



PVRC Newsletter

July

Newsletter Editor: John K3TN jpescatore@aol.com

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

Meeting Info: <http://www.pvrc.org/chapters.htm>

Facebook: <https://www.facebook.com/groups/PotomacValleyRadioClub/>

President's Letter – Doug AA3S

The yearly Open House at Frank Donovan's QTH, W3LPL, was held in June and was well attended by PVRC members as well as by NCDXA and GDXA members plus ARRL QSL Bureau volunteers. This is one of several large annual get-togethers for PVRC members. See our website for much more on related events at "Reference" then "Events & Hamfests". Many thanks to Frank for organizing and providing this event with a great food vendor on site, a guided tour of his huge antenna farm, a porta-potty and more!

It is usual at these Open Houses to ask if any attendees have met the two-meeting requirement in order to be voted in to PVRC as a member (with a sponsor) but it is NOT usual that within minutes of being voted in that the new member wins a brand-new ham transceiver in a surprise raffle provided by K3LR, Tim Duffy, CEO of DX Engineering. That is what actually happened! More from DXE in the photo section below, but first...

Other highlights of the Open House included Frank displaying the 2024 CQ DX Marathon Club competition plaque won by PVRC. Frank promoted the highly successful PVRC participation, and a group photo was taken. Also, five very special PVRC members received plaques for their important contributions to PVRC successes. Awardees were:

- **N4AF, N3RTW and N3QE** (Howie, Sean and Tim) each received a PVRC Technical Service Award plaque recognizing their technical contributions to PVRC including *"expert and crucial support of our core PVRC initiatives ... enabling the continued success of our club"*.
- **K8LF** Jerome Svinicki received a PVRC Appreciation Award plaque *"In recognition for advancing the Mission of PVRC through outstanding performance in concurrent PVRC roles over multiple years as Vice President, Chapter Chair, Olympics administrator and organizer of yearly PVRC-wide Galactic Lunch events"*.
- **K3RA** Rol Anders received a PVRC Leadership Award *"For outstanding success in advancing the Mission of PVRC through leading the complex and category-winning PVRC entries in the ARRL Field Day events every year from 1999; including multiple all-time, all-category QSO records which remain unbeaten to date"*.

Please join me in thanking these and all the other PVRC members who participate so meaningfully for the benefit of all of us! What a fun club this is.

Look for the various photos of the Open House event elsewhere in this Newsletter. The captions help describe some of what took place at this event so I won't go into detail here. See it in the photos! Go PVRC!

Club Competition –

The new PVRC Contest Season 2025-2026 Season begins this month with three 5M events –
 - **5M Events #1 and #2:** the CQ World Wide VHF Contest which has been split into two events (*take heed ARRL*):

SSB/CW/FM

Begins: 1200 UTC Saturday, **July 5,**
 2025

Ends: 1200 UTC Sunday, July 6,
 2025

Digital

Begins: 1200 UTC Saturday,
July 19, 2025

Ends: 1200 UTC Sunday, July
 20, 2025

The Club Competition for this contest is won by the club with the highest aggregate score in both events. PVRC 5M points will be awarded separately for each event, so the highest PVRC score in the Digital event by itself gets the maximum 5M points available for that event in our 5M Program (per the detail scoring rules) regardless of their score in the SSB/CW/FM event. *This is quite an incentive for digital mode-capable members to participate!* CQWW VHF rules at <https://www.cqww-vhf.com/>

- **5M event #3:** NAQP RTTY Saturday July 19 at 2pm Eastern (1800 UTC) for 12 hours only! Your participation is needed since PVRC sponsors an award for the NAQP Club Challenge and other clubs are in real contention with us for this six-event per calendar year contest.

Note that this July event overlaps part of the CQWW VHF Digital, so monitor our Reflector to see how to make a QSO in one of these events count toward both contests.

See also our website info via the homepage or <https://www.pvrc.org/NOCC.html>.

For a reminder of *how to get 5M credit in the NAQP* (different than any other 5M contest!!): you must report your score so that it appears at the <https://contestonlinescore.com/> . For a reminder as to how this came about, see the January 2023 Newsletter page 13 via our website under the “Reference” navigation tab.

As always, the PVRC Reflector is the way for members to keep up to date with PVRC events, ask questions, get answers ... subscribe to the Reflector!

In Case You Don't Get Enough Contesting Already...

It feels like State QSO Parties have attracted more participants over the last few years in particular. And those whose sponsors also have a *club competition* have caught our attention, too. This 2025-2026 contest season is the first time PVRC has a State QSO Party in the 5M Program, as a “trial balloon” to see if it catches on for PVRC members.

We have added the California QSO Party to our 5M Program list, see my April 23rd Reflector post for details. If this new 5M contest gets significant PVRC participation, then other state QSO parties (with out-of-state club competitions and no conflict with existing 5M contests) may be considered for our 5M calendar.

If you have a 'favorite' state QSO party and it does not now have a club competition, you may want to try to convince the contest sponsors to publish the ranked results of out-of-state clubs participating in their Party. Creating a club competition would likely increase the number of submitted logs by a noticeable amount. The more requests that the sponsors receive, the more likely that a club competition may be implemented.
Be radio-active!

73, Doug AA3S

Photos below...



Frank W3LPL receives an unexpected award from surprise attendee Tim Duffy K3LR (CEO of DX Engineering and PVRC member). All attendees received a \$20 Coupon for items purchased at DX Engineering, Thanks Tim! (photo by Zory KB3VQC)



Tim Duffy & DX Engineering raffled off an ICOM IC-7300 and the winner was Jim Wallace N3ADF who had just been voted into PVRC a few minutes before! Thanks again to K3LR! (photo by Zory KB3VQC)

Three PVRC members each received the PVRC Technical Service Award: Tim N3QE and Sean N3RTW were at the Open House while N4AF Howie was at home in North Carolina. All contributed their expert and crucial abilities to the success of several core PVRC activities, like the new website and 5M Program 'back office' essentials that make our club so enjoyable. You see the results, but not the time-consuming work that they give to PVRC. Hats off to Howie, Sean & Tim!



(photo by Zory KB3VQC)



PVRC Vice President Jerome Svinicki K8LF received a PVRC Appreciation Award (in absentia), see photo:

While holding the positions of Vice President and Chapter Chair, Jerome has found time to be successful as the PVRC Olympics Administrator so you could receive your medals and organized the yearly PVRC Galactic Lunch events so you could attend interesting presentations from the comfort of your home. (photo by Zory KB3VQC)





Rol Anders receives the PVRC Leadership Award:

“For outstanding success in advancing the Mission of PVRC through leading the complex and category-winning PVRC entries in the ARRL Field Day events every year from 1999; including multiple all-time, all-category QSO records which remain unbeaten to date.” (I’m really not that tall, I was on a stair-step being used as a podium and Rol was not! (Doug, AA3S) (photo by Zory KB3VQC)

PVRC Bling – Mike N4GU (via PVRC Reflector)

AG4TT First Place Low Power CW CQ WW CW 2024
- N4CWZ, N4GU, N4NTO ops



PVRC Officers:

President:	AA3S	Doug Hart
Vice President:	N0YY	Rick Heinrich
Vice President:	K8LF	Jerome Svinicki
Secretary:	K3WA	Bill Axelrod
Treasurer:	WA3AER	Ted Bauer

Trustees:

K3MM, N3OC, K2AV, N1RM, W3LPL, N3KN, N8II, W3LL, N3QE

PVRC Charter Members (all SK):

W3GRF, W4AAV, W4KFC, N0FFZ, W4LUE, W7YS, VP2VI/W0DX, W3IKN, W4KFT, W4RQR, W4MKM, W4BFO, W4CC, W4IA

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PVRCers at Hamvention 2025 – (via ., K1RA, N3AM, K8CX)



Stitched together PVRC Group Photo



Andy K1RA with Ken K4ZW and Mike KA4RRU



and Dave KM3T



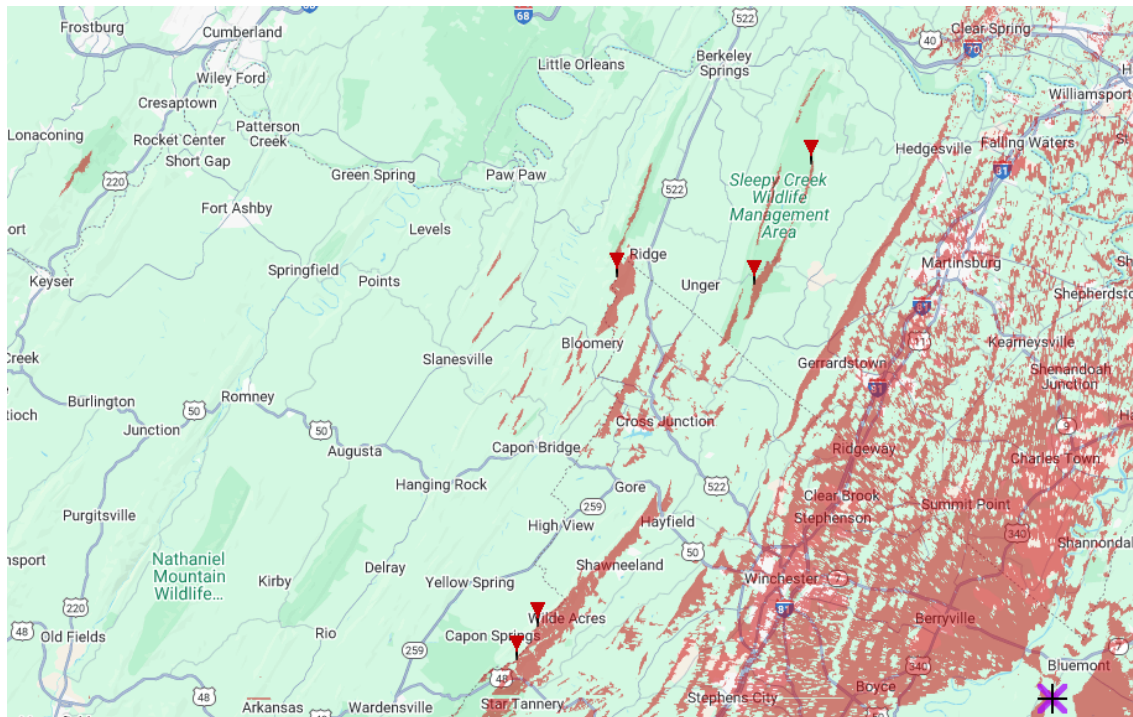
Frank W3LPL, Mark KD4D, Art VE3SM (via K8CX)



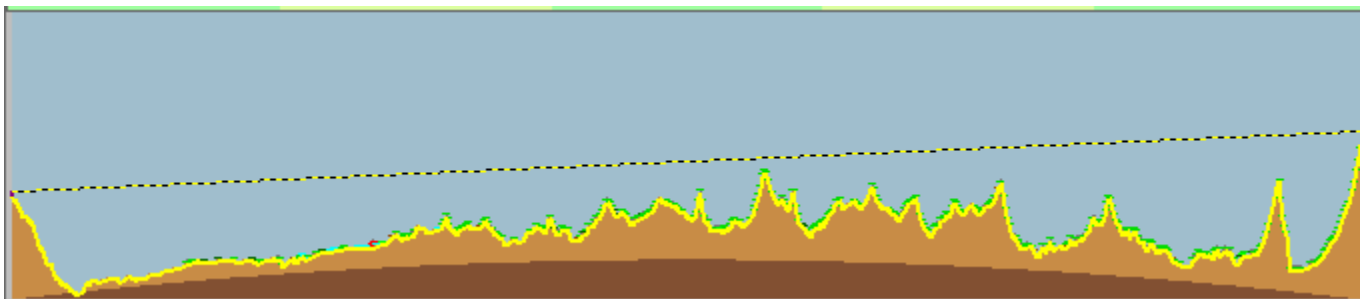
John N3AM spotted this "porcupine mobile" winning the award for highest antenna density

On a Clear Day, I Can See... - MikeW3IP

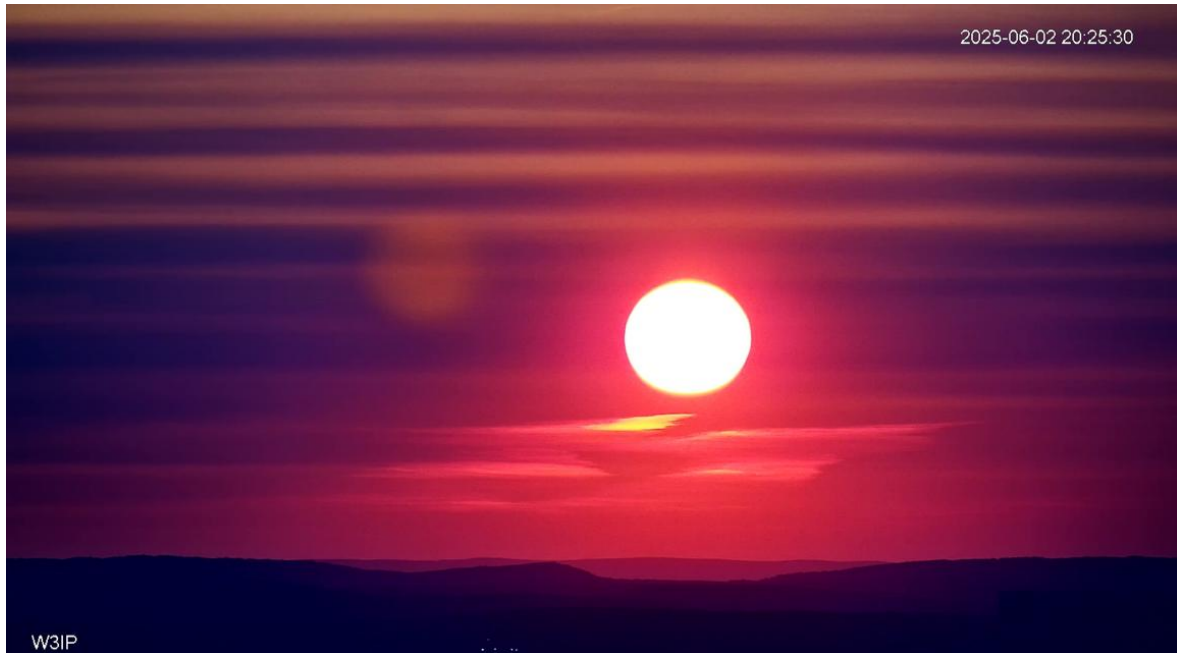
I have long been curious about the maximum line of sight distance that I could see from the top of my tower. I used an app called Heywhatsthat.com to produce a plot of the geographic features that should be visible from my tower, calculated from topographical data. According to the app, the red colored features should be visible from my tower with the right lighting, atmospheric conditions, and absence of any local foliage. My tower is located at the cross near the lower right corner of this map. Of particular interest was the red area southeast of Lonaconing in Western Maryland (on the upper left of the map).



That small area of Western Maryland is visible due to a small gap in the ridge line west of Winchester Virginia. A quick look at Google Earth shows that area near Lonaconing to be part of Dan's Mountain at ~2800 feet above sea level. This is especially interesting to me as the "Dan" of Dan's Mountain is my great great great grandfather. The path profile from RadioMobile clearly shows a easy line of site path from my tower on the left to the top of Dan's Mountain on the right over all of the lower ridge lines..



For a long time, this was just an academic exercise. Just before sunset on June 2, 2025, the atmosphere was unusually clear, and the smoke from the Canadian wildfires had mostly drifted south of the area (but there were still enough smoke particles to create an colorful sunset). I was looking for good sunset pictures and snapped this photo of the setting sun. I saw the gap and the distant ridge line and wondered if that could be Dan's Mountain. I took the tower latitude and longitude and the exact time of day and plugged it into the NOAA solar position calculator at <https://gml.noaa.gov/grad/solcalc/azel.html>. The calculator returned 299 degrees for the sun's azimuth at that moment of time, which perfectly matches the ridge line gap west of Winchester per Google Earth. A 66 mile view may not be impressive to westerners who are used to such vistas, but it was impressive to me!



What Will Happen to Your Station After Your Final QRL? – Mark W3ZQI

Those of you who have radio equipment and computers: Have you considered what will happen to your lifetime collection if you get really sick or pass away? You spent years and perhaps a lot of money accumulating your collection. Frequently our local club hears from a widow “OMG, he died and left me rooms full of crap to get rid of, help!”. And they are frequently in a hurry. Of equal incidence is a request from relatives where a ham station has sat dormant for 10+ years and the survivors are just getting around to the idea that what is ignored does not just vanish on its own. That then hot K3 or ICOM 7600 is now ten years older and much resale value has vanished. And we know better than to just plug in electrical equipment not powered up for ten years; more items possibly lost by neglect.

Due to liability concerns, clubs cannot just jump in to help survivors. Considerable time is needed to accomplish anything, which is asking a lot of anyone who already has their own daily agenda. Sometimes the club has never even heard of the deceased but is expected to help because “he was a ham like you!”. Not only are the survivors saddled with disposal, they are also likely very upset with the deceased ham over the monumental effort ahead of them. Is that how you want to be remembered--as that grubby hoarder?

Those left behind frequently have no idea of the hidden value of a ham station—to them it is just dusty junk. Most all of my relatives already tell me that. Hams are supposed to be smart people, having achieved FCC licenses and the ability to communicate over the air... Why no contingency plans on our part?

If wholesale clean up isn't going to happen then sorting is the first step we should take before our demise. Get a roll of large color dots (bright color round, 3/4 inch labels) to be placed on every box or piece of equipment. Define the label scheme in an important paper given to family/friends. Perhaps:

Red: has sizable cash value like that Collins KWM-2 or Flex 8000.

Yellow: historical value or modest cash value, e.g. Vibroflex or Eimac tube

Green: some value; cables, tools

Black: value only in the eyes of the beholder/e.g. junk, nuts/bolts, connectors, odd projects.

Red and Yellow items represent \$\$\$ which may be needed by the survivor(s) or at least should not be squandered. Sad that unscrupulous predators hoodwink survivors by offering pennies on the dollar for some items. A dusty Bird Wattmeter in electronics circles is more valuable than much jewelry. We are talking hundreds of dollars for the unit and each set of power slugs. Low offers for equipment are the norm unless properly documented. Another predator line is "it's broken" followed by a low-ball offer. Also consider gifting with intended direct recipient instructions on various items. Examples: designate and label a specific radio to a named ham friend or named club. Essentially, if a desirable recipient is intended for anything, include that info in the label scheme document right away.

Green and Black items typically represent the bulk of the holdings but survivor(s) won't know that without proper labeling. At least, the survivor(s) can prioritize their time to save the Red and Yellow items; if from out of state, allotted clearing out time could be little more than a weekend--how diligent and thorough would that be? The green and black items can be offered in bulk. Much can be recycled with time and proper sorting.

Get rid of clutter ahead of time. Unless you actively repair and restore old computers, example—ISA bus computer gear and peripherals are effectively unusable these days. If a computer ever ran Windows 8 or older, get rid of it or install Linux if you have a useful purpose. If no purpose then dump it now. Unless you actively use or repair vintage radios, don't keep tubes or old point-to-point components. Unlike wine, they don't improve with age. Donate to a museum or restorer while they still have any value. Most paper manuals are now readily available on the Internet. Trim your supply of manuals no longer needed; scan some as necessary. Avoid buying more manuals if only casual use is expected. Even when printing from the Internet, exploit double-sided printing and positioning of two page images on each side of paper. Unfinished projects don't finish themselves. If you haven't touched a given item in five years, how important can it be? Recover space and improve clutter.

Antennas: if you got them up, you should provide hints as to how to get them down. Antenna removal is off-the-chart in complexity and risk to the uninformed. If your health or stamina are declining, scale back now or share resources with a friend. Most of us have highly successful amateur radio hobbies on HF with just wire antennas. With any sophisticated antenna system, document what you have. A properly documented antenna system might even attract someone to remove it for free when the time comes; lack of documentation might cost the survivors big dollars for removal. No matter how or by whom an antenna gets removed, liability issues are a big concern.

PVRC 160 Meter DXCC Standings – Frank W3LPL

Below are the 160M DXCC totals for PVRC members, transcribed from the ARRL [DXCC data](#) as of the 20th of each month or so. Thanks to Frank for the data each month to make this a regular feature. Please report any omissions or errors to [Frank](#).

CALL	DXCC	CALL	DXCC	CALL	DXCC	CALL	DXCC
W8LRL	344	WS6X	221	WA2BCK	151	N4DJ	118
W4DR	339	N1LN	220	N5JB	151	K1BZ	117
W4ZV	339	W4NL	214	N3QE	150	K0GD	115
W3UR	322	W3YY	213	K3RA	149	K3OSX	114
W3LPL	317	N4MM	212	K3TN	149	K5RJ	114
K4CIA	306	K3WA	211	N4GG	145	N3MN	114
K4ZW	305	K5RT	208	N3KK	144	KA4RRU	113
N2QT	287	K3JT	207	W3BW	141	K1KO	112
W4PK	287	K1GG	200	W4JVN	141	W3MR	112
K3SX	286	W3GG	200	W4VIC	141	W3UL	112
K4SO	283	N4DB	192	W2YE	138	NA1DX	111
KG4W	278	K4FJ	192	W4YV	138	N3HBX	110
K6ND	269	N3OC	182	AA4NC	132	N3IQ	110
N3NT	263	K3WC	177	N3MK	131	W3XY	110
W3DF	256	K4RG	177	KM3V	131	W3NRJ	108
K5VRX	256	K2PLF	174	K5VIP	131	W4ZYT	108
W3KX	255	K3AJ	174	N0YY	129	W3KB	107
AB3CV	249	W4FQT	172	N3KS	129	N4NW	105
N1EK	248	W3IP	170	N3RR	129	W3TMZ	104
WB3AVN	247	N4PY	170	W0YVA	129	W3EKT	102
WX4G	243	N4XX	169	K3XA	128	KN4KL	102
KG7H	242	N4QQ	168	W4NF	123	WA3EKL	101
K1HTV	239	K4XD	168	W2GG	121	KE4S	101
W3LL	238	K3KY	166	N3ND	121	N3AF	100
K3SWZ	235	NR4M	160	K2BA	120	K3TZV	100
K5EK	235	N3RC	156	W4PRO	120	KC4D	100
K1AR	234	N3UA	156	N4TL	120		
K4XL	232	N8II	153	AE3T	119		
W0VTT	226	W2RS	152	W4HZ	119		



Membership News – Bill K3WA

We have two new members to report this month. Please welcome:

- In the Virginia Metro Chapter, Bryce KM6VRX
- In the Annapolis Chapter, Joseph K9TUW
-

Chapter leaders please remember to complete the [Meeting Attendance Report](#).

Members can check and update their roster details via the [Roster Lookup](#).

Upcoming Contests – from [WA7BNM](#)

July 2025

+ RAC Canada Day Contest	0000Z-2359Z, Jul 1
+ IARU HF World Championship	1200Z, Jul 12 to 1200Z, Jul 13
+ YOTA Contest	1000Z-2159Z, Jul 19
+ CQ Worldwide VHF Digital Contest	1200Z, Jul 19 to 1200Z, Jul 20
+ North American QSO Party, RTTY	1800Z, Jul 19 to 0559Z, Jul 20

RED – scores count towards PVRC 5M Awards or Challenge Program

Editor's Last Word – John K3TN

Thanks to KB3VQC, N4GU, W3LPL, K1RA, N3AM, W3IP, N4IW and W3ZQI for contributions to this issue of the PVRC newsletter.

The Newsletter takes the month of August off each year – see you in September!

The quality and usefulness of the PVRC newsletter depends on contributions from members. If you have photos from club meetings, screenshots of new contest software, or writeups on station improvements or contest war stories, send them in any format to jpescatore at aol dot com.



From the PVRC Treasurer – Ted WA3AER

PVRC has chosen not to implement an annual dues requirement. We depend on the generosity of all 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.

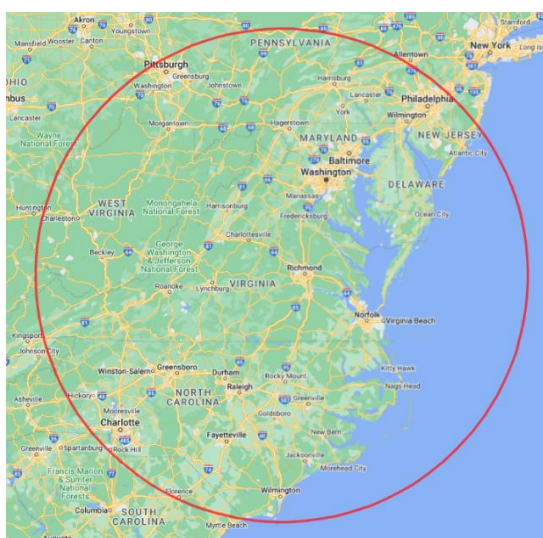
Direct donations to PVRC via Credit Card or PayPal may be made by clicking this "Donate" button and clicking the next Donate button that appears on your screen:



Donations to PVRC are not tax deductible

Eyeball QSO Directions

The latest info on local club meetings and get togethers will always be sent out on the [PVRC reflector](#) and posted on the PVRC [web site](#).



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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World Map &
DXCC Country List
Edition 2024

SIZE:
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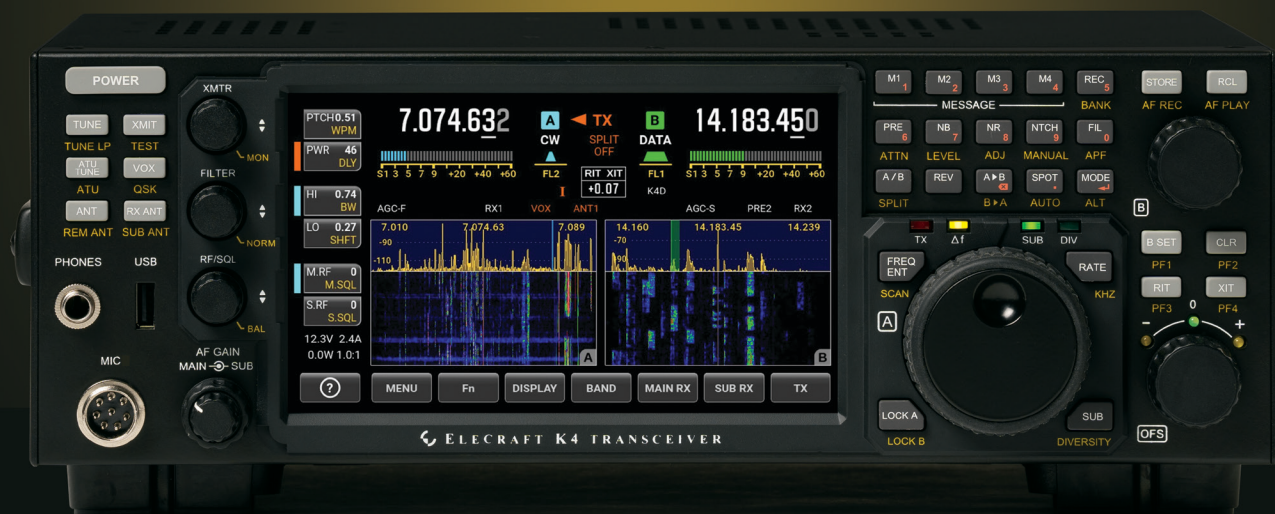
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Modular, hybrid architecture adapts to your needs

The basic K4 covers 160-6 m, with dual receive on the same or different bands. The K4D adds diversity receive, with a full set of band-pass filters for the second receiver. (Thanks to direct RF sampling, there's no need for crystal filters in either the K4 or K4D.) The K4HD adds a dual superhet module for extreme-signal environments. Any K4 model can be upgraded to the next level, and future enhancements—such as a planned internal VHF/UHF module—can be added as needed.

Single or dual panadapter, plus a high-resolution tuning aid

The main panadapter can be set up as single or dual. Separate from the main panadapter is our per-receiver *mini-pan* tuning aid, with a resampled bandwidth as narrow as ± 1 kHz. You can turn it on by tapping either receiver's S-meter or by tapping on a signal of interest, then easily auto-spot or fine tune to the signal.

Comprehensive I/O, plus full remote control

The K4's rear panel includes all the analog and digital I/O you'll ever need. All K-line accessories are supported, including amps, ATUs, and our K-Pod controller. The USB display output supports its own user-specified format. Via Ethernet, the K4 can be 100% remote controlled from a PC, notebook, tablet, or even another K4, with panadapter data included in all remote displays. Work the world from anywhere—in style!

K4 KEY FEATURES

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ATU with 10:1+ range, 3 antenna jacks

Up to 5 receive antenna sources

Full remote control via Ethernet



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FTM-150RASP | 2M/430MHz FM True Dual Band Xcvr

- Dual Receivers Allowing (V+V, U+U, V+U, U+V) Operation • 55W VHF & 50W UHF • Heavy Duty Heat Sink w/Funnel Air Convection Conductor • Front & Main Body Speaker for 6W High Quality Audio



FTM-500DR | C4FM/FM 144/430MHz Dual Band Xcvr

- Front Firing Acoustically Enhanced Speaker System • True Dual Band Operation, C4FM/C4FM Digital D-D Dual Receive • 2.4" High-Resolution Full-Color Touch Panel Display • Built-in High Precision GPS Receiver • Wireless Operation Capability with Optional Bluetooth® Headset

FT-70DR C4FM/FM 144/430MHz Xcvr

- System Fusion Compatible • Large Front Speaker delivers 700 mW of Loud Audio Output • Automatic Mode Select detects C4FM or Fm Analog and Switches Accordingly • Huge 1,105 Channel Memory Capacity • External DC Jack for DC Supply and Battery Charging



FT-5DR C4FM/FM 144/430 MHz Dual Band



- High-Res Full-Color Touch Screen TFT LCD Display • Easy Hands-Free Operation w/Built-In Bluetooth® Unit • Built-In High Precision GPS Antenna • 1200/9600bps APRS Data Communications • Supports Simultaneous C4FM Digital • Micro SD Card Slot

FT-65R | 144/430 MHz Transceiver

Compact Commercial Grade Rugged Design • Large Front Speaker Delivers 1W of Powerful Clear Audio • 5 Watts of Reliable RF Power Within a compact Body • 3.5-Hour Rapid Charger Included • Large White LED Flashlight, Alarm and Quick Home Channel Access



FTM-600R | 50W VHF/UHF Mobile Transceiver

- All New User Operating Interface-E20-III (Easy to Operate-III) • Robust Speaker Delivers 3W of Clear, Crisp Receive Audio • Detachable Front Panel Can Be Mounted in Multiple Positions • Supports Optional Bluetooth® Wireless Operation Using the SSM-BT10 or a Commercially Available Bluetooth® Headset

5 Ways to Shop!

• RETAIL LOCATIONS – Store hours 10:00AM - 5:30PM - Closed Sunday

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IC-9700 | All Mode Tri-Band Transceiver

- VHF/UHF/1.2GHz • Direct Sampling Now Enters the VHF/UHF Arena • 4.3" Touch Screen Color TFT LCD • Real-Time, High-Speed Spectrum Scope & Waterfall Display • Smooth Satellite Operation



IC-7760 | HF150MHz All Mode Transceiver

- New Design-Remote Control Head & Separate RF Deck • Dual Independent Receivers, Spectrum Scope & Waterfall • 200 Watts Output 100% Duty Cycle • Flexible Remote Operation Capabilities



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



IC-7610 | HF/50 MHz All Mode Transceiver

- Large 7-inch color display with high resolution real-time spectrum scope and waterfall • Independent direct sampling receivers capable of receiving two bands/two modes simultaneously



IC-R8600 | Wideband SDR Receiver

- 10 kHz to 3 GHz Super Wideband Coverage • Real-time Spectrum Scope w/Waterfall Function • Remote Control Function through IP Network or USB Cable • Decodes Digital Incl P25, NXDN™, D-STAR • SD Card Slot for Receiver Recorder



IC-PW2 | HF-50 MHz 1kW Linear Amplifier

- 1kW Output Full Duty Single Operator Two Radios (SO2R) • Built-in Automatic Antenna Tuner • Detachable Controller with Touch Screen Display • 2x6 Automatic Antenna Selector - 2 Radio Inputs & 6 Antenna Connections



IC-705 | HF/50/144/430 MHz All Mode Transceiver

- RF Direct Sampling • Real-Time Spectrum Scope and Waterfall Display • Large Color Touch Screen • Supports QRP/QRPp • Bluetooth® and Wireless LAN Built-in



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



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



IC-5100 AD

VHF/UHF Dual Band Digital Transceiver

- 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



IC-V3500 | 144MHz FM Mobile

- 65W of Power for Long Range Communications • 4.5 Watts Loud & Clear Audio • Modern White Display & Simple Operation • Weather Channel Receive & Alert Function



ID-50A | VHF/UHF D-STAR Portable

- High Visible LCD with Backlight Function • Find Nearby Repeaters with the Built-In GPS • Easy D-STAR Settings for Beginners • Voice Recorder Function • Share Pictures in DV Mode

IC-V86 | VHF 7W HT

- 7W Output Power Plus New Antenna Provides 1.5 Times More Coverage • More Audio, 1500 mW Audio Output • IP54 & MIL-STD 810G-Rugged Design Against Dust & Water • 19 Hours of Long Lasting Battery Life • 200 Memory Channels, 1 Call Channel & 6 Scan Edges



IC-T10 | Rugged 144/430 MHz Dual Band

- Disaster Ready - Excellent Fit for Your Emergency Bag • Loud Audio - New Speaker Design • Long Battery Life - Up to 11 Hours • FM Broadcast & Weather Channels



ID-52A Plus version also available!

ID-52A | VHF/UHF D-STAR Portable

- Bluetooth® Communication • Simultaneous Reception in V/V, U/U, V/U and DV/DV • Enriched D-STAR® Features Including the Terminal Mode/Access Point Mode • UHF (225~374.995MHz) Air Band Reception



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