

# Improving Your Contest Scores

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# AA3B Biography



- Licensed since 1970
- USA Calls Held: WN3OVZ, WA3OVZ, AA3B
- DX Calls Held: VP2EEB, VP5BB, V26K
- Trustee for K3CWO
- Past EPA Section CW Traffic Net Manager
- Past President, Penn Wireless Association
- Current Treasurer, Frankford Radio Club
- Current Treasurer / Secretary, Pa QSO Party Association
- CQ WPX Contest Director





# AA3B Home Station



## Single Op 2 Radio (SO2R)

# AA3B Antenna Farm





# V26K – Antigua & Barbuda



**CQ WW CW - #1 World, Single  
Op Low Power, All Band:**

- |         |         |         |
|---------|---------|---------|
| • 1998* | • 2010  | • 2018  |
| • 2000  | • 2011  | • 2019* |
| • 2002  | • 2013* |         |
| • 2005  | • 2014* |         |
| • 2006  | • 2015  |         |
| • 2007  | • 2016  |         |
| • 2009  | • 2017  |         |

**\* World Record**

# Contest Score Improvement Process Overview

**BE ACTIVE!**

## Plan

Rules Deep Dive

Collect Competitor Intel

Study Propagation Predictions

Craft an Operating Plan

Establish Goals

Ensure Readiness

## Perform

Apply Operating Best Practices

Track Hourly Performance

Monitor Online Scoreboards

## Scrutinize

Submit Your Results

Critically Analyze Your Performance

# **BE ACTIVE!**

**The benefits of regular contest participation include:**

- **Your recognition of active contest calls**
- **Recognition of your call by others**
- **Increased operating proficiency**
- **Awareness of competitor operating techniques**
- **Improved propagation awareness**
- **Confidence in station functionality**
- **Knowledge of competitive strengths and weaknesses**

**Every Contest is an Opportunity to Learn**

# PLAN





# Rules Deep Dive Review

Parameter	Typical Options
QSO points	Band, Geography, Distance, Mode, Power Level
Multipliers	Country, Zone (CQ or IARU) Prefix, State, Section, County, Grid, Age, Year of first license
Operating Times	48, 36, 30, 24, 12, 10, 6, 4, 1, 0.5 Hours
Off Times	18, 12, 6, Hours with length and quantity restrictions
Bonuses	Special Stations, Contest Sponsor or Country
Penalties	Busted Calls, Busted Exchanges
Categories	Multi-Distributed, Multi-Multi, Multi-Two, Multi-Single, Single Op (High Power/Low Power/QRP, All Band/Single Band, Assisted/Unassisted)
Overlays	Youth, Rookie, Classic, Tri-bander/Wires
Log Submittal	5 or 7 days. Cabrillo 3.0 file, uploaded to the Sponsor's websites

# Collect Competitor Intel

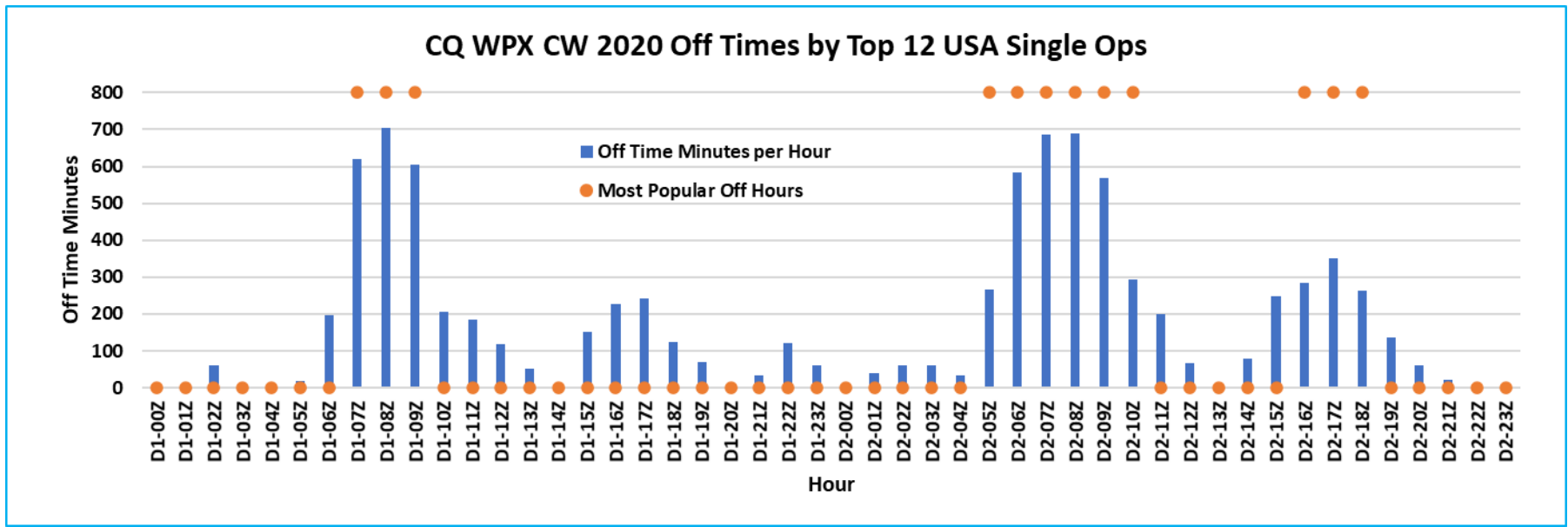
- Inspect public logs to identify band selections and off times
- Skim 3830scores.com comments for nuggets and hints
- Review results from prior year and 11 years ago

Call	Score	Rate	QPTs	Total		160m		80m		40m		20m		15m		10m	
				Q	M	Q	M	Q	M	Q	M	Q	M	Q	M	Q	M
AA3B	3,060,344	130	3.32	3110	296	41	15	424	54	910	66	1125	80	514	51	96	30
W1KM	2,631,980	112	3.76	2691	260	68	22	268	42	652	55	1139	69	442	45	122	27
VE3JM	2,428,790	121	3.77	2913	221	71	11	411	40	593	41	1223	60	536	41	79	28
K8AZ	2,306,739	93	3.42	2227	303	26	10	244	49	720	73	839	88	322	53	76	30
K1KI	2,214,576	101	3.63	2421	252	34	20	160	34	792	59	983	66	207	42	245	31

- Watch social media for competitor plans and strategies

# Competitive Intel Example – WPX CW Off Times

- Public logs for the top 12 USA Single Ops were inspected and off times tabulated in Microsoft Excel
- The 12 most popular off time hours were:**
  - Day 1: 07Z, 08Z and 09Z
  - Day 2: 05Z, 06Z, 07Z, 08Z, 09Z, 10Z, 16Z, 17Z, 18Z



**Notes:**

- Ops – Operators
- Z – Greenwich Mean Time

# Study Propagation Predictions

The objective is to understand the timing and durations of band openings, as well as the potential for geomagnetic disturbances

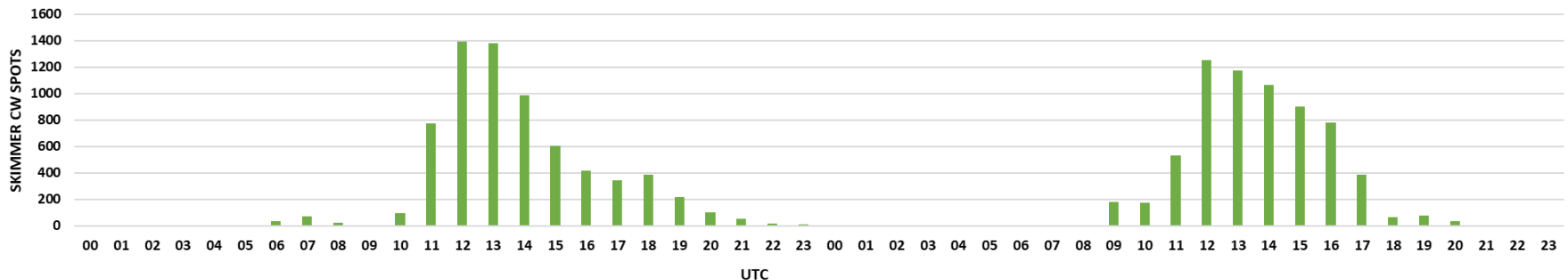
Propagation Prediction and Forecast Sources
Voice of America Coverage Analysis Program (VOACAP)
ARRL Propagation Bulletins
National Oceanic and Atmospheric Administration (NOAA) Space Weather Prediction Center (SWPC) Products: <ul style="list-style-type: none"><li>• Geophysical Alert – WWV Text</li><li>• Notifications Timeline</li></ul>
PSK Reporter
Reverse Beacon Network (RBN) Raw Data



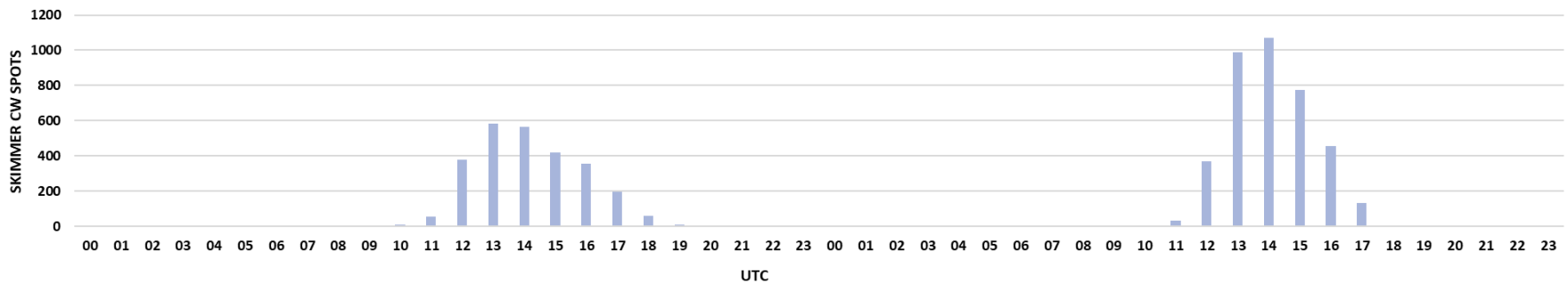
# Propagation Prediction Example using RBN Raw Data

- **Goal:** Predict openings on 20M and 15M for the 2022 ARRL DX CW contest
- **Approach:** Reverse Beacon Network raw data from one week prior to the contest was analyzed using Microsoft Excel

20M - EU CW Spots by Local Skimmers



15M - EU CW Spots by Local Skimmers



# Craft an Operating Plan

- Identify the most productive bands (predicted) by hour
- Flag multiplier rich openings
- Capture off times selections, sunrise, and sunset

GMT	Focus on:	Notes	OFF	Listen for - Short Path:
00	40 EU, 20 SA	15 OC		40 SA, 20 SA, 40 AF, 20 AF, 15 OC, 40 AS, 20 AS
01	40 EU			40 SA, 40 AF, 40 AS
02	80 EU, 40 EU			80 SA, 40 SA, 40 AF
03	80 EU, 40 EU			80 SA, 40 SA, 40 AF
04	80 EU, 40 EU			80 SA, 40 SA, 20 SA, 40 AF
05	40 EU			80 SA, 40 SA, 20 SA
06	40 EU		60	80 SA, 40 SA
07	40		60	40 SA, 40 OC
08	40	40 JA	60	40 OC, 40 JA
09	40	40 JA	60	40 OC, 40 JA
10	20 SA, 40	Sunrise 10:54	60	20 SA
11	20 EU			20 SA, 20 AS
12	20 EU	20 OC		15 CARIB, 20 OC, 20 AS, 15 AS
13	20 JA, 15/10 S	20 OC		15 SA, 10 SA, 20 OC, 20 JA, 20 AS, 15 AS
14	20 JA, 15 SA			15 SA, 20 JA, 20 AS, 15 AS
15	15 EU	10 CARIB		10 CARIB, 15 SA, 15 AF, 20 AS, 15 AS
16	20 EU, 10 S			10 CARIB, 15 SA, 10 SA, 15 AF, 10 AF, 15 AS
17	20 EU, 15 S	15 OC		15 CARIB, 10 CARIB, 15 SA, 15 AF, 10 AF, 15 OC
18	20 EU, 15/10 S	15 OC		15 CARIB, 10 CARIB, 15 SA, 10 SA, 15 AF, 10 AF, 15 OC, 20 AS
19	20 EU, 10/15 S	15 OC		15 CARIB, 10 CARIB, 15 SA, 10 SA, 20 AF, 15 AF, 15 OC, 20 AS
20	20 EU, 10/15 S	20 JA		15 CARIB, 20 SA, 15 SA, 10 SA, 20 AF, 15 AF, 15 OC, 20 JA, 20 AS
21	15 JA, 20/10 S	15 OC		15 CARIB, 20 SA, 15 SA, 10 SA, 20 AF, 15 AF, 15 OC, 15 JA, 20 AS
22	15 JA, 20 SA	15 OC		15 CARIB, 20 SA, 15 SA, 20 AF, 15 AF, 15 OC, 15 JA, 40 AS, 20 AS
23	40 EU, 15 JA	Sunset 23:22		15 CARIB, 40 SA, 20 SA, 40 AF, 20 AF, 15 OC, 15 JA, 40 AS, 20 AS, 15 AS

# Establish Goals

The goals should:

- ☐ Consider past performance of yourself and peers
- ☐ Account for station improvements and anticipated propagation
- ☐ Be consistent with Operating Plan band time allocations
- ☐ Establish a final score that is challenging to achieve

Band	QSOs	Mults
160	150	60
80	600	80
40	1,000	100
20	1,400	110
15	1,100	100
10	250	70
Total	4,500	520
Score	7M	

# Ensure Readiness

- ✓ **Test all antennas, radios, amplifiers, peripherals, etc.**
- ✓ **Fix all intermittencies**
- ✓ **Verify logging software functionality and interfaces**
- ✓ **Critically assess transmit audio and/or CW waveform**
- ✓ **Setup and debug Function Key Macros and WAV files**
- ✓ **Demonstrate DX Cluster Filters provide expected results**
- ✓ **Configure a backup DX Cluster Node**
- ✓ **Resolve any ergonomic concerns**
- ✓ **Disable “controllable” RFI sources, typically wall-warts**
- ✓ **Turn off software updates**

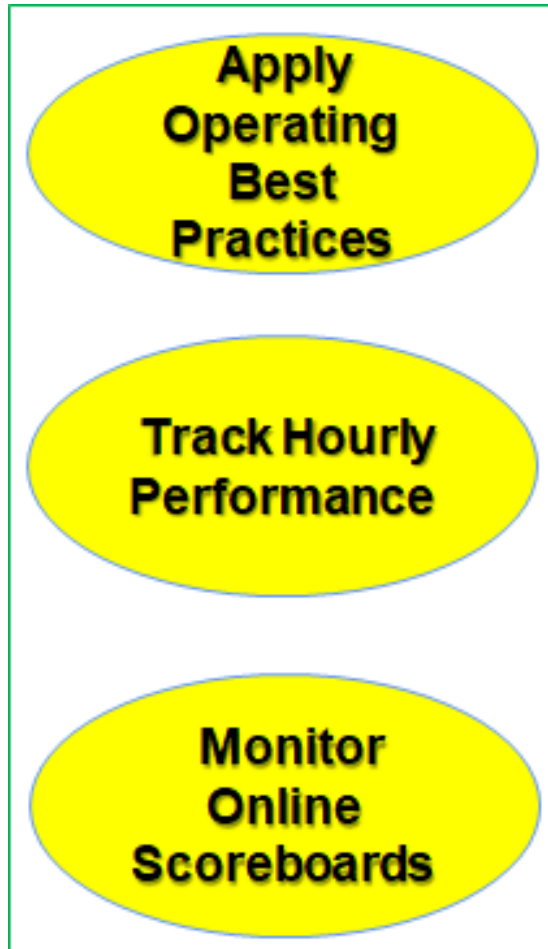


# Ensure Readiness

**Additional readiness questions to ponder....**

- ❖ Am I proficient with the contest software?**
- ❖ Are there any new station capabilities that I need to experiment with prior to the contest?**
- ❖ Will I be able to operate the contest with minimum distractions due to family or work?**
- ❖ Can I rest adequately prior to the start of the contest?**
- ❖ What food and supplies do I need to have handy?**
- ❖ Will local weather impact my operation?**

# PERFORM



# Apply Operating Best Practices

- Select the highest band that is productive
- Strive for the maximum QSO **POINT** rate – this may be different than the maximum QSO quantity rate
- Keep exchanges short – efficiency is paramount
- Multipliers are essential, but be thoughtful about excessive time spent in pileups
- Verify the call/exchange – accuracy is a competitive advantage
- On CW, try sending a little bit off frequency when multiple stations are calling
- On phone, use commonly known phonetics

# Track Your Hourly Performance

Track your performance against historic hourly metrics

	2022			2015				Delta		
Hr	QSO	Mult	Score	QSO	Mult	Score	Rate	QSO	Mult	Score
00	166	53	26394	140	68	28560	140	26	-15	-2166
01	296	100	88800	266	131	104538	126	30	-31	-15738
02	406	127	154686	385	157	181335	119	21	-30	-26649
03	507	145	220545	492	190	280440	107	15	-45	-59895
04	627	163	306603	604	213	385956	112	23	-50	-79353
05	743	178	396762	718	232	499728	114	25	-54	-102966
06	850	188	479400	816	241	589968	98	34	-53	-110568
07	945	196	555660	914	266	729372	98	31	-70	-173712
08				975	272	795600	61	0	0	
09				975	272	795600	0	0	0	
10				975	272	795600	0	0	0	
11				1152	290	1002240	177	0	0	
12				1319	340	1345380	167	0	0	



# Track Your Hourly Performance

Consulting hourly breakdowns from previous contests can guide operating decisions

Hour	160M	80M	40M	20M	15M	10M	Total	Cumm	OffTime
D1 00Z		80/23	63/45				143/68	143/68	
D1 01Z		56/5	93/10				149/15	292/83	
D1 02Z	2/2	57/4	57/10				116/16	408/99	
D1 03Z	77/30	44/6					121/36	529/135	
D1 04Z	53/8	41/1	13/2				107/11	636/146	
D1 05Z	20/2	78/11	11/1				109/14	745/160	
D1 06Z	9/4	54/1	34/6				97/11	842/171	
D1 07Z	3/2	21/4	26/2				50/8	892/179	
D1 08Z	2/1	6/2	64/2	4/3			76/8	968/187	
D1 09Z			18/0	9/5			27/5	995/192	46
D1 10Z							0/0	995/192	60
D1 11Z			1/1	93/36	1/1		95/38	1090/230	31
D1 12Z				177/3	9/8		186/11	1276/241	
D1 13Z				140/0	32/13		172/13	1448/254	
D1 14Z				142/1	17/6		159/7	1607/261	
D1 15Z				113/4	17/7		130/11	1737/272	
D1 16Z				119/3	22/5	5/5	146/13	1883/285	
D1 17Z				109/2	39/8	2/2	150/12	2033/297	
D1 18Z				75/1	27/9	15/11	117/21	2150/318	
D1 19Z				53/5	14/2	20/5	87/12	2237/330	
D1 20Z			66/2	39/5	5/1	2/1	112/9	2349/339	
D1 21Z			80/1	24/9	14/2		118/12	2467/351	
D1 22Z		8/0	45/0	25/3	2/0	1/0	81/3	2548/354	
D1 23Z		36/2	17/2	5/5			58/9	2606/363	

# Monitor Online Scoreboards

- Log onto online scoreboards for motivation and tracking competitor progress
- Many participants provide band breakdowns in their scoreboard postings which is valuable insight on their progress
  - This insight can also inform your decisions on band selections

Contest Online ScoreBoard

11 Apr 2022 20:53 UTC

CWops Mini-CWT 1 (13 Apr 13z - 13 Apr 14z)

SFI:101 Kp:2

Coming: CWops Mini-CWT 1

Go

Highest rate: 97 q/10m by I2IFT

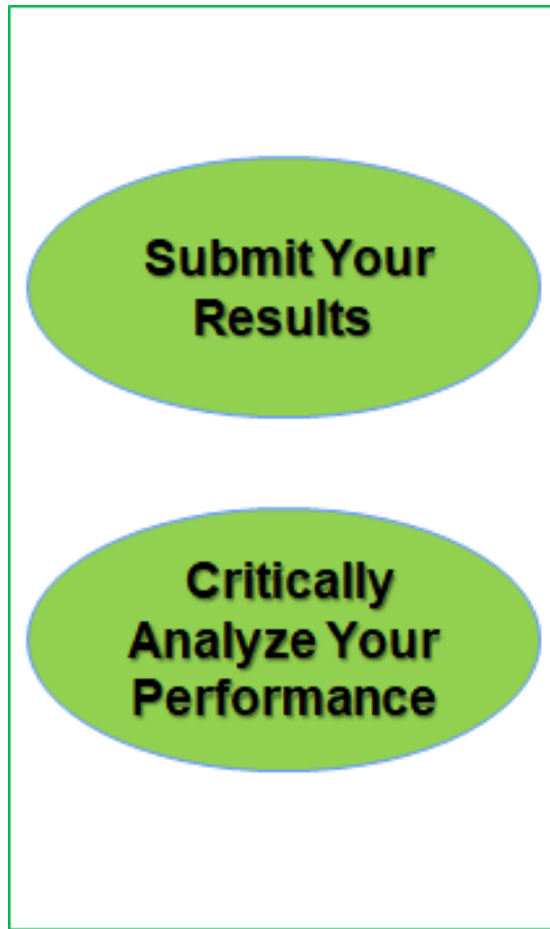
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2022

Radio

Home	Login	Filter	View	Clear Filter	No bands	Clubs	Teams	Manual post	Archive	Supported contests	Help with logger set up	Blog	
SO-ALL HP CW		Score	QSO	160	80	40	20	15	10	Unique Calls	Last	Log	
1	AA3B	59,624	257		28/27	140/127	65/55	24/23		232		Frankford Radio Club	N+
2	K7RL	50,244	237				132/114	105/98		212		Deep Dixie Contest Club	N+
3	N4YDU	45,954	222		23/23	107/100	75/70	17/14		207		Potomac Valley Radio Club	DX
4	N3RD	42,924	219				147/133	72/63		196	00:00	Frankford Radio Club	N+
5	W8FJ	40,596	204			176/176	14/11	14/12		199		Frankford Radio Club	N+
6	N3QE	29,584	172			172/172				172		Potomac Valley Radio Club	N+
7	KG9X	28,224	168			168/168				168		Society of Midwest Contesters	N+
8	N5RZ	27,209	169				97/92	72/69		161		Central Texas DX and Contest Club	N+
9	N7US	25,840	170		33/15	137/137				152		Society of Midwest Contesters	N+
10	K3WJV	20,655	153		54/36	99/99				135		Frankford Radio Club	N+
11	VE5MX	18,340	140			66/64	74/67			131		Saskatchewan Contest Club	N+
12	N4ZR	17,816	136			99/99	37/32			131		Potomac Valley Radio Club	N+
13	K2SX	17,290	133			106/106	19/16	8/8		130		South East Contest Club	N+
14	W5TM	12,544	112			97/97	15/15			112		Deep Dixie Contest Club	N+
15	I2WIJ	9,300	100				55/49	45/44		93		Italian Contest Club	DX
16	K1SM	8,036	98							82		None	N+
17	OZ3SM	7,614	94			23/16	59/53	12/12		81		Chiltern DX Club	N+
18	WA3AER	7,007	91							77		Potomac Valley Radio Club	N+
19	I2IFT	6,952	88				75/75	13/4		79		Italian Contest Club	N+
20	KV0I	6,885	85			72/72	13/9			81		Heartland DX Association	N+

# SCRUTINIZE



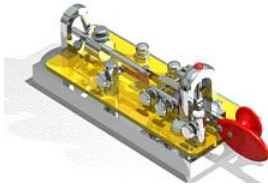
# Submit Your Results

- **Generate your log as a Cabrillo 3.0 file**
- **Inspect the information in the Cabrillo 3.0 file header**
- **Submit your log as soon as possible**
- **Verify that the log has been received**
- **Optional but worthwhile: share your results on social media platforms and [3830scores.com](https://3830scores.com)**



# Critically Analyze Your Performance

- **Capture QSO and multiplier counts by hour**
- **Document what went well and improvement opportunities**
- **Did you make the right band and off time selections?**
- **How did the competitors do?**
- **Was there any unexpected propagation?**
- **What were your best and worst hours?**
- **Are there any faults or intermittent conditions to fix?**
- **Review 3830scores.com comments**
- **Study log checking reports**



# Questions?

