



SWLing on the Road with Sony's XR-CA660X

By Ken Reitz KS4ZR

I have to admit that I'm a refugee from satellite radio. For years I've had either Sirius or XM units in the car, but, as time passed and subscription fees climbed, I called it quits and sought an alternative. As a lifelong SWLer, I was disappointed in the lack of international broadcasters on either satellite service. Sure, XM carries the BBC World Service, and Sirius carries a truncated version as well as the wheel of rebroadcasts from World Radio Network. And, just recently, Sirius added CBC Radio One and CBC Premiere Plus, while XM added Canada 360 and Franc Parler. But, I was looking for more diversity, a wider range of broadcasters, some really esoteric music and an end to "cable's disease," constantly rising monthly rates. That's why I turned to old fashioned shortwave radio in the car.

Over the years I've looked at mobile SWLing using portable shortwave radios, downconverters (tuning devices which convert your existing in-dash AM radio to tune the shortwave bands), even mounting my general coverage ham transceiver in the car. But, they all had drawbacks. I found that portable radios were cumbersome, not easily tuned, poor audio quality and susceptible to ignition and other electrical noise. The downconverters were easy to mount and hook up, but most were also susceptible to ignition noise and required a certain amount of mathematical gymnastics to determine the frequency.

With the exception of the LFB Short Wave Converter* most were also poor performers. The ham transceiver was very sensitive but was bulky, not easily mounted (and a high risk of theft), suffered from poor audio but was less susceptible to ignition noise. The only thing left to do was to install a real in-dash AM/FM/SW radio.

❖ Stalking the Elusive In-Dash SW Radio

You might think that finding a shortwave radio for your car would be as simple as going to your local consumer electronics superstore. But, today there are only two manufacturers of in-dash shortwave radios: Becker and Sony. Both are hard to find.

Several dealers in the U.K. are selling the Becker Mexico Pro line. Cost is around \$450 (U.S.) plus ship-

ping. The Becker's price is high and SW coverage limited, so I checked out what Sony had to offer. In North America there is only one Sony dealer still selling in-dash AM/FM/SW radios: Durham Radio in Ontario, Canada. Worldwide, the only other Sony dealer selling these radios is an on-line retailer in the United Arab Emirates called Jacky's. Jacky's price is considerably cheaper, but the express shipping and customs duties make the final price more expensive than Durham Radio.

Durham Radio sells their products at www.shortwavestore.com. They stock two similar radios but with a \$100 price difference. The Sony XR-CA660 is identical to the Sony XRF5100 except that it tunes the AM band in 9 kHz steps instead of 10 kHz steps (the XRF5100 is actually switchable between the two steps). It also tunes only to 1620 kHz, whereas the XRF5100 tunes to 1710 kHz.

I've done a lot of AM band DXing in my time, but not in the car. My own interests were being able to receive the FM and SW bands, so I opted to save the \$100. But if you feel you need the AM capability, you should opt for XRF5100. Both radios replace previous models and are in keeping with Sony's policy of changing the face plates and various features every couple of years to "update" the line. Both feature built-in cassette decks which, if nothing else, may be used to play satellite radio, MP3 players or iPods in the car.

I ordered the XR-CA660 from TheShortwaveStore.com and received the unit 7 days later. Total cost, including shipping was \$204. After taking the unit out of the box and perus-



Use small wire nuts to connect the new wiring harness to your stock speaker and power wires. Installing the radio requires patience and a couple of hours of your weekend. (Courtesy: Author)

ing the installation manual, it was time for the hardest part of this project: in-dash installation.

❖ A Wiring Nightmare

I put my radio in a 1985 Toyota Celica, a relic from days gone by before auto designers made it very hard for consumers to do their own radio installations. If you can't do the installation yourself or simply don't want to risk making a complete mess of the installation, take it to a local auto sound installer.

Once I pulled the radio out of the center console I found there was a rat's nest of wires. Before I did anything else, I tagged each of the wires and then cut them from the harness plug which did not fit the input on the new radio. To my horror, I found that none of the wire colors on the old radio seemed to match the wire color scheme on the new radio.

Later, I also found out that snap-on wire harnesses are commercially available which convert the old wiring harness to adapt to the new wiring system. No cutting necessary!

But if you find, as I did, that such a harness may not be available for your car, don't panic! Go to www.installdr.com. Yes, the good doctor has a wealth of car radio installation advice including a page which shows the wire colors for virtually any car and the typical color equivalent for the new radio. With a printout for my car in hand I went back to the project with renewed confidence.

The first thing you have to do is



Sony XR-CA660X AM/FM/SW radio brings two bands of shortwave listening and great audio at a reasonable price. Has built-in cassette deck and detachable front panel. (Courtesy: Durham Radio)



Sony XR-CA660X installed in-dash and tuned to BBC World Service to Africa on 15.400 MHz. Clean lines, easy operating and excellent sound quality are Sony hallmarks. (Courtesy: Author)

determine which wire carries the main 12 volts D.C. to power the radio. There will also be a 12 volt line to the ACC position on the ignition which allows you to have the radio on without turning on the engine. Use a volt meter to find these wires. Before you connect any wires, make sure the black ground wire is attached first to a metal component connected to the chassis. This may prevent accidental shorts while you're sorting out the wires.

Next, bundle wires you know you won't be using, such as amp and CD changer controls, etc. to get them out of the way. When you find the correct matching wires, strip about a quarter inch insulation from the ends and twist the two together. I used small wire nuts to secure the connection, though you can use electrical tape instead. Tug on the wire nut to make sure it's secure. When you're hooking up the wires make sure the key is out of the ignition.

Once you have all the wires connected (don't forget to attach the antenna!), slip the plug into the back of the radio and get ready for the smoke test. Turn the key to ACC and the unit should come to life. When I did there was sound coming from one of the four speakers and the display on the radio read FAILURE. Not a good sign.

A quick check with the owner's manual (which is in English and Arabic) showed that the display meant that the speakers were not hooked up properly. I believe this stemmed from a difference of opinion between **installdr.com** and me as to which colors were pink, purple and green. After some trial and error among the 12 remaining wire options, I hit pay dirt and all four speakers were working.

❖ The XR-CA660 in Action

Like most car audio products today, this radio comes with a credit card sized IR remote control, though all the functions are easily done via the radio's detachable front panel. In fact, the controls for this radio are nearly identical to other Sony radio products. Among the amenities of this particular radio are a three-band equalizer (fancy bass/treble controls); three FM band selections with six pre-sets each (considerably more than most will need); the aforementioned MW band (also

six pre-sets) and two bands of shortwave, each with six pre-sets. There are a few other controls for use with optional out-board amps and CD changers (though they will only be compatible with Sony products) as well as advanced features for the cassette deck, if you actually have cassettes.

I found reception on the FM band equal or better than any other in-dash receiver I've used. The audio was excellent, the equalization scheme easy to adjust and made some difference in listening pleasure. The cassette player is great. It has a snappy drive motor which can zip you to the end of a tape in a hurry. The

amp in this unit is capable of delivering excellent audio. The limits will be in your speaker system: the better the speakers the better the sound.

You might be skeptical of a shortwave radio using only a 29-inch whip, but since this is essentially what most portables use you won't be surprised to learn that it does very well picking up the traditional international powerhouses. This radio has two "bands" which are SW1 (2.940-7.735 MHz) and SW2 (9.500-18.135 MHz with a gap between 10.140 and 11.575 MHz). You can think of these bands as "day" and "night" bands, with the higher frequency band most active in daytime and the lower frequency band more active at night.

Now, Sony doesn't want you to be tuning the radio hunting DX when you're supposed to be driving, so tuning is done via the "seek" button. Pressing the "mode" button a few times eventually brings the radio to the SW1. Press either the "seek +" or "seek -" buttons and the unit tunes up or down the band. Press the mode button once more and you're on SW2. Again the "seek +" or "seek -" does the tuning. Save any station received by pressing and holding one of the six preset buttons.

Sony set the receive sensitivity at just the right level. It will pick up fairly weak stations but won't stop at every spike of atmospheric noise. When it lands on a station, the exact frequency is indicated on the front display. It was afternoon by the time I finished the installation. SW1 was fairly dead, but the first pass through SW2 netted Radio Netherlands at 17.735, VOA's Africa service at 15.580 and 15.240, WWV at 15.000, BBC's Africa service at 12.095 and 15.400.

In the morning Radio Canada International's service to North America on 9515 comes in with the power of a local station. All your state-side favorites such as WWCR, WWRB and WYFR are easily heard. Devotees of the late Dr. Scott can catch his recorded teachings 24/7 from the car. Spanish speakers will enjoy tuning into live World Cup action this summer as many stations will be carrying the play-by-play.

It's one thing to sit in your driveway tuning the bands with the engine off and another to be out on the highway where your ears

have to compete with local electrical and road noise. The weaker stations were less audible in the noise, but the powerful internationals came right through without a problem. Ignition noise was not apparent.

There was, of course, the typical signal fading, a trademark of SWLing, and in the summer you can expect to hear a certain amount of atmospheric static, too. But, to many of us that's part of the charm of analog SWLing. If you listen to shortwave broadcasts for content, you'll be really happy with either Sony product. And, if you speak French, Spanish, German, Portuguese, or Arabic, or are a student of any one of these languages, this radio is a great language skills builder. It's possible that future generations of either version will add an MP3 or iPod input on the front panel and a CD slot to replace the cassette. But, that may be years in coming.

AVAILABLE FROM:

Durham Radio Sales & Service, Inc.
10-1380 Hopkins Street
Whitby, Ontario, Canada L1N 2C3
888-426-1699 www.shortwavestore.com
They carry both the XRF5100 (\$289) and XR-CA660 (\$189) plus shipping (about \$15 to U.S. East Coast)

MANUFACTURERS SPECS:

Sony XRF5100 and XR-CA660X
Tuning Range:
AM: (XRF5100): 530-1710 kHz (9 or 10 kHz steps switchable)
(XR-CA660X): 531-1602 kHz (9 kHz steps)
FM: 87.5-108 MHz
SW1: 2.940-7.735 MHz
SW2: 9.500-18.135 MHz
(except for 10.140-11.575 MHz)
Size: 7-1/8" x 2" x 7"
Antenna connector: Motorola
Price: XRF5100 \$289.00 (U.S.) plus shipping (about \$15)
XR-CA660X \$189.00 (U.S.) plus shipping (about \$15)

**LFB Short Wave Converter is made in Brazil. Cost is \$140 + \$15 Shipping. Contact: Luis Loeff angel@tsp.com.br Website: www.angelfire.com/ia/lfb (Review: MT Nov. 2001 page 84)*

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