

C. CRANE

CC SOLAR OBSERVER



INSTRUCTION MANUAL

**PLEASE READ ALL THE INSTRUCTIONS
COMPLETELY BEFORE USE AND SAVE THIS MANUAL
FOR FUTURE REFERENCE**

Owners Record

CAUTION:

- Before turning the unit on, set your volume control to a low setting.
- Slowly increase the sound until you can hear it comfortably and clearly without distortion.
- Long-term exposure to loud sounds may cause hearing damage. It is best to avoid high volume levels when using headphones/earbuds, especially for extended periods.

For your future reference:

Serial No. (Found inside battery compartment): _____

Date of purchase / Name & address of dealer: _____

Unpacking

The box should contain the CC Solar Observer radio, a Radio-to-USB cell phone adapter, and this manual. If anything is missing or damaged please contact C. Crane immediately. We recommend you keep the box in the unlikely event your radio needs to be serviced.

Please read **IMPORTANT SAFETY INSTRUCTIONS** on **Page 4** before use. It is important to read and understand all instructions.

WARNING: To prevent fire or electric shock hazard do not expose this product to rain or moisture.



CAUTION: To reduce the risk of electric shock, do not remove the radio back. No user serviceable parts inside. Refer servicing to qualified service personnel.



THE LIGHTNING FLASH AND ARROWHEAD WITHIN THE TRIANGLE IS A WARNING SIGN ALERTING YOU OF "DANGEROUS VOLTAGE" INSIDE THE RADIO.



THE EXCLAMATION POINT WITHIN THE TRIANGLE IS A WARNING SIGN ALERTING YOU OF IMPORTANT INSTRUCTIONS ACCOMPANYING THIS RADIO.

PLEASE READ BEFORE USING THE RADIO

- The internal battery pack will need to be fully charged and fully depleted three consecutive times to build maximum battery life.
- If you plan to use the optional AC adapter for more than 12 hours, disconnect the internal battery pack to avoid overcharging it.
- If you need to use the phone charger port, do not connect the AC adapter at the same time to avoid damage to the AC adapter or cause phone battery discharge.
- We recommend the internal battery pack to be fully depleted and fully recharged every 6 months if the radio has not been used. This will help maintain optimal battery life.
- Keep these precautions and instructions where all who will use this radio will read them.





READ BEFORE OPERATING EQUIPMENT SAVE THESE INSTRUCTIONS



To prevent damage to your radio or possible injury to you or others, read these safety precautions and instructions entirely before applying power to the radio. Keep these precautions/instructions where all who use this radio will read them.

1) **COMMON CARE** ⚠

Check the radio and any accessories regularly. Do not use the radio if there is any sign of damage. Only operate in accordance with the instructions in this manual. Only use attachments or accessories specified by C. Crane.

Note: If the radio is unused for more than 6 months, we recommend winding the crank for at least 30 seconds to keep the battery healthy. Thereafter we recommend charging the battery fully before returning to storage.

2) **DISCONNECT THE RADIO IN CASE OF MALFUNCTION** ⚠

If you smell or notice smoke, disconnect the optional AC Adapter immediately, taking care to avoid burns. Please contact C. Crane for inspection and service before any future operation. Only use the AC-DC Adapter recommended with the unit and replace it if any wires become frayed or exposed. It should have an output of 5 Volts 300mA DC. Use only the recommended adapter. Otherwise it may damage the radio or cause a fire or electric shock.

3) **KEEP OUT OF REACH OF CHILDREN** ⚠

Dropping the radio can cause damage or injury. Keep the AC Adapter cord in a position so someone cannot trip and cause the radio to fall.

4) **KEEP AWAY FROM WATER AND MOISTURE** ⚠

Keep the radio dry. Liquids and moisture can damage the radio. If a liquid leaks into the radio do not operate and seek a qualified service shop.

5) **KEEP AWAY FROM EXTREME TEMPERATURES** ⚠

Extreme temperatures can damage the radio. Do not leave or use the radio where it can be subjected to high temperatures such as the inside of a car.

Caution: Some windows may intensify the sun's effect on your radio, causing melting or a potential fire hazard.

6) **DO NOT ATTEMPT TO SERVICE RADIO** ⚠

Refer all service work to a qualified service shop when the radio does not appear to operate normally, exhibits a change in performance or the radio has received damage. Never open the radio as this may expose you to dangerous voltages and this will void all warranties.

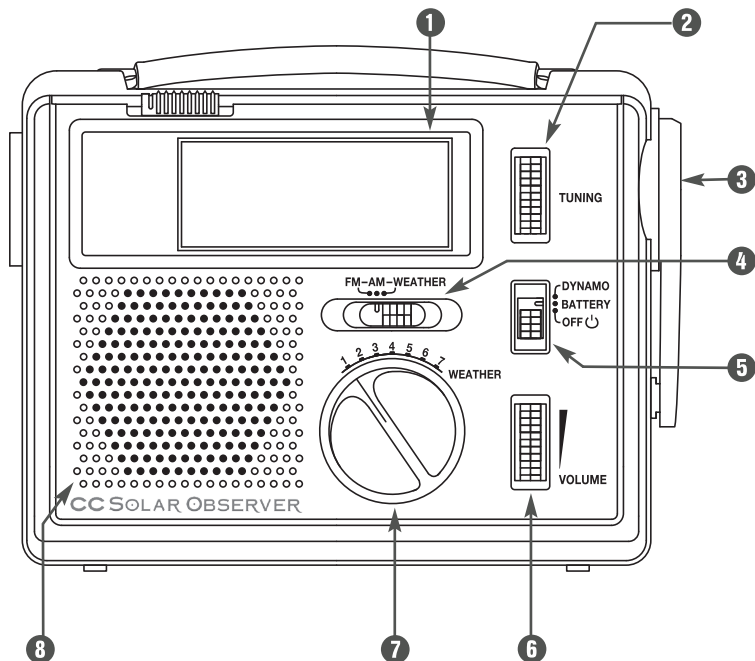
7) **OUTSIDE ANTENNAS OR CABLES** ⚠

Outside antennas or cables that create a potential hazard should not be used with this radio unless installed by qualified personnel.

Table of Contents

Owners Record/Unpacking.....	3
Introduction/Safety Instructions.....	4
Location of Controls - Front of Radio.....	7
Location of Controls - Left Side and Top of Radio.....	8
Getting Started	
Display Panel.....	9
Powering Your Radio.....	9
Inserting the Batteries.....	10
Radio Operation	
Tuning.....	11
Display Light.....	11
Flashlight.....	11
Listening with Earphones.....	11
Phone Charger Jack.....	11
Specifications.....	12
Troubleshooting Guide.....	13
Personal Station Log.....	14

Location of Controls - Front of Radio



1 Display Panel

2 Tuning Dial

3 Dynamo Crank

4 Band Switch

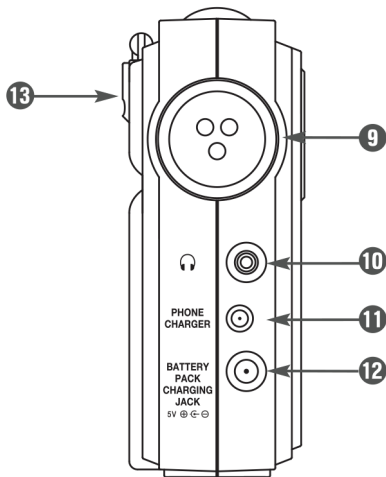
5 Power Selection Switch

6 Volume Control

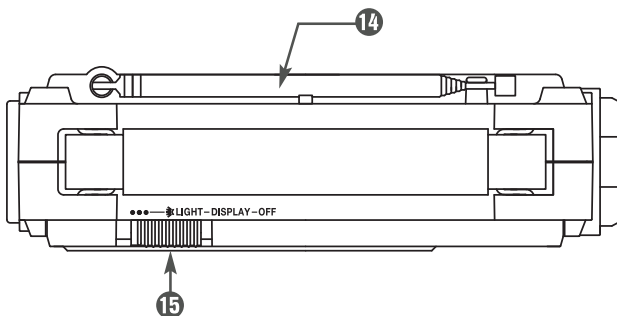
7 Weather Dial

8 Speaker

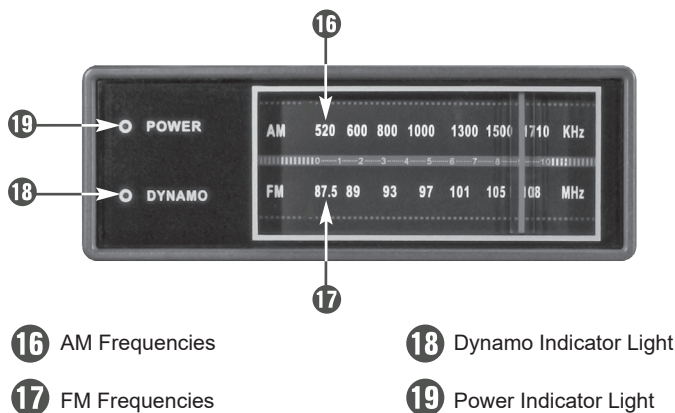
Location of Controls - Left Side and Top of Radio



- 9** LED Light
- 10** Headphone Jack
- 11** Phone Charging Jack
- 12** Battery Pack Charging Jack
- 13** Fold Out Solar Panel



- 14** Telescopic Antenna
- 15** Display Light and Flashlight Switch



Note: Before powering your radio, be sure to read the **Safety Instructions on Page 4.**

Powering the Radio:

Power Using the Solar Panel - Place the solar panel in direct sunlight. It is best to angle the solar panel so that it is pointed directly at the sun. The solar panel is hinged to allow for better positioning. Do not charge the radio in a hot area like a car. To charge the internal battery pack with the solar panel, it is best to leave the radio turned off. Eight hours of direct sunlight should provide 4 to 6 hours of playtime at medium volume, depending on the sun intensity. Set the "Power Switch" to "Dynamo" to play.

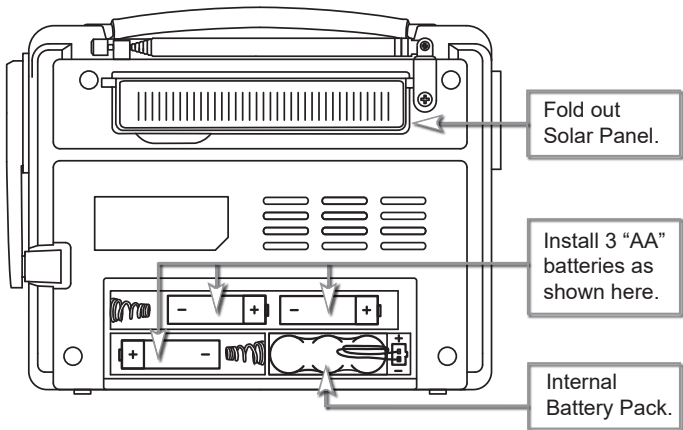
Power by Winding - Unfold the Dynamo Crank (labeled 'Power Generator') from the side of the radio and rotate in either direction. The green "DYNAMO" light on the front of the radio will glow indicating proper winding speed. After 90 seconds of winding the radio will play for about 15 to 25 minutes. This varies depending on the winding speed, volume level and band selection.

Power using "AA" Batteries - When using "AA" alkaline batteries the radio should play at normal volume for about 60 hours. When using nickel metal hydride rechargeable "AA" batteries, about 55 hours of play can be expected. This radio will not charge user-installed batteries. **Note:** Do not use Lithium type batteries.

Getting Started - Powering Your Radio

Inserting the Batteries:

1. Position the radio face down on a soft surface to protect it.
2. Gently press and slide the battery compartment cover towards you. It will slide down slightly, and then flips up on its hinges. Do not force.
3. Insert the 3 "AA" batteries into the compartment, as indicated in the picture below. Be sure the negative (-) end is against the spring. Refer to the picture below to ensure correct installation of your batteries.
4. Place the battery cover down flat and slide back up to the closed position. On the front of the radio, slide the "Power Switch" to "Battery" to turn the radio on.



Power by Charging Adapter (Optional accessory not included) - Connect the AC charging adapter between a 120 Volt/60 Hz wall outlet and the "BATTERY PACK CHARGING JACK" on the side of the radio. The green "DYNAMO" light will glow. To fully charge the battery pack, plug the charging adapter in. We recommend keeping it plugged in for no more than 12 hours.

Note: The AC charging adapter should only be used to charge the battery pack and should not be used to power the radio on a constant basis. Leaving the charging adapter plugged into the radio for long periods of time will shorten the life of the internal battery pack (**See Page 4**).

Note: We do not recommend using the AC charging adapter while your cell phone is connected to the radio. Many newer cell phones require more power than the power adapter can supply. This can cause the cell phone to discharge and possibly damage the power adapter.

Radio Operation

TUNING

The CC Solar Observer features three bands: FM, AM and WEATHER.

1. Position the power switch to “BATTERY” or “DYNAMO”.
2. Select band by positioning the “BAND SWITCH”.
3. Adjust TUNING dial to desired frequency. For tuning Weather, position the “WEATHER” dial to the desired channel (1 through 7).
4. Adjust volume by rotating the “VOLUME CONTROL”.

DISPLAY LIGHT

To turn the display light on, move the light switch to the “DISPLAY” position (see Top of Radio diagram on **Page 8**). The display light will remain on until you turn it off.

FLASHLIGHT

Located on the left side of the CC Solar Observer is a flashlight consisting of three bright LEDs (see Side of Radio diagram on **Page 8**). To turn the flashlight on move the light switch to the “LIGHT” position. The special LED bulbs last more than 10,000 hours and use very little electrical energy.

HEADPHONE JACK

You can use stereo or mono headphones with a 1/8” (3.5mm) plug. When you insert the headphone plug, the speaker is disconnected.

PHONE CHARGER JACK

In an emergency, you may need to power your cell phone to make an important call. Cranking the radio for just 90 seconds should give you enough time to make a few quick calls. This of course will depend on the make and model of your cell phone. Attach the included Radio-to-USB Adapter to your cell phone's USB charging cable (not included), then plug it into the jack on the radio labeled “PHONE CHARGER”. If you do not have a USB charging cable for your cell phone, you can usually purchase one from your cell phone provider.



Your phone will start charging as soon as you plug it into the radio. If the CC Solar Observer is fully charged, it will charge your cell phone battery for about 20-40 minutes. If the Observer's batteries are low or dead, a message may appear on your phone saying the charger is incompatible.

Note: Do not use the optional AC Charging Adapter when charging your cell phone.

Specifications

FREQUENCY COVERAGE:

FM Band: 87.5 - 108 MHz Stereo
AM Band: 520 - 1710 kHz
WX Band: 162.400 - 162.550 MHz

POWER SOURCE:

Batteries: 3 "AA" size (**Note:** Do not use Lithium batteries)
Internal Battery Pack: NiMH 2/3 "AA" 800 mAh
Battery Pack Charging Jack: Internal Battery Pack can be charged with optional AC Adapter - 5V 300 mA DC
Winding Generator: 300-500 mA (DC depending on RPM)
Solar Panel: 20-40 mA DC (Depending on sunlight intensity)

POWER CONSUMPTION AT MODERATE VOLUME:

AM:	38 mA
FM:	45 mA
Weather:	45 mA
Flashlight:	23 mA
Display Light	5 mA

AUDIO:

Speaker: 2.5"

ANTENNA:

FM and Weather Band: Telescopic whip antenna
AM Band: Built-in Ferrite Bar

WEIGHT AND DIMENSIONS:

Weight: 1 lb.
Dimensions: 7.25" W x 5.5" H x 2" D

HEADPHONE JACK:

1/8" (3.5 mm) - Will accept stereo or mono plug.

Note: Specifications are subject to change without notice.

My CC Solar Observer was working but now I have no AM/FM/WX but the LED functions work. How come?

In some cases, if your radio is left on for an extended amount of time after the battery pack is fully depleted, the microprocessor inside the radio may have locked up and disabled the radio functions. It will be necessary to unplug the battery pack, remove any "AA" batteries and cover the solar panel for 15 minutes (or place the radio in a dark area). This will allow a reset of the processor. Re-insert the battery pack and "AA" batteries (if desired), then using the hand crank, wind the radio at a good pace for 90 seconds and then try the radio functions.

Why is the sound garbled on my CC Solar Observer? How can I fix it?

The rechargeable battery pack may be depleted. Charging the unit for a few minutes should clear up the sound.

How do I get the best runtime on my CC Solar Observer?

The simple answer is to "exercise" the batteries to condition them for an optimal charge. To do this, charge the batteries to full and then discharge them completely. Performing this procedure about 3 times will bring your batteries to optimal efficiency.

Can "AA" Lithium batteries be used in the CC Solar Observer?

No. Lithium batteries can damage the radio.

Can I charge my cell phone while charging my CC Solar Observer radio using the AC Adapter?

No. We do not recommend having the AC Adapter connected to the radio while charging your cell phone or other devices.

When I try using the Dynamo Crank to charge the internal battery pack, it is very hard to turn the crank.

Hard winding of the Dynamo Crank on the CC Solar Observer is usually due to a low charge on the internal battery pack. For best results, continue winding the Dynamo Crank and try winding at a rate of two full turns per second. Another option is to use the optional AC Charging Adapter (sold separately) to fully charge the internal battery pack.

Model: CC Solar Observer

ANSI C63.4: 2003

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 UNDESIRE
OPERATION.

NOTICE: Any changes or modifications not expressly approved by the party responsible for compliance could void the users authority to operate the equipment.

Copyright ©2020 by C. Crane, Fortuna, CA 95540 • Phone: 1-800-522-8863
Web: *crcrane.com*

All rights reserved. No part of this booklet may be reproduced, in any form or means whatsoever, without permission in writing from C. Crane.