



PCARA Update



Volume 3, Issue 1

Peekskill / Cortlandt Amateur Radio Association Inc.

January 2002

Field Day and Funding – KB2CQE



It's never too early to start thinking about and planning for Field Day. This year Field Day will be held on June 22-23, hopefully once again on Bear Mountain. Last year we had a great time and it was an excellent learning experience. Anyone wishing to take the lead in planning/coordinating PCARA's Field Day 2002 activities, please let one of the officers know. We will hold several planning sessions, and everyone is welcome and encouraged to attend! Stay tuned, details to follow.

We're always on the lookout for ways to raise funds for operating expenses — i.e. insurance, telephone line, photocopies, postage, refreshments, etc. I would like to ask the membership to start thinking of ways we might be able to generate some income for the club. Maybe we could apply for some type of grant or award for nonprofit community service organizations [501 (c) (4)]. We could also consider the formation of a Finance and Fundraising Committee. I'm sure we'll come up with an idea or two.

Hope to see you all at the February meeting!

- 73 de Greg, KB2CQE

Tech Class – Joe, KR2V

The second PCARA Tech Class will begin February 5th and run for eight consecutive Tuesdays from 7:00 PM to 9:00 PM at Hudson Valley Hospital Center-Dining Room B (please park and enter through the rear of the hospital). The last Tuesday, March 26th, will be a VE Session, which is open to all. The course fee, which includes the required book, is \$35.00 for adults and \$20.00 for students 18 years old or younger. The VE Session is \$10.00.

Your help is needed in several ways:

- ◆ Please help us spread the word about the class.
- ◆ We can use a few extra instructors to help lighten the load of those scheduled to teach.
- ◆ Class logistical help and support are also needed.

PCARA members need only pay the cost of the book, which is \$15.00. If you already have the book, *ARRLs Now You're Talking*, then all you need to do is join us at the class. Members wishing to upgrade are also encouraged to attend the class as a refresher/prep for your next license class.

Please contact Joe, KR2V (914-737-0348) for further information.

Electronic Update

A big thank you to our newsletter contributors this month. Your articles are always welcome — please submit to the Editor, NM9J@arrl.net.

December's *PCARA Update* was the first issue distributed electronically. The newsletter was sent in Adobe PDF format to 34 members and many of you reported receiving it successfully. Three e-mail addresses from the roster proved to be inoperational and needed correction. Eight members had their December newsletter dispatched by conventional snail-mail.

If you are still receiving the *Update* by regular mail, think about the advantages of electronic distribution. Use of e-mail saves PCARA money on photocopying and postage. Your poor old Editor does not have to lick any more stamps. Delivery is immediate and the photographs arrive in full color. So... if you would like to take advantage of 21st century newsletter distribution, make sure the PCARA secretary has your current e-mail address recorded in the roster — you can contact Joe, KR2V with your *Update* details via kr2v@arrl.net or through the information number on page 4 of this newsletter. You will also need a copy of Adobe Acrobat Reader 3.0 (or higher) installed on your computer in order to view the PDF files.

Election of Officers

In a replay of events from January 2001, the December meeting of PCARA elected the incumbents unopposed for a further term in 2002:

Greg, KB2CQE	President
Bob, N2CBH	Vice President
Joe, KR2V	Secretary / Treasurer.

Book Review: If you like low bands... – Karl, N2KZ

Winter is the peak period for propagation on the low bands: 40, 80 and 160 meters. The ARRL has published two books on this subject both worthy of your attention.

Jeff Briggs, K1ZM, should be a motivational speaker. His book *DXing on the Edge, The Thrill of 160 Meters*, is dedicated to his love of Topband. The book originally was authored as a biography in honor of Stew Perry, W1BB (SK), who resided on 160 for many decades and inspired masses of hams to discover its magic. While

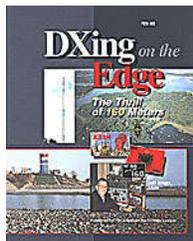
describing Perry's remarkable life, Briggs encourages you to try the ultimate challenge of 160 meters. He also recruits the testimony of dozens of other operators as a rallying cry to join the fun. After reading this book you will *love* this band!

The first ten chapters contain a fascinating history of how the band developed and weathered many changes in allocations due to war and sharing this spectrum with the maritime radiolocation system LORAN. Several interesting chapters follow describing antennas and peripheral devices for 160 meter operation and some very useful operating tips. Each book also includes an audio CD where Briggs guides you through historical recordings of some of the best QSOs ever accomplished on 160. It is a mysterious band which is hard to master and harness, but the annals of success described here make you want to tune into the land of static salad without delay!

The adventures of Stew Perry, and his fantastic antenna farms in the Boston area, made terrific reading. Here is a man who nearly single-handedly awakened several generations of Hams to embrace this difficult slice of spectrum. Stew's life was filled with physical and mental work and years of experience and research, which earned him the honor of becoming the first person to be awarded DXCC for 160. Most important was Stew's kindness and generosity in Elmering dozens of fellow Hams to enjoy the band he loved.

Jeff's testament to Stew and 160 meters is written with passion and delight. Even if you never drop below 20 meters, you'll enjoy reading *DXing on the Edge*.

It might take you a lifetime to ingest *ON4UN's Low-Band DXing*, authored by the legendary John Devoldere. This is the bible of the world of 40, 80 and 160 meters, especially the area of antenna design. John has gathered material from a world of Hams and added his own work to produce a tome that touches every aspect you can imagine.



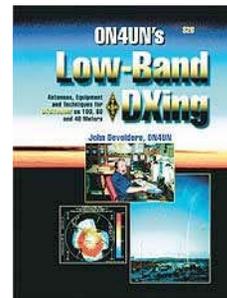
Low band DXing is primarily a very detailed antenna book explaining every nuance of dipoles, verticals, loops, Yagis, quads and other arrays. There are full chapters on receiving antennas, feed lines and strategies for fitting small pieces of real estate with efficient antennas to discover 40, 80 and 160 meters. This is a highly technical masterpiece, but is written in a fashion that the beginner can enjoy and learn from.

This isn't merely a textbook by any means! There are great stories about the adventure of remote DXpeditions and capturing remarkable loggings through perseverance and skill. Much can be learned from these Hams' achievements! Propagation is also discussed at length with great insight regarding grayline, antipodal, long-path, and many other types of skip. You'll also enjoy reading the experiences of seasoned operators describing how to master these bands, as they share their operating techniques, advice on equipment modifications, and how they manipulate propagation to increase their totals.

Low-Band DXing is the kind of book that you might have by your bedside for years as a constant reference and source of entertainment and knowledge. It will make your mind imagine great things and pique your interest time and time again.

Both books are available from the ARRL at 225 Main Street, Newington, CT 06111-1494; Phone: 860-594-0200; Internet: <http://www.arrl.org>

Let me know what you think! Enjoy!



- 73 de N2KZ Karl

Anyone for Extra?

If you have been procrastinating about upgrading to Amateur Extra class don't hesitate much longer. The exam will be more difficult after July.

Make a New Year's resolution to study and take the exam soon. A new question pool has been released and it becomes effective July 1, 2002 when it will be used to generate all Extra class written exams. The new Element 4 will expand the number of questions by more than 20 percent - 806 questions - as opposed to the current 665. That sounds harder to me.

The new Element 4 question pool is available on the ARRL Web site <http://www.arrl.org/arrlvec/pools.html>.

– N2FF, Hudson Beacon, ARRL Hudson Division

Towering triumphs – NM9J

I've had a soft spot for radio towers for a while – they are the one part of a radio station you cannot hide too easily, they are often located in wild, rugged places and they frequently stretch the limits of mechanical engineering.

It's also worth remembering that towers have a **history**, and in some cases that history goes back a long, long way. When you look at an AM tower, remember that this type of radio technology stretches back some eighty years to the early 1920s. Broadcast towers represent a significant investment and can last longer than you would think. Next time you tune to WMCA - 570 kHz or WNYC-AM - 820 kHz, the signal is reaching you courtesy of a sixty year old three-tower array in Kearny, NJ. You can find more details on Jim Hawkins' web site: <http://hawkins.pair.com/radio.shtml>.



BBC Holme Moss transmitter site as it looked in 1983. [Photos by G3VNQ]

Here's a picture of one of my favorite towers. It's the BBC Television mast at Holme Moss in Northern England. The location is near the village of Holmfirth in Yorkshire, made famous by the BBC-TV comedy series "Last of the Summer Wine", shown here on WNJN channel 50 (Sun 7:30 P.M.) plus WLIW channel 21.

This 750 foot high mast was erected in 1950-51 and the antennas at the top are the reason you would not have worked anybody from Britain on 6 meters from then until the mid-1980s. The top of the mast has an array of vertically-polarized folded dipoles for UK channel 2 television. The 405-line TV transmitter came on air in December 1951 and brought live pictures of Queen Elizabeth's Coronation from London to northern England in June 1953.

Channel 2 television in the United Kingdom had a vision carrier frequency of 51.75 MHz – right in the middle of 6 meters. This explains the post-war ban on 6 meter amateur operation. Six meter transmissions from the U.K. were not permitted until 1983, with full access for class A licensees being granted in February 1986, one year after all the VHF television networks had closed down for good, and one month after I was transferred from the U.K. to Illinois. Nowadays, terrestrial analogue TV broadcasting in the UK is entirely supported by **UHF** transmissions, with five distinct 625-line services carried around the country.

The Holme Moss transmitters are at a bleak, exposed site 1,750 feet above sea level. The original BBC mast towered 750 feet above the moorland. Take a look at the long, cylindrical section of mast immediately beneath the TV dipoles. This was part of the antenna for VHF-FM radio. Vertical slots were cut around the cylinder – there are eight layers of these slots, one above the other. A half-wave vertical slot antenna has the same radiation pattern as a vertical dipole, but the polarization is **horizontal** – so this antenna produced an omnidirectional pattern, which was horizontally polarized.

Perhaps you can think of some other uses for a slot antenna. All you need is a large conducting sheet with an insulating slot cut in it. You connect the feeder across opposite sides of the slot. Maybe this would be a good antenna for aircraft? Jaybeam Limited used a development of the slot in their stacked antenna designs for amateur radio, known as skeleton-slot Yagi arrays.

Take a look further down the Holme Moss mast and you will see some conventional VHF Yagis with metal platforms above. The Yagi antennas were for BBC VHF local radio stations serving

Manchester, Leeds and Sheffield. The metal platforms above the Yagis prevented large lumps of ice falling straight down the mast and damaging the antennas.

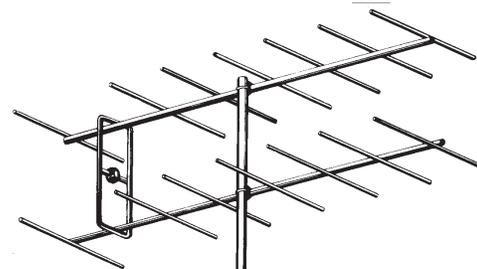
Continuing with the history lesson, the original tower at Holme Moss was completely replaced during 1983-1984. The old Channel 2 TV antennas are no more and the horizontally polarized slot antennas for FM radio were replaced with a **mixed polarization** array, radiating equal power for the horizontal and vertically polarized signals. The main reason for the change was the growth in FM listening on car radios and portables with vertical antennas. The Holme Moss transmitting site now belongs to Houston-based Crown Castle International Corporation.

If you would like to see some terrific pictures of Holme Moss and other UK transmitter sites, pay a visit to the mb21 Ether.net web site at <http://tx.mb21.co.uk>.

- Malcolm, G3VNQ, NM9J



Top of the Holme Moss tower.



Jaybeam 8 over 8 skeleton slot Yagi for two meters. The skeleton slot is the driven element. Gain is 12.3 dBd.

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Newsletter contributions are always very welcome!

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. Meetings are suspended during July and August.

PCARA Repeaters

W2NYW: 146.67 MHz -0.6, PL 156.7Hz

KB2CQE: 449.925MHz -5.0, PL 179.9Hz

N2CBH: 448.725MHz -5.0, PL 107.2Hz

PCARA Calendar

Sun Feb 3: February meeting, 3:00 PM. HVHC.

Tues Feb 5 -Tues Mar 26: PCARA Tech class, 7:00 PM.

Wed Feb 6: PCARA on-air CW practice starts, **Mon/**

Wed/Fri: 8:45 PM. on 146.67 repeater.

Hamfests

Feb 24: LIMARC, Hicksville NY.

Mar 2: Splitrock ARA, Parsippany NJ.

Apr 14: Southington ARA, Southington CT.

Apr 21: Mt Beacon ARC, Poughkeepsie NY.

Jun 1: Bergen ARA, Washington Township NJ.

VE Test Sessions

Feb 3, Mar 3: Yonkers ARC, Yonkers Police Dept., 1st Precinct, East Grassy Sprain Rd, 9:00 A.M. Contact: Daniel Calabrese, 914 667-0587.

Feb 14: WECA, Fire Training Center, Dana Rd., Valhalla, 7:00 PM. Pre-registration required, contact: Sanford Fried 914 273-2741

Feb 25, Mar 18: Columbia Univ ARC, Watson Labs, 612 W 115th St. New York, NY 10025, 6:30 PM. Contact Alan Crosswell, 212 854-3754.

Mar 2: Splitrock ARA Hamfest, 9:00 A.M.

Mar 19: W5YI VEC Pel Hams, 20 5th Ave, Pelham NY 10801, 7:30 PM. Contact Michael Ciferri 914 738-5775.

Mar 26: PCARA (Final session of Tech Class), HVHC, 7:30 p.m. Contact NM9J, 736-0368.



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