

## CC Radio-SW AM/FM/Shortwave Portable Radio

By Larry Van Horn N5FPW (Photos courtesy of the manufacturer)

If you are into radios, you probably have heard of the C.Crane Company, based in Fortuna, California. Founded in 1976 by Bob and Susan Crane, the company was initially a furniture design and manufacturing business and only switched to being an electronics distributor in 1983.

From those humble beginnings, with their first electronics product, the "Select-A-Tenna," the company eventually expanded into the portable AM/FM marketplace, selling popular radios such as the GE Superradio. Eventually, C. Crane began to produce its own radios in collaboration with Sangean and other companies.

Their latest portable continues a long tradition of excellent AM/FM portable radios and now includes a unit that covers the shortwave radio spectrum.

The CCRadio-SW AM/FM/Shortwave Radio is one of the better portable radios to come out of Fortuna in a long time. It is a U.S. consumer version of the Redsun RP2100 AM/FM/shortwave portable.

### ❖ What's in the Box?

The unit we received was well packaged and was received undamaged in shipment. Inside the box we found the following:

- CC Radio-SW
- AC Power Adapter
- Two PAL Antenna Connectors
- Printed Instruction Manual
- One Year Limited Warranty

Optional accessories for this radio include the CCRadio-SW carrying case (\$30) and reel antenna (\$20). C.Crane recently announced that the acrylic radio stand accessory is sold out and is no longer being included free with the purchase of this radio.

The manual is well written, clear and straightforward in the use of this radio. This radio is very easy to use so I have not needed to refer at all to the manual for normal operations.

And, that's one of the things that really strikes me about the CCRadio-SW; its sheer ease of use. The design is simple, ergonomic and effective. It's very well built and the hard plastic carrying handle gives the radio a solid feel.

The front panel contains the large tuning knob; to its left are the mode and band selector knobs with the volume control at the bottom. The smaller knobs at the lower left are RF gain, treble and bass. There's a one-eighth inch stereo mini-jack for headphones in the lower left front corner.

At the top right of the tuning knob are three buttons for Power/Sleep, Local/World Time and Lock, which disables all functions except the

light switch. You can display world or local time momentarily while the radio is on.

Above the tuning knob are three push-buttons: Hold (a tuning lock) as well as slow and fast tuning. To the right, a group of eight push-buttons control down and up tuning and seek (both of those buttons double as minute/hour controls by a pressing and holding for the second function). There are also memory set, alarm, timers A and B and SW bandswitch buttons.

The back panel contains two PAL connectors: One is for an external FM/SW antenna input and the other is an AM IF output jack for connection to an outboard SSB or DRM decoder. There are also two spring-loaded connectors to aid in hooking up an external medium wave broadcast band (AM) antenna. Inside the battery compartment you can use two different sized batteries to power this radio; it has a 9/10 kHz MW step selection switch as well.



On the top panel of the radio there is a light switch (which can turn the lights on for eight seconds or lock it on) and a snooze bar (pressing it with the radio off defeats the key beep feature).

The left side of the radio contains two RCA stereo line out jacks, a AA or D battery selector switch, and DC/AC power input jacks.

The right side contains switches for button lights, DX/Local and internal/external antennas. The button light switch illuminates the push buttons on the front of the radio when the dial light is on.

The unit has a built-in Twin Coil Ferrite® AM Antenna that provides excellent AM reception in the same class as C.Crane's legendary CCRadio portables.

The CCRadio-SW comes with a large, easy-to-read LCD display that can be illuminated, but that illumination is not the best I have seen. More on this topic later.



### ❖ A Lot of Features for the Money

Here are some of the outstanding features found on the CCRadio-SW radio: a real RF gain control (not just a selectable attenuation switch), bandwidth control, bass and treble controls, fast and slow tuning buttons, 50 memory presets, lighted buttons, clock radio with snooze alarm, stereo line output and headphone jack, IF output for input to a computer. This radio runs on four D-batteries or four backup AA-batteries (simultaneously if you wish, but the unit will not run for long on the AA batteries). There is a built-in charging circuit that will recharge optional NiMH batteries inside the radio, saving you both time and money. Batteries are not included.

### ❖ Performance

If you're not as concerned about portability, the C.Crane CCRadio-SW is an excellent value for performance. Think of the CCRadio-SW as a medium size (11.25-inches wide x 7.25-inches high x 3.5-inches deep) portable or table radio. You won't be stashing this one in a carry on bag, but I do throw it in my regular luggage when I take a trip.

What makes this radio stand out from its peers? It has truly exceptional audio fidelity. The large five inch built-in speaker utilizes separate treble and bass controls. The sound is rich and warm and very 'listenable' for extended periods and this radio's audio will fill a large room.

No, it obviously does not have stereo speakers (you can listen to stereo through headphones or line-out), but it is one of the best sounding radios I have heard in this price category. On FM, it is easily comparable to the Bose Wave Radio that a friend of mine has at his home. The speaker and audio quality are really that good.

This unit has excellent AM reception that is almost equal to the legendary Panasonic RF-2200 and Sony 2010 portables, both of which I also own. This radio has nearly the best, if not the best AM reception (internal antenna) of any current production portable radio selling for less than \$300 in the marketplace.

The FM band reception is nearly the best I've ever experienced in almost any portable I have tested. It is actually better than my Sony 2010 or an older Panasonic portable that I have been using for FM DXing off the telescoping whip antenna. With strong FM reception, it does not even need the telescopic whip fully extended to grab fringe area stations. You most likely will not even have to raise the whip for stations located within 50 miles of your location depending on the FM station power output.

Shortwave sensitivity is very good. In fact,

it is much better than some of the Sangean portables I have tested or owned and even somewhat better than my venerable Sony 2010 portable.

## ❖ Negatives?

You know I won't let any review here in the *MT First Look* columns get through without at least a few negatives. Surprisingly, given that this radio is a portable and sells for around \$140, I didn't have many negatives.

The CCRadio-SW does not have direct keying to enter frequencies. However, the tuning/seek and SW band buttons helped speed things up when changing frequencies/bands.

This radio delivers stereo FM to the headphone and line out jacks, but be sure to keep the FM stereo/mono switch in mono at all times when using the radio with its built-in speaker. If you are listening to a stereo signal via the speaker, and the stereo position is selected, only one channel of audio will be heard. I never figured out which channel left or right, but one was definitely missing.

Quite frankly the LCD illumination on this radio is dim. This appears to be because only the left side of the unit we tested appeared to have light coming from it. It is good enough to let you operate the radio in the dark, but it's difficult to tell if the lights are on under typical room lighting. Other portables I have tested fared better in the regard. I do like the lighted buttons on this unit.

Speaking of buttons, the push buttons on the unit I tested require solid pushes. These are click style buttons, but the click does not necessarily indicate that the switch has been activated. You need to hold these buttons down briefly to get the function to activate. It's not a problem once you get used to it, but quick taps on the switches will be ignored.

This radio does not have single sideband built in. However, it does have impressive array of external connections, including an IF out connection, which (with an IF converter and some free software) will allow you to interpret SSB and an array of digital signals including DRM (Digital Radio Mondial).

One really strange quirk I found was with the battery level indication. The level indication appears to be rather conservative. It is a three-segment meter, but the third segment drops out rather quickly after new batteries are installed. Strangely, at times it will come back to three full bars when certain stations at certain signal levels are received. It is as though it is measuring battery current flow under load instead of battery power left in the tank, so to speak. Again, this is not a big problem nor a show stopper.

## ❖ Bottom Line

In conclusion, if you want a top-notch performing portable radio—and by top notch I mean powerful audio, great RF sensitivity on all bands, two well-chosen bandwidths for AM and SW, a convenient handle, many power options, a feel of solidity and quality and fairly simple operation—then this is it. If you are looking to purchase another portable and you already have a Grundig, or similar brand, you may want to



give the CC Radio-SW a try.

This phenomenal radio offers the best combination of sensitivity, selectivity and audio performance ever for any radio of this size and price range. Shortwave is excellent right off the whip antenna. The five-inch speaker is accurate, pleasant and reproduces deeper bass than any portable of similar size.

This radio offers absolutely superb overall performance at a \$140 price tag. I highly recommend purchasing the CCRadio-SW directly from C. Crane or from Grove Enterprises instead of a third party in case there are any warranty return issues after purchase.

### CCRadio-SW AM/FM/Shortwave Radio Specifications

#### Frequency Coverage

AM broadcast band 520 - 1710 kHz (using 10-kHz steps) or 522 - 1620 kHz (using 9-kHz steps); FM broadcast band 87.0 - 108.0 MHz; and shortwave - SW1 1.711 to 10.010 MHz; SW2 9.990 - 20.010 MHz; SW3 19.990 - 29.999 MHz

Memory presets: 50 Total (10 per band)

Controls: RF Gain, bandwidth, bass and treble, fast/slow tuning

Rotary tuning knob resolution: AM 1 kHz, 9 kHz or 10 kHz; FM 10 kHz or 100 kHz; SW 1 kHz or 5 kHz  
Tuning steps: AM 10 kHz or 9 kHz steps; FM 100 kHz steps and SW 5 kHz steps

AM Dual Conversion: 55.845 MHz 1st IF; 455 kHz 2nd IF

AM IF Output: For input into a computer for decoding DRM, SSTV, SSB, CW and more.

Sensitivity: AM 0.2 mV/m; FM > 5 uV and SW > 20 uV  
Selectivity (Wide): Wide > 40 db (100x) and Narrow > 60 db (1000x)

AM Antenna: Internal ferrite bar 6.3-inches long with Twin Coil Ferrite® technology

FM/SW Antenna: Telescopic whip antenna

External antenna terminals: AM Spring loaded wire terminals and an FM/SW PAL connector

Line Out Jack: Dual RCA

FM Stereo/Mono Switch Yes

Earphone Jack: 1/8-inch (3.5mm) 32 ohm stereo jack

Audio Output: 2.5 Watts

Speaker: 5-inch, 8 ohms  
Large, easy-to-read lighted digital LCD display  
Clock 12/24 hour modes

Alarm: Dual (Buzzer or Radio) with five minute snooze and a sleep timer with nine operational settings: 90, 60, 45, 30, 15, 10, 5, 1 (minutes) and "ON" (continuous).

Batteries: Four AA or D size and the unit has a built-in charging circuit that will recharge optional NiMH batteries. (No batteries are included)

Input power: AC adapter 9-VDC 500 mA tip negative  
Weight: 4.2 lbs.

Dimensions: 11.25-inches wide by 7.25-inches high (9-inches high with handle) by 3.5-inches deep

Warranty: One year limited warranty

Note: Specifications are subject to change without notice



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