



PCARA Update



Volume 8, Issue 11

Peekskill / Cortlandt Amateur Radio Association Inc.

November 2007

Hunt fore dinner

The Holidays are quickly approaching! The PCARA Annual Holiday Dinner is scheduled for Sunday December 2, 2007 at 3:00 p.m. As in years past, the dinner is at "At The Reef" on Annsville Circle and has been organized once again through the efforts of Marylyn, KC2NKU and Ray, W2CH -- thank you. The cost is \$25.00 per person (soft drinks/ethanol extra). All are WELCOME! Family and friends, hams and non-hams, spouses and significant others. Please consider joining us, to enjoy each other's company and revel in the spirit of the season.



Here's where the foxes were hiding in the May 2007 event.



Previous winner Wires, KC2FYY races after the PCARA foxes during the May 2007 foxhunt.

Our next Foxhunt is scheduled for Saturday November 10, 2007 at 3:00 p.m. *All are welcome!* Members and non-members alike, anyone who enjoys adventure and amateur radio combined should come along. We will meet for registration at the Beach Shopping Center in Peekskill at 2:30 p.m. There might be a slight change in the rules this time around. Further details will be available at the November meeting, so come and find out.

On the repeater front, a new 2 meter antenna has been installed at the Putnam Valley site. The Diamond antenna was supplied courtesy of Jerry, WA2ZOA, and installed by Bob, N2CBH (thank you gentlemen). Give the new antenna a try, and let Bob, N2CBH know what you think.

Our next meeting is Sunday November 4, 2007 at 3:00 p.m., at Hudson Valley Hospital Center. I look forward to seeing each of you there.

- 73 de Greg, KB2CQE

New net night

Peekskill/Cortlandt Amateur Radio Association holds a weekly net on the 146.67 MHz W2NYW repeater. Starting from October 25, net control Karl, N2KZ has changed net night from Wednesdays to **Thursdays** at 8:00 p.m.

PCARA Officers

President:

Greg Appleyard, KB2CQE kb2cq at arrl.net

Vice President:

Joe Calabrese, WA2MCR; wa2mcr at arrl.net

Contents

Hunt fore dinner - KB2CQE	1
Adventures in DXing - N2KZ	2
PCARA Foxhunt rules	4
IC-706MkIIG filter fix for sound card modes	5
Depot dual-bander - NM9J	6
PEARL Tech class	7
Holiday dinner	7

Adventures in DXing

- N2KZ

Have You Heard?

Mobile Internet radio took two steps closer to becoming a household word this month. First, you have to select a station. Now it's easy! iHeard is a new search engine which allows access to thousands of radio stations from just one site. Other entities have experimented with this concept, but almost all of them simply refer you to the home page of the radio station. Wi-Fi listening was a laborious process.

Step one: Enter the world of iHeard. Pages and pages of stations are available with just one click! Name a type of music or talk show. iHeard has it. Who needs a shortwave radio? Pick a country, pick a station and

you're there. If you like, you can also choose by musical genre, location, foreign language...the categories are

endless. It is the perfect site to visit during those long, boring waits for appointments or at the airport. Your web surfing cell phone can now be a unique form of radio with a bottomless pit of programming possibilities. At home, connect your computer up to your stereo and you'll have the world on a string, literally! Check in today at: www.iheard.com.

Step two: Get in SYNC. Ford has announced the release of SYNC, an amazing in-car management system incorporating voice recognition. You can now control all your multi-media and communications devices with one computer application custom written for Ford by Microsoft. Providing you have continuous coverage of Wi-Fi, you can listen to Internet radio in your car without hassle. (Some communities have already installed public access city-wide Wi-Fi.)

Listening to "the stream" is closer than you think! Take a test drive at: <http://www.youtube.com/watch?v=bKvpGbxn7Tc>

Step back: Are these high tech. innovations too much for you? Jump back to 1939 and see what amateur radio is really all about! It's amazing to see how little the basics have changed over the years. Produced by Pete Smith for MGM, the



movie short 'Radio Hams' is ten minutes of nostalgic fun. <http://www.youtube.com/watch?v=vBGIdf0VjQ4>. Finally, to end your viewing with a giggle, check out: <http://www.youtube.com/watch?v=PqmQ1CMrqrkY>. In less than three minutes you will gain a higher understanding of how not to erect a Yagi out in a meadow. You! On the ladder! Watch out!



Jimmy Mulligan and Grandpa experience amateur radio, 1939-style.

Rare Shortwave DX

Mark the 15th of December as a day to remember: From a tiny island in the middle of the South Atlantic, Radio St. Helena will again be on the air for its yearly broadcast. Their kilowatt transmitter will be heard worldwide on 11092.5 kHz USB using a three-element Yagi. Look for them between 1730 and 0000 UTC and send them a reception report for a commemorative full color QSL card. 4:45 pm to 5:45 pm Eastern time will be the best time to listen along the east coast of the US. During that one-hour time slot, Radio St. Helena will be pointing their Yagi towards the Eastern U.S. and Canada. Watch www.sthelena.se/radioproject for details and address information for QSLing.



Let's Convert!

Rabbit ears users please note: February 2009 is growing nearer (only 15 months to go!) and the time to convert is right after Christmas 2007. {Convert from analog to digital TV, that is!} The federal government will begin issuing \$40 credit vouchers on January 1, 2008 (up to two per household) to offset the expense of digital set-top-box converters for your analog TV. You may need a converter if you only view on good old analog television using an antenna. (Cable and satellite subscribers can relax. This change won't affect you!) In February 2009, all analog broadcast television will end. You'll have to watch digital TV or else! Details regarding ordering voucher coupons will soon be revealed at: <http://www.ntia.doc.gov/dtvcoupon/index.html>.

Manufacturers have already responded to this program. LG Electronics recently received official approval of their set-top-box converter to be released for sale just after the first of the year to meet the demands of the federal voucher program. The street

price for the LG converter is said to be about \$60. LG's converter will feature closed captioning, a variety of available aspect ratios, V-chip program rating filters, programming information screens and direct composite and RF inputs and outputs (no external video modulator needed!) Except for basic functions (channel change and power,) most of the LG's features require its remote control and on-screen display. Their unit is quite small and has no front panel display. It's simplistic, concise and attractive design should become a welcomed accessory. Put your analog television on channel 3 and use the converter box to view all the new (and expanded) digital television services now available. The big question: Will digital signals reach these converters as reliably as good old NTSC analog signals?



LG set-top converter for digital television.

Another new product of interest: Best Buy's



Insignia portable digital TV.

private label 'Insignia' is offering possibly the first hand-held portable DTV. The Insignia NS-7HTV offers a seven inch LCD screen and a built-in ATSC DTV tuner. It's been purchased on eBay for as little as \$60. Friends from the WTFDA (Worldwide TV-FM DX Association) who have auditioned the Insignia

have given it lukewarm reviews particularly regarding anemic reception. Even so, it's good to see the world of electronics adapting to the digital world that lies ahead.

Shock and Stop IBOC

Last month, I bemoaned the arrival of AM in-band on-carrier digital signals during nighttime hours. Lots of beehive-like noise rippled through the band, often ending long-distance reception that had been relied upon for decades. Many AM radio DXers saw this move as the end of their hobby. The battle is not over yet. The first couple of weeks of operation were rocky. Listener complaints were being received from all over the

country! What could be done?

One group, Citadel Broadcasting, went on record as retreating from the IBOC experiment (at least for the time being.) A dominant station owner, Citadel controls 66 radio stations nationwide. When Citadel decided to cease all broadcasting IBOC signals, many listeners could again listen in



peace! For local listeners, this would include Citadel's WABC 770 New York City, WJR 760 Detroit and WLS 890 Chicago. WABC and WJR certainly did strong battle with each other during their brief IBOC trial. WLS 890 is only one channel away from another IBOC'er WCBS 880 in New York City. You can rest assured that their dueling IBOCs were not easy listening! WCBS, and sister station WFAN 660, have also been noted with their IBOC systems off many nights recently. The jury may still be out, but the verdict is clear: The AM Radio IBOC system needs substantial modification to co-exist during nighttime operations. The beehive noise must desist!

Another downside of IBOC 'HD Radio' is time delay. Here is an excerpt from the WCBS Radio website: "WCBS now broadcasts in high definition. It takes 8 seconds for HD to encode and then decode at a HD receiver. Consequently, the regular analog signal must be delayed 8 seconds in order for the broadcasts to synch. Also, it is not as simple as starting the time tone 8 seconds earlier to make it hit the airwave 'on time.' The issue is much more complex. However, WCBS is working to find a solution as HD radio becomes more main stream."

N2KZ Editorial comment: Analog AM Radio technology dates back to before 1920. It remains an extraordinary means of delivering radio to a wide area of listeners using very inexpensive and low tech receivers. Why reduce this amazing medium to a tentative local-only scenario that requires sophisticated expensive receivers to enjoy? It's time to scroll back to basics and allow AM Radio to do what it does so well. Put digital radio where it belongs: in a separate specially-allocated band where it can thrive on its own without the challenge of being compatible with older technologies.

Do I Rate?

What do people listen to on their satellite radios? Now we know! Recently, the Spring 2007 Arbitron ratings book was posted on the Internet revealing the winners and losers of both Sirius and XM Satellite Radio. Sirius is really Stern Satellite Radio! Howard's two channels on Sirius command a huge audience, around 1.7 million listeners a week. Compare this with Stern's alleged 20 million listeners in his heyday on terrestrial FM radio. Sirius pays dearly for Stern.

Beyond the land of Stern, the most popular channels are mainstream popular music. XM's 20 on 20 rules with over a million listeners a week, while Sirius Hits One registers about 650,000. XM's channels for 60s, 70s and 80s music have similar ratings just above 600,000. One thing for sure, XM listeners love to listen and listen at length. A telling comparison: popular Fox News has 485,000 listeners a week on XM while the exact same programming on Sirius only draws 133,000. My personal opinion: Sirius listeners prefer an expanded version of what traditional radio has to offer. It attracts younger men in droves. XM listeners seek a more eclectic and adventuresome stew and listen to their satellite radios as constant companionship. The entire report can be found at: http://www.radio-info.com/in3_src/images/SP07_National_Satellite_P12.pdf

For some great listening fun, check out XM's 'Igor' Halloween micro-channel to be heard on XM 120 from Monday night, October 29th at 9pm through Thursday morning, November 1 at 6am Eastern time. Then, switch channels to XM 103 and begin the Christmas season early! A yuletide tradition, XM's Holly



begins for a two-month run November 1 until the week after Christmas. Ho! Ho! Ho! Break out the mistletoe!

Until next month, 73 de N2KZ 'The Old Goat'



PCARA Foxhunt Rules

Saturday November 10, 2007

Note: there may be some variation to these rules on the day. Any changes will be announced prior to departure from the Beach Shopping Center check-in point.

1. Transmission – FM simplex on 146.565 MHz, horizontally polarized.
2. Transmissions start at 3:00 p.m. for 5 minutes, followed by 5 minutes off. Second transmission commences at 3:10 p.m. 3 minutes on, 7 minutes off. The fox will not move during this time. This cycle repeats at 10 minute intervals until the last transmission ends at 4:30 p.m. when the fox will announce its location.

3. The opening transmission will include a time check for watch synchronization.

4. All contestants who wish to be eligible for a prize must book in at the **Beach Shopping Center car park**, in Peekskill before the start. Contestants will count as one team if more than one person occupies a car. (i.e. if three in a car, they don't get first, second and third prize.)

5. No contestant is allowed to move his/her car until the end of the first transmission, so take your time with the first bearing and make it a good one. The transmission will be audible from the start without a super-sensitive receiver.

6. Radio silence will be maintained by all contestants on all frequencies from the first to the last transmission.

7. No excess mileage penalty will be incurred but all contestants are reminded at all times to stay within the law and observe speed limits, parking restrictions etc.

8. The fox will be hidden not more than 5 miles from the start. The location of the fox will not be on property which is inaccessible by car.

9. Upon a contestant finding the fox, please do not shout or in any way give the location away to other contestants. Report your name/callsign to the fox and retire to the place of refreshment immediately. This will ensure that other contestants do not "discover" the fox because a group of people is hanging around nearby. It is requested that you maintain radio silence even though the fox has been found and the fact that you have found the fox should not be revealed to anyone until the place of refreshment has been reached.

10. The first competitor to locate the fox and positively identify him/her will be presented with a certificate. This competitor will be invited to assume the role of fox for the next foxhunt event.

11. Competitors should convene from 4:30 p.m. at the place of refreshment, which will be announced on-air by the fox.

Rules adapted from Bury Radio Society Fox Hunt, Malcolm, NM9J



The PCARA fox will be in hiding again on Saturday November 10.

IC-706MkIIG filter fix for sound card modes

At a recent PEARL meeting, West Mountain Radio gave a presentation and made some of their excellent equipment available at attractive prices. I came away with a “RIGblaster plug & play”. This is a sound card-to-radio interface, intended for modern PCs with no serial port available.



“RIGblaster plug & play” is a sound-card interface with USB connector for power and transceiver control.

Hint!
Icom 706 MkIIG users following the same path as I did should order the optional “Rigblaster p&p adapter – Icom 13 pin DIN” cable, rather than trying to use

the 6 pin mini DIN data jack on the rear of the 706. As far as I can tell, the 6 pin mini DIN data port is fine for VHF-FM packet radio, but is not suitable for HF sound card operation, which requires SSB-mode and connection to the SSB modulator input and detector output.

Once I had the “RIGblaster plug & play” installed on my notebook computer, I connected it to the Icom 706 MkIIG and started tuning in PSK31 transmissions on 14.070 MHz. The band was busy and I had an urge to reduce receiver bandwidth. In addition to the standard 2.4 kHz FL-272 SSB filter, my Icom 706 has two optional filters fitted — the 1.9 kHz narrow SSB filter FL-223 and the 350 Hz narrow CW filter FL-232. Unfortunately, while operating in SSB mode as required for PSK31, the only available option is the 1.9 kHz narrow SSB filter. If you have ever operated RTTY or PSK31 you will know that these ultra-narrow modes can benefit from a much narrower receive bandwidth, especially when you are operating close to strong signals.

I wondered whether there was a fix — I found one on the web site of Harold, KV5R, and the Athens Amateur Radio Club, <http://www.athensarc.org/techindex.asp>. KV5R recommends fitting the FL-232 narrow CW filter to the 706, but then suggests setting it up in the transceiver’s menu as an **FL-223** filter. This allows the filter to be used on both CW and SSB modes.

But I had a problem — I already had two optional narrow filters installed... was there a way to set-up the radio so that *all three filters* could be chosen while operating on SSB-mode?

The tables on page 23 of the Icom 706MkIIG Instruction Manual proved useful. They show which of the various optional filters are chosen in SSB and CW modes when the “N” and “W” filter selections are in effect. Only one combination of optional filters allows all three filters to be chosen in SSB mode — you would need to have the FL-103 2.8 kHz wide SSB filter fitted, along with the FL-223 1.9 kHz narrow SSB filter.

I went into the Icom 706MkIIG “Initial Set mode” by holding down the “LOCK” button while powering up the radio. I navigated to menu items 9 and 10 where the optional filters are defined. The table below shows my original and new settings:



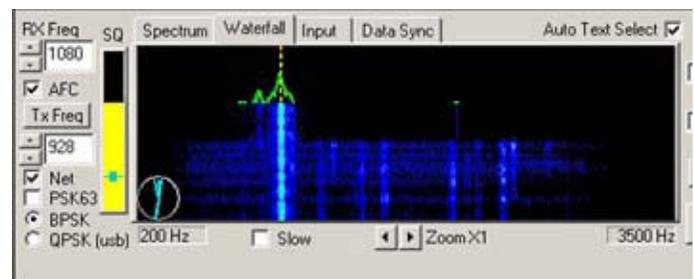
Icom IC-706MkIIG in “Initial Set mode” to specify the optional filters.

Menu item	Original setting	New setting
9-OPT-FIL-1	FL-223 (1.9kHz)	FL-103 (“2.8kHz”)
10-OPT-FIL-2	FL-232 (350 Hz)	FL-223 (“1.9kHz”)

After the change, the 706 “N” filter setting now selects the 350Hz filter in *both* SSB and CW/RTTY modes, while the “W” filter selection chooses the 1.9 kHz filter. This has made a substantial difference to reception of PSK31 and RTTY using the RIGblaster (see picture below). If you are running in USB mode, remember that the 706 has an IF “SHIFT” control that can move the receiver passband to a more useful audio-frequency range while the 350 Hz filter is in use.

It’s not a bad little filter fix, with no need to warm up the soldering iron or even remove the radio’s covers.

- NM9J



Screen shot of waterfall display from “WinPSK” PSK31 software. Signals in the receiver bandwidth are indicated in blue. The Icom 706 transceiver was changed from a 2.4 kHz SSB filter to a narrower 350 Hz CW filter partway up.

The Depot dual-bander

Last time we looked at the “Simple Slim Jim”, an antenna project for 2 meters that almost anyone could build. This time we’ll try an inexpensive vertical antenna for 440 MHz that can also be adapted for dual-band use on two meters — and most of the parts can be found at Home Depot.

This antenna is based on a design from the RSGB *VHF/UHF Handbook*, where it started life as a “432 MHz collinear”. (In the UK, 70 cm operation is concentrated around 432-435 MHz rather than 440 MHz.) The original design was based on a length of 4 millimeter diameter fiberglass rod, but I modified the size to 5/16 inch fiberglass rod, which is readily available in the form of a 48 inch reflective driveway marker from Home Depot for \$1.99. Choose the “reflective staff” model with a length of reflective plastic film wrapped around the top of the colored rod, rather than the type that has a red or blue reflective circle on the top.

The collinear antenna elements are made from copper braid, which is pushed over the fiberglass rod. This type of braid can be recovered from old coaxial cable, or from shielded multicore cable. It is also sold at hamfests for low-impedance ground connections.

Cut three lengths of the copper braid as shown in the drawing, two lengths 16½" and one 6¾" long. (Hint: use tin-shears.) Cut a length of miniature 50 ohm coax — RG-174 or similar, 10"

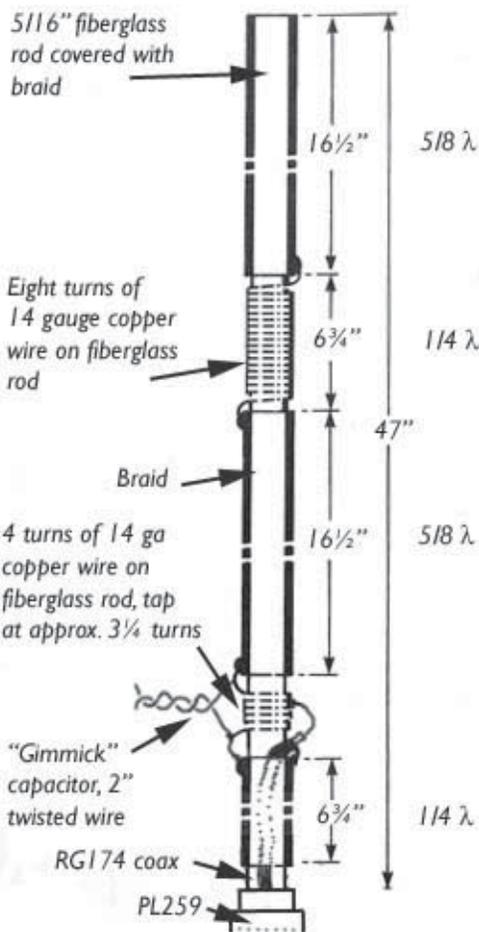
long. Prepare the ends so that one tail is 1½" long and the other is 1¼" long.

Mounting the antenna is a matter of individual preference. I chose to push the fiberglass rod into the end of a PL259 plug, which could then be screwed onto a suitable SO239 magnetic mount. There is just sufficient room at the top of a standard PL259 — with no reducer — for the fiberglass rod and the miniature coax. As an alternative, you could mount the completed antenna in a PVC tube and extend the coaxial cable as a pigtail. Whichever way you choose, the coaxial cable should be soldered to the coaxial connector in the usual way, using a high-wattage soldering iron for the outer conductor. The coaxial cable should then be threaded up *inside* the 6¾" length of copper braid, which will act as a decoupling sleeve. The bottom end of this piece of copper braid must remain *insulated* from the brass top of the PL259 coaxial connector.

Push the fiberglass rod through all three pieces of braid as shown in the diagram. Next, strip the insulation from some 14 gauge solid copper wire (also available from Home Depot) and wind the lower, matching coil as shown, using the fiberglass rod as a coil former. This 4-turn coil should be soldered to the top of the decoupling sleeve and to the bottom of the lower 5/8 wave element. Solder the outer conductor of the coaxial cable to the same point on the decoupling sleeve. The inner conductor of the coax should be soldered to the coil 3¼ turns up.

Don’t connect the upper 5/8 wave element just yet. Set up the antenna in the clear with an accurate VSWR meter for 440 MHz and transmit at low power. Adjust the tapping point on the coil for the lowest SWR. If you cannot achieve 1:1, attach a “gimmick” capacitor made up of two lengths of thin, insulated wire connected as shown, across the coil. Twist the wires together and untwist for the lowest SWR at mid-band, 446 MHz.

Now connect the upper phasing coil and the upper 5/8 wave element. The 8 turn coil should be spread over 6¾" of the fiberglass rod. Solder the coil securely to the



Collinear antenna for 440 MHz has two 5/8 wave elements above a 1/4 wave decoupling sleeve. The copper braid elements, phasing coil and matching coil are all mounted on a single 48" length of fiberglass rod.



Matching coil at base of antenna. Coax inner conductor (black) is connected 3¼ turns up the coil — through a series capacitor for dual-band use. Twisted red insulated wire is the “gimmick” capacitor.

upper and lower elements. Recheck the SWR at 446 MHz. If all is well, the SWR will still be low, otherwise readjust the tap and the gimmick capacitor.

Two bands!

If all you needed was a single-band antenna for 440 MHz, then your work is done. For a dual-band antenna that also covers 144 MHz, proceed as follows.

Disconnect the coaxial cable inner conductor from the tapping point on the lower coil and connect a small air-spaced trimmer capacitor in series as shown. A capacitor covering 3-30 pF or similar should be sufficient. Change the transmit frequency to 146 MHz and transmit at low power – or use an antenna analyzer. Adjust the trimmer capacitor for the lowest SWR (Hint! Both sides of this capacitor are hot with RF! Adjust the trimmer first, then move away, press transmit and check SWR second.)

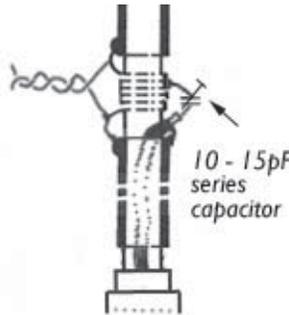
Once the trimmer capacitor is adjusted, return to 440 MHz and recheck SWR. You may need a final touch on the “gimmick” capacitor. With the antenna in the clear, check performance on some nearby and distant stations.

This antenna acts as a half-wave vertical on two meters and as two 5/8 waves on 440 MHz. Informal testing suggests performance is similar to a Diamond NR770HNMO dual band mobile antenna.

When everything is working satisfactorily, it is time to tidy up the antenna. I was able to replace the trimmer capacitor with a fixed ceramic capacitor of the same value (12pF). I secured the fiberglass rod in the top of the PL259 connector with epoxy adhesive (available from Home Depot), then I covered the ends of the copper braid with yellow PVC tape, matching the bright yellow color of the driveway marker. This yellow electrical tape is also available from Home Depot. Hint — leave the bottom end of the decoupling sleeve braid fanned out, so that it **does not** contact the metal top of the PL-259 coaxial connector.



8- turn coil between upper and lower 5/8 wave elements.



For dual band use (144/440 MHz), a trimmer capacitor is added in series with the coaxial cable inner conductor.



Completed collinear antenna

Protect the top of the coaxial connector with more tape.

If you need to waterproof the dual-bander you can cover the entire antenna in heat-shrink tubing, or slide it into a PVC pipe. Just be careful not to bunch the copper braid up on the rod when threading the tubing over the antenna. And be prepared for a small drop in the resonant frequency.

Have fun with this inexpensive project. The bill of materials should be a whole lot less than any commercial dual-band antenna.

- NM9J

PEARL Tech Class

Putnam Emergency and Amateur Repeater League (PEARL) will be holding a short Technician Class in Carmel, NY during November. The class begins on Friday November 2nd, from 7:00 - 9:00 p.m. and continues each Friday until November 30th. Venue is the Putnam County Bureau of Emergency Services, Training and Operations Center at 112 Old Route 6 in Carmel, New York. The class is free, but there will be a charge of \$24.95 for the ARRL License Manual and \$14.00 for the V.E. Test. For more information, browse to <http://www.k2put.org>.

Fall backward

Don't be too early! Reset your clocks for the PCARA meeting on Sun Nov 4, the new date when daylight saving time ends.

Holiday dinner

Ray W2CH and Marylyn KC2NKU have made arrangements with “At the Reef” restaurant regarding PCARA’s 2007 holiday dinner, scheduled for 3:00 p.m. on Sunday December 2.

If you would like to make your booking, please contact Ray and Marylyn. The cost will be \$25.00, not including drinks. Here is the menu.

MENU

- Tossed green salad*
- Choice of entrées with Baked Potato and Vegetable:*
- Prime Ribs of Beef*
- Chicken Cordon Bleu*
- Boneless Breast of Chicken Marsala*
- Broiled Stuffed Filet of Sole*
- Broiled Filet of Salmon*
- Penne à la Vodka with Chicken <- New!*
- Cake of the Day, Coffee or Tea*

Peekskill / Cortlandt Amateur Radio Association

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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

November 4: November meeting, 3:00 p.m. Hudson Valley Hospital Center.

November 10: PCARA Foxhunt. Starts 3:00 p.m. from Beach Shopping Center.

December 2: Holiday meal, "At the Reef" 3:00 p.m.

Hamfests

Sun Oct 28: Long Island Indoor Hamfair, Levittown Hall, 201 Levittown Parkway, Hicksville, LI, NY. 9:00 a.m.

Sun Jan 13 2008: ARRL NYC-LI Section Convention, Ham Radio University, Briarcliffe College, 1055 Stewart Ave., Bethpage, NY.

VE Test Sessions (*No more code tests!*)

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

Nov 8: WECA, Westchester Co Fire Trg Cntr, 4 Dana Rd, Valhall NY. 7:00 p.m. Contact: Stanley Rothman, (914) 831-3258.

Nov 16: Bergen ARA, Westwood Regional HS, 701 Ridgewood Rd, Washington Township NJ. 7:00 p.m. Contact Donald Younger, (201) 265-6583.

Nov 19: Columbia Univ ARC, 2960 Broadway, 115 Havemeyer Hall, New York, NY 10027. 6:30 PM. Contact: Alan Crosswell, (212) 854-3754.



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