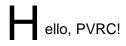


PVRC Newsletter October 2016

President's Letter – Bud W3LL



This month with the receipt of our plaque order by our treasurer Tom K3AJ we took to the open road.

At the joint NCDXA PVRC Regional Fowlfest, Mark KD4D was presented the 2015 K3MM Top Gun Sweepstakes Award plaque along with a 5M 125 million endorsement plate by PVRC President W3LL. Called the "K3MM Top Gun Award", this award goes to the individual having the highest combined Sweepstakes CW and SSB scores.

Also at the Fowlfest Jim W3NRJ, Fowlfest host since 2010, was presented the PVRC President's Leadership Award plaque by PVRC President W3LL "For keeping the tradition of Fowlfest alive".

On our next excursion Tom K3AJ and myself hit the road for a 2 hour ride to Purcellville VA for a special PVRC Northwest Extension meeting at Smokin Willy BBQ. The purpose of the trip was to meet with old friends, vote into PVRC 2nd meeting attendees and distribute 5M plaques and endorsements. Voted into PVRC membership was Jerry, W6IHG and Mike W3IP. This was a first meeting for John, W0MPM.

Treasurer Tom K3AJ and I again took to the road for another two hour combination drive and DC Metro Ride to visit with the Downtown DC Lunch Group chapter of PVRC. Ken KE3X PVRC Trustee and former PVRC President was presented by Bud W3LL the President's Leadership Award plaque for Unconditional Support In Time Of Need During PVRC Turbulent Times. Eric W3DQ chairman of the DC Downtown Lunch Group presented Raphael NN3RP with his 5M plaque. Eric W3DQ presented Ken KE3X with his 5M 35 Million Point endorsement plate. Eric also presented Tim N3QE with the 2015 CQ Club Competition Plaque for the CQWW DX RTTY Contest along with his 5M 35 Million Point endorsement plate.

Next it was off to the Northwest meeting for more presentations.

Secretary Tim N3QE provided Jim WX3B NW Chairman with the 2015 Sweepstakes "run' em" Certificates for presentation. This went to NW chapter members who operated (not just station owners) 2015 SS and worked more than 500 QSO's between the two modes combined: AB3CV, K0ZR, K1RH, K3AJ, K3DNE, K3MM, K3TM, K3WI, K4FTO, K8NY, KE4S, N1RM, N1SZ, N3HEE, N3KS, M3MK, N3RR, N3UM, N4PD, N8II, ND3D, W3DF, W3GB, W3KX, W3LL, W8ZA, WR3R, WX3B.

I had the pleasure to present the President's Leadership Award to Art K4FTO for his use of indoor antennas with low power. The record shows Art participated in 251 5M contests and so far has reached 12M points in the program. Perseverance pays off.

The balance of the President's Leadership Awards will be made at the 2017 PVRC Center of The Circle Galactic Social and Luncheon. Neal K3NC plank holder for the first Galactic event injured himself and notified us that he cannot host the 2017 event. The Colonial Capital Williamsburg chapter under the leadership of chapter chair Bill NR4C along with VP Ted W3TB volunteered to host the 2017 event.

Bill and VP Ted went on an Expedition to Richmond and found two good locations, and chose one: <u>Roma</u>, 7240 Bell Creek Road, Richmond

On another note, Dave K3ZJ volunteered to run fundraising for PVRC WRTC tent(s). We look forward to hearing more from Dave regarding his PVRC fundraising progress.

The PVRC Logo shirt project is moving along well. Don't put off sending in for yours and find yourself in a rush later. This is a chance to own a classy alternative to wearing a name tag. We added 270 new members in the last eight years who don't have a PVRC Logo shirt. The shirt promotion ends on 18 October. After that date it may be another thirteen years before we do it again. Shirts may be ordered by going <u>here</u>.

While reading the September edition of CQ magazine there I saw our rookie Tucker McGuire W4FS appearing in a full color close-up in the September issue of CQ magazine.

Roanoke-Blacksburg chapter chairman Bob N4HY writes in the October QST column Letters From Members - "Member Spotlight" commenting about Women in STEM – Magda KM4EGE a VA Tech ARA role model for women.

Do you know that PVRC sponsors club competition contest plaques? Here's a listing of what we sponsor:

ARRL Sweepstakes

Single Operator Low Power Phone Atlantic Division

Single Operator High Power CW Roanoke Division

ARRL International DX Contest - North America Single Operator High Power CW

ARRL June VHF Contest - Atlantic and Roanoke Division Rover

<u>CQ-WW RTTY Contest</u> - World Club Plaque

CQ WPX RTTY Contest - World Club Plaque

CQ WW DX Contest - SOAB Europe and USA, SSB 2013

October begins the process for annual PVRC elections. The PVRC by-laws Section 2 stipulate the following process:

Elections - Section 2: "The President shall call for the nomination of officers and the Board of Trustees in September. The floor shall remain open for additional nominations until October 31. The Officers and Trustees shall be elected by a majority vote of active, voting members. Election results will be announced by December 31."

I've confirmed that all presently serving officers and trustees have agreed to stand for reelection. The process that we'll use for the 2017 annual election cycle is as follows:

- 1. Chapter chairmen will ask for nominations at both their September and October meetings. See September posting: Annual Elections A View From The Bridge 25
- 2. Chairmen will forward nomination results via email to the PVRC secretary not later than 31 October.
- 3. PVRC Secretary Tim, N3QE will receive via email the September and October nominations from your chapter chairmen.
- 4. A list of all nominees received by Tim from all chapter chairmen plus presently serving officers and trustees will be sent to each chapter chairman via email on 01 November.
- 5. Chapter chairmen will hold elections at their November and December chapter meetings.
- 6. Chairmen will forward election results via email to the PVRC secretary not later than 15 December.
- 7. Secretary Tim N3QE will post election results to the PVRC reflector not later than 31 December.

Before we get to the Sports Page and with Sweepstakes right around the corner I now officially declare Sweepstakes 2016 is a Double Point Contest for 5-Meg. Let the games begin!

Now on to the Sports Page:

The contest season is now starting to heat up, with dueling 5M contests on the weekend of September 10-11, a few smaller DX contests and a plethora of State QSO Parties to keep the juices flowing in the last month.

There was a serious turnout of PVRC'ers in the WAE SSB contest with 28 SO's and three multiops with another 12 PVRC ops in play for a total of 40 operators. Continuing the recent trend, this is way up from the 2015 running, which had 18 PVRC participants.

Despite less than ideal conditions that weekend, team KD4D at N3HBX was edged out for the top M/S NA spot by a mere 27K points. WX3B wasn't too far off the pace either, putting up a good third place finish. KE3X, continuing his quest for a WRTC slot, appears to have put up the top US SO HP score. Other top 10 SO HP finishers from PVRC included W3LL, K3ZJ/8 and K4XL. As for SO LP, N4YDU (at NR4X) put in a second place US finish.

Overlapping WAE SSB was the ARRL September VHF contest. While no remarkable propagation was noted, conditions weren't too bad, with a little bit of tropo enhancement here and there. Notable PVRC scores were posted by some of the usual PVRC suspects, such as the W3SO and K3CCR multiops as well as SOHP efforts by W3IP (third in SO HP), N3MK, K1HTV. Ed, W3EKT put up a nice SO LP score good for a fourth place finish. Looks like Ed had his UHF gear working well, as he had QSO's on 7 bands. There are a lot of categories in this one, and some PVRC players in some of the other categories included AB3WS in SO QRP portable, N4MM in SO 3 Band HP. PVRC put up a good showing in SO 3 Band LP with N3ALN in second, N3XF in third, and K3YDX and N9NB also making the top ten.

Playing in some of the smaller DX contest can be a lot of fun. N3JT and K1IMI (with N4CW at the controls) played in the YO DX HF contest at the end of August. W3LL, W3GVX, K0OO (at W3EKL) and K4GMH all participated in the Russian RTTY WW Contest. RTTY maven W3LL seems to have put up the number 2 US score, still limited to his OCF dipole for 40 and up! PVRC had a pretty good showing in the Scandinavian Activity Contest as well, with 9 players (if we include K3AJ who somehow reported his club as Pizza Lovers 259). AB3WS made 81 Q's and 56 mults as QRP using a wire antenna. K7SV hit this one pretty hard with 224 QSO's good for a first place US finish in SO LP.

There are so many state QSO parties that it is hard to keep up with them, and we do have some PVRC folks who really like them. N8II is a big state QSO party guy, and he was in both the Colorado and Kansas parties. AB3WS made a couple of QRP QSO in the Hawaii party. W4MPS put up a notable score in the NJ party, with 89 QSO. The Kansas QSO party seems to generate a lot of interest, and N4MM and N3KN were in that one as well as N8II. Finally, the Ohio party had scores from K7SV and N3KN.

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

73, Bud W3LL

PVRC Officers	<u>;</u> :		Trustees:
President: Vice President: Vice President: Secretary: Treasurer:	W3LL K2YWE W3TB N3QE K3AJ	Bud Governale Dan Zeitlin Tom Edwards Tim Shoppa Tom Valenti	K3MM, N3OC, WX3B, W4ZYT, N4NW, K2AV, KE3X, K4ZA, K3WRY <u>PVRC Charter Members (all SK):</u> W3GRF, W4AAV, W4KFC, N0FFZ, W4LUE, W7YS, VP2VI/W0DX, W3IKN, W4KFT
		PVRC Website	nttp://www.pvrc.org

2016 PVRC President's Leadership Awards – Bud W3LL

With the advice and consent of the board of PVRC officers, I am pleased to announce the following President's Leadership Awards for 2016:

Art Hackett K4FTO – Successful Use of Indoor Antennas in Radio Contesting

Art epitomizes the fact that the love of, and enthusiasm for, contesting doesn't depend on or require impressive hardware. Art is a very active contester using indoor antennas, and serves as a role model for PVRC members whose situations limit their ability to put up antennas.

Bill Hider N3RR – Prolific and Tireless Contributions as Treasurer of PVRC

There is a tremendous amount of work that goes on behind the scenes to keep PVRC running and to maintain our position as a leading contest club. Bill served the club admirably for many years as treasurer. Beyond that, his deep knowledge of club history, the finer points of the legal environment in which the club operates and just all around good judgement has been invaluable to the club's success

Ken Low KE3X – Unconditional Support in During PVRC Turbulent Times

Upon moving up to the Presidency of PVRC on an unplanned basis at a time when the club was facing a lot of challenges, the advice, counsel and leadership of Ken during that leadership transition period was of inestimable value to the President and the board of officers.

Jim Locke W3NRJ – Keeping the Tradition of Fowlfest Alive

Jim has taken the initiative and done all the hard work of organizing and hosting the FowlFest event for some years, keeping an important PVRC tradition (along with our partners in the National Capital DX Association) alive.

Neal Campbell K3NC – Creating and Organizing the First PVRC Galactic Event

Amidst all the changes and challenges that PVRC faced in early 2016, the need for a PVRC wide social event, somewhere convenient to the center of the PVRC circle, was recognized. Neal stepped forward on short notice and made, what now appears to be becoming an annual event, a reality.

Tucker McGuire W4FS – Most Improved New Contester

One of PVRC's younger active contesters, Tucker has advanced his skills rapidly, putting up good scores, showing constant improvement, and even winning the Rookie overlay category for North America in the 2016 CQ WPX SSB contest.

Nate Moreschi N4YDU – Outstanding Service by Being an ARRL Contest Awards Editor

Everyone knows that Nate is a world class contester, a past WRTC competitor and the chairman of the NC – East Chapter of PVRC. But he also contributes to our sport by making the considerable commitment to serve as an editor for published ARRL contest results.

Dave Collingham K3LP – Risking Life and Limb to Provide VP8STI/VP8SGI as All Time New Ones to Many PVRC Members

One of the amazing things about PVRC is that our members include some individuals who are known all over the world as leaders in Amateur Radio in ways that go beyond contesting. Dave is one of the driving forces behind the Intrepid DX Group, who have mounted some impressive DXpeditions. This award recognizes Dave for his pivotal role in last year's VP8STI/VP8SGI operation.

Mark Bailey KD4D – The K3MM "Top Gun" Award

This award recognizes Mark's accomplishment of having the top combined CW/SSB score in the 2015 ARRL Sweepstakes.

2016 5M Program Milestones – Tom K3AJ

Congratulations to the following PVRC members who have achieved milestones in the 5M Award Program! The awards are being distributed through the Chapters insofar as possible.

5M Award: AA3S, K4UVA, N3HEE, N4QQ, N4RA, NA1DX, ND3N, NN3RP, W2RU, K4MIL (Earned in 2015), W4MPS, W4TTY, W4WWQ, WA3AER, WR3R

10M Endorsement: AB3CV, AJ3M, K0ZR, K5OF, N3AHA, N3ND

15M Endorsement: K1DQV, K1RH, K3TC, K4GM, N1SZ, N4UA, ND3D, W4AAW

20M Endorsement: K3AJ, K3TN, N3JT, N3UA, W3CB, WB4FDT

25M Endorsement: K3ZU, K4OV, WJ9B

30M Endorsement: K3DNE, W3YOZ

35M Endorsement: K1RZ, K3WI, KE3X, N3QE

40M Endorsement: K4EU, K4QPL

50M Endorsement: K7SV, KT3Y, N1LN, N3KS, N3UM, N4YDU, W4RM

60M Endorsement: N3RR, W3LL

70M Endorsement: K2PLF, K4GMH, N4CW, N8II

80M Endorsement: WR3Z

90M Endorsement: WX3B

100M Endorsement: N3OC, W3LPL

125M Endorsement: K3ZO, KD4D

150M Endorsement: N3HBX

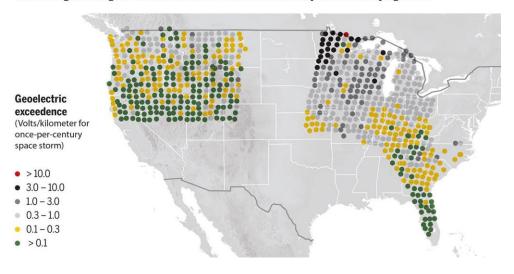
Which Contest Clubs Would Survive the Killer Solar Storm? - John K3TN

It looks like the Mad River Radio Club would be toast, while NCC and the Florida and Southeast Contest clubs are safe. The lack of a dot means they didn't yet have the conductivity data for the underlying rock – PVRC should be in the clear but FRC and YCCC could be right up there on the crispy list, too...

From Science Magazine, September 13 2016

A Minnesota menace

A new hazard map shows how power grid infrastructure in parts of Minnesota is vulnerable to disruptions from solar magnetic storms. The hazard combines the tendency for severe magnetic storms, which is higher at higher latitudes, with the relative conductivity of the underlying rocks.

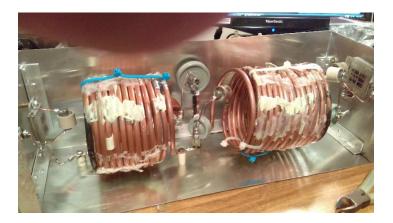


WriteLog Contesting Super Simulator

(From the <u>ARRL Contest Letter</u> Sept 7th)

Wayne, W5XD, has released the <u>Contesting Super Simulator</u>, an add-on to WriteLog. This software enables real CW or RTTY Practice, including SO2R, by emulating the radio and station hardware and providing simulated band conditions. Search and pounce mode is even available.

The World's Ugliest 160M Band Pass Filter – Mike W4AAW



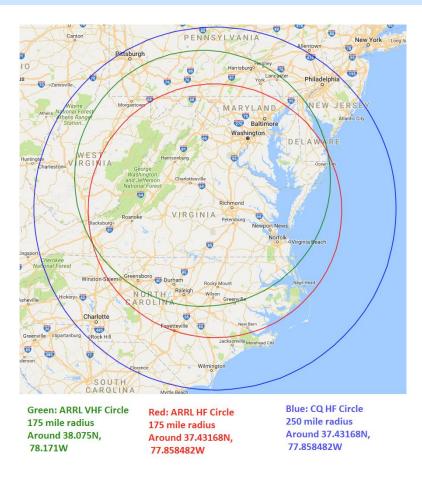
Homebrew 2 KW 160M BPF for use at the W4AAW remote multi operation, using ARRL's Elsie filter software design. I have never seen a worse-looking pair of inductors! I had to use various epoxies to hold the turns in place. They were sagging, shorting turns. Then, used my inductance meter and zip ties to pull turns together to achieve precise values required. Homemade enclosure (18" X 6" X 6") will be buttoned up and fitted with a muffin fan to diffuse heat.



Negligible insertion loss on 160M. 80M harmonic >-50 dB. Anything higher than 7 MHz, >-80 dB. SWR <2:1 1.800-1.850 MHz.

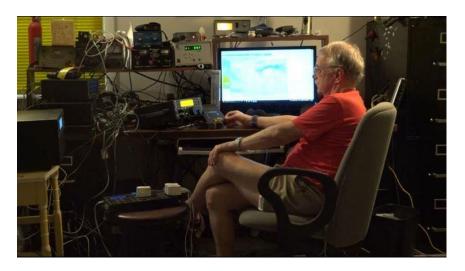
Now you see why 2 kW BPF cost \$400-\$500 if you buy them. Thanks to KU1CW and W4TMO for providing the expensive capacitors.

Do You Know Your PVRC Circles? – Tim N3QE



Online version here.

Jim N3JT (The Morse Code Man) On WUSA-9 TV



Watch the video here

PVRC Club Shirts – Dan K2YWE



Personalized PVRC polo shirts are available again for the first time in 13 years. The shirts feature an embroidered PVRC logo on the right breast and the member's name and call sign embroidered on the left above the pocket. The logo is 1/2" smaller than on our last shirt. Name and call sign are the same size as before. Cost is \$43. Click here for more detail on the shirts.

Download and print the order form from <u>here</u> and send it to K2YWE with your check. You may use a hand written version of the form if you can't print it. Checks and info must be received by October 18, 2016 to be included in the order.

Shirts will be distributed primarily through Chapter Heads at chapter meetings and at the February Richmond gathering. Other arrangements can be made on request

Membership News - Tim N3QE

PVRC added several members in the last month – please welcome **Jerry W6IHG and Mike W3IP in the Northwest Chapter.**

Chapter leaders please remember to complete the <u>Meeting Attendance Report</u>. Members can check and update their roster details via the <u>Roster Lookup</u>.

Upcoming Contests and Log Due Dates

Contests This Month

- Oct 1 Oceania DX SSB
- Oct 1 CA QSO Party
- Oct 8 Oceania DX CW
- Oct 15 Worked All Germany
- Oct 29 CQ WW SSB

Logs Due This Month

- Oct 2 CQ WW RTTY
- Oct 7 All Asian DX SSB
- Oct 10 SARTG RTTY
- Oct 20 ARRL UHF

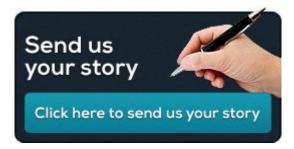
See WA7BNM's <u>Contest Calendar</u> for more detail and the latest information.

The Editor's Last Word – John K3TN

October kicks off the real[™] contest season – the biggest of the SSB DX contests in CQ SSB WW and the California QSO party as the biggest state contest. CQP is a good one to test out your station, operating position and software for the real[™] real[™] contests in November – CQ WW CW and Sweepstakes.

I didn't do any shack or station improvements over the summer but one of the wind storms brought down some limbs that took down my wires. So, I did get a lot of tree trimming done and had one big dying tree taken down. The Windom now is in the clear and I have an open spot in the trees where something can go up before November.

Thanks to Jim N3JT, Tim N3QE, Dan K2YWE and Mike W4AAW for submissions for this month's newsletter. If you have any good contest stories or photos of your station or fellow PVRCers, or anything else – send to jpescatore at aol dot com.



From the PVRC Treasurer – Tom K3AJ

PVRC has chosen not to implement an annual Dues requirement. We depend on the generosity of all of our club members to finance our annual budget. In addition, active PVRC members are expected to participate and submit logs for at least two PVRC Club Competition contests per year.

When contemplating your donation to PVRC, each member should consider the benefit you are receiving from PVRC and its many opportunities for your personal growth in our wonderful hobby, then donate accordingly.

Direct donations to PVRC via Credit Card or PayPal may be made by clicking this "Donate" button and clicking the next Donate button that appears on your screen:



Eyeball QSO Directions

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

NW Region: Meetings are generally held on the third Tuesday of each month at: <u>Chef Lin</u>, 417 S Jefferson St. Frederick, MD 21701 Phone #: 301-620-0664(2675) The meeting begins at 7:00 PM.

Contact: Jim WX3B

DC Metro: 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 <u>NN3W</u>

MD LOCATION: Max's Café. 2319 University Blvd W, Wheaton MD 20902. Tel: 301-949-6297 People usually begin arriving at the restaurant around 6:00. Meets at this location during the months of January, March, May, September and November. Contact: Art <u>K3KU</u>

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 <u>Manchester's Bar and</u> <u>Grill</u> 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 <u>PVRC-NC website</u>.

The **PVRC-NC West** chapter meets the 3rd Monday of each month (except December) at about 7:00 PM at Hams Restaurant, 414 S. Stratford Rd., Winston-Salem on the south end of the Thruway Shopping Center. We meet in the front meeting room of the restaurant. A wide variety of cold 801s and Sports bar menu available. Contact Henry Heidtmann W2DZO, full info at http://www.w4nc.com

Over the Hill Bunch: The group meets for lunch at noon alternately in Maryland at the Sir Walter Raleigh Inn 6323 Greenbelt Rd, Berwyn Heights, MD or in Virginia at Anthony's restaurant in Falls Church. Meetings generally are held on the last Wednesday of the month and are subject to change. Meetings are announced by email.

All PVRC members, non-members interested in membership and guests are welcome. For information contact Roger Stephens, <u>K5VRX</u>, 703-658-3991 for Virginia meetings; or Cliff Bedore <u>W3CB</u> or get on 147.00 for Maryland meetings.

Downtown Lunch Group: Meets at noon on the first Wednesday of the month in the downtown area of Washington, DC. Location: R.F.D. Washington, 810 Seventh St., N.W. Closest Metro stop is GALLERY PLACE-CHINATOWN (Red, Green and Yellow lines). Any changes will be 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

Eastern Shore Chapter: Meets every three months, on the second Saturday of April, July, October and January at noon. In keeping with the tradition established by SK Dallas W3PP we will also meet at the contest station of Eric WG3J one hour before the start of most major contests. Contact Eric Hudson <u>WG3J</u>

Location: Delmar Pizza, north west corner of the intersection of highways 13 and 54 in Delmar, De.

Southern Maryland Chapter: Currently on hiatus, if interested in meeting contact the Chapter Chair, Tom Shelton, <u>ND3N</u> via email or (240)

Colonial Capital Chapter: Meets the 2nd Thursday of each month at 8:30 am Location: Hot Stacks Restaurant, 6495 Richmond Rd, Williamsburg, VA 23188 757-565-1105

Contact: Bill Conkling NR4C

The Tidewater Chapter meets the 3rd Tuesday of every month at Frankie's Place for Ribs located in the Fairfield Shopping Center on the corner of Kempsville Rd and Providence Rd in Virginia Beach. The meeting starts at 7:00 PM. All amateurs are invited.

Contact either Chapter Chair: Don Lynch, W4YZT, or Ron Young, W8RJL

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. You can also support the Club by buying from the firms listed who advertise in the newsletter!



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

Attention: Contesters

7 Big Problems that are Probably Affecting Your Scores Right Now!

and

How The RF Connection's <u>Mike-Link</u> and <u>Shure</u>^{$^{\odot}$} Legendary Performance^{TM} <u>Broadcast Headsets</u> <u>Solve them ALL</u>!

Mic/PTT cable RX Audio: L/R cable From Footswitch Your Radio	RF Connection's Shure BRH440M
	Mike-Link Broadcast Headset
Solution #1 Use Your Finger Instead!Image: Constraint of the second sec	Problem #5: Operating CW, you have a "pain in the head" after "Y" hours on-airSolution #5 - Use Mike-LinkPeriodically, Flip the Reverse/Inphase Audio Switch• Reverses mono audio source for greater listening pleasure• Tereo/MONO REV/INPHASE
Problem #2: You wear eyeglasses and you have a "pain in the temple" after "X" hours on-air Problem #3: Brand 'Z' comfortable headset solves problem #2, BUT <u>increases</u> external background noise	Problem #6: Special microphone is needed for your ICOM radioProblem #7: External batteries needed when your ICOM-specific headset is used with other radio brands
 <u>Solutions #2 & #3</u> Use Shure BRM440M Broadcast Headset External background noise isolating Closed back—noise isolating Gamer-style, circumaural (over-the- ear) ear cup pads 	Solutions #6 & #7 Use Mike-Link & Shure BRM440M • Built-in, user-selectable, Active ICOM pre-amp • External power/battery NOT required • Built-in, user-selectable mic input impedance 2.5K or 10k Call For Your <u>FREE REPORT</u> : "The R.F. Connection's 'Mike-Link' and
 Problem #4: "RF in your mic audio OM!" Solution #4 - Use Mike-Link Ferrite RF suppression chokes included on: microphone audio receiver audio PTT 	Shure [©] Legendary Performance TM Broadcast Headsets" Call Joel for your <u>SPECIAL PVRC PRICE</u> ! 301-840-5477

DX Engineering is Your Go-To Source for DXing!

<u>NCC-2</u> <u>Receive</u> <u>Antenna</u> <u>Phasing</u> System



The NCC-2 allows you to phase one receive antenna with a transmit antenna or two receive antennas with each other. That means you can use the NCC-2's phasing and balance controls to electronically "rotate" the receive antenna pattern, steering the pattern null(s) to reduce interference. This new unit is completely redesigned, giving you better control over the variations in received signal levels from different antennas. But the really big news is the NCC-2's internal slots for installing optional DX Engineering Plug-in Modules, like the new RPA Receive Preamplifier, Receiver Guard 5000HD and 75 to 50 ohm Impedance Transformer.



The 59+ offers impressive 20, 17, 15, 12 and 10 meter band coverage without the use of traps or loading coils. Based on extensive field-tests, the 59+ boasts some of the best performance among HF antennas in its class, yet its boom is less than 20 feet long. Rugged and durable, the antenna will survive winds close to 100 mph.

<u>Footswitches</u>

Go hands-free and speed up your operating. These new PTT footswitches from DX Engineering blend

performance and value. You have three options: a budget friendly plastic model, the stalwart cast iron version, and a new style with an extra-wide pedal perfect for enthusiastic stomps.



bhi Noise Cancellation Products

bhi Noise Cancellation Products harness cutting-edge digital signal processing (DSP) technology to enhance the audio quality of incoming radio signals. By removing the noise, the improved audio makes it much easier to discern distant and weak contacts. DX Engineering now carries bhi Noise Cancellation Products, plus bhi accessories like switches, audio cables, adapters and extension speakers.

Email Support 24/7/365 at DXEngineering@DXEngineering.com



8:30 am to midnight ET, Monday-Friday 1230 to 0400 UTC March-October

8:30 am to 5 pm ET, Weekends 1230 to 2100 UTC March-October

International/Tech: 330-572-3200 8:30 am to 7 pm ET, Monday-Friday 9:00 am to 2 pm ET, Saturday Country Code: +1 Sale Code: 1610PVRC



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IC-7851 | HF/50MHz Transceiver

• 1.2kHz "Optimum" roofing filter • New local oscillator design • Improved phase noise • Improved spectrum scope • Dual scope function · Enhanced mouse operation for spectrum scope · More features



IC-7700 | HF/50MHz Transceiver

The Contester's Rig • HF + 6m operation • +40dBm ultra high intercept point • IF DSP, user defined filters • 200W output power full duty cycle · Digital voice recorder



IC-7600 | All Mode Transceiver

• 100W HF/6m Transceiver, gen cov. receiver • Dual DSP 32 bit • Three roofing filters- 3, 6, 15khz • 5.8 in WQVGA TFT display • Hi-res real time spectrum scope



IC-9100 | The All-Round Transceiver

• HF/50MHz 144/430 (440) MHz and 1200MHz*1 coverage • 100W on HF/50/144MHz, 75W on 430 (440) MHz, 10W on 1200MHz*1 • Double superheterodyne with image rejection mixer



IC-7410 | HF/50MHz Transceiver

• 32-bit floating point DSP unit • Double Conversion Super-Het Receiver • Built-in 15kHz 1st IF Filter • Built-in Band Scope • Large, multi-function LCD • RTTY Demodulator/Decoder • USB for PC control



IC-7300 | HF/50MHz Transceiver

• RF Direct Sampling System • New "IP+" Function • Class Leading RMDR and Phase Noise Characteristics • 15 Discrete Band-Pass Filters • Built-In Automatic Antenna Tuner • Large Touch Screen Color TFT I CD



IC-718 | HF Transceiver

• 160-10M* • 100W • 12V operation • Simple to use • CW Keyer Built-in • One touch band switching • Direct frequency input • VOX Built-in • Band stacking register • IF shift • 101 memories



IC-7100 | All Mode Transceiver

• HF/50/144/430/440 MHz Multi-band, Multi-mode, IF DSP • D-STAR DV Mode (Digital Voice + Data) • Intuitive Touch Screen Interface • Built-in **RTTY Functions**



ID-5100A Deluxe | VHF/UHF Dual Band Digital Xcvr

 Analog FM/D-Star DV Mode
 SD Card Slot for Voice & Data Storage • 50W Output on VHF/UHF Bands • Integrated GPS Receiver • AM Airband Dualwatch • FM Analog/DV Repeater List Function



IC-2730A | VHF/UHF Dual Band Transceiver

• VHF/VHF, UHF/UHF simultaneous receive • 50 watts of output on VHF and UHF . Optional VS-3 Bluetooth® headset . Easy-to-See large white backlight LCD . Controller attachment to the main Unit with optional MBA-4 • Wideband receiver



IC-PW1 | HF/50 MHz Amplifier

• Wide freq. coverage - 1 kW from 1.8 MHz to 50 MHz (amateur bands only) Wide ALC adjustable range • Full duty cycle • Auto antenna tuner built-in • Auto AC input voltage selector is employed • Current (Ip), Voltage (Vp), temperature, SWR and output power protectors are available



IC-2300H | VHF FM Transceiver

• 65W RF Output Power • 4.5W Audio Output • MIL-STD 810 G Specifications • 207 alphanumeric Memory Channels • Built-in CTCSS/DTCS Encode/Decode • DMS



ID-880H | Analog+Digital Dual Bander D-STAR

• D-STAR DV mode operation • DR (D-STAR repeater)mode • Free software download • GPS A mode for easy D-PRS operation • One touch reply button (DV mode) • Wideband receiver **D-STAR** ready



IC-V80 | HD 2 Meter FM Transceiver

• Tough construction • 750mW loud audio • Powerful 5.5W of output power • IP54 and MIL-STD-810 rugged construction • Built-in CTCSS/DTCS • WX channel & weather alert function

ID-51A Plus | VHF/UHF Dual Band Xcvr

• 5/2.5/1.0/0.5/0.1W Output • RX: 0.52-1.71.88-174. 380-479 MHz** • AM/FM/FM-N/WFM/DV • 1304 Alphanumeric Memory Chls • Integrated GPS • D-STAR Repeater Directory • IPX7 Submersible D-STAR ready





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*Except 60M Band. **Frequency coverage may vary. Refer to owner's manual for exact specs. *1 Optional UX-9100 required. QST OCTOBER 2016. The lcom logo is a registered trademark of lcom Inc. Toll-free including Hawaii, Alaska and Canada. Call will be routed to the nearest store. All HRO 800-lines can assist you. If the first line you call is busy, you may call another. AZ, CA, CO, GA, TX, VA, WI residents add sales tax. Prices, specifications and descriptions subject to change without notice

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FTDX5000MP Limited | 200W HF + 6M Txcvr

• Internal Power Supply • Two Totally Independent Receivers • Super Sharp "Roofing" Filters • High Performance Yaesu Customdesigned 32-bit Floating Point DSP • True Analog Meter Precision



FTDX3000 | 100W HF + 6M Transceiver

• 100 Watt HF/6 Meters • Large and wide color LCD display • High Speed Spectrum Scope built-in • 32 bit high speed DSP /Down Conversion 1st IF **Call For Low Pricing!**



FT-991 | HE/50MHz/2M/440 Transceiver

• 160 M-440MHz - SSB/CW/FM/C4FM Digital/AM/RTTY/PSK • 100 W (2M/4440: 50 Watts) • 3.5" TFT full-color touch panel operation • High speed spectrum scope • Roofing filers: 3kHz & 15kHz • 32-bit high speed floating point IF DSP • 160-6 meter high speed automatic antenna tuner



FTDX1200 | 100W HF + 6M Transceiver

• Triple Conversion Receiver With 32-bit Floating Point DSP • 40 MHz 1st IF with selectable 3 kHz, 6kHz & 15 kHz Roofing Filters Optional FFT-1 Supports AF-FFT Scope, RTTY/PSK31 Encode/ Decode, CW Decode/Auto Zero-In • Full Color 4.3" TFT Display



FT-450D | A100W HF + 6M Transceiver

• 100W HF/6M • Auto tuner built-in • DSP built-in • 500 memories • DNR, IF Notch, IF Shift **Call For Pricing!**



FT-857D | Ultra Compact HF/VHF/UHF

• 100w HF/6M, 50W 2M, 20W UHF • DSP included • 32 color display • 200 mems • Detachable front panel (YSK-857 required) **Call For Our Low Price!**



FT-2900R | Heavy-Duty 75W 2M FM Transceiver

· Massive heatsink guarantees 75 watts of solid RF power · Loud 3 watts of audio output for noisy environments . Large 6 digit backlit LCD display for excellent visibility • 200 memory channels for serious users



FTM-100DR | C4FM FDMA/FM 144/430 MHz Txcvr

• Power Packed System Fusion Transceiver • High Audio Output Power • Rugged Powerful Transmitter • Integrated 66ch High Sensitivity GPS • 1200/9600 APRS Data Communications • Voice Guide and Recording Function *Optional FVS-2 Required • Digital Group Monitor (GM) Function • Digital Clock & Timer Functions



FTM-400XD | 2M/440 Mobile

• Color display-green, blue, orange, purple, gray • GPS/APRS • Packet 1200/9600 bd ready • Spectrum scope • Bluetooth • MicroSD slot • 500 memory per band



FT1XD | 144/430 5W Digital Transceiver

• C4FM/FDMA • 1200/9600bps AX.25 APRS & GPS Recvr Built-in • Dual Band Operation w/Dual Receivers (V+V/U+V/V+U) • Wideband Receive/ AM Bar Antenna/Aircraft Receive • 1266 Memory Channels w/16 Char Alpha Tagging

FT-2DR | C4FM/FM 144/430 MHz Txcvr

• Analog/C4FM Dual Monitor (V+V/U+U/V+U) • System Fusion compatible • 1200/9600 APRS Data Communications • Integrated 66ch High Sensitivity GPS • Wide Band Receiver • Snapshot Picture Taking Capability With Optional MH-85A11U





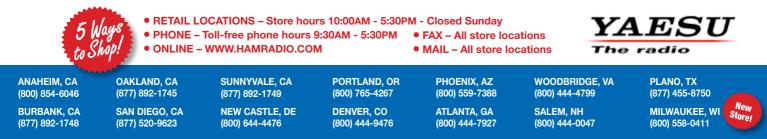
VX-8DR | 50/144/220/440

50/144/220/440 • 5W (1W 222 MHz) • Bluetooth optional • Waterproof/ submersible (3' for 30 min) · GPS APRS operation optional · Li-ion Hi-capacity battery • Wide band Rx

FT-60R | 2M/440 5W HT

• Wide receiver coverage • AM air band receive • 1000 memory channels w/alpha labels • Huge LCD display • Rugged die-cast, water resistant case . NOAA severe weather alert with alert scan





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TS-990S | 200W HF + 6M Transceiver

• World's first dual TFT display • 200W output on all bands • ±0.1ppm TCXO ensures both high stability and reduced power consumption • Triple 32-bit DSP's dedicated to main/sub receivers and band scope • Main receiver employs full down conversion, new mixer & narrow band roofing filters • Third order intercept point (IP3) +40dBm for highest level of RX performance (main receiver)







& DX-Cluster operation • 50W 2M & UHF • 1,000 memories • Dual receive • Green or amber backlight colors • Latest APRS firmware w/new features • Sky Command II remote functions

Call For Special Price!



TS-480SAT/HX | HF + 6M Transceiver

• 480HX 200W HF & 100W 6M (no tuner) • 480SAT 100W HF & 6M w/AT • Remotable w/front panel/speaker • DSP built-in

Call Now For Low Price!



TH-D72A | 2M/440 HT w/extended RX

• 5W TX, RX 118-524 MHz, VxU, VxV, UxU • APRS w/built-in 1200/9600 TNC • Built-in GPS. Built-in USB, digipeater • Echolink® compatible, Mil-Spec STD810

Call For Special Low Price!

TH-F6A | 2M/220/440

• Dual channel receive • .1 - 1300 MHz (cell blocked) RX • FM, AM, SSB • 5W 2M/220/440 TX, FM • 435 Memories • Li-Ion Batterv



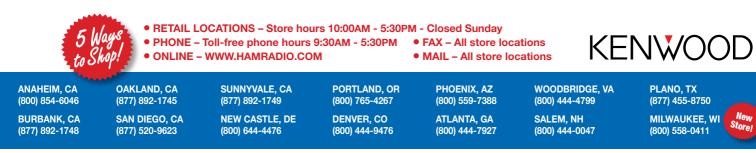
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TH-K20A | 2M Handheld

• 2M 5.5W • VOX • CTCSS/DCS/1750 Burst built-in • Weather alert

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65 Watt • 200 Memories • CTCSS/DCS • Mil-Std specs • Hi-quality

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TS-590SG | HF/50MHz Transceiver

• Equipped with 500 Hz/2.7 kHz roofing filter as standard • ALC derived from TS-990S eliminating spike issues • Antenna output function (shared with DRV connector) • CW - morse code decoder function • Improved 1st mixer • New PFB key with multi-function knob • New split function enabling quick setting • LED backlight with selectable color tone



TM-V71A | 2M/440 DualBand

• High RF output (50W) • Multiple Scan • Dual receive on same band (VxV, UxU) • Echolink® memory (auto dialer) • Echolink® Sysop mode for node terminal ops • Invertible front panel • Choice of green/amber for LCD panel • 104 code digital code squelch • "Five in One" programmable memory • 1000 multifunction memory

Call Now For Your Low Price!

TM-281A | 2 Mtr Mobile

Call For Special Low Price!

audio



TS-2000/2000X | HF/VHF/UHF Transceiver

Call For Special Price!

• 100W HF, 6M, 2M • 50W 70CM • TS-2000X 10W 1.2GHz · Built-in TNC, DX packet cluster IF Stage DSP · Backlit front key nanel

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ACOM-1000

• HF and 6 Meter 1KW Amplifier • Match 3:1 SWR with No Tuner • User Friendly QSK Operation • LCD Message Display • Single 4CX800a Tube • Vacuum Antenna Relays

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- Continuous Coverage from 100kHz to 2GHz
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 55' freestanding crank-up • Handles 18 sq. ft. @ 50 mph • No guying required • Extra-strength construction
 Can add raising and motor drive accessory • Towers rated to EIA specifications • Other models available at great prices!

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