



PCARA Update



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New year cast-off

Have you carefully combed through your extensive collection of electronic flotsam and jetsam for gems to



Bring your flotsam and jetsam to the PCARA auction.

bring to the *Second Annual PCARA Bring and Buy Auction*? If not, what are you waiting for? The auction is only a week away and throngs of amateurs are anxiously wringing their hands in expectant anticipation of acquiring some diamonds in the rough, just waiting to be freed

from their idle existence. Sotheby's of Peekskill/Cortlandt will be auctioning off these treasures at the January 4, 2009 meeting at Hudson Valley Hospital Center. If you have any questions regarding the PCARA Bring and Buy Auction, please contact Malcolm, NM9J.



View of the PCARA holiday meal held "At the Reef" restaurant on Sunday December 7 2008.

The 2008 PCARA Holiday Dinner at *At the Reef* in Annsville was a big success! Thanks to Marylyn, KC2NKH and Ray, W2CH, the evening went off without a hitch. It was **by far** the best attended Holiday

Dinner in the eight year history of the event. **Thank you** Marylyn and Ray!

We have a new year ahead of us and as in years past, I'm asking each of you to bring your thoughts and ideas for the future of PCARA to the January 4th meeting at 3:00 p.m. at Hudson Valley Hospital Center.

To each of you, your families, and loved ones, I wish a very Happy, Healthy, Joyous, and Blessed New Year!

- 73 de Greg, KB2CQE

PCARA Officers

President:

Greg Appleyard, KB2CQE, kb2cq at arrl.net

Vice President:

Joe Calabrese, WA2MCR; wa2mcr at arrl.net

Net night

Peekskill/Cortlandt Amateur Radio Association holds a weekly net on the 146.67 MHz W2NYW repeater on Thursdays at 8:00 p.m. Join net control Karl, N2KZ for neighborly news and technical topics.

(Note: the PCARA net has been postponed for the holiday dates of Thursday December 25 and Thursday January 1.)

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Adventures in DXing

– N2KZ

New Year Resolutions

Happy New Year everyone! The beginning of a new year often brings to mind and heart a wave of inspiration and ambition. There is no need to wait! Your hobby needs you! (and it's a lot more fun than losing weight or cleaning out your garage!) Here are some suggestions for amateur radio fun in 2009:

A QSO a day: It sounds simple and easy, but it's actually quite a commitment! Don't worry what band or mode you are on! Get on the air! Extra credit will be given if you use the privileges gained by your license class. Are you a new Technician? Get on HF by using CW! Have you just become a General? Get on HF phone or QRO CW. Did you finally make it to Extra? Use the first 25 kHz of the HF CW bands or the exclusive Extra Class phone allocations to make extraordinary DX catches. Other hams are eager to work you. Hurry up! They are waiting!

Build your future: A QRP transceiver kit might be just the uplift you need to rekindle your interest in homebrewing. Highly recommended are the kits available from Dave Benson, K1SWL (see <http://www.smallwonderlabs.com>). If you are not ready for soldering practice, how about building



Dave Benson, K1SWL

a new antenna? Certainly something around you needs improvement! Just give some thought to your ham radio world and think what you could do!

Try a new band!

Try a new mode! When was the last time you operated on 220 MHz or 160 meters?!) Have you tried



How about building a new antenna? Here's Joe WA2MCR constructing a 1.8 MHz inverted L ground plane for the ARRL 160 meter contest in December.



Screen shot of Digipan software, decoding PSK31 transmissions on 20 meters.

60 meters yet? (See? Now you need a new antenna!) Simple computer interfaces will allow you to launch into new modes like PSK31 or RTTY with ease. To listen to PSK31, all you need is a free software download (<http://www.digipan.net>) and one cable between your receiver and your computer's sound card. Spend some time as a listener and you'll certainly be inspired to participate. Look for PSK31 on 3580, 7035 and 14070 kHz, sit back and enjoy!

Find new adventure: Attend a PCARA meeting on the first Sunday of every month at 3 pm at the Hudson Valley Hospital Center in Peekskill. Hop on to The Old Goat's Net on the PCARA repeater on Thursday nights at 8 pm (146.67 MHz.) Join us for ARRL Field Day on June 27 and 28. It's only six months away! Too long to wait? The ARRL VHF Sweepstakes is held January 17-19 (<http://www.arrl.org/contests/rules/2009/jan-vhf-ss.html>.) Jump on to six or two meters and see how far you can reach! What a great way to increase your grid square totals!

More than anything else: Have fun! Amateur radio is a diverse hobby with many modes and bands to discover and endless activities to enjoy. Over 600,000 Americans agree and they are all out there waiting to join you. Fill up your logbook this year and have a great time doing it. Don't let the world pass you by! Get on the air now!

That's Entertainment!

Looking for entertainment during the solar minimum? Are dead bands getting you down? Two websites have recently appeared bringing smiles to idle amateurs worldwide. Take a look at [!\[\]\(166772600a13ad0a433053f90fe45649_img.jpg\)](http://</p></div><div data-bbox=)

www.hamradiotube.com for an enormous collection of short films all about radio and technology. Want to watch TV classics like Herman Munster calling CQ? How about a tour of the Ten-Tec manufacturing plant in Tennessee? You can also watch the world of television come alive at the 1939 World's Fair. A similar site, <http://www.cqtube.com> has a smaller similar collection of amateur radio films.

Of course, you can also find oodles of amateur radio content on YouTube. One of my favorites is how not to put up an antenna on Field Day: <http://www.youtube.com/watch?v=PqmQ1CMrQkY>. YouTube has every nuance of amateur radio documented. Want to join a DXpedition in far-off Bhutan? The six part documentary starts here: <http://www.youtube.com/watch?v=uDBHH6z9HPI>. Want to get ready for February's DTV conversion? Make a high-gain UHF antenna from coat hangers! Watch a full demonstration of this easy construction project at: <http://www.youtube.com/watch?v=EWQhlmJTMzw>. I built



Test pattern from RCA's experimental TV station W2XBS, from Ham Radio Tube video, "The Story of Television".



"Will all of this make Jack Benny come back?"

one and it works amazing well. Impress your friends! Also check out an entertaining television public service announcement for the upcoming digital transition at: <http://www.youtube.com/watch?v=xy-pD-M0rY4>. "Will all of this make Jack Benny come back?"

More Conversions

In just six weeks, most of America's analog television broadcasts will be history. Now we turn to radio! A group of technical experts in the United Kingdom are

predicting that terrestrial FM radio stations may revert to digital-only broadcasting as early as the year 2012. U.K. broadcasters are working on increasing the coverage of digital transmission networks and hoping that the price of DAB receivers decreases in time. 50% of households need to be able to receive DAB before the switch-off of analog broadcasts can begin.

Will we see an all-digital world of radio in our lifetime? Some observers think it is already here! It's called the Internet and it is quickly replacing shortwave as a worldwide distribution hub for nationalist radio. All the stations that you used to hear on your Sky Buddy or Knight-Kit (and more!) are now available via the web. Do I miss all the noise and fading? It's kind of unnerving, at first, to hear all these programs in full quality, even stereo, delivered unscathed directly to your home. It is fascinating technology!

Some wonderful resources have evolved out of shortwave radio. One of the premiere shortwave broadcasters, Radio Nederland from Holland, used to produce a weekly digest of all things radio called Media Network. The show is no longer broadcast but is now available as a web blog at: <http://blogs.rnw.nl/medianetwork>. With a comprehensive worldwide perspective, it is a must read for anyone interested in radio.

World Radio Network provides a 24/7 audio service featuring half-hour programs produced by many shortwave broadcasters available via both Sirius and XM satellite radio, on demand on the web at <http://www.wrn.org> or via podcasts available at their site. Just sit back and listen! You can hop from country to country all day long. WRN does all the tuning for you!

The band most likely to survive the digital revolution is good old AM radio. All the modern technology in the world can not replace a medium that requires only one capacitor, a coil and a diode to receive. You can hear for hundreds or even thousands of miles with an inexpensive radio. No satellite necessary! Now, if broadcasters would just turn off those noisy AM HD radio generators we would breathe a lot easier. Some stations have already stopped their HDcasting, especially at night. One notable shut-off of late has been 50,000 watt clear channel WTIC 1080 in Hartford, Connecticut. Their HD exciter has been off for a couple of weeks day and night. I should send them a belated Christmas card!

AM radio should be known for Analog Modulation!

Until next month, enjoy your analog TV while you can! Less than 50 days left! Many thanks to Malcolm, NM9J, for another year of fine editing!



73 de N2KZ Karl "The Old Goat" dit dit.

Highly Disappointing Radio tuner

If you have been following the HD Radio articles in these pages, you may remember that in November 2006, Ray W2CH and I both began our appreciation of digital audio broadcasting with the Radio Shack Accurian receiver. Later, I moved on to the Sangean HDT-1 and HDT-1X external tuners, which provide excellent performance when combined with a HiFi receiver or amplifier, while Ray investigated HD car radios from JVC.



Sony XDR-F1HD tuner

In the June 2008 issue of the PCARA Update, Karl mentioned Sony's latest HD Radio tuner, the XDR-F1HD. This item costs \$99.99 and received an excellent review for its FM performance from

Brian Beezley, K6STI – see <http://www.ham-radio.com/k6sti/xdr-f1hd.htm>. Unfortunately for me, this tuner also has some serious drawbacks. For example, if AC power is removed, the tuning and memory presets are only retained for a few minutes. The power supply runs very hot, and the tuner is in an all-plastic case.

I was thinking about the Sony product when I noticed that Best Buy has a new HD Radio tuner available under its “Insignia” house brand, with the model designation “NS-HDTUNE”, I was hoping that it would match my particular preferences better than the Sony. The price was the same \$99.99, but the Insignia unit is in a full-size metal case, suitable for mounting on a shelf with other HiFi equipment. In addition, tuning and presets are retained long after power is removed, and the tuner powers up fully functioning when AC power is restored.



Insignia NS-HDTUNE HD Radio tuner.

The first indication of imperfection was in our local Best Buy, where the helpful sales person told me

that this particular model was not being stocked by the Cortlandt Town Center store, even though it was available in Poughkeepsie and Monroe. (I wonder why?) I settled for mail order.

When the unit arrived, all looked well. The metal cabinet was nicely finished, with “Insignia” boldly stamped into the metal lid. The tuner has standard RCA phone jacks for the analog audio output, but it also has coaxial and optical digital outputs, for connection to a suitably equipped receiver.



Insignia HD Radio tuner, with remote control.

The tuner is supplied with the usual accessories – a remote control, an AM loop antenna, an FM wire dipole and an analog stereo cable. I connected the receiver in a test setup, using an external FM yagi antenna, with the analog phono outputs wired to a stereo receiver.

Initial indications were good – the blue and white LCD display showed the usual information about frequency and RDS information, and a quick scan of the bands showed several FM stations that could be received in digital format, with HD1, HD2 and HD3 programming available. AM reception on the loop antenna was also encouraging – several AM stations could be received in ‘HD’ during daytime. A nice touch was the orange “HD” indicator light on the front panel, which blinks when a digital transmission is first tuned in, then glows steadily after the signal has been buffered and digital reception is taking place.

But there were some troubling points. First of all, there are only 8 memory presets available on each ‘band’, with two FM bands and one AM band. With only eight push buttons on the front panel, there are not enough digits to enter frequencies directly. In place of direct frequency mode, a dimpled tuning knob is provided at the right end of the front panel. If you are used to spinning the VFO knob on your HF transceiver to move rapidly up and down the band, don’t try this on the “Insignia” – the response is unbelievably slow. Instead, you must move the knob once click at a time and wait for the receive tuning to catch up. Sometimes the tuner gets the direction wrong and moves the frequency in the opposite direction, up or down the band. The designers would have done better to fit a

simple up/down press-button for frequency adjustment.

The next problem was the remote control... you may remember that I'm not fond of thin remote controls with a delicate membrane keypad. The Insignia remote falls into this class, but to add insult to injury, it only worked for a couple of presses, then refused to emit a single photon of coded infrared radiation. Even with a replacement battery, it was as dead as a doornail.

The final problem left me with the most concern. I had noticed that while tuning AM analog stations, the audio sounded rather compressed. Then, while listening to some FM HD Radio stations, I noticed the same thing – the audio output was definitely compressed, with background noise rising up in the quiet pauses between people speaking. This background noise seemed to favor low bass frequencies. Worse, there was distinct distortion on peak signals. I checked that my receiver was not being overloaded – but that wasn't the cause. The audio output from the tuner was simply compressed, distorted and bass-heavy.

Hoping the audio problems might be confined to the analog output, I checked the coaxial digital output, connecting it to my home theater receiver. The first observation was that the audio level on the digital output was much, much higher than expected– I had to set the audio gain on the receiver to about half the normal level! The next observation was that the compression and distortion problems were also present to the same extent on the digital output.

I popped the cover off the Insignia receiver – as you will see, there is very little within. The 120V AC power input is nicely filtered, and the power transformer runs continuously, unless the switch on the rear panel is turned off. There is one main printed circuit board, containing the DC power supply components and the rest of the radio. The AM/FM tuner, digital signal processing and control unit are all combined in a single HMA module from Wistron NeWeb Corporation (WNC). This module is housed in a small diecast case that also acts as the heat sink and runs quite warm. An



Insignia tuner with top cover removed. Small board on the left is a 120V AC line filter. The main circuitry is all contained on the circuit board at right.

external IC on the same circuit board handles the front panel controls and the LCD display.

I can only assume that the WNC module has been incorrectly designed and/or configured to output a compressed audio signal. This might be suitable for a high-noise environment such as a car radio, but it is completely inappropriate for a home audio component intended for integration into a Hi-Fi stereo setup.

The Insignia's box claims that it will "Upgrade your existing home theater system" with "Crystal clear digital sound, extra FM channels, 100% subscription FREE". I carried out some very careful comparisons of the Insignia's HD Radio reception with a standard FM tuner, and with my Sangean HDT-1 HD radio tuner. In both cases, the results were **two thumbs down** for the Insignia tuner. It offers **worse** performance than a conventional stereo FM tuner and **worse** performance than the Sangean tuner on digital reception. The Insignia's audio is compressed and distorted, and does not have a flat frequency response.

My advice on this particular HD Radio tuner: Run away! Run away!

- NM9J

Portable DTV

Ray, W2CH reports that after reading last month's "Adventures in DXing" by N2KZ, he purchased one of the Accurian 7" widescreen LCD portable TVs that Karl described from Radio Shack at Jefferson Valley Mall. Unfortunately the device looked as though it might have been a return. Ray speculates that the previous owner probably could not receive anything with the built-in antenna. The internal rechargeable battery is only good for 100 minutes, so Ray mostly uses the DC cord with an external power supply or portable battery.

Ray tried attaching his set to the cable TV outlet, and was able to receive various channels up to channel 72. Over-the-air reception with either the built-in antenna or with an indoor rabbit ear antenna plus preamp was *not* successful in Cortlandt.

Ray suggests that the Radio Shack Accurian DTV seems similar to the Best Buy Insignia model that was available about a year ago, and to the current Best Buy model, the Dynex 7" widescreen portable Analog/Digital TV.



Accurian DTV receiving WNBC-DT Weather Plus on digital channel 4.2

During a recent visit to Scranton, PA, Ray was able to receive signals off-air using the Accurian DTV. He was also able to use a Pinnacle USB HDTV tuner with his HP notebook PC for successful reception of over-the-air



Reception of WNEP-DT from Penobscott Mountain on channel 49 (virtual channel 16.2), on Ray's Pinnacle USB HDTV tuner.

small mag-mount external antenna and an updated manual.

Farewell *WorldRadio*

On November 12, *CQ* Publisher Dick Ross, K2MGA and *WorldRadio* Publisher Armond Noble, announced that *CQ* Communications had acquired *WorldRadio* magazine. *CQ*, based in Hicksville, Long Island, currently publishes *CQ Amateur Radio*, *CQ VHF* and *Popular Communications* magazines.

WorldRadio, based in Sacramento, CA has been published monthly since July, 1971, with a primary focus on the human side of ham radio. *CQ*, a general-interest ham radio magazine best known for its support of DXing and contesting, has been in print since January, 1945.

Armond Noble, N6WR, Publisher of *WorldRadio*, said that at age 74 the time had come for him to retire. "I wanted to be sure that *WorldRadio* found a good home, and that our readers would continue to be served by an independent voice in amateur radio," Noble said.

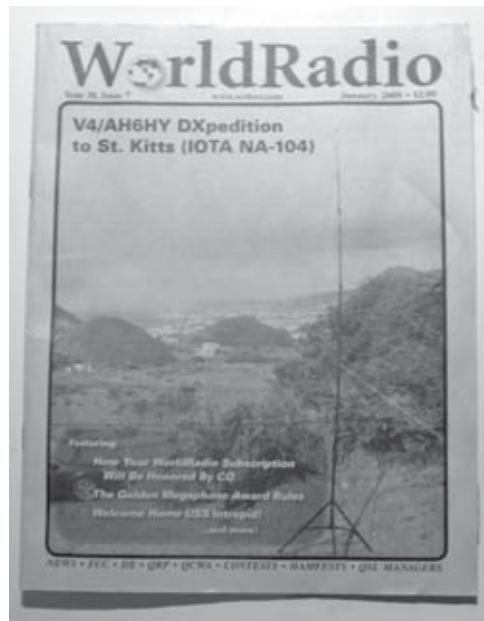
CQ stated in its January 2009 issue that *WorldRadio* would continue to be published, with editor Nancy Kott, WZ8C remaining at the helm. Within the next couple of months, *WorldRadio* will be converted from a print publication into a fully on-line magazine in .PDF format, with free access through *CQ*'s own web site, <http://www.cq-amateur-radio.com>.

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Sic transit gloria mundi

So the curtain closes on yet another amateur radio print magazine. It's just over five years since "73 *Amateur Radio Today*" took its final bow with the September 2003 last issue. And three years ago in January 2006, one of the UK periodicals that I had subscribed to since my earliest days in the hobby, *Short Wave Magazine* merged with *Radio Active* to form the monitoring publication *RadioUser*. (I did not renew my SWM subscription because the amateur radio content almost entirely transferred to *Practical Wireless*.)

WorldRadio was different from other magazines around today. It looked cheap – because it was produced on newsprint in black and white rather than color on glossy paper. And it *was* cheap, costing only \$2.00 a copy or \$21.00 a year. While *CQ* and *QST* tend to look at things from the eastern side of the country, *WorldRadio* has a distinctly west coast view, and many of their advertisers were — like the magazine — based in California.



Gray Lady of the amateur radio world.

Two of my favorite contributors were Kurt N. Sterba, with his "Aerials" column (nothing like a good old British word) and Bill Pasternak WA6ITF, with "FM VHF and Repeaters". WA6ITF raises an interesting point in his January 2009 column when he suggests that the future of all telecommunications will be in the digital domain and says that if digital standards for Ham Radio are not cast in concrete today, we will have digital chaos tomorrow. But he concludes by saying that he does not see much of an advantage to the hobby of Ham Radio going digital.

— . . . —

Digital changeover? I have to add my own comments to Bill Pasternak's thoughts. We can certainly see the signs of a switchover to digital all around us. The change to over-the-air digital television is all set for midnight on Tuesday February 17 2009, when full-power broadcast television stations in the United States

will switch off their analog signals. The move to digital for broadcast radio is also taking place, but at a much slower pace. Small-dish satellite TV has been digital from the start, and the cable companies are pushing subscribers toward a digital future. Cell phone providers have been practically all digital for nearly a year – from February 18 2008, the FCC allowed mobile operators to shut down their analog systems. In what was called the “analog sunset” AT&T Wireless and Verizon closed down their analog networks, which had been providing service on the old “AMPS” standard since the early 1980s. This affected a small number of analog cell-phone users, as well as owners of alarm systems and other analog data networks that relied on old-style cell phones.

Why would I support an analog component as part of the future for amateur radio? First of all, there is simplicity. The equipment needed to generate and receive analog signals is relatively simple and widely understood. Many of us have been able to “home-brew” analog receivers and transmitters from basic components. How many amateurs do you know who could home-brew a digital radio from scratch? Or troubleshoot such a radio down to the individual component level?

Analog signals are instantaneous! When you speak into a microphone, or press the key contacts, the signal travels at the speed of light and emerges from the loudspeaker at the other end – up to half a world away – within a few milliseconds. The same cannot always be said for digital – the twin requirements for data compression and error correction often mean there is a distinct delay in the time it takes for the signal to be sent. When you watch the ball fall in Times Square at midnight on digital TV or listen to the Greenwich pips on BBC World Service via digital satellite, your experience is at least 15 seconds behind the real world. This might seem to be a minor problem – but the police and security forces take it seriously. What is the point of a senior officer yelling “Go Go Go!” into a digital radio if it takes another 10 seconds before his subordinates hear the command for immediate action?

The last reason I think analog still has a future is the intimate contact that it provides with all the elements in the signal chain. If somebody is over-deviating, you can immediately hear it in the quality of the signal. If you rotate your beam antenna, the signal improves immediately. If the ionosphere is moving around, you can tell by the selective fading of the received signal. If an adjacent signal is operating near your frequency, you can detect it immediately, and even check which side of the current channel it is on. Unusual modes of communication such as aurora or satellite have their own effect on the signal – as heard with your own ears. As Ellie Arway, “W9GFO” said in the movie *Contact*, in answer to one of her fellow radio



Jodie Foster played radio astronomer Ellie Arway in the 1997 movie ‘Contact’.

astronomers’ observation... “I think it’s great that you listen.”
“Oh, it’s just an old habit you know.
Makes it seem more real.”

- NM9J

Bring & Buy Auction

PCARA will hold its second “Bring and Buy Auction” at the January meeting, scheduled for 3:00 p.m. on Sunday January 4 at HVHC.

So... take a look around your basement for items you have not used in a while and bring them along on Sunday January 4.



Foxy footnote



At the holiday dinner Mike, N2EAB accepts the winning certificate from Greg, KB2CQE for the May 10 PCARA foxhunt.

Peekskill / Cortlandt Amateur Radio Association

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(Alternate address: <http://www.geocities.com/pcara2000>)

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Newsletter contributions are always very welcome!

Archive: <http://home.computer.net/~pcara/newslett.htm>

PCARA Information

PCARA is a **Non-Profit Community Service Organization**. PCARA meetings take place the first Sunday of each month* at 3:00 p.m. in Dining Room B of the Hudson Valley Hospital Center, Route 202, Cortlandt Manor, NY 10567. Drive round behind the main hospital building and enter from the rear (look for the oxygen tanks). Talk-in is available on the 146.67 repeater. *Apart from holidays.

PCARA Repeaters

W2NYW: 146.67 MHz -0.6, PL 156.7Hz

KB2CQE: 449.925MHz -5.0, PL 179.9Hz

(IRLP node: **4214**)

N2CBH: 448.725MHz -5.0, PL 107.2Hz

PCARA Calendar

Sun Jan 4: PCARA New Year bring and buy auction, 3:00 p.m. Hudson Valley Hospital Center, 3:00 p.m.

Hamfests

Sun Jan 11: NY/Long Island Section Convention/ Ham Radio University, Briarcliffe College, Stewart Ave, Bethpage, NY.

VE Test Sessions

Jan 4: Yonkers ARC, Yonkers PD, 1st Precinct, E Grassy Sprain Rd, 8:30 a.m. Contact D. Calabrese, (914) 667-0587.

Jan 23: Bergen ARA, Westwood Regional HS, 701 Ridgewood Rd, Washington Twnshp, NJ. 7:00 p.m. Contact Donald C Younger, (201) 265-6583.

Jan 26: Columbia Univ VE Team, 2960 Broadway, 115 Havemeyer Hall, New York NY. 6:30 p.m. Contact Alan Crosswell, (212) 854-3754.

Jan 30: Orange County ARC, Munger Cottage, Riverlight Pk, Hudson St, Cornwll, NY. Contact Ronald P Torpey, (845) 234-2371.



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