton Fort Worth, TX 76102
Phone:	817-415-3200

This equipment complies with the limits for a Class B digital device as specified in Part 15 of *FCC Rules*. These limits provide reasonable protection against radio and TV interference in a residential area.

However, your equipment might cause TV or radio interference even when it is operating properly. To eliminate interference, you can try one or more of the following corrective measures:

- reorient or relocate the receiving antenna
- increase the distance between the equipment and the radio or TV
- use outlets on different electrical circuits for the equipment and the radio or TV

Consult your local RadioShack store if the problem still exists.

You must use shielded interface cables with this equipment.

❒ Features

An attractive and useful addition to your home or business, your RadioShack Wireless Weather Station uses 433 MHz radio signals to send and receive weather data between its component parts, so you do not need to run wires between them. Your weather station lets you monitor the air temperature, relative humidity, and dew point temperature (indoors and outdoors), as well as the barometric pressure, wind speed/direction, wind chill, and rainfall rate (outdoors only). The weather station's monitor's memory lets you recall the maximum and minimum readings, set an alarm to sound at a set time or when a set condition is exceeded, and more.

The monitor's **RS-232** jack lets you connect it to a PC using a serial cable (not supplied). The monitor sends data to a connected PC, so you can use the supplied AccuWeather® for Windows® Weather Station software to monitor data as it is recorded (real-time), or recall it later.

The monitor also has an easy-to-read display that forecasts (12–24 hours in advance) the weather most likely to occur where the weather station is located. The weather sta-

tion is ideal for anyone who relies on knowing local weather conditions, such as gardeners, farmers, or anyone who works outdoors. It can also help you successfully plan outdoor activities — from a picnic to simply knowing when to carry your umbrella!

The supplied software also includes AccuWeather for Windows, which lets you access AccuWeather's Accu-Data® on-line service and view or download current and past weather information — color weather maps (including radar and satellite images), weather data, forecasts/warnings, and more from all over the world.

The weather station's other features include:

Display Touch Monitor — clearly shows current conditions and various options. The monitor alerts you when programmed conditions are met.

Weather Measurements — the weather station measures the air temperature, relative humidity, and dew point temperature (indoors and outdoors), as well as the barometric pressure, wind speed/direction, wind chill, and rainfall rate (outdoors only).

Built-In Memory — the weather station records the highest and lowest readings for temperature, relative humidity, dew point temperature, maximum wind speed, daily and accumulated rainfall, and minimum wind chill. You can reset the memory separately for each weather type.

Weather Alarms — let you set the monitor to sound an alarm for each weather parameter (temperature, wind speed, rainfall rate, dew-point temperature, and so on) and alert you when a set weather condition is reached.

Optional PC Connection — lets you connect the monitor to a personal computer (using an optional serial cable), so you can record and store weather data on your PC using the supplied AccuWeather for Windows software.

Weather Forecast — the weather station provides you with a forecast of the weather conditions most likely to occur where the weather station is located.

Weather Symbols — appear on the monitor, showing you weather conditions at a glance with sunny, partly cloudy, cloudy, and rainy symbols.

Measurement Unit Selection — lets you select the measurement unit (such as 12- or 24-hour time format, Fahrenheit or Celsius, and so on) that the monitor displays in all modes that use that unit.

Clock Display with Alarm — shows the time and date, and lets you set an alarm to sound at the same time every day.

Mounting Hardware — lets you easily mount the weather station's components in the locations that best suit your needs.

Liquid Crystal Display — clearly displays the monitor's digital readings and functional indicators.

Backlight — makes the monitor's display easy to read in low light situations when using AC power.

Low Battery Indicator — lets you know when to change the batteries in the weather station's components.

Weather References — the Owner's Manual includes a glossary of frequently used weather terms and a cloud classification chart.

AccuWeather for Windows Software Features

Real-Time Display of Weather Conditions — lets you view the weather station's data output as it is received by your PC.

Helps Organize and Store Weather Data — a variety of features let you organize and

store some or all of the weather data recorded by your weather station.

Easy Data Access — lets you recall the stored data at any time, print it out in tables or graphs, and even compare it to normal and historical conditions for your area.

Accu-Data — AccuWeather's on-line service lets you view and download current and past weather information — color weather maps (including radar and satellite images), weather data, forecasts, warnings, and more — for your location or from around the world.

Software Registration Benefits — (from AccuWeather) include some free on-line time, an on-line subscription discount, free software upgrades, and other free merchandise.

Notes:

- The weather station and the information available in the Accu-Data database are for educational and hobby use only. Neither RadioShack nor AccuWeather shall have any responsibility or liability whatsoever for any inconsistency, inaccuracy, or omissions for weather recorded, reported, or forecasted by the software, the weather station or the Accu-Data database or for reliance on such records, reports, data, or forecasts.
- The modular connection cords supplied with your weather station are carefully calibrated and specially designed for it. Please do not lengthen or shorten these cables. To avoid inaccurate readings from the weather instruments, we recommend you do not use extension cords.

❒ *Preparation*

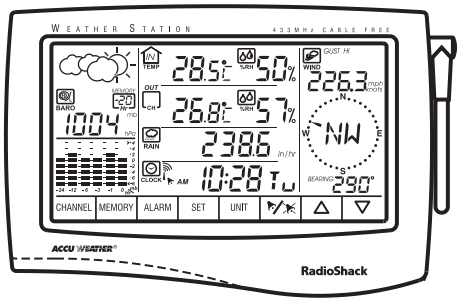
A QUICK LOOK AT THE WEATHER STATION

Your weather station includes these components and mounting supplies. Be sure to locate all of these items before you dispose of the packing material and box.

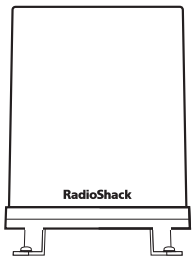
Note: Because the indoor thermo/hygro/baro sensor and outdoor thermo/hygro sensor are calibrated to different specifications, they might measure slightly different temperatures even if they are located in the same area (if for example they are located side by side before you install them). This is not a malfunction.

Components

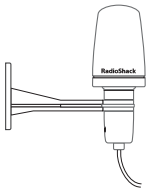
Monitor



Rain Gauge

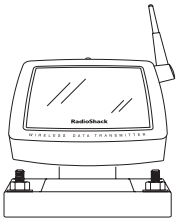


Outdoor Thermo/Hygro Sensor

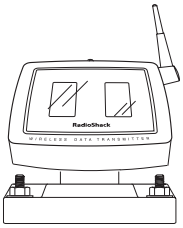


Indoor Thermo/Hygro/Baro Sensor

Solar Transmitter for Anemometer

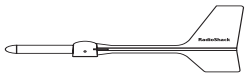


Solar Transmitter for Rain Gauge/ Outdoor Thermo/Hygro Sensor (2)



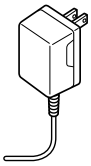
Anemometer Base, Arm, and Vane Set

Wind Vane



Wind Cup

AC Adapter



Mounting Hardware

Number Provided	Description
4	M3 × 17 Self-Tapping Screws
2	M3 × 12 Self-Tapping Screws
8	1/4 inch U-Bolts
16	1/4 inch Plain Washers
16	1/4 inch Hex Nuts
2	Rubber screw covers

Tools/Additional Supplies Needed for Installation

In addition to the supplied mounting hardware, you need the following tools and supplies to install your weather station:

- small flat screwdriver
- small Phillips screwdriver
- electric drill
- pencil
- compass

- level
- two screws (if you plan to mount the monitor on a wall)
- mast, 1–1 1/4 inches (2.54–3.18 cm) in diameter (to mount the anemometer)
- batteries (not supplied):
  monitor: 4 AA
  Indoor thermo/hygro/baro sensor: 4 AAA
  backup power for solar transmitters (3): 2 AA (each)

Notes:

- For the best performance and longest life, we recommend RadioShack alkaline batteries.
- We recommend that you use lithium batteries in any component that could be exposed to temperatures between –4° and –58°F (–20° and –50°C) or colder.

UNDERSTANDING THE MONITOR AND ITS DISPLAY

The weather station's monitor is divided into various windows: barometric pressure and current outdoor general condition, barometric bar chart, indoor temperature, outdoor temperature, rainfall, clock, and wind speed and wind direction. Each window displays related information for that item.

The monitor lights for about 12 seconds and a tone sounds each time you press the screen.

The following chart describes each icon or control.

Icon/ Control	Description	Function
	barometric pressure (absolute/ sea level)	Repeatedly press to toggle between the absolute and sea level barometric pressure readings. (See "Using the Barometric Pressure Window" on Page 18.)
	indoor temperature	Repeatedly press to toggle among the indoor temperature and the indoor dew point temperature. (See "Using the Indoor Temperature Window" on Page 20.)
	outdoor temperature/channel	Repeatedly press to toggle between the outdoor temperature, dew point temperature, and windchill. The channel number appears inside the icon. (See "Using the Outdoor Temperature Window" on Page 21.)
	rain	Press to view the rainfall measurement. (See "Using the Rain Window" on Page 24.)
	relative humidity	Press to view the relative humidity. (See "Viewing and Resetting Max/ Min Relative Humidity Records" on Page 23.)
	clock	Repeatedly press to toggle between the time and date. (See "Viewing the Time/Date/Day of the Week" on Page 17.)
	wind	Repeatedly press to toggle between the average wind speed and the gust wind speed. (See "Using the Wind Window" on Page 25.)
CHANNEL	control	Repeatedly press to toggle among the outside channels.

Icon/ Control	Description	Function
MEMORY	control	Press the desired mode (such as outdoor temperature), then press **MEMORY** to view the saved high/low value.
ALARM	control	Press the desired mode (such as outdoor temperature), then press **ALARM** to see the desired alarm condition(s).
SET	control	Press to store a setting in memory.
UNIT	control	Press to toggle among various units of measurement.
	alarm on/off	Repeatedly press to turn the desired alarm condition on or off.
△	up	Press to increase a value.
▽	down	Press to decrease a value.

❒ *Installation*

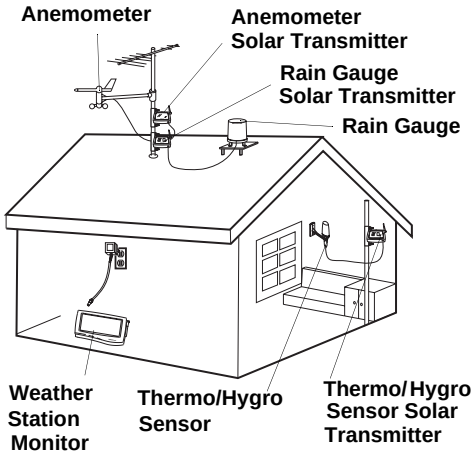
INSTALLATION TIPS

Although the solar transmitters for the anemometer, outdoor thermo/hygro sensor, and rain gauge contain a built-in Ni-MH battery, they also require a backup battery. See the assembly sections in this manual for instructions on installing a backup battery in those components. Replace the backup battery for these components once a year or when ⊄ appears under the corresponding sensor's window.

The weather station operates at 433 MHz and does not require wire installation among the component parts. To ensure successful installation and the best performance, we recommend you follow the preparation, installation, and connection instructions in the order they appear in this manual.

1. Select the best location for each weather station component and carefully measure the approximate mounting distances.

Typical Installation



2. Make sure you have all the tools/supplies necessary to install each component.

3. Assemble and calibrate the anemometer. See "Calibrating the Anemometer" on Page 9.

4. Install all components, then connect all related components.

5. Connect the anemometer, outdoor thermo/hygro sensor and rain gauge to their individual solar transmitters to receive the weather element data. Each solar transmitter needs two AA batteries (not supplied) for backup power.

Notes:

- Install the anemometer, outdoor thermo/hygro sensor, and rain gauge outdoors in a location that provides the best measurement for the weather elements the instruments are designed for.
- To reduce interference, do not install individual solar transmitters closer than 3.28 feet (1 meter) to each other.
- We recommend that you use lithium batteries in any component that could be exposed to temperatures between –4°F (–20° C) and –58°F (–50° C) or colder.
- If you are installing more than one weather station in the same area, wait at least 30 minutes between the installations.

Estimating the Mounting Distances

To help you find the right location for each weather station component, follow the tips listed in “Selecting a Location” on Page 11 that precede the mounting instructions for that component.

Before you mount any of the components, we recommend you select a general mounting location for each component first, then measure the distance between the locations for components that you will be connecting to each other to be sure the selected locations are close enough together.

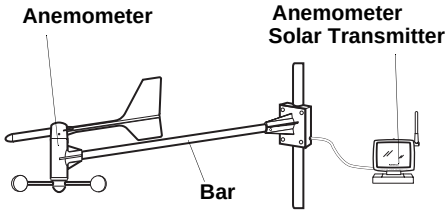
For the best reception, mount the solar transmitters no more than about 328 ft (100 m) from the monitor. Obstacles between the solar transmitters and the monitor might reduce the effective range.

The maximum length of serial cable (not supplied) required to connect the monitor’s **RS-232** jack to a PC is 10 feet, so the monitor must be located indoors within 10 feet of your PC.

CALIBRATING THE ANEMOMETER

Before you mount the anemometer at the selected mounting location, follow these steps to calibrate it with the monitor, so the monitor properly measures wind speed and direction.

Important: You must be able to view the monitor while you assemble and calibrate the anemometer. You must temporarily install the monitor and connect AC power to it. Be sure to follow these steps before you install the anemometer at its mounting location.



Assembling the Anemometer

1. Place the wind cup over the thin shaft on the anemometer’s bar, use a small Phillips screwdriver to tighten the screw on the base of the wind cup, then insert one of the supplied rubber screw covers into the screw’s hole to protect the screw from corrosion.

2. Use a Phillips screwdriver to loosen the screws on the cover of the anemometer’s solar transmitter, then remove the cover. The anemometer’s cable and

anemometer solar transmitter are both labeled with a red tag.

3. Install two AA batteries in the compartment according to the polarity symbols (+ and –) marked inside.

   Cautions:

   - Use only fresh batteries of the required size and recommended type.
   - Do not mix old and new batteries, different types of batteries (standard, alkaline, or rechargeable), or rechargeable batteries of different capacities.

4. Insert the anemometer's modular plug into the modular jack inside the anemometer's solar transmitter's battery compartment.

5. Align the rubber gasket on the anemometer's cord with the groove in the solar transmitter.

6. Replace the cover and secure it with its screws. The indicator on the solar transmitter flashes while it is transmitting data.

7. Insert the supplied AC adapter's barrel plug into the monitor's **DC 12V** jack, then plug the other end of the AC adapter into a standard AC outlet.

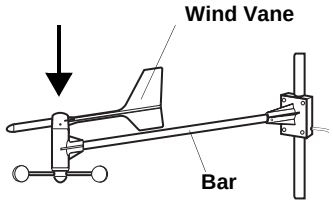
   All display elements appear. Then the default time appears.

8. To calibrate the position of the wind vane's shaft with the monitor, turn the shaft until **180°** appears next to **BEARING** on the monitor. This shows the wind direction.

   Notes:

   - The current position of the shaft appears on the monitor about 14 seconds after you turn the shaft.
   - If you are unable to view the monitor while calibrating the wind vane, you can use the alignment marks on the T-bar and wind vane. When the red mark on the wind vane's shaft is aligned with the mark on the outer edge of the shaft's base, **180°** should appear next to **BEARING** on the monitor.

9. Align the wind vane's tail with the bar as shown here, then carefully press the wind vane down onto the shaft. Do not allow the shaft to turn as you press the wind vane down onto it.



10. Use a small Phillips screwdriver to tighten the screw on the base of the wind vane. Then insert one of the supplied rubber screw covers into the screw's hole to protect the screw from corrosion.

    Important: If the shaft turns and the monitor's reading changes (or alignment marks are no longer aligned), repeat Steps 8 and 9 before you tighten the wind vane's screw. Otherwise, the weather station will not provide accurate wind direction data.

11. When you finish calibrating the anemometer, disconnect the AC adapter from the monitor.

INSTALLING THE ANEMOMETER

Selecting a Location

Select a mounting location for the anemometer that is:

- outdoors, within 10 feet of its solar transmitter
- not blocked on the top or sides, so wind can freely reach the anemometer

The best location for the anemometer is usually above roof level on the building where the monitor is located.

Caution: To prevent damage to your weather station by lightning, we recommend you ground the anemometer to the mast, and ground the mast as directed in the installation instructions provided with the mast.

Note: To mount the anemometer, you need a mast (not supplied) about 1–$1^{1}/_{4}$ inches (2.54–3.18 cm) in diameter, and the hardware necessary to fasten it to the mounting location. If you previously installed such a mast (for mounting an antenna, for example), you can mount the anemometer and its solar transmitter on that mast.

Mounting the Anemometer/ Solar Transmitter

Important: Be sure you follow the steps listed in “Assembling the Anemometer” on Page 9 before you mount the anemometer.

1. If necessary, mount and ground a mast as directed in the installation instructions provided with the mast.

   Warning: Be sure to follow all safety instructions provided with the mast.

2. Using a compass for reference, point the bar on which the anemometer is mounted so the end with the anemometer and wind cup point due south. Then hold the mounting bracket on the end of the bar against the place where you plan to attach it to the mast. Make sure the wind vane is above the wind cup.

3. Place the supplied U-bolts around the mast and through the holes on the anemometer’s mounting bracket.

4. Place a washer over both ends of each U-bolt, then place the ring terminal of the anemometer’s grounding wire over the end of one of the bolts.

5. Tighten a nut onto both ends of each bolt (be sure the nuts are snug but not too tight).

6. Check the bar’s position on the mast against the compass to be sure it is still facing due south. Adjust it if necessary, then tighten the nuts on the U-bolts.

7. Place the supplied U-bolts around the mast and through the holes on the anemometer’s solar transmitter’s mounting bracket.

8. Place a washer over both ends of each U-bolt.

9. Tighten a nut onto both ends of each bolt (be sure the nuts are snug but not too tight), then tighten the nuts on the U-bolts.

10. Loosen the knurled ring on the anemometer’s solar transmitter, adjust the solar transmitter so it faces the sun, then tighten the ring to secure the solar transmitter.

INSTALLING THE RAIN GAUGE

Selecting a Location

Select a mounting location for the rain gauge that is:

- a flat, level surface
- outdoors, within 10 feet of where you mount the rain gauge's solar transmitter
- in an area not blocked on the top or sides, so rain can freely reach the rain gauge (for example, not under an overhang or too close to a building or fence)

Cautions:

- To prevent false rainfall readings caused by water splashes, do not choose a location that is not level or that is too close to the ground, a swimming pool, lawn sprinklers, or anywhere water might accumulate or run off.
- The screen in the cylinder of the rain gauge filters most debris (such as leaves) that might fall into the rain gauge. To avoid frequent build-up of debris in the cylinder, do not mount the rain gauge too close to trees or plants.

Removing the Packing Tape

Protective packing tape is installed inside your rain gauge to protect it from damage during shipment. Follow these steps to remove the packing tape before you mount the rain gauge.

1. Use a small Phillips screwdriver to remove the screws on the base of the rain gauge.
2. Lift the rain gauge's cylinder off its base, then carefully remove the packing tape from the bucket assembly.
3. Replace the cylinder on the base, align its screw holes, then reinsert and tighten the screws.

Connecting the Rain Gauge to a Solar Transmitter

1. Use a Phillips screwdriver to loosen the screws on the cover of the rain gauge's solar transmitter, then remove the cover.
2. Install two AA batteries in the compartment according to the polarity symbols (+ and –) marked inside.

   Cautions:

   - Use only fresh batteries of the required size and recommended type.
   - Do not mix old and new batteries, different types of batteries (standard, alkaline, or rechargeable), or rechargeable batteries of different capacities.
3. Insert the modular plug at the base of the rain gauge into the modular jack in the rain gauge's solar transmitter's compartment.
4. Align the rubber gasket on the rain gauge's cord with the groove in the solar transmitter.
5. Replace the cover and secure it with its screws. The indicator on the solar transmitter flashes while data is transmitting.
6. Mount the connected solar transmitter in a place that will be close to the rain gauge.

Mounting the Rain Gauge

Important: Before you mount the rain gauge, follow the steps listed in "Removing the Packing Tape" to remove the protective packing tape inside. Otherwise, the rain gauge will not operate properly.

1. Hold the base of the rain gauge flat against the mounting surface then use a level to make sure the rain gauge (as it rests on the mounting surface) is horizontally level.

2. Use a pencil to trace the inside of the mounting holes on the base of the rain gauge to mark the screw locations.

3. Drill a small pilot hole (shallow and slightly smaller in diameter than the supplied M3 × 17 screws) in the center of each marked location to guide the screws.

4. Hold the rain gauge against the mounting surface so the holes on the base are aligned with the pilot holes, then thread the supplied M3 × 17 screws into each hole and use a Phillips screwdriver to tighten them.

INSTALLING THE OUTDOOR THERMO/HYGRO SENSOR

Selecting a Location

Select a mounting location for the outdoor thermo/hygro sensor that is within 10 feet of its solar transmitter.

Caution: To avoid false outdoor temperature and humidity readings and prevent damage to the sensor's electronic components, do not place the sensor where it will be:

- in direct or reflected sunlight
- close to a surface that easily absorbs or reflects heat (such as a metallic surface or a window with reflective coating)
- near hot or cold sources, such as a grill, stove or clothes dryer vent, or a heating or air conditioning unit
- in an area where it might get wet
- in an area where these substances are likely to be present in the air: salt, inorganic gases (such as sulphur dioxide, chlorine, or ammonia), or organic gases (such as alcohol, glycol, aldehydes, and so on)

Connecting the Outdoor Thermo/ Hygro Sensor to a Solar Transmitter

1. Use a Phillips screwdriver to loosen the screws on the cover of the remaining solar transmitter, then remove the cover.

2. Install two AA batteries in the compartment according to the polarity symbols (+ and –) marked inside.

   Cautions:

   - Use only fresh batteries of the required size and recommended type.
   - Do not mix old and new batteries, different types of batteries (standard, alkaline, or rechargeable), or rechargeable batteries of different capacities.

3. Insert the outdoor thermo/hygro sensor's modular plug into the modular jack inside the solar transmitter's battery compartment.

4. Align the rubber gasket on the outdoor thermo/hygro sensor's cord with the groove in the solar transmitter.

5. Replace the cover and secure it with its screws.

6. Mount the connected solar transmitter in a place that will be close to the outdoor thermo/hygro sensor.

Mounting the Outdoor Thermo/ Hygro Sensor

1. Hold the sensor's mounting bracket flat against the mounting surface and trace the inside of the pilot holes with a pencil to mark the screw locations.

2. Drill a small pilot hole (shallow and slightly smaller in diameter than the supplied M3 × 12 screws) in the center of each marked location to guide the screws.

3. Hold the bracket against the mounting surface so the bracket and pilot holes are aligned, then thread one of the supplied M3 × 12 screws into each hole and tighten them with a Phillips screwdriver.

4. To mount the sensor on the bracket, press the grooved area on the sensor against the clip-arm on the bracket so it pops into place. Then press the sensor's modular cord into the guides on the bracket's arm and base.

INSTALLING THE INDOOR THERMO/HYGRO/BARO SENSOR

Selecting a Location

Set the thermo/hygro/baro sensor indoors on a flat surface (such as a desk or counter) using its built-in stand, or mount it on an indoor wall.

Caution: To avoid false atmospheric pressure, temperature, and humidity readings, do not place the sensor where it will be:

- outdoors
- in direct sunlight
- in water or in a location where it is likely to get wet
- on or close to a surface that easily absorbs or reflects heat (such as a window or metal surface)
- near hot or cold sources, such as stoves, heating and air conditioning vents, and radiators.

Before mounting the thermo/hygro/baro sensor, install its batteries.

1. Slide the battery compartment down to remove it.

2. Install four AAA batteries in the compartment according to the polarity symbols (+ and –) marked inside.

   Cautions:

   - Use only fresh batteries of the required size and recommended type.

   - Do not mix old and new batteries, different types of batteries (standard, alkaline, or rechargeable), or rechargeable batteries of different capacities.

3. Replace the cover.

Mounting the Thermo/Hygro/Baro Sensor on a Wall

To mount the thermo/hygro/baro sensor on a wall, you need a screw (not supplied) with a head that fits into the keyhole slot on the back of the sensor.

1. Drill a hole in the wall at the desired mounting location.

2. Thread a screw into the wall until the head extends about 1/4 inch from the wall.

3. Position the keyhole slot over the screw and slide the sensor down to secure it.

INSTALLING THE MONITOR

Selecting a Location

You should set the monitor indoors on a flat surface (such as a desk or counter), or mount it on an indoor wall within 6 feet of where your PC is located and near an AC outlet.

Caution: To avoid false indoor temperature and humidity readings, do not place the monitor where it will be:

- outdoors
- in direct or reflected sunlight
- on or close to a surface that easily absorbs or reflects heat (such as a window or metal surface)
- near hot or cold sources, such as stoves, heating and air conditioning vents, and radiators
- near electronic equipment that could interfere with it
- in water or in a location where it can get wet

Installing Batteries

Your monitor requires four AA batteries (not supplied) for backup power. For the best performance and longest life, we recommend RadioShack alkaline batteries.

Cautions:

- Use only fresh batteries of the required size and recommended type.
- Do not mix old and new batteries, different types of batteries (standard, alkaline, or rechargeable), or rechargeable batteries of different capacities.

Notes:

- The monitor can operate on fresh batteries for up to 1 week without AC power.
- The monitor might display inaccurate data if it is using backup battery power and battery power becomes low.

1. Press the tab on the battery compartment cover down and lift the cover up to remove it.
2. Place the batteries in the compartment as indicated by the polarity symbols (+ and –) marked inside.
3. Use a pointed object such as a straightened paper clip to press the **RESET** hole inside the battery compartment. This initializes the monitor's transmitter.
4. Replace the cover.

All display segments briefly appear. Then the air pressure, indoor temperature, and humidity readings appear.

When appears in the clock window, the display dims, or the monitor stops operating properly, replace the batteries. disappears within about 1 hour after you replace the batteries.

The weather station scans all sensors to check battery power status. appears under the corresponding sensor's window to indicate which sensor's batteries need to be replaced.

Warning: Dispose of old batteries promptly and properly. Do not burn or bury them.

USING AC POWER

Power the monitor using the supplied 12V, 300 mA AC adapter.

Cautions:

You must use a Class 2 power source that supplies 12V DC and delivers at least 300 mA. Its center tip must be set to positive and

its plug must fit the monitor's **DC 12V** jack. The supplied adapter meets these specifications. Using an adapter that does not meet these specifications could damage the monitor or the adapter.

- Always connect the AC adapter to the monitor before you connect it to AC power. When you finish, disconnect the adapter from AC power before you disconnect it from the monitor.

To connect the monitor to AC power, insert the supplied adapter's barrel plug into the **DC 12V** jack on the back of the monitor, then plug the other end of the adapter into a standard AC outlet. If you did not install batteries in the monitor, all programmed display characters appear, then the default time (**12:00**) and the weather element readings appear.

The monitor begins scanning and reading data from all components as soon as you connect AC power. Wait until the monitor stops scanning before you make any adjustments.

Mounting the Monitor on a Wall

To mount the monitor on a wall, you need two wall screws (not supplied) with heads that fit the keyhole slots on the back of the monitor. The heads should be no larger than 0.31 inches (8 mm).

1. Drill two small pilot holes (each shallow and slightly smaller in diameter than the screw) $5^{9}/_{16}$ inches apart, one beside the other, at the desired mounting location.
2. Thread a screw into each hole until the screw's head extends about $^{1}/_{8}$ inch from the wall.
3. Place the keyhole slots on the back of the monitor over the screws, then slide the monitor down over the screws until it is securely in place.

❒ *Operation*

SETTING THE TIME ZONE, TIME, DATE, AND LANGUAGE

Setting the Time Zone

The monitor automatically displays a time zone (**P** = Pacific, **M** = Mountain, **C** = Central, or **E** = Eastern) in the Clock window while you set the clock. To set the time zone, hold down **CLOCK** ⏲ for about 2 seconds, then press △ or ▽ until your time zone appears. Press **CLOCK** ⏲ to store the setting.

Notes:

- If you do not press a key for about 1 minute after you begin, the clock will return to the current time display. Start over from Step 2.
- To keep the existing setting in any step, simply press **SET**.

1. Press **CLOCK** ⏲ to enter the clock mode.
2. Hold down **SET** until the hour format (**12 HR** or **24 HR**) flashes.
3. Hold down △ or ▽ to set the time to the desired format.
4. Press **SET**. A letter representing the language used for the day of the week flashes.
5. Repeatedly press (or hold down) △ or ▽ until the desired language appears (**E**

= English, **F** = French, **D** = German, **I** = Italian, **S** = Spanish).

6. Press **SET**. The hour digit flashes.
7. Repeatedly press (or hold down) △ or ▽ to set the hour digits.
8. Press **SET**. The minute digits flash.
9. Repeatedly press (or hold down) △ or ▽ to set the minute digits.
10. Press **SET** to store each setting in memory. **M** and **D** flash.
11. Repeatedly press (or hold down) △ or ▽ to toggle between the month/day and the day/month views.
12. Press **SET** to store the setting.
13. Repeatedly press (or hold down) △ or ▽ to set the year.
14. Press **SET** to store the setting. The month digits flash.
15. Repeatedly press (or hold down) △ or ▽ to set the month.
16. Press **SET** to store the setting. The day digits flash.
17. Repeatedly press (or hold down) △ or ▽ to set the day.
18. Press **SET** to store the setting. The current time appears.

VIEWING THE TIME/DATE/ DAY OF THE WEEK

To toggle between the current date, time, and day of the week view, and the time with seconds view, repeatedly press **CLOCK** ⊙.

Note: If you selected the 12-hour format, **AM** appears during AM hours and **PM** appears during PM hours.

USING THE DAILY ALARM

You can set the monitor to sound an alarm at the same time every day. When the monitor reaches the alarm time, 🔔 flashes and an alarm sounds for about 1 minute. To silence the alarm sooner, press any key.

Setting the Daily Alarm

1. Press **CLOCK** ⊙.
2. Press **ALARM**. (•) appears.

   Note: --:-- appears the first time you set the alarm.
3. Hold down **SET**. The previous alarm setting (or **12**) flashes.
4. Repeatedly press (or hold down) △ or ▽ to set the alarm hour.
5. Press **SET**. The previous alarm setting (or **00**) flashes.
6. Repeatedly press (or hold down) △ or ▽ to set the minute digits.
7. Press **SET**. The monitor returns to the current time display and 🔔 appears.

After setting the alarm time, the monitor automatically turns on the alarm. To turn off the alarm, press **CLOCK** ⊙, then press 🔔/✕. 🔔 disappears.

To toggle between viewing the set alarm time and the current time, press **CLOCK** ⊙, then repeatedly press **ALARM**.

Note: --:-- appears when no alarm time is set.

READING THE WEATHER FORECAST DISPLAY

Your weather station is designed to forecast the weather conditions, from 12–24 hours in advance, for an area within 20–30 miles of where you installed it. The weather station updates its forecast once every 15 minutes (based on the barometric pressure readings stored in its memory) and displays the forecast using easy-to-read symbols.

Notes:

- Allow at least 24 hours after you connect power for the weather station to store barometric pressure data in memory and display an accurate weather forecast.
- If you move the weather station from one altitude to another, allow at least 24 hours for the weather station to store barometric pressure data at the new altitude. Otherwise, the forecast it provides will not be within normal accuracy levels.

General Weather Symbols

Condition	Symbol
Sunny	
Slightly Cloudy	
Cloudy	
Rainy	

Note: you can also view the weather forecast from the thermo/hygro/baro sensor.

USING THE BAROMETRIC PRESSURE WINDOW

Setting/Viewing the Barometric Display Units

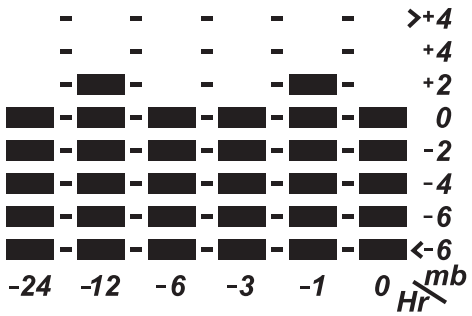
The weather station samples the barometric pressure every 15 minutes. You can set it to display the current barometric pressure in millimeters of mercury (mm Hg), inches of mercury (in Hg), millibars (mb), or hectopascals (hPa). To set the monitor to display the desired pressure units, press **BARO** then repeatedly press **UNIT** until the desired unit appears.

You can also display the pressure reading for a particular hour within the past 24 hours. Press **BARO** and repeatedly press (or hold down) △ or ▽ to the desired time.

For example, if you want to display the barometric pressure reading for half a day ago, repeatedly press △ or ▽ until **-12** appears.

Repeatedly press **mb/hPa/inHg** on the thermo/hygro/baro sensor to toggle between viewing the pressure in mb/hPa and in Hg. Repeatedly press **°C/°F** to toggle between viewing the indoor temperature in Celsius or Fahrenheit.

Note: The monitor displays the pressure history for the past 24 hours in a six-column bar chart.



Setting the Sea Level Barometric Pressure

No matter where you are, barometric pressure is measured using the current sea level barometric pressure. This way, meteorologists (and you!) can easily compare measurements from locations at different altitudes.

Note: To obtain the current sea level barometric pressure in your area, contact the nearest airport or go to *http://www.nws.noaa.gov* and select current weather conditions for the closest location to you in your state.

1. Repeatedly press **BARO** until **SEA LEVEL** appears.
2. Hold down **SET** for about 2 seconds until the previous sea level pressure setting flashes.
3. Press △ or ▽ to set the sea level pressure.
4. Press **SET** to store the setting.

Using the Barometric Pressure-Drop Alarm

You can set the monitor to sound an alarm when the current barometric pressure drops to the condition relevant to a programmed setting. For example, you can set the monitor to sound an alarm if the current barometric pressure drops .03 inch below the level you specify. Each time the barometric pressure changes and meets the set condition, **ALARM** flashes and the monitor sounds an alarm for about 1 minute. To silence the alarm sooner, press any key.

Note: If you press a key to silence the alarm, the alarm stops sounding, but continues to flash until the alarm condition is no longer met.

To view the current barometric pressure-drop alarm setting, press **BARO**, then press **ALARM**. The barometric pressure-drop alarm setting and **ALARM** appear.

Note: **----** appears when no alarm condition is set.

Setting the Barometric Pressure-Drop Alarm

1. Press **BARO**.
2. Repeatedly press **ALARM** until **ALARM** appears.
3. Hold down **SET** for about 2 seconds until the last set pressure-drop alarm condition flashes.
4. Repeatedly press (or hold down) △ or ▽ until the monitor shows the desired setting.
5. Press **SET** to store the setting.

Note: If you do not press any button for about 60 seconds, the monitor returns to the current barometric reading display. To continue programming, start over at Step 2.

Clearing the Barometric Pressure-Drop Alarm Setting

To clear the barometric pressure-drop alarm condition so the alarm does not sound, press **BARO**. Repeatedly press **ALARM** until **ALARM** appears, then repeatedly press until **----** appears.

USING THE INDOOR TEMPERATURE WINDOW

The weather station samples the indoor air temperature about every 38 seconds. The monitor shows both the current indoor temperature and the dew point temperature in the indoor temperature window (on the monitor).

You can display the temperature in degrees Celsius (°C) or degrees Fahrenheit (°F). Press IN **TEMP**. Then repeatedly press **UNIT** until °C or °F appears.

Notes:

- The monitor adjusts the unit of measurement (Celsius or Fahrenheit) you see for both the outdoor and indoor temperature readings simultaneously.
- You can also view the indoor temperature from the thermo/hygro/baro sensor.

Viewing/Resetting MAX/MIN Temperature Records

To toggle between the current indoor temperature view and the maximum or minimum indoor temperature view (recorded since the last memory reset), press IN **TEMP**, then repeatedly press **MEMORY**.

MAX or MIN appears when the monitor shows the maximum or minimum recorded temperature. The recorded times of the maximum or minimum temperatures and STAMP appear in the **CLOCK** window.

To reset the temperature records in memory and record a new maximum or minimum temperature (beginning with the current reading), hold down **MEMORY** for about 2 seconds.

Using the HI/LOW Temperature Alarms

You can set the monitor to sound an alarm when a set high or low indoor temperature is reached.

Each time the temperature changes and meets or exceeds a set high or low indoor alarm condition, the current temperature and HI or LO flash, and the monitor sounds an alarm for about 1 minute. To silence the alarm sooner, press any key.

Note: If you press a key to silence the alarm, the alarm stops sounding, but the current temperature and HI or LO continue to flash until that alarm condition is no longer met.

To view the current temperature and the current high or low indoor temperature alarm conditions, press IN **TEMP**, then repeatedly press **ALARM**. HI or LO appears when the monitor shows the high or low indoor temperature alarm conditions.

Setting a HI/LOW Temperature Alarm

1. Press IN **TEMP**.
2. Repeatedly press **ALARM** so HI or LO appears.
3. Hold down **SET** until the last temperature alarm condition flashes.
4. Repeatedly press (or hold down) △ or ▽ to set the temperature alarm.
5. Press **SET** to store the setting.

Note: The monitor automatically displays the high temperature alarm setting after you set the low alarm temperature, and vice versa.

Clearing a HI/LOW Temperature Alarm Setting

To clear the conditions for a high or low temperature alarm so the alarm does not sound, repeatedly press **ALARM** to select the high or low temperature condition, then repeatedly press ⚑/✕ until **--.-** appears.

Viewing the Indoor Dew Point Temperature

Your weather station determines the current dew point temperature once it receives temperature and humidity data. Repeatedly press 🏠 **TEMP** until **DEW** and the recorded dew point temperature appear.

Using the Indoor Dew Point Temperature Alarm

You can set the monitor to sound an alarm when the indoor dew point is within a specific range (from 2–29°F or 1–16°C) of the current indoor temperature.

Each time the indoor dew point temperature changes and is within the programmed range of the indoor temperature, **IN** flashes and the monitor sounds an alarm for about 1 minute. To silence the alarm sooner, press any key.

Note: If you press a key to silence the alarm, the alarm stops sounding but **IN** and the current readings continue to flash until the alarm condition is no longer met.

Setting the Indoor Dew Point Temperature Alarm

1. Repeatedly press 🏠 **TEMP** until **DEW** appears.
2. Repeatedly press **ALARM** until **ALARM** appears.
3. Hold down **SET** until the indoor dew point setting flashes.
4. Repeatedly press (or hold down) △ or ▽ to set the dew point alarm condition.
5. Press **SET** to store the setting.

Note: If you do not press any button for about 60 seconds, the monitor returns to the current indoor dew point temperature display. To continue programming, start over at Step 2.

Clearing the Indoor Dew Point Temperature Alarm Setting

To clear the dew point alarm conditions so the alarm does not sound, repeatedly press 🏠 **TEMP** until **DEW** appears. Press **ALARM** then repeatedly press ⚑/✕ until **--.-** appears.

USING THE OUTDOOR TEMPERATURE WINDOW

The weather station samples the outdoor air temperature about every 37 seconds. The monitor shows both the current outdoor temperature and the dew point temperature. You can display the temperature in Celsius (°C) or Fahrenheit (°F). Press **OUT** 🌡, then repeatedly press **UNIT** until **°C** or **°F** appears.

Notes:

- The monitor adjusts the unit of measurement (Celsius or Fahrenheit) you see for both the outdoor and indoor temperature readings simultaneously.
- You can add up to three extra sensors such as Cat. No. 63-1031 (not supplied, available at your local RadioShack store) to measure temperature readings in different locations.

Viewing and Resetting Max/Min Outdoor Temperature Records

To toggle between the current outdoor temperature view and the maximum or minimum outdoor temperature view (recorded since

the last memory reset), press **OUT** . Then repeatedly press **MEMORY**. **MAX** or **MIN** appears when the monitor shows the maximum or minimum recorded temperature. The recorded times of the maximum or minimum temperatures and **STAMP** also appear.

To reset the temperature records in memory and record a new maximum or minimum temperature beginning with the current reading, hold down **MEMORY** until a beep sounds.

Using the HI/LOW Outdoor Temperature Alarms

You can set the monitor to sound an alarm when a set high or low outdoor temperature is reached.

Each time the temperature changes and meets or exceeds an alarm condition, the current temperature and **HI** or **LO** flash, and the monitor sounds an alarm for about 1 minute. To silence the alarm sooner, press any key.

Note: If you press a key to silence the alarm, the alarm stops sounding but the current temperature and **HI** or **LO** continue to flash until that alarm condition is no longer met.

To view the current temperature and the current high or low outdoor temperature alarm conditions, press **OUT** and repeatedly press **ALARM**. **HI** or **LO** appears when the monitor shows the high or low indoor temperature alarm condition.

Setting a HI/LOW Temperature Alarm

1. Press **OUT** , then repeatedly press **CHANNEL** until **OUT** appears.
2. Repeatedly press **ALARM** so either **HI** or **LO** appears.
3. Hold down **SET** until the last temperature alarm condition flashes.
4. Repeatedly press (or hold down) △ or ▽ to set the temperature alarm.
5. Press **SET** to store the setting.

Note: The monitor automatically displays the high temperature alarm setting after you set the low alarm temperature and vice versa.

Clearing a HI/LOW Temperature Alarm Setting

To clear the conditions for a high or low temperature alarm so the alarm does not sound, repeatedly press **ALARM** to select a high or low temperature condition and repeatedly press until **--.-** appears.

Viewing the Outdoor Dew Point and Wind Chill Temperature

Your weather station determines the current dew point and wind chill temperatures from the current collected data. To toggle between the outdoor dew point temperature view and wind chill temperature view, repeatedly press **OUT** until **DEW** or **WIND CHILL** appears.

Note: The weather station determines the wind chill temperature when it receives wind speed signals from the anemometer.

Setting the Outdoor Dew Point/ Wind Chill Temperature Alarm

You can set the monitor to sound an alarm when the outdoor dew point is within a specific range (from 2–29°F or 1–16°C) of the current dew point temperature, or when the wind chill temperature meets or drops below a set temperature.

Each time the outdoor dew point temperature changes and is within the programmed range, **OUT** flashes and the monitor sounds an alarm for about 1 minute. To silence the alarm sooner, press any key.

Each time the outdoor wind chill temperature changes and meets or drops below the set temperature, *OUT* and the current readings flash and the monitor sounds an alarm for about 1 minute. To silence the alarm sooner, press any key.

Note: If you press a key to silence the alarm, the alarm stops sounding, but *OUT* and the current readings continue to flash until the alarm condition is no longer met.

1. Repeatedly press **OUT** until *DEW* or *WIND CHILL* appears.
2. Press **ALARM**. *ALARM* appears when you set the dew point temperature alarm, or *LO ALARM* appears when you set the wind chill temperature alarm.
3. Hold down **SET** until the dew point setting or the current wind chill setting flashes.
4. Repeatedly press (or hold down) △ or ▽ to set the dew point or wind chill alarm condition.
5. Press **SET** to store the setting.

Notes:

- If you do not press any button for about 60 seconds, the monitor returns to the current temperature display. To continue programming the settings, start over at Step 2.
- You can only set the wind chill alarm on the outside (*OUT*) channel.

Clearing the Outdoor Dew Point or Wind Chill Temperature Alarm Setting

To clear the dew point or wind chill alarm conditions so the alarm does not sound, repeatedly press **OUT** until *DEW/WIND CHILL* appears. Press **ALARM**, then press so **--.-** appears.

VIEWING AND RESETTING MAX/MIN RELATIVE HUMIDITY RECORDS

The weather station samples the indoor and outdoor humidity and determines the relative humidity percentage. The current indoor (*IN*) and outdoor (*OUT*) relative humidity (*%RH*) conditions are located under the indoor and outdoor temperature windows, respectively.

Note: You can also view the indoor relative humidity from the indoor thermo/hygro/baro sensor.

To view the maximum or minimum indoor or outdoor relative humidity recorded since the last memory reset, press the desired **%RH** (indoor or outdoor), then repeatedly press *MEMORY* until *MAX* or *MIN* appears. The recorded times of the maximum or minimum humidity and *STAMP* appear.

To reset the maximum or minimum relative humidity records in memory and record a new record (beginning with the current condition), hold down *MEMORY* for about 2 seconds until the monitor beeps.

Using the HI/LOW Relative Humidity Alarms

You can set the monitor to sound an alarm when a set high or low indoor or outdoor relative humidity condition is reached.

Each time the relative humidity changes and meets or exceeds an alarm condition, *HI* or *LO* flashes, and the monitor sounds an alarm for about 1 minute. To silence the alarm sooner, press any key.

Note: If you press a key to silence the alarm, the alarm stops sounding, but *HI/LO* and the current readings continue to flash until that alarm condition is no longer met.

To view the current high or low indoor or outdoor relative humidity alarm conditions, press the desired **%RH**, then repeatedly press **ALARM** until *HI ALARM* or *LO ALARM* and the alarm condition appear.

Note: When no humidity alarm condition is set, **--** appears.

Setting a HI/LOW Relative Humidity Alarm

Note: When setting a high or low relative humidity alarm:

- If you do not press any button for about 60 seconds, the monitor returns to the current reading display. If you want to continue setting the alarm conditions, start over at Step 2.
- To keep the existing condition in any step, simply press **SET** to store the setting and advance to the next step.

1. Press the desired **%RH** (in either the indoor or outdoor temperature window).
2. Repeatedly press **ALARM** until *HI* or *LO* appears.
3. Hold down **SET** until the last humidity alarm condition flashes.
4. Repeatedly press (or hold down) △ or ▽ to set the humidity alarm.
5. Press **SET** to store the setting.

Note: The monitor automatically displays the high temperature alarm setting after you set the low alarm temperature and vice versa.

Clearing a HI/LOW Relative Humidity Alarm Setting

To clear the conditions for a high or low relative humidity alarm so the alarm does not sound, press the desired **%RH** or **CHANNEL,** if necessary. Repeatedly press **ALARM** until the desired alarm setting (*HI ALARM* or *LO ALARM*) appears, then repeatedly press ▽ until **--** appears.

USING THE RAIN GAUGE

The weather station's rain gauge measures rain as it falls and automatically calculates the rate of rainfall per hour. You can set the monitor to display the rainfall rate in in/hr (inches per hour) or mm/hr (millimeters per hour). To set the desired rainfall measurement, press **RAIN**, then repeatedly press *UNIT* until *IN/HR* or *MM/HR* appears.

Notes:

- We recommend you regularly check for and remove any debris that might have fallen into the rain gauge's cylinder. Otherwise, rain might not properly drain into the gauge.
- The rain gauge automatically empties itself. There is no need to empty the gauge after rainfall.

To remove the rain gauge's screen for easy cleaning, simply pull up on the string attached to the screen. When you finish, place the screen back in the cylinder and press it down into place.

USING THE RAIN WINDOW

Viewing the Previous Day's and the Total Amount of Rainfall Records

To toggle between viewing yesterday's rainfall amount and the total amount of rainfall recorded in memory, press **RAIN**, then repeatedly press *MEMORY* until *YESTERDAY* or *TOTAL* appears.

Notes:

- When displaying total rainfall records, the time that the total rainfall memory

was last reset and *SINCE* appear simultaneously.

- Yesterday's rainfall amount is calculated from 12:00 AM of one day to 12:00 AM on the next day.
- If no rainfall is detected for two consecutive hours, *0* appears on the monitor.

Resetting the Total Rainfall Record

To reset the total rainfall record in memory and record new data (beginning with the current conditions), press **RAIN**, then hold down *MEMORY* until a beep sounds.

Using the High Rainfall Rate Alarm

You can set the monitor to sound an alarm when the rainfall rate meets or exceeds a set condition (such as 1 in/hr). Each time rain falls and meets or exceeds the set alarm condition, *HI* flashes and the monitor sounds an alarm for about 1 minute. To silence the alarm sooner, press any key.

Note: If you press a key to silence the alarm, the alarm stops sounding, but *HI* and current rainfall rate continue to flash until the alarm condition is no longer met.

To view the current high rainfall rate alarm setting, press **RAIN**, then press **ALARM** so *ALARM HI* appears.

Note: When no rainfall alarm condition is set, **---** appears.

Setting the High Rainfall Rate Alarm

Note: If you do not press any button for about 60 seconds, the monitor returns to the current alarm condition display. To continue programming the alarm condition, start over at Step 2.

1. Press **RAIN**.
2. Repeatedly press **ALARM** until *ALARM HI* appears.
3. Hold down **SET** for about 2 seconds until the monitor beeps. The last set alarm condition (in inches/hour or mm/hour) flashes.
4. Repeatedly press (or hold down) △ or ▽ to adjust the setting.
5. Press **SET** to store the setting.

Clearing the High Rainfall Rate Alarm Setting

To clear the high rainfall rate alarm condition so the alarm does not sound, press **RAIN**, then repeatedly press **ALARM** until *ALARM HI* appears. Repeatedly press ▽/✱ until **---** appears.

USING THE WIND WINDOW

The weather station uses the anemometer to sample the wind speed and direction. You can set the monitor to display the wind speed in miles per hour (mph), kilometers per hour (kph), meters per second (m/s), or knots. To set the wind speed unit of measurement, press **WIND**, then repeatedly press **UNIT** until the desired unit appears.

The monitor displays wind direction in degrees (0° to 359° — 0° being due North, 180° being due South, and so on) and literal compass direction (N for north, S for south, and so on). The monitor displays the literal compass wind direction at all times, regardless of which window is active.

The anemometer determines gust every 14 seconds and the average wind speed about every 60 seconds. To toggle between the gust view and the average wind speed view, repeatedly press **WIND**, so *GUST* or *AVERAGE* appears.

Viewing and Resetting the Max Wind Speed Record

To view the maximum wind speed recorded since the last memory reset, press **MEMORY**. *MAX* appears. The time the wind speed was recorded in memory, the direction the wind was blowing, and *STAMP* appear simultaneously.

To reset the maximum wind speed in memory and record a new high wind speed and direction beginning with the current conditions, hold down **MEMORY** for about 2 seconds until the monitor beeps.

Using the High Wind Speed Alarm

You can set the monitor to sound an alarm when the wind speed reaches or exceeds a set limit. Each time the wind speed changes and meets or exceeds the set limit, *HI* flashes and the monitor sounds an alarm for about 1 minute. To silence the alarm sooner, press any key.

Note: If you press a key to silence the alarm, the alarm stops sounding, but *HI* continues to flash until the alarm condition is no longer met.

To view the current high wind speed alarm condition, press **WIND**, then press **ALARM**. *HI* appears.

Note: When no wind speed alarm condition is set, **---** appears.

Setting the High Wind Speed Alarm

1. Press **WIND**.
2. Press **ALARM** so *HI ALARM* appears.
3. Hold down **SET** for about 2 seconds until the monitor beeps. The last set high wind speed condition flashes.
4. Repeatedly press (or hold down) △ or ▽ to adjust the setting.
5. Press **SET** to store the setting.

Note: If you do not press any button for about 60 seconds, the monitor returns to the current wind speed and direction display. To continue programming the wind speed alarm, start over from Step 2.

Clearing the High Wind Speed Alarm Setting

To clear the high wind speed alarm condition so the alarm does not sound, press **WIND**. Press **ALARM** so *HI ALARM* appears next to *GUST*, then press so **---** appears.

Note: If the recorded conditions fall outside the operating range listed in the specifications, *HHH* or *LLL* appear.

❒ Special Features

Note: If the recorded conditions are out of the operating range listed in the specifications, ***HHH*** or ***LLL*** appears on the monitor.

DISCONNECTED SIGNALS

If the signal from a sensor was disconnected, **---** appears on the monitor. If this happens, hold down **CHANNEL**. The weather station searches for the most current signal. (You do not need to reset the clock.)

If **---** appears on the monitor often, try the following methods to correct it:

- Move the monitor or transmitter if there is an obstacle between them.
- Check the backup battery.
- Move the transmitter closer to the sensor.

CONNECTING THE MONITOR TO A PC

Using an optional serial cable (up to 10 feet long) and the supplied software, you can connect the monitor to a PC. You can view any recorded data on the PC.

Note: Your local RadioShack store sells a wide variety of cables.

To connect the monitor to a PC, plug one end of a serial PC cable into the **RS-232** jack on the back of the monitor, then plug the other end into the appropriate port on your PC.

Notes:

- The monitor sends data through its **RS-232** jack (once it receives the signal) at a rate of 9600 bps.
- For instructions on using the supplied software or viewing data sent from your monitor, see the software's separate Owner's Manual.

SCANNING THE MONITOR'S CHANNELS

The monitor can scan the readings from the ***OUT*** (outdoor) channel and channels 1, 2, and 3 every 4 seconds. Press **OUT** ⎕, then hold down △. To stop scanning, press any key.

WEATHER REFERENCES

Glossary of Weather Terms

air mass — a large body of air that has similar horizontal temperature and moisture characteristics.

air (atmospheric) pressure — the pressure exerted by the weight of air above a given point. Usually expressed in millibars (mb) or inches (in) of mercury (Hg).

altimeter — an instrument that indicates the altitude of an object above a fixed level. Pressure altimeters use an aneroid barometer with a scale graduated in altitude instead of pressure.

anemometer — an instrument that measures wind speed.

atmosphere — the envelope of gases that surrounds a planet and are held to it by the planet's gravitational attraction.

autumnal equinox — the equinox at which the sun approaches the Southern hemisphere and passes directly over the equator. Occurs around September 23.

backing wind — a wind that signifies cooling and changes direction in a counterclock-

wise sense (north to northwest to west, for example).

barometer — an instrument that measures atmospheric pressure. The two most common barometers are the mercury barometer and the aneroid barometer.

blizzard — a severe weather condition characterized by low temperatures and strong winds (greater than 32 mph) bearing a great amount of snow.

Celsius scale — a temperature scale where (at sea level) water freezes at 0° and boils at 100°.

cold front — a transition zone where a cold air mass advances and replaces a warm air mass.

cold wave — a rapid fall in temperature within 24 hours that often requires increased protection for agriculture, industry, commerce, and human activities.

convection — atmospheric motions that are predominantly vertical, such as rising air currents due to surface heating. The rising of heated surface air and the sinking of cooler air aloft is often called free convection.

cyclone — an area of low pressure around which the winds blow counterclockwise in the Northern hemisphere and clockwise in the Southern hemisphere.

daily range of temperature — the difference between the maximum and minimum temperatures for any given day.

dew — water that has condensed onto objects near the ground when their temperatures have fallen below the dew point of the surface air.

dew point (dew-point temperature) — the temperature to which air must be cooled (at constant pressure and constant water vapor content) for saturation to occur. When the dew point falls below freezing, it is called the frost point.

downburst — a severe localized downdraft that can be experienced beneath a severe thunderstorm.

drizzle — small drops between 0.2 and 0.5 mm in diameter that fall slowly and reduce visibility more than light rain.

drought — a period of abnormally dry weather sufficiently long enough to cause serious effects on agriculture and other activities in the affected area.

dry line — a boundary that separates warm, dry air from warm, moist air. It usually represents a zone of instability along which thunderstorms form.

evaporation — the process by which a liquid changes into a gas.

extratropical cyclone — a cyclonic storm that most often forms along a front in middle and high latitudes. Also called a middle latitude storm, a depression, and a low. It is not a tropical storm or hurricane.

eye — a region in the center of a hurricane (tropical storm) where the winds are light and skies are clear to partly cloudy.

eye wall — a wall of dense thunderstorms that surrounds the eye of a hurricane.

Fahrenheit scale — a temperature scale where (at sea level) water freezes at 32° and boils at 212°.

fog — a cloud with its base at the earth's surface. It reduces visibility to less than 1 mile (1.6 km).

freeze — the condition that exists when the surface temperature over a widespread area remains below freezing (32° F or 0° C) for a sufficient time to constitute the characteristic feature of the weather. If the freeze cuts

short the growing season, it is a killing freeze.

freezing rain/drizzle — rain or drizzle that falls in liquid form and then freezes upon striking the ground or objects that are at 32°F (0°C) or colder.

front — the transition zone between two distinct air masses.

frost (hoarfrost) — a covering of ice produced by sublimation (to change from a gaseous state to a solid without becoming a liquid) on exposed surfaces when the air temperature falls below the frost point (the dew point is below freezing).

frozen dew — the transformation of liquid dew into tiny beads of ice when the air temperature drops below freezing.

funnel cloud — a rotating cone-like cloud that extends downward from the base of a thunderstorm. When it reaches the surface, it is called a **tornado**.

graupel — ice particles between .08–.20 inches (2 and 5 mm) in diameter that form in a cloud. Snowflakes that become rounded pellets due to riming (being frosted over) are called graupel or snow pellets.

gust front — a boundary that separates a cold downdraft of a thunderstorm from warm, humid surface air. On the surface, its passage resembles that of a cold front.

hailstones — transparent or partially opaque particles of ice that range in size from that of a pea to that of golf balls and larger.

haze — fine dry or wet dust or salt particles dispersed through a portion of the atmosphere. Individually these are not visible, but cumulatively they diminish visibility.

heat index (HI) — an index that combines air temperature and relative humidity to determine an apparent temperature — how hot it actually feels.

humidity — a general term that refers to the air's water vapor content.

hurricane — a severe tropical cyclone having winds in excess of 64 knots (74 mph).

hurricane warning — a warning given when it is likely that a hurricane will strike an area within 24 hours.

hurricane watch — a hurricane watch indicates that a hurricane poses a threat to an area (often within several days) and residents of the watch area should be prepared.

jet stream — relatively strong winds concentrated within a narrow band in the atmosphere.

knot — a unit of speed equal to 1 nautical mile per hour (1 knot = 1.15 mph).

lake-effect snows — localized snowstorms that form on the downwind side of a lake. Such storms are common in late fall and early winter near the Great Lakes as cold, dry air picks up moisture and warmth from the unfrozen bodies of water.

lightning — a visible electrical discharge produced by thunderstorms.

mean annual temperature — the average temperature at any given location for the entire year.

mean daily temperature — the average of the highest and lowest temperature for a 24-hour period.

meteorology — the study of the atmosphere and atmospheric phenomena as well as the atmosphere's interaction with the earth's surface, oceans, and life in general.

millibar (mb) — a unit for expressing atmospheric pressure. Sea level pressure is normally close to 1013 mb.

northeaster — a name given to a strong, steady northeast wind that is accompanied by rain and inclement weather. It often develops when a storm system moves northwesterly along the coast of North America.

overrunning — a condition that occurs when air moves up and over another layer of air.

pressure tendency — the rate of change of atmospheric pressure within a specified period of time, most often three hours. Also known as barometric tendency.

rain — precipitation in the form of liquid water drops that have diameters greater than that of drizzle.

rainbow — an arc of concentric colored bands that spans a section of the sky when rain is present and the sun is behind the observer's back.

Rain Gauge — an instrument designed to measure the amount of rain that falls during a given time interval.

relative humidity — the ratio of the amount of water vapor actually in the air compared to the amount of water vapor the air can hold at that particular temperature and pressure. The ratio of the air's actual vapor pressure to its saturation vapor pressure.

sea breeze — a coastal local wind that blows from the ocean onto the land. The leading edge of the breeze is called a sea breeze front.

sea level pressure — the atmospheric pressure at mean sea level.

severe thunderstorms — intense thunderstorms capable of producing heavy showers, flash floods, hail, strong and gusty surface winds, and tornadoes.

shower — intermittent precipitation from a cumuli form cloud, usually of short duration but often heavy.

sleet — a type of precipitation consisting of transparent pellets of ice .20 inches (5 mm) or less in diameter. Also known as ice pellets.

smog — air that has restricted visibility due to pollution, or pollution formed in the presence of sunlight — photochemical smog (originally smog meant a mixture of smoke and fog).

snow — a solid form of precipitation composed of ice crystals in complex hexagonal forms.

snowflake — an aggregate of ice crystals that falls from a cloud.

snow flurries — light showers of snow that fall intermittently.

snow squall (shower) — an intermittent heavy shower of snow that greatly reduces visibility.

squall line — any non-frontal line or band of active thunderstorms.

standard atmospheric pressure — pressure of 1013.25 millibars (mb), 29.92 inches of mercury (Hg), 760 millimeters of mercury (mm), 14.7 pounds per square inch (lb/in), 101,325 pascals (Pa).

station pressure — the actual air pressure computed at the observing station.

supercell storm — an enormous severe thunderstorm whose updrafts and downdrafts are nearly in balance, allowing it to maintain itself for several hours. It can produce large hail and tornadoes.

temperature — the degree of hotness or coldness of a substance as measured by a thermometer. It is also a measure of the

average speed or kinetic energy of the atoms and molecules in a substance.

thermograph — an instrument that measures and records air temperature.

thermometer — an instrument for measuring temperature.

thunder — the sound created by rapidly expanding gases along the channel of a lightning discharge.

thunderstorm — a local storm produced by cumulonimbus clouds and is always accompanied by lightning and thunder.

tornado — an intense, rotating column of air that protrudes from a cumulonimbus cloud in the shape of a funnel or a rope and touches the ground.

tornado outbreak — a series of tornadoes that form within a particular region that may include several states. Often associated with widespread damage and destruction.

tornado warning — a warning issued when a tornado has actually been observed either visually or on a radar screen.

tornado watch — a forecast issued to alert the public that tornadoes may develop within a specified area.

trace (of precipitation) — an amount of precipitation less than 0.01 inch (0.025 cm).

visibility — the distance an observer can see and identify prominent objects.

warm front — a front that moves in such a way that warm air replaces cold air.

wet-bulb temperature — the lowest temperature that can be obtained by evaporating water into the air.

wind — air in motion relative to the earth's surface.

wind-chill factor — the cooling effect of any combination of temperature and wind, expressed as the loss of body heat. Also called **wind-chill index**.

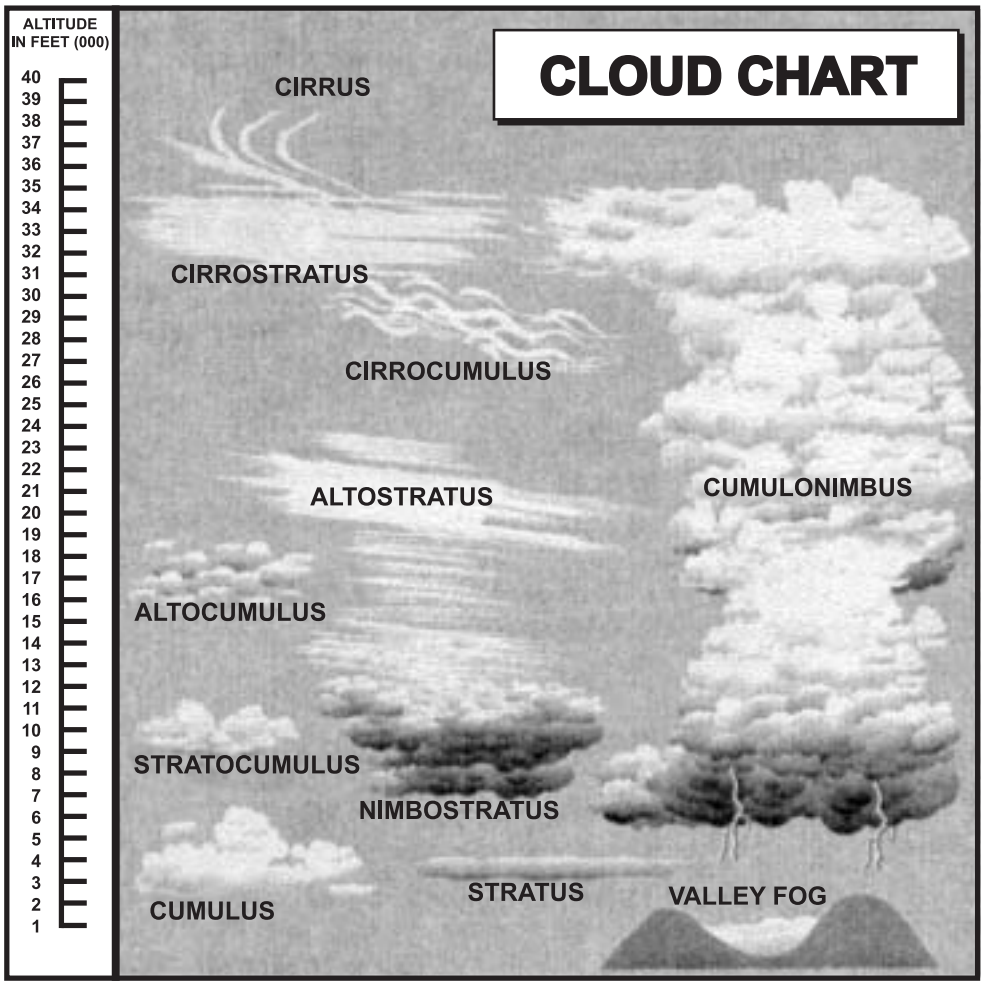
wind direction — the direction from which the wind is blowing.

wind vane — an instrument used to indicate wind direction.

winter solstice — approximately December 22 in the Northern hemisphere when the sun is lowest in the sky and directly overhead at latitude 23.5° S, the Tropic of Capricorn.

Cloud Classification Chart

Clouds can float from a few feet above the earth (fog) all the way up to 40,000 feet and higher. There are 11 different classes of clouds. As the following chart illustrates, you can distinguish clouds based on their altitude and shape.



❒ Care

Keep the weather station's indoor components dry; if they get wet, wipe them dry immediately. Use and store the weather station's indoor components only in normal temperature environments. Handle the weather station carefully; do not drop it. Keep the weather station away from dust and dirt, and wipe it with a damp cloth occasionally to keep it looking new.

Modifying or tampering with the weather station's internal components can cause a malfunction and might invalidate its warranty and void your FCC authorization to operate it. If your weather station is not performing as it should, take it to your local RadioShack store for assistance.

RESETTING THE MONITOR

Caution: Resetting the monitor also clears all data stored in the monitor's memory.

If the monitor's display locks up or the monitor does not work properly or is receiving interference, use a pointed object such as a straightened paper clip to press and release the **RESET** hole inside the monitor's battery compartment. All display segments appear briefly, then the default time and date (12:00 and 1/1) appear.

Note: Set the correct date, time, and sea level barometric pressure after you reset the monitor.

❒ Specifications

Temperature

Operating Measurement:

- Indoor ..... 23° to 122°F (–5° to 50°C)
- Outdoor ..... –4° to 140°F (–20° to 60°C)

Indoor Measurement Accuracy:

- Range: 23° to 32°F (–5° to 0°C) ..... ±4°F (±2°C)
- Range: >32° to 104°F (0° to 40°C) ..... ±2°F (±1°C)
- Range: >104° to 122°F (40° to 50°C) ..... ±4°F (±2°C)

Outdoor Measurement Accuracy:

- Range: –4° to <32°F (–20° to 0°C) ..... ±4°F (±2°C)
- Range: >32° to 104°F (0° to 40°C) ..... ±2°F (±1°C)
- Range: >104° to 122°F (>40° to 50°C) ..... ±4°F (±2°C)
- Range: >122° to 140°F (>50° to 60°C) ..... ±6°F (±3°C)
- Resolution (Indoor and Outdoor) ..... 0.2°F (0.1°C)

Sampling Cycle Frequency:

- Indoor ..... 38 Seconds
- Outdoor ..... 37 Seconds

Resolution (Indoor and Outdoor) ..... 0.2 F (0.1 C)

Relative Humidity

Operating Measurement ..... 25–90% RH

Accuracy:

Indoor Range: 40–80% ..... ±5%

Outdoor Range: 25–90% ..... ±7%

Resolution (Indoor and Outdoor) 1%

Sampling Cycle Frequency

Indoor ..... 38 Seconds

Outdoor ..... 37 Seconds

Dew Point Temperature

Temperature Operating Range:

Indoor ..... 14° to 140°F (–10° to 60°C)

Outdoor ..... 14° or 140°F (–10° to 60°C)

Measurement Accuracy (Indoor and Outdoor):

Conditions: 25–90% RH: 14° to 104°F (–10° to 40°C) ..... ±18°F (±9°C)

Resolution (Indoor and Outdoor) ..... 2°F (1°C)

Sampling Cycle Frequency:

Indoor ..... 38 Seconds

Outdoor ..... 37 Seconds

Wind Speed

Operating Measurement ..... 0–125.3 mph (0–56 m/s)

Measurement Accuracy:

Range: 2 –10 m/s: 32° to 104°F (0° to 40°C) ..... ±1 m/s

Other temperature ranges ..... ±3 m/s

Resolution ..... 0.2 m/s (0.4 mph)

Sampling Cycle Frequency:

Gust Wind Mode ..... 5 Seconds

Average Wind Mode ..... 1 Minute

Wind Direction

Operating Measurement ..... 0° to 359° (Degrees)
0° to 350° (Compass Direction)

Measurement Accuracy:

Range: 0°–347° ..... ±8°

Range: 347°–359° ..... ±18°

Resolution ..... 1° (Degrees)
10° (Compass Direction)

Wind Chill Temperature

Measurement Display Range ..... –146° to 158°F (–99° to 70°C)

Accuracy and Range: 2–56 m/s ..... ±16°F (±8°C)

Resolution ..... 2°F (1°C)

Rainfall

Daily and Cumulative Measurement Display Range ..... 0–394 in (0–9999 mm)

Rainfall Rate Measurement Display Range ..... 0–39.32 in/hr (0–998 mm/hr)

Daily Rainfall Accuracy:

Range: <.6 in (15 mm) ..... ±0.04% in (1 mm) ±1 unit

Range: 0.6–394 in (15–9999 mm) ..... ±5% ±1 unit

Cumulative Rainfall Accuracy:

Range: <.8 in (20 mm) ..... ±.04 in (1 mm) ±1 unit

Range: .8 to 394 in (20 to 9999 mm) ..... ±5% ±1 unit

Rainfall Rate Accuracy:

Range: <.6 in/hr (15 mm/hr) ..... ±.04 in/hr (±1%)

Range: .6 to 39.32 in/hr (15 to 998 mm/hr) ..... +7% ±1 unit

Daily and Cumulative Resolution ..... .04 in (1 mm)

Rainfall Rate Resolution ..... .04 in/hr (1 mm/hr)

Daily Sampling Cycle Frequency ..... 24 Hours

Rainfall Rate Sampling Cycle Frequency ..... Varies Based on Rainfall Frequency

Cumulative Sampling Cycle Frequency ..... Varies Based on Rainfall Frequency

Barometric Pressure

Display Range 600mb–1050mb

Accuracy ..... ± 10mb

General

Display ..... Liquid Crystal (LCD)

Clock Accuracy ..... ±0.5 seconds/day

Power Requirement ..... 12V DC

Battery Life (Alkaline) ..... About 1 Week

Monitor Dimensions (HWD) ..... $8^{1}/_{16} \times 5^{1}/_{2} \times 1\ ^{9}/_{16}$ in ($204 \times 139 \times 39$ mm)

Weight:

Monitor (without batteries) ..... 17.81 oz (505 g)

Specifications are typical; individual units might vary. Specifications are subject to change and improvement without notice.

Limited One-Year Warranty

This product is warranted by RadioShack against manufacturing defects in material and workmanship under normal use for one (1) year from the date of purchase from RadioShack company-owned stores and authorized RadioShack franchisees and dealers. EXCEPT AS PROVIDED HEREIN, RadioShack MAKES NO EXPRESS WARRANTIES AND ANY IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE DURATION OF THE WRITTEN LIMITED WARRANTIES CONTAINED HEREIN. EXCEPT AS PROVIDED HEREIN, RadioShack SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO CUSTOMER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS OR DAMAGE CAUSED DIRECTLY OR INDIRECTLY BY USE OR PERFORMANCE OF THE PRODUCT OR ARISING OUT OF ANY BREACH OF THIS WARRANTY, INCLUDING, BUT NOT LIMITED TO, ANY DAMAGES RESULTING FROM INCONVENIENCE, LOSS OF TIME, DATA, PROPERTY, REVENUE, OR PROFIT OR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, EVEN IF RadioShack HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

In the event of a product defect during the warranty period, take the product and the RadioShack sales receipt as proof of purchase date to any RadioShack store. RadioShack will, at its option, unless otherwise provided by law: (a) correct the defect by product repair without charge for parts and labor; (b) replace the product with one of the same or similar design; or (c) refund the purchase price. All replaced parts and products, and products on which a refund is made, become the property of RadioShack. New or reconditioned parts and products may be used in the performance of warranty service. Repaired or replaced parts and products are warranted for the remainder of the original warranty period. You will be charged for repair or replacement of the product made after the expiration of the warranty period.

This warranty does not cover: (a) damage or failure caused by or attributable to acts of God, abuse, accident, misuse, improper or abnormal usage, failure to follow instructions, improper installation or maintenance, alteration, lightning or other incidence of excess voltage or current; (b) any repairs other than those provided by a RadioShack Authorized Service Facility; (c) consumables such as fuses or batteries; (d) cosmetic damage; (e) transportation, shipping or insurance costs; or (f) costs of product removal, installation, set-up service adjustment or reinstallation.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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