C.CRANE

CCRadio SW

INSTRUCTION MANUAL

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

Before Use

Please read IMPORTANT SAFETY INSTRUCTIONS on page 23 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	
	RISK OF ELECTRIC SHOCK DO NOT OPEN	
THE LIGHTNING FLASH AND ARROWHEAD WITHIN THE TRIANGLE IS A WARNING SIGN ALERTING YOU OF "DANGEROUS VOLTAGE" INSIDE THE RADIO.	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 EXCLAMATION POINT WITHIN THE TRIANGLE IS A WARNING SIGN ALERTING YOU OF IMPORTANT INSTRUCTIONS ACCOMPANYING THIS RADIO.

For your future reference:

Serial No. _____ Date of purchase _____
(found inside battery compartment)

Name & address of dealer _____

_____

Unpacking

The box should contain the CCRadio SW, the AC Adapter, (2) PAL Antenna Connectors, and this manual. If anything is missing or damaged, please contact your dealer immediately. We recommend you keep the box in the unlikely event your radio will need servicing.

Phone: 1-800-522-8863 Web: *ccrane.com*

Rev. 1209

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Quick Start

1. Turn “AM RF GAIN” control knob ⑱ full clockwise.

2. Slide “AM SENSITIVITY” switch ㉚ to “DISTANT” position.

3. Slide “FM/SW ANTENNA” switch ㉛ to “INTERNAL” position.

4. Select band by rotating band selection knobs:

a) For **AM** band turn “AM/SW” knob ⑳ to “AM” and “AM/SW–FM” knob ㉑ to “WIDE”.

b) For **FM** band turn “AM/SW” knob ㉑ to “MONO”.

c) For **SW** turn “AM/SW” knob ⑳ to “SW1”, “SW2” or “SW3” and “AM/SW–FM” knob ㉑ to “WIDE.”

5. Apply power:

a) Use AC ADAPTER by connecting the adapter to “DC IN” jack ㉗; or

b) Install batteries by sliding “BATTERY SIZE” switch ㉖ to type of battery being used. Insert 4 batteries into Battery Compartment ㉝, paying close attention to orientation of the batteries’ + and – ends.

6. Turn on the radio by pressing the POWER button ❶.

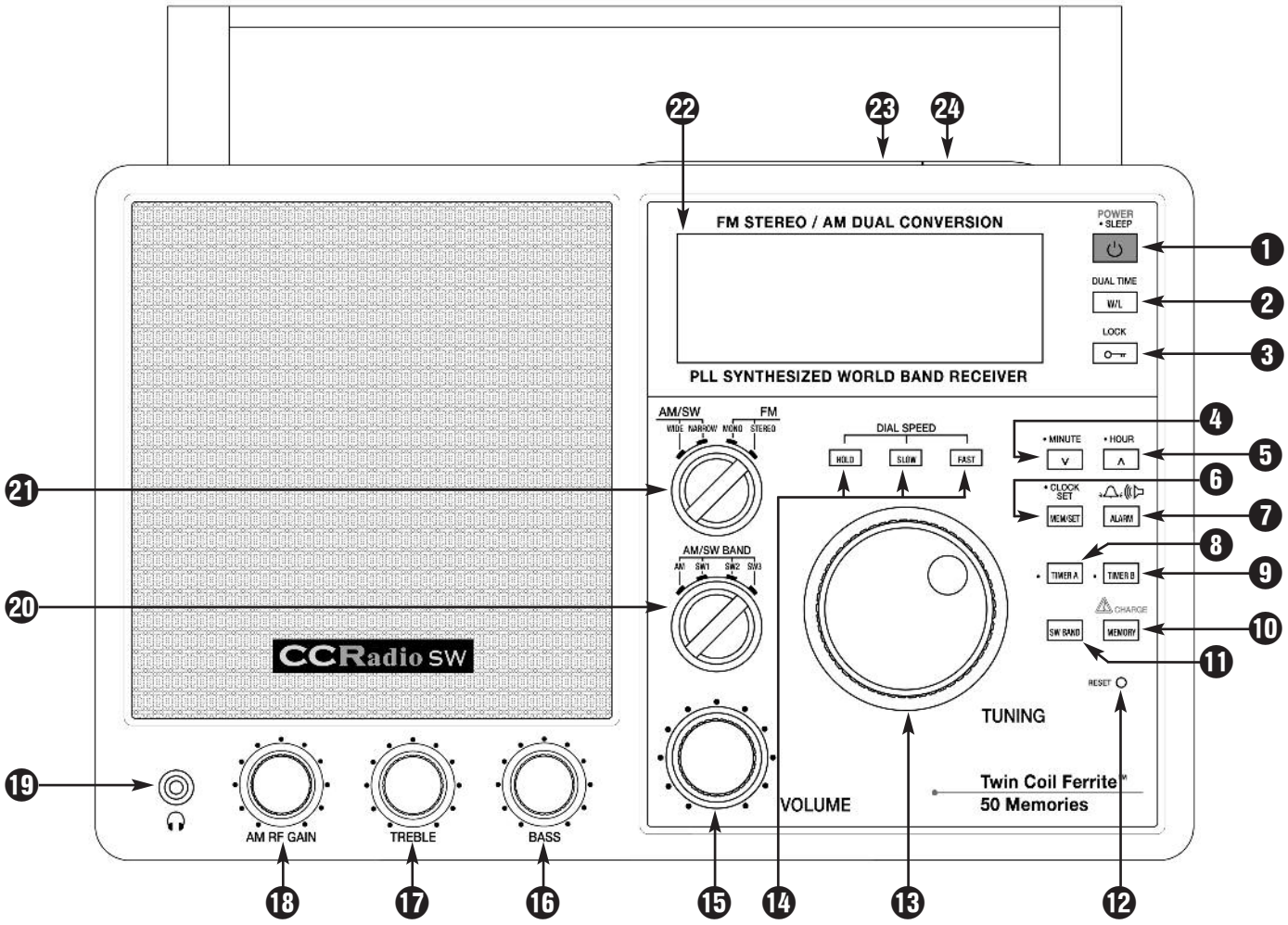
7. Press the “DIAL SPEED FAST” button ⑭ above the tuning knob.

8. Use the “TUNING” knob ⑬ to locate a station.

9. Adjust “VOLUME” knob ⑮, “TREBLE” knob ⑰ and “BASS” knob ⑯ to desired levels.

For Button and Knob locations, see Radio Identification diagrams on pages 5-7.

Radio Identification — Front View

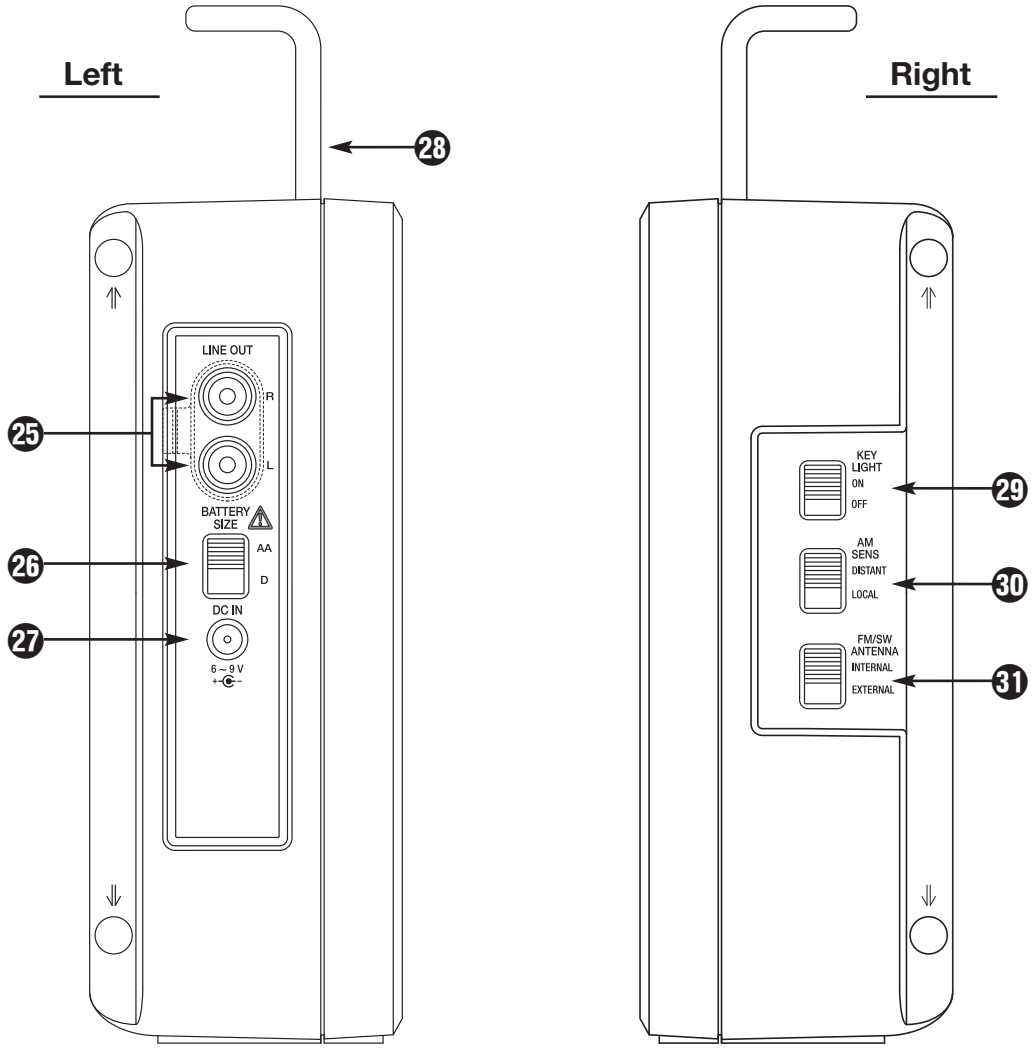


Front/Top Identification

1. POWER or • SLEEP Timer
2. DUAL TIME Button
3. LOCK Button
4. Down or • MINUTE
5. Up or • HOUR or 12/24 Hour Clock
6. MEMORY SET or • CLOCK SET
7. ALARM
8. • TIMER A
9. • TIMER B
10. MEMORY or • CHARGE
11. SW BAND Selection
12. RESET
13. TUNING Knob
14. DIAL SPEED Selection
15. VOLUME Control
16. BASS Control
17. TREBLE Control
18. AM RF GAIN
19. Headphone Jack
20. AM/SW BAND Selection
21. AM/SW–FM Band Selection
22. LCD Display
23. SNOOZE Button
24. LIGHT Button

NOTE: The "•" next to a button description means *"press and hold"* for a second function.

Radio Identification — Side Views



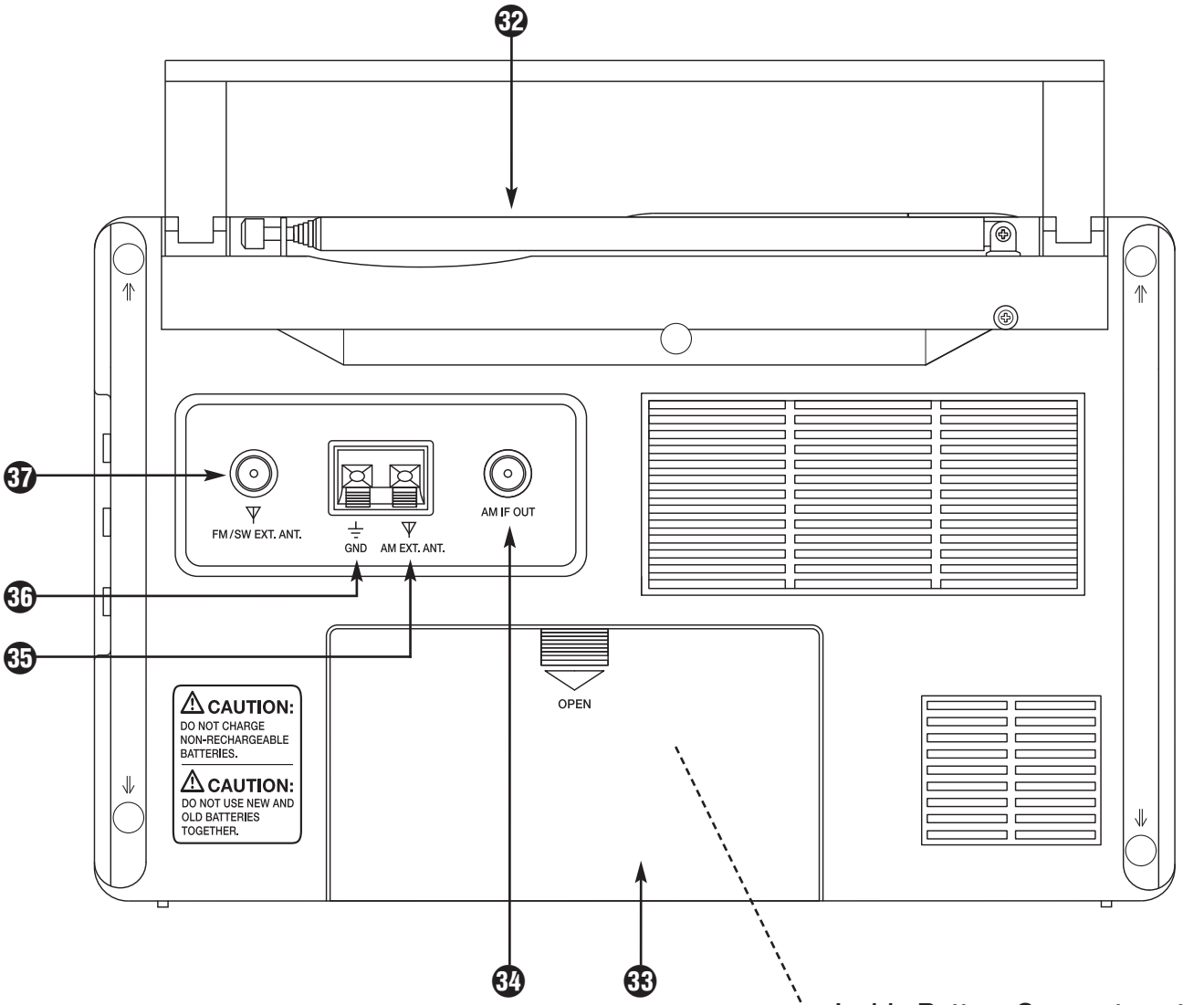
Left View

- 25 LINE OUT Jacks
- 26 BATTERY SIZE Switch
- 27 DC POWER IN Jack
- 28 Radio Handle

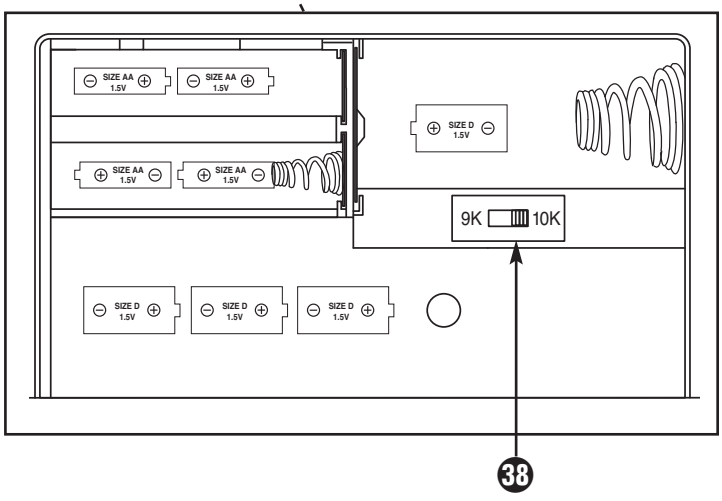
Right View

- 29 KEY LIGHT Switch
- 30 AM SENSITIVITY Switch
- 31 FM/SW ANTENNA Switch

Radio Identification — Back View



Inside Battery Compartment



Back View

- 32 Whip Antenna
- 33 Battery Compartment
- 34 AM IF OUTPUT
- 35 AM EXTERNAL ANTENNA
- 36 GROUND
- 37 FM/SW EXTERNAL ANTENNA
- 38 AM Tuning Step Switch

Features and Operation Explained — Front of Radio

Introduction

The CCRadio-SW can receive weaker signals, with superior audio, than perhaps any portable radio ever made. You are given much more control over how the radio works, sounds and picks up a signal. You can even deliver a digital signal to a computer for decoding. Learning how the radio works will help you with your audio experience.

Please refer to the Radio Identification diagrams on pages 5-7 as you read through this instruction manual. Radio controls and their functions are listed numerically in this manual.

NOTE: The "•" next to a button description on the radio means that button has a dual function. "*Press and hold*" briefly to activate the second function. The dual functions are usually done with the power "off", while AC power is connected or batteries installed.

❶ POWER • SLEEP 

The "POWER • SLEEP" button has nine operational settings: *90, 60, 45, 30, 15, 10, 5, 1 (minutes) and "ON" (continuous)*.

When you press and release the "POWER" button the first time you will see *"60"* minutes displayed for about two seconds. This indicates the radio is set to operate for 60 minutes and then shut off. A *SLEEP* icon will also be displayed continuously during this timed playing mode. When the radio shuts "off", the *SLEEP* icon will disappear. This is the radio's "SLEEP" operation. The radio will function with this "*60*" minute "SLEEP" time limit every time you turn the radio "on" until you change it to a different one of the nine SLEEP settings.

To change to a different setting, press and release the "POWER • SLEEP" button while any one of the nine "SLEEP" settings is displayed. They are only displayed for two seconds at a time. Each press of the button will display the next setting respectively. Stop on the setting you desire and it will be remembered for your convenience each time you turn the radio "on". If you select any one of the sleep settings, except *"ON"*, the *SLEEP* icon will be displayed while the radio is "on". When "on" is selected, the radio will simply turn on and off when the power button is pushed.

Pressing the "POWER • SLEEP" button while the radio is operating on any of the settings will turn the radio off.

❷ DUAL TIME 

The "DUAL TIME" W/L button has two functions:

1) It toggles between "WORLD" and "LOCAL" time clock with the radio "on" or "off". The radio displays the word *LOCAL* or *WORLD* indicating which clock time is the default display time clock. Press and release this button and the alternate time clock will display its time for two seconds, along with the word *LOCAL* or *WORLD*.

2) It sets the “WORLD” or “LOCAL” time clock to the default time clock when the radio is “off”.

   To change the default display time clock, with the radio “off”, hold the button down for five seconds. The radio display will change displaying the word *LOCAL* or *WORLD* indicating the time clock that will now be the new default time clock. See “**CLOCK SET**” (page 10) to set the time on the default clock.

Tip: Many people set the ‘WORLD” time clock to “UTC” (Universal Time Coordinated) because SW radio broadcasts are scheduled on this time. “UTC” is broadcast on a 24-hour format. Tune into 10,000 kHz or 15,000 kHz to hear the time in UTC.

❸ LOCK

The “LOCK” button locks out the operation of all the buttons on the radio except the display “LIGHT” button ❸ and the “KEY LIGHT” switch ㉙.

Press and release the “LOCK” button and the “KEY LOCK” icon will be displayed. When the “KEY LOCK” icon is displayed, all radio buttons become locked off except for the LCD display light and the key light. Press and hold the “LOCK” button for one second to turn off this feature. This button “LOCK” is normally used for travel so the radio does not turn on accidentally.

❹ • MINUTE ∨

The “ • MINUTE ∨ ” button performs four functions:

When the radio is “on”:

1) It will decrease the frequency one step at a time with each press and release of the button.
2) It will automatically search “down” in frequency until it finds a relatively strong station to stop on when you press and hold the button for two seconds.
3) When used with “MEMSET” button ❻ it toggles memory number positions for storing stations to memory. See “**MEMORY SET**” (page 11) to set stations to memory.

When the radio is “off”:

4) It is used with “CLOCK SET” on button ❻ to set the minutes for the clocks and timers. See “**CLOCK SET**” (below) and “**ALARM SET**” (page 11) to set clock and alarm times.

❺ • HOUR ∧

The “ • HOUR ∧ ” button performs five functions:

When the radio is “on”:

1) It will increase the frequency one step at a time with each press and release of the button.
2) It will automatically search "up" in frequency until it finds a relatively strong station to stop on, when you press and hold the button for two seconds.
3) When used with "MEMSET" button ❻ it toggles memory number positions for storing stations to memory. See "**MEMORY SET**" (page 11) to set stations to memory.

When the radio is "off":

4) It is used with "CLOCK SET" on button ❻ to set the hours for the clocks and timers. See "**CLOCK SET**" (below) and "**ALARM SET**" (page 12) to set clock and alarm times.
5) Press and hold the "HOUR **Λ**" button ❺ for five seconds to toggle the clock time on the display between 12 or 24 hour modes. "*AM*" and "*PM*" indicators will be displayed when the clock is set to 12 hour mode.

Note: This sets both "LOCAL" and "WORLD" time clocks to the same hour format.

❻ CLOCK SET [MEM/SET]

The [MEM/SET] button has two functions:

1) When the radio is "off", the [MEM/SET] button sets the time on the default clock.

CLOCK SET

See "**DUAL TIME**" [W/L] (page 8) to set "WORLD" or "LOCAL" time clock to the default time clock.

To set the time, press and hold the "CLOCK SET" button ❻ until the *Hour* begins to flash. While the *Hour* is flashing use the "HOUR **Λ**" button ❺ or "TUNING" dial knob ⓭ to set the hour. Then press the "MINUTE **V**" button ❹ to select the minutes. The *Minutes* will flash on the display. While the *Minutes* are flashing use the "MINUTE **V**" button or the "TUNING" dial to set the minutes. To complete setting the time, you must press the "CLOCK SET" button while the time is flashing. If you don't press "CLOCK SET" while the time is flashing, the time will change back to the time you started with and you will have to start over.

NOTE: Pressing the "HOUR **Λ**" or "MINUTE **V**" buttons will increase the numbers only. Using the "TUNING" dial will allow you to increase and decrease the numbers with the change of direction of the dial.

CLOCK TIPS: You can also use the "TUNING" dial after pressing "HOUR" or "MINUTE". Read "**DUAL TIME**" [W/L] (page 8) to use the clocks the way you prefer. See also the "**HOUR Λ**" button (page 10) to change the hour to 12/24 hour format.

NOTE: Setting the "LOCAL" time clock also sets the "WORLD" time clock. Next to the "WORLD" clock you will see *Time DIFF* and a number displayed. If you set the "WORLD" time

clock to “UTC” (Universal Time Coordinated) the *Time DIFF* number is the number of hours between “LOCAL” time and “WORLD” time. As an example, San Francisco, CA, is 8 hours behind UTC. Set the “WORLD” time clock 8 hours ahead of “LOCAL” time, rotating the “TUNING” dial until the *Time DIFF* number is “+8”.

2) When the radio is “on”, the MEM/SET button stores stations to a Memory Preset number.

MEMORY SET

The CCRadio SW has 10 memories per band: AM, FM, SW1, SW2, and SW3.

To memorize a station, tune to it, then press the MEM/SET button. The word *Preset* will flash with a memory number below it. If this is the memory number you want for this station, press MEM/SET to complete while *Preset* is flashing. If this is not the memory number you want press the **Λ** or **V** button to pick a memory number between 1 to 10 then press MEM/SET to complete. You must do this while *Preset* is flashing or you will have to start over.

MEMORY TIPS: You have only four seconds to perform this action or you will have to start over. It is best to write down your memory stations and numbers to make entering them easier.

Note: When a station is stored to memory, whenever the radio is tuned to that station, the word *Preset* and its number are always displayed. If you press MEM/SET to store a station, *Preset* will begin flashing and the number will increment to the next number.

7 ALARM

The CCRadio SW is equipped with dual alarms and there are two different alar modes to choose from. You can choose to wake up to the radio or to a buzzer tone. The ALARM button is used with TIMER A or TIMER B buttons to set the alarms and to turn the alarms off.

ALARM SET

8 . TIMER A

1) To set the alarm time, press and hold TIMER A button until word “*Timer A”* and the alarm hour begin to flash on the display.

2) While they are flashing, press the “HOUR **Λ**” button to set the hour and the “MINUTE **V**” button to set the minutes.

3) With the word “*Timer A”* still flashing, press and release the “ALARM” ALARM button to set the alarm mode. The first icon to appear on the display next to the word “*Timer A”* will be . This sets the alarm to Buzzer mode. Press this button again and the will display, setting the alarm to Speaker mode. This activates the radio to play a radio station. Press the button again and both icons will disappear from the display, indicating that the alarm is “off”. You have about four seconds between pressing buttons or you must start over.

4) When you have finished setting your alarm, you must confirm your settings by

pressing the [TIMER A] "Timer A" button.

Alarm Modes:

On "Buzzer", the alarm will sound for three minutes and the will flash.

On "Speaker", the radio will come on to the station and volume setting that you listened to before turning the radio "off". The radio will play for 60 minutes. While the radio is playing, the will flash and the will also be displayed.

To stop a "*Timer"* for the day but retain the alarm setting, press the "POWER" button. The "*Timer"* will then come on automatically the next day.

Snooze:

To snooze, press and release the "SNOOZE" bar ㉓ on top of the radio, while the alarm is sounding. The alarm icon will flash on the display. Each press on the snooze bar will pause the alarm for five minutes. You can snooze up to four times, then the alarm will automatically shut off until the next day.

ALARM TIPS: Set the time on the alarms first. A timer will not be activated until the alarm mode is selected. You must select or the . The mode you have selected will appear on the LCD display. To turn a timer "off" permanently, press and hold the timer button that is active until "*Timer A"* or "*Timer B"* and the clock flash and then press the [ALARM] button until both icons disappear. When no icon is displayed on the LCD, the "Timer" will not go off even though an alarm time has been set.

Timer A and *Timer B* work in either the "WORLD" or "LOCAL" time that has been selected as the default time clock, not in the alternate time clock. If you want to change the "Timers" to function on the alternate time clock, you must use the "DUAL TIME" button to change it to be the default time clock. See "**DUAL TIME**" [W/L] on page 8.

⑨ • [TIMER B]

Repeat the same procedure as described for "TIMER A".

⑩ [MEMORY] CHARGE

The "MEMORY" [MEMORY] button has two functions:

1) When the radio is "off" and plugged into the AC Adapter, this button turns "on" the radio's battery charging mode.

BATTERY CHARGING

There is a built in charging system on the CCRadio-SW. **WARNING: DO NOT CHARGE ALKALINE BATTERIES OR OTHER NON-RECHARGEABLE BATTERIES.** If you charge alkaline batteries, they will leak, they will ruin your radio and it will void your warranty. Only use the supplied AC Adapter for charging batteries in this radio.

Using a different AC Adapter could ruin your radio and it will void your warranty.

Charging Rechargeable Batteries:

Select the battery size you would like to charge by using the "BATTERY SIZE" switch ㉖ on the left side of the radio. Install "AA" or "D" size rechargeable batteries such as Nickel Metal Hydride into the "AA" or "D" slots according to the diagram etched in the battery compartment. Be very careful to orientate the batteries correctly as labeled. Connect the radio to power using the supplied AC Adapter. While the radio is "off" and the radio is connected to a power source, press the "CHARGE" MEMORY button. The battery icon will flash during the charge cycle ⚠.

CHARGING TIPS: 1) The charging circuit will not work while the radio is turned "on". The charging cycle will resume when the radio is turned "off" and connected to power with the AC Adapter. 2) The charge cycle shuts "off" after 12 hours whether the batteries are fully charged or not. 12 hours is long enough to fully charge "AA" batteries. High capacity "D" size batteries (9000 MAh) require three or four charge cycles to become fully charged. The charge system is designed to stop charging if an attempt is made to charge an already fully charged battery. **If you attempt to charge dead alkaline batteries, they will leak, they will ruin your radio, and it will void your warranty.**

2) When the radio is "on", pressing and releasing the ⚠ "CHARGE" MEMORY button selects stations stored to the memory presets. See "**MEMORY SET**" (page 11) to store stations to memory presets.

Note: The battery strength indicator is calibrated for alkaline or other single-use batteries. When using rechargeable batteries in this radio, the battery strength indicator will display a fully charged battery at two bars, while alkaline batteries will be displayed at three bars.

⑪ SW BAND SW BAND

This button is best used to quickly step to the beginning of each of the commonly designated **SW** broadcast bands. Example: In the evening turn the "AM/SW BAND" knob ⑯ to "SW1". Press the "SW BAND" button until it reads 9400 on the LCD display. Press and hold the Λ button to start scanning through this **SW** band. Different **SW** Bands work better at different times of the day, year and even solar cycle. (See "Common Shortwave Broadcast Bands" below.) This button can also be used to increment through the **AM** band by 100 kHz steps and the **FM** band by 1000 kHz steps.

COMMON SHORTWAVE BROADCAST BANDS

2300 – 2495	120 Meters		11600 – 12100	25 Meters
3200 – 3400	90 Meters		13570 – 13870	22 Meters
3900 – 4000	75 Meters		15100 – 15800	19 Meters
4750 – 5060	60 Meters		17480 – 17900	16 Meters
5900 – 6200	49 Meters		18900 – 19020	15 Meters
7100 – 7450	41 Meters		21450 – 21850	13 Meters
9400 – 9900	31 Meters		25670 – 26100	11 Meters

⓬ RESET

"RESET" is used to clear up the radio if it should become scrambled and the buttons do not respond, or if you wish to change "AM Tuning Steps". To push the "RESET", use the end of a paperclip and push it into the hole briefly. Stations stored in Memory are saved after you "reset" the radio.

If you change the "AM Tuning Step" switch from 10 kHz to 9 kHz tune spacing, you must press the "RESET" to activate the change after you flip the switch. 9 Kilohertz spacing is used in Europe and many other countries. See "**BATTERY COMPARTMENT**" ㉝ on page 20 for more information on the "AM Tuning Step" switch.

⓭ TUNING DIAL KNOB

The "TUNING" dial has two functions:

1) When the radio is "on", it is used to tune in stations; and
2) When the radio is "off", it can be used to adjust the time for time clocks and alarms. See "**CLOCK SET**" (page 10) and "**ALARM SET**" (page 11).

⓮ DIAL SPEED HOLD SLOW FAST

HOLD

Press and release the HOLD button to disable the "TUNING" dial ⓭. The word *Stop* will appear on the display, indicating the "TUNING" dial has been disabled. This is used to prevent frequency changes with accidental bumps of the dial.

SLOW

Press and release the SLOW button and the word *Slow* will appear on the display. When the radio is in **AM** or **SW** band the "TUNING" dial will the tune in 1kHz steps. In **FM** band it will tune in 10 kHz steps.

This feature is good for fine tuning **AM** reception. You may find the best reception of some **AM** stations is one or two KHz off of the frequency you would expect. It is also good for tuning away from a strong offending station that is next to the station you want on the dial.

FAST

Press and release the FAST button and the word *Fast* will be displayed. When the radio is in **AM** band, the "TUNING" dial ⓭ will now tune in 10 kHz or 9 kHz steps, depending on the "AM Step Switch" ㊳ setting in the battery compartment (page 21). In **SW** band, tuning is 5 kHz steps, and in **FM** band tuning is 100 kHz steps.

This setting may take some time to get use to. It allows fast access across the dial in all frequency ranges.

⓯ VOLUME KNOB

The "VOLUME" dial adjusts volume for the speaker and "HEADPHONE" jack. It does not adjust volume for "LINE OUT" jacks ㉕. Turn the volume down before plugging in headphones.

⓰ BASS KNOB

The best bass response is achieved when the radio is connected to the AC Adapter because of the greater power available. If you turn the bass up full while operating on batteries, the audio will distort. If the bass is kept at a lower level while operating on batteries, distortion will be kept to a minimum. To turn the bass up, rotate the "BASS" knob clockwise.

⓱ TREBLE KNOB

Treble can be used to raise the range of highs to improve music fidelity. It can also be used to adjust for your hearing to make voices more legible. To turn the treble up, rotate the "TREBLE" knob clockwise.

⓲ AM RF GAIN KNOB

The "AM RF GAIN" control is used to:

1) Reduce overload from an overly strong nearby station. If you have background

distortion, try reducing the “AM RF GAIN” for a clearer signal; and

2) Reduce static. When a signal is amplified by the RF amplifier, background noise is generally amplified out of proportion to the audio signal. This is due to the inherent nature of solid state chips. By reducing the “AM RF GAIN” control you can reduce static while keeping a decent audio signal.

TUNING TIP: The “AM RF GAIN” knob should be set to full clockwise to begin. **AM** and **SW** station signal strengths are indicated on the display with signal bar graph. If you experience background noise or overlapping stations when tuning to your station, turn the “AM RF GAIN” down or counter clockwise and it will reduce interference in many cases.

⑲ HEADPHONE JACK

The “HEADPHONE” jack output will be in stereo for **FM** stations that broadcast in stereo. Set “AM/SW–FM” band switch ㉑ to “FM STEREO” position to hear **FM** stations in stereo with headphones. Stereo will be displayed when the “AM/SW–FM” band switch is set to “FM STEREO” and a stereo signal is received.

HEADPHONE JACK TIP: When using headphones, turn down the volume before plugging in headphones.

⑳ AM/SW SWITCH

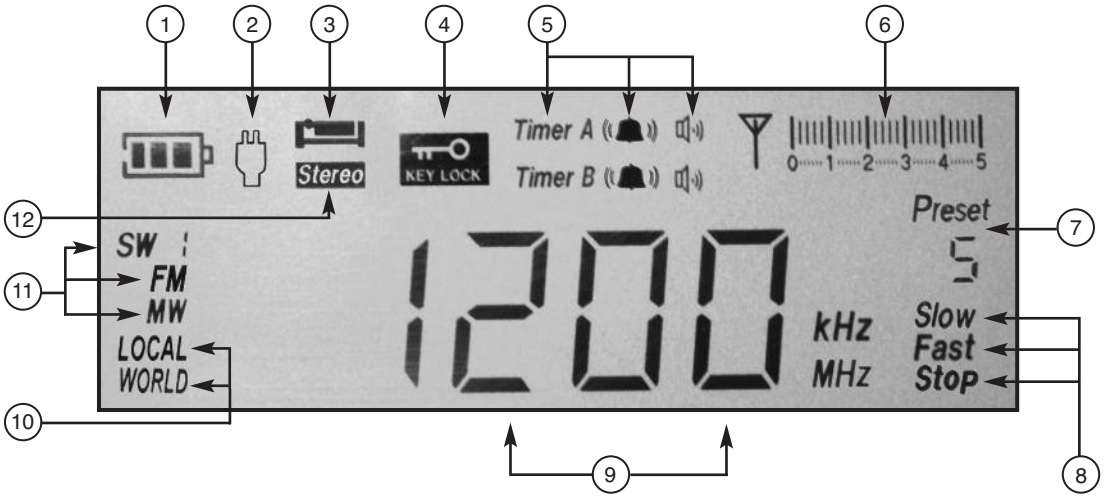
This switch is used with “AM/SW–FM” band switch ㉑ to select **AM** band or **SW** band ranges “SW1”, “SW2” and “SW3”.

㉑ AM/SW–FM BAND SWITCH

This switch is used to select **AM** and **SW** “WIDE” and “NARROW” modes. It is also used to select **FM** “MONO” and “STEREO” modes. The “MONO” setting will give the best reception while listening to a weak station.

TUNING TIP: To tune to **SW**, set this switch to **AM** “WIDE.” Then using the “AM/SW BAND” switch ⑳, select either “SW1”, “SW2” or “SW3”. To tune to **AM**, set this switch to **AM** “WIDE”. Then set the “AM/SW BAND” switch ⑳ to **AM**. If you experience overlapping stations or background noise, try setting the switch to “NARROW”. When tuning **FM** stations, set the switch to “STEREO” only when you are listening with headphones. The word Stereo will be displayed when a stereo signal is received.

㉒ LCD DISPLAY



1) BATTERY Symbol	7) MEMORY Location (1 - 10)
2) AC ADAPTER Symbol	8) DIAL SPEED Indicators
3) SLEEP Timer/SNOOZE Status	9) FREQUENCY/CLOCK Display
4) KEY LOCK On/Off	10) DUAL TIME Indicator
5) ALARM Status and Type	11) Indicates BAND In Use
6) Signal Strength Meter	12) STEREO Reception

㉓ SNOOZE BAR

The “SNOOZE” bar has two functions:

1) The “SNOOZE” bar is used to pause an alarm. See “**SETTING THE ALARM**” on page 11.

   To snooze, press and release the “SNOOZE” bar ㉓ on top of the radio, while the alarm is going off. The alarm icon will flash on the display. Each time the “SNOOZE” bar is pressed, the alarm will be paused for five minutes. You can snooze up to four times and then the alarm will be automatically shut off.

2) When the radio is “off” but power is applied, pressing the “SNOOZE” bar ㉓ turns off the “beep” while using the “HOUR **∧** ” or the “MINUTE **∨** ” buttons. There is still a “beep” when reaching the end of a radio band.

㉔ LIGHT BAR

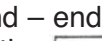
Press and release “LIGHT” bar to turn the LCD display light on for eight seconds. If you want the display light to remain on, press and hold the “LIGHT” bar for 2 seconds or more. Press and release the “LIGHT” button again to turn the LCD display light off.

25 LINE OUT

"LINE OUT" is used to send the radio's audio to an external amplified speaker or stereo system. It is a fixed output level designed to work with external systems. The radio's "VOLUME", "BASS" and "TREBLE" controls do not function when using "LINE OUT" to an external system. An optional patch cord to your amplified speakers or stereo system will be needed for this connection.

LINE OUT TIPS: When using "LINE OUT", set "AM/SW–FM" switch 21 to **FM** "STEREO" position to hear **FM** stations in stereo with external systems. The word Stereo will be displayed when a stereo sign is received.

26 BATTERY SIZE SWITCH ⚠

The "BATTERY SIZE" switch is used to select between "AA" and "D" size batteries. To power the radio with batteries, slide "BATTERY SIZE" switch 26 to the size of battery being used. Insert 4 batteries into the Battery compartment 33, paying close attention to THE orientation of the batteries' + and – ends. The LCD will display a  with fresh, new batteries. When the batteries are low, the  icon will display. If the batteries are too low to run the radio, the  icon will flash on the display, and ultimately, the radio will automatically shut "off".

Batteries are also used to maintain clocks, alarms and station memory settings. When replacing batteries in the radio, it is not necessary to have the AC Adapter plugged in as the radio will hold its memory for several hours before losing them without power.

BATTERY TIPS: Never mix new and used batteries. If you are not going to use the radio for a long time, remove the batteries.

WARNING: Battery charging can be dangerous and can cause batteries to overheat and explode and or leak. THIS RADIO HAS A CHARGING CIRCUIT for both AA and D size batteries. **NEVER CHARGE ALKALINE BATTERIES or other non-rechargeable batteries. Pressing the "MEMORY/CHARGE" button on the front of the radio while the radio is off and the AC Adapter is connected to power, the radio will start the charging process!** See "**BATTERY CHARGING**" (page 12) for proper operation of the charging circuit. See **Safety Instructions** on page 23.

27 DC IN

The "DC IN" jack is used to power the radio with the AC Adapter. Only use the AC Adapter supplied by the manufacturer to power this radio. When the AC Adapter is used the will appear on the LCD display. If batteries are installed and the AC Adapter is plugged in, the  icon will be replaced by the Adapter icon . If power to the AC Adapter is cut off, the radio will automatically switch to batteries and the  will again reappear in the display.

㉘ RADIO HANDLE

The handle is made of a special, high-tensile strength plastic to resist breakage. It is designed to fold down when not in use.

㉙ KEY LIGHT SWITCH

Setting the “KEY LIGHT” switch to “on” turns the button back light function “on”. When this switch is “on”, the front panel buttons will light for 8 seconds when any button is pressed.

KEY LIGHT TIP: If you are running the radio on batteries, you may want to keep the key light switch “off” to conserve battery power.

㉚ AM SENS (SENSITIVITY) SWITCH

The “AM SENSITIVITY” switch has two positions: “DISTANT” and “LOCAL”.

Set “AM SENSITIVITY” switch to “DISTANT” to enhance signal strength for weak and long distance stations. If you have distortion or stations overlapping, set the switch to “LOCAL”.

㉛ FM/SW ANTENNA SWITCH

The “FM/SW ANTENNA” switch has two positions: “INTERNAL” and “EXTERNAL”.

When “FM/SW ANTENNA” switch is set to “INTERNAL” the radio uses the “Whip Antenna ㉜ to receive **FM** and **SW** stations. For best reception, extend the “Whip Antenna” fully and try rotating it into different positions. It is best to try the radio with the “Whip Antenna” first. Then try using external antennas if stations are weak or hard to receive.

When the “FM/SW ANTENNA” switch is set to “EXTERNAL” you must connect another antenna to the “FM/SW EXTERNAL ANTENNA” jack ㊲. For best reception, different types of antennas are used for **FM** and **SW**. For **FM** we recommend beginning with C. Crane’s FM Reflect Antenna. **SW** can be greatly improved with the addition of a simple antenna. A small diameter stranded wire, about 60 feet in length is a good place to start.

FM/SW ANTENNA TIP: Set “AM SENSITIVITY” switch ㉚ to “DISTANT” to start when using external antennas.

㉜ WHIP ANTENNA

The “Whip Antenna” is used to receive **FM** and **SW** stations. For best reception with the “Whip

Antenna", set "FM/SW ANTENNA" switch ㉛ to "INTERNAL", extend the "Whip Antenna" fully and try rotating it into different positions. It is best to try the radio with the "Whip Antenna" first. While on **FM**, try collapsing the last two telescopic elements for better reception. This length resonates better with **FM** band frequencies. Then try using external antennas if stations are weak or hard to receive.

㉝ BATTERY COMPARTMENT

The battery compartment will accept 4 "AA" or 4 "D" size batteries. Recommendation: Use "D" size if you plan to operate the radio primarily on battery power. You can use "AA" size for emergency backup when you plan to operate the radio primarily with the AC Adapter. See "**BATTERY SIZE**" switch ㉖ on page 18 for battery size selection.

***WARNING:* Battery charging can be dangerous and can cause batteries to overheat and explode and or leak. THIS RADIO HAS A CHARGING CIRCUIT for both AA and D size batteries. NEVER CHARGE ALKALINE BATTERIES or other non-rechargeable batteries. Pressing the "MEMORY/CHARGE" button on the front of the radio while the radio is connected to the AC Adapter will start the charging process!** See BATTERY CHARGING on page 12 for proper operation of the charging circuit. See Safety Instructions on page 23.

The "AM TUNING STEP" switch ㊳ is also located in the battery compartment. Set this switch to 10K tuning steps for the United States. 9 K tuning steps are used in Europe and many other countries.

NOTE: If you change the "AM TUNING STEP" switch you must press the "RESET" to activate the change. See "**RESET**" ⑫ on page 14 for more information.

㉞ AM IF OUT JACK

The "AM IF OUT" jack is used for **AM**, **SW1**, **SW2**, and **SW3** only.

This an interesting feature if you are a radio experimenter. There are many different digital formats that are currently being broadcast such as weather, marine, aeronautical information, and a digital **SW** format called DRM. You can use the CCRadio SW to tune in these digital broadcasts and input them into your computer for deciphering. You can search the internet for free utility programs to decode these broadcasts. For long range broadcasts, **SW** is the only frequency range that can cover hundreds and even thousands of miles.

To connect to this jack, a PAL type connector is needed. See PAL connector assembly on page 22.

㉟ MW (AM) EXTERNAL ANTENNA

If you are in a brick or metal building, **AM** can be greatly improved with the addition of a sim-

ple antenna. A small diameter insulated stranded wire, about 60 feet in length is a good place to start. Antenna wire can be attached by pressing the spring loaded lever and inserting the wire. See “GROUND” jack ㊱ to complete the antenna. If you are not familiar with external wires we recommend hiring a qualified installer. See **Safety Instructions** on page 23.

NOTE: **AM** as we commonly call it in the United States is MW or Medium Wave in the rest of the world.

㊱ GROUND JACK

The “GROUND” jack is used with the “MW (**AM**) EXTERNAL ANTENNA” jack ㉟. Attach one end of a length of wire to the “GROUND” jack and the other end to a good earth ground. See “MW (**AM**) EXTERNAL ANTENNA” jack ㉟ above for more information.

㊲ FM/SW EXTERNAL JACK

See “**FM/SW ANTENNA**” switch ㉛ on page 19 for more information. To connect to this jack, a PAL type connector is needed.

Specifications

DIMENSIONS
11.4" W x 7.3" H x 2.75" D
(290mm x 185mm x 70mm)

WEIGHT
4.5 pounds without batteries

INPUT POWER
4 “AA” or 4 “D” size batteries
9V DC 500mA tip negative

AUDIO OUTPUT
2.5 Watt

SPEAKER
5 Watt 8 ohm

HEADPHONE JACK
3.5mm 32 ohm

AM DUAL CONVERSION
55.845 MHz 1st IF
455 kHz 2nd IF

AM IF OUTPUT
For expansion of
CW, SSB, DRM, SSTV, etc.

FREQUENCY COVERAGE

FM Band:	87.00 - 108 MHz Stereo
AM (MW) Band:	522 - 1620 kHz (9 kHz step)
AM (MW) Band:	520 - 1710 kHz (10 kHz step)
SW1 Band:	1711 - 10010 kHz
SW2 Band:	9990 - 20010 kHz
SW3 Band:	199901 - 29999 kHz

TUNING
AM — 10 kHz - 9 kHz
FM — 50 kHz

SENSITIVITY
FM > 5uv
MW > 0.2 mV/m
SW >20 uv

SELECTIVITY
Wide > 40 db (100x)
Narrow > 60 db (1000x)

MEMORY PRESETS
50 Total (10 Per Band)

Note: Specifications are subject to change without notice.

Troubleshooting Guide

The CCRadio SW will not turn on:

1. Make sure the “LOCK” is off.
2. Check the “BATTERY SELECTION” switch to make sure it is in the proper position.
3. Be sure that the batteries are installed correctly.
4. Make sure all batteries are good.
5. If using the AC Adapter, make sure that it is plugged fully into the power jack.

The CCRadio SW has poor reception on FM and SW:

1. Check the “FM/SW ANTENNA” switch on the right side of the radio for the proper setting.
2. Check the position of the “AM SENSITIVITY” switch for “LOCAL” or “DISTANT” setting.
3. Check the position of the “AM RF GAIN” control. It should be fully clockwise.

The CCRadio SW has poor reception on AM:

1. Check the position of the “AM RF GAIN” control. It should be fully clockwise.
2. Rotate the radio for the best reception.
3. Concrete, brick, and metal buildings can greatly reduce radio reception. Try the radio outside. If the reception is improved, add an external AM antenna like C. Crane’s Twin Coil Ferrite™ AM Antenna or see feature ㉟ on page 20.

I changed the “AM Tuning Steps” from 10 kHz to 9 kHz, but my radio does not respond:

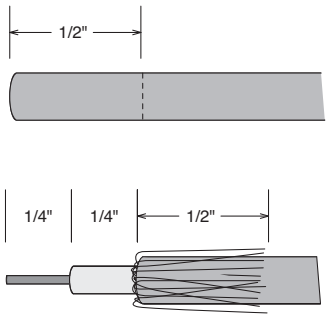
You must press the “RESET” to activate the change. To press the “RESET”, use the end of a paperclip and push it into the hole briefly.

The Battery Strength Indicator does not display a full battery icon when using rechargeable batteries:

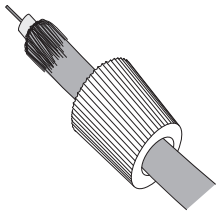
The battery strength indicator is calibrated for alkaline or other single-use batteries. When using rechargeable batteries in this radio, the battery strength indicator will display a fully charged battery at two bars, while alkaline batteries will be displayed at three bars.

PAL Connector Assembly

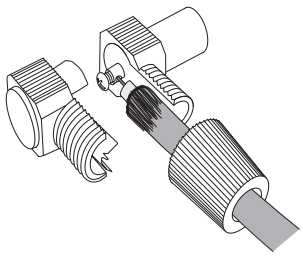
1 *RG 59 Cable*



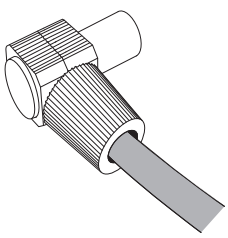
2



3



4



Safety Instructions

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 your radio. Keep these precautions and instructions where all who use this radio will read them.

1) COMMON CARE ⚠
Check the radio, AC adapter, batteries 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 the manufacturer.

2) BATTERY CHARGING ⚠
Battery charging can be dangerous and can cause batteries to overheat and explode and/or leak. THIS RADIO HAS A CHARGING CIRCUIT for both AA and D size batteries. **NEVER CHARGE ALKALINE BATTERIES OR other non-rechargeable batteries.** Pressing the "MEMORY/CHARGE" button on the front of the radio while the radio is connected to the AC Adapter will start the charging process! See BATTERY CHARGING (page 13) for proper operation of the charging circuit.

3) PROPER BATTERY HANDLING
Never mix different type of batteries or use old batteries with new. This may cause the batteries to leak or explode. Dead batteries are prone to leakage. Remove the batteries when no charge remains. Orientate the batteries correctly in the unit according to the diagram. Do not store batteries with metal objects like paper clips. We recommend you remove batteries from the radio if you are not going to use the radio for one month or more.

4) DISCONNECT THE RADIO IN CASE OF MALFUNCTION ⚠
If you smell or notice smoke, disconnect the AC adapter and remove the batteries immediately taking care to avoid burns. Contact C. Crane Company or their representative for inspection and service before any future operation. Only use the AC adapter supplied with the unit and replace it if wires become frayed or exposed.

5) KEEP OUT OF REACH OF CHILDREN ⚠
The radio is heavy, especially when batteries are installed. Use only on a stable level surface. 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.

6) 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. To clean radio, remove the power and use a damp cloth on the exterior only.

7) 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 or very cold temperatures.

8) 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.

9) OUTSIDE ANTENNAS OR CABLES ⚠
Outside antennas or cables should not be used with this radio unless installed by qualified personnel.

Model: CCRadio SW
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 UNDESIRED
OPERATION.

Notice: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.