



PVRC Newsletter

December 2016

President's Letter – Bud W3LL

We're approaching the season of Christmas/Holiday dinners at PVRC:

- SWVA and QCWA PVRC Christmas Luncheon is scheduled for Friday December 16. 1:30-4:00 PM at [Liberty Station Restaurant](#), Bedford, VA
- A PVRC Regional Holiday Dinner, arranged by Dave K3ZJ, is scheduled for December 5th at P.J. Skidoos.
- DC Metro has one scheduled for 11 December with location TBD.
- Tidewater will join QCWA Chapter 119, and the Virginia DX Century Club on 16 December for their Christmas/Holiday dinner.
- Northwest announced it will join the PVRC Regional Holiday Dinner on December 5 at P.J. Skidoos.
- Colonial Capital Chapter Christmas/holiday dinner will be at Victoria's restaurant on December 8th, 2016 at 6:30 PM.
- Rappahannock will be holding their Christmas/Holiday dinner at Ristorante Renato in Fredericksburg at 7:30 on Saturday 17 December.

There may be others not yet announced.

The PVRC annual elections are drawing to a close. Announcement of results will be made in a few weeks' time by Secretary Tim N3QE. With no nominations received

beyond the present slate of officers and trustees the line up in January will remain as found on the PVRC Homepage Reference tab:

Officers

President: Bud Governale, W3LL
Vice President: Ted Edwards, W3TB
Vice President: Dan Zeitlin, K2YWE
Secretary: Tim Shoppa, N3QE
Treasurer: Tom Valenti, K3AJ

Trustees

Tyler Stewart, K3MM
Don Lynch, W4ZYT
Guy Olinger, K2AV
Brian McGinniss, N3OC
Jim Nitzberg, WX3B
Tom Gregory, N4NW
Joe Palsa, K3WRV
Ken Low, KE3X
Don Daso, K4ZA

VP Dan K2YWE announced receipt of all PVRC shirts ordered and just completed the distribution phase. A big thank you to Dan for taking on this project and to all who ordered shirts. The results went well beyond expectations resulting in an addition to the PVRC treasury.

You may have noticed on the PVRC reflector a grass roots organization named the HF Farm Team – MD/DC/VA organized by our member Dick WN3R. Please support this organization as it steps forward meeting one of our lacking goals, namely recruiting new members both youngsters and those needing direction and support. I'd like to see other PVRC organizers in other parts of our region replicate what Dick is doing up north. There's a hole that needs filling.

Here's what your officers are working on this month in addition to the everyday workload:

1. WRTC tent fundraiser for PVRC SK's chaired by Dave K3ZJ.
2. The PVRC Circle Wide Galactic Event on 04 February hosted by the Williamsburg chapter.
3. PVRC Homepage updates chaired by Tim N3QE and the Internet Presence Organization
4. Giving new members automatic PVRC reflector privileges Chaired by Tim N3QE and Eric W3DQ, and contacting names on our potential new members spreadsheet.
5. Recognizing multi-single efforts
6. Preparation for PVRC's 70th anniversary year events.

7. By-laws update and December election results and announcement.

This month marks the end of my first term as your president. So what milestones did the officer leadership team accomplish this year? Rather than reiterate them here you'll find them among each of this year's President's Newsletter column and in "A View from the Bridge" emails. I hope that you'll see that we're focusing on a member driven bottoms up approach to managing PVRC and treating all PVRC regions equally. I look forward to serving you for another term beginning 01 January.

Now we'll go to the Sports Page where we'll see what achievements everyone is making in the contesting arena.

Let's start with Sweepstakes, without doubt the most important of all PVRC competitive efforts. Based on the stats on 3830scores.com PVRC results in the CW test have been remarkably consistent over the last two years. In 2016, we had 9 multi ops and 111 single ops putting up a total score of 8.6 million. In 2015, 5 multis and 117 single ops scored almost the same - rounded off to 8.6 million. Participation in SSB this year included 10 multiops, 1 school club entry and 95 single ops scoring 6.5 million. N4AF put up the top PVRC SO CW score and KD4D edged out K3MM for the top PVRC SSB score.

Continuing the trend toward increased participation in RTTY contests across PVRC, 22 individuals and 2 multiops from PVRC participated in the 2016 WAE RTTY contest. That's up from 12 SO's and 1 multiop entry last year. WS7I/4 (at W4AAW) appears to have set a new NA record for M/S. Congratulations to Mike and the team, continuing to show the world what can be done with a remote multiop station. PVRC was well represented in the top 10 in US HP, with N3QE in 2nd, K4GMH in 5th and AB3CV in 7th. N4CF also pulled off a top ten US finish in LP. Kudos to first time RTTY contesteer Elaine, N3PQW for doing the heavy lifting at the K3AJ multiop. It didn't take her long to get the hang of making QSO's and handling QTC's.

Despite difficult conditions, CQ WW SSB saw another year over year uptick for PVRC, with 9 multiops and 67 SO entries - up from 7 and 57 respectively in 2015. Among the many categories of competition in this contest, top ten US finishes in some very competitive SO categories were scored by K3ZO, KK4UA, K3CCR, N8II (#1 SOAB Classic LP), N4NQY, AB3WS, K3ZU, W3LL and KE3X (#1 SOAB (A) LP). There were a lot of PVRC players in the single band entries as well - N4MM, NA1DX, K4XL, K8GU, K3YDX, K3ZJ, N3JT and ND3D.

CQ WW CW saw 9 PVRC multis and 65 SO's. Congratulations to team W3LPL for their apparent victory in the "battle of the titans" among US M/M entries. Team NY4A (at N4AF) achieved a top ten US finish in M/S HP, while the NN3W multiop at N3HBX is in first place in US M/S LP. Top 10 US SO finishes in various categories were achieved by NR3X (N4YDU op), N9NB, W4AAW and W3LL (K3WI op). N8II and KE3X did it again - equaling their SSB US wins in SOAB Classic LP and SOAB(A)LP respectively.

That's a wrap and onto next year for more contesting. See you in the contest arena.

73, Bud W3LL

PVRC Sweepstakes Multi-op Crews At Work



Here's Will (K4MI) and Ed (K1NUH) at work on SS SSB – de Bill NR4C



Bob WO3E (far) and Chris KB3CS (close) – de WN3R

Antennas Sprout at K8GU – Ethan K8GU



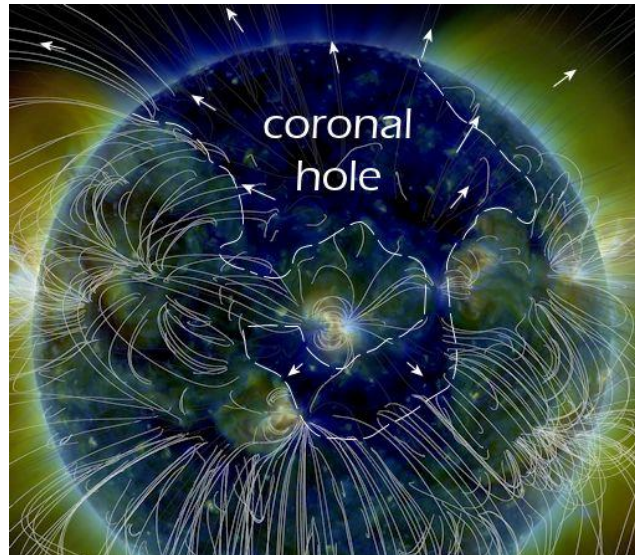
I've been keeping my head down recently as far as ham radio, with a lot of other stuff going on and losing interest, etc. But, in late summer and early fall, my work and family schedule began to break free enough to spend some time in the machine shop at work making up parts (principally a rotator mount top-cap) for the two AB-621s that Ed, N3CW, so heroically liberated from the scrap yard last year. By mid-October, I had a prototype top cap ready to go and drilled to accept a T2X.

In parallel with this activity, I've been gathering antenna materials, culminating with picking up the 7-element 15-meter antenna that John, N3HBX, advertised on the reflector in the late summer. I had not intended to install the full-sized antenna, but I went ahead and decided to try it. The kids and I (mostly I) assembled the antenna and rocket launcher, as well as Phillystran guy leaders for the top portion and spent most of the Saturday (and Sunday morning) of CQ WW phone weekend cranking the antenna up and getting it plumbed. I had the rotator control box on along extension cord propped up in an Adirondack chair at the base of the tower and brought an aging hank of RG-213 over from the 80-meter vertical feed over to the base of the mast. I managed about 45 minutes at the end of the EU opening and was pleased with how loud I felt, despite having to dash out to the mast to turn the antenna.

The antenna and mast barely budged in the gusty 50+ mph winds we had the week prior to Thanksgiving. I think it was Dave Leeson (W6NL/ex-W6QHS) that said that "if you've done all the engineering, you can rest easy when the wind blows." I was a bit nervous at first, but stared at his book on the shelf in my shack and was comforted. I was also comforted that the Hexbeam, which is far more precarious and less-engineered, hasn't blown away in 3 years.

CQ WW CW Low Band Conditions – John K3TN

Conditions for the recent CQ WW CW contest managed to combine a lack of sunspots causing poor high band conditions with G1-class geomagnetic storms (due to a high-speed solar wind stream flowing from a large hole in the sun's atmosphere) that caused oddly depressed low band conditions.



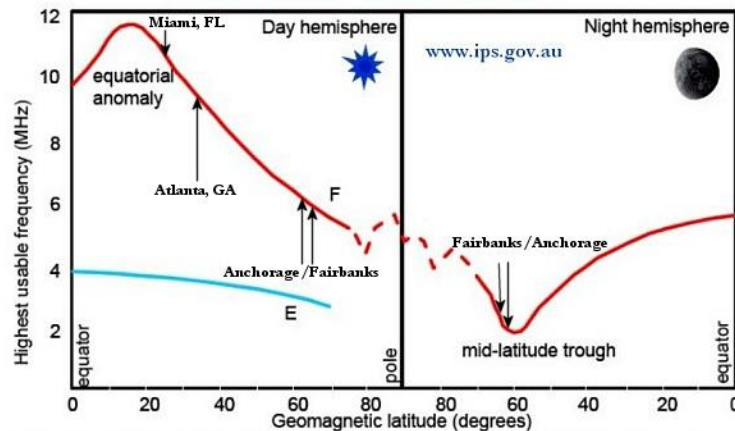
Source: Spaceweather.com

From my station, on 160M and 80M it seemed like there was a trans-Atlantic diode, with the pointy end aimed at us. I could hear EI0R on 160M at **1630Z**, but he kept CQing. An hour later, EU signals on 80M were legitimate 599 for the big guns, but very little NA RF was able to cross the pond going east.

The good news was 40M was runnable by 2pm local, amazing. But, equally amazing, as soon as darkness hit 40 shut down, argh. On the PVRC reflector, Frank W3LPL explained the phenomenon:

One of the most pronounced phenomena of the night time ionosphere during fall and winter is the "mid-latitude trough." It's a region of significantly depleted total electron content (much reduced MUF) just southward of the northern hemisphere auroral zone. The trough occurs during about half of the fall and winter nights, and it strongly affects propagation on high latitude paths such as the short path from eastern North America to Europe and Japan. During about half of those fall and winter nights (when the trough is active), the trough typically develops near sunset at its westward end and rapidly disappears at sunrise at its eastern end.

Latitude Variations



Last weekend the night time auroral zone was pushed significantly southward by the effects of an unusually large and energetic earth-directed coronal hole that also pushed the mid-latitude trough directly over our North Atlantic propagation paths to Europe and our high latitude short path to Japan. As a result, our best 40 meter propagation to Europe occurred during North American daylight hours and after European sunrise. The mid-latitude trough significantly shortens the duration of 40 meter propagation to Europe and Japan for stations located at more northerly latitudes and somewhat less for stations at more southerly latitudes during those nights when the trough is active.

Our very brief short path propagation from the mid-Atlantic states to Japan occurred near JA sunset (0730-0830Z). Soon after JA sunset our propagation to Japan was mostly via the skew path that propagates via the tilted ionosphere about 20 degrees south of the equator, Our east coast short path to Japan usually strongly redevelops near east coast sunrise, but the effects of the coronal hole significantly degraded our short path to JA.

While the most pronounced effects of the trough are on 40 meter propagation, it also significantly shortens the duration of our openings to Europe and Japan on the higher bands, essentially terminating the openings near sunset at the eastern end of the paths during about half of the November through February nights when the trough is active.

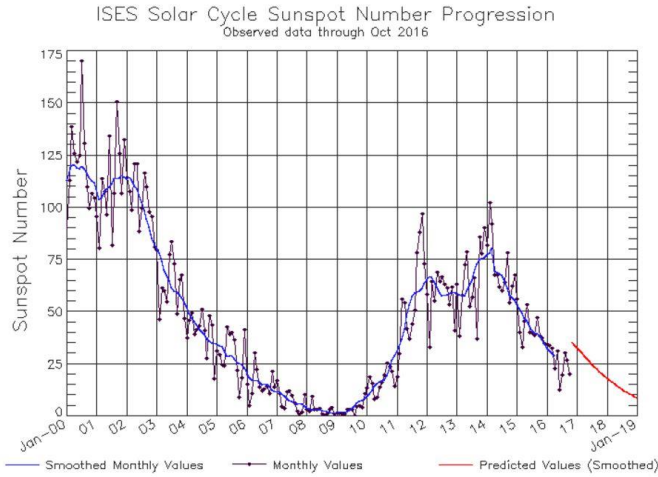
It's a big mistake to consider 40 meters to be mostly a night time DX band near the bottom of the sunspot cycle. Daytime 40 meter DX is significantly enhanced near the bottom of the sunspot cycle by the reduced daytime E-layer MUF which otherwise blankets the F layer during most daylight hours nearer the top of the sunspot cycle. As a result, DX propagation is possible on 40 meters during most daylight hours, especially for stations located at higher latitudes from November through early February. During those months daytime propagation is common from the northern east coast USA to northern Europe even at high noon.

Close to the bottom of the sunspot cycle, both the short and long paths are strongly open from the East coast to Japan on 40 meters during many December and early January late afternoons from 2130Z to about 2215Z. If you have a directive antenna, some JA stations can be worked on only one of those paths if they're also using a

directive antenna. Without a directive antenna, some JA signals can be an unreadable blur of overlapping echoes.

True long paths from the USA to Japan (not skew paths) rarely exhibit scintillation effects that are usually observed on the short path because the long path propagates well away from the southern auroral zone during the southern latitude summer.

Sunspot Number Progression



PVRC Club Wins Infographic – Tim N3QE

North American Top Contest Club Results 2007-2015

	ARRL 10M	ARRL 160M	ARRL DX	ARRL JAN VHF	ARRL JUNE VHF	ARRL RTTY ROUNDUP	ARRL SS	CQ 160M	CQ VHF	CQ WPX	CQ WPX RTTY	CQ WW	CQ WW RTTY	NAOP Challenge	RUSSIAN DX	
2015	10.9M YCDD 9.7M PVRC 4.4M FCG 4.2M MWA 4.0M FRC	617K PVRC 521K YCDD 464K FRC 381K SMC 364K MWA	350K FIC 262M YCDD 197M PVRC 78M FCG 73M NCC	186K MWA 177K YCDD 170M PVRC 454K NEWS 270K NLS	948K PVRC 548K NEWS 477K YCDD 378M MWA 359K FRC	245K PVRC 187K YCDD 170M PVRC 152K NEWS 122K FRC	18.6M PVRC 18.6M SMC 17.7M YCDD 17.7M MWA 17.7M FRC	754K PVRC 761K YCDD 761K FRC 761K MWA 761K NCC	189K PVRC 189K SMC 189K YCDD 189K FRC 189K MWA	291M PVRC 291M YCDD 291M FRC 291M MWA 291M NCC	31.0M PVRC 31.0M YCDD 31.0M FRC 31.0M MWA 31.0M NCC	429M YCDD 429M FRC 429M MWA 429M NCC	22.1M PVRC 22.1M YCDD 22.1M FRC 22.1M MWA 22.1M NCC	1614K SMC 1251K PVRC 1014K YCDD 1014K FRC 1014K MWA	15.1M PVRC 15.1M YCDD 15.1M FRC 15.1M MWA 15.1M NCC	2015
2014	32.9M PVRC 25.9M YCDD 22.9M FCG 16.7M FIC 14.9M AOCG	643K PVRC 533K FRC 515K YCDD 260K MWA 260K SMC	304K YCDD 278M FRC 271M PVRC 171M NCC 171M MWA	218K MWA 171K YCDD 154K NEWS 154K FRC 154K MWA	323K NCC 217K PVRC 217K YCDD 154K FRC 154K MWA	794K YCDD 723K FRC 723K MWA 723K NCC 723K PVRC	18.9M PVRC 18.9M YCDD 18.9M FRC 18.9M MWA 18.9M NCC	794K YCDD 723K FRC 723K MWA 723K NCC 723K PVRC	154K MWA 147K PVRC 147K YCDD 147K FRC 147K MWA	261M PVRC 261M YCDD 261M FRC 261M MWA 261M NCC	61.6M PVRC 61.6M YCDD 61.6M FRC 61.6M MWA 61.6M NCC	553M YCDD 553M FRC 553M MWA 553M NCC	29.6M YCDD 29.6M FRC 29.6M MWA 29.6M NCC	1374K PVRC 1094K SMC 1014K YCDD 1014K FRC 1014K MWA	37.9M PVRC 27.9M YCDD 27.9M FRC 27.9M MWA 27.9M NCC	2014
2013	31.7M PVRC 24.8M YCDD 18.0M FCG 16.7M FIC 14.9M AOCG	609K PVRC 512K YCDD 436K FRC 317K SMC 237K MWA	367M PVRC 347M FRC 326M YCDD 124M NCC 124M MWA	261K MWA 261K YCDD 261K FRC 261K SMC 261K MWA	189K PVRC 154K NEWS 154K FRC 154K MWA 154K NCC	404K YCDD 378M PVRC 378K YCDD 378K FRC 378K MWA	25.0M PVRC 25.0M YCDD 25.0M FRC 25.0M MWA 25.0M NCC	18.9M PVRC 18.9M YCDD 18.9M FRC 18.9M MWA 18.9M NCC	367K PVRC 367K YCDD 367K FRC 367K MWA 367K NCC	17.6M PVRC 17.6M YCDD 17.6M FRC 17.6M MWA 17.6M NCC	48.6M PVRC 48.6M YCDD 48.6M FRC 48.6M MWA 48.6M NCC	543M YCDD 543M FRC 543M MWA 543M NCC	37.9M PVRC 37.9M YCDD 37.9M FRC 37.9M MWA 37.9M NCC	1024K PVRC 1024K YCDD 1024K FRC 1024K MWA 1024K NCC	24.4M PVRC 24.4M YCDD 24.4M FRC 24.4M MWA 24.4M NCC	2013
2012	97.2K PVRC 57.5K YCDD 49.8K FRC 48.4K MWA	618K PVRC 512K SMC 350K YCDD 349K FRC 251K MWA	248M PVRC 248M YCDD 248M FRC 248M MWA 248M NCC	302K NARC 316K PVRC 316K YCDD 316K FRC 316K MWA	242K NEWS 221K PVRC 221K YCDD 221K FRC 221K MWA	271K NCC 271K PVRC 271K YCDD 271K FRC 271K MWA	24.1M PVRC 24.1M YCDD 24.1M FRC 24.1M MWA 24.1M NCC	672K PVRC 672K YCDD 672K FRC 672K MWA 672K NCC	378K PVRC 378K YCDD 378K FRC 378K MWA 378K NCC	25.1M PVRC 25.1M YCDD 25.1M FRC 25.1M MWA 25.1M NCC	43.1M PVRC 43.1M YCDD 43.1M FRC 43.1M MWA 43.1M NCC	478K YCDD 478K FRC 478K MWA 478K NCC	42.5M PVRC 42.5M YCDD 42.5M FRC 42.5M MWA 42.5M NCC	505K YCDD 505K FRC 505K MWA 505K NCC	21.8K PVRC 21.8K YCDD 21.8K FRC 21.8K MWA 21.8K NCC	2012
2011	33.7M PVRC 28.7M YCDD 24.6M FCG 23.5M NCC 14.5M MWA	618K PVRC 512K SMC 350K YCDD 349K FRC 251K MWA	248M PVRC 248M YCDD 248M FRC 248M MWA 248M NCC	302K NARC 316K PVRC 316K YCDD 316K FRC 316K MWA	242K NEWS 221K PVRC 221K YCDD 221K FRC 221K MWA	271K NCC 271K PVRC 271K YCDD 271K FRC 271K MWA	24.1M PVRC 24.1M YCDD 24.1M FRC 24.1M MWA 24.1M NCC	672K PVRC 672K YCDD 672K FRC 672K MWA 672K NCC	378K PVRC 378K YCDD 378K FRC 378K MWA 378K NCC	25.1M PVRC 25.1M YCDD 25.1M FRC 25.1M MWA 25.1M NCC	43.1M PVRC 43.1M YCDD 43.1M FRC 43.1M MWA 43.1M NCC	478K YCDD 478K FRC 478K MWA 478K NCC	42.5M PVRC 42.5M YCDD 42.5M FRC 42.5M MWA 42.5M NCC	505K YCDD 505K FRC 505K MWA 505K NCC	21.8K PVRC 21.8K YCDD 21.8K FRC 21.8K MWA 21.8K NCC	2011
2010	90.5K FCG 49.8K CTDXCC 39.6K NCC 39.6K FRC 39.6K MWA	607K YCDD 512K SMC 350K YCDD 349K FRC 251K MWA	248M PVRC 248M YCDD 248M FRC 248M MWA 248M NCC	302K NARC 316K PVRC 316K YCDD 316K FRC 316K MWA	242K NEWS 221K PVRC 221K YCDD 221K FRC 221K MWA	271K NCC 271K PVRC 271K YCDD 271K FRC 271K MWA	24.1M PVRC 24.1M YCDD 24.1M FRC 24.1M MWA 24.1M NCC	672K PVRC 672K YCDD 672K FRC 672K MWA 672K NCC	378K PVRC 378K YCDD 378K FRC 378K MWA 378K NCC	25.1M PVRC 25.1M YCDD 25.1M FRC 25.1M MWA 25.1M NCC	43.1M PVRC 43.1M YCDD 43.1M FRC 43.1M MWA 43.1M NCC	478K YCDD 478K FRC 478K MWA 478K NCC	42.5M PVRC 42.5M YCDD 42.5M FRC 42.5M MWA 42.5M NCC	505K YCDD 505K FRC 505K MWA 505K NCC	21.8K PVRC 21.8K YCDD 21.8K FRC 21.8K MWA 21.8K NCC	2010
2009	204K PVRC 204K YCDD 154K MWA 11.7M FRC 11.7M SMC	627K YCDD 512K SMC 350K YCDD 349K FRC 251K MWA	248M PVRC 248M YCDD 248M FRC 248M MWA 248M NCC	302K NARC 316K PVRC 316K YCDD 316K FRC 316K MWA	242K NEWS 221K PVRC 221K YCDD 221K FRC 221K MWA	271K NCC 271K PVRC 271K YCDD 271K FRC 271K MWA	24.1M PVRC 24.1M YCDD 24.1M FRC 24.1M MWA 24.1M NCC	672K PVRC 672K YCDD 672K FRC 672K MWA 672K NCC	378K PVRC 378K YCDD 378K FRC 378K MWA 378K NCC	25.1M PVRC 25.1M YCDD 25.1M FRC 25.1M MWA 25.1M NCC	43.1M PVRC 43.1M YCDD 43.1M FRC 43.1M MWA 43.1M NCC	478K YCDD 478K FRC 478K MWA 478K NCC	42.5M PVRC 42.5M YCDD 42.5M FRC 42.5M MWA 42.5M NCC	505K YCDD 505K FRC 505K MWA 505K NCC	21.8K PVRC 21.8K YCDD 21.8K FRC 21.8K MWA 21.8K NCC	2009
2008	455K FCG 245K PVRC 147K FRC 127K CTDXCC 114K MWA	771K YCDD 618K PVRC 512K SMC 350K YCDD 349K FRC 251K MWA	248M PVRC 248M YCDD 248M FRC 248M MWA 248M NCC	302K NARC 316K PVRC 316K YCDD 316K FRC 316K MWA	242K NEWS 221K PVRC 221K YCDD 221K FRC 221K MWA	271K NCC 271K PVRC 271K YCDD 271K FRC 271K MWA	24.1M PVRC 24.1M YCDD 24.1M FRC 24.1M MWA 24.1M NCC	672K PVRC 672K YCDD 672K FRC 672K MWA 672K NCC	378K PVRC 378K YCDD 378K FRC 378K MWA 378K NCC	25.1M PVRC 25.1M YCDD 25.1M FRC 25.1M MWA 25.1M NCC	43.1M PVRC 43.1M YCDD 43.1M FRC 43.1M MWA 43.1M NCC	478K YCDD 478K FRC 478K MWA 478K NCC	42.5M PVRC 42.5M YCDD 42.5M FRC 42.5M MWA 42.5M NCC	505K YCDD 505K FRC 505K MWA 505K NCC	21.8K PVRC 21.8K YCDD 21.8K FRC 21.8K MWA 21.8K NCC	2008
2007	202K CTDXCC 172K PVRC 11.9M FRC 11.9M SMC 11.9M MWA	538K SMC 538K PVRC 538K YCDD 538K FRC 538K MWA	135M YCDD 135M FRC 135M MWA 135M NCC	216K MWA 105K NEWS 105K FRC 105K MWA 105K NCC	303K PVRC 135K YCDD 135K FRC 135K MWA 135K NCC	444K PVRC 354K YCDD 354K FRC 354K MWA 354K NCC	19.1M PVRC 19.1M YCDD 19.1M FRC 19.1M MWA 19.1M NCC	853K PVRC 853K YCDD 853K FRC 853K MWA 853K NCC	108M PVRC 108M YCDD 108M FRC 108M MWA 108M NCC	26.4M PVRC 26.4M YCDD 26.4M FRC 26.4M MWA 26.4M NCC	35.4M PVRC 35.4M YCDD 35.4M FRC 35.4M MWA 35.4M NCC	207M PVRC 207M YCDD 207M FRC 207M MWA 207M NCC	11.8M PVRC 11.8M YCDD 11.8M FRC 11.8M MWA 11.8M NCC	659K PVRC 659K YCDD 659K FRC 659K MWA 659K NCC	11.8K PVRC 11.8K YCDD 11.8K FRC 11.8K MWA 11.8K NCC	2007

Available on the PVRC website [here](http://www.pvrc.org).

Ground Rod Installation Tip – Glenn K3SWZ

Reprinted with permission from the FRC Newsletter

I was planning to install a couple of 4 foot ground rods for my Beverage on Ground (BOG) project. Over the years I have had pretty poor luck installing ground rods, as I always seem to hit rock after the rod is half-way in and hopelessly stuck!

I hatched a simple plan that worked very well. I made a “probe” out of a 0.5 in. dia. piece of steel stock. My friend welded a junk piece of angle iron across the top to make a “T” shape. The cross piece is about 18 in. long and the angle iron happened to be 1 in. I also took a big nut from the junk box and drilled out the threads so the 0.5 in rod would pass through the nut. He welded this nut into place, so I had something to pound on.

After locating the desired spot for the holes, I started pounding the probe into the ground, twisting it a few turns after hitting it a few blows with the sledge hammer. If I did not hit a rock I kept going. At about 3.5 feet, I pulled it out fairly easily. I then drove the ground rod into the hole, which is slightly larger in diameter than the probe. The process took about 10-15 minutes. The only problem is that sledge hammer gets real heavy!

PVRC WRTC 2018 Tent Sites – Dave K3ZJ

For WRTC in 2014 PVRC donated sponsored three tents. Since PVRC does not assess dues, for WRTC in 2018 we are soliciting donations directly from you, the members, to continue this tradition.

Please help us put together a similarly significant contribution in the name of PVRC. Donations will be used to sponsor one or more tents in memory of PVRC's Silent Keys. Any amount left that is less than the 1000 Euro donation per tent will be donated to WRTC2018 as a non-designated donation, also in the name of PVRC.

The officers set a **December 24 deadline** for this activity, so don't delay! Donations must clearly be marked “WRTC”.

DONATE: (1) by check: payable to “PVRC”, write “WRTC” in the memo area, and mail to PVRC Treasurer Tom Valenti, K3AJ, 17210 Foreston Rd., Upperco, MD 21155.
(2) By PayPal: use button at the very bottom of PVRC's [homepage](#) and in the "Special

Contributions to PVRC are **not** tax deductible as charitable contributions. If you wish to make a charitable contribution to WRTC2018 contact Dave, [K3ZJ](#).

Membership News – Tim N3QE

PVRC did not add any new members in the past month.

Chapter leaders please remember to complete the [Meeting Attendance Report](#). Members can check and update their roster details via the [Roster Lookup](#).

Upcoming Contests and Log Due Dates

Contests This Month

- Dec 2 – ARRL 160M
- Dec 4 – 10M RTTY
- Dec 10 – ARRL 10M
- Dec 17 – Croatian CW
- Dec 17 – RAC Winter
- Dec 17 – Stew Perry Top Band
- Dec 18 – Rookie Roundup CW

Logs Due This Month

- Dec 2 – CQ WW CW
- Dec 6 – SS SSB
- Dec 12 – 10M RTTY

See WA7BNM's [Contest Calendar](#) for more detail and the latest information.

The Editor's Last Word – John K3TN

I've worked my entire career in cybersecurity, though no one called it that when I got out of college and started working at NSA in 1978. Many things stay the same in security - my grandfather fell for scams when he got off the boat from Italy in 1920 that people now fall for via email almost 100 years later, and the internal computer security newsletter in June 1978 talked about operating system vulnerabilities that are still getting built into software today!

But one reason it has been an interesting and challenging career is that threats and technology change constantly, requiring new skills. The same is true for contesting. Like many of us, Cycle 24 was my fifth solar cycle, yet what happens on the way up, at the top and one the way down (as evidenced in CQ WW CW recently) always seems to bring surprises. Similarly, what can be done with new technology in receivers and computers mirrors the rapid changes in technology overall for more fun and new ways to increase the contest score each time.

This year I have asked Santa Claus for an Elecraft Kpod and an Amazon Alexa – two “toys” I just couldn't convince myself to buy, but I secretly want to see if can someday be in the U class in Sweepstakes CW and yell out “Alexa has anyone spotted a Santa Barbara station!!” and get a response, vs. the just usual echo when I yell out “Where the hell is SB this year!

Thanks to Ethan K8GU, Bill NR4C and Dick WN3R for submissions for this month's newsletter. Stories and photos from all are needed – send to [jpescatore at aol dot com](mailto:jpescatore@aol.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:



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**Happy Holidays
and
Happy New Year!**

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Vice President:	W3TB	Tom Edwards
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Treasurer:	K3AJ	Tom Valenti

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PVRC Charter Members (all SK):

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

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

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: [Chef Lin](#), 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 [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 6:00. 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 [LARC](#) 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 [K2YWE](#) 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 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, [K5VRX](#), 703-658-3991 for Virginia meetings; or Cliff Bedore [W3CB](#) or get on 147.00 for Maryland meetings.

Downtown Lunch Group: Meets: At 12 o'clock noon on the first Wednesday of every month in Downtown DC.

Location: R.F.D. Washington, 810 7th St., N.W. Washington - Metro (Green Line) at Gallery Place Station

Meeting since April 2005, PVRC'ers, contesters, DX'ers, and others coming through this area have been meeting for lunch in the Metro Center area of downtown Washington, DC. If you give him enough notice, regular attendee Fred, K3ZO, may bring you your 3-land QSL bureau cards! We invite and encourage you to join us every month for good food, good company, and good conversation. If you have any questions feel free to email or call W3DQ or our co-convenor, Rich NN3W. Hope you can join us!

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 [WG3J](#)

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, [ND3N](#) via email or (240) 434-3811

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 Road and Providence Road 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!

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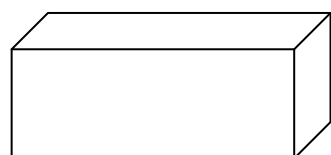
Attention: Contesters

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

and

How The RF Connection's Mike-Link and
Shure® Legendary Performance™ Broadcast Headsets

Solve them ALL!



Your Radio

← Mic/PTT cable
RX Audio: L/R cable
From Footswitch →



The RF Connection's
Mike-Link

← Headset cable →



Shure BRH440M
Broadcast Headset

Problem #1: Foot Not Near Footswitch, QSO Missed

Solution #1

Use Your Finger Instead!

- Mike-Link finger-touch PTT
- Momentary SPST switch
- Positive tactile feel



Problem #5: Operating CW, you have a "pain in the head" after "Y" hours on-air

Solution #5 - Use Mike-Link

Periodically, Flip the Reverse/Inphase Audio Switch

- Reverses mono audio source for greater listening pleasure



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 increases external background noise

Solutions #2 & #3

Use Shure BRM440M
Broadcast Headset

- External background noise isolating
- Closed back—noise isolating
- Gamer-style, circumaural (over-the-ear) ear cup pads



Problem #6: Special microphone is needed for your ICOM radio

Problem #7: External batteries needed when your ICOM-specific headset is used with other radio brands

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 FREE REPORT:

"The R.F. Connection's 'Mike-Link' and
Shure® Legendary Performance™
Broadcast Headsets"

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Problem #4: "RF in your mic audio OM!"

Solution #4 - Use Mike-Link

Ferrite RF suppression chokes included on:

- microphone audio
- receiver audio
- PTT

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MAIL-IN REBATE

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



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MAIL-IN REBATE

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



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INSTANT SAVINGS

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



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\$500
INSTANT SAVINGS

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



\$50
MAIL-IN REBATE

\$100
INSTANT SAVINGS

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**



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INSTANT SAVINGS

IC-7700 | HF/50MHz Transceiver

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



\$55
MAIL-IN REBATE

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



\$20
MAIL-IN REBATE

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



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INSTANT SAVINGS

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



\$20
MAIL-IN REBATE

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INSTANT SAVINGS

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



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 LCD

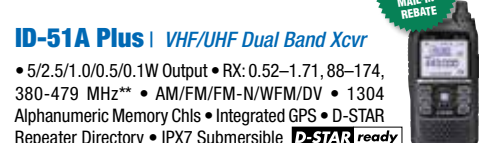


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ID-5100A Deluxe | VHF/UHF Dual Band Digital Xcvr

• 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



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**



ID-51A PLUS2 | VHF/UHF D-STAR Portable

• RS-MS1A, free download Android™ application • New modes for extended D-STAR coverage • Terminal Mode & Access Point Mode allow D-STAR operation through Internet • DV & FM repeater search function • Dplus reflector link commands



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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!**



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SAVINGS

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



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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!**



FREE
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SAVINGS

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!



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



\$120
MAIL-IN
REBATE

FT-991 | HF/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 filters: 3kHz & 15kHz • 32-bit high speed floating point IF DSP • 160-6 meter high speed automatic antenna tuner



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

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



\$40
INSTANT
SAVINGS



\$200
MAIL-IN
REBATE

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



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

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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- 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)

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TM-D710G | 2M/440 Dualband

- V+V/V+U/U+U operation • Built-in GPS • Built-in TNC for APRS & 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!



\$250
KENWOOD
COUPON

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!



NEW

\$300
KENWOOD
COUPON

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



\$25
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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!



\$40
KENWOOD
COUPON

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!



\$200
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TS-2000

\$250
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TS-2000X

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

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

Call For Special Price!



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TM-281A | 2 Mtr Mobile

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

Call For Special Low Price!



TH-K20A | 2M Handheld

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

Call For Special Low Price!



TH-D74A | 2M/220/440 HT w/D-STAR!

- D-STAR compatible • APRS ready w/built in GPS • Color weather station information • Built-in KISS mode TNC • High-performance DSP voice processing • Standard compatibility for Bluetooth

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