



ARRL 10 Meter Contest

2018 Full Results

By Scott Tuthill, K7ZO (k7zo@cableone.net)

“That was fun” – paraphrasing many operators

These surprising comments were made by many operators after the conclusion of the 46th running of the ARRL 10 Meter Contest. Held December 8 and 9, 2018, large geographic areas were blessed with much better than expected propagation. Operators set aside their alternate plans for the weekend and jumped on the radio.

Compared to 2017, total logs submitted increased by 6% to 1,900 and total reported QSOs increased by 55% to over 150,000. A few operators got tantalizingly close to Worked All States, with N4BP managing to work 49. The highest total in 2017 was just 42. And there were 17 new World Records set at the W-VE-XE Section and DX Entity level. In 2017 there were just 6. Looking back at the weekend it was a great example of how 10 meters can offer up surprises even in the depths of a solar cycle minimum. As Joe, K7JOE, commented: “Ten meters - the other mystery band...good fun.”

What a Difference a year Makes
Total Reported QSOs

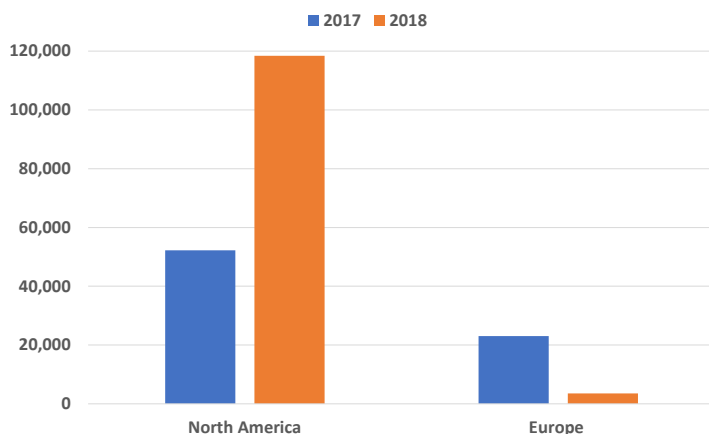


Figure 1 – North America and Europe QSO Comparison

However, 10 meters can also be fickle in its generosity. While conditions were greatly improved for most of North America, the opposite occurred across Europe. “Dismal” might even understate how bad conditions were for contesters in Europe. For comparison, improved conditions in North America meant the average log size increased by 80% over 2017 and this in turn meant more operators were on the air with submitted logs increasing almost 30%.

What a Difference a Year Makes
QSOs per Log

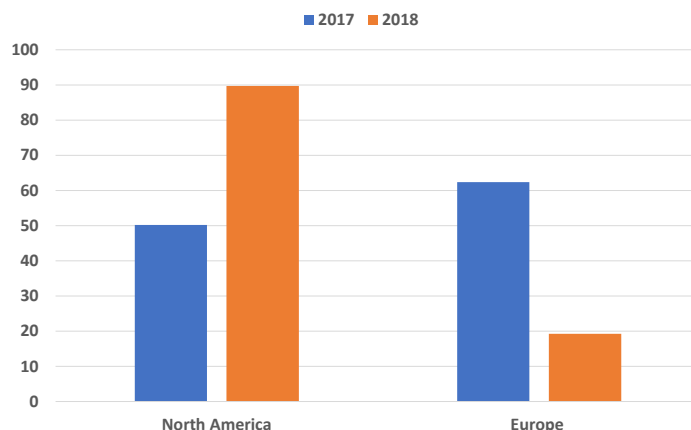


Figure 2 – North America and Europe QSOs per log Comparison

Conversely, in Europe average log size decreased almost 70% to just 19 QSOs per log. Faced with these conditions European operators sat on sidelines and total logs submitted dropped 50% to just 186 logs from the whole continent. To put this in perspective, this is about the same number of logs that were submitted from California and Florida combined.

Type of QSOs

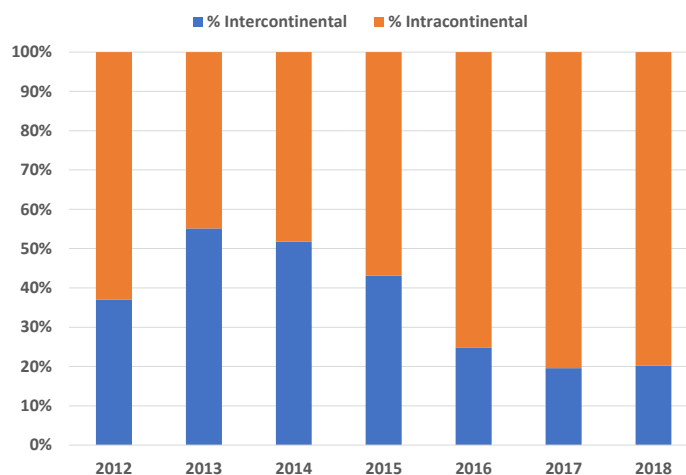


Figure 3 – Trends in QSO types

One overall trend that continued from 2017 was the preponderance of *intra*-continental QSOs. As the solar cycle has worked its way toward the bottom, long distance *inter*-continental QSOs have dwindled. After peaking at well over 50% during the solar maximum in 2013 and

2014 in the last two years the percentage of intercontinental QSOs has hovered around 20%.

The vast majority of intercontinental QSOs are now on North-South paths. Common ones are South America to North America and Oceania to Asia — which are pretty much due north-south. Historically, with slightly better propagation, the paths widened east and west on both ends. For example, South America to Europe and South America to Asia, but in 2018 these paths failed to open. This was one contributor to the dismal conditions in Europe.

Lack of European propagation also had impacts on multiplier counts for operators in South America. Missing many of their usual Europe and Asia multipliers meant their scores suffered. South America managed just 8 worldwide category wins versus 14 in 2017. The benefactor of the propagation change was North America where operators managed 12 worldwide category wins in 2018 vs just 3 in 2017.

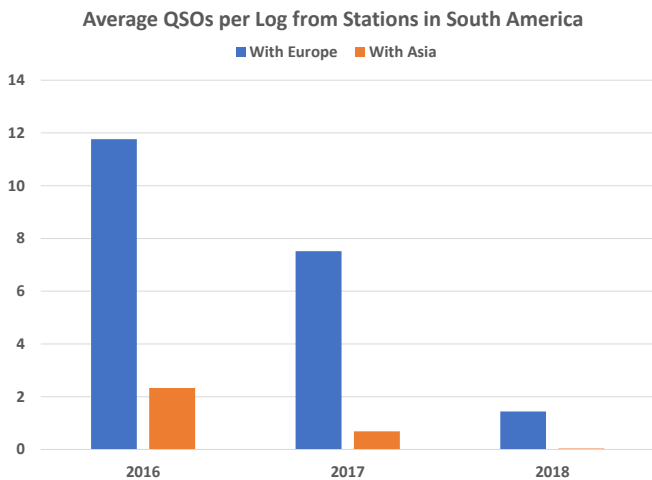


Figure 4 – QSO Trends for stations in South America

This overall trend toward intracontinental QSOs coupled with enhanced propagation over North America meant that 70% of all reported QSOs in 2017 were one North America station contacting another one. But even across a whole continent, conditions were not uniform. One common comment about conditions in North America was about the high number of QSOs with Florida. Typical soapbox stories included:

- *It was a pleasure to work every ham in the state of Florida – Michael, NITA*
- *Like others, FL was 23% of my Qs, more than MA at 20%! – Larry, WIDYJ*
- *Fun contest...Great opening to FL Sunday morning, they all sounded like locals – Lloyd, KH6LC*

- *Saturday early opening to ZL at 1740 and then nice opening to S/A. CX/LU/PY/YV, then back scatter looking southeast to the eastern states then it opened direct to FL, up the coast to CT – Frederick, K6IJ*

These, and many other similar comments, suggested that propagation from many different parts of the USA to Florida was especially good during 2018.

With those first two comments being from stations in Massachusetts. I thought it would be enlightening to look at log data to see if, in fact, there was a higher percentage of QSOs with Florida than in past years. As a comparison year I took the data from 2014, the last of the “higher sunspot years”. I calculated the percentage of QSOs for stations in Massachusetts with the other states in the lower 48 for both 2014 and 2018 and then calculated the change. The amount of change was then used as value to color in a map. If the percentage of QSOs with a state decreased, the state was colored red. If it increased it was colored green. If it changed a lot, then the color is dark and if it changed a little then the color was light.

Sources of Stateside QSOs – for stations in Massachusetts Changes as a % of total from 2014 to 2018

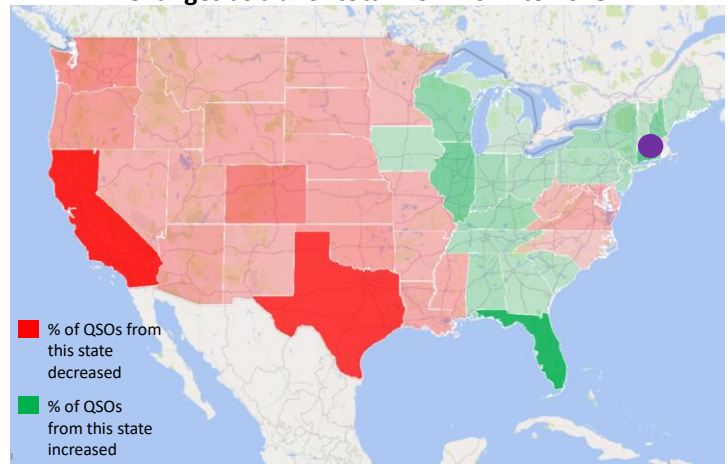


Figure 5 – Where QSOs came from for stations in Massachusetts — 2018 vs 2014

Looking at Figure 5 we can see data supports the soapbox comments. The darkest green state was, in fact, Florida. This means Florida had the largest percentage increase from 2014 to 2018 as a source of QSOs for stations in Massachusetts. Looking at the overall map it also seems to tell the expected story. Stations far away to the west all decreased as a source of QSOs. As the sunspot cycle has waned so has long-distance F2 propagation on east-west paths. Conversely states in the Midwest and up and down the East Coast increased as a source of QSOs. To some extent this is because of QSOs with the western states decreased even more, but it also is indicative of QSOs

made during E-skip openings which, by their very nature are shorter distance.

With the log examination tools I created it was relatively easy to look at some other states as well. I looked at Wisconsin, Washington and California. All of these also show that their percentage of QSOs with Florida increased over 2014. It does seem like “all paths lead to Florida” was the theme of the 2018 contest.

**Sources of Stateside QSOs – for stations in Wisconsin
Changes as a % of total from 2014 to 2018**

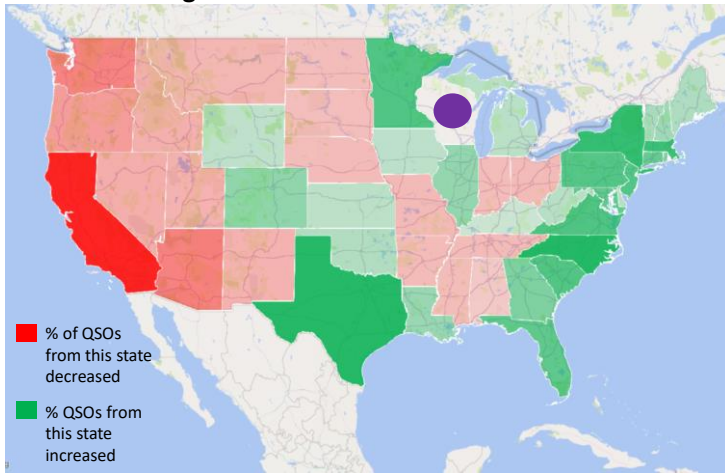


Figure 6 – Where QSOs came from for stations in Wisconsin — 2018 vs 2014

The maps from California and Washington are fascinating. They show increases in the % of QSOs from states quite some distance away. In Washington’s case the whole southeast increased as a source of QSOs – Florida, Georgia, and Alabama. This contrasts with Massachusetts that saw decreases in QSO % from long distance states.

**Sources of Stateside QSOs – for stations in Washington
Changes as a % of total from 2014 to 2018**

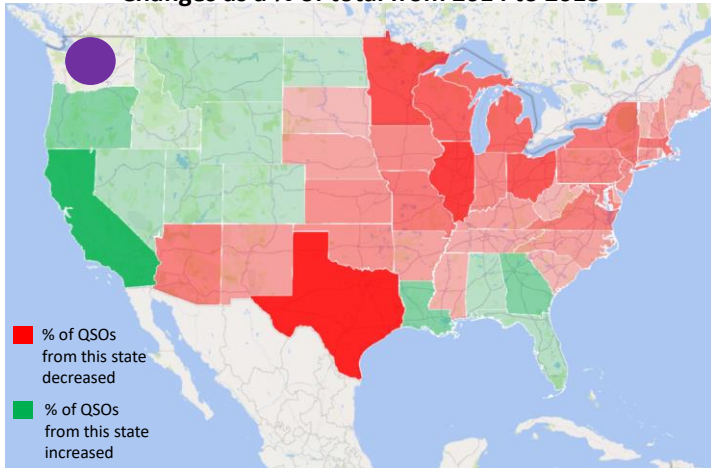


Figure 7 – Where QSOs came from for stations in Washington — 2018 vs 2014

**Sources of Stateside QSOs – for stations in California
Changes as a % of total from 2014 to 2018**

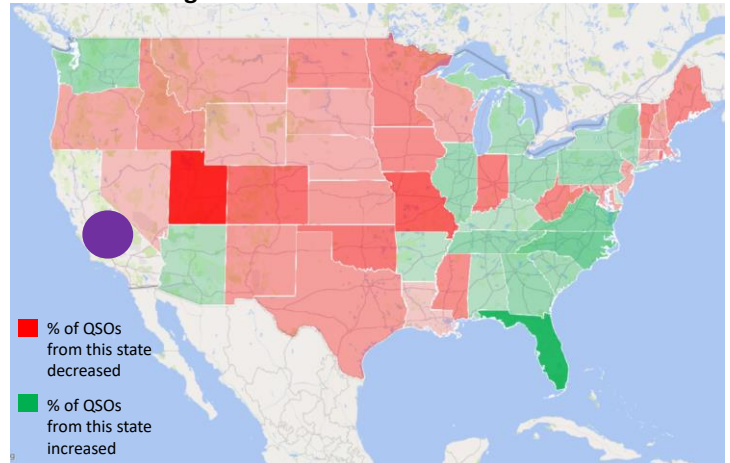


Figure 8 – Where QSOs came from for stations in California – 2018 vs 2014

There is probably another story in here relative to propagation types – E-skip, F2, etc. This is not the year to dig into this too deeply. If you are interested, the 2016 10 Meter Contest results article covers this topic in some detail. It can be found at contests.arrl.org.

The other side of this story about “All paths leading to Florida” is the viewpoint from stations in Florida. Looking at the same map of where QSOs came from, it looks pretty much like Massachusetts. A bigger percentage of QSOs from close in states reflective of shorter propagation than 2014. Nothing looks out of the ordinary here.

**Sources of Stateside QSOs – for stations in Florida
Changes as a % of total from 2014 to 2018**

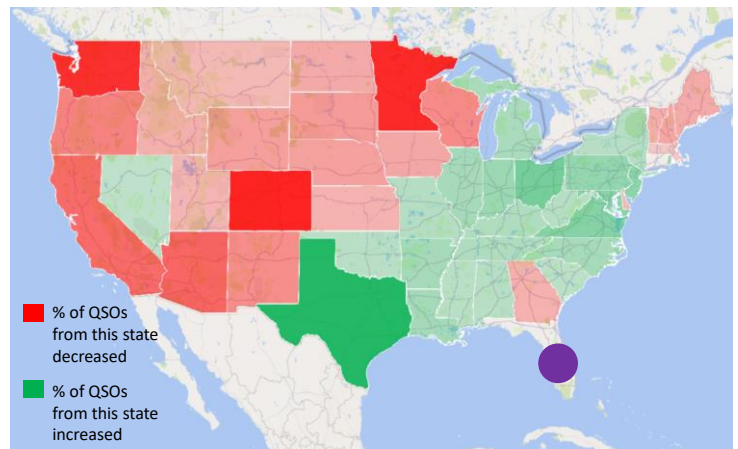


Figure 9 – Where QSOs came from for stations in Florida – 2018 vs 2014

Next let's look at a comment from a Florida station:

- *Surprisingly good propagation to specific regions. At times, signals were extremely strong and, at other times, very marginal. Many times propagation was to a wide area, such as 8s & 9s, but at other times it was focused on a particular state. A Saturday afternoon opening to the West Coast was a real treat. – George, K5KG*

Here the perspective is coming through, "Hey, we had a pretty good contest!" Note that the states showing relative increases in sources for QSOs for Florida are homes of large ham populations. These could easily translate into a good QSO count. And if we look at the average QSOs per log by each state you can see Florida was the place to be in 2018. Operators there averaged 2.5 times the QSOs of the average operator in the USA and 1.7 times the QSOs of operators in state with the second most — Arizona.

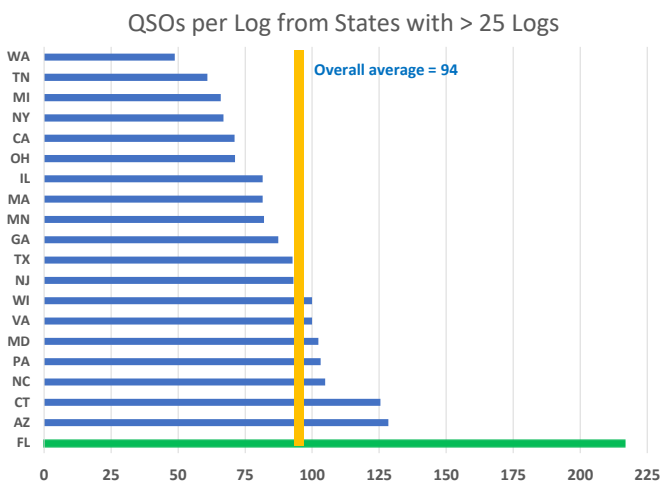


Figure 10 – Florida was the place to be in 2018!

Florida was ideally situated for the propagation that weekend in two ways. First, for the long-distance openings from the West Coast which were strongest to the southeast, aka Florida. And second, for the shorter distance openings from the large population centers in the East and Midwest. Operators in Florida benefited from this propagation and attention and achieved 6 first-place Division scores across W-VE-XE, the most of any state. They also benefited when it came to Club Competition as will be seen later in this article.

Category Winners and New Records

One measure of the improved conditions in 2018 over 2017, albeit in focused geographies, were the increases in the worldwide high category scores. In 18 of the 20 categories the score of the category winner increased in 2018 over 2017 and by an incredible average of 250 percent. Additionally, there were increases in the stateside multiplier counts of the top stations. N4BP managed to

work 49, just missing Alaska for the Worked All States sweep. In 2017 the top state multiplier count was 42 by KTØK. As mentioned earlier, conditions still did not support worldwide QSOs especially on east-west paths. There were no reported QSOs between the United States and Asia. There were only three reported QSOs between the United States and Europe. A single station in Germany was logged calling stations in Florida, Arizona, and California during a 30-minute period on Saturday. If valid QSOs, these would be amazing examples of spotlight long distance propagation. The rest of us will need to wait for future years for that propagation to return.

Looking at the worldwide 2018 Category Winners, special mention goes to PY2NY as a repeat winner from 2017 in the Single Operator, Mixed Mode, QRP category. CX7SS and LU7DID were back-to-back winners as well, but in different categories. In 2017 CX7SS operating as CV7S took top honors in the Single Operator Unlimited, Phone Only, High Power category. In 2018 he competed in the Single Operator, Phone Only, High Power category for the repeat. In 2017 LU7DID won the Single Operator Unlimited, CW Only, QRP category. In 2018 he operated as LT7D in the Single Operator Unlimited, CW Only, Low Power category for his repeat. Congratulations for all three of these winners for committing to a world-high effort two years in a row at the bottom of the solar cycle.

In a year like 2018, even though better than 2017, being able to set a new all-time record is a tough challenge. In fact, no new World, W-VE-XE, or DX records were set. Two W-VE-XE Division records were set as KØTLG made the first-ever entry from the Dakota Division in the Single Operator Unlimited, Mixed Mode, QRP category and XE2JTS made the first ever entry from Mexico in the Single Operator Unlimited, Phone Only, QRP category. Additionally, two new Continent records were set. LU4VZ set the record from South America for Single Operator Unlimited, Phone Only, QRP category, beating the prior record set by YY4KCV in 2015. DU3GKT set the Single Operator Unlimited, CW Only, QRP category record for Oceania with a first-ever entry in this category. You must give all these operators credit for operating QRP in a year with minimal propagation!

More broadly, 56 W-VE-XE Section and DX Entity records were set in 2018. Of these 39 were first-ever entries in the category. Seventeen represented scores that beat or tied a previous high score. There were only 6 such examples in 2017. Here is another example of where the slightly better conditions in 2018 did result in higher scores.

ARRL Affiliated Club Competition

Club competition continues to be a popular and fun aspect of this contest. Operators get a chance to be part of a team while still operating from their home QTH. For many operators it is motivating to get on the air to make some points for their club or to compete for honors against rival club members. Many operators mention in their soapbox comments something similar to, "Wanted to get on the air to make some points for our club." Just a way to have some fun on a December weekend.

In 2018 a total of 665 operators submitted logs that were also credited towards ARRL Affiliated Club Competition. This means about 52% of the W/VE operators were part of one of the 48 different clubs that participated. Given the conditions this year club organizers were key in motivating folks to get on the air. Way to go club organizers!

In the Local Category, the Central Virginia Contest Club (CVCC) took top honors among the nine clubs in this category. With their win they recaptured the top spot after an unaccustomed second-place in 2017. The win means the CVCC has captured first for 6 out of the last 7 years! In 2018 the CVCC's 6 entrants combined for a bit more than 161,000 points. This was well over double the score it took to win in 2017. CVCC's success formula this year? High-scoring entrants. Though they had fewer entrants than second place Hampden County Radio Association, each CVCC member had double the average score and this is what pushed them to the win.

In the always popular and competitive Medium category, 36 clubs fought it out. Total entries were up nicely from the 28 that entered in 2017. When it was all over Florida Contest Club (FCG) leveraged their propagation advantage and cruised to an easy victory. They were so far in front that their score just about equaled the sum of the next five clubs combined! Wow. None of the other clubs really had a chance. FCG's average score per member was 3-4 times that of other clubs. The Alabama Contest Group got relatively close on a score per member basis but with only 8 logs entered they could not match FCG's 37 entrants. As a final statement on the FCG's amazing performance, they would have won the Unlimited Club category if they had entered that!

In the Unlimited category only three clubs fought it out in 2018. Congratulations to the 98 members of the Potomac Valley Radio Club (PVRC) who came out on top by a comfortable margin over the Minnesota Wireless Association (MWA). This win means the PVRC has now won the Unlimited category 6 of the last 7 years. PVRC's success formula for 2018 was, as it was in 2017, member turnout. Their score per member was actually less than

MWA but they had 60% more entries. In fact, PVRC has had essentially the same number of entrants in 2016, 2017, and 2018 which is a testament to their organization and motivation. There are not many clubs that can pull that off.

Congratulations to all the clubs and their organizers.

Affiliated Club Competition

<i>Club</i>	<i>Score</i>	<i>Entries</i>
Unlimited		
Potomac Valley Radio Club	1,869,714	98
Minnesota Wireless Assn	1,222,374	60
Society of Midwest Contesters	918,362	52
Medium		
Florida Contest Group	2,932,806	37
Frankford Radio Club	896,250	40
Yankee Clipper Contest Club	746,166	43
Arizona Outlaws Contest Club	620,798	25
Alabama Contest Group	450,030	8
Southern California Contest Club	397,818	24
Central Texas DX and Contest Club	328,418	12
Northern California Contest Club	262,520	23
Contest Club Ontario	227,268	20
Mad River Radio Club	197,798	15
Georgia Contest Group	194,206	5
Kentucky Contest Group	193,320	9
South East Contest Club	177,250	9
Carolina DX Association	172,782	6
Mother Lode DX/Contest Club	169,366	11
DFW Contest Group	167,014	14
Texas DX Society	166,240	10
Tennessee Contest Group	124,324	12
Hudson Valley Contesters and DXers	117,270	8
North Texas Contest Club	90,392	3
Northeast Maryland Amateur Radio Contest Society	89,514	9
Kansas City Contest Club	71,698	4
Grand Mesa Contesters of Colorado	57,854	10
Driftless Zone Contesters	51,724	4
Western Washington DX Club	33,296	8
Order of Boiled Owls of New York	31,988	4
Willamette Valley DX Club	27,594	6
Pacific Northwest VHF Society	23,904	3
Portage County Amateur Radio Service	13,192	4
Rochester (NY) DX Assn	11,626	3
Six Meter Club of Chicago	10,562	5
Northern Arizona DX Assn	10,386	3
Swamp Fox Contest Group	9,512	4
North Coast Contesters	8,144	4
Big Sky Contesters	4,018	3
Maritime Contest Club	3,500	3
Local		
Central Virginia Contest Club	161,100	6
Hampden County Radio Association	138,256	10
Niagara Frontier Radiosport	42,432	7
Athens County ARA	37,896	3
CTRI Contest Group	25,176	4
Bristol (TN) ARC	17,104	4
THE VILLAGES AMATEUR RADIO CLUB	8,070	3
Metro DX Club	1,592	3
Silver Comet Amateur Radio Society	1,538	4

Having Fun in 2019 (And Beyond!)

The 47th annual ARRL 10 Meter Contest will be held on December 14th and 15th, 2019. What might we expect this year? Well, it's pretty much the same as we experienced in 2018 and in 2017. We are at the bottom of the solar cycle and solar flux index (SFI) is pretty much as low as it can get.

For the 10 Meter Contest, solar flux is everything. A lot of it generates good propagation. Not enough of it deprives us. During the 2018 contest Solar Radio flux was in the 70 range, which is really low — almost as low as it can get. Depending on who you talk to, the minimum SFI is in the 64 to 67 range. So, in 2018 we just about hit bottom. And, unfortunately, the forecast for the 2019 contest is for the flux to decline more. Something in the range of 60 to 70 is forecasted. At this level what you will experience on the bands should be very similar to 2018 and 2017.

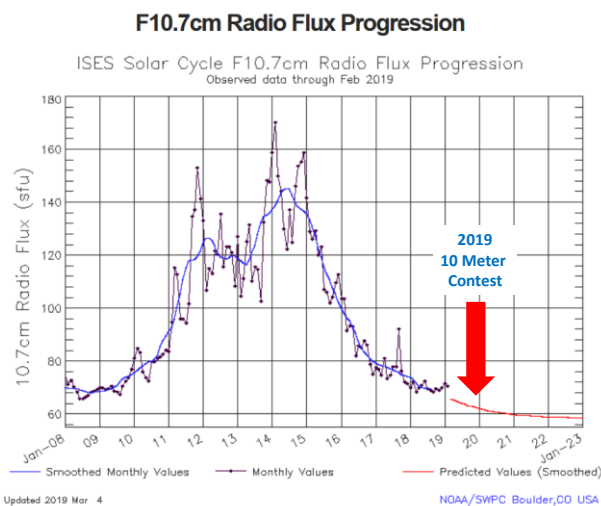


Figure 11 – Solar Flux forecast, courtesy of NOAA/SWPC

Remember though, even without high SFI there was fun to be had by being in the right place at the right time and using your creativity and knowledge of propagation and operating modes. In 2018 and 2017 the contest started with a long period of sporadic-E ionization covering much of the United States. Experienced 10 meter operators caught that opening and had some real fun.

Figure 12 shows how operators in the US jumped on the air after finding out that band was open at the start of the contest. During the first hour, 371 operators made at least one QSO. Five hours later when the opening closed another 278 had joined them for a total of 649. Over 50% of all USA operators that turned in a log made QSOs during the first 6 hours of the contest. So, remember you have to be at the radio to make QSOs. Don't sit on the sidelines. You would rather look back and say "Boy, that was fun catching that opening" rather than "I can't believe I missed that opening".

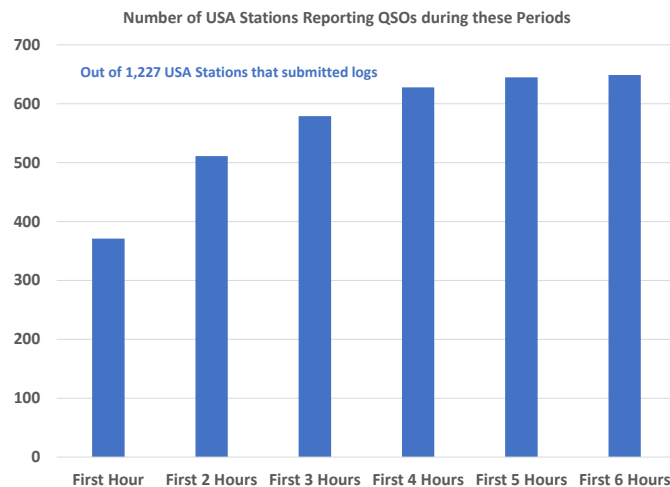


Figure 12 – Operators take advantage of the e-skip openings early in the contest.

Let me repeat my usual advice on how to make QSOs and have fun in these low sunspot years. There will be numerous opportunities to make QSOs in 2019 just like there were in 2018 and 2017. The strategies are:

First, an ability to operate CW is key for Mixed Mode entries or those Single Operators interested in maximum QSO counts. CW is a much more effective emission mode in times of marginal propagation. In 2018, 63% of the reported QSOs were made on CW. This was actually a reduction from 76% in 2017 because the better propagation allowed more phone QSOs to be made. But you are always best off being prepared to make CW QSOs.

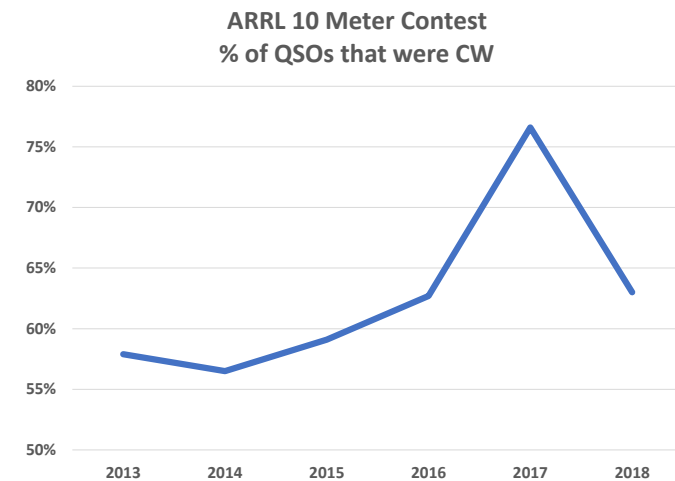


Figure 13 – in weak propagation years, CW is the mode that gets through.

Second, seek out other propagation modes than traditional long distance F2-layer ionosphere refraction. This will be key for those seeking top scores, meeting your personal goals, or just having fun. For instance: backscatter, meteor scatter, transequatorial, and sporadic E ionization will become more important. If you are not familiar with these

the ARRL Bookstore has several books which can help you out.

Third is to have patience and conviction to find path openings that may exist for only minutes over the whole weekend rather than hours on end. Meteor scatter is ethereal in nature with the path open for just a few seconds. It is best around your local dawn — though it could happen any time in the day.

Sporadic E often occurs in the early evening hours just when you think you might as well walk away from the radio and the 10 meter band. “It’s shut down for good!” may be your thinking. Not always! Carlin, N5OE, mentioned in his 2018 soapbox “SOOO glad I went ahead and got on Friday night. Turns out band was open way past sunset. Almost decided to wait and just work all day Sat and Sunday. I would have to say 80% of my log came from Friday night’s openings.”

Regular F2 openings will be short, sometimes really short. As Jim, AD1C, mentioned in his 2016 soapbox: “I heard JM7OLW for about 30 seconds on Sunday.” That was the extent of his opening from Colorado to Japan. Or as Steve, K6SCA, put it: “Many times the band would open for a minute or so, then just totally fade away. You never knew where your next contact would come from.”

It may also be tempting in these years to just say “I will just watch the spotting network or panadapter and let others tell me when the band is open.” Based on soapbox comments it seems like more and more operators have a panadapter or bandscope. Typical 2018 comments were:

- *Would periodically come into the shack and peek at the 6600 panadapter – Hunter, K3IE*
- *PX3 used to check periodically for activity – Ryan, AI6DO.*
- *I came to like my bandscope a great deal during this contest – Dan, K2YWE*

Remember if everyone used this strategy you would never know when the band was open. Someone has to call CQ. My recommendation is to commit yourself to actual seat time using that big knob on the front of the radio to tune the band yourself to see what you can hear. If you don’t hear anything then call CQ for 5-10 minutes. So, even if you encounter a seemingly dead band, try calling CQ for a while. The key to a successful operating strategy in 2019 will be to catch the band openings. [Beacon mode on a keyer can be very effective while you do something else in the station – Ed.]

Additional Analysis and Insights

In the seven prior years I have written about the ARRL 10 Meter Contest, I have provided additional in-depth analysis beyond the results and people. The intent being to provide insight into contest strategy and planning, how the 10 meter band behaves, or just something to satisfy my, and hopefully your, curiosity. In past years I examined the following topics. These articles can be found on the ARRL web site in the 10 Meter Contest Expanded Results articles (contests.arrl.org).

2011

- A Skimmer View of the Contest -- looking at Europe, Asia, and South America openings
- Skimmer Spots Counts as a way to Predict Scores?
- Phone versus CW Mix -- A magic formula?
- A Bit of Contest History

2012

- A Skimmer View of the Contest -- looking at the North America to Europe Opening as well as some perspectives on skimmer spot quality and usage.
- Contest Planning Insights -- characterizing the locations and activity levels in the US by state.

2013

- A look into the North America to Europe opening
- Contest logging program usage

2014

- Breakthrough animated movies of propagation from the US to major contest areas.
- A look at late evening activity in the US and its impact on three close races
- An updated look at contest logging program usage
- New world records established in 2014
- So how many stations really were on the air and how many QSOs were made?

2015

- An updated look at contest logging program usage
- New world records established in 2015
- Total contest activity – how many stations were on the air and how many QSOs did they make?
- Investigating propagation differences in the US between 2014 and 2015

2016

- A very deep dive into 10 meter propagation and how both E-skip and F2 propagation played roles during the contest with visual QSO “movies” to demonstrate.
- An update on entry category usage three years into the Unlimited Category era.
- Updated World, W/VE/XE, and DX records. (News flash for 2017! There were no changes in these.)
- My annual update on logging program usage.

2017

- My annual update on logging program usage.
- An in-depth study of Log Check Reports to develop recommendations on how to improve your logging accuracy.

This year I examined the changes in state-to-state QSOs presented earlier and here am providing my annual update on logging program usage.

As I have done in past years, I looked at what logging programs operators were using for the ARRL 10 Meter Contest. With access to Cabrillo log files it is easy to investigate. One of the standard Cabrillo tags is "CREATED-BY:" which is followed by the name of the logging program. A simple Python program looks through all the logs tallying the programs everyone used.

For the 2018 ARRL 10 Meter Contest logging program usage looked like this:

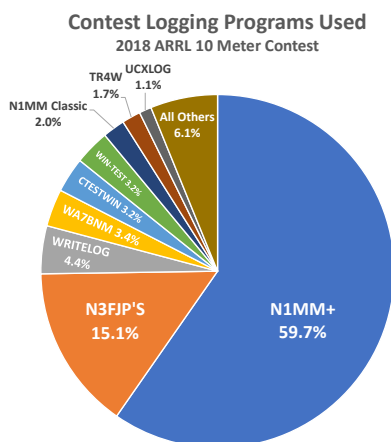


Figure 14 – 2018 Logging Program Usage

There are a few programs on this list I am not familiar with. The ARRL 10 Meter Contest is a worldwide event and there are several countries with a logging program that is popular just in their country or region. For example,

CTESTWIN is popular in Japan and *UcxLog* is popular in central and eastern Europe. There are also a substantial number of operators who still log by hand and then use the WA7BNM Cabrillo Web Form to create their log file. In 2018 there were 50 different logging programs used by someone. Overall though, the *N1MM* family is used by far more contesters than any other logging program. It is used by about four times as many contesters as the second most popular logging program, *N3FJP*. Looking into the *N1MM* family itself you can see the migration to *N1MM+* marching along. 2018 represented the fifth running of the ARRL 10 Meter Contest since *N1MM+* was launched in August 2014. In 2018 97% of *N1MM* users were using *N1MM+* versus 53% in 2014. During the year since the 2017 contest the percentage of users still hanging on to *N1MM Classic* dropped in half from 6% to 3%. I think 2019 is the last time I am going to report on this. The transition is essentially over.

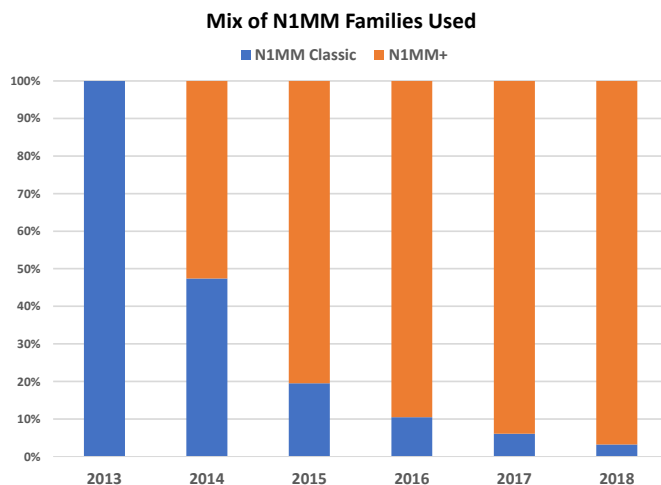


Figure 15 – N1MM Classic is fading into the sunset.

The *N1MM+* functionality that encourages/forces you to use the latest version seems to be effective as well as almost 73% of *N1MM+* logs were created by the latest version at the time of the contest. Whereas among the *N1MM Classic* users there were more than 25 different versions in use stretching across 5 different major releases.

To observe longer term trends in program usage I compared the logging programs used in 2018 to those used in 2013. Among the Top 10 programs, the *N1MM* family and *N3FJP* are the only ones to show significant growth. *N1MM* family usage has increased from 45.4% of logs in 2013 to 61.7% of logs in 2017. Both *Win-Test* and *TR4W* usage have declined over the same period by 4.2% and 3.4%, respectively. *WriteLog* usage has also decreased by 1.3%. Though some of these changes is being driven by changes in the geographic mix of logs, the overall story is really one about continued consolidation around one major logging platform — *N1MM+*.

Trends in Contest Logging Program Usage - 2013 to 2018
Change in % of logs using one of the Top 10 programs

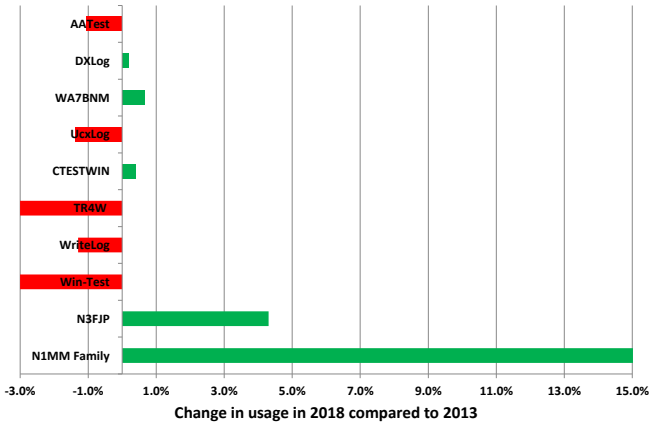


Figure 16– Only two logging programs have seen substantial growth since 2013

Another perspective about contest logging program that I have heard discussed is "What do serious contesters use?" Using a metric of "Average size of log submitted" seems at least plausible to provide this insight. Serious contesters usually make more QSOs than the casual ones. Using this metric, the view looks as follows:

Average Log Size from different Logging Programs
From programs with at least 10 logs submitted

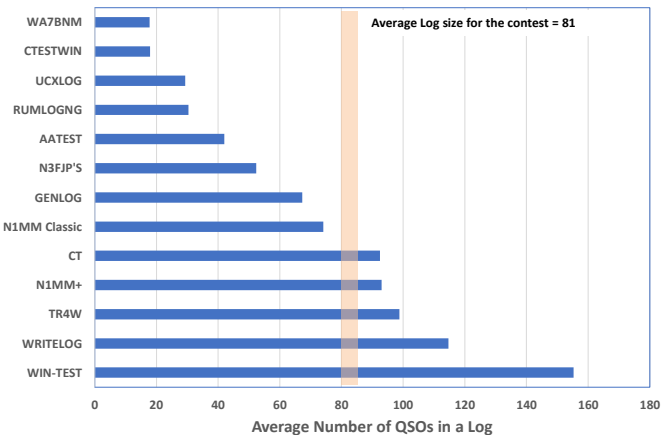


Figure 17 – What loggers are used by the big guns?

Win-Test and WriteLog users have the largest average log size. Almost 50-100% larger than the average log. CT and TR4W also have logs larger than average. These two “oldie but goodie” loggers must have some die-hard users among a few serious contesters. N1MM logs are just a little above average. It’s hard for it to be much different than average since it is used by almost 2/3rds of the contesters. Also interesting is that N3FJP, which is the second most popular program, has relatively small logs at around half the average log size. It would thus seem to appeal to more casual contesters.

Top Ten Scores

United States

Single Operator, Mixed Mode, High Power

N8OO	443,954
N4EEB	419,136
WØAIH (NE9U, op)	384,652
K5NA	231,952
N4OX	210,504
K1KI	196,876
N4YDU	155,216
K3ZO	141,100
KØTT	135,408
WAØMHJ	112,660

Single Operator, Mixed Mode, Low Power

K2PS	178,746
N8II	169,260
WB4TDH	132,624
WD5F	77,836
K4EJ	57,230
KØAD	46,632
ND9G	43,890
WA7NB	41,760
N4OO	39,894
WN6K	28,208

Single Operator, Mixed Mode, QRP

WA6FGV	10,010
N4ELM	6,790
WB2AMU	3,780
K2YGM	936
NA4C	364
AF9J	252
WA2CLP	228
K6DAJ	100
KEØL	8
WC7S	2

Single Operator, Phone Only, High Power

W5PR	77,520
AF1T	31,050
KE2DX	27,448
W4DD	25,248
K2XA	23,422
N8RA	13,200
KF9US	9,912
WA8UEG	9,512
N4MM	9,324
4U1WB (AJ3M, op)	8,892

Single Operator, Phone Only, Low Power

K2SDS	10,428
NO2EL	5,220
NF7E	4,452
N9RJM	4,450
WD5DJW	4,268
KB4OLM	3,456
KC1IH	2,968
W3MBC	2,832
N1NQD	2,688
N9OU	2,496

Single Operator, Phone Only, QRP		WA2JQK	19,504
W6QU (W8QZA, op)	3,234	N8VV	18,648
WB6CZG	108	KØEA	17,404
KS4GW	72	W3KB	15,624
KC9AMM	32		
KEØJWQ	22	Single Operator Unlimited, Mixed Mode, QRP	
KM6HDY	4	K2GMY	7,130
N1AIA	2	K8ZT	2,080
		KØTLG	1,008
Single Operator, CW Only, High Power		K2QO	704
NN7CW	248,080	K6MI	448
N4TB	238,920		
NN4X	96,580	Single Operator Unlimited, Phone Only, High Power	
N2IC	88,500	W2RD	21,952
N4XD	86,612	WV4P	9,120
KU8E	74,420	KC1BB	8,040
N4KS	72,128	KN4BIT	7,350
KVØQ	62,832	K4KKC	5,460
K6NR	61,824	K3SOM	4,464
K4BAI	58,864	W9JA	2,400
		N8PCN	2,080
Single Operator, CW Only, Low Power		W4KW	1,824
N4WW (N4KM, op)	177,936	WS4WW	1,722
AE5GT	77,040		
W3BGN	63,400	Single Operator Unlimited, Phone Only, Low Power	
W9RE	46,848	K2DRH	38,266
K1VUT	44,712	W4ZAO	3,744
K7SV	39,780	AJ4VE	1,188
KØFLY	39,396	N9UDO	768
N1TO	36,120	W5TCB	756
N5EE	33,368	K4LDC	726
N7YK	33,136	KC2DPF	520
		K5YM	504
Single Operator, CW Only, QRP		N7MZW	352
N5OE	31,356	N8VZ	252
N7RCS	16,848		
N8AP	10,440	Single Operator Unlimited, Phone Only, QRP	
K2YAZ	10,296	KC3KBE	32
AC4G	5,040		
W4ZGR	4,324	Single Operator Unlimited, CW Only, High Power	
N3GD	4,232	N4BP	247,792
K2SM	3,740	N2MM	136,144
K4NAX	3,360	N6SS	119,808
W5GZ	3,168	K3EST	101,760
		W6YX (N7MH, op)	87,108
Single Operator Unlimited, Mixed Mode, High Power		KØNM	82,592
W3EP	199,120	NR4M	73,416
K5KG	189,372	WA1J (N1TA, op)	73,216
K4WI	155,430	AA3B	71,820
N4RV	139,958	KØLUZ	70,992
K4MM	134,136		
N2TU	111,962	Single Operator Unlimited, CW Only, Low Power	
WO4O	110,880	W9XT	65,448
K3WW	103,964	WT9Q	47,880
K4LQ	101,100	K2DFC	41,400
AA5AU	95,472	NØNI	35,616
		W5RYA	26,788
Single Operator Unlimited, Mixed Mode, Low Power		W1VEM	25,620
K9OM	105,544	AA4NP	19,312
K5KJ	61,236	K8AJS	15,744
W4EE	43,440	WA3MD	12,992
NØEO (AAØAW, op)	38,976	W4KPG	12,672
N5DO	19,980		
K1ZE	19,694	Single Operator Unlimited, CW Only, QRP	
		K3TW	12,000

NØUR	1,680	VE6BBP	1,892
W6MZ	1,300	VA1MM	56
W5/KH6KG	384		
N3CW	88	Single Operator, CW Only, Low Power	
Multioperator, Single Transmitter, High Power		VA3GUY	3,344
NX5M	281,280	VE3VN	2,664
NV9L	247,170	VE3TM	2,352
AA1JD	159,360	VE3FJ	2,296
W4DR	110,296	VE3SST	1,584
N7AT	108,984	VA3RKM	1,056
W8PR	77,356	VE5GC	720
W6UE	67,200	VE4JBB	720
W3RFC	66,000	VE6QO	648
W4AAW	63,624	VA3SY	608
K3CCR	56,012	Single Operator, CW Only, QRP	
Multioperator, Single Transmitter, Low Power		VE6EX	768
NC1CC	20,280	VE3CBK	60
WA1S	16,200	Single Operator Unlimited, Mixed Mode, High Power	
W1FM	10,816	VE5MX	68,620
W7TVC	10,304	VA2CZ	21,252
W4AMC	9,724	VA3WW	1,722
W8RP	7,936	VA2WA	1,100
KØNR	5,940	OT6M (ON9CC, op)	680
W9ET	2,992	Single Operator Unlimited, Mixed Mode, Low Power	
KC3KOH	464	VA3DF	66,150
W4BSF	84	VE7CA	1,360
		VE6TL	720
Canada		VE3KTB	272
Single Operator, Mixed Mode, High Power		VE7AHT	160
VE3KZ	99,858	VE2GT	120
VE3MM	14,280	Single Operator Unlimited, Phone Only, High Power	
VE3TW	2,204	VA3PC	1,944
VE3BR	2,016	VE3HED	476
VE2EZD	80	Single Operator Unlimited, Phone Only, Low Power	
Single Operator, Mixed Mode, Low Power		VE2HAY	48
VE1ZA	31,120	VE4MAD	24
VA7MM	2,688	VA2FW	2
VA3EON	1,170	Single Operator Unlimited, CW Only, High Power	
VE7ZR	1,056	VE2FK	17,664
VE3CNA	494	Single Operator Unlimited, CW Only, Low Power	
VE6/KE5JA	150	VA3EC	2,880
VE2NCG	32	VE4VJR	64
VE3OTL	2	Single Operator Unlimited, CW Only, QRP	
Single Operator, Phone Only, High Power		VA3AMX	160
VA2BN	4,872	Multioperator, Single Transmitter, High Power	
Single Operator, Phone Only, Low Power		VE9CB	1,204
VA2LGQ	70	Multioperator, Single Transmitter, Low Power	
VA2DG	24	VE3LON	680
VE3BKM	8		
Single Operator, CW Only, High Power			
VE9HF	20,088		
VE3PN	11,128		
VE3EJ	10,700		
VE3NNT	10,560		
VA7ST	3,536		
VE9AA	2,240		
VE3DZ	2,220		

DX

Single Operator, Mixed Mode, High Power

VR2XAN	22,040
PA1T	6,552
PV8DX	4,032
G4FKA	2,940
JA3QOS	2,184
F4GXX	1,470
JA9LJS	600
LY9Y	576
VK3TZ	552
JF9JTS	550

Single Operator, Mixed Mode, Low Power

LW1EUD	110,700
PV8ADI	57,120
OA4SS	48,822
PY2AXH	18,144
V31MA	14,288
NP2P (N2TTA, op)	8,688
PR4C (PY2TI, op)	8,246
DU3LA	7,370
YV5EMG	6,808
YV5JGO	4,972

Single Operator, Mixed Mode, QRP

PY2NY	15,756
LU7VCH	5,304
JR1UJX	2,882
PY2VTC	1,316
PY1XR	858
YBØANN	230
PY2ZQ	210
JR2EKD	120
DW3TRZ	72
PP5BSD	48

Single Operator, Phone Only, High Power

CV7S (CX7SS, op)	108,576
PX2A (PY2LED, op)	105,780
LU8VLE	41,358
CE5JZO	38,076
HK3C	20,424
CB8E (CE8EIO, op)	17,238
LU5AB	17,108
PJ4DX	13,104
PY5DC	8,214
PY2RKG	6,032

Single Operator, Phone Only, Low Power

CE7VPQ	45,056
FY5KE (F5DKO, op)	37,570
CE6UFF	32,832
LU9VD (LU9VEA, op)	22,776
LW5DPG	22,176
PY2CX	20,736
TI2CC	9,590
CA4PSH	9,500
TG9ADQ	9,112
ZV5B	8,268

Single Operator, Phone Only, QRP

PU4ALZ	1,092
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PY2BN	960
JQ1NGT	208
PU2NKC	168
9W6MUL	150
JA1NEZ	120
DU4DXT	72
PA2TMS	40
JH3DMQ	18
A61BK	8

Single Operator, CW Only, High Power

CX9AU	142,080
CE2ML	87,696
PJ2ND (K8ND, op)	37,904
YV4ABR	23,520
LU8DZJ	21,600
DL2OM	6,240
VK2BJ	5,616
HP1RIS	4,400
VK2GR	2,176
VK4SN	2,176

Single Operator, CW Only, Low Power

LU5DF	134,680
LU6DOT	49,820
LW9EKA	37,816
V51YJ	34,200
PY2XC	11,008
HP1AC	8,400
LU6FLZ	6,048
CO2RQ	4,536
JJ1LBJ	3,608
XQ3SK	3,240

Single Operator, CW Only, QRP

JA1YNE (JR1NKN, op)	2,508
US5VX	1,092
JM1MTE	288
EU6DX	288
JG1GOY	128
9A2EY	80
JR1USU	72
JE1ILP	72
4L6QL	64
DJ3GE	60

Single Operator Unlimited, Mixed Mode, High Power

CE2LR	174,482
CX5UA	87,360
DL2ARD	72,924
PY5ZHP	64,940
PY5AMF	57,168
LU2EE (LW5EE, op)	30,772
JH4UTP	11,264
EF5Y (EA5FR, op)	9,048
DJ8OG	5,350
NH2DX (KG6DX, op)	4,706

Single Operator Unlimited, Mixed Mode, Low Power

9Z4Y	44,288
PR8KW	11,376
PY1ZV	9,288
PY4LH	6,188
JH6WHN	5,112

PY1AX	4,608
4F3BZ	4,268
PY1KB	3,800
PY1FI	3,360
PY1AN	2,520

Single Operator Unlimited, Mixed Mode, QRP

JK1TCV	1,078
BH6KWC	456
LZ5QZ	36

Single Operator Unlimited, Phone Only, High Power

PP5BZ	85,008
LU5VV	71,832
LU1DX	60,900
ZW5T (PY5ZD, op)	41,904
HI3LT (HI3CC, op)	27,146
JA7OWD	3,900
PY2GZ	700
VK4QH	696
PY2TMV	384
S52T	252

Single Operator Unlimited, Phone Only, Low Power

LW4EF	27,108
PU8UMR	18,768
PP1WW	16,660
PU2UAF	14,476
PY2CP	11,610
YV7MAY	7,936
PY3PA	6,688
CE7KF	1,560
VK2NSS	1,008
PR7RBA	980
PP7DX	980

Single Operator Unlimited, Phone Only, QRP

LU4VZ	15,394
PU2VJI	24

Single Operator Unlimited, CW Only, High Power

P4/DL6RAI	163,584
CX2BR	78,880
LU7HN	58,804
PP5AX	33,072
OY1CT	19,440
LU7YS	16,428
LU3CW	15,600
ZL6YOTA (ZL4YL, op)	12,768
DH8BQA	12,636
ZM2B (ZL2BR, op)	6,104

Single Operator Unlimited, CW Only, Low Power

LT7D (LU7DID, op)	110,976
PY4XX	21,344
4F3OM	6,560
D4C (IK2NCJ, op)	6,148
PP5PG	2,480
PY3DX	2,016
JG3WDN	1,692
PA3DAT	1,188
LA5LJA	900
LU9DDJ	896

Single Operator Unlimited, CW Only, QRP

DU3GKT	400
DLØBSK	120

Multioperator, Single Transmitter, High Power

LW7DX	423,878
PT3T	315,684
PY5BH	66,552
VK6NC	6,766
9H6A	1,768
JK2VOC	1,020
EE5T	744
EA3HJO	140

Multioperator, Single Transmitter, Low Power

PR2E	60,344
LU9DAG	43,092
PP5EI	25,254
PY2ANY	19,074
LW5DW	7,178
PY2GMR	200
DX9EVM	24

Mexico

Single Operator, Mixed Mode, Low Power

XE1H	4,930
XE1SVT	4,266
XE2NK	520
XE1GZU	252

Single Operator, Phone Only, High Power

XE1RF	1,632
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Single Operator, Phone Only, Low Power

XE2PEA	6,240
XE1J	2,196
XE2PXN	1,476
XE2KSL	72
XE1DBE	36

Single Operator, CW Only, High Power

XE2V	4,284
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Single Operator, CW Only, Low Power

XE1CT	47,040
XE1RZL	5,544
XE1AY	2,016
XE2S	1,680
XE3A	416
XE2MVY	384

Single Operator Unlimited, Mixed Mode, Low Power

XE2OK	192
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Single Operator Unlimited, Phone Only, Low Power

XE2JS	8,820
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Single Operator Unlimited, Phone Only, QRP

XE2JTS	50
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Single Operator Unlimited, CW Only, High Power

XE2CQ	19,800
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Single Operator Unlimited, CW Only, Low Power

XE2B	19,992
XE1EE	4,488

Multioperator, Single Transmitter, Low Power

XE2N	20
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Continental Winners

Africa			Single Operator, Phone Only, Low Power	EA8OM	3,434	Single Operator, Phone Only, Low Power	IZ3KIF	240
Single Operator, Mixed Mode, Low Power	EA8OM	3,434	Single Operator, Phone Only, High Power	FR4QT	928	Single Operator, Phone Only, Low Power	PA2TMS	40
Single Operator, Phone Only, High Power	FR4QT	928	Single Operator, CW Only, Low Power	EA8TR	564	Single Operator, CW Only, High Power	DL2OM	6,240
Single Operator, Phone Only, Low Power	EA8TR	564	Single Operator Unlimited, Mixed Mode, High Power	V51YJ	34,200	Single Operator, CW Only, QRP	DL9ZP	2,240
Single Operator, CW Only, Low Power	V51YJ	34,200	Single Operator Unlimited, Mixed Mode, Low Power	TZ4AM	2	Single Operator Unlimited, Mixed Mode, QRP	US5VX	1,092
Single Operator Unlimited, Mixed Mode, High Power	TZ4AM	2	Single Operator Unlimited, CW Only, Low Power	EA8/IK1PMR	666	Single Operator Unlimited, Mixed Mode, High Power	DL2ARD	72,924
Single Operator Unlimited, Mixed Mode, Low Power	EA8/IK1PMR	666		D4C (IK2NCJ, op)	6,148	Single Operator Unlimited, Mixed Mode, Low Power	PA4O	2,250
Single Operator Unlimited, CW Only, Low Power	D4C (IK2NCJ, op)	6,148				Single Operator Unlimited, Mixed Mode, QRP	LZ5QZ	36
Asia						Single Operator Unlimited, Phone Only, High Power	S52T	252
Single Operator, Mixed Mode, High Power	VR2XAN	22,040				Single Operator Unlimited, Phone Only, Low Power	EA4AA	90
Single Operator, Mixed Mode, Low Power	JR1MEG/1	2,400				Single Operator Unlimited, CW Only, High Power	OY1CT	19,440
Single Operator, Mixed Mode, QRP	JR1UJX	2,882				Single Operator Unlimited, CW Only, Low Power	PA3DAT	1,188
Single Operator, Phone Only, High Power	RNØCT	630				Single Operator Unlimited, CW Only, QRP	DLØBSK	120
Single Operator, Phone Only, Low Power	JR1AKD/1	792				Multioperator, Single Transmitter, High Power	9H6A	1,768
Single Operator, Phone Only, QRP	JQ1NGT	208				North America		
Single Operator, CW Only, High Power	JR3RIU	620				Single Operator, Mixed Mode, High Power	HI8RD	144
Single Operator, CW Only, Low Power	JJ1LBJ	3,608				Single Operator, Mixed Mode, Low Power	V31MA	14,288
	JA1YNE (JR1NKN, op)	2,508				Single Operator, Phone Only, Low Power	TI2CC	9,590
Single Operator, CW Only, QRP	JH4UTP	11,264				Single Operator, CW Only, High Power	HP1RIS	4,400
Single Operator Unlimited, Mixed Mode, High Power	JH6WHN	5,112				Single Operator, CW Only, Low Power	HP1AC	8,400
Single Operator Unlimited, Mixed Mode, Low Power	JK1TCV	1,078				Single Operator Unlimited, Mixed Mode, High Power	NP4LW	1,440
Single Operator Unlimited, Mixed Mode, QRP	JA7OWD	3,900				Single Operator Unlimited, Phone Only, High Power	HI3LT (HI3CC, op)	27,146
Single Operator Unlimited, Phone Only, High Power	BX2AFS	32				Single Operator Unlimited, CW Only, Low Power	KP3W	336
Single Operator Unlimited, Phone Only, Low Power	JA6GCE	4,888				Oceania		
Single Operator Unlimited, CW Only, High Power	JG3WDN	1,692				Single Operator, Mixed Mode, High Power	VK3TZ	552
Single Operator Unlimited, CW Only, Low Power	JK2VOC	1,020				Single Operator, Mixed Mode, Low Power	DU3LA	7,370
Multioperator, Single Transmitter, High Power						Single Operator, Mixed Mode, QRP	YBØANN	230
Europe						Single Operator, Phone Only, High Power	VK4CZ	1,008
Single Operator, Mixed Mode, High Power	PA1T	6,552				Single Operator, Phone Only, Low Power	VK4FOMP	168
Single Operator, Mixed Mode, Low Power	CT7ACG	348				Single Operator, Phone Only, QRP	9W6MUL	150
Single Operator, Mixed Mode, QRP	LZ2AF/P	36				Single Operator, CW Only, High Power	VK2BJ	5,616
Single Operator, Phone Only, High Power	M6T (GØAEV, op)	1,938				Single Operator, CW Only, Low Power	VK2IG	1,736

Single Operator Unlimited, Mixed Mode, High Power	NH2DX (KG6DX, op)	4,706
Single Operator Unlimited, Mixed Mode, Low Power	4F3BZ	4,268
Single Operator Unlimited, Phone Only, High Power	VK4QH	696
Single Operator Unlimited, Phone Only, Low Power	VK2NSS	1,008
Single Operator Unlimited, CW Only, High Power	ZL6YOTA (ZL4YL, op)	12,768
Single Operator Unlimited, CW Only, Low Power	4F3OM	6,560
Single Operator Unlimited, CW Only, QRP	DU3GKT	400
Multioperator, Single Transmitter, High Power	VK6NC	6,766
Multioperator, Single Transmitter, Low Power	DX9EVM	24

South America

Single Operator, Mixed Mode, High Power	PV8DX	4,032
Single Operator, Mixed Mode, Low Power	LW1EUD	110,700
Single Operator, Mixed Mode, QRP	PY2NY	15,756
Single Operator, Phone Only, High Power	CV7S (CX7SS, op)	108,576
Single Operator, Phone Only, Low Power	CE7VPQ	45,056
Single Operator, Phone Only, QRP	PU4ALZ	1,092
Single Operator, CW Only, High Power	CX9AU	142,080
Single Operator, CW Only, Low Power	LU5DF	134,680
Single Operator Unlimited, Mixed Mode, High Power	CE2LR	174,482
Single Operator Unlimited, Mixed Mode, Low Power	9Z4Y	44,288
Single Operator Unlimited, Phone Only, High Power	PP5BZ	85,008
Single Operator Unlimited, Phone Only, Low Power	LW4EF	27,108
Single Operator Unlimited, Phone Only, QRP	LU4VZ	15,394
Single Operator Unlimited, CW Only, High Power	P4/DL6RAI	163,584
Single Operator Unlimited, CW Only, Low Power	LT7D (LU7DID, op)	110,976
Multioperator, Single Transmitter, High Power	LW7DX	423,878
Multioperator, Single Transmitter, Low Power	PR2E	60,344

Division Winners

Single Operator, Mixed Mode, High Power

Atlantic	K3ZO	141,100
Central	WØAIH	384,652
Dakota	KØTT	135,408
Delta	N8OO	443,954
Great Lakes	K8MR	65,514
Hudson	N2ED	30,660
Midwest	ABØRX	41,182
New England	K1KI	196,876
Northwestern	W7GKF	11,900
Pacific	K6YK	14,416
Roanoke	N4YDU	155,216
Rocky Mountain	K5TA	30,380
Southeastern	N4EEB	419,136
Southwestern	W1PR	12,606
West Gulf	K5NA	231,952
Canada	VE3KZ	99,858

Single Operator, Mixed Mode, Low Power

Atlantic	NS3T	17,712
Central	ND9G	43,890
Dakota	KØAD	46,632
Delta	W4DAN	18,392
Great Lakes	W8CO	5,684
Hudson	WA2ALY	7,450
Midwest	KIØI	8,568
New England	K1VSJ	9,912
Northwestern	N7LOX	14,652
Pacific	N6NF	3,348
Roanoke	N8II	169,260
Rocky Mountain	W5RDL	6,912
Southeastern	K2PS	178,746
Southwestern	WA7NB	41,760
West Gulf	W5GCX	12,810
Canada	VE1ZA	31,120
México	XE1H	4,930

Single Operator, Mixed Mode, QRP

Central	AF9J	252
Delta	N4ELM	6,790
Hudson	WB2AMU	3,780
Pacific	K6DAJ	100
Rocky Mountain	WC7S	2
Southwestern	WA6FGV	10,010

Single Operator, Phone Only, High Power

Atlantic	WA8UEG	9,512
Central	KF9US	9,912
Dakota	WDØBMS	1,750
Delta	K4HWS	1,332
Great Lakes	N8BI	6,324
Hudson	KE2DX	27,448
Midwest	WØPPF	784
New England	AF1T	31,050
Northwestern	KB7QFE	140
Pacific	N6AJ	1,960
Roanoke	N4MM	9,324
Rocky Mountain	K9MWM	320
Southeastern	W4DD	25,248
Southwestern	KD7RF	3,876
West Gulf	W5PR	77,520

Canada	VA2BN	4,872	West Gulf	AE5GT	77,040
México	XE1RF	1,632	Canada	VA3GUY	3,344
Single Operator, Phone Only, Low Power			México	XE1CT	47,040
Atlantic	K2SDS	10,428	Single Operator, CW Only, QRP		
Central	N9RJM	4,450	Atlantic	K2SM	3,740
Dakota	NØVRM	2,024	Central	K4NAX	3,360
Delta	WD5DJW	4,268	Dakota	NDØC	108
Great Lakes	N8WCP	110	Delta	AC4G	5,040
Hudson	NO2EL	5,220	Great Lakes	N8AP	10,440
Midwest	AGØM	676	Hudson	WO2N	924
New England	K1YWW	1,760	Midwest	NØJK	816
Northwestern	N7FLT	486	New England	K1SX	2,304
Pacific	K7XE	500	Pacific	AC6YY	1,248
Roanoke	KB4OLM	3,456	Roanoke	KS4YX	2,408
Rocky Mountain	KG5ANO	330	Rocky Mountain	W5GZ	3,168
Southeastern	KC1IH	2,968	Southeastern	N7RCS	16,848
Southwestern	NF7E	4,452	West Gulf	N5OE	31,356
West Gulf	N5YBG	462	Canada	VE6EX	768
Canada	VA2LQG	70	Single Operator Unlimited, Mixed Mode, High Power		
México	XE2PEA	6,240	Atlantic	K3WW	103,964
Single Operator, Phone Only, QRP			Central	K9NR	43,368
Central	KC9AMM	32	Dakota	KØTI	57,114
New England	N1AIA	2	Delta	AA5AU	95,472
Pacific	WB6CZG	108	Great Lakes	N4QS	66,236
Rocky Mountain	KEØJWQ	22	Hudson	K2CYE	45,508
Southeastern	KS4GW	72	Midwest	K3PA	58,254
Southwestern	W6QU (W8QZA, op)	3,234	New England	W3EP	199,120
Single Operator, CW Only, High Power			Northwestern	N7NM	28,782
Atlantic	K3TC	45,408	Pacific	N3RC	6,348
Central	K9BGL	20,992	Roanoke	N4RV	139,958
Dakota	NØAT	58,140	Rocky Mountain	NG7M	30,080
Delta	W5KI	3,600	Southeastern	K5KG	189,372
Great Lakes	NA8V	51,792	Southwestern	AA6PW	67,284
Hudson	W2OIB	48,348	West Gulf	K5BG	20,240
Midwest	AD4OS	1,500	Canada	VE5MX	68,620
New England	W1ECT	54,708	Single Operator Unlimited, Mixed Mode, Low Power		
Northwestern	N7EPD	19,488	Atlantic	W3KB	15,624
Pacific	KH7M (KH6ZM, op)	48,960	Central	K9PG	7,384
Roanoke	N4XD	86,612	Dakota	NØEO (AAØAW, op)	38,976
Rocky Mountain	N2IC	88,500	Delta	K4LPQ	280
Southeastern	NN7CW	248,080	Great Lakes	N8VV	18,648
Southwestern	K6NR	61,824	Hudson	WA2JQK	19,504
West Gulf	AC4CA	22,608	Midwest	KØKEX	1,534
Canada	VE9HF	20,088	New England	K1ZE	19,694
México	XE2V	4,284	Northwestern	K7QA	1,904
Single Operator, CW Only, Low Power			Pacific	WQ6X	5,418
Atlantic	W3BGN	63,400	Roanoke	K4JKB	10,432
Central	W9RE	46,848	Southeastern	K9OM	105,544
Dakota	KNØV	30,744	Southwestern	AC7JM	4,620
Delta	N5EE	33,368	West Gulf	K5KJ	61,236
Great Lakes	K4FT	21,440	Canada	VA3DF	66,150
Hudson	N2CJ	10,240	México	XE2OK	192
Midwest	KØFLY	39,396	Single Operator Unlimited, Mixed Mode, QRP		
New England	K1VUT	44,712	Atlantic	K2QO	704
Northwestern	K7JF	3,168	Dakota	KØTLG	1,008
Pacific	N7YK	33,136	Great Lakes	K8ZT	2,080
Roanoke	K7SV	39,780	Pacific	K2GMY	7,130
Rocky Mountain	K6XT	4,704	Single Operator Unlimited, Phone Only, High Power		
Southeastern	N4WW (N4KM, op)	177,936	Atlantic	K3SOM	4,464
Southwestern	W7IV	32,264			

Central	W9JA	2,400
Dakota	KØJM	644
Delta	WV4P	9,120
Great Lakes	N8PCN	2,080
Hudson	W2RD	21,952
Northwestern	K7STO	240
Roanoke	WS4WW	1,722
Southeastern	KN4BIT	7,350
Southwestern	KC1BB	8,040
Canada	VA3PC	1,944

Single Operator Unlimited, Phone Only, Low Power

Atlantic	KC3INR	130
Central	K2DRH	38,266
Dakota	KØMCG	234
Delta	W5TCB	756
Great Lakes	N8VZ	252
New England	W4FEB	50
Pacific	N6ORB	44
Roanoke	W4ZAO	3,744
Rocky Mountain	N7MZW	352
Southeastern	AJ4VE	1,188
Southwestern	AF6F	84
West Gulf	K5YM	504
Canada	VE2HAY	48
México	XE2JS	8,820

Single Operator Unlimited, Phone Only, QRP

Atlantic	KC3KBE	32
México	XE2JTS	50

Single Operator Unlimited, CW Only, High Power

Atlantic	N2MM	136,144
Central	A19T	45,288
Dakota	K1KD	2,400
Delta	NA5NN (W5UE, op)	52,752
Great Lakes	W8CZN	38,220
Hudson	W2GDJ	58,300
Midwest	NØAV	13,144
New England	WA1J (N1TA, op)	73,216
Northwestern	N4SL	16,576
Pacific	K3EST	101,760
Roanoke	NR4M	73,416
Rocky Mountain	KØUK	1,380
Southeastern	N4BP	247,792
Southwestern	N6SS	119,808
West Gulf	KØNM	82,592
Canada	VE2FK	17,664
México	XE2CQ	19,800

Single Operator Unlimited, CW Only, Low Power

Atlantic	WA3MD	12,992
Central	W9XT	65,448
Delta	W4HRC	2,028
Great Lakes	K8AJS	15,744
Hudson	K2DFC	41,400
Midwest	NØNI	35,616
New England	W1VEM	25,620
Northwestern	W6OAT	2,400
Pacific	N6YEU	4,928
Roanoke	NJ4Q	3,808
Southeastern	AA4NP	19,312
Southwestern	K6PO	6,700
West Gulf	W5RYA	26,788

Canada	VA3EC	2,880
México	XE2B	19,992

Single Operator Unlimited, CW Only, QRP

Dakota	NØUR	1,680
Delta	W5/KH6KG	384
Roanoke	N3CW	88
Southeastern	K3TW	12,000
Southwestern	W6MZ	1,300
Canada	VA3AMX	160

Multioperator, Single Transmitter, High Power

Atlantic	W3RFC	66,000
Central	NV9L	247,170
Great Lakes	W8PR	77,356
Midwest	WØIW	31,680
New England	AA1JD	159,360
Northwestern	K7RAT	8,448
Pacific	W7EB	10,962
Roanoke	W4DR	110,296
Southeastern	WB4WXE	1,824
Southwestern	N7AT	108,984
West Gulf	NX5M	281,280
Canada	VE9CB	1,204

Multioperator, Single Transmitter, Low Power

Atlantic	KC3KOH	464
Central	W9ET	2,992
Delta	W4BSF	84
Great Lakes	W8RP	7,936
New England	NC1CC	20,280
Northwestern	W7TVC	10,304
Roanoke	W4AMC	9,724
Rocky Mountain	KØNR	5,940
Southeastern	WA1S	16,200
West Gulf	OK1OFM	30
Canada	VE3LON	680
México	XE2N	20

Regional Leaders

Boxes list call sign, score, and class:

MSHP = Multioperator, Single Transmitter, High Power
 MSLP = Multioperator, Single Transmitter, Low Power
 SO-CW-HP = Single Operator, CW Only, High Power
 SO-CW-LP = Single Operator, CW Only, Low Power
 SO-CW-QRP = Single Operator, CW Only, QRP
 SO-MIX-HP = Single Operator, Mixed Mode, High Power
 SO-MIX-LP = Single Operator, Mixed Mode, Low Power
 SO-MIX-QRP = Single Operator, Mixed Mode, QRP
 SO-PH-HP = Single Operator, Phone Only, High Power
 SO-PH-LP = Single Operator, Phone Only, Low Power
 SO-PH-QRP = Single Operator, Phone Only, QRP
 SOU-CW-HP = Single Operator Unlimited, CW Only, High Power
 SOU-CW-LP = Single Operator Unlimited, CW Only, Low Power
 SOU-CW-QRP = Single Operator Unlimited, CW Only, QRP
 SOU-MIX-HP = Single Operator Unlimited, Mixed Mode, High Power
 SOU-MIX-LP = Single Operator Unlimited, Mixed Mode, Low Power
 SOU-MIX-QRP = Single Operator Unlimited, Mixed Mode, QRP
 SOU-PH-HP = Single Operator Unlimited, Phone Only, High Power
 SOU-PH-LP = Single Operator Unlimited, Phone Only, Low Power
 SOU-PH-QRP = Single Operator Unlimited, Phone Only, QRP

West Coast Region

(Pacific, Northwestern and Southwestern Divisions; Alberta, British Columbia and NT Sections)

K6YK	14,416	SO-MIX-HP
W1PR	12,606	SO-MIX-HP
AI6O	12,300	SO-MIX-HP
W7GKF	11,900	SO-MIX-HP
N6VOH	7,784	SO-MIX-HP
WA7NB	41,760	SO-MIX-LP
WN6K	28,208	SO-MIX-LP
N7LOX	14,652	SO-MIX-LP
WA7NWL	14,356	SO-MIX-LP
N6LL	9,300	SO-MIX-LP
WA6FGV	10,010	SO-MIX-QRP
K6DAJ	100	SO-MIX-QRP
KD7RF	3,876	SO-PH-HP
N6AJ	1,960	SO-PH-HP
KB7QFE	140	SO-PH-HP
NF7E	4,452	SO-PH-LP
K7XE	500	SO-PH-LP
N7FLT	486	SO-PH-LP
N7MZ	406	SO-PH-LP
K7VIT	336	SO-PH-LP
W6QU (W8QZA, op)	3,234	SO-PH-QRP
WB6CZG	108	SO-PH-QRP
KM6HDY	4	SO-PH-QRP
K6NR	61,824	SO-CW-HP
KH7M (KH6ZM, op)	48,960	SO-CW-HP
K6IJ	42,168	SO-CW-HP
K6LRN	30,488	SO-CW-HP
N7GP	21,684	SO-CW-HP
N7YK	33,136	SO-CW-LP
W7IV	32,264	SO-CW-LP
KM6Z	15,792	SO-CW-LP
KC7V	6,992	SO-CW-LP
W6ZL	4,500	SO-CW-LP
AC6YY	1,248	SO-CW-QRP
VE6EX	768	SO-CW-QRP

K6JS	480	SO-CW-QRP
AE6JV	16	SO-CW-QRP
AA6PW	67,284	SOU-MIX-HP
NA2U	62,504	SOU-MIX-HP
W7ZR	52,680	SOU-MIX-HP
N9NA	31,154	SOU-MIX-HP
N7NM	28,782	SOU-MIX-HP
WQ6X	5,418	SOU-MIX-LP
AC7JM	4,620	SOU-MIX-LP
K7QA	1,904	SOU-MIX-LP
WA7AXT	1,408	SOU-MIX-LP
VE7CA	1,360	SOU-MIX-LP
K2GMY	7,130	SOU-MIX-QRP
K6MI	448	SOU-MIX-QRP
KC1BB	8,040	SOU-PH-HP
K7STO	240	SOU-PH-HP
AA7VR	16	SOU-PH-HP
AF6F	84	SOU-PH-LP
N6ORB	44	SOU-PH-LP
NO6G	16	SOU-PH-LP
N6SS	119,808	SOU-CW-HP
K3EST	101,760	SOU-CW-HP
W6YX (N7MH, op)	87,108	SOU-CW-HP
W7RN (K5RC, op)	63,896	SOU-CW-HP
KY7M	52,640	SOU-CW-HP
K6PO	6,700	SOU-CW-LP
N6YEU	4,928	SOU-CW-LP
KX6A	3,264	SOU-CW-LP
W6OAT	2,400	SOU-CW-LP
W7KKM	1,144	SOU-CW-LP
W6MZ	1,300	SOU-CW-QRP
N7AT	108,984	MSHP
W6UE	67,200	MSHP
W7EB	10,962	MSHP
W6LP	8,924	MSHP
K7RAT	8,448	MSHP
W7TVC	10,304	MSLP

Midwest Region

(Dakota, Midwest, Rocky Mountain and West Gulf Divisions; Manitoba and Saskatchewan Sections)

K5NA	231,952	SO-MIX-HP
KØTT	135,408	SO-MIX-HP
WAØMHJ	112,660	SO-MIX-HP
ABØRX	41,182	SO-MIX-HP
N7WY	36,252	SO-MIX-HP
KØAD	46,632	SO-MIX-LP
ACØW	24,012	SO-MIX-LP
WØZQ	19,530	SO-MIX-LP
W5GCX	12,810	SO-MIX-LP
WW3K	12,168	SO-MIX-LP
WC7S	2	SO-MIX-QRP
W5PR	77,520	SO-PH-HP
WDØBMS	1,750	SO-PH-HP

KØPG	7,200	SOU-MIX-LP	N4TB	238,920	SO-CW-HP
K8ZT	2,080	SOU-MIX-QRP	NN4X	96,580	SO-CW-HP
W9JA	2,400	SOU-PH-HP	N4XD	86,612	SO-CW-HP
N8PCN	2,080	SOU-PH-HP	KU8E	74,420	SO-CW-HP
VA3PC	1,944	SOU-PH-HP	N4WW (N4KM, op)	177,936	SO-CW-LP
VE3HED	476	SOU-PH-HP	K7SV	39,780	SO-CW-LP
K2DRH	38,266	SOU-PH-LP	N1TO	36,120	SO-CW-LP
N9UDO	768	SOU-PH-LP	N5EE	33,368	SO-CW-LP
N8VZ	252	SOU-PH-LP	KN4Y	26,344	SO-CW-LP
N9BC	140	SOU-PH-LP	N7RCS	16,848	SO-CW-QRP
K9BBQ	84	SOU-PH-LP	AC4G	5,040	SO-CW-QRP
A19T	45,288	SOU-CW-HP	W4ZGR	4,324	SO-CW-QRP
N7US	41,616	SOU-CW-HP	N3GD	4,232	SO-CW-QRP
W8CZN	38,220	SOU-CW-HP	KS4YX	2,408	SO-CW-QRP
KA9FOX	22,072	SOU-CW-HP	K5KG	189,372	SOU-MIX-HP
N8BJQ	18,816	SOU-CW-HP	K4WI	155,430	SOU-MIX-HP
W9XT	65,448	SOU-CW-LP	N4RV	139,958	SOU-MIX-HP
WT9Q	47,880	SOU-CW-LP	K4MM	134,136	SOU-MIX-HP
K8AJS	15,744	SOU-CW-LP	N2TU	111,962	SOU-MIX-HP
N8EA	9,920	SOU-CW-LP	K9OM	105,544	SOU-MIX-LP
VA3EC	2,880	SOU-CW-LP	W4EE	43,440	SOU-MIX-LP
VA3AMX	160	SOU-CW-QRP	K4JKB	10,432	SOU-MIX-LP
NV9L	247,170	MSHP	WN4AFP	3,948	SOU-MIX-LP
W8PR	77,356	MSHP	W4PM	3,276	SOU-MIX-LP
W8RP	7,936	MSLP	WV4P	9,120	SOU-PH-HP
W9ET	2,992	MSLP	KN4BIT	7,350	SOU-PH-HP
VE3LON	680	MSLP	K4KKC	5,460	SOU-PH-HP
			W4KW	1,824	SOU-PH-HP
			WS4WW	1,722	SOU-PH-HP
Southeast Region			W4ZAO	3,744	SOU-PH-LP
(Delta, Roanoke and Southeastern Divisions)			AJ4VE	1,188	SOU-PH-LP
N8OO	443,954	SO-MIX-HP	W5TCB	756	SOU-PH-LP
N4EEB	419,136	SO-MIX-HP	K4LDC	726	SOU-PH-LP
N4OX	210,504	SO-MIX-HP	KC2DPF	520	SOU-PH-LP
N4YDU	155,216	SO-MIX-HP	N4BP	247,792	SOU-CW-HP
KM4HI	65,844	SO-MIX-HP	NR4M	73,416	SOU-CW-HP
K2PS	178,746	SO-MIX-LP	KØLUZ	70,992	SOU-CW-HP
N8II	169,260	SO-MIX-LP	W4CU	56,448	SOU-CW-HP
WB4TDH	132,624	SO-MIX-LP	NA5NN (W5UE, op)	52,752	SOU-CW-HP
WD5F	77,836	SO-MIX-LP	AA4NP	19,312	SOU-CW-LP
K4EJ	57,230	SO-MIX-LP	W4KPG	12,672	SOU-CW-LP
N4ELM	6,790	SO-MIX-QRP	AF3K	12,416	SOU-CW-LP
NA4C	364	SO-MIX-QRP	KM2T	10,092	SOU-CW-LP
W4DD	25,248	SO-PH-HP	N4LF	6,448	SOU-CW-LP
N4MM	9,324	SO-PH-HP	K3TW	12,000	SOU-CW-QRP
W4SLT	2,436	SO-PH-HP	W5/KH6KG	384	SOU-CW-QRP
K4HWS	1,332	SO-PH-HP	N3CW	88	SOU-CW-QRP
W1LBV	342	SO-PH-HP	W4DR	110,296	MSHP
WD5DJW	4,268	SO-PH-LP	W4AAW	63,624	MSHP
KB4OLM	3,456	SO-PH-LP	W4MYA	14,960	MSHP
KC1IH	2,968	SO-PH-LP	WB4WXE	1,824	MSHP
N9OU	2,496	SO-PH-LP	WA1S	16,200	MSLP
AE4M	2,464	SO-PH-LP	W4AMC	9,724	MSLP
KS4GW	72	SO-PH-QRP	W4BSF	84	MSLP
NN7CW	248,080	SO-CW-HP			

Northeast Region

(New England, Hudson and Atlantic Divisions; Maritime and Quebec Sections)

K1KI	196,876	SO-MIX-HP
K3ZO	141,100	SO-MIX-HP
N2ED	30,660	SO-MIX-HP
K1RO	26,660	SO-MIX-HP
NS2N	24,864	SO-MIX-HP
VE1ZA	31,120	SO-MIX-LP
NS3T	17,712	SO-MIX-LP
K1VSJ	9,912	SO-MIX-LP
KØDI	9,050	SO-MIX-LP
WA1LAD	8,460	SO-MIX-LP
WB2AMU	3,780	SO-MIX-QRP
K2YGM	936	SO-MIX-QRP
WA2CLP	228	SO-MIX-QRP
AF1T	31,050	SO-PH-HP
KE2DX	27,448	SO-PH-HP
K2XA	23,422	SO-PH-HP
N8RA	13,200	SO-PH-HP
WA8UEG	9,512	SO-PH-HP
K2SDS	10,428	SO-PH-LP
NO2EL	5,220	SO-PH-LP
W3MBC	2,832	SO-PH-LP
N1NQD	2,688	SO-PH-LP
K1YWW	1,760	SO-PH-LP
N1AIA	2	SO-PH-QRP
W1ECT	54,708	SO-CW-HP
W2OIB	48,348	SO-CW-HP
K1RM	47,112	SO-CW-HP
K3TC	45,408	SO-CW-HP
KW2J	43,428	SO-CW-HP
W3BGN	63,400	SO-CW-LP
K1VUT	44,712	SO-CW-LP
W1QK	30,240	SO-CW-LP
N1IX	19,440	SO-CW-LP
W3CB	14,144	SO-CW-LP
K2SM	3,740	SO-CW-QRP
K1SX	2,304	SO-CW-QRP
KN1H	1,120	SO-CW-QRP
WO2N	924	SO-CW-QRP
KC2WUF	480	SO-CW-QRP
W3EP	199,120	SOU-MIX-HP
K3WW	103,964	SOU-MIX-HP
K1ZZ	66,480	SOU-MIX-HP
K3AU (K2YWE, op)	55,266	SOU-MIX-HP
N3QE	52,528	SOU-MIX-HP
K1ZE	19,694	SOU-MIX-LP
WA2JQK	19,504	SOU-MIX-LP
W3KB	15,624	SOU-MIX-LP
AC3BU	12,656	SOU-MIX-LP
W2FDJ	11,200	SOU-MIX-LP
K2QO	704	SOU-MIX-QRP
W2RD	21,952	SOU-PH-HP
K3SOM	4,464	SOU-PH-HP

K4JDF	1,452	SOU-PH-HP
K2ANZ	1,102	SOU-PH-HP
W8LYJ	132	SOU-PH-HP
KC3INR	130	SOU-PH-LP
KT3RR	70	SOU-PH-LP
W4FEB	50	SOU-PH-LP
VE2HAY	48	SOU-PH-LP
VA2FW	2	SOU-PH-LP
KC3KBE	32	SOU-PH-QRP
N2MM	136,144	SOU-CW-HP
WA1J (N1TA, op)	73,216	SOU-CW-HP
AA3B	71,820	SOU-CW-HP
W8HAP	63,180	SOU-CW-HP
W2GDJ	58,300	SOU-CW-HP
K2DFC	41,400	SOU-CW-LP
W1VEM	25,620	SOU-CW-LP
WA3MD	12,992	SOU-CW-LP
K1NY	9,632	SOU-CW-LP
W2CG	5,544	SOU-CW-LP
AA1JD	159,360	MSHP
W3RFC	66,000	MSHP
K3CCR	56,012	MSHP
N1SOH	15,600	MSHP
W1AST	4,650	MSHP
NC1CC	20,280	MSLP
W1FM	10,816	MSLP
KC3KOH	464	MSLP