

# 2024 ARRL 160-Meter Contest Full Results

By Mark Beckwith N5OT (n5ot@arrl.net)

"Always nice to commune with the mysterious voices from the ether."
-WD6T

Whether you focused on getting in the Top Ten, just getting on the air, or anything in-between, the 2024 ARRL 160-Meter Contest had some good stuff to offer this past December.

"Bring on the low bands!" – VE3EJ

Indeed, compared to the 2023 contest, 160 meters was quiet, and conditions were good. Still, entries were down a little. This is to be expected when the high bands are so good. Unlike last year when the West Coast was nearly shut out, stations out west made it into more logs in 2024.

"Conditions were much better than expected." – K7QA

"Good conditions to Europe and the West Coast." – K5ZD

"The West Coast was coming in well." – K3ZM

Since this contest mostly takes place at night, it's easy to think you can get normal stuff done during the day since you don't have to be on the radio. 160-meter regular Dan, N1ZZ, found out how hard it is to try and fit a 160 contest weekend into normal life. He tried to operate during the night but also go to the Silver Springs Hamfest during the day in Florida. Sleep finally caught up with him! "I only operated for 4 hours on Friday because I needed to leave at 4 AM to be a vendor at the Hamfest. After we got back at 8 PM, I operated another four hours but needed sleep after midnight."

There are DX contests and there are domestic contests, but this one falls a little bit in-between. Largely a rate-fest for stations in the US and Canada, every DXCC country outside that area counts as a multiplier, so QSOs with stations all over the globe are coveted by stations in the US and Canada.

It's not a level playing field, so the stations outside the US and Canada have their own competition with separate categories and listings (see later in these extended results).



Julio, HI3A/AD4Z, used his remote station in the Dominican Republic and made over 100 QSOs with 90W and a linear-loaded Inverted-L. [Photo courtesy AD4Z]

## **Records**

Even during the sunspot peak, 160-meter records continue to fall. There were 5 new Division records:

Division	Station	Category
Midwest	КЗРА	SOULP
Midwest	NONI	MSLP
New England	K1ZM	SOQRP
Roanoke	WA4PGM	SOUQRP
Southwest	WQ6X	SOUQRP

Additionally, 21 section records were beaten, 2 in unassisted single-operator categories, 15 single-operator unlimited, and 4 multioperator.

Section	Station	Category
AL	KT4XA	MSLP
AR	K5UZ	SOULP
CT	K1KI	SOUHP
EMA	K1ZM	SOQRP
GA	AA5JF	SOUQRP
IA	NØNI	MSLP
KS	КЗРА	SOULP
MB	VE4DX	SOLP
ME	N1CGP	SOULP
ME	K1LZ	MSHP
NB	VE9DXC	SOLP
NB	VE9ML	SOULP
NE	ABØS	SOUHP
NNY	WB9G	SOULP
NS	VA1RST	SOUHP
ONE	VE3VN	SOUHP
ORG	WQ6X	SOUQRP
PR	KP4AA	SOUHP
SK	VE5ZX	SOULP
VA	WA4PGM	SOUQRP
VA	W4TG	MSLP

#### W/VE Results

# **Single Operator**

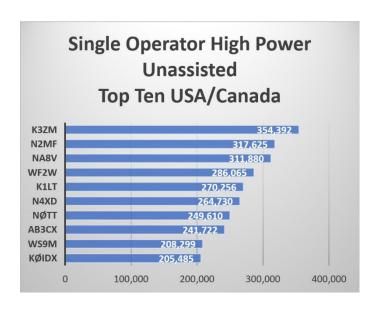
# **High Power**

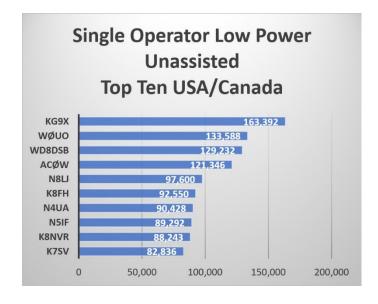
Peter, K3ZM, once again receives accolades in the unassisted Single Operator High Power class in the USA, sweeping this top prize for the third consecutive time. "I was worried I might be a little rusty, because I've had to compete for station operating time with my XYL, K4ZMA. Margaret has been chasing countries on 10 meters." I guess operating 160 meters is like riding a bike. You never forget how. Congratulations to Peter for his 3-peat as the Single Combat Warrior of our game.



K3ZM in his happy place getting answers from Europeans. Just a boy with his radio, working DX. (Photo courtesy of K3ZM].

You can see in the Top-Ten chart that Peter did not run away with it. Regular Top-Tenners N2MF, NA8V, WF2W and K1LT all got in line for a spot in the Top-Five.





#### **Low Power**

After the first 6 hours and 500 Q's Fred, KG9X, described it as a grind. "What happened to this contest?" he asked, recollecting past years with more QSOs. (The sponsor is glad to report this year is up 28% over last year for total contest QSOs). Fred dug deep and won it convincingly for the Single Operator Low Power class.

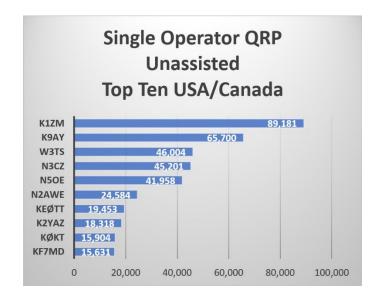
The race was on for second place. In the pub afterward they might have called it "nice grouping." Jim, WØUO, narrowly edged out Don, WD8DSB, and Bill, ACØW, for the number two spot. Don't let anybody tell you that winning one of these categories does not take serious perseverance.



This is WØUO contemplating his strategy for overtaking KG9X next year. [Photo courtesy of WØUO]

#### **QRP**

Top-band veteran Jeff, K1ZM, put in a convincing win without his past benefit of the VY2ZM superstation, setting a new division record from his station on Cape Cod. 26 hours in the chair running 5 watts is a whole lot of dedication. Second place finisher Gary, K9AY, thanks everyone for digging his pipsqueak signal out of the noise.



# **Single Operator Unlimited**

# **High Power**

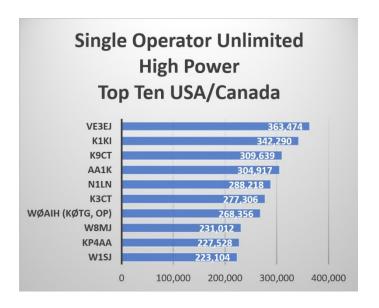
"That was another fun ARRL 160 CW contest." – N1LN

Four out of the Top Five operators from last year's running landed in the Top Five again this year, all randomized to where nobody finished in the same spot in both years. This is a tight bunch! Multiple time champ in this group John, VE3EJ, captured the top spot again this year, coming off the line with 510 QSOs in the first four hours, including a first hour of 184. John reports it was downhill from there, with new stations running dry making for a tough second night. "But" John adds, "activity and the resulting score were better than in 2023 which brings on optimism for 2025."



This photo of VE3EJ was obviously taken during the first hour of the contest. [Photo courtesy of VE3EJ]

When you look at the chart, in this category it is like a stepladder all the way to the top spot. And of course, a lot of familiar calls.



#### **Low Power**

Every year we can see how the Low Power categories are the domain of the middle of the continent, where there are a lot of domestic QSOs because of the shorter distance to both coasts. Low Power stations on the East coast really can't build up a huge multiplier advantage working Europeans like the High Power stations do.

This year long-time 160-meter specialist Brian, VE3MGY, in Ontario Canada, pulled out the victory over hopeful Drew, K3PA, who is well-situated in the center of things outside Kansas City.



The glow from his four monitors kept VE3MGY going all through the night and part of the day. [Photo courtesy of Yvonne Campbell]



K3PA is considering adding two more monitors, turning off the shack lights, and operating a few more hours next year. [Photo courtesy of K3PA]



Brian has learned that calling CQ during the day can yield better hours than very late into the wee hours of the morning (details later in this article). "Ultimately I spent 34 hours in the chair to stay ahead of K3PA. Congrats to Drew for his fantastic result after a more reasonable 16 hours in front of the radio. Yes, every QSO counts!"

#### **QRP**

This year Kyle, WA4PGM, was motivated to go the distance with only 5 watts, and set a new Roanoke Division record from his two-radio setup in Virginia. "Several weeks prior to the contest I was talking with my friend Mike, KA4RRU, about installing a 160 "T" antenna to go along with my

Inverted-L for the contest. During the conversation Mike reminded me he held the Division Record."



When the dust settled, Kyle was publicly thanking Mike for keeping him motivated. Mike went on to take the number two spot. One can only imagine the banter on *that* back-channel!



WA4PGM gave his amplifier the weekend off and ended up setting a new QRP Division Record. [Photo courtesy of WA4PGM]

# **Multi Operator**

Many operators choose to band together into groups and work together. Some do it so they don't have to stay awake all night. Others do it because more ears are better than less ears! According to the team at W2GD, who landed 2<sup>nd</sup> place in the High Power category, "We enjoy the camaraderie we have when we do this every year. It's one of the reasons we've been doing this together as a team for over three decades."

# **High Power**

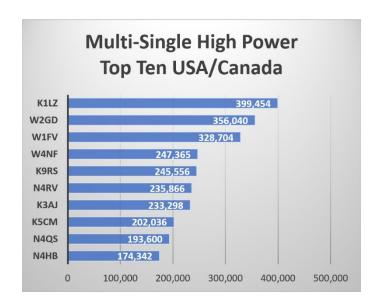
"Loudest signal heard was K1LZ." – G3LDI

"A classic confrontation between good teams and stations." - W2GD

The new K1LZ superstation in Maine bested all comers. The station is close to the Atlantic Ocean and thus much closer to Europe compared to other stations in the USA. Krassy's station boasts both a full-sized 4-square and an additional full-sized quarter-wave vertical some distance away on the same property. There are also multiple Beverage antennas for receiving. The setup allows for multiple stations on the band, with one calling CQ and the other looking for other stations to work at the same time. State-of-the-art engineering allows both stations to coexist with a minimum of interstation interference. The stations are fully interlocked to ensure only one transmitted signal on the band at any time.

The W2GD team, using temporary antennas hanging over marshy salt water on the New Jersey coast (the same location they have used now for 25 years), had the online scoreboard up and running for the whole contest. "We enjoyed following the individual and team horse races as they developed. We got off to a hot start, but the underlying numbers, QSOs and multipliers, changed constantly."

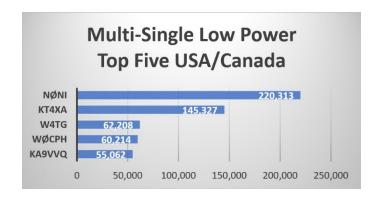
Third place went to the team running the KC1XX station in a memorial operation dedicated to legendary low-band expert John Kaufmann,W1FV, and using his callsign (now a club call). K1GQ, KM3T, and WA1Z wanted to activate John's call in the first major 160-meter contest since his passing. "Congrats to the teams at K1LZ and W2GD for their outstanding efforts, and thanks for Matt, KC1XX, for the use of the station."



## **Low Power**

As mentioned above, the Low Power categories can be dominated by stations in the middle of the continent. Toni, NØNI, is no stranger to multiop, and no stranger to 160 meters. "We have always done ARRL 160 high power and have only won 1 time. That was the year of Hurricane Sandy when the W2GD crew were unable to get to their salt water location."

Ordinarily stations on the East Coast will dominate the High Power category. Some readers may recall Toni's station suffered significant antenna/tower damage due to a derecho in 2020. This year they entered the Low Power category and ran away with it. "I told the operators to just operate it like they would if they were running the amp." What they may have lost in multipliers they more than made up for in number of QSOs, being situated in Nebraska where the shot to the west is so much easier.



#### **DX Results**

For stations that are not in the United States or Canada, it can be a real labor of love. Without those stations getting on from the rest of the world, our contest would not be nearly as spirited.

"We are grateful for the DX stations who generously provide contacts to us in 'our' contest."

– K3ZM

"Thanks to all the DX that got on and participated this weekend." – WA1Z

# **Single Operator**

## **High Power**

No stranger to the winners' circle, lifetime 160-meter enthusiast Stan, K5GO, put in a solid win from ZF9CW. As other operators have also described, although Stan enjoyed over 700 QSOs in the first 7 hours, it took him another 15 hours to make the other 350 contacts!

#### **Low Power**

XE2S won for the world by braving the crowded band with no amplifier, handing out 122 QSOs to others who really wanted to get him in the log. It has got to be hard entering the low power category when you're a DX station.

#### **QRP**

There were only2 entrants brave enough to send in QRP entries from outside the U.S and Canada, and surprisingly both were from Japan: JH1APZ with 12 points, and JH7UJU with 8 points.

# **Single Operator Unlimited**

## **High Power**

After the smoke settled, once again the Caribbean blowtorch at Signal Point on the island of Curacao, PJ2T, dominated this category. Piloted by Jeff, K8ND, there are 700 logs that can count this multiplier! "Radio conditions were much better this year!" Jeff bemoaned how so many 160-meter operators close up shop right after the sun comes up

in Europe, leaving stations like PJ2T with nothing to do. "The bandmap collapses like a bad souffle. You guys can sleep when the contest is OVER."



Some of the radio (and award) hardware at the PJ2T shack. [Photo courtesy of K8ND]

NV4B commented how, although he has worked PJ2T many times over many years, this was the first time ever that PJ2T came back to his CQ. That shows how hard Jeff pushed to work as many contacts as he could.

Jeff was quick to congratulate fellow Single-Op winner (unassisted) Stan at ZF9CW. "His first night score beat my overall score." Jeff then suggested adding ZF as a 51<sup>st</sup> state.

#### **Low Power**

LY7M won this category with 85 QSOs and nearly 10 times the score of the 2<sup>nd</sup> place finisher, LZ2ZG.

#### **QRP**

Only SP7AS entered this difficult category and took first place with 40 points.

# **Multi Operator**

OZ5W won the DX Multioperator category by making 64 QSOs, outdistancing the other entrants.

# **Affiliated Club Competition**

In the Affiliated Club Competition arena, the number of club members submitting scores for their clubs is up for the second straight year. 655 individual stations submitted scores to benefit their clubs in the Affiliated Club Competition. At the highest level, Unlimited, two clubs consistently dominate the standings, year after year. This year, 99 members of the Potomac Valley Radio Club (PVRC) delivered the goods, besting the Frankford Radio Club (FRC) which fielded 57 members.

Unlimited Club Category		
Club	Score	Entries
Potomac Valley Radio Club	5,882,455	99
Frankford Radio Club	4,289,372	57
Society of Midwest Contesters	3,872,775	60
Yankee Clipper Contest Club	3,749,425	61
Minnesota Wireless Assn	2,620,402	56

In the Medium category, it was Contest Club Ontario (CCO) for the win. Over the years CCO has shown a consistently strong performance, regularly sparring with the Mad River Radio Club (MRRC) and the Tennessee Contest Group (TCG) to win the gavel in this hotly contested Club category.

Medium Club Category		
Club	Score	Entries
Contest Club Ontario	1,920,633	29
Mad River Radio Club	1,266,102	13
Tennessee Contest Group	1,193,447	19
Kansas City Contest Club	990,359	10
Arizona Outlaws Contest Club	791,378	18
Grand Mesa Contesters of		
Colorado	689,385	11
Florida Contest Group	660,469	16
Central Texas DX and Contest		
Club	659,215	11
Niagara Frontier Radiosport	626,623	10
Northern California Contest Club	568,165	19
South East Contest Club	557,527	12
Hudson Valley Contesters and		
DXers	548,714	16

North Coast Contesters	467,433	8
DFW Contest Group	416,815	13
Kentucky Contest Group	378,922	9
Big Sky Contesters	280,857	5
Rochester (NY) DX Assn	277,448	8
Willamette Valley DX Club	258,373	7
Arkansas DX Assn	241,759	5
Oklahoma DX Assn	213,717	3
Swamp Fox Contest Group	210,345	7
Southern California Contest Club	204,682	11
Maritime Contest Club	181,074	4
Alabama Contest Group	166,223	4
Orca DX and Contest Club	145,162	7
Heartland DX Association	112,661	3
Portage County Amateur Radio		
Service	112,440	4
Western Washington DX Club	98,868	7
Texas DX Society	55,084	3
Saskatchewan Contest Club	41,505	3
Carolina DX Association	35,797	4
Spokane DX Association	32,163	4

The Local category allows for a smaller pool of eligible operators but requires a tighter geographic radius. This year the Medina County Amateur Radio Club repeats its win over all comers where the number of entries is limited to a maximum of 10 and they must all be within 35 miles of each other.

Local Club Category		
Club	Score	Entries
Medina County Amateur		
Radio Club	251,165	3
Central Virginia Contest Club	231,881	3
CTRI Contest Group	141,750	3
Bristol (TN) ARC	59,791	4
Redwood Empire DX Assn	38,872	3
Metro DX Club	9,870	3

#### A sad note

Just a few days before the contest, we learned that 160-meter contest regular Ralph Bellas, K9ZO, passed away.

"Missing in my log this year was K9ZO who passed away this week. We had operated this contest together last SS cycle." - K9CT

"K9ZO will be remembered. What a pleasure to spend time with such a great human being." – VE3EJ

R.I.P., Ralph.

## A 160-Meter Rookie's Observations

Tim Cates, KC1QDK, a devoted Parks-On-The-Air (POTA) enthusiast, relates how he tried 160 meters for the very first time during the contest. My wife and I had a lot of fun camping at the headquarters of Mount Monadnock in a tent using an old MFJ wire dipole that was almost 100 yards long strung up in the trees. I activated the POTA park three times during the contest on 160 CW because the exchange was basically the same. This was my first time making a contact on 160 meters and it was a terrific experience finding the band open at night and very quiet during the day. Our challenge was to keep the tent warm with my buddy's propane heater, because it was 18 degrees outside at night. Then I would stay up late tapping code in the mostly deserted campground. This was such a fun adventure and I am looking forward to doing it again!



KC1QDK trying to keep warm in a tent on a New Hampshire mountain. [Photo KC1QDK]

#### **Antennas**

A full-size antenna for 160 meters is too big for most hams to install. As a result, there are a lot of "interesting" antennas used on the band. Every year, operators like to share what kinds of antennas they were running. It never ceases to amaze what people will use to put out a signal on 160 meters. Especially impressive is how minimal an antenna can be and still enable you to work other stations.

Here are the editors' pick of the best antenna comments for 2024:

"Low wire across the back yard, low power, limited time. Still fun!" – KØVBU

"I call my antenna the 'DX Skimmer' because it is made from an aluminum swimming pool skimmer handle, topped with a 4 foot Hamstick stinger." – AJIG

"I used my Micro Vertical antenna 12 meters high on my balcony." - JE1SPY

"You can make a lot of contacts on 160 with a low dipole." – N4JRG

"I have the world's ugliest 160-meter antenna." – N9MSG

We couldn't resist asking John, N9MSG, what makes his antenna so ugly, and he told us, "Starting with a G5RV I added 25 feet of linear loading using aluminum 'Jewelery Wire' and created some back and forth zig zags, then added some additional wire. My lot is still too small, so the wire ends are wrapping around the tree and lining the fence. The antenna is only about 35 feet high. I was hoping the vertical ladder line section of the G5RV would help keep the length down. but in the end it is essentially a full half-wave dipole feed by 35 feet of ladder line, and a 1:1 choke."



N9MSG claims this is the world's ugliest 160-meter antenna. [Photo courtesy N9MSG]

# VE3MGY's Daytime operation on 160

"Saturday morning, I woke up and grabbed a cup of coffee and drank it in the shack - while calling CQ - the local time here was 0900 but there were still stations on 160 CQing - and making QSOs. I had tried this a few years ago and found that if you're able to handle the rate 'mentally', you can make daytime QSOs on 160. Would it make the difference between winning and losing? Maybe it would, and maybe it wouldn't. At any rate, by Sunday morning at 0700z I once again ran out of stations to work so I slept until 0800z then got up and CQ'd until 1300z.

Believe it or not Saturday afternoon CQing in the daylight was not the worst part of the contest – the hardest part of the entire contest was waking up Sunday morning at 0800z after just barely falling asleep.

On Saturday afternoon I took a screen shot of my daytime coverage area on the RBN map and then overlaid it with the daytime coverage maps of two local 50kW AM stations, CFTR and CFRB. I put this image up by the radio to constantly remind me how far my 100W was currently going on 160 in the daytime. More importantly it acted as a motivator to stay in the chair and keep CQing!"



VE3MGY's 100W CW signal has better coverage than his local 50kW AM stations! [map courtesy VE3MGY]

# **Closing the Books**

This year boasted a lot of activity and great conditions even though we are at the peak of Cycle 25 and conventional wisdom says 160 meters should suffer. Instead, we showed that the ARRL 160-Meter Contest just keeps on generating new records and allowing new entrants to brag about who has the ugliest antenna.

And with that we close the books once more. The dust has settled, and it is all over but the shouting. We hope everyone will join in again next December for the 2025 ARRL 160-Meter Contest when, propagation willing, we hope to hold another great party on the top band. See you on the air!

The 2025 ARRL 160-Meter Contest will be held December 5 – December 7, 2025. For rules, previous year's results articles and more, visit contests.arrl.org/160m/

Continental Winners								
Africa								
Single Operator Unlimited, High Power	CR3DX (OM3RM, op)	35,496						
Asia								
Single Operator, High Power	JA8NFV	672						
Single Operator, Low Power	JE1SPY	300						
Single Operator, QRP	JH1APZ	12						
Single Operator Unlimited, High Power	JF1AMX	3,450						
Single Operator Unlimited, Low Power	JH1BBT	162						
Multioperator, Single Transmitter, High Power	JA1ZGP	12						
Europe								
Single Operator, High Power	G6XX (G4FAL, op)	22,776						
Single Operator, Low Power	SP1D	2,200						
Single Operator Unlimited, High Power	DR5X	18,424						
Single Operator Unlimited, Low Power	LY7M	5,082						
Single Operator Unlimited, QRP	SP7AS	40						
Multioperator, Single Transmitter, High Power	OZ5W	3,776						
North America								
Single Operator, High Power	ZF9CW	169,984						
Single Operator, Low Power	XE2S	11,616						
Single Operator Unlimited, High Power	FM5BH	52,114						
Single Operator Unlimited, Low Power	HP1EUA	32						
Oceania								
Single Operator, High Power	VK2GR	416						
South America								
Single Operator Unlimited, High Power	PJ2T (K8ND, op)	111,456						

				Regiona	l Winners					
West Co	ast Region	Midwest	Region	Centr	ral Region	Southea	st Region	Northeas	st Region	
Southweste Alberta, Brit	hwestern and ern Divisions; tish Columbia Sections)	(Dakota, Mid Mountain an Divisions; M Saskatchewa	d West Gulf anitoba and	Divisions Ontario N South, and	nd Great Lakes ; Ontario East, North, Ontario Greater Toronto Sections)		(Delta, Roanoke and Southeastern Divisions)		(New England, Hudson and Atlantic Divisions; Maritime and Quebec Sections)	
Single Operator, High Power										
K7RAT (N6TR, op)	174,832	NØTT	249,610	NA8V	311,880	K3ZM	354,392	N2MF	317,625	
W8KA	164,238	KØIDX	205,485	K1LT	270,256	N4XD	264,730	WF2W	286,065	
N9RV	147,405	K5RX	202,650	W9RE	199,038	K4SO	202,036	AB3CX	241,722	
KH7X (KH6ND, op) WJ9B	124,323 123,443	N5RZ WD5COV	172,410 134,514	W5MX K9MA	183,113 168,295	W1RCR N4CW	109,824 107,734	WS9M W2XL	208,299 149,815	
				Single Opera	tor, Low Power					
W7TMT	58,292	wøuo	133,588	KG9X	163,392	N4UA	90,428	W1QK	59,605	
N7IR	42,600	ACØW	121,346	WD8DSB	129,232	K7SV	82,836	N2EM	54,747	
VE7SL	35,574	N5IF	89,292	N8LJ	97,600	K1GU	72,864	WA3EOQ	51,094	
N6HC	24,662	VE4DX	66,080	K8FH	92,550	K3IE	70,290	N2CJ	50,203	
K6RAD	18,200	кøтт	47,300	K8NVR	88,243	WB4AAA	66,130	NS3T	50,116	
				Single Op	erator, QRP					
W6MZ	4,884	N5OE	41,958	К9АҮ	65,700	N3CZ	45,201	K1ZM	89,181	
N6AN	460	кефтт	19,453	K2YAZ	18,318	N2AWE	24,584	W3TS	46,004	
K6ICS	286	кøкт	15,904	WB8DC	12,513	K4PQC	6,623	WU2M	11,058	
N6HI	120	KF7MD	15,631	VE3DQN	3,024	K4WM	578	WA2CLP	4,234	
K6GTE	84	NØLMQ	6,734	W9QL	2,820			W7LG	4,104	
					1 .					

			Singl	e Operator Unlir	nited, High Pow	ver			
KY7M	115,338	KVØQ	219,132	VE3EJ	363,474	N1LN	288,218	K1KI	342,290
VE7ZO	103,602	KØRF	204,558	К9СТ	309,639	KP4AA	227,528	AA1K	304,917
				WØAIH					
K7QA	90,112	KØTI	152,750	(KØTG, op)	268,356	W4RM	213,909	K3CT	277,306
W7JXY	65,600	KØMD	150,300	W8MJ	231,012	K2AV	196,630	W1SJ	223,104
K6LL	64,525	NSØR	141,955	KB9OWD	200,532	AD4EB	180,129	VA2WA	222,902
			Singl	e Operator Unli	mited, Low Pow	er			
N7UVH	15,480	КЗРА	163,736	VE3MGY	181,790	N3HEE	136,677	NJ3K	112,509
AF7NX	8,932	KØRC	117,754	K8BL	124,500	N9TF	77,532	K1EP	88,232
VE7BV	5,396	NØHJZ	106,038	KX9RT	116,960	KK4R	48,484	WA2QAU	65,995
K6ST	192	NGØC	46,872	ND4Y	101,052	WF7T	44,496	VE9ML	63,714
WB6PVU	40	кøкх	46,282	WT9Q	89,325	N3RTW	39,120	N3SD	51,545
			<u> </u>	ingle Operator L	Inlimited, QRP		<del>, , , , , , , , , , , , , , , , , , , </del>	T	
								AA2A	
WQ6X	175	WØGJ	20,374	WE9R	49,088	WA4PGM	106,650	(N2KW,	39,707
WQOX	1/3	KØLW	2,047	VVLSIX	49,088	KA4RRU	83,980	op)	33,707
		KEØWPA	1			AA5JF	27,030		
		KLØWFA	1			N5UE	2,232		
						AD4TJ	750		
						AD413	/30		
				Multioperator,	High Power				
N6RO	161,856	K5CM	202,036	N4QS	193,600	W4NF	247,365	K1LZ	399,454
KH6AQ	142,492	KØLIR	110,245	11112		N4RV	235,866	W2GD	356,040
KH6LC	28,704	, ,	2, 2			N4HB	174,342	W1FV	328,704
	==,,					AD4ES	123,876	K9RS	245,556
							,	K3AJ	233,298
			<u> </u>	Multioperator,	Low Power		<u> </u>		
		NØNI	220,313	KA9VVQ	55,062	KT4XA	145,327	NJ1F	8,251
		WØCPH	60,214			W4TG	62,208		
		KØLTC	1,188			AC8Y	14,910		

Division Winners											
SO: Single (	SO: Single Operator; SOU: Single Operator Unlimited; MS: Multioperator Single Transmitter; HP: >100W; LP: 5-100W; QRP: <5W										
	SOHP	SOLP	SOQRP	SOUHP	SOULP	SOUQRP	MSHP	MSLP			
Atlantic	N2MF	N2EM	W3TS	AA1K	NJ3K		W2GD				
Central	W9RE	KG9X	K9AY	к9СТ	KX9RT	WE9R		KA9VVQ			
Dakota	KØIDX	ACØW	KEØTT	кøті	KØRC	KEØWPA		KØLTC			
Delta	N4ZZ	K1GU		AD4EB	N9TF	N5UE					
<b>Great Lakes</b>	NA8V	N8LJ	K2YAZ	W8MJ	K8BL		N4QS				
Hudson	W2XL	N2CJ	WU2M	KC2GOW	W2VQ		N2NC	NJ1F			
Midwest	NØTT	NØNB	кøкт	NSØR	КЗРА	WØGJ	KØLIR	NØNI			
New England	K1ZZ	W1QK	K1ZM	K1KI	K1EP	AA2A (N2KW, op)	K1LZ				
Northwestern	K7RAT (N6TR, op)	W7TMT	KK7A	K7QA	N7UVH						
Pacific	AA6AA (@W6UC)	K6RAD		К9ҮС	K6ST		N6RO	W4TG			
Roanoke	K3ZM	N4UA	N3CZ	N1LN	N3HEE	WA4PGM	W4NF	WØCPH			
<b>Rocky Mountain</b>	WD5COV	K7TD	KF7MD	KVØQ	кøuк			KT4XA			
Southeastern	W1RCR	WB4AAA	K4PQC	KP4AA	K3TW	AA5JF	AD4ES				
Southwestern	W8KA	N7IR	W6MZ	KY7M		WQ6X					
West Gulf	K5RX	wøuo	N5OE	N5TJ	K5LJ		K5CM				
Canada	VA3AR	VE4DX	VE3DQN	VE3EJ	VE3MGY						