
Ambient Weather WR-299 Emergency Solar Hand Crank Radio, Flashlight with AM/FM/NOAA Weather Band, Weather Alert and Smart Phone Charger User Manual



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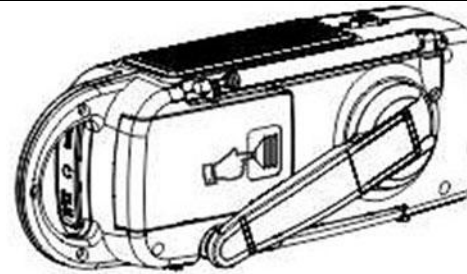
1. Introduction

Thank you for your purchase of the Ambient Weather WR-299 Emergency Solar Hand Crank Radio. To download the latest full size manual (for easy viewing) and additional troubleshooting tips, please visit: <http://ambientweather.wikispaces.com/wr299>

2. Quick Start Guide

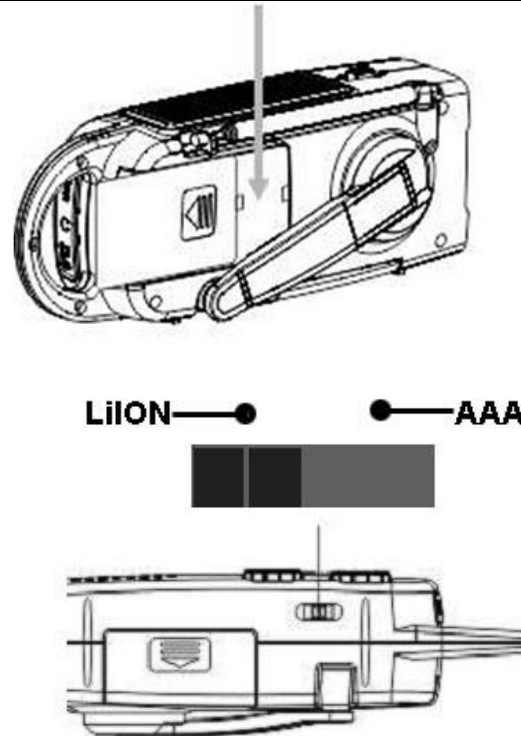
Insert the rechargeable battery before operation.

If the battery is already depleted, charge the battery before first use through the USB port on your computer or optional AC adaptor.



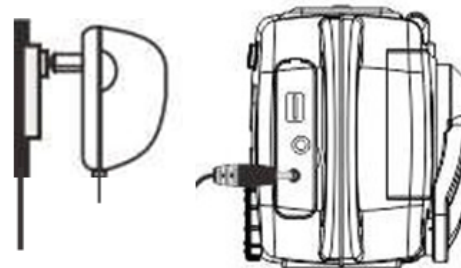
If the radio does not operate during normal operation:

1. Reset the radio by removing and re-inserting the rechargeable battery.
2. Make sure the battery switch is in the LiIon battery position.



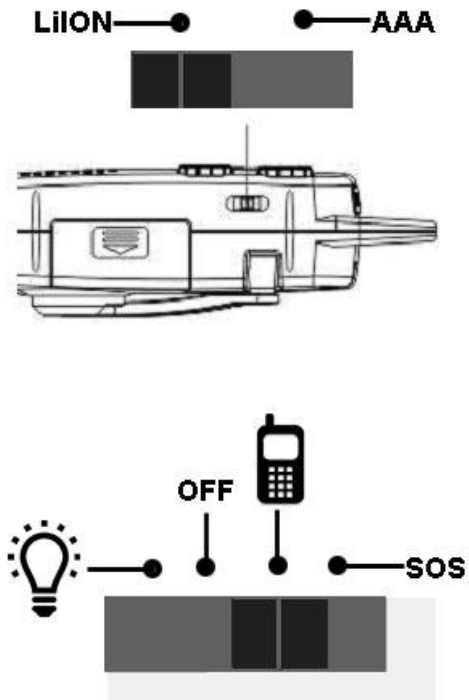
Maintenance:

1. Disconnect the radio from AC power or the computer USB port when you are done charging.
2. Periodically charge the radio every few weeks. This will extend the battery life and provide a fully charged radio when an emergency occurs. The solar collector will not fully charge the battery.
3. Remove, inspect and clean the radio battery contacts every few months with a cloth. Inspect the battery for corrosion or leakage.

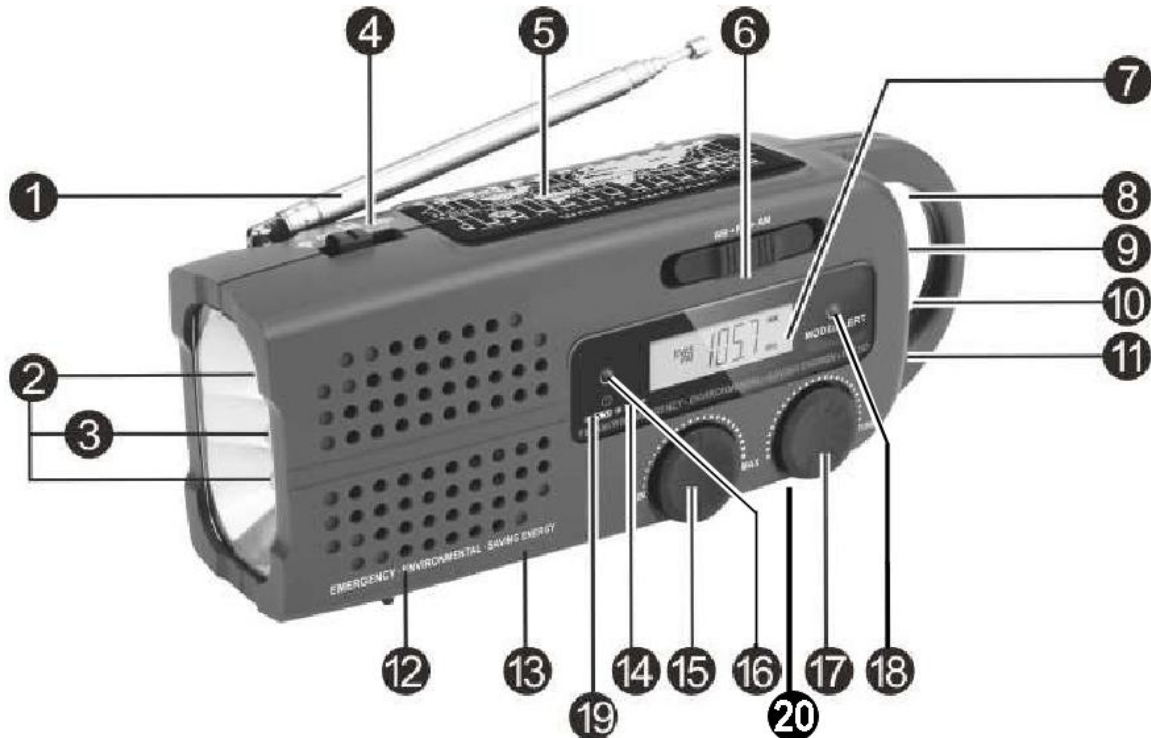


Charging Smart Phone or PDA:

1. Place the battery switch is in the LiIon position. The AAA batteries do not provide sufficient current to charge a smart phone or PDA.
2. Place the multi-function switch in the cell phone position.



3. Controls




No	Description	No	Description
1	Telescoping antenna	11	Power Input Port (to computer, optional AC adaptor, DC converter, or external solar panel)
2	Flashlight LED (white)	12	Hand Crank (on back)
3	Alarm LED (red)	13	AAA battery compartment (on bottom)
4	Multi-function switch	14	Tuner indicating light
5	Solar Panel	15	Volume adjustment knob
6	AM/FM/WB switch	16	ON / OFF Power button 
7	Tuner display	17	Tuning knob
8	Clip	18	Weather Alert Mode button
9	USB Output Power Port (to smart phone or PDA)	19	Charging indicator light
10	Headphone Jack	20	Rechargeable battery compartment (on back)

Figure 1

4. Cables

The WR-299 includes a power input cable that connects to USB power (from a computer or optional AC adapter, DC converter, or external solar panel).



Figure 2

5. Warnings



Lithium Battery Safety Instructions

- Charge batteries on a fireproof surface away from flammable items or liquids.
- Do not burn or bury batteries. Do not puncture or crush. Do not disassemble. Recycle Lithium batteries. Do not dispose of in the trash.
- If the electrolyte in the smarts should get on your skin, thoroughly wash with soap and water. If in the eyes, rinse thoroughly with cool water. Immediately seek medical attention.



Hand Crank Warning

To prevent overheating of the dynamo hand crank and permanent damage, do not crank faster than approximately two revolutions per second. Do not crank continuously for more than two minutes. After two minutes, allow two minutes of rest before cranking again.



Smart Phone Charging Feature

The smart phone charging feature is intended to make brief calls. It is not intended to serve as a normal smart phone charging device, due to the limited battery capacity.

Before using this product, please read the following warning and cautions:

1. Read these instructions – All the safety and operating instructions should be read before the unit is operated.
2. Keep these instructions – The safety and operating instructions should be kept for future reference.
3. Heed all warnings – All warnings on the device and in the operating instructions should be adhered to.
4. Follow all instructions – All operation and use instructions should be followed
5. Do not use this item near water – The device should not be used near water; for example, near a bath tub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool. Unplug immediately if liquid has been spilled or any object has fallen into the unit.
6. Clean only with dry cloth – The device should be cleaned only as recommended by the manufacturer.
7. Do not install near any heat sources such as radiators, heat registers, stoves, or other device (including amplifiers) that produce heat.
8. Do not place near a fire. The battery can explode.
9. Only use attachments / accessories recommended by the manufacturer.
10. Power Sources – The device should be connected to a power supply only of the type described in the operating instructions or as marked on the device. Do not overload wall outlet.
11. Do not attempt to dismantle, open or repair this product yourself. If a fault occurs, seek advice from Ambient Weather support only.
12. Only operate within specified temperature range (32 °F to 131 °F).

13. Do not burn or bury batteries. Do not puncture or crush. Do not disassemble. Recycle batteries. Do not dispose of in the trash.
14. If the electrolyte in the cells should get on your skin, thoroughly wash with soap and water. If in the eyes, rinse thoroughly with cool water. Immediately seek medical attention.
15. Charge batteries on a fireproof surface away from flammable items or liquids.
16. This item is water resistant but not waterproof.

6. Features

The WR-299 includes the following features:

- Super bright 3-LED flashlight
- AM/FM with Weather Band Feature
- Emergency smart phone / PDA charger
- Audio output (headphones)

7. Power Sources

The WR-299 battery can be powered from the following sources:

- DC power from a USB power source, such as a computer
- AC power by adding a USB to AC adaptor (optional)
- DC car charger by adding a USB to DC car adaptor or external 5V solar panel (optional)
- Solar power
- Hand crank power

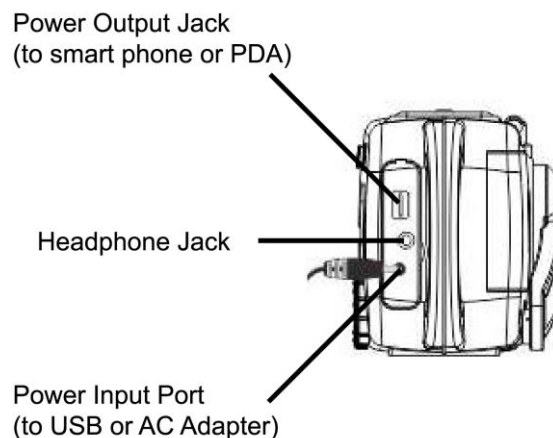


Figure 3

7.1 Battery Sources

There are two battery sources:

1. Rechargeable LiIon battery, which is the primary source of energy
2. 3 x AAA (non rechargeable) batteries, which are the back up source of energy.

7.1.1 LiIon Battery

Insert the rechargeable battery into the battery compartment, as shown in Figure 4. Replace the battery cover.

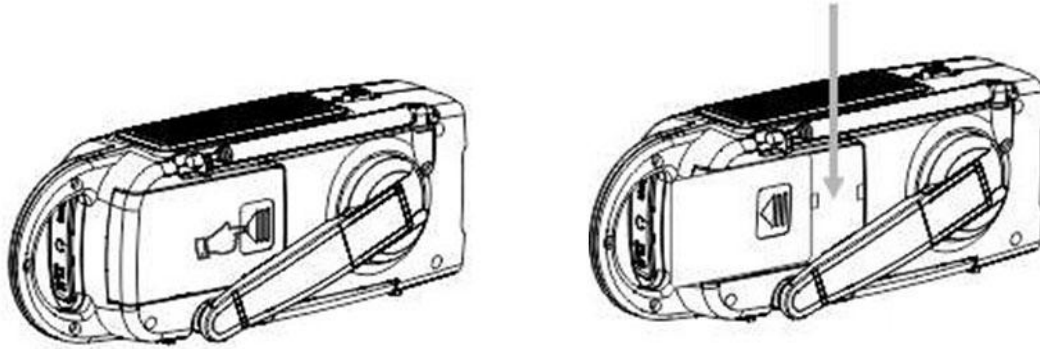
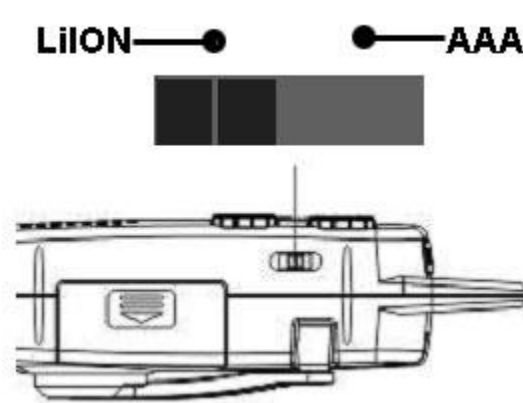
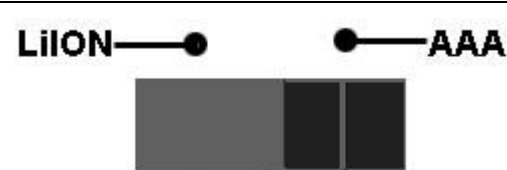


Figure 4

<p>Switch the battery switch to LiION to use the rechargeable battery source.</p>	
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7.1.2 AAA Batteries

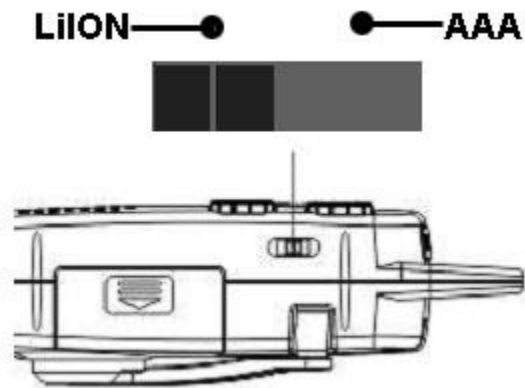
Insert the 3 x AAA batteries into the battery compartment, observing the property battery polarity.. Replace the battery cover.

<p>Switch the battery switch to AAA to use the non-rechargeable battery AAA batteries.</p>	
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7.2 Power Input (charging the radio from an external power source)

Prior to using the WR-299, we recommend you charge the rechargeable battery through the Power Input Port (Figure 3) using a computer USB port or optional AC adaptor. The WR-299 takes about two hours to fully charge from a drained battery.

Switch the battery switch to **LiION** to charge the rechargeable battery source.



Lift the rubber tab on the back of the WR-299 to expose the power port.

Connect the DC power input cable (**Figure 2**) to the input power port, and the other end to the USB power source. The red battery charge indicator light will illuminate when charging. Continue to charge the WR-299 for several hours.

When fully charged, the red battery charge indicator will turn off. The WR-299 is now ready for use.

NOTE: Use a 5.0V USB power source (from a computer or appropriate AC or DC adaptor). Over-voltage may result in damaging the WR-299.

Order the WR-AC2, WR-DC1 and WR-SOLAR-BAG from Ambient Weather (optional):



Optional WR-AC2 from Ambient Weather




Optional WR-DC1 from Ambient Weather



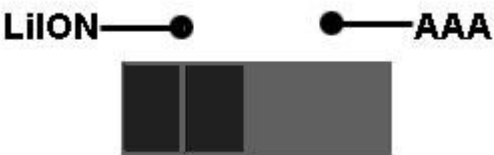
Optional WR-SOLAR-BAG from Ambient Weather
Figure 5

7.3 Solar Power

<p>Place the battery power switch in the LiION position to charge the rechargeable battery.</p>	 <p>The diagram shows a battery power switch with two positions: 'LiION' on the left and 'AAA' on the right. Below the switch is a battery icon with three segments, the first two of which are dark, indicating a partially charged battery.</p>
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Place the WR-299 in direct (or indirect) sunlight with the solar panel facing upwards (Figure 1). The red battery charging light will illuminate when charging.

7.4 Hand Crank Power

<p>Place the battery power switch in the LiION position to charge the rechargeable battery.</p>	 <p>The diagram shows a battery power switch with two positions: 'LiION' on the left and 'AAA' on the right. Below the switch is a battery icon with three segments, the first two of which are dark, indicating a partially charged battery.</p>
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To operate the hand crank, perform the following:

1. Lift the hand crank from the cradle, as shown in Figure 6.
2. Turn the hand crank either clockwise or counterclockwise at about two cranks per second for two minutes to activate the internal battery for initial use, or when the unit has not been used for more than 60 days. The red battery charging light illuminates when charging, as shown in Figure 1.

Hand Crank Warning

To prevent overheating of the dynamo hand crank and permanent damage, do not crank faster than approximately two revolutions per second. Do not crank continuously for more than two minutes. After two minutes, allow two minutes of rest before cranking again.

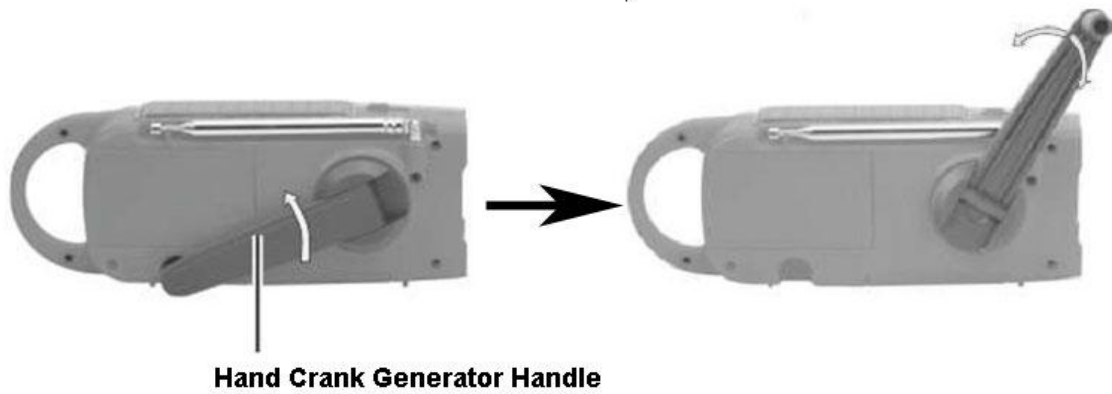
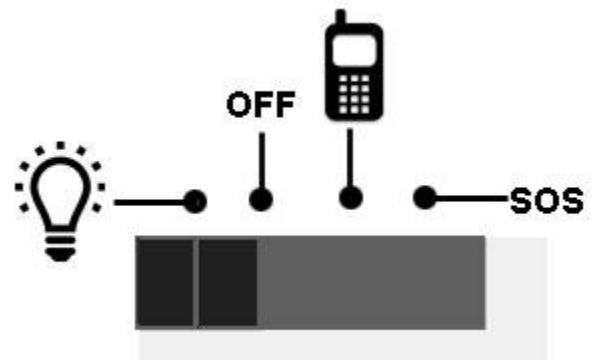


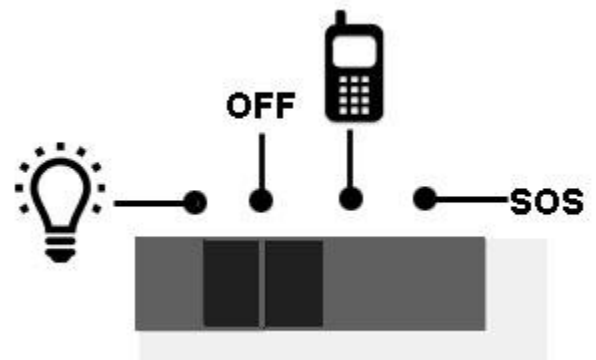
Figure 6


8. Operation

8.1 Flashlight Operation

<p>Place the multi-function switch in the flashlight position to turn ON and OFF position to turn off.</p>	
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8.2 Radio Operation

<p>For best results, place the multi-function switch to the OFF position while listening to the radio.</p> <p>Significant static is present during cell phone charging operation.</p>	
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- **POWER.** Press the power button  (Figure 1, reference 16) to turn on the radio. Press the power button again to turn off the radio. The time will be displayed.
- **MODE SWITCH.** Switches the radio band between AM, FM, weather band (Figure 1,

- reference 6).
- **ALERT BUTTON.** Activate the Weather Alert mode and the radio will remain silent, unless there is a weather alert in your area (Figure 1, reference 18).
TUNE. Rotate the TUNE knob to adjust the AM, FM or weather band (Figure 1, reference 18).

8.2.1 Weather Band Tuning

There are seven distinct weather channels. The frequencies are as follows:

Channel	Frequency (MHz)
1	162.400
2	162.425
3	162.450
4	162.475
5	162.500
6	162.525
7	162.550

For a complete list of weather radio broadcasting stations, please visit the National Weather Service website:

www.nws.noaa.gov/nwr/indexnw.htm


Our recommendation is to tune to the station with the best reception using the tuning knob. You will hear the “voice of the National Weather Service”, and automated voice that provides forecast information, weather statements, watches and warnings.

8.3 Weather Alert Mode

Press the **MODE/ALERT** button to enter the weather alert mode. **ALE** will be displayed on the screen, and the icon **EWS** will flash. In addition, the Tune LED will flash while scanning the 7 weather band channels. If the TUNE LED does not flash, you do not have reception in your area.


The radio will silence (standby) in the alert mode. The radio will remain in standby mode until there is a weather statement, watch or warning.

To verify you have reception in your area, the National Weather Service (NWS) normally run tests each Wednesday between 10 a.m. and noon local time. Tests may occur at other days and times when there is a threat of severe weather in the listening area or for other reasons.

When a weather alert occurs, the radio will sound. Press the ON / OFF Power button  to disable the weather alert.

NOTE: The weather alert mode consumes a significant amount of power because it is constantly scanning for the emergency 1050 Hz tone from the National Weather Service. We recommend connecting the power input to a USB computer port or the USB to AC converter for continuous alert operation. Otherwise, you must rely on hand crank power in this mode when no power is available.

8.4 Setting the Time

Turn the power button  OFF to set the time. The default time will be displayed.

Press and Hold the **MODE/ALERT** button until the hour flashes. Rotate the **TUNE** knob up or down to adjust the hour of the day. Make note of the AM icon. Press the **MODE/ALERT** button again (do not hold), and the minute flashes. Rotate the **TUNE** knob up or down to adjust the minute. Press the **MODE/ALERT** button again to exit the time set mode.

8.5 Battery Status Indicator

Reference 7. The battery status indicator is shown in the upper right hand corner of the display.

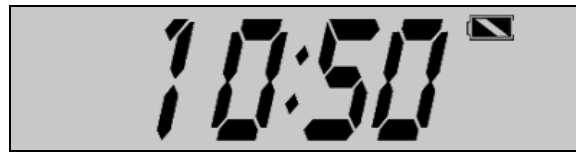






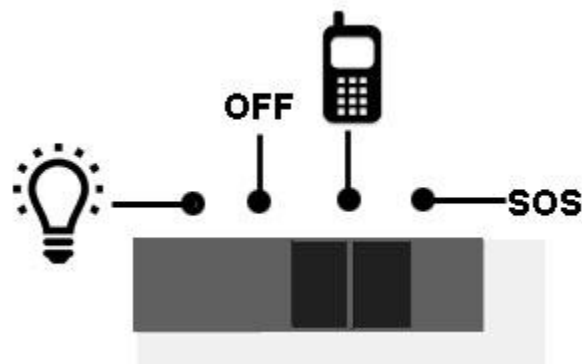
Figure 7

Battery Status	Battery Charge Indicator
Battery Full	
75-100% Full	 Flashing
50% or less	
Charging	 Flashing

8.6 Smart phone and PDA Operation

Place the multi-function switch to the **cell phone** position while charging your phone or PDA.

Note that significant radio static is present during cell phone charging operation.



Because smart phone batteries vary in their current ratings, we cannot specify charging rates or usage time. 10 to 15 minutes of cranking may result in 1 or more minute of talk-time, but your results may vary.

NOTE: Charging a smart phone through the Phone Charger Port is intended for emergency purpose only. It is not intended for recharging fully a discharged smart phone battery. Smart phone battery capacity significantly exceeds the battery capacity of the WR-299. Therefore, a fully charged WR-299 will only partially charge a smart phone or PDA. After the battery stops charging the device, begin cranking if a DC power source is not available to continue recharging the smart phone.

To charge the smart phone or PDA:

1. Lift the rubber tab on the back of the WR-299 to expose the connectors, as shown in Figure 3.
2. Plug the smart phone charging cable into the WR-299 USB power output port.
NOTE: Most smart phones or PDAs include a USB cable to connect to a computer. Use this cable for connecting to the WR-299.
3. If the phone does not begin charging, begin cranking. When charging a smart phone via the smart phone charger, it is important to turn the crank at least two revolutions per second, or until you see red charging LED turn on. This is an indication that the phone is receiving enough power from the WR-299. Continue to crank at this rate until you are satisfied that an appropriate level of charge has been received by your smart phone.

When fully charged, the charging LED will turn off.

NOTE: You may receive a charging compatibility error on your smart phone, but your device may still charge and it will not harm your device.

If your smart phone or PDA did not include a USB cable, order the WR-005 from Ambient Weather (optional):

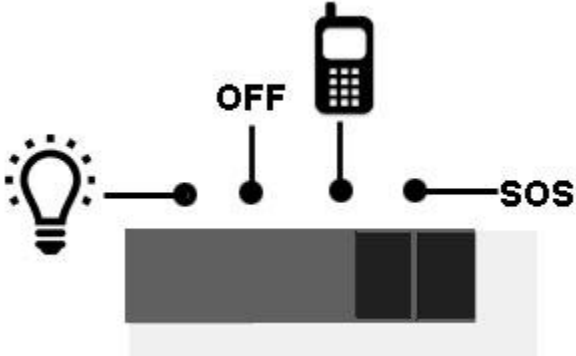


**Optional 10-in-1 USB Charging Cable from Ambient Weather
Figure 8**

8.7 SOS

Siren Warning

The siren is very loud. Guard your ears against hearing damage.

<p>Place the multi-function switch to the SOS position.</p> <p>The alarm will sound and the RED LED will flash.</p>	
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8.8 Audio Output / Head Phones

The WR-299 includes an audio output jack. This allows you to listen with headphones or connect to an auxiliary input source, such as an amplifier.

Lift the rubber tab on the back of the WR-299 to expose the connectors, as shown in Figure 3. Plug your earbuds into the headphone jack.

CAUTION: Guard your ears against hearing damage. When listening with headphones, start at the lowest volume and gradually increase until you can hear it comfortably and clearly.

Read this Important Information before Using Your Ear buds:

- Avoid extended play at very high volume as it may impair your hearing.
- If you experience ringing in your ears, reduce the volume or shut off the unit.
- Keep the volume at a reasonable level even if your headset is an open-air type designed to allow you to hear outside sounds.
- Excessively high volume may still block outside sounds.

8.9 Antenna and Radio Reception

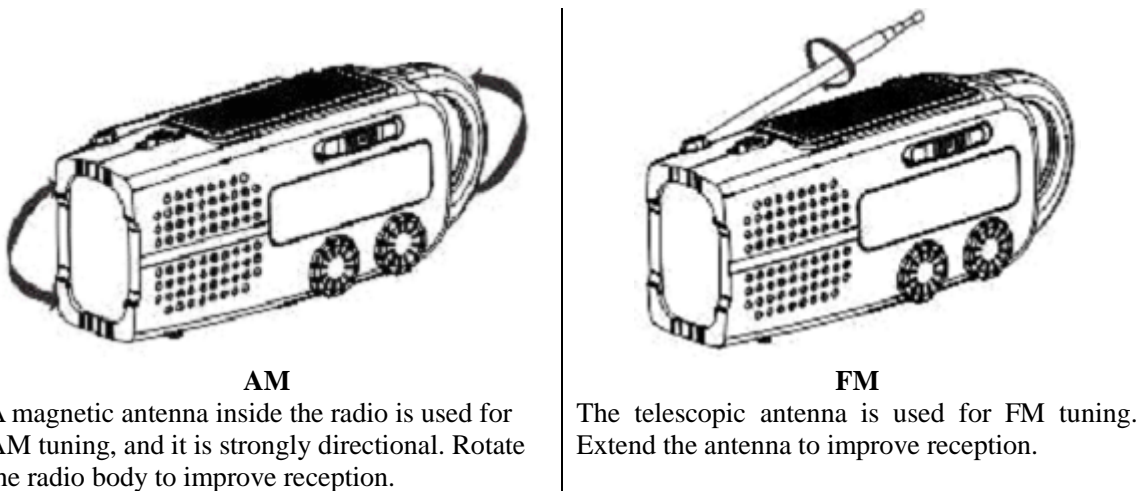


Figure 9

9. Care and Maintenance

9.1 Battery Maintenance

To maintain the battery and extend battery life, periodically charge through the power port every few weeks. Disconnect the power port from AC power or the computer when charging is complete.

9.2 General Care and Maintenance

- Do not tamper with the internal components of the unit.
- Clean your unit with a damp (never wet) cloth. Solvent or detergent should never be used.
- Avoid leaving your unit in direct sunlight or in hot, humid or dusty places.
- Keep your unit away from heating appliances and sources of electrical noise such as fluorescent lamps or motors

CAUTION: Never allow any water to enter the unit while cleaning.

10. Specifications

Dimensions: 163 x 52 x 62mm (6.5 x 2.25 x 2.0 in.)

Weight: Approximately 210g (0.46 lbs)

Radio Frequency Range: 520-1710 KHz AM; 87-108 MHz FM

WB (MHz): 1)162.400 2)162.425 3)162.450 4)162.475 5)162.500 6)162.525 7)162.550

Rechargeable Battery: 3.7V/1000mAh LiIon

Back Up Batteries: 3 x AAA

External Power: 5V/400mA

11. Troubleshooting Guide

If your question is not answered here, you can contact us as follows:

1. Email Support: support@ambientweather.com
2. Live Chat Support: www.ambientweather.com/chat.html (M-F 8am to 4pm Arizona Time)
3. Technical Support: 480-283-1644 (M-F 8am to 4pm Arizona Time)

Problem	Solution
The unit will not power up.	Fully charge the WR-299 through the power port. Reset the unit by removing and reinstalling the rechargeable battery. Make sure the battery switch is in the LiIon position.
Phone generates an error message when plugged into the WR-299.	A lower voltage output may result in error messages on the phone but should still charge the phone.
The Weather Band reception is poor.	<ul style="list-style-type: none"> • Weather band reception can be poor inside a metal building, structure or where electronic noise is present. Try moving outside to improve reception • Check local reception by driving to a different location and testing the weather band reception. • Radio reception is dramatically reduced when charging from USB. Disconnect AC power when listening to the radio.
The WR-299 will not fully charge my smart phone.	Charging a smart phone through the Phone Charger Jack is intended for emergency purpose only. It is not intended

Problem	Solution
	<p>for recharging fully a discharged battery. Smart phone battery capacity significantly exceeds the battery capacity of the WR-299.</p> <p>Therefore, a fully charged WR-299 will only partially charge a smart phone or PDA device. After the battery stops charging the device, disconnect the device and begin cranking if a DC power source is not available.</p>

12. Liability Disclaimer

- Please help in the preservation of the environment and return used batteries to an authorized depot.
- The electrical and electronic wastes contain hazardous substances. Disposal of electronic waste in wild country and/or in unauthorized grounds strongly damages the environment.
- Reading the “User manual” is highly recommended.
- The specifications of this product may change without prior notice.
- This product is not a toy. Keep out of the reach of children.
- No part of this manual may be reproduced without written authorization of the manufacturer. Ambient, LLC WILL NOT ASSUME LIABILITY FOR INCIDENTAL, CONSEQUENTIAL, PUNITIVE, OR OTHER SIMILAR DAMAGES ASSOCIATED WITH THE OPERATION OR MALFUNCTION OF THIS PRODUCT.

13. Warranty Information

Ambient, LLC provides a 1-year limited warranty on this product against manufacturing defects in materials and workmanship.

This limited warranty begins on the original date of purchase, is valid only on products purchased and only to the original purchaser of this product. To receive warranty service, the purchaser must contact Ambient, LLC for problem determination and service procedures.

Warranty service can only be performed by Ambient, LLC. The original dated bill of sale must be presented upon request as proof of purchase to Ambient, LLC.

Your Ambient, LLC warranty covers all defects in material and workmanship with the following specified exceptions: (1) damage caused by accident, unreasonable use or neglect (lack of reasonable and necessary maintenance); (2) damage resulting from failure to follow instructions contained in your owner’s manual; (3) damage resulting from the performance of repairs or alterations by someone other than an authorized Ambient, LLC authorized service center; (4) applications and uses that this product was not intended (5) the products inability to receive a radio signal due to any source of interference, metal obstructions or other reception issues.

This warranty covers only actual defects within the product itself, and does not cover the cost of installation or removal from a fixed installation, normal set-up or adjustments, claims based on misrepresentation by the seller or performance variations resulting from installation-related circumstances.

14. FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

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

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



15. Battery Recycle Statement

Recycle Rechargeable Batteries



Recycle your old rechargeable batteries at one of the many collection sites in the U.S. and Canada. To find the site nearest you, visit www.call2recycle.org or call toll-free 1-877-2-RECYCLE.