

# PVRC Newsletter

## January

Newsletter Editor: John K3TN [jpescatore@aol.com](mailto: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

I very much hope that all of you have recovered from a happy holiday season and are looking forward to more radio contesting in 2024!

Competition against other radio clubs is a major reason for PVRC to exist. PVRC has been competing since its official incorporation in 1947. The table below updates our contest performance over the recent years in 19 of the 5M contests. Note that some contest sponsors report a single club score result as the sum of separate CW, Phone and perhaps RTTY events (e.g., ARRL Sweepstakes).

<b>PVRC Officers:</b>		<b>Trustees:</b>	
President:	AA3S Doug Hart	K3MM, N3OC, K2AV, N1RM, W3LPL, N3KN, W2RU, W3LL, N4RA	
Vice President:	K3WA Bill Axelrod		
Vice President:	K8LF Jerome Svinicki		
Secretary:	N3QE Tim Shoppa	<b>PVRC Charter Members (all SK):</b>	
Treasurer:	WA3AER Ted Bauer	W3GRF, W4AAV, W4KFC, N0FFZ, W4LUE, W7YS, VP2VI/W0DX, W3IKN, W4KFT, W4RQR, W4MKM, W4BFO, W4CC, W4IA	
<p>Newsletter Editor: John K3TN <a href="mailto:jpescatore@aol.com">jpescatore@aol.com</a></p> <p>PVRC Website: <a href="http://www.pvrc.org">http://www.pvrc.org</a></p> <p>PVRC Meeting Info: <a href="http://www.pvrc.org/chapters.htm">http://www.pvrc.org/chapters.htm</a></p> <p>PVRC on Facebook: <a href="https://www.facebook.com/groups/PotomacValleyRadioClub/">https://www.facebook.com/groups/PotomacValleyRadioClub/</a></p>			

The table on the next page shows:

- the number for how PVRC ranked (1 means PVRC won) in each year of club competition against clubs in the United States (i.e. not including foreign clubs) and regardless of number of club member logs submitted
- the name of the domestic club that won if PVRC did not win recently, all in **RED**
- **GREEN** if PVRC did better in 2023 than last year
- the club that placed second when PVRC won

PVRC 5 Million Point Contest Name	# is PVRC rank, NAME is winning club or closest to PVRC. RED means PVRC did NOT win in recent 5M Season				
	2023	2022	2021	2020	2019
ARRL RTTY Round Up	1, NCCC	2, NCCC	3, NCCC	2, NCCC	2, NCCC
NAQP Club Competition	1, tbd	NA	1, SMC	1, SMC	1, SMC
ARRL January VHF	7, Mt Airy	5, Mt Airy	5, Mt Airy	6, Mt Airy	9, Mt Airy
CQ160 CW + SSB (rank in U.S.A.)	1, FRC	1, FRC	1, FRC	1, FRC	1, FRC
CQ WPX RTTY (rank in U.S.A.)	1, FRC	1, FRC	1, FRC	2, NCCC	1, NCCC
ARRL DX CW + SSB	3, FRC	3, FRC	3, FRC	3, FRC	3, FRC
CQ WPX SSB + CW (rank in U.S.A.)	1, YCCC	2, YCCC	1, FRC	2, YCCC	2, YCCC
CQMM DX (Brazil)	NA	3, YCCC	3, FRC	4, FRC	2, FRC
ARRL June VHF	4, Mt Airy	2, Mt Airy	2, Mt Airy	3, Mt Airy	2, Mt Airy
CQWW VHF Contest	NA	1, SMC	2, SMC	1, NEWSG	2, SMC
WAE CW + SSB +RTTY	2, YCCC	1, YCCC	1, FRC	1, FRC	1, FRC
WW DIGI	3, YCCC	1, YCCC	3, NCCC	4, YCCC	3, NCCC
ARRL September VHF	NA	3, Mt Airy	3, Mt Airy	2, Mt Airy	6, Rochester
CQWW RTTY (rank in U.S.A.)	NA	1, YCCC	1, FRC	1, FRC	1, YCCC
WAG (Germany)	NA	1, FRC	NA	NA	NA
CQWW SSB + CW	NA	3, FRC	3, FRC	3, FRC	3, FRC
ARRL SS CW + SSB	NA	1, MWA	1, FRC	1, SMC	1, FRC
ARRL 160M	NA	1, FRC	1, FRC	1, FRC	2, FRC
ARRL 10M	NA	1, YCCC	2, FCG	1, FCG	1, FCG

An important takeaway is that of the nineteen 5M contests there are eight contests that PVRC has not won recently (though 2 better than last year's report of ten!). PVRC lost ground in four contests, two of which we had won in 2023, oops. One of those was the WAE, look for an announcement of double 5M points for that contest in 2023 and start to plan your calendar to operate for all three legs (CW, SSB, RTTY) of that contest if you can.

So how can we plan to score higher in our 5M contests? There are many PVRC members who regularly score very high in many of the 5M contests, and those operators are a natural place to start for ideas.

Can you volunteer to be a '5M Contest Tactics Chairperson' to examine a specific 5M contest of special interest to you and determine some practical actions PVRC operators could take to score higher in that contest? Different contests have different geographic areas, propagation characteristics, modes, etc. so "one size will not fit all" contests. An output of these tactics groups might be a 'live document' (one that changes quickly when improvements arise) made available to all PVRC members on-line to help prepare for a specific contest. Not all tactics ideas will be applicable to all operators: an op who chooses to be in the single-band category of a multi-band contest won't need to consider using the band-change minimum time tool in N1MM+ logger, for example.

Having a list of ideas unique to each contest should help each of us prepare for and perform better in the contest we choose to be in. We can then give a more confident answer to “QRV?”.

Please contact me directly if interested in being such a chairperson or a member of a specific tactics group. 73, Doug Hart AA3S

**Club Competition**

- 1) PVRC won the 2023 CQ WPX Club Competition combined SSB/CW and I just received the plaque in the mail, see photo below. That nice looking plaque will go to a deserving PVRC member who contributed to that win, TBD. Congrats to all of us who contributed WPX contest logs to PVRC.



- 2) January has *five* 5M contests!

5M Contest in January	Participation Circle, if any	Begin Date, UTC
<a href="#">ARRL RTTY Round Up</a>	ARRL/CQ 250-Mile Circle	2024-01-06
<a href="#">NA QSO Party - January CW</a>	<b>PVRC Members Worldwide</b>	2024-01-13
<a href="#">NA QSO Party - January SSB</a>	<b>PVRC Members Worldwide</b>	2024-01-20
<a href="#">ARRL January VHF</a>	ARRL/CQ 250-Mile Circle	2024-01-20
<a href="#">CQ160 CW</a>	<b>PVRC Members Worldwide</b>	2024-01-26

In January of 2023, PVRC won the club competition for the ARRL RTTY Roundup for the first time since at least 2019. Let’s try to hold on to this one by winning it again in 2024!

The January VHF contest has been difficult for us to perform well in the standings, *and we lost ground last year*. The rules allow any authorized mode and any authorized frequency above 50MHz. If you are new to 50 MHz and above or new to this type of contest, please ask questions on our Reflector to help you participate in this contest. I had never used 50 MHz and above or RTTY until I joined PVRC to help generate more PVRC points. See what you can do...

- 3) The first state QSO Party that has a club competition is in March. More on that in a future Newsletter.

PVRC won the 'Top Club from Outside Michigan' in the 2023 Michigan State QSO Party! That nice looking plaque will go to a deserving PVRC member who contributed to that win, TBD.



### Save the Date: Virtual Galactic Event – Jerome K8LF

#### Virtual Galactic Event 2024

Feb 3, 2024 01:00 PM Eastern Time

Guest Speaker Presentations  
All member round table



## PVRC 2024 Election Results -reported by Doug AA3S

All five officer positions are up for election each year. In 2023 there were only as many nominations as there were open positions. For 2024 terms the PVRC Officers are:

- President: Doug Hart AA3S
- Vice-Presidents: Bill Axelrod K3WA and Jerome Svinicki K8LF
- Treasurer: Ted Bauer WA3AER
- Secretary: Tim Shoppa N3QE

For the new term beginning in 2024, three Trustee positions (Virginia/WV, MD/DE/PA, and At Large) were up for election and there were 3 nominees. These three re-elected trustees will serve through the end of year 2026:

- Virginia/WV Trustee: N3KN Kay Craigie
- MD/DE/PA Trustee: W3LPL Frank Donovan
- At Large Trustee: K2AV Guy Ollinger

The complete list of 2024 Trustees, including both those just elected and those continuing from previous trustee cycles, is:

- MD/DC/PA Trustee: Frank Donovan W3LPL (terms run through end of year 2026).
- MD/DC/PA Trustee: Bud Governale W3LL (term runs through end of year 2025)
- MD/DC/PA Trustee: Tyler Stewart K3MM (term runs through end of year 2024)
- VA/WV Trustee: Kay Craigie N3KN (term runs through end of year 2026)
- VA/WV Trustee: Rick Miller N1RM (term runs through end of year 2025)
- VA/WV Trustee: Dick Allardyce N4RA (term runs through end of year 2024)
- NC Trustee: Guy Ollinger K2AV (term runs through end of year 2026)
- At Large Trustee: Brian McGinness N3OC (term runs through end of year 2025)
- At Large Trustee: Bud Hippisley W2RU (term runs through end of year 2024).



For those of you interested in statistics, as reported from the online service that coordinated this (and previous) PVRC election:

Ballots emailed to <b>active members</b> using Roster data	<b>458</b>	
emails returned as not deliverable (most were re-sent with updated email addresses researched by Officers)	27	6%
<b>Ballots actually voted</b>	<b>172</b>	<b>38%</b>
Ballot count results:		
President		
Name	Vote s	
Doug Hart, AA3S	168	
Vice Presidents (2)		
Name	Vote s	
Bill Axelrod, K3WA	166	
Jerome Svinicki, K8LF	139	
Treasurer		
Name	Vote s	
Ted Bauer, WA3AER	166	
Secretary		
Name	Vote s	
Tim Shoppa, N3QE	167	
Trustees		
Name	Vote s	
Kay Cragie, N3KN	167	
Frank Donovan, W3LPL	165	
Guy, K2AV	156	

North Carolina Chapter Activity – de Hank K3YDX and Mark N2QT



Nate N4YDU, Don W4BBT, Eric NR4O



NC Chapter head Bill K3WA



VP5M Team: Eric, NR3O. Wayne, KI4V.  
Jim K4PQL



Here, Ed, N3CW is holding his newly awarded bronze medal over Dave, N3AC's head, no doubt to inspire him to greatness in the future...de Mark N2QT

### Tree Chopping Horror Story – Fred W3ICM

I am originally from Ohio near the Ohio River in the Wheeling, WV area.

I have a cousin who lived with his wife in a very nice house in a rather remote area outside of Wheeling. He was not an amateur.

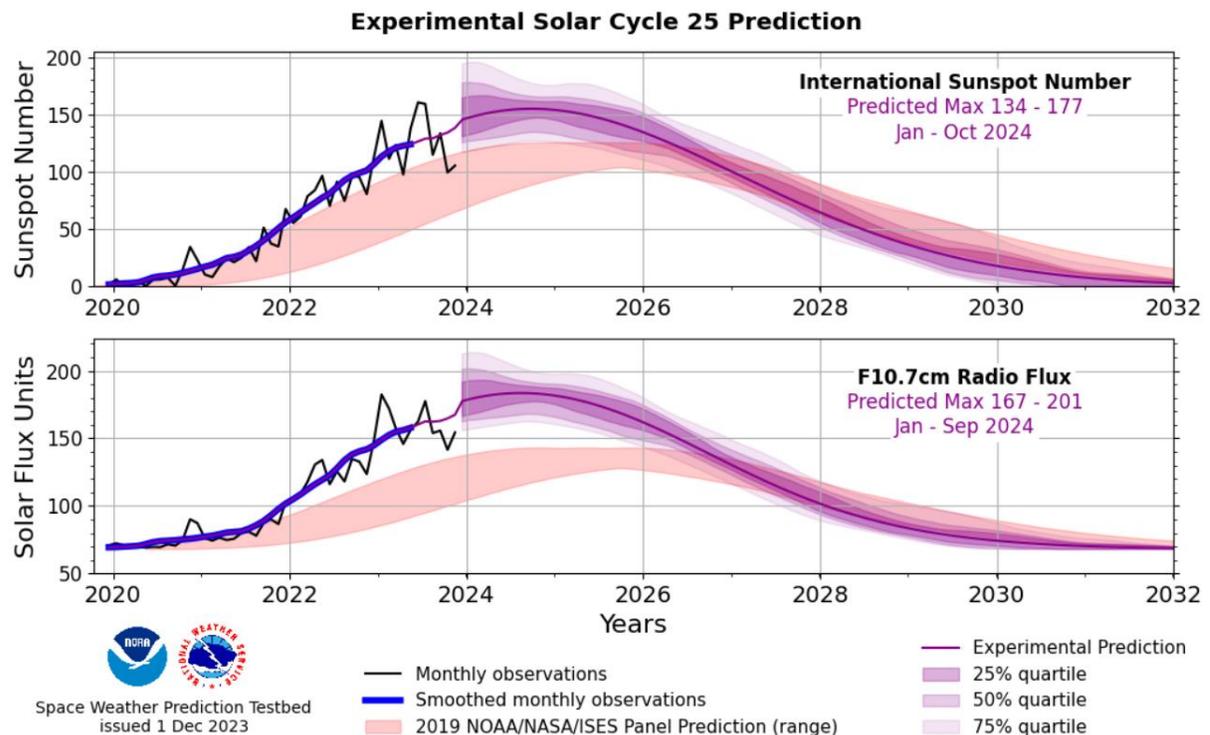
They had a large dead tree in their front yard and arranged with a local tree-chopper to cut it down. Just a local man who had no bonding or insurance but had some experience. It was like they contracted with him because he was a needy person.

They both went to work in the morning, so nobody was home. The tree-chopper came and chopped down the tree, but it fell on the power lines. Unbeknownst to the tree chopper, the power lines got tangled and 2,400 volts was sent into the house.

The junction box and internal wiring could not handle the high voltage, resulting in a fire. The tree-chopper was unaware of the fire. The horror story is that the beautiful house burned down.

The lessons to be learned from this story are to get a professional tree chopper who has insurance; and secondly, have an adult at home to handle things if anything goes wrong.

### 2024 Should be a Good Year, Propagation-wise



## How I Cracked the Enigma Code – John N3AM

The Maritime Radio Historical Society sent a coded message in 5-letter groups via station KPH on July 22, 2023. This was an authentic message sent by a U-boat in the North Atlantic in 1942 and was encrypted using the Enigma code machine.

There were several transmission frequencies available, and I copied the 20 WPM CW transmission on 17016.8 kHz for the most reliable reception. QSB obscured one character during the first transmission at 2000Z and I was able to copy that missing character during the 2015Z repeat transmission.

Here's the copy:

**DONITZ FR LOOKS 2013Z OKTOBER 7 - 100 - DBK WSE –  
EVJMZ VISFP CVCBJ SNQDF CVNPL CNFFO EVSLH YOSKU EUWPB QLRGR XRGDW  
OFQCQ KZRJT AUOLG DVSGM GJFRR OZLRC ANKRI NNTCG WVLRC**

Before I was ready to decode the message with the on-line Enigma simulator, I watched the video demonstration [here](#).

Decoding an Enigma message requires the use of two keys: a *Daily Key* (valid for a particular day), and a *Message Key* (unique to each individual message sent that day).

The Daily Key settings were specified in codebooks and distributed monthly.

The Message Key consists of two groups of three letters randomly chosen by the Enigma machine operator. The operator encodes each message using the message key in addition to the daily key settings. The first group of three letters (DBK in the above transmission) is used to encode the second group (WSE) in the message to provide the final ring starting positions for decoding the message.

The on-line Enigma simulator that I used is at [here](#).

*From the National Museum of Computing:*

A standard three-wheel Enigma Machine showing the wheels (top), Reflector to the left and the black entry wheel to the right, lampboard (Note small light bulbs), keyboard and (front) plugboard.



The daily key for October 7 is detailed in the codebook entry below:

Geheime Kommandosache  
Nicht ins Flugzeug mitnehmen

Armee-Stabs-Maschinenschlüssel Nr. 28

Nr. 00008

für Oktober 1944

	Datum	Walzenlage	Ringstellung	Steckerverbindungen	Kenngruppen
St	31.	IV V I	21 15 16	KL IT FQ HY XC NP VZ JB SB OG	jkm ogi ncj glp
St	30.	IV II III	26 14 11	ZN YO QB ER DK XU GP TV SJ LM	ino udl nam lax
St	29.	II V IV	19 09 24	ZU HL CQ WM OA PY EB TR DN YI	nci oid yhp nip
St	28.	IV III I	03 04 22	YT BX CV ZN UD IR SJ HW GA KQ	zqj hlg xky ebt
St	27.	V I IV	20 06 18	KX GJ EP AC TB HL MW QS DV OZ	bvo sur ccc lqe
St	26.	IV I V	10 17 01	YV GT OQ WN FI SK LD RP MZ BU	jhx uuh giw ugw
St	25.	V IV III	13 04 17	QR GB HA NM VS WD YZ OF XK PE	tba pnc ukd nld
St	24.	III II IV	09 20 18	RS NC WK GO YQ AX EH VJ ZL PF	nfi mew xbk yes
St	23.	V II III	11 21 08	EY DT KF MO XP HN WJ ZL IV JA	lsd nuo vor vox
St	22.	I II IV	01 25 02	PZ SE OJ XF HA GB VQ UY KW LR	yji rwy rdk nso
St	21.	IV I III	06 22 03	GH JR TQ KF NZ IL WM BD UQ EC	ema mlv jjy iqh
St	20.	V I II	12 25 08	TF RQ XV DZ PY NL WI SJ ME GB	xjl pgs ggh znd
St	19.	IV III IP	07 05 23	ZX EU AC GD KP VO QS NW HL RM	vpj zqe jrs cgm
St	18.	II III V	19 14 22	WG OM RL DB ST AQ PZ XB YN IJ	oxd lnb iou ytt
St	17.	IV I II	12 08 21	ME HX BF WY ZD TR FJ AG IL KQ	tak pjs kdh jvh
St	16.	I II III	07 11 15	WZ AB MO TF RX SG QU VT YN EL	pzg eww wyt iye
St	15.	III II V	06 16 02	GT YC EJ UA RX PN IS WB MH ZV	bhe xzm yzk evp
St	14.	II I V	23 05 24	AZ CJ WF UY SO QV MI NH DP GX	fdx tyj bmq typ
St	13.	IV II V	03 25 10	CX KN JR DQ IU TL HZ MF EP WB	zfo bjr zwx gvn
St	12.	I III II	26 01 18	QB YE WN AI GJ TO HR FK PS CM	upc anf tkr pwz
St	11.	V I III	17 13 04	SV GO PA ZR FN HI YK WT DE BJ	vdh ego wmy uti
St	10.	I V IV	26 07 16	SW AQ NF PO VY UX MK CL HT ZJ	rpl anw vpr mhn
St	9.	I III IV	17 10 18	EH IR GK NZ SP UA LD CQ JM YV	knq ysq rhj tlj
St	8.	V II I	23 11 25	QY OG ST HA CB WD KL JN VX IU	lro avv axh gws
St	7.	II III I	06 12 03	BG FS TH JE VK PI CU QA OD NM	aty mbb mvo jmz
St	6.	I IV V	24 19 01	IR HQ NT WZ VC OY GP LF BX AK	bhc iwo zgz rnr
St	5.	II IV III	05 22 14	MK GO RQ XT DW IA ZL SY PJ EN	bok rzw kzo ryl
St	4.	IV II I	15 02 21	KD PG CO FW HJ RY MT QL VB UZ	kpk php xmo pfw
St	3.	III V IV	03 23 04	DY CP WN OV QH UZ RA TJ GL SM	hjj nkt ytn pvc
St	2.	I III V	13 18 01	DR VJ PS ZK IU HX AQ GT YO PC	ppq fqw oiy ruj
St	1.	II IV I	06 17 26	AC LS BQ WN MY UV FJ PZ TR OK	ool ooi ywv sfb

Reading left to right are the selected rotors and their positions in the machine; the ring settings; plugboard connections; and the message identification groups. Note that the first 5-letter group (EVJMZ) in the received transmission includes the identification sequence "jnz" as a confirmation for the October 7 settings on the codebook sheet.

**Setting up the Enigma Machine for the October 7 message**

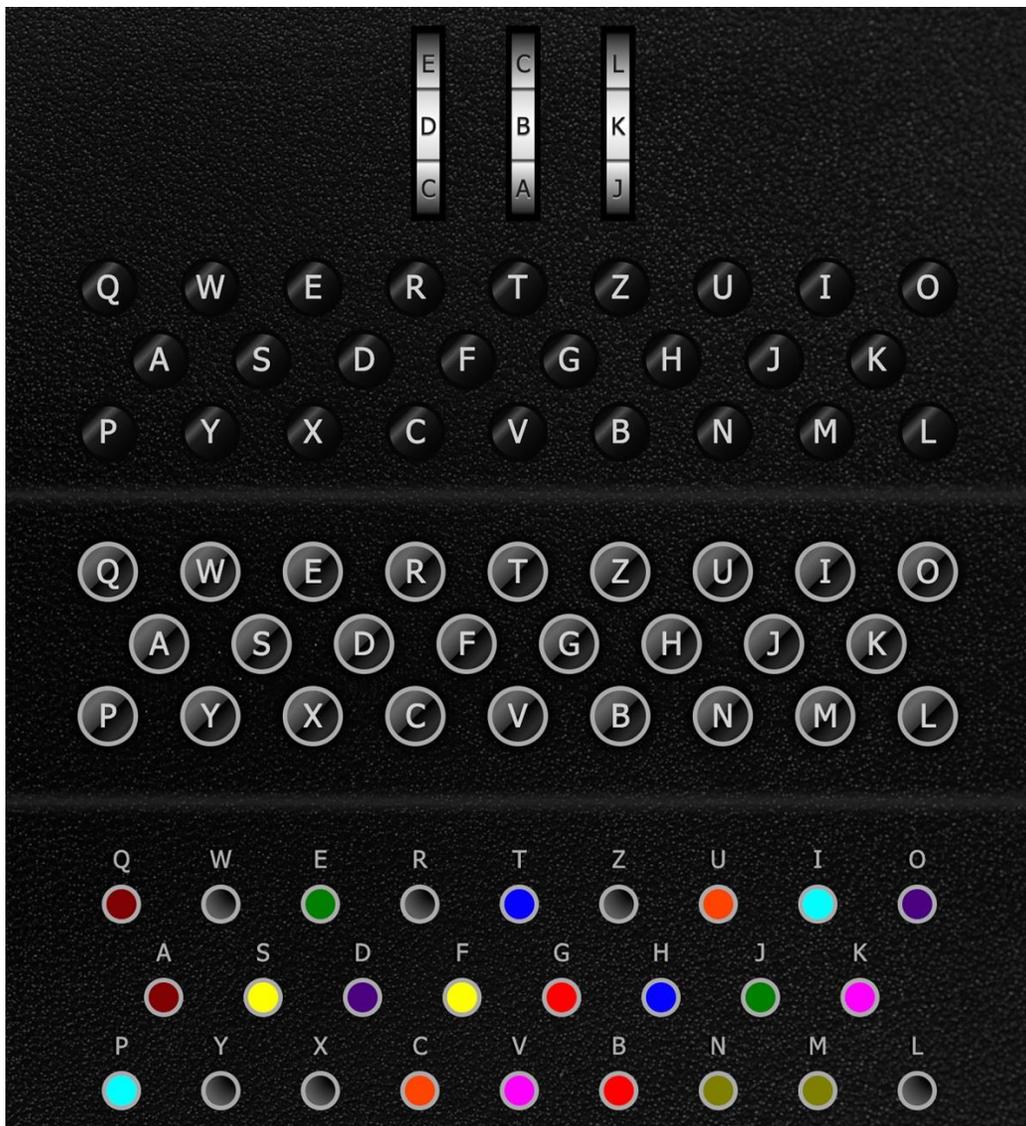
Rotors II III and I are to be installed in the Enigma, in that order. Respective ring settings are 06, 12, 03, corresponding to the letters F, L, C (simple alphabetic order numbers).

Using the message key (DBK WSE) in the received transmission, the rotor start positions are set to DBK.

Plugboard connections are BG, FS, TH, JE, VK, PI, CU, QA, OD, NM.

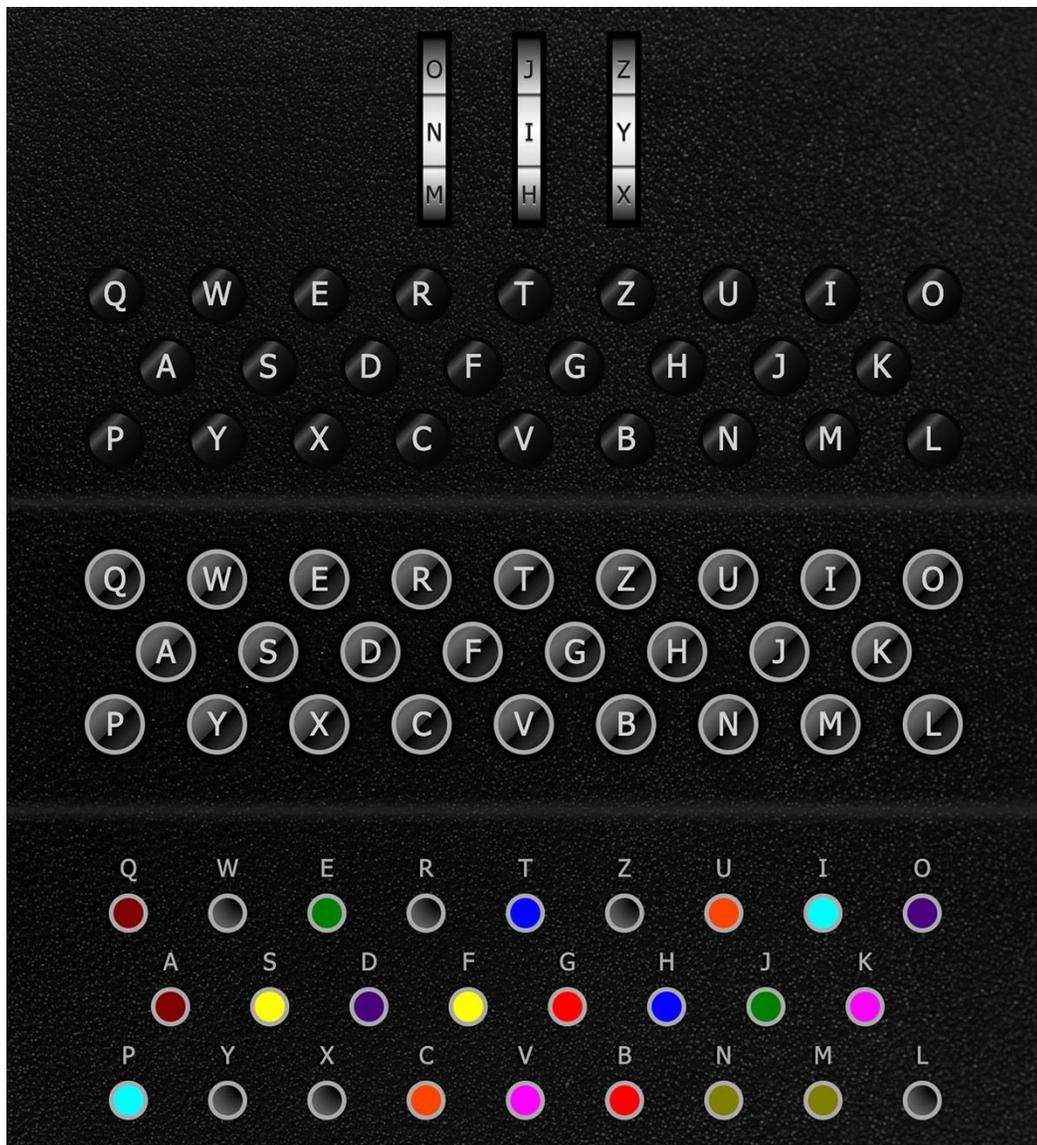
As depicted below, the Enigma is now ready to encrypt the second 3-letter group (WSE) in the message key that was received in the transmission. This will provide the final ring starting positions.

Reflector: <input type="text" value="UKW-B"/>	1 <sup>st</sup> Rotor: <input type="text" value="II"/>	2 <sup>nd</sup> Rotor: <input type="text" value="III"/>	3 <sup>rd</sup> Rotor: <input type="text" value="I"/>
Rotor	<input type="text" value="II"/>	<input type="text" value="III"/>	<input type="text" value="I"/>
Ring Setting	<input type="text" value="F"/>	<input type="text" value="L"/>	<input type="text" value="C"/>
Initial Position	<input type="text" value="D"/>	<input type="text" value="B"/>	<input type="text" value="K"/>



Typing WSE yields the final ring starting positions (NIY), as shown below. The machine is now configured to decode the received transmission, starting with the SECOND 5-letter group of characters, VISFP.

Reflector: UKW-B ▾	1 <sup>st</sup> Rotor: ▾	2 <sup>nd</sup> Rotor: ▾	3 <sup>rd</sup> Rotor: ▾
Rotor	II ▾	III ▾	I ▾
Ring Setting	F ▾	L ▾	C ▾
Initial Position	N ▾	I ▾	Y ▾

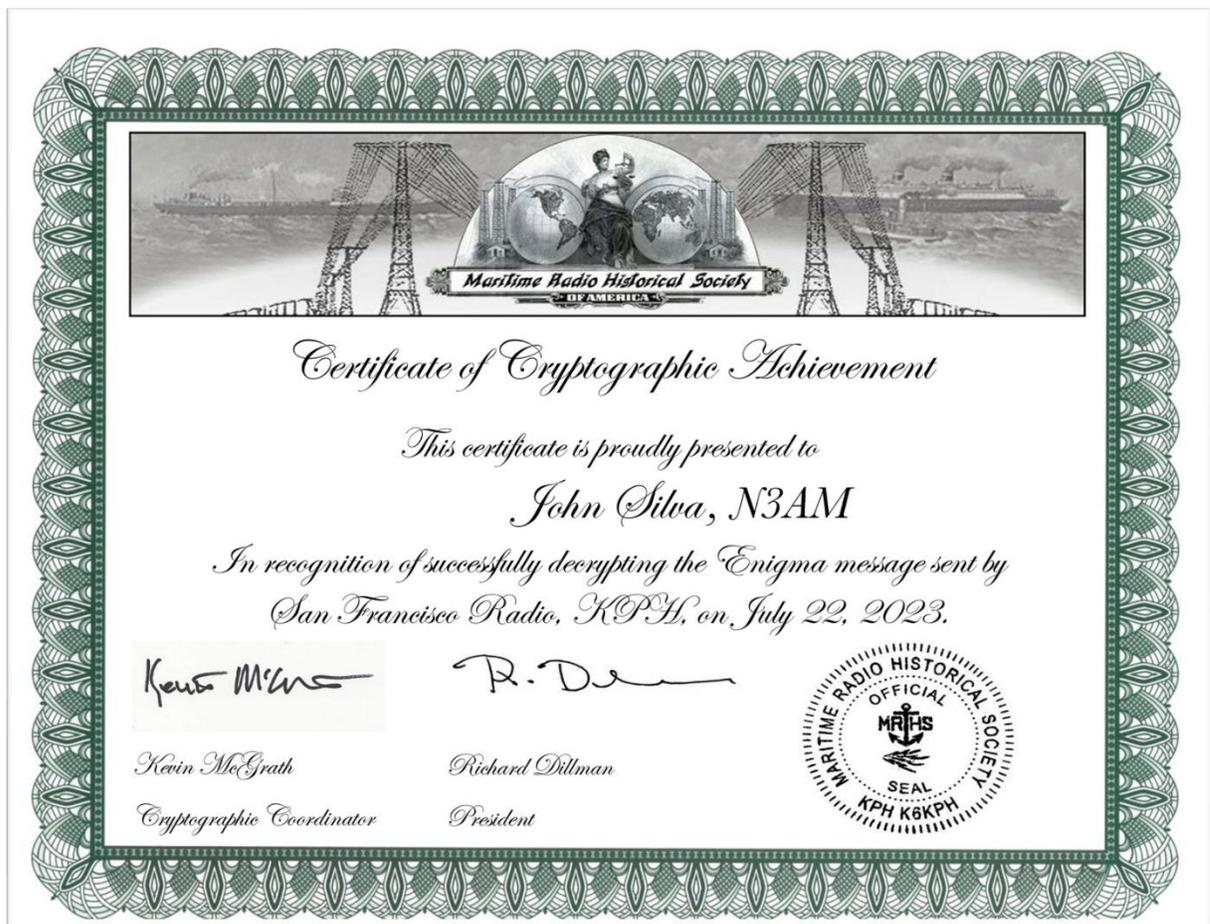


Entering the received Ciphertext on the on-line Enigma keyboard yields the Plaintext noted below.

<u>Ciphertext:</u>	<u>Plaintext:</u>
VISFP CVCBJ SNQDF	FORCE DTOSU BMERG
CVNPL CNFFO EVSLH	EDURI NGATT ACKXD
YOSKU EUWPB QLRGR	EPTHC HARGE SXLAS
XRGDW OFQCQ KZRJT	TENEM YPOSI TIONG
AUOLG DVSGM GJFRR	RIDAJ NINEE IGHTS
OZLRC ANKRI NNTCG	IXTHR EEXIA MFOLL
WVLRC	OWING

“Forced to submerge during attack. Depth charges. Last enemy position grid AJ9863. I am following”

The decryption process was challenging and fun, and the Maritime Historical Radio Society sent me the following certificate as confirmation of a successful decryption.



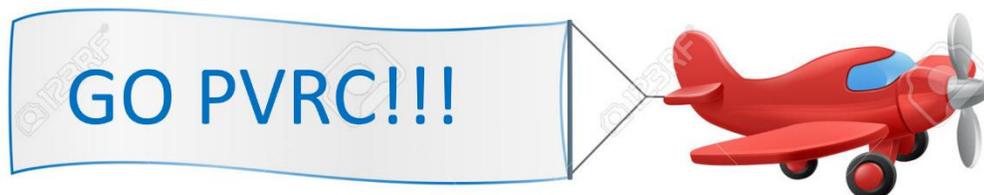
**CQ WW CW 2023 – D4C Video**

D4C setup and operation video [here](#)



**Secrets of Winning – Video Chat with Dan N6MJ and Chris KL9A – W1DED**

Hear how two top contesters are doing it – hour long video interview [here](#)



**“Vanishing History” – from the American Wireless Association Museum**

Nikola Tesla's Wardenclyffe wireless station in 1904

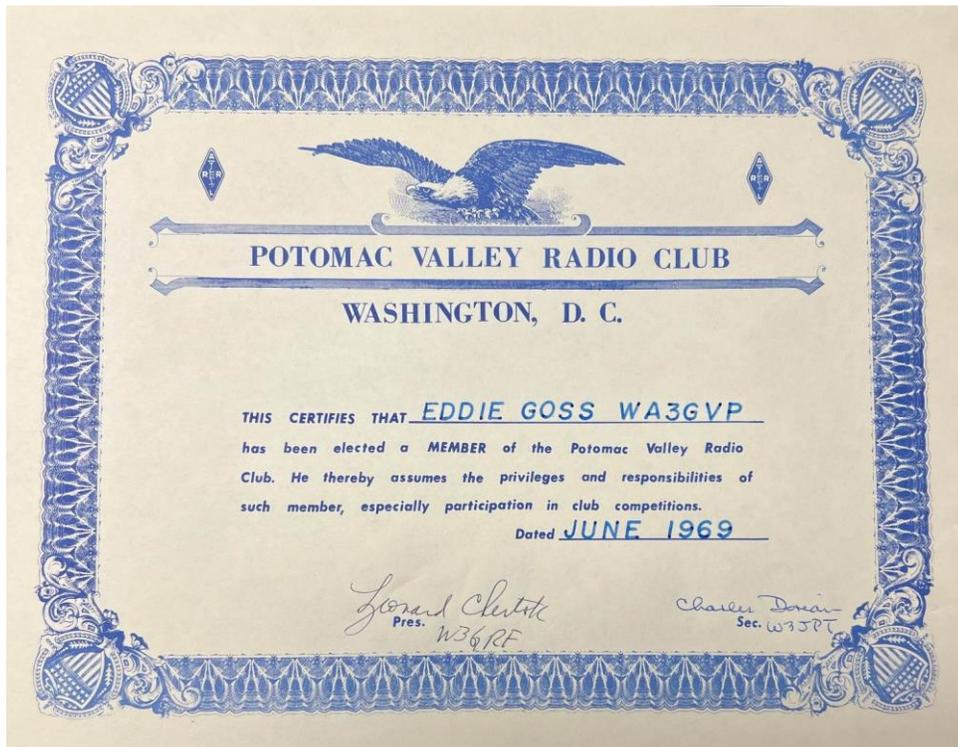
The building that was Nikola Tesla's Wardenclyffe Laboratory, near Shoreham New York on Long Island, was struck by a serious fire on the night of November 21st, a sobering reminder of the impermanence of historical artifacts. Tesla worked at this lab between 1902 and 1906, and it was the site of his most advanced experiments in wireless power transmission and the only remaining historic site associated with Tesla's work. Most recently this site was being redeveloped as the *Tesla Science Center at Wardenclyffe Laboratory*, and the sponsors of that project are hoping to recover from the fire damage.

Tesla was a larger-than-life figure who is often credited with inventing everything from radio to the poly-phase induction motor in addition to our modern alternating current power grid. The idea of an inventor like Tesla, Thomas Edison or Lee DeForest, working alone in the lab is appealing, and our current patent law seems to favor the idea that a lone inventor can dream up brilliant, fully formed ideas on their own, provided that they are properly motivated by the lure of a patent. The problem with this idea is that many of the inventions that we attribute to an individual inventor were invented simultaneously, or nearly so, by two or more teams. Inventors, engineers and scientists always build on the work of others, and as Isaac Newton pointed out “if I have

seen further [than others], it is by standing on the shoulders of giants.”

The myth of the lone genius makes it easy to tell the story of scientific and technological history, but even Tesla acknowledged the complex reality of innovation in this article from the July 1934 edition from Modern Mechanics “The scientific man does not aim at an immediate result. He does not expect that his advanced ideas will be readily taken up. His work is like that of a planter — for the future. His duty is to lay the foundation of those who are to come, and point the way.”

### PVRC Nostalgia – Ed N3CW



I wonder how many have a PVRC member certificate? Here's mine, complete with W3GRF and W3JPT signatures.

**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 20<sup>th</sup> 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](#).

<b>CALL</b>	<b>DXCC</b>	<b>CALL</b>	<b>DXCC</b>	<b>CALL</b>	<b>DXCC</b>
W8LRL	344	N4DB	192	K2BA	120
W4DR	339	K4FJ	192	W4PRO	120
W4ZV	339	K3WC	177	W4HZ	119
W3UR	322	K2PLF	174	AE3T	118
W3LPL	317	K3AJ	174	N3UA	118
K4CIA	306	N3OC	173	W4NF	118
K4ZW	305	W4FQT	172	N3ND	117
N2QT	287	N4PY	170	N4TL	117
W4PK	287	N4XX	169	K0GD	115
K3SX	286	N4QQ	168	K3OSX	114
K4SO	281	K4XD	167	K5RJ	114
KG4W	273	K3KY	166	N3MN	114
K6ND	267	W3IP	159	N4DJ	113
N3NT	257	NR4M	159	KA4RRU	113
K5VRX	256	N8II	153	K1KO	112
W3DF	255	W2RS	152	W3MR	112
WB3AVN	247	N5JB	151	W3UL	112
W3KX	247	N3QE	150	NA1DX	111
WX4G	243	N3RC	150	N3HBX	110
KG7H	242	K3RA	149	N3IQ	110
K1HTV	238	K4RG	149	K1BZ	109
AB3CV	238	K3TN	148	W3NRJ	108
K3SWZ	235	WA2BCK	146	W3XY	108
K4XL	232	N4GG	145	W4ZYT	108
K1AR	231	N3KK	144	W3KB	107
K5EK	231	W3BW	141	N4NW	105
W3LL	229	W4VIC	141	W3TMZ	104
W0VTT	221	W2YE	138	W3EKT	102
WS6X	221	W4YV	138	W4JVN	102
N1LN	220	AA4NC	132	KN4KL	102
W4NL	214	K5VIP	131	WA3EKL	101
W3YY	213	N3KS	129	KE4S	101
N4MM	212	N3MK	129	N3AF	100
K3WA	210	N3RR	129	K3TZV	100
K3JT	207	KM3V	128	KC4D	100
W3GG	200	K3XA	128		
K5RT	200	W0YVA	127		
K1GG	196	W2GG	121		

**Membership News – Tim N3QE**

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](#)**

January 2024	
± ARRL RTTY Roundup	1800Z, Jan 6 to 2400Z, Jan 7
± North American QSO Party, CW	1800Z, Jan 13 to 0559Z, Jan 14
± Hungarian DX Contest	1200Z, Jan 20 to 1159Z, Jan 21
± North American QSO Party, SSB	1800Z, Jan 20 to 0559Z, Jan 21
± ARRL January VHF Contest	1900Z, Jan 20 to 0359Z, Jan 22
± CQ 160-Meter Contest, CW	2200Z, Jan 26 to 2200Z, Jan 28

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

**Editor’s Last Word – John K3TN**

Thanks to AA3S, W3ICM, N3AM, N3CW, K3YDX, N2QT, K8LF and W3LPL for contributions to this issue of the PVRC newsletter.

Happy New Year to all!

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 [jpscator at aol dot com](mailto:jpscator@aol.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.

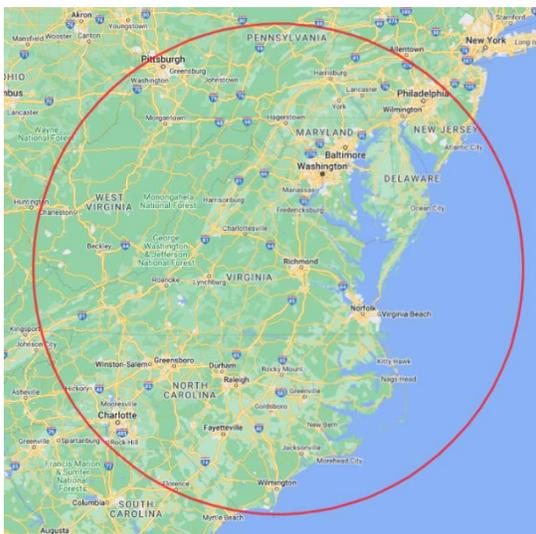
Direct donations to PVRC via Credit Card or PayPal may be made by clicking this "Donate" button and clicking the next Donate button that appears on your screen:



**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](#).



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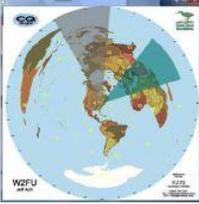



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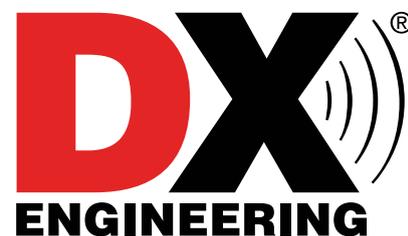
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# ELECRAFT K4

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### A direct-sampling SDR you'll love to use

Our new K4 transceiver harnesses advanced signal processing while retaining the best aspects of the K3S and P3. It features a 7" touch display, plus a rich set of dedicated controls. Per-VFO transmit metering makes split mode foolproof. Band-stacking registers and per-receiver settings are versatile and intuitive. Control usage information is just one tap away thanks to a built-in help system.

### 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

Optimized for ease of use

Modular, upgradeable design

7" color screen with touch and mouse control

ATU with 10:1+ range, 3 antenna jacks

Up to 5 receive antenna sources

Full remote control via Ethernet



The K4 interfaces seamlessly with the KPA500 and KPA1500 amplifiers

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### 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-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



### 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



### 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-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



### 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-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-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-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

**NEW**



### 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



### 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-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

### 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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### FTDX101MP | 200W HF/50MHz Transceiver

- Hybrid SDR Configuration • Unparalleled 70 dB Max. Attenuation VC-Tune • New Generation Scope Display 3DSS • ABI (Active Band Indicator) & MPVD (Multi-Purpose VFO Outer Dial) • PC Remote Control Software to Expand the Operating Range • Includes External Power With Matching Front Speaker



### FTDX10 | HF/50MHz 100 W SDR Transceiver

- Narrow Band and Direct Sampling SDR • Down Conversion, 9MHz IF Roofing Filters Produce Excellent Shape Factor • 5" Full-Color Touch Panel w/3D Spectrum Stream • High Speed Auto Antenna Tuner • Microphone Amplifier w/3-Stage Parametric Equalizer • Remote Operation w/optional LAN Unit (SCU-LAN10)



### FT-991A | HF/VHF/UHF All Mode Transceiver

Real-time Spectrum Scope with Automatic Scope Control • Multi-color waterfall display • State of the art 32-bit Digital Signal Processing System • 3kHz Roofing Filter for enhanced performance • 3.5 Inch Full Color TFT USB Capable • Internal Automatic Antenna Tuner • High Accuracy TCXO



### FTDX101D | HF + 6M Transceiver

- Narrow Band SDR & Direct Sampling SDR • Crystal Roofing Filters Phenomenal Multi-Signal Receiving Characteristics • Unparalleled - 70dB Maximum Attenuation VC-Tune • 15 Separate (HAM 10 + GEN 5) Powerful Band Pass Filters • New Generation Scope Displays 3-Dimensional Spectrum Stream



### FT-710 Aess | HF/50MHz 100W SDR Transceiver

- Unmatched SDR Receiving Performance • Band Pass Filters Dedicated for the Amateur Bands • High Res 4.3-inch TFT Color Touch Display • AESS: Acoustic Enhanced Speaker System with SP-40 For High-Fidelity Audio • Built-in High Speed Auto Antenna Tuner



### FT-891 | HF+50 MHz All Mode Mobile Transceiver

Stable 100 Watt Output • 32-Bit IF DSP • Large Dot Matrix LCD Display with Quick Spectrum Scope • USB Port Allows Connection to a PC with a Single Cable • CAT Control, PTT/RTTY Control



### FTM-300DR | C4FM/FM 144/430MHz Dual Band

- 50W Output Power • Real Dual Band Operation • Full Color TFT Display • Band Scope • Built-in Bluetooth • WIRES-X Portable Digital Node/Fixed Node with HRI-200



### FT-2980R | Heavy-Duty 80W 2M FM Transceiver

- 80 watts of RF power • Large 6 digit backlit LCD display for excellent visibility • 200 memory channels for serious users



### FTM-200DR | C4FM/FM 144/430MHz Dual Band

- 1200/9600bps APRS® Data Communications • 2" High-Res Full-Color TFT Display • High-Speed Band Scope • Advanced C4FM Digital Mode • Voice Recording Function for TX/RX



### 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-6000R | 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



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