

# CC SKYWAVE 2

## INSTRUCTION MANUAL

Please read all the instructions completely before use and save this manual for future reference.



C.C. CRANE

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## Introduction

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The CC Skywave 2 radio uses the latest in digital chip technology along with our own ideas developed at C. Crane. This radio is a travel essential for several reasons:

1. Experiencing local music and social customs is enlightening.
2. If there is a problem at the airport or with your plane you can usually find out the reason and make adjustments.
3. The cost of using data on your smart phone overseas can be prohibitive.

The AM/FM, Weather, Shortwave and Aviation bands give you information and insight into a country that is available by no other means. Small and lightweight but with high quality reception and features. Easy button navigation makes it a superior companion for night time listening at home or abroad. The new micro-USB connector works well from any USB Port along with improved in-circuit battery charging. Other changes are a better speaker with slightly more amplification, circuit noise reduction, and long feet for better stability. If you have any question about your radio, please give us a call or check out [www.ccrane.com](http://www.ccrane.com).

## Owners Record

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### UNPACKING

The box should contain the CC Skywave 2, CC Buds Earphones, carry case, warranty card and this manual. If anything is missing or damaged, please contact your dealer immediately. We recommend that you keep the packaging in the unlikely event that your radio needs servicing.

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#### **FOR YOUR FUTURE REFERENCE:**

Serial No. (Found inside battery compartment): \_\_\_\_\_

Date of purchase/Name & address of dealer: \_\_\_\_\_

\_\_\_\_\_

## Safety Instructions

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### 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.
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### SAFETY INSTRUCTIONS - READ BEFORE OPERATING EQUIPMENT

#### SAVE THESE INSTRUCTIONS

1. Read and understand all safety and operating instructions before the radio is operated
2. **Heat:** Never put the radio in direct sunlight in an unventilated area or behind glass like a car's interior. The appliance should be away from heat sources such as radiators, heat registers, stoves, or other appliances that produce heat.
3. If the radio is left unattended and unused for long periods of time, remove the batteries. The batteries may leak and damage furniture or your radio.

## Safety Instructions

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4. The user should not attempt to service the appliance beyond that described in the operating instructions.
5. All other servicing should be referred to qualified service personnel.

**WARNING: DO NOT CHARGE ALKALINE BATTERIES. Use only the recommended power adapter that we offer for recharging NiMH batteries.**

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## Getting Started

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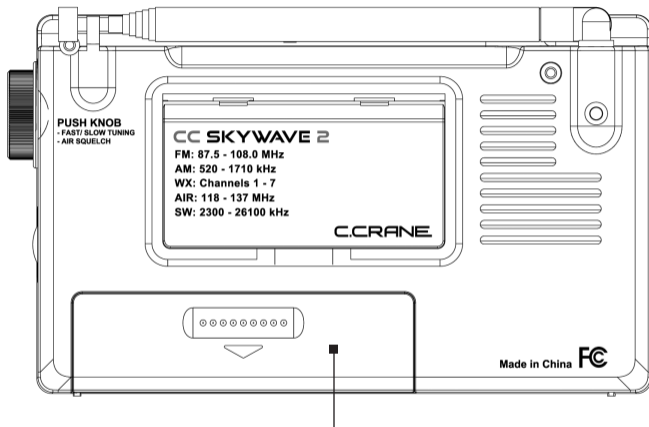
### **INSTALLING THE BATTERIES - DO NOT USE LITHIUM BATTERIES.**

1. Position the radio face down on a soft surface to protect it.
2. Remove the battery cover by applying pressure and sliding downwards towards the bottom of the radio.
3. Insert the two (2) "AA" alkaline or NiMH cell batteries into the compartment as indicated. Be sure the negative (-) end of each battery is against the spring.
4. Replace the battery cover. You are now ready to operate your radio.

**NOTE:** You will have 30 seconds after batteries are removed before the clock and alarm settings are lost. We recommend having your new batteries ready to insert quickly after removing the old ones.

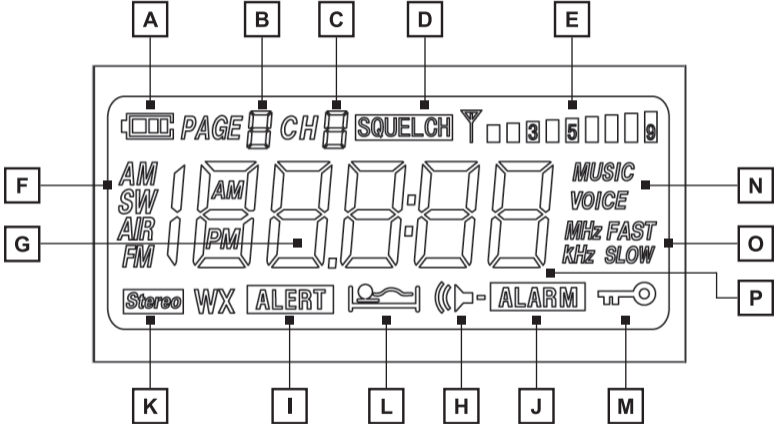
In our test, (going slowly) it took us about 15 seconds to add the new batteries after removing the old ones. The memory presets and other settings are stored in permanent memory so they will not be lost if the radio is unpowered for a duration of time.

## Getting Started



Two (2) "AA" Alkaline or NiMH batteries. **DO NOT USE LITHIUM BATTERIES.**

# Display Screen Identification

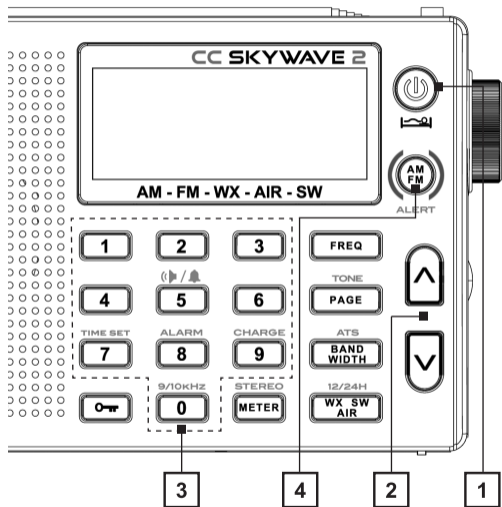


## Display Screen Identification

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- A.** Battery Icon/Charge Indicator
- B.** Page Number (for station memories)
- C.** Station memories 0-9
- D.** Squelch
- E.** Reception Signal Strength
- F.** Band Indicators  
(AM, SW, AIR, FM, WX)
- G.** Frequency
- H.** Alarm Set for Radio Station
- I.** Alert is Activated
- J.** Alarm is Activated
- K.** Stereo FM Reception
- L.** Sleep Timer is Activated
- M.** Radio is Locked
- N.** Audio Filter for Voice or Music
- O.** Tuning Speed with Knob
- P.** Tuning Increments

## Radio Operation



### 1. POWER BUTTON - SLEEP TIMER

To turn the radio "ON" just press the red power button. To set the Sleep Timer, press and hold the red power button.

### SETTING THE SLEEP TIMER

The Sleep Timer will automatically shut off the radio after the set amount of time expires. The display will cycle through minutes 120, 90, 60, 45, 30, 15, and OFF.

Release the power button to activate the sleep setting you desire. The radio will remember your last Sleep Timer setting for the next time you activate it.

### 2. UP AND DOWN TUNING BUTTONS

Press once quickly to tune to the next

## Radio Operation

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frequency increment.

Press and hold for 2 seconds to automatically tune to the next strong station. Hold continuously to cycle through the whole band.

### 3. MEMORY PRESET BUTTONS 0-9

To save your favorite stations to memory buttons press and hold any memory button for 2 seconds while the station is playing. To play a saved station, press the same button once quickly. **NOTE:** The CC Skywave 2 is a “smart” radio and will remember current settings when a station is preset into memory. The current settings that will be saved with your station are:

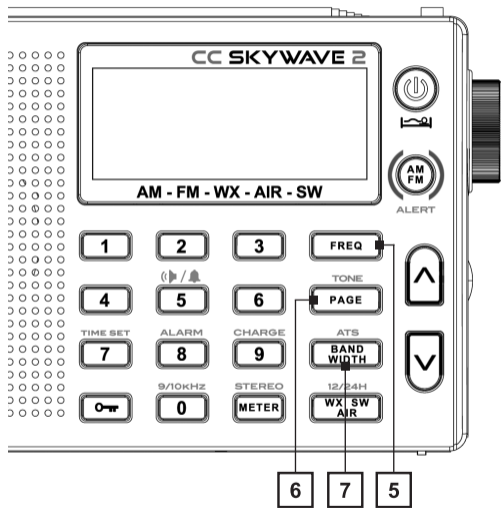
- **Stereo** or **Mono** selection on FM
- **Bandwidth** selection on AM, Shortwave, or Air bands.
- **Audio tone** selection. On or Off.

### 4. CHANGING AM/FM BANDS - SETTING WEATHER ALERT

Press the AM/ FM button once quickly to switch between AM and FM bands.

For NOAA Weather Alert: Press and hold this button to activate the weather alert for 4, 8, or 16 hours.

## Radio Operation



Release button to make selection. To disable alert, press and hold this button for 2 seconds. **NOTE:** When alert is set and radio is OFF, light will flash indicating alert is on and working. Turning off when not needed will help conserve batteries.

### 5. FREQUENCY BUTTON

When you are in your selected band, this button lets you directly enter the frequency number of your desired station using the number buttons. For example, to play 1480 kHz in the AM band, quickly press the FREQ button and then enter 1, 4, 8, 0 using the number buttons. **NOTE:** When manually entering SW frequencies 2300 to 2610, you must press the FREQ button after entry.



### **6. PAGE BUTTON/CHANGING TONE**

Each memory page allows you to save 10 additional stations per band. To change to a different page, press the PAGE button once quickly, then press any memory button 0-9 to select the Page that you desire. To change between Music and Voice tones, press and hold this button for two seconds. Display will switch between “Music” and “Voice”.

### **7. AUTOMATIC TUNING SYSTEM (ATS) BUTTON**

Automatic Tuning System (ATS). This feature programs all receivable stations in the AM, FM and Shortwave bands to memory buttons. To use ATS, select your desired band: AM, FM or Shortwave, and press and hold the ATS button for two seconds. The CC Skywave 2 will scan the entire band and automatically set all available stations in sequence 1-10. If more than 10 stations are available then the remaining stations will be preset to the next memory page, and so on.

### **SETTING BANDWIDTH FILTERS (FOR AM, SW, AND AIRBAND ONLY)**

The AM and SW bands have five bandwidth settings that can be used to filter out unwanted noise or adjacent overlapping stations. The Airband has three filters for this.

## Radio Operation

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Quickly press the BANDWIDTH button to view the current selection. Press it again to choose the setting that sounds best to you. A narrow bandwidth of 1 kHz may work best when receiving a weak or noisy signal. For strong local signals 6 kHz is usually best, especially for music.

If the station is changed then the radio will return to the default bandwidth setting. By default, the CC Skywave 2 is set to 3 kHz bandwidth for good audio, noise filtering, and voice quality. The default bandwidth can be changed by holding down the bandwidth button for more than five seconds with the power OFF. Release the button to choose the displayed selection.

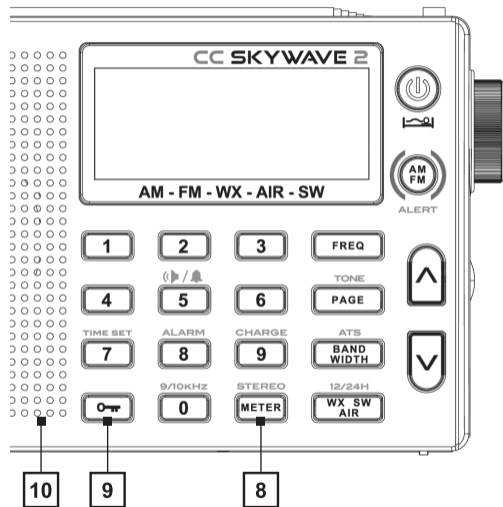
### **8. METER/STEREO - CHANGING METER BANDS**

In the Shortwave band the METER/STEREO button will change between frequencies according to popular meter bands.

### **STEREO OR MONO RECEPTION**


In the FM band the METER/STEREO button will cycle between stereo and mono FM reception. Typically, FM Mono will have better reception than FM Stereo. **NOTE:** If a

## Radio Operation



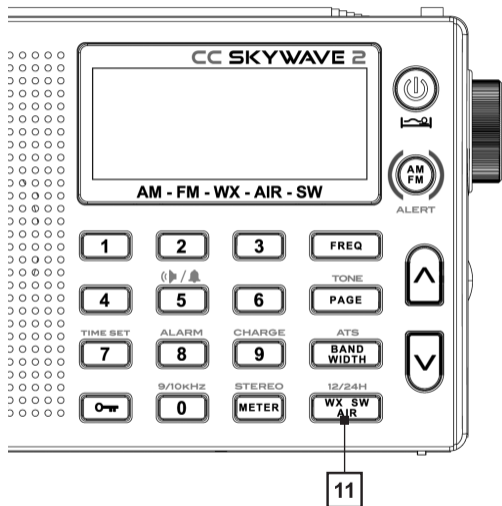
station does not broadcast in stereo, or the radio cannot lock on to the stereo signal the radio will only receive FM mono and the stereo symbol will not be displayed.

### 9. LOCK BUTTON

The lock button will disable all buttons and controls, except the volume control. A Key icon will display on the screen when the radio is locked. To enable lock press the lock button  for two seconds. To disable press and hold again for two seconds.

### 10. SPEAKER

The speaker will be disabled when headphones are plugged into the headphone jack.



### 11. WX/SW/AIR - WEATHER, SHORTWAVE AND AIR BANDS

Quickly press the “WX/SW/AIR” button to cycle between Weather, Shortwave, and AIR bands.

#### ABOUT THE WEATHER BAND

The CC Skywave 2 can receive all 7 NOAA weather band channels. NOAA is short for National Oceanic and Atmospheric Administration. It is a network of stations across the USA and territories that continuously broadcasts local weather forecasts and Emergency Alerts are issued for serious weather conditions and public safety information. Enable the ALERT

## Radio Operation

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feature to be notified when a warning is issued in your area. See page 10. Fully extend the whip antenna for best reception.

### **ABOUT THE SHORTWAVE BAND**

With shortwave you can listen to radio signals from around the world. Signals are usually received best at night and early morning when the earth's ionosphere does not cause interference with the bouncing signals. The CC Skywave 2 has several bandwidth filters to reduce interference. Select which one sounds best by pressing the "BAND WIDTH" button after a station is tuned in.


### **ABOUT THE AIR BAND**

With air band you can listen to communications between pilots and control towers. Basic instructions for moving the plane and updates for weather and possible delays can also be heard. Many airports broadcast a continuous feed that updates frequently for this information. To find station frequencies that are used for your airport, we recommend searching the internet. One good site is [www.radioreference.com](http://www.radioreference.com). See Page 25 for setting Squelch.

### CHANGING TIME FORMAT

12 or 24 Hour Time Switch between 12 hour and 24 hour time. With the radio OFF, press and hold the 12/24H button for two seconds to change this setting.

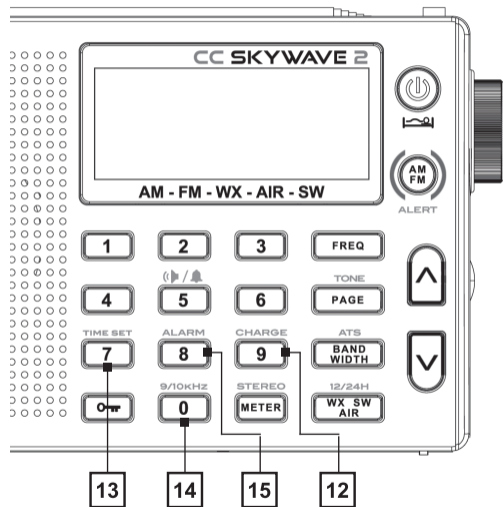
### 12. CHARGE BUTTON - BATTERY CHARGING

Use the CC Skywave 2 to recharge your NiMH type batteries. Supply power to the CC Skywave 2 from AC power adapter (not included). With the radio powered off, press and hold the CHARGE button for two seconds. The battery icon  on the display will begin to cycle indicating that the batteries are charging. Charging will continue for 10 hours or until the batteries are full. Do not charge alkaline batteries.

### 13. TIME SET BUTTON - SETTING THE TIME

With the radio OFF, press and hold the TIME SET button for two seconds. While the hour is flashing, press the **▲** or **▼** tuning buttons (or rotate knob) until the hour and AM/PM time is correct. Press the TIME SET button again to adjust the minutes. When finished, press the TIME SET button again.

## Radio Operation



### 14. ACTIVATE 9 OR 10 KHZ TUNING BUTTON - EXPAND FM BAND



Many parts of the world, including Europe, use 9 kHz tuning steps for the AM band. 10 kHz tuning steps for AM are used in the USA and other regions. Switch tuning steps by holding the 9/10 kHz button for two seconds with the radio turned OFF. When tuning steps are set to 9 kHz the FM Band will also be expanded to cover 76-108 MHz (FM band in Japan).

### 15. ALARM BUTTON - SETTING THE ALARM

With the alarm powered off, press and hold the ALARM button  for two seconds.

## Radio Operation

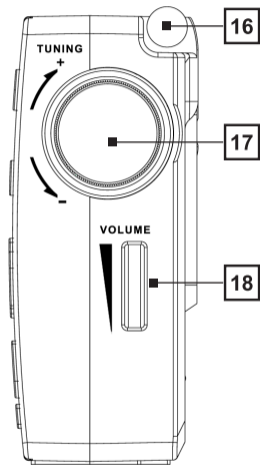
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While the hour is flashing, press the **▼** or **▲** tuning buttons (or rotate knob) until the hour and AM/PM time is correct. Press the ALARM button again to adjust the minutes. When finished, press the ALARM button again to confirm. To disable alarm, press the ALARM button for three seconds. By default, the alarm will wake you with a beep. To wake to a radio station, press the #5  button during alarm setup. A speaker icon  displays on the screen indicating that the alarm will wake to the previous radio station played. It is best to check the station frequency and adjust the volume level to your wake up preference before going to sleep to insure that is just how you want it. When the alarm sounds, press the power button to turn the alarm off, or press any other button to sleep for 10 more minutes.

### **16. POSITIONING THE WHIP ANTENNA - FM/WX/AIR/SW**

Flip up and fully extend the whip antenna. For most stations, reception is best when antenna is positioned vertically. Other stations may have better reception with the antenna positioned differently.





### 17. TUNING KNOB

Rotate knob to tune to the next frequency increment. Press the knob “IN” towards the body of the radio (once quickly) to change between “FAST” and “SLOW” tuning increments when rotating the knob. “FAST” tuning will use larger incremental steps between frequencies. “SLOW” tuning can improve AM stations that are slightly frequency on poor signals. Try tuning 1 kHz higher or lower than the actual station frequency to see if reception improves.

### SQUELCH MODE

Squelch Mode only works on the Air band. Press and hold the tuning knob “IN” towards the body of the radio (for 2 seconds) to activate. “OFF” will appear on the display screen. Rotate the knob to adjust the level of squelch desired. The optimal level is usually the lowest number that does not have background noise.

## Radio Operation

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With squelch turned “OFF”, you may be able to receive some very weak signals that do not register when the squelch is enabled. Press the tuning knob “IN” towards the body of the radio one time to save the current squelch setting.

### **18. VOLUME CONTROL**

Rotate the small wheel up for more volume and down for less volume.

### **19. ANTENNA JACK**

This jack can be used for connecting an external shortwave antenna for improved reception.

### **20. EARPHONE JACK**

For private listening, use headphones or earbuds. This jack can also be used as an audio output to another device.

### **21. USB POWER / CHARGING JACK**


You can power your radio or charge NiMH type batteries with the USB jack connected to a computer or USB power adapter (not included).

### POWERING THE CC SKYWAVE 2

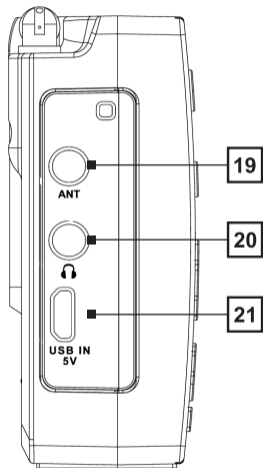
For best reception we recommend using the C. Crane power adapter (not included) or “AA” batteries.

A computer or non-approved power adapter may generate too much interference on the AM, SW and AIR bands. The FM band should not have as much interference when connected.

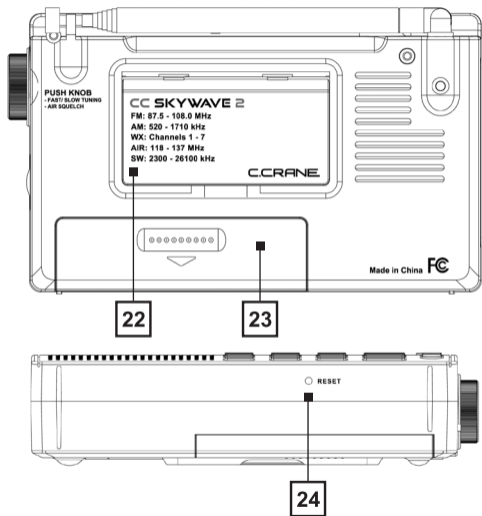
### CHARGING NIMH BATTERIES

To begin battery charging press the CHARGE  button for two seconds with the power OFF.

**WARNING: DO NOT CHARGE ALKALINE BATTERIES OR OTHER BATTERY CHEMISTRIES. USE ONLY THE RECOMMENDED POWER ADAPTER THAT WE OFFER FOR RECHARGING NiMH BATTERIES.**



## Radio Operation



### 22. BACK STAND

Flip this panel out to prop up your radio for easy use of the controls, best audio and for viewing positioning.

### 23. BATTERY COMPARTMENT

Requires two "AA" alkaline or NiMH batteries. **DO NOT USE LITHIUM BATTERIES.**

### 24. RESET HOLE - RESETTING THE RADIO

Quickly press into the reset hole on the bottom of the radio to reset the microprocessor. It is recommended to use a toothpick or other soft device to reset the radio. Do not press too hard as you might


## Radio Operation / Hidden Settings

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damage the radio. See paragraph below for resetting to all factory settings.


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### DISABLE BEEP SOUND

With the power OFF, press and hold memory button #3  for two seconds. All beeps are disabled except ALARM and WX ALERT. Repeat sequence to enable beep again.



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### DESIGNATE FREQUENCY OR CLOCK WHILE LISTENING TO THE RADIO

With the power OFF, press and hold memory button #4  for two seconds. A “C” will appear on the screen indicating that the clock will show while listening to radio. Repeat sequence to display frequency instead. “F” will appear on the screen to indicate that the frequency will show when listening to the radio.

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### RESET ALL SETTINGS

With the power OFF, press and hold memory buttons #4  and #6  for five seconds. The radio will beep four times, a long pause and three more beeps indicating that all settings have been restored back to the factory defaults.

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### **NOTE ON THE DISPLAY BACKLIGHT:**


When using the AC Adapter (sold separately) the following applies:

- Default setting = Light is ON for 15 seconds when any button is pressed.
- If radio is OFF, the display light is OFF.
- If any button is pressed while radio is OFF, the display light will turn ON for 15 seconds
- If LOCK button is tapped while the radio is ON = Light is ON all the time.
- If LOCK button is tapped again while radio is ON= Lights return to default setting of 15 seconds.

## Troubleshooting Guide

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### **THE CC SKYWAVE 2 WILL NOT TURN ON AND NONE OF THE BUTTONS WORK:**

The Lock button:  that is located on the front of the radio may be activated. When activated, a key icon will show on the display screen. Push lock button for 2 seconds to resume normal operation of the radio.

See “Lock Button” on Page 19.

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### **MY RADIO SHUTS OFF AFTER JUST A FEW SECONDS:**

Low batteries can cause this situation. Replace them with a new set of batteries.

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### **STATIONS WON'T HOLD IN MEMORY:**

The memory button settings are being overwritten. When recalling a station from memory, if you hold the memory button down too long it will program the current station over your previously stored station. To recall a station that has been stored in memory, always press and release the button quickly. To program a new station into memory, tune to the desired station and then press and hold the memory button for two seconds until you hear a beep.

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### **POOR RECEPTION ON AM BAND:**

Rotate the radio until the reception is best. Many buildings that use brick, metal, or stucco can absorb or reflect the AM signal. Computers and other electronic equipment, including fluorescent lights, can cause noise that interferes with your AM reception. Move the radio to a different place to see if that helps. Additional noise may affect a weak signal. There are several bandwidth filters which can help to reduce interference. Select which one sounds best by pressing the “BANDWIDTH” button. For better reception, use an external AM antenna like our Terk Indoor AM antenna available at [www.ccrane.com](http://www.ccrane.com).

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### **POOR RECEPTION ON FM, WEATHER AND AIR BAND:**

Fully extend the whip antenna and adjust its orientation to obtain the strongest signal. You may be able to get an even better signal by switching to FM mono. Press the STEREO button to change between FM Stereo and FM Mono. For even better reception use an external FM antenna available at [www.ccrane.com](http://www.ccrane.com).



### **POOR RECEPTION ON SHORTWAVE BAND:**

Fully extend the whip antenna and adjust its orientation to obtain the strongest signal. There are several bandwidth filters which can help to reduce interference. Select which one sounds best by pressing the “BANDWIDTH” button. For much better reception, use an external SW antenna available at [www.ccrane.com](http://www.ccrane.com). or attach a simple 30’ insulated wire to the telescopic antenna.

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### **BATTERY POWER LEVEL INDICATOR DOESN'T SHOW FULL CHARGE WHEN USING RECHARGEABLE BATTERIES:**

Rechargeable batteries will not show a full charge on your radio display. The CC Skywave 2 is calibrated to read the charge of your alkaline batteries, which is 1.5 volts at full charge. Rechargeable batteries, however, are fully charged at just 1.25 volts, so your radio will show a partial charge even if the rechargeable batteries have been fully charged.

## Specifications

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### **FM BAND:**

87.5 - 108 MHz (Regular Mode) / 76 - 108 MHz (Expanded Mode - See page 23)

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### **AM BAND:**

520 - 1710 kHz (10 kHz)

522 - 1620 kHz (9 kHz)

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### **SHORTWAVE BAND:**

2300 - 26100 kHz

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### **AIR BAND:**

118 - 137 MHz

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### **WEATHER BAND:**

Channel 1: 162.400 MHz / Channel 2: 162.425 MHz / Channel 3: 162.450 MHz /

Channel 4: 162.475 MHz / Channel 5: 162.500 MHz / Channel 6: 162.525 MHz /

Channel 7: 162.550 MHz

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## Specifications

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### **POWER SOURCE:**

Batteries: (2) "AA" size

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### **POWER CONSUMPTION:**

30 - 100 mA DC (depending on headphone or speaker usage)

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### **AUDIO:**

Speaker: 1.5", 25 Ohm, 0.5 watt

Stereo headphone jack

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### **ANTENNA:**

FM, Weather, Shortwave and Air Band: 19" whip antenna

AM Band: Built-in Ferrite bar

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### **DIMENSIONS:**

3" H x 4.75" W x 1.1" D

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## Specifications / Common Shortwave Broadcast Bands

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### WEIGHT:

Approximately 5.5 ounces without batteries

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### WARRANTY:

1-Year Limited Warranty.

**NOTE:** Specifications are subject to change without notice.

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### COMMON SHORTWAVE BROADCAST BANDS

2300 - 2495 _____	120 Meters	11500 - 12100 _____	25 Meters
3200 - 3495 _____	90 Meters	13570 - 13870 _____	22 Meters
3900 - 4000 _____	75 Meters	15030 - 15800 _____	19 Meters
4750 - 5060 _____	60 Meters	17480 - 17900 _____	16 Meters
5730 - 6200 _____	49 Meters	18900 - 19020 _____	15 Meters
7100 - 7450 _____	41 Meters	21450 - 21850 _____	13 Meters
9250 - 9900 _____	31 Meters	25670 - 26100 _____	11 Meters

## Accessories for your CC Skywave 2

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**AC Power Adapter**  
(Item # SKWVP)



**CC SW Reel Antenna**  
(Item # CCSWA)



**CC Wire Terminal  
Antenna Adapter**  
(Item # CCSWT)



**Rechargeable NiMH  
"AA" Batteries**  
(Item # NHA)

Available at [ccrane.com](http://ccrane.com) or call: 1-800-522-8863

# MODEL: CC SKYWAVE 2

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.

**C.CRANE**

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