
Ambient Weather WR-112 ADVENTURER User Manual



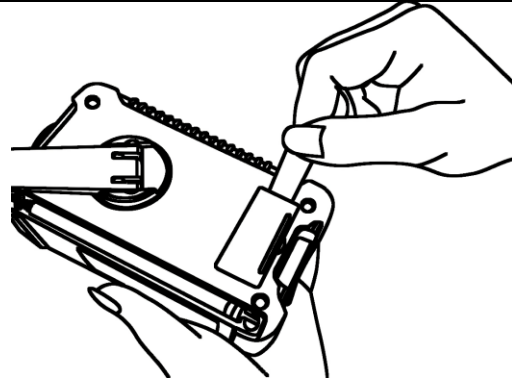
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1. Quick Start Guide

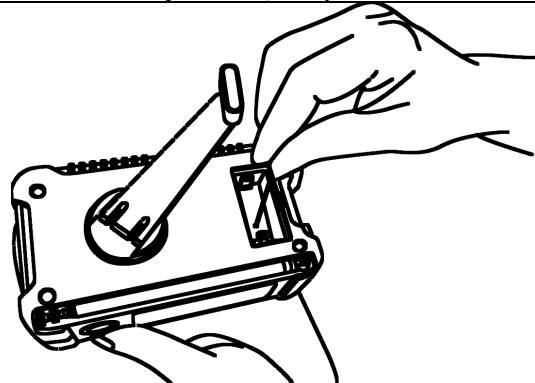
Pull the battery tab before operation.

If the battery is already depleted, charge the battery before first use.



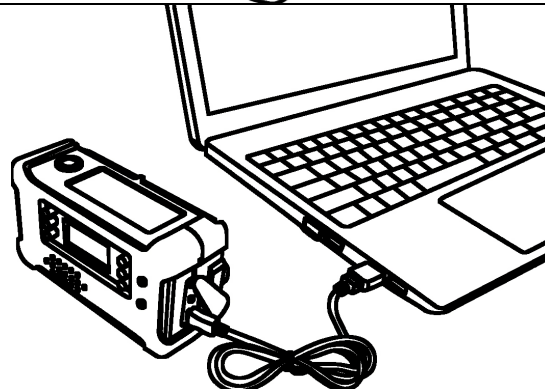
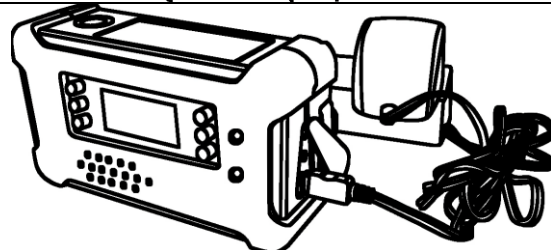
If the radio does not operate after pulling the battery tab or anytime during normal operation:

reset the radio by removing the battery and inserting an open ended paper clip into the reset hole. Replace the battery.




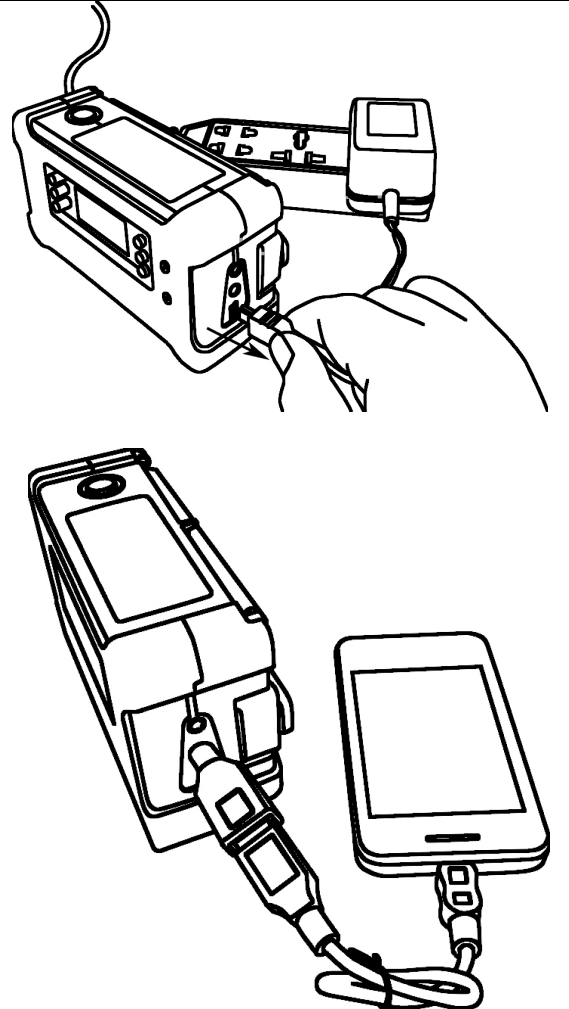
Maintenance:

1. Plug the radio into a power source (computer USB or AC) until fully charged. Disconnect after fully charged to extend the battery life. **Do not leave plugged into the charger indefinitely.**
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.
4. If the battery light rapidly flashes red and green, it is time to replace the battery.



Charging Smart Phone or PDA:

1. Disconnect from AC or USB power.
2. Press and hold the Power button  for 3 seconds until the **PHONE** charging icon is displayed on the screen.
3. Plug in your Smart Phone or PDA.



2. Introduction

Thank you for your purchase of the Ambient Weather WR-112 ADVENTURER Emergency Solar Hand Crank Radio, Flashlight with AM/FM/NOAA Weather Band, Certified Weather Alert and Smart Phone/PDA Charger. To download the latest full size manual (for easy viewing) and additional troubleshooting tips, please visit:

<http://ambientweather.wikispaces.com/wr112>



Figure 1



Figure 2

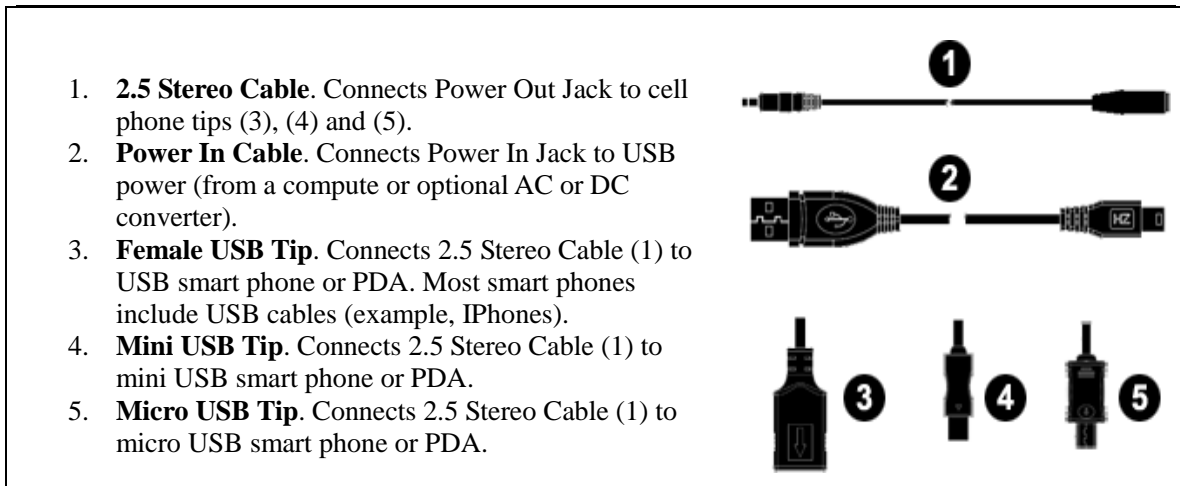


Figure 3

NOTE: The tip for the iPhone series is not included, but you can connect the iPhone USB cable that came with your iPhone directly into the WR-112 USB power output port.

If your smart phone included a USB cable, you can substitute this cable for the conversion cable and tips, and plug directly into the WR-112 USB power output port.

3. Warnings

When used in the directed manner, this unit has been designed and manufactured to ensure your personal safety. However, improper use can result in potential electrical shock or fire hazards. Please read all safety and operating instructions carefully before use, and keep these instructions handy for future reference. Take special note of all warnings listed in these instructions.

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. The battery can fail.
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. The battery can explode.
8. Do not place near a fire. The battery can explode.
9. Only use attachments / accessories recommended by the manufacturer. Always use an AC adapter rated at 5V / 500 mA. Failure to do so can damage the battery.
10. Refer all servicing to qualified service personnel. Servicing is required when the device has been damaged in any way, such as liquid has been spilled or the device has been exposed to rain or moisture, does not operate normally, or has been dropped.
11. This device shall not be exposed to dripping or splashing water and that no object filled with liquids such as vases shall be placed on the device.

12. Unplug immediately from AC power if liquid has been spilled or any object has fallen into the unit and disconnect the battery.
13. 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.
14. Danger of explosion if battery is incorrectly replaced. Replace only with the same battery type.
15. Do not attempt to dismantle, open or repair this product yourself. If a fault occurs, seek advice from Ambient Weather support only. Only the rechargeable battery can be replaced or serviced.
16. Only operate within specified temperature range (32 °F to 131 °F).



Lithium Battery Safety Instructions

- 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.
- Charge batteries on a fireproof surface away from flammable items or liquids.



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.

4. Features

The ADVENTURER includes the following features:

- Super bright 3 LED flashlight
- AM/FM with Weather Band Feature
- Weather Alert Feature (public alert certified)
- Emergency smart phone/PDA/USB charger
- Backlight digital display
- Clock
- Audio output (headphones)
- Siren
- SOS signal
- Light beacon with loss of power

5. Power Sources

The ADVENTURER 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 (optional).
- Solar power.
- Hand crank power.

5.1 Best Practices for Charging

We recommend periodically charging the radio completely through the ADVENTURER's USB port (from your computer or the optional AC adaptor or DC converter). Disconnect after fully charged to extend the battery life. Do not leave plugged into the charger indefinitely.

The solar collector will not completely charge your unit and is intended to extend the existing battery charge.

5.2 DC and AC Power

Prior to using the ADVENTURER, we recommend you fully charge the rechargeable battery through the USB Power Input (Figure 2).

Lift the rubber tab on the back of the ADVENTURER to expose the connectors, as shown in Figure 2. Connect the Power In Cable (Figure 3, Cable 2) from the Power Input jack on the radio and the USB Power source on your computer or optional AC or DC converter. The red battery charge indicator light will illuminate when charging. Continue to charge the ADVENTURER for several hours or until the charging light stops flashing. The ADVENTURER is now ready for use.

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

5.3 Solar Power

Place the ADVENTURER in direct (or indirect) sunlight with the solar panel facing upwards. The LED charging light will flash when there is sufficient solar energy to charge.

NOTE: If the display heats up outside the operational range, the display will fade.

NOTE: The solar collector will not completely charge the ADVENTURER and is intended to extend the existing battery charge. The solar collector efficiency is significantly impacted by direct vs. indirect sunlight, angle of the solar collector, angle of the sun and weather conditions, including your latitude, time of year (winter vs. summer), time of day, and cloud cover.

5.4 Hand Crank Power

To operate the hand crank, perform the following:

1. 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. After two minutes of cranking at two revolutions per second, wait two minutes to begin cranking again. This will extend the crank life.
2. For subsequent charges, turn the hand crank for one minute to produce 70 minutes of continuous light for the LED flashlight, or 16-20 minutes of continuous radio usage (subject to volume) or approximately 3-5 minutes of talk time on the smart phone (your results may vary due to phone variation).

5.5 Power Consumption

The ADVENTURER includes a large battery capacity (800 mAh) but different operational modes result in significantly varying power consumption requirements. Here is a general guide on power consumption, typical user operation and recommend power sources.

Mode	Typical User Operation	Power Consumption	Recommend Power Source
Flashlight	Emergency or remote use	Low	Solar, Hand Crank
AM/FM/Weather Band Radio	Emergency or remote use	Low	Solar, Hand Crank
Weather Alert	Continuous monitoring (1)	High	AC, USB (from computer)
Smart phone charging	Short term emergency use	High	Hand Crank, AC, USB (from computer)

(1) 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 fully charging the battery before using this feature.

6. Operation

6.1 Flashlight Operation

Turn the light on and off with the flashlight switch on the top of the unit (Figure 1).

6.2 Siren and SOS Operation

To sound the emergency siren with SOS light flasher, press and hold the flashlight switch for 3 seconds. To disable, press the flashlight switch again.

6.3 Power Outage Light Flasher

When plugged into AC power, in the event of a power outage, the flashlight will flash, providing a location beacon. To disable, press the flashlight switch.

6.4 Radio Operation

The ADVENTURER includes a digital LCD display (Figure 4) with backlighting, with the following push button controls:

- **POWER.** Turns on and off the radio. Transitions from clock display to radio tuner display.
- **MODE.** Switches the radio band between AM, FM, weather band, and weather band alert mode.
- **TUN+:** Adjusts the radio frequency up
- **TUN-:** Adjusts the radio frequency down
- **VOL+:** Adjusts the radio volume up
- **VOL-:** Adjusts the radio volume down

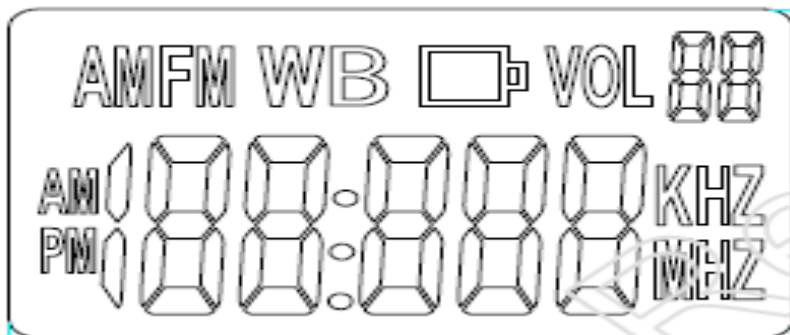


Figure 4

6.5 Time

When first powered up, the time will default to 12:00 AM.

1. **Set 12Hr/24Hr Mode.** Press and hold the **MODE** button for two seconds to enter the time setting mode. 12 Hr will begin flashing. Press the **TUN+** button to switch between 12 hour and 24 hour time mode. Press the **MODE** button to proceed to the next step.
2. **Set Hour.** Press the **TUN+** or **TUN-** to adjust the hour up or down. Hold the **TUN** button to change rapidly. Press the **MODE** button to proceed to the next step.
3. **Set Minute.** Press the **TUN+** or **TUN-** to adjust the minute up or down. Hold the **TUN** button to change rapidly. Press the **MODE** button to exit the time setting mode.

6.6 Radio Band Mode

NOTE: Radio reception is dramatically reduced when charging from USB. Disconnect USB power when listening to the radio.

Press the **POWER** button to turn the radio on and transition from the time mode.

The radio will default to **FM** band (or the last radio band since power up). Press the **MODE** button to change to the **AM** band. Press the **MODE** button to change to the Weather Band (**WB**). While displaying the Weather Band, press the **MODE** button again to change to Weather Band Alert mode (**ALT**).



Figure 5

NOTE: Radio interference will be present while charging the WR-112. For best reception, there is a telescoping antenna. Extend the antenna and change the position if the reception is weak.

6.6.1 AM/FM Radio Tuning

When the radio is turned on, press the **TUN+** button to increase the frequency and press the **TUN-** button to decrease the frequency.

To tune quickly, press and hold the **TUN** (+ or -) key for at least one second. When you let go, the radio will automatically tune to next radio station with sufficient reception.

6.6.2 Weather Band Tuning

There are seven distinct weather channels. The frequencies are 162.400 MHz, 162.425 MHz, 162.450 MHz, 162.475 MHz, 162.500 MHz, 162.525 MHz and 162.550 MHz.

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 **TUN+** button. You will hear the “voice of the National Weather Service”, and automated voice that provides forecast information, weather statements, watches and warnings.

6.6.3 Weather Alert Mode

You can silence the radio and enter the alert mode. The radio will remain in standby mode until there is a weather statement, watch or warning. To activate the Weather Alert Mode, tune to your local station as defined in the previous section.

Press and hold the **MODE** button until the **ALT** symbol is displayed.

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 and the weather alert light will flash on the front of the unit. Press the power button  to disable the weather alert.


NOTE: If battery power is low, the unit will exit the weather alert mode and enter the time display mode.

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 fully charging the battery before using this feature.

6.6.4 Smart Phone and PDA 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.

To charge the smart phone or music player device:

1. Disconnect the unit from AC or USB power (if it is connected).
2. Press and hold the Power button  for 3 seconds until the **PHONE** charging icon is displayed on the screen. This feature will turn off all radio modes to conserve power.
3. Lift the rubber tab on the back of the WR-112 to expose the connectors, as shown in Figure 2.
4. Plug the smart phone charging cable (Figure 2, A.2) into the ADVENTURER charge output (Figure 2). Connect the appropriate smart phone tip (Figure 3, Tips 4 and 5) into the other end of the smart phone charging cable (Figure 3, Cable 1).
5. Plug other end of the smart phone tip into the smart phone's charging connector.
In addition to the smart phone tips, a USB female connector (Figure 3, Tip 3) is available if your smart phone connector is not supported. If this is the case, contact your smart phone manufacturer for the appropriate USB to smart phone charger conversion cable. Connect the female USB tip (Figure 3, Tip 3) into the other end of the smart phone charging cable (Figure 3, Cable 1), and connect the female USB tip into the smart phone's conversion cable.
6. If the phone does not begin charging, disconnect the phone and begin cranking. After two minutes of cranking at two revolutions per second, wait two minutes to begin cranking again. This will extend the crank life.

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.

6.7 Low Battery Indication

When the battery voltage is less than 3.0V, the low battery indication will be displayed:



The radio will not operate in a low battery condition. If the battery drains quickly, or the charging LED flashes rapidly from red to green, it is time to replace your battery (typically 1-3 years of operation).

6.8 Audio Output

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

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 Earbuds:

- 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. Please note that excessively high volume may still block outside sounds.

7. Resetting the Unit

If the unit experiences a low voltage, it is possible that the internal micro-controller may lock up and the unit will not respond to any commands from the panel controls. In this event, use a straightened paper clip, toothpick or similar objects to press the RESET button located underneath the battery in the battery compartment. The reset operation clears the system memory to factory default, and all of your previous settings will be erased.

CAUTION: Do not use a sharp or pointed object to press the reset button. It may damage the reset switch inside the unit.

8. Battery Maintenance

- Periodically charge the battery to extend battery life
- Do not leave the radio plugged into the charger indefinitely
- Switch off power after radio use to extend battery life
- Remove the battery or reinsert the plastic battery pull tab for extended storage
- Remove and inspect the battery and battery terminals for corrosion. If corrosion is present, clean with a damp cloth.

The battery is a rechargeable 3.7V / 800 mAh lithium ion battery. To replace the battery, open the battery compartment cover (Figure 2) by squeezing the tab.

NOTE: Only replace with rechargeable 3.7V lithium battery (LIR123A). Replacing the battery with a non-rechargeable battery may cause the battery to explode. Rechargeable 3.7V lithium batteries are available from Ambient Weather.

9. Specifications

Battery Power:

3.7V / 800 mAh lithium ion rechargeable battery (replaceable)

Working voltage: 3-5V

Radio Bands:

AM: 525 KHz to 1710 KHz

FM: 88 MHz to 108 MHz

WeatherBand: 162.400 to 162.550 MHz

Flashlight:

3-LED Flashlight

Size and Dimensions:

Dimensions: 5.5" x 3.0" x 2.0"

Weight: less than 0.5 lbs.

Temperature Range:

Working temperature range: 32 to 131 °F (0 to 55 °C)

Storage temperature range: 14 to 140 °F (-10 to 60 °C)

10. 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
Phone generates an error message when plugged into the ADVENTURER.	A lower voltage output may result in error messages on the phone but should still charge the phone.
My Ipad / iPhone does not display the charge signal.	<p>The output voltage of the ADVENTURER is lower than the operating voltage of the IPod / iPhone, and will not charge these devices until the battery is fully discharged.</p> <p>The device is only intended for emergency charges and not for topping off already charged devices.</p>
The ADVENTURER will no longer hold a charge.	<p>Remove the battery and inspect the battery and battery terminals of corrosion or debris.</p> <p>Replace the 3.7V lithium ion rechargeable battery (LIR123A). Typically, this battery will hold 2000 charge cycles.</p> <p>Important note: ALWAYS replace with rechargeable batteries, available from AmbientWeather.com.</p>
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 USB power when listening to the radio.
My smart phone connector is not supported. Where can I purchase the proper tip for my smart phone?	Contact Ambient Weather with your smart phone model and connector type. The connectors included cover about 95% of the smart phone market.

Problem	Solution
The ADVENTURER will not fully charge my smart phone.	<p>Charging a smart phone through the Phone Charger Jack is intended for emergency purpose only. It is not intended for recharging fully a discharged battery. Smart phone battery capacity significantly exceeds the battery capacity of the ADVENTURER.</p> <p>Therefore, a fully charged ADVENTURER 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>
I never receive weather alerts.	<p>Verify you receive the test alert from the National Weather Service on Wednesday as described in the weather alert section of this manual.</p> <p>Verify you have tuned the weather band to your local area and you have reception before activating the Weather Alert feature.</p> <p>Make sure you have good weather radio reception. If your radio reception is poor, you will not receive any alerts.</p>
How can I receive warnings only and not watches or statements?	Selective filtering of statements, watches and warnings is not possible. You will always receive all three levels.
The ADVENTURER is locked up and will not respond to commands. How do I reset it?	Remove the battery. Press the reset button inside the battery compartment with a paperclip. Reinstall the battery.
The red charging light does not illuminate during solar charging.	There is not enough solar energy to drive the red charging light.
The display fades when placed in direct sunlight.	If the display heats up outside the operational range, the display will fade. For solar charging, partial sunlight or shade is sufficient.
The ADVENTURER exits the alert mode and displays time.	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 power input to a USB computer port or the optional USB to AC converter for continuous alert operation (reference Section 11). Otherwise, you must rely on hand crank power in this mode.
The radio does not fully charge with the solar collector.	The solar collector will not completely charge the ADVENTURER and is intended to extend the existing battery charge. The solar collector efficiency is significantly impacted by direct vs. indirect sunlight, angle of the solar collector, angle of the sun and weather conditions, including your latitude, time of year (winter vs. summer), time of day, and cloud cover.

11. Accessories

The following software and hardware accessories are available for the ADVENTURER at www.AmbientWeather.com.

Accessory	Image	Description
Ambient Weather WR-AC1 UL Rated USB to AC Adaptor for Small Electronics Devices		AC power adaptor
Ambient Weather WR-DC1 USB to DC Converter for Small Electronic Devices		DC power adaptor
Ambient Weather WR-BATT 3.7V / 800 mAh Rechargeable Battery for Weather Alert Radios		Replaces rechargeable battery after end of life (LIR123A rechargeable).
Ambient Weather WR-POWER-KIT Emergency Power Kit		Includes AC adaptor, DC converter, USB to USB mini cable and spare battery.

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.