

PVRC Newsletter March 2014

President's Letter – Ken KE3X

t seems just yesterday I was writing

my President's column yet March is upon us. What a busy month just past: NA Sprint CW, CQ WPX RTTY, ARRL DX CW and last weekend the double-header of CQ 160 Phone and NAQP RTTY - all in the books for 2014. As always, PVRC was a force to be reckoned with each weekend. Let's take a quick look at the NAQP Challenge standings after 3 events.

Using inputs from Logs Received on ncjweb.com and the M/2 participant lists from 3830scores.com, the preliminary participant multiplier totals from the CW and Phone legs of Winter 2014 NAQP's looked like this:

NAQP CW

NCCC: 76 participants, 473 M points PVRC: 92 participants, 457 M points SMC: 86 participants, 383 M points **NAQP SSB** (Preliminary scores not yet available)

PVRC: 96 participants SMC: 71 participants NCCC: 66 participants

So we did **great** on CW, keeping neck and neck with NCCC, then had 50% more logs on Phone than our Left Coast rivals. On RTTY, special congratulations are due to the Rappahannock Chapter, which generated more RTTY points for the club than any other chapter. Total scores are yet to be finalized, but we can look forward to the summer and fall 2014 NAQP events with confidence. Those events will be great tune-ups for Sweepstakes, where we'll be looking to extend our winning streak one more year!

Keeping Up the Fun Factor

If you subscribe to NCJ, make sure to read Kirk Pickering, K4RO's editorial in the current issue. Kirk does an excellent job of putting contesting in perspective, and talks about taking a break to stay fresh. I've been doing the same recently, using three approaches new to me: DXing, QRP and RTTY.

In ARRL DX CW this year, I had a weekend full of kids' activities and knew I could not do a serious effort, so I focused on 80 and 160-meters, using the contest to fill in the remaining 5 QSL card slots I still need on 80-meters for my 5-Band DXCC. I also spent enough time on the high bands to make sure the DC Multiplier was available. Most rewarding was to have my son Kody join me for a while, perhaps for the last time before going off to college next year. Hopefully I've planted enough of a 'contesting seed' that he comes back to help again when he's older.

Secondly, I would also recommend trying QRP to increase the fun factor. In the last 12 months I've tried QRP in NAQP and the NA Sprint, and it really makes you focus on each and every QSO as being valuable. As the saying goes, "You don't have to be crazy to operate QRP, but it helps." OK, I might be a bit crazy, but to be honest QRP feels more comfortable to me in a way ... it reminds me of my teenage years with my HW-101 and dipole antennas, where each QSO was indeed special. It requires a different skill to break pileups with a 5-watt signal than it does to run pileups. Not necessarily 'more

skill', just 'different skills'. And that keeps things fresh.

The third aspect I tried last weekend was RTTY, in a last-minute effort to contribute my Participant Multiplier for the Challenge. Somehow I got MMTTY to send pre-programmed messages through my computer's audio output, then through a microphone onto the air ... it was not pretty but I did make 23 legitimate RTTY QSO's across three bands. Kudos go out to all the PVRC members who tried RTTY for the first time last weekend, including our own Treasurer, Bill Hider N3RR (with a little help from N3QE)! If you are proficient in RTTY, who not help some 'old fashioned' CW or Phone ops 'start diddling' in preparation for NAQP RTTY next summer?

W1AW Travels to Virginia

I hope you enjoy this issue of the PVRC Newsletter, and thanks to Steve Hawley, K4EU for his update on the upcoming ARRL Centennial event. If you live in Virginia, or want to travel there during the 'W1AW/4 Virginia Week', why not give them a shout and get on the operator schedule?

See you in the pileups ... and Go PVRC!

Ken KE3X

PVRC Officers:

President: KE3X Ken Low
Vice President: K8GU Ethan Miller
Vice President: W3LL Bud Governale
Secretary: AA4FU AI Knight
Treasurer: N3RR Bill Hider

Trustees:

K3MM, N3OC, WX3B, W4ZYT, N4NW, K2AV, N4ZR, K4ZA, K3WRY

PVRC Charter Members (all SK):

W3GRF, W4AAV, W4KFC, N0FFZ, W4LUE, W7YS, VP2VI/W0DX, W3IKN, W4KFT

PVRC Website: http://www.pvrc.org

QST QST QST - CALLING PVRC/VIRGINIA - QST QST QST - Steve K4EU

Virginia will air W1AW/4 during the following periods during 2014:

- 0001Z 9 April to 2359Z 15 April
- 0001Z 8 October to 2359Z 14 October

We are seeking Virginia host stations and operators for the 2014 ARRL Centennial QSO Party and would like to maximize operations as much as possible across all bands/modes. We are looking for VA hams (PVRC and others with savvy and experience running pile-ups) to operate as W1AW/4 during VA's two weeks for the Centennial QSO Party. Ops will be from your station/QTH.

Please contact K4ZW (k4zw@verizon.net) and K4EU (k4eu@arrl.net) to add your preferred operating time/date/mode to the Ops Schedule Spreadsheet.

ARRL has stated that host stations/owners who will air W1AW/4 should be ARRL members. Individual operators of multi-op stations need not be members. Per ARRL, host stations/operators should operate within the General Class band segments when possible for maximum QSO exposure. Logs, in .adif format, should be forwarded to K4EU as soon as possible at the conclusion of our operating week. Please keep in mind our on-the-air decorum will directly represent PVRC and ARRL.

More info on the ARRL Centennial QSO Party here, W1AW portable ops schedule here.

Field Day Style 160M SSB from Denmark - Dave K3ZJ

OZ/K3ZJ was a field Day-style operation from Bangsbo Fort just outside the Danish port city of Frederikshavn, in North Jutland. After Nazi occupation began in 1940, the location was chosen to protect the port and Germany itself from Allied invasion. The port was essential to German transportation of war supplies from Norway, immediately to the north. Today the port is still in use for imports from the other Scandinavian countries destined to Europe.

The Germans constructed more than 50 bunkers in a high security area on the hill overlooking the port and northern Jutland. After the war the Danish military took over the site, expanded it, and used it during the cold war until 1962. Today part of the site continues to be used by the Danish military for radio communications.

OZ/K3ZJ was operated from one of the original German bunkers preserved by the Danish Bangsbo Museum and open to the public. The one used, "number 14", would have been the Nazi command bunker had the Allies invaded by way of North Denmark. Today it contains historical exhibits.

The room next to the command room where I operated had been the "wireless room", a "Morse beacon" for communicating with ships remains there, with the switchboard and other communications equipment. According to the signage, "a powerful LW and SW radio transmitter of 800 watts" was used from the bunker. So my little AL811H putting out about 800 watts on 160 meters restored wireless communications to this historic site, if temporarily.



No good trees or other antenna support was correctly situated even though the Danish military communications site next door has multiple towers about 300 feet tall. They were off limits to me, of course. There were several rusting guy points on the roof of the bunker, so I used one of these to attach a 20-foot 2 X 4 that supported a short vertical portion for an "almost L": 18 feet vertical and 110 feet stretched horizontal about 10 feet high connected to a pipe on the neighboring bunker. Radial was one 75 foot 12" wide roll of tin foil purchased at the grocery store. I decided not to model it because I didn't want to know how bad it was.



First night for NA heard only VY2ZM & K3ZM, both weak and unable to hear me. Their stations clearly are in a different class. The second night they both went into the log, along with W3BGN and W2MF. Stations heard but not contacted included N3RR, K1AR, K1RX, N2CW & K3JO (at K1LZ). This was understandable given my poor set-up. My friend OZ1ADL, located about 150 km to the south, did get called by N3RR and 6 or 7 other stateside stations.

Final score was 332 QSOs, 4 StP, 44 DXC = 80,976.

PVRC Stations Survive the Polar Vortex



W3LPL's 40M tower had a nice view of Frank's house.



K3YDX's antenna farm (garden?) survives.



Light icing at W3IP

Don't forget the NAQP Challenge!



From the Wayback Machine: Article about W3AU/W3MSK - Fred K3ZO

Cleaning up the shack, I found the April 1971 issue of Phil Wight VS6DR's OHM (Oriental Ham Magazine) out of Hong Kong. It contained an article about the contest station of Ed Bissell, W3AU originally W3MSK. It is written by PVRCer Don Riebhoff, K7ZZ earlier K7CBZ, intrepid traveler who also held HS3DR, HS4ABM, CT4AT, and was involved with the XV5AC group and the Spratly Island DXpedition in the 1970's. Longtime PVRCers will recall Don as the closest thing PVRC had to 007.



On Location.... 'Alice in Threeland'

by Don Riebhoff, HS3DR

In this issue we have been successful in infiltrating our reporter and camera, disguised as a 20 meter phone operator, behind the voices of the station that has become affectionately known as Radio Maryland and less affectionately, by the competition as V. O. A. (U). The subject of this understatement is the major effort of the well known Potomac Valley Radio Club (P. V. R. C.). The station, W3AU, better known as W3MSK (ex), is owned and financed by Edward E. Bissell Jr.



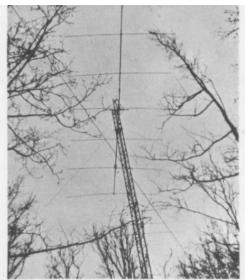
** The man behind the license, Ed Bissell, W3AU, refueling in flight

who, when not playing monkey to one of his many towers, is Deputy Director of the Goddard Space flight center (NASA) near Wash-

ington, D. C. The station is located 25 miles south of Washington in Accokeek, Maryland, on a large hill overlooking the Potomac River. The heavily wooded area surrounding W3AU makes the large antenna farm nearly invisible until one is actually on the estate and then with some difficulty during the summer months when the foliage is heavy. The next best observation point is from the QTH of the old Cherry Tree Chopper himself, George Washington. Mr. Vernon is directly across the River in Virginia from where Ed's antennas are clearly visible above the tree

W3MSK has become synonomous with contests over the last several years and when the call was shortened to W3AU in 1970 the contest world was continually querying W3 land on the absence of W3MSK. The station is rarely heard but for the contest season wherein it has compiled a record envied around the world.

The antenna farm consists of four towers supporting the vast arrays. The 10 meter array is an 80 foot boom with 10 elements wide spaced at 200 feet. Down the tower we find four 2 element 20 meter beams stacked and fixed to the south.



** 20 Meter tower and array. Lotsa talk power.

The 15 meter Array is seven elements on an 80 foot boom atop a similar tower and with 2 fixed 15 meter beams stacked at various levels. The 20 meter array is 7 elements on a 86 foot boom and 40 is 4 elements on an 80 foot boom, both at 200 feet. The remainder of the estate is a cobweb of dipoles, long wires, and inverted vee's for the low bands, 80 and 160. Just a few days prior to my first visit to W3AU a fifth tower was bested by a heavy windstorm which brought down as second multi-element 20 meter array which had a 2 element 80 meter (rotatable) array on the same boom.

If this is not enuff to give you visions of fantasy we will move into the studio where we find one complete wall of floor to ceiling racks. Each of the six racks is a Kilowatt Linear, one for each band and one spare. The three remaining walls are lined with operating positions, 20 and 10 at each end, 40, 15 and 80 opposite the Amplifiers and the 160 position on a bench in front of the center rack. Surprisingly one would

find very little equipment in the room other than during a contest at which time one can barely squeeze in the room. Nearly all of the exciters and receivers are the property of those who come to operate in this multi-op effort. Built into each position is a rotor control and indicator, an antenna select switch (for those positions where more than one antenna is



** The 10 Meter position with it's gadgets.

available), a tape control (allows pre-recorded CQ-tapes to be controled at each position), a Frequency select switch (which allows an exciter to be controled by any of several receivers in transceive fashion at the flick of a switch), and a Headfone control (allows at least two operators to work at each position, each monitoring any of several receivers by selecting a receive position on the switch). The operators donate far more than their operating time and equipment. Most any weekend you can find a good many of the PVRC gang repairing and or modifying the station gear.

Sitting down to the operating position will give you many lasting memories far into your days in Amateur Radio. The command of this station in a pile-up is something to behold. When you hear a

station you want to work, on any band, you first enter him in the log and then give him a call. You know, short of Ed having a power failure or the other station having a Cardiac arrest, that you will in fact work him and never more than 2 dalls. I recall one situation where I broke a local roundtable in Angola, got a report from each



** L. to R. 10, 40 and 15 meter positions and their masters.

of the 6 stations and signed whereupon the entire eastern seaboard piled on the frequency but up to 10 minutes later no one else had managed to break in. Naturally this prompted a bit of X rated name calling toward PVRC and W3AU. Another convenient feature that has been adopted by PVRC is a 2 meter spoting net in the Washington area. The 3 major multi-op stations (K4CG, W4BVV and AU exchange information on where the rare stations are operating. A word of caution to those who might consider using this technique in future contests. Any single operator station who exchanges information on this sort of spoting net automatically puts him self into a multi-transmitter category.

afte afte afte afte

Winter Tower Climbing Tips – Eric W3DQ

Winter Climbing 101: Top 6 tips for cold conditions

Posted on 14 January 2014 by Kelly Hill here.

With most of the country just recovered from a polar vortex, and two Alberta clippers forecast to bring cold and snow to much of the Midwest and East Coast this week, tower climbers face chilly and dangerous conditions during winter tower work.

The experts at Safety One Training International, which specializes in tower climbing safety and rescues, offered these top tips for winter climbing and getting back to the ground safely. "Cold weather is one of the most overlooked hazards that there is," said Todd Horning, director of training for Safety One. "With all the things involved in working at height, the last thing on [climbers'] minds is the cold."

Tip 1: Dress for the weather. Jeans and Carhartt-type work pants don't provide enough warmth and can get soaked, chilling a climber further. PVC-based rain gear will hold in sweat while not providing insulation. Climbers need clothing that will breathe during the exertion of the climb, then insulate and protect them from the wind and cold temperatures during prolonged stretches at height. Horning recommended clothing from the Gortex family of fabrics. Horning also noted that thicker clothing can mean needing to adjust a climber's harness or other personal safety gear in order to maintain good fit, as well as balancing the

warmth of thick gloves vs. the dexterity needed to make connections. And climbers may want to consider bringing an extra pair of gloves, in case one gets dropped during work, rather than risk frostbitten fingers.

Safety One CEO Arthur Seely also noted that wind chill at the base of the tower can be much less than at height, causing climbers to underestimate how much protection they need.

Tip 2: Be aware of the signs of hypothermia. Seely is a paramedic and teaches university courses about the impact of hypothermia and frostbite. Seely noted that conventional wisdom has held that shivering is the body's first reaction to cold, and generally happens at an internal temperature of 95 degrees. But new research, he said, has shown that a person's mental processes are affected at just a core temperature of 97.4 degrees, long before shivering kicks in — and the first thing to go is the ability to clearly recognize risk and make sound decisions.

Tower conditions in winter can be particularly conducive to hypothermia and frostbite. The steel frame conducts heat away from the body at a rate 17 times faster than air, Seely warned. As the hands and feet get cold, the body cuts off blood flow to those areas because they're losing heat, which reduces grip strength and sensation. Seely offered a simple test of dexterity: take the tip of your little finger and touch it to the tip of your thumb. "If you can do that, you're still fine. If you can't do that, we're in trouble," he said.

Tip 3: Don't forget to hydrate. Climbers often assume that because the cold weather makes them unlikely to sweat, they don't need to drag a water bottle up with them on the tower. Seely says not so fast. The lungs require lots of moisture when working in cold, dry conditions — and that can dehydrate a person faster than sweating, he said. The vast majority of water loss in cold weather is not through perspiration but respiration, he said. Water is the fastest way to rehydrate, Seely said, because it is absorbed directly through the stomach rather than travelling through the large intestine, which can take up to four times longer.

Tip 4: Adjust communications. Even a small amount of wind can make verbal communication from the tower impossible to make out. Horning recommended that radios be used that can withstand cold weather — otherwise their batteries might die in bitter temperatures. Carrying radios inside a jacket or shirt, close to the body, can keep them warm enough to be functional.

Tip 5: Have a rescue plan in place and the gear readily accessible. "It's a chain of events that leads to an accident," Horning warned. "You don't do a good hazard assessment, you don't dress adequately. You're focused on 'hey, I've got to pick up the equipment and get out to the site,' and you're not spending a lot of time thinking about what outfit or what gloves should you bring. ... Then you're getting really cold halfway up the tower, you're in stage two hypothermia in an altered mental state with tunnel vision on the job, and you realize 'Hey, I'm really cold and I need some help' and you're stuck up there." "Even if that happens, we can deal with that with a good rescue plan in place."

Tip 6: Know when to call it a day. Ice and snow can bring down a tower due to the extra weight, not to mention the added risk of falling from slick surfaces. Hazard assessments are critical when conditions are cold.

"There are so many bonuses and strict guidelines for getting things done right now," Horning said. But, he added, getting injured isn't worth the bonus. Dropping or damaging equipment due to hazardous conditions may cause a bigger delay than waiting out a storm. "If we can figure out a way to work safely, then we can work," he said.

Originally from Towercrews.net

Membership News - Bud W3LL

PVRC added three new members since the last newsletter, all in the Rappahannock chapter. Please welcome:

- Stephen N4DXS
- John KJ4RTF
- Skip KC4QP

Chapter leaders please remember to complete the Meeting Attendance Report.

Upcoming Contests and Log Due Dates

Contests This Month

Mar 1 - ARRL DX SSB Mar 9 - NA Sprint RTTY Mar 15 – BARTG RTTY Mar 15 – Russian DX Mar 16 – NA Sprint SSB Mar 23 – UBA SB

Mar 29 – WPX SSB

Logs Due This Month

Mar 2 – NAQP RTTY Mar 2 – NAQP RTTY Mar 9 – UBA CW Mar 18 – ARRL DX CW

See WA7BNM's Contest Calendar for more detail and the latest information.

Editor's Last Word - John K3TN

Thanks to Fred K3ZO and Dave K3ZJ for the great write-ups and pictures for this month.

Pictures, write-ups, anything you have for the next newsletter – send them to <u>ipescatore</u> at aol dot com.

Eyeball QSO Directions

The latest info on local club meetings and get together will always be sent out on the PVRC reflector and posted on the PVRC web site.

NW Region: Meetings are generally held on the third Tuesday of each month at the Golden Corral Frederick, MD 5621 Spectrum Dr.
Frederick, MD 21703
PVRC Meets in the BANQUET ROOM (301) 662-5922

From Interstate 270 south of Frederick, MD take MD Route 85, "Buckeystown Road" NORTH. First right on Spectrum Drive. Restaurant is in a couple of blocks. Most arrive about 6 PM for dinner and informal discussions. The meeting begins at 7:00 PM.

Contact: Jim WX3B

Central Region: Meets monthly the second Monday of each month, except June, July & August). The location alternates between the below MD and VA locations. Pre-meeting dinners start at 6:00 pm and meetings start at 7:30 pm.

VA LOCATION: Anita's, 521 E. Maple Ave, Vienna, VA. Tel: 703-255-1001. Meets at this location during the months of February, April and October. Contact: Rich NN3W

MD LOCATION: Max's Café. 2319 University Blvd W, Wheaton MD 20902. Tel: 301-949-6297 People usually begin arriving at the restaurant around 6:30. Meets at this location during the months of January, March, May, September and November. Contact: Art K3KU

The Laurel, MD Region: Bill N3XL The PVRC get-together is held at the first <u>LARC</u> meeting each quarter at the clubhouse.

The Annapolis Crew: Dan K2YWE Meetings are held on the 4th Wednesday of each month at Broadneck Grill in Annapolis. We gather at about 5:30 PM and order dinner about 6. We break up usually before 8 PM. E-Mail <u>K2YWE</u> to be put on the e-mail reminder list.

PVRC-NC: The PVRC NC-East chapter meetings are held at Manchester's Bar and Grill on the 9100 block of Leesville Rd. in North Raleigh, with "QRM" beginning at 6:00pm and the dinner meeting following shortly thereafter. The meeting is held monthly on the 1st Thursday of most months, cancellations or changes usually announced on the PVRC-NC website. The PVRC NC-West Chapter holds its meetings on the 4th Monday of each month at the Mellow Mushroom, 314 W. 4th St., Winston-Salem, NC. Ragchew at 7:00pm, dinner meeting starts at 7:30pm. All contesters and interested guests are invited!

Central Virginia Contest Club: Ed NW4V Meets the first Tuesday of the month at St. Martins Church, 9000 St. Martin Lane, Richmond VA, (between W. Broad St. and N. Parham Road). Our meeting begins at 7PM.

Over the Hill Bunch: The group meets for lunch at noon alternately in Maryland at the College Park Holiday Hotel Route 1 and the Beltway or in Virginia at the Parkview Marriot near route 50 and the Beltway. Meetings generally are held on the last Wednesday of the month and are subject to change. Meetings are announced by E-Mail. All PVRC members, non-members interested in membership and guests are welcome. For information contact Roger Stephens, K5VRX, 703-658-3991 for Virginia meetings; or Cliff Bedore W3CB or get on 147.00 for Maryland meetings.

Downtown Lunch Group: Meets on the 3rd Wednesday or Thursday of the month in the downtown area of Washington, DC. Locations occasionally change, but are always Metro accessible. Details are sent out on the PVRC reflector. Feel free to contact Eric W3DQ or Brian WV4V for details and directions.

Southwest VA Chapter: The Southwest VA group meets each Wednesday at about 8:30 AM at Hardees at 20265 Timberlake Road in Lynchburg, VA. This is an informal gathering, but normally has about 10-12 attendees..Contact Mark Sihlanick N2QT, Tel: 434-525-2921

SOMD Region Meeting: The Southern Maryland Chapter meets at 6:30PM on the first Tuesday of even numbered months. We meet in the vicinity of Charlotte Hall, MD, with the specific location (usually a local restaurant) to be announced several weeks prior to the meeting (keep an eye on the reflector). These meetings are open to all PVRCers, guests, and those interested in joining PVRC. Contact Tom AB3IC for information: e-mail: GL1800Winger@verizon.net - cell: 240-434-3811

If you'd like to add or correct a listing, contact K3TN for inclusion in the Newsletter!

Now a Word From Our Sponsors

PVRC doesn't ask for dues, but the Club does have expenses. Please send contributions by snail mail to N3RR's address at QRZ.com. You can also support the Club by buying from the firms listed who advertise in the newsletter, or by getting your company to sponsor the newsletter!

QSL CARDS By LZ1JZ WWW.LZ1JZ.COM



By Scott KA9FOX

Free Ham Radio Classifieds (most popular ham swap site)
Low Cost Web Hosting, Email & Domain Name Services
Web Design & Development

http://www.QTH.com





Your source for DX News!

The Daily DX - is a text DX bulletin that can be sent via e-mail to your home or office Monday through Friday and includes DX news, IOTA news, QSN reports, QSL information, a DX Calendar, propagation forecast and much, much more. With a subscription to The Daily DX you will also receive DX news flashes and other interesting DX tidbits. Subscriptions are \$49.00 for one year or \$28.00 for 6 months.

The Weekly DX - is a product of The Daily DX that can be sent weekly to your home or office via e-mail in the form of a PDF (portable document format). It includes DX news, IOTA news, QSN reports, QSL information, a DX Calendar, propagation forecast and graphics. Subscriptions are \$27.00 for one year.

Get a free two week trial of The Daily DX and The Weekly DX by sending a request to **bernie@dailydx.com.**

The Daily DX 3025 Hobbs Road Glenwood, Maryland 21738 Phone: 410-489-651 Skype w3ur-bernie





	Per Foot
O.D.	
.375	\$.50
.5	\$.70
.625	\$.80
.75	\$.90
.875	\$.95
1	\$1.00
1.125	\$1.10
1.25	\$1.30
1.375	\$1.40
1.5	\$1.50
2.0	\$2.25

6063-T832 Aluminium TX38 Triband Yagi Antenna 10-15-20 Meter with Monoband Performance 2 Elements on 15 and 20 and 4 Elements on 10 All hardware weather resistant Antenna Rated for over 100 MPH

Official Antenna of WRTC 2014

U-Bolt Saddle Clamps for 1.25" Tubing – 3.5" Tubing Galvanized – Zinc Plated – Stainless Steel Monoband Yagi Antenna Kits for 6-20 Meters Custom Built and Designed Yagi Antennas

www.cycle-24.com sales@cycle-24.com 870-715-8228 THE R. F. CONNECTION
"Specialists in RF
Connectors and Coax"

213 North Frederick Avenue Suite 11-F Gaithersburg, MD 20877

Tech Support: 301-840-5477

24-hour Fax: 301-869-3680

Order line: 800-783 -2666

Email: rfc@therfc.com

Please visit us at: Http://www.therfc.com

Our catalog includes:

UHF Series, N Series, BNC Series, Adapters, F Series, DIN Plugs, Portable Radio Power, DIN Plugs, Hardline Connectors, Audio Connectors, Microphone Connectors, FME Series, SMA Series, Reverse Thread SMA Connectors, MCX Series, MMCX Series, Adapter Kits, Reverse Polarity (TNC, N, SMA), 39 coax types and 5 balanced lines



(714) 533-7373 (800) 854-6046 Janet, KL7MF, Mgr. anaheim@hamradio.com

BURBANK, CA

1525 W. Magnolia Blvd, 91506 (818) 842-1786 (800) 854-6046 Eric, KA6HT, Mgr. Magnolia between S. Victory & Buena Vista burbank@hamradio.com

OAKLAND, CA

UAKLAND, CA 2210 Livingston St., 94606 (510) 534-5757 (800) 854-6046 Mark, WIZYN, Mgr. 1-880 at 23rd Ave. ramp oakland@hamradio.com

SAN DIEGO, CA

5375 Kearny Villa Rd., 92123 (858) 560-4900 (800) 854-6046 Tom, KM6K, Mgr.

Hwy. 163 & Claremont Mesa sandiego@hamradio.com

SUNNYVALE, CA

510 Lawrence Exp. #102, 94085 (408) 736-9496 (800) 854-6046 Dan K6DN, Co-Mgr. Howard, W6HOC, Co-Mgr.

So. from Hwy. 101 sunnyvale@hamradio.com

NEW CASTLE, DE

(Near Philadelphia) 1509 N. Dupont Hwy., 19720 (302) 322-7092 (800) 644-4476 Rick, K3TL, Mgr. RT.13 1/4 mi., So. I-295 newcastle@hamradio.com

PORTLAND, OR

11705 S.W. Pacific Hwy. 97223 (503) 598-0555 (800) 854-6046 Leon, W7AD, Mgr. Tigard-99W exit from Hwy. 5 & 217 portland@hamradio.com

DENVER, CO 8400 E. Iliff Ave. #9, 80231 (303) 745-7373 (800) 444-9476

PHOENIX, AZ 1939 W. Dunlap Ave., 85 (602) 242-3515 (800) 444-9476 Gary, N7GJ, Mgr. 1 mi. east of I-17 phoenix@hamradio.com p Ave., 85021

ATLANTA, GA

6071 Buford Hwy., 30340 (770) 263-0700 (800) 444-7927 Mark, KJ4VO, Mgr. Doraville, 1 mi. no. of 1-285 atlanta@hamradio.com

WOODBRIDGE, VA

(Near Washington D.C.) 14803 Build America Dr. 22191 (703) 643-1063 (800) 444-4799 Steve. W4SHG. Mgr. Exit 161, 195, So. to US 1 woodbridge@hamradie.com

SALEM, NH

(Near Boston) 224 N. Broadway, 03079 (603) 898-3750 (800) 444-0047 Chuck, N1UC, Mgr. Sares@hamradio.com Exit 1, I-93; 28 mi M-28 mi. No. of Boston salem@hamradio.com

Special Holiday Discounts Off Our Already Low Prices!



VX-2R 2M/440 HT

WiRES compatible

FT-60R

Low Price!

55. HRO COMP

VX-6R

2m/440 HT
 5W Wide-band receive
 CTCSS/DCS Built-in
 Emergency Auto ID

• 1300 Memory channels

Call For Low Price!

World's smallest Dual-band H
w/ wide RX

1.5 W RF output

VX-7R/VX-7R Black

Wideband RX - 900 Memories
 SW TX (300mw 220Mhz)
 Li-lon Battery
 Fully Submersible to 3 ft.
 Built-in CTCSS/DCS

Internet WIRES compatible

Now available in Black!

50/2M/220/440 HT

GREAT YAESU WINTER SPECIALS Through 12/31/06



FT-897D VHF/UHF/HF Transceiver

- HE/6M/2M/70CM DSP Built-in
- HF 100W (20W battery)
 Optional P.S. + Tuner TCXO Built-in

Call Now For Our Low Pricing!



FT-817ND HE/VHE/UHF TCVR

- 5W @13.8V ext DC USB. LSB. CW. AM, FM Packet (1200/9600 Baud FM) 200 mems built in CTCSS/DC5 TX 160-10M, 6M, 2M, 440 Compact 5.3" x 1.5" x 5.5", 2.6 fbs FNB-85 NiMH battery + NC-72B included
- Call Now For Low Pricing!



FT-8800R 2M/440 Mobile

- V+U/V+V/U+U operation
 V+U full duplex Cross Band repeater function
 SOW 2M 35W UHF
- 1000+ Memory channels
- · WIRES ready

Call Now For Low Pricing!





Direct Keypad Entry
 Sw output
 209 memories
 Ultra Rugged

FREE

Call Now For Special Pricing!



Ultra compact HF, VHF, UHF

- 100w HF/6M, 50w 2M, 20w UHF
- DSP included 32 color display
 200 merns Detachable front panel (YSK-857 required)

Call for Low Price!



- 50w 2m, 40w on 440mHz
 Weather Alert

- Weather Alert
 1000+ Mems
 WIRES Capability
 Wideband Receiver (Cell Blocked)

Call Now For Your Low Price!



FT-2000 HF + 6M tcvr

- 100 W w/ auto tuner built-in Power supply
- DSP filters / Voice memory recorder
 3 Band Parametric Mic EQ 3 IF roofing filter
- **Call Now For Low Pricing!**



- 10M/6M/2M/70CM Wires capable 800+ memories Built-in CTCSS/DCS Remotable w/optional YSK-8900
- **Call Now For Special Pricing**

FREE SHIPPING







8:30 am to 4:30 pm ET Monday-Friday 1230 to 2030 UTC (March-October) 1330 to 2130 UTC (November-February) Tech/International: 330.572.3200 Country Code: +1

Fax: 330.572.3279 Sale Code: 1404PVRC

DXENGINEERING.COM 800-777-0703

DX Engineering can provide you with everything you need to stay competitive, including advice from our team of serious Amateur Operators and the fastest shipping in the industry.

RigExpert Antenna Analyzers—Click for Details.

Professional broadcasters, telecommunications engineers and serious Amateur Operators all over the planet trust analyzers from RigExpert. They combine functionality, accuracy, durability, and ease-of-use. These invaluable tools let you test, check, tune, or repair your antennas and feedlines. They can also be used to test coaxial cable assemblies and drastically cut down on antenna adjustment time. Several models are available, with frequency ranges as broad as 0.1-1400 MHz.

Receive Preamplifier—Click for Details.

The <u>RPA-1 Receive Preamplifier</u> has been tested to be the best low-noise preamp available. It's better than most radio front-ends, using an advanced push-pull design to eliminate harmonic distortion. The preamp also has a high quiescent current to help handle strong signals without overloading. It covers 300 kHz-35 MHz, and offers the best results for HF DXing or Contesting.

Receive Antenna Variable Phasing Controller—Click for Details.

Combine two identical receive antennas to create a "virtual rotator" directional setup using the <u>NCC-1 Receive Antenna Variable Phasing Controller</u>. It's adjustable, allowing you to change the receive pattern as if you were physically moving the antennas. That means you can null-out unwanted directional noise or enhance distant signals. This controller is the ideal solution for imperfect antenna setups, giving you directional array features regardless of your landscape.



AA-54

Ultra-Grip Crimp Tool—Click for Details.

Made precisely for coaxial and Powerpole® connectors, this kit is filled with the exact prep tools and dies you'll need to make full-ferrule connections. The <u>Ultra-Grip Crimp Tool Kit</u> comes with the tool, shears, braid trimmer, Allen wrench and case. It also includes crimp dies for several coaxial cable types, along with Anderson Powerpole® connectors. The tool, dies and case are also available separately.



Stay competitive: Get the right parts and blazing-fast shipping. If your order is in by 10 pm Eastern and the parts are in stock, DX Engineering will put it on a truck the same day. Request your catalog and shop online 24 hours a day, 7 days a week at DXEngineering.com.