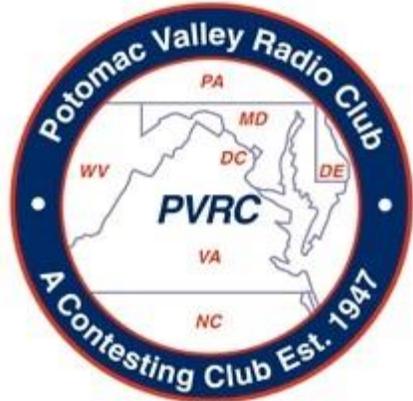


Maximizing Fun and Points in ARRL Sweepstakes

John Pescatore K3TN



Ahh,
Sweepstakes
– it's either
the perfect
contest or
perfectly
awful



<u>Perfect</u>	<u>Perfectly awful</u>
Doesn't require a killer station	Doesn't reward a killer station
Challenging exchange	Annoying exchange
Short – 24 hours operating	Long – Sunday lasts forever
Clean Sweep	Limited Multipliers
Everyone can run	Once per contest rule – see “Sunday lasts forever”

Did You Know...?

The ARRL Sweepstakes has its roots in “The January Contest” announced in December 1929 QST. It was originally structured as a message handling contest for hams in Canada and the US (which at the time included Cuba, the Philippines and “Porto Rico”) and ran for two solid weeks in January. A successful two-way exchange of a minimum ten word message would result in two points for each station. The number of message points would be multiplied by the number of ARRL sections (at the time 68) for the final score. A key rule was “Participating stations will be limited for the purposes of the contest to sending but one test message to each station worked; that is, further messages can be transmitted but will not add to the contest score of either station.” Thus was born the dreaded “work stations once per contest” rule.

While a lot about the contest has stayed the same over the years, much has also changed. Sweepstakes was moved to November in 1932; a separate phone contest was added in 1941; and operating time was limited to 24 hours along the way. However, for the past half-century not much has changed, other than the ARRL section list gradually expanding to its current level of 85.

And of course: PVRC was formed in 1948 to win Sweepstakes!

Save the Date



- **CW:** First full weekend in November (**November 2-4, 2024**).
- **Phone:** Third full weekend in November (**November 16-18, 2024**).
- **Contest Period:** Begins 2100 UTC Saturday and runs through 0259 UTC Monday.

The Basics

- Key Rules
 - 160 – 10m
 - ARRL US and VE Sections are once per contest mults
 - Work a station once per contest
- The Exchange:
 - CQ SS K3TN
 - N4CW
 - N4CW 457U **K3TN** 69 MDC
 - 678B **N4CW** 72 NC
 - TU K3TN



- No Cut Numbers!
- No leading zeroes!
- No cute phonetics!
- As fast as you can copy

What is your goal?

- Break into a top ten box
- Beat my score from last year
- Beat my buddy W4XYZ
- Work New States/Counties/etc.
- Improve contesting skills/station
- Get a new Clean Sweep Coffee Cup
- Beat the other clubs and get points in PVRC 5M
- Have something to say at next chapter meeting

WHY...?
BECAUSE

How Much Time Will You Spend?

Full timer – most points

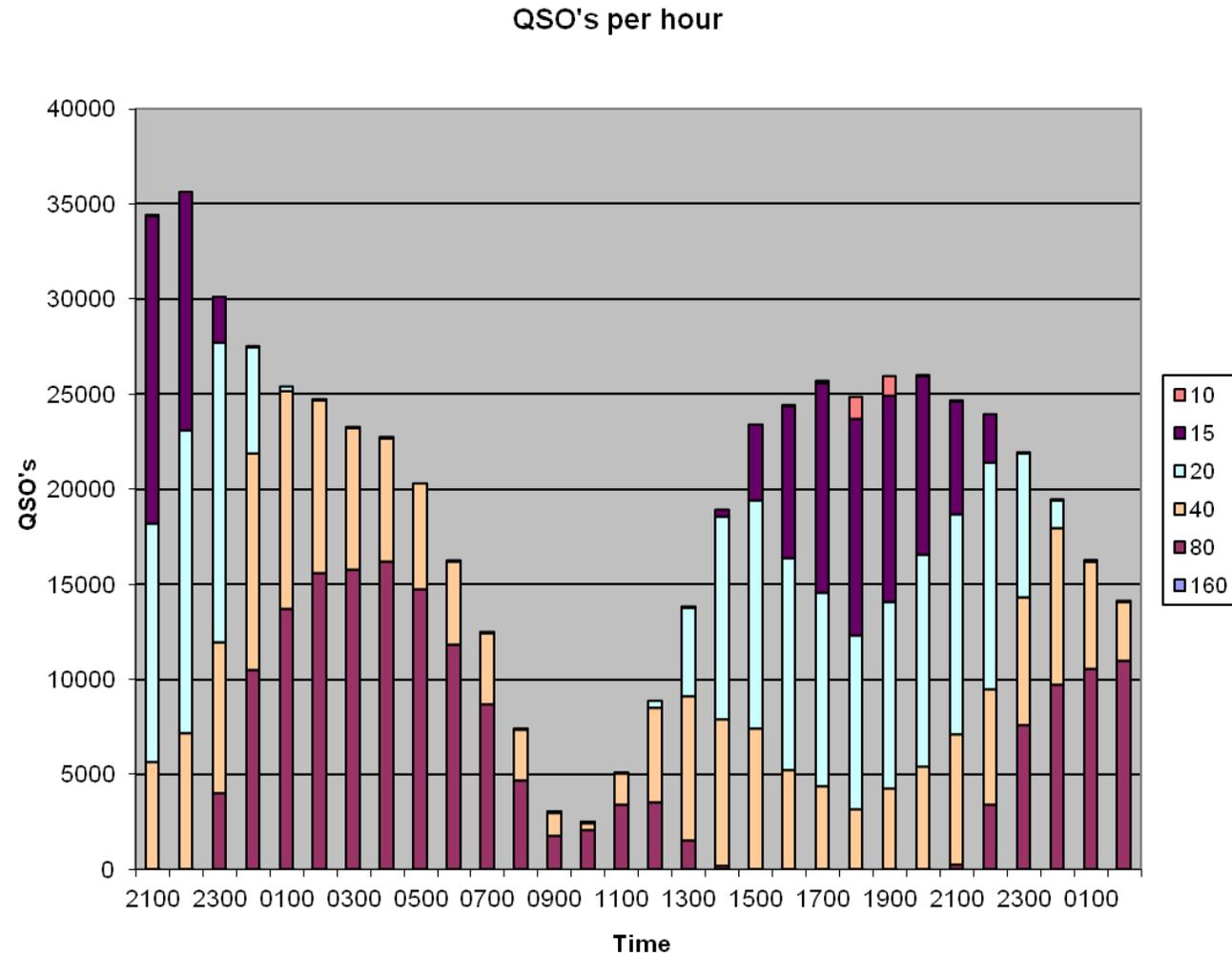
Saturday only – best rates

Sunday only – easy to find run freqs

Scattered short periods – you can only take so much...

Highly motivated operator – all of the above at multiple stations

QSO per Hour Chart



How Many Radios/Antennas Do You Have

- Single Op 1 Radio
- Single Op 1 Radio 2 Receivers
- SO2R – more radios, switches, filters



What Category Will You Enter?

CATEGORY	CATEGORY ABBREVIATION	PRECEDENCE	DESCRIPTION
Single Operator, QRP	SOQRP	Q	One Operator, 5 W output or less, no use of spotting networks.
Single Operator, Low Power	SOLP	A	One operator, 100W output or less, no use of spotting networks.
Single Operator, High Power	SOHP	B	One operator, greater than 100W output, no use of spotting networks.
Single Operator Unlimited, QRP	SOUQRP	U	One Operator, 5 W output or less, use of spotting networks permitted.
Single Operator Unlimited, Low Power	SOULP	U	One operator, up to 100W output, use of spotting networks permitted.
Single Operator Unlimited, High Power	SOUHP	U	One operator, greater than 100W output, use of spotting networks permitted.
Multioperator, Single Transmitter, Low Power	MSLP	M	More than one operator, only one transmitted signal allowed at any given time, up to 100W output, use of Social Media & spotting networks is permitted.
Multioperator, Single Transmitter, High Power	MSHP	M	More than one operator, only one transmitted signal allowed at any given time, greater than 100W output, use of Social Media & spotting networks is permitted.
School Club	S	S	Students and participating alumni in a college, university, technical, secondary or other school club station. More than one operator encouraged and use of Social Media & spotting networks is permitted.

Start Out With a Band Plan

- After you plan out your times...
- For most PVRCers, 40/80/20 are the money bands. 10 and 15 can be rate traps.
- Know your station
- If possible, be there at the start until 0500
- Common approach
 - S&P 10, then 15, FAST
 - S&P 20, find freq and run
 - Go to 40 based on your station
 - Spend last few hours on 80 before bedtime

EVERYONE HAS
A PLAN
UNTIL THEY GET
PUNCHED
IN THE FACE

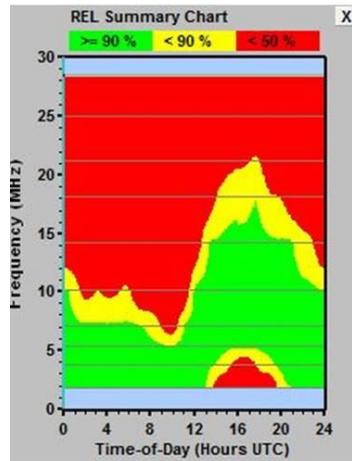
HOW TO DEVELOP YOUR STORY
AND ACHIEVE YOUR DREAMS.



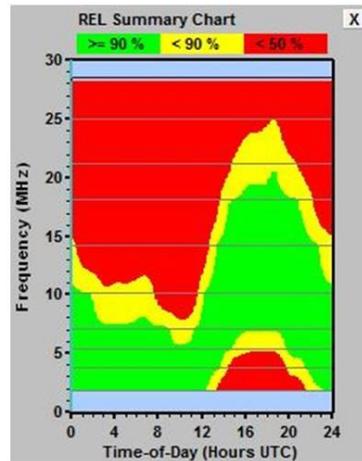
LUCAS MACK

Propagation Charts

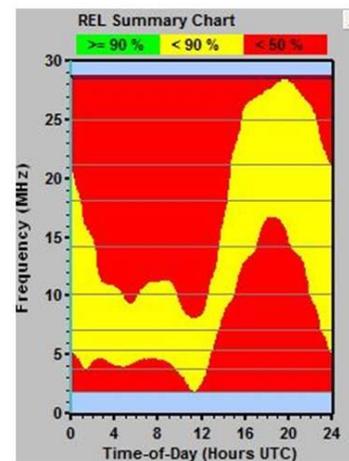
Sweepstakes paths for 100w and a dipole station



DC to Chicago



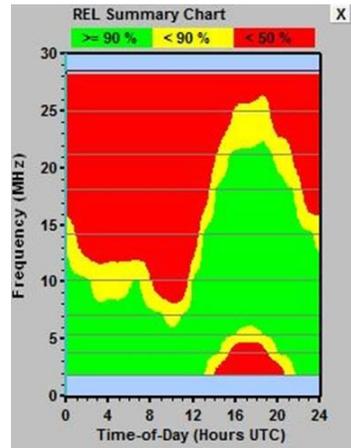
DC to Boston



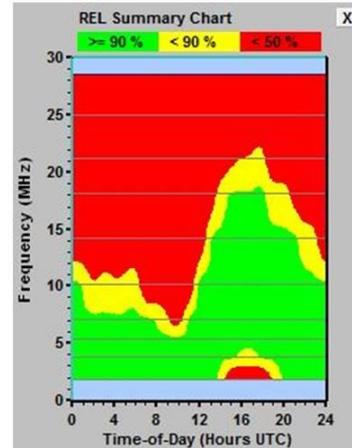
DC to California

Propagation Charts

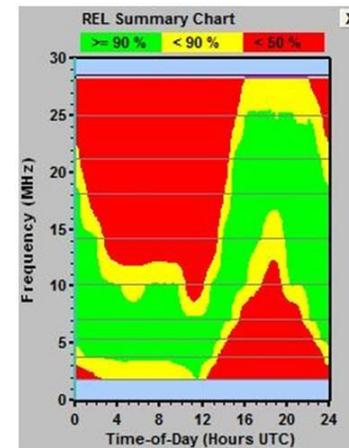
Sweepstakes paths for Kw and tribander station



DC to Chicago



DC to Boston



DC to California

Maximizing Score and Fun

- Maximizing Points per minute usually means most fun
- $\text{QSOs} \times \text{Sections} \times \text{Accuracy} = \text{Score}$
 - $\text{QSOs} = (\text{RunRate} + \text{S\&P Rate}) \times (\text{Butt in Chair Time})$
 - 1 Section is worth about 8 Qs in SS
 - You will work 70% of sections without trying
- Rate is key
- Accuracy counts
 - Not in Log (NIL) can mean penalty plus loss of mult – 10Qs gone!
 - The Dupe Decision
 - History files: if you use them, don't rely on them – copy what you hear

Exchange Efficiently

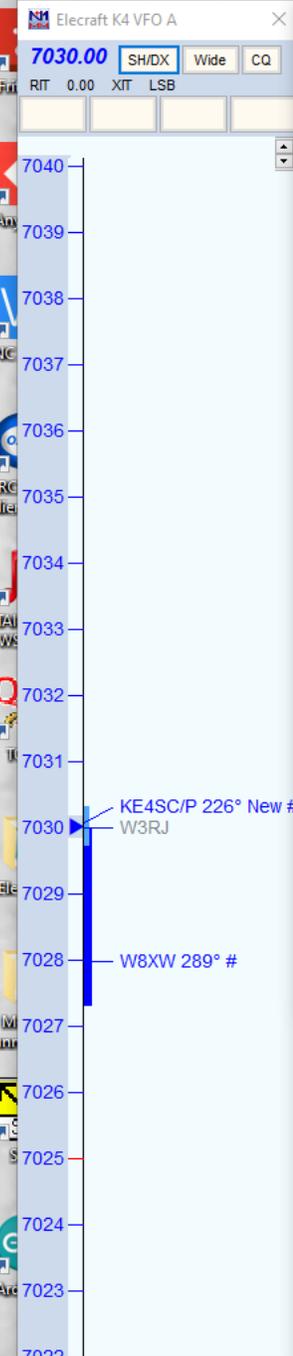
- In general, we are trying to maximize rate
- Send the minimum required:
 - Eschew flabby CW/voice messages
 - Don't repeat anything the other op sent
 - Please, no "Please copy"...
 - NO SS after TU
- If you want to acknowledge a friend "FB TU URCALL" is OK
- On phone, if you must, a real *fast* "GO PVRC!" is OK
- Always send PREC with NR fills
- SSB: Send his call letters, not phonetics
- Section Phonetics vs. word -

Set Up Your Software (N1MM-centric)

- Enter Sends Message (ESM) on for CW!
 - The Big Gun Switch
- Available Mult/Q Window
- Check Partial Window
- Band Map/Spectrum
 - Use those buttons!
- Function Keys
- Online Contest Scoreboard – Crack for BIC



USB Device Router
Recycle Bin
O.R.B.
RCForb Client
Google Chrome
WSJT-X
DXLabLau...
N1MM Logger
Morse Runner
Pileup Practice
PileUpPract...
Audacity



Available - 1 Mults 22 Q...

Mults & Qs

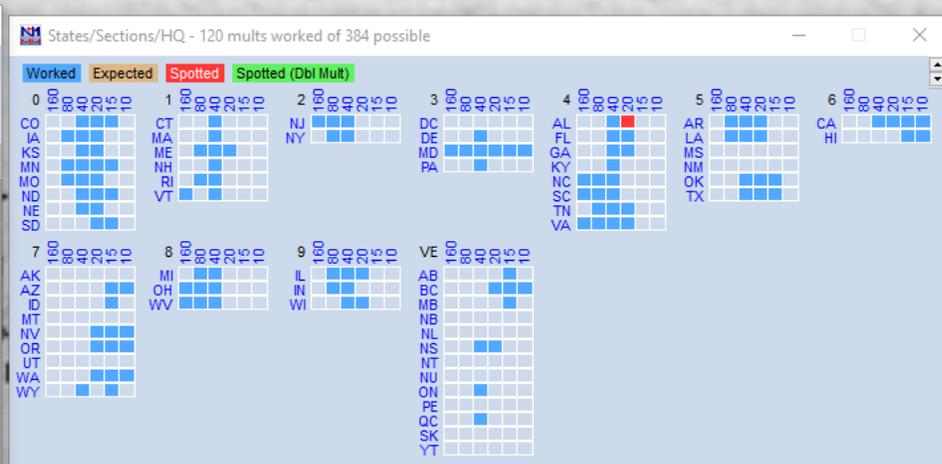
Mults	160	80	40	20	15	10
Qs	0	0	0	1	0	0
Total Qs	0	0	13	6	4	0

Bands & Modes

Call	Freq	S/N	Time	Dir
N4JAW	7057.5	23dB	1253Z	226°
KE4SC/P	7030.1	11dB	1252Z	226°
W8JNM	7055.6	12dB	1251Z	289°
W9ATB	7018.2	29dB	1251Z	287°
VA3JTN	7050.0	34dB	1249Z	339°
W8XW	7028.0	37dB	1248Z	289°
N4ASF	7054.2	25dB	1246Z	226°
KK0I	7051.2	28dB	1246Z	274°
N4QR	7055.5	30dB	1245Z	226°
K2JVB	7058.1	34dB	1243Z	036°
WASPQL	7065.1	17dB	1243Z	250°
K9ALT	7042.9	15dB	1240Z	287°

Check Log/Master/Telnet/Exch/Call history/Rever...

KE4SC	KE4SC
-------	-------



9/19/2024 12:55:09Z North American QSO Parties - SSB - 2022 K3TN.s3db

MM-DD HH:MM	Call	Freq	Name	Sect	M1	M2
08-18 03:18	KR4I	1854.00	RAY	NC	✓	
08-18 03:20	AI0Y	7150.00	JOE	ND		
08-18 03:20	W3RJ	7189.40	RICH	PA		
08-18 03:21	W6AFA	7270.00	ALEX	CA		
08-18 03:22	KG9X	7231.30	FRED	IL		
08-18 03:25	N8II	1848.00	JEFF	WV	✓	
08-18 03:25	K3DNE	1841.30	ED	SC	✓	
08-18 03:26	K3KU	3805.20	ART	MD		
08-18 03:27	WD9CIR	3730.00	STEVE	IL		
08-18 03:28	N7MZW	7234.00	CHUCK	WY	✓	

7030.00 LSB Elecraft K4 VFO A

File Edit View Tools Config Window Help 12:55:09Z

PH KE4SC/P Name State

160
80
40
20
15
10

Run S&P

F1 S&P CQ F2 Exch F3 TNX F4 K3TN F5 His Call F6 Spare
F7 State F8 Spare F9 Spare F10 Spare F11 Spare F12 Wipe

No Heading
Call history UserText appears here when enabled.

Setting up radios & bandmaps 315/120/7 40,005

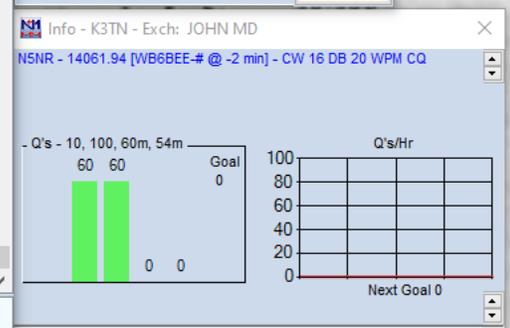
Score - 40,005 Points

Contest: NAQPSB

Band	QSOs	Pts	Sec	Mt2	Pt/G
1.8	9	9	8	0	1.0
3.5	38	38	19	0	1.0
7	141	141	41	1	1.0
14	76	76	26	2	1.0
21	38	38	18	2	1.0
28	13	13	8	2	1.0
Total	315	315	120	7	1.0

Score: 40,005
1 Mult = 2.5 Q's

Rescore



Telnet

NA - dxc.km3t.net:7373 (203 / 96%) Clusters Bands/Modes Filters Spot Comment Ba

DX de K1HTV-#:	7057.6	N4JAW	CW 23 dB 22 WPM CQ	125
DX de W2NAF-#:	7030.0	W3RJ	CW 22 dB 25 WPM CQ	125
DX de W3W-#:	7030.0	W3RJ	CW 10 dB 25 WPM CQ	125

BYE SH/DX Clear PVRC Yes DX PVRC only No DX
ALL SHOW DX TEST US TEST SKIM NO SKIM K3TN

Messages/Function Key Files

- **F1** RUN CQ,<ss> K3TN K3TN <ss>
 - **F2** Exch,#~B * 69 MDC
 - **F3** TU,TU *{CLEARRRIT}
 - **F4** K3TN,*
 - **F5** HIS Call,!
 - **F6** QSO B4,B4 *
 - **F7** NR,# B
 - **F8** ?,? Or QRL, QRL
 - **F9** NR?,NR?
 - **F10** CK?,CK?
 - **F11** Sec?,SEC?
 - **F12** Wipe,{wipe}
 - **F1** S&P CQ,<SS> * * <ss>{CLEARRRIT}
 - **F2** EXCH,#~B * 69 MDC
 - **F3** SEC,MDC
 - **F4** K3TN,*
 - **F5** HIS CALL,!
 - **F6** CK,69
- CQ K3TN or SS K3TN or K3TN K3TN will get you spotted
 - CQ K3TN SS vs. CQ SS K3TN as a short CQ
 - {VARYMSG1 &CQ * *&CQ CQ * *&3&} will send a slightly longer CQ every 3rd time.
 - For SSB:
 - F1, F3, F4 .wav files
 - Voicing all letters hard to do well
 - Hybrid of you and F2 tricky

N1MM Exchange Parser

- In Log Setup for EXCH, do NOT put # - just something like U 69 NC
- Entering received exchange:
 - Enter other stations call then hit RETURN, SPACE or TAB and then:
 - 275B 72 EWA <or> 72 275B EWA <or> EWA 275B 72 - order doesn't matter!
 - No space between # and PREC! (different than Fkey message)
 - You don't need to enter HIS CALL unless it needs correction
 - You can correct anything by typing it again to the right of first try
 - 275B 73 EWA 257B ends up logging 257B 73 EWA
- Please: no cut numbers!

On the Air: Run, Forest, Run!

- Different styles:
 - Get on early, claim a freq, and run from the start
 - Start S&P, get a feel for things, move to Run
 - S&P forever
 - Fresh Meat Sunday Runner
- Finding a Run Frequency
 - The Alt-A strategy
 - Bandmap/spectrum gaps
 - Get spotted!
- Have a QRL Fkey
- Pick an abandonment rate in advance
 - Don't fall in love with the 10 minute rate meter!

Windows of opportunity!

Available - 61 Mults 254 Qs of 325 total spots

Mults & Qs

	160	80	40	20	15	10
Mults	0	27	33	1	0	0
Qs	0	132	118	4	0	0
Total Qs	0	141	133	32	2	0

Bands & Modes

Call ^^	Freq ^	Dir	Mult?	Time	S/N	Mode	Spotter
AA4MC	3512.2 #	180°	No	1208Z	08dB	CW	KC4YVA-#
NOBUI	3514.0 ✕	295°	Yes 1	1217Z		CW	WA8ZBT
WB2KAO	3515.0 ✕	095°	No	1218Z	25dB	CW	WE9V-#
W9XS	3515.1 ✕	252°	Yes 1	1218Z	19dB	CW	N9YKE-#
K19A	3517.3 ✕	252°	Yes 1	1217Z	16dB	CW	KM3T-2-#
WA3EKL	3517.7 ✕	119°	No	1218Z	07dB	CW	KO7SS-#
W7QDM	3518.5 ✕	274°	No	1211Z	08dB	CW	AC0C-#
N4QS	3518.6 ✕	193°	Yes 1	1215Z		CW	WA8ZBT
K3WJV	3519.2 ✕	119°	No	1215Z	34dB	CW	W30A-#
W1NN	3519.5 ✕	156°	Yes 1	1216Z	23dB	CW	K9LC-#
VE5SF	3520.0 ✕	310°	Yes 1	1217Z	24dB	CW	N7TR-#
NR5M	3520.2 ✕	228°	No	1213Z	10dB	CW	NX5M-#
K9IG	3520.8 ✕	252°	No	1217Z	09dB	CW	KC0VKN-#
N0UR	3521.5 ✕	295°	Yes 1	1212Z	32dB	CW	KM3T-1-#
K8BL	3522.0 ✕	156°	Yes 1	1216Z	18dB	CW	VE7CC-#
N4AF	3522.5 ✕	153°	Yes 1	1219Z	29dB	CW	KM3T-2-#
W7UT	3522.9 ✕	283°	Yes 1	1218Z	28dB	CW	W8VWV-#
WA8KAN	3522.9 ✕	147°	Yes 1	1210Z		CW	AF8A
W0ZP	3523.5 ✕	219°	Yes 1	1215Z	19dB	CW	K9IMM-#
N4UA	3523.6 ✕	133°	Yes 1	1219Z	30dB	CW	KM3T-2-#

Info - VE3KI - Exch: 59 001

M10BPB - 14090.07 [VE3KI @ 0 min]
 GI: EU/NORTHERN IRELAND, Zn 14, Hdg 51° LP 232° 3012mi 4847km
 Sunrise:06:29Z Sunset:18:38Z His time: 1412(Sat)

VE3KI
 Off Time ^ (180)
00:02
 5 Min Band Timer
02:56

Q's - 10, 100, 60m, 14m

Q's/Hr

Next Goal 50

- Clear Message Window
- Callframe Spot
- Country Info
- Sunrise/Sunset
- WWW Messages
- Message Window
- Show Goals
- Show QSO Timers

Rates & Goals - All Computers

Rates & Goals - Only Current Band

- Goals Chart - 20min Moving Average
- Goals Chart - 30min Moving Average
- Goals Chart - 60min Moving Average
- Edit, Export Goals...
- Import Goals...

Copy Message Text to Clipboard

Show RBN Spots of this Station

Help

On the Air: S&P

- S&P Fast- don't be an SWL!
- If you using spots, pick the right cluster (W9PA/W3LPL/KM3T) and:
 - Use spotting filter like: SET DX FILTER **NOT SKIMBUSTED** AND SPOTTERSTATE=[NC,TN,SC,VA,FL] AND CTY<>K OR CALL=N4CW
 - Alt-A
 - CTRL Arrow UP/DOWN
 - Don't wait – use VFO B to listen and come back
- If you don't use spots:
 - Can you put up a spectrum window?
 - Can you stand spinning VFO knob counterclockwise?
- Turn on Spot All S&P QSOs, turn on CW spot offset

Are You Ready to Try SO2V?

- Try it out on Sunday if your XCVR has two receivers:
 - Run on VFOA, S&P on VFO B
 - S&P on both VFOs
 - Combat Sunday doldrums
- Good for practice: chase split DX listening to DX and pileup
- Configure N1MM and learn a few new keys:
 - \ - Toggle TX focus between VFOs
 - Pause – Swap VFOs
 - ~ - stereo on/off
 - CTRL Right/Left Arrow - Move TX **and** RX/Keyboard focus to VFO A/B
 - Swap VFO macro in FKey

Manual - VFO A

Click to Reset Radio

Contrast

14210

14209

14208

14207

14206

14205

14204

14203

14202

14201

14200

14199

14198

14197

14196

14195

14194

14193

14192

Center Static

Available - 0 Mults 1 Qs ...

Mults & Qs

Bands & Modes

Mults 160 80 40 20 15 10

Qs 0 0 0 0 0 0

Total Qs 0 0 0 0 1 0

Call	Freq	S/N	Time	Dir
PC8X	21002.4	05dB	1338Z	047°

Check Log/Master/Telnet/Exch/Call history/Rever...

Log	Master	Telnet	Call hist	Exchange
218	50460	9 of 22 calls	15283	

Reverse lookup 15501

States/Sections/HQ - 120 mults worked of 384 possible

Worked Expected Spotted Spotted (Dbl Mult)

0 1 2 3 4 5 6

CO IA KS MN MO ND NE SD

CT MA NH RI VT

NJ NY

DC DE MD PA

AL FL GA KY NC SC TN VA

AR LA MS NM OK TX

CA HI

AK AZ ID MT NV OR UT WA WY

MI OH WV

IL IN WI

VE AB BC MB NB NL NS NT NU ON PE QC SK YT

9/19/2024 13:39:36Z North American QSO Parties - SSB - 2022 K3TN.s3db

MM-DD HH:MM	Call	Freq	Name	Sect	M1	M2
08-18 03:18	KR4I	1854.00	RAY	NC	✓	
08-18 03:20	AI0Y	7150.00	JOE	ND		
08-18 03:20	W3RJ	7189.40	RICH	PA		
08-18 03:21	W6AFA	7270.00	ALEX	CA		
08-18 03:22	KG9X	7231.30	FRED	IL		
08-18 03:25	N8II	1848.00	JEFF	WV	✓	
08-18 03:25	K3DNE	1841.30	ED	SC	✓	
08-18 03:26	K3KU	3805.20	ART	MD		
08-18 03:27	WD9CIR	3730.00	STEVE	IL		
08-18 03:28	N7MZW	7234.00	CHUCK	WY	✓	

14200.00 USB Manual - VFO A

13:39:36Z

File Edit View Tools Config Window Help

PH Name State

160

80

40

20

15

10

Run S&P

F1 S&P CQ F2 Exch F3 TNX F4 K3TN F5 His Call F6 Spare

F7 State F8 Spare F9 Spare F10 Spare F11 Spare F12 Wipe

Heading appears here when enabled.

Call history UserText appears here when enabled.

315/120/7 40,005

Manual - VFO B

Click to Reset Radio

26:400

Score - 40,005 Points

Contest: NAQPSSB

Band	QSOs	Pts	Sec	Mt2	Pt/G
1.8	9	9	8	0	1.0
3.5	38	38	19	0	1.0
7	141	141	41	1	1.0
14	76	76	26	2	1.0
21	38	38	18	2	1.0
28	13	13	8	2	1.0
Total	315	315	120	7	1.0

Score: 40,005

1 Mult = 2.5 Q's

Info - K3TN - Exch: JOHN MD

Q's - 10, 100, 60m, 39m

60 60

Goal 0

Q's/Hr

100

80

60

40

20

0

Next Goal 0

315/120/7 40,005

Contact Mode (<>) Contest mode (SSB)

File Edit View Tools Config Window Help

PH Name State

160

80

40

20

15

10

Run S&P

F1 S&P CQ F2 Exch F3 TNX F4 K3TN F5 His Call F6 Spare

F7 State F8 Spare F9 Spare F10 Spare F11 Spare F12 Wipe

Esc: Stop Wipe Log It Edit Mark Store Spot It QRZ

Heading appears here when enabled.

Call history UserText appears here when enabled.

315/120/7 40,005

How Motivated Are You?

- HMO – operate multiple stations using multiple call signs
 - You are fresh meat multiple times
 - Everyone is fresh meat multiple times
 - Can increase Rate and BIC overall
- Partially Motivated – host or join a multi-op effort
 - Teamwork can be dreamwork
 - Invite/train future contesters
 - Usually results in fewer points than all single op efforts
- Totally unmotivated – 85 sections in 85 QSOS earns a coffee cup..,

When the Final Bell Rings

- At 0400z Sunday, logs should be frozen
 - Check log screen for possible errors **during** contest
- Create Cabrillo file and upload to ARRL - include PVRC as club
- Post to 3830 if you like – include PVRC as club
- Post on the PVRC reflector
- Write down lessons learned, what to do differently next year.
- Get ready for the next one – GO PVRC!

More Resources

- K3MM/WX3B - https://www.pvrc.org/Files/2017_pvrc_sweepstakes.pdf
- K3TN - <https://www.pvrc.org/Files/ARRL%20Sweepstakes.pdf>
- ARRL - <https://www.arrl.org/sweepstakes>
- SS CW Records - <https://contests.arrl.org/records.php?cn=sscw>
- SS SSB Records - <https://contests.arrl.org/records.php?cn=ssph>

Swarm, PVRC, Swarm!

Affiliated Club Competition		
Club	Score	Entries
Unlimited		
Potomac Valley Radio Club	11,934,598	191
Society of Midwest Contesters	7,184,322	114
Minnesota Wireless Assn.	5,257,720	106
Yankee Clipper Contest Club	5,242,304	84
Frankford Radio Club	4,573,072	92
Florida Contest Group	3,261,300	53

PVRC Average Score - 62,491
SMC Average Score - 63.013
YCCC Average Score - 62,405
FRC Average Score - 49,700

