



# 2018 ARRL January VHF Contest Results

By **KK6MC James R. Duffey** ([jamesduffy@comcast.net](mailto:jamesduffy@comcast.net))

## ***FT8, MSK144, and SOTA make up for lack of propagation***

While January VHF contests are always a crapshoot, the 2018 edition, held January 20-22, more than held its own with good activity despite sparse propagation enhancement. Variables such as weather, road conditions, NFL playoffs, conflicting contests, gas prices, and, most importantly, the presence of sporadic E or other enhanced propagation, often drive wild swings in participation. Even with no, or very little sporadic E propagation this year, the number of submitted logs was the highest for a January contest since 2012, the last time the January VHF contest had widespread sporadic E. The increased activity with no interesting propagation was likely due to the rapid adoption of the easy digital mode FT8 and the spreading use of digital meteor scatter with MSK144 to increase grid count. In addition, several regions, most notably southern Arizona, had widespread Summits on the Air (SOTA) activity which added to many scores when the SOTA folks activated normally sparsely populated grids from high elevation spots. The weather was good over most of the US for the contest and was not really a factor in participation, although much of the Midwest had significant fog and an ice storm/blizzard closed in at the end of the contest.

The big news from the 2018 January Contest is the widespread use of the six-month-old digital mode FT8 by participants. Nearly 30% of all QSOs on 6-meters were made with digital modes, and 57 entrants submitted logs that consisted *exclusively* of QSOs made on digital modes, with 49 of those logs on 6-meters. While the extensive use of FT8 has fomented some controversy, many no-code operators used the mode to their advantage in working what would otherwise be marginal or nonexistent contacts. Many old hands made QSOs with FT8 under marginal and often short Es openings that may have otherwise gone unnoticed. The downside to the FT8 activity in the January contest is that it took contest activity away from CW and SSB.

This running of the January VHF contest marked the third year that participants have been allowed to use assistance. The use of assistance has become old hat and most operators have settled into routines that maximize the use of assistance while minimizing the time consumed by using assistance. Most rovers have decided

that APRS, either by internet or RF, is the most efficient way to announce their position, with fixed stations using APRS to track the rovers and [Ping Jockey](#) and the [ON4KST chat](#) pages. Many local groups have chat pages or live web page input where stations can list their activity.

The January 2018 contest also marked the tenth anniversary of splitting the Rover category into three categories. The Unlimited Rover category had a record number of entrants, including several participants in rover packs, for which the Unlimited category was instituted. The Limited Rover category has proven to be very popular, but instead of attracting new blood, it has siphoned off participants in the Classic Rover category, which in turn has reduced rover microwave activity. This is most noticeable in the January contest, where the lack of sporadic E gives rovers and base stations alike more time to explore the higher bands. Most telling, perhaps, is that Classic Rovers only roved, or at least only submitted logs, from six of the ARRL Divisions, while Limited Rovers roved from, and submitted logs from, all but one of the ARRL Divisions.



NC5AX/R set up in Homer, Louisiana (grid square EM32). With AF5WN and KK5WA they activated 9 grids on four bands. NC5AX/R used FT8 *in motion* on 6-meters to make 3 QSOs. They plan to add MSK144 for the June contest. (Photo courtesy KK5WA)

## Single Operator, Low Power (SOLP)

Single Operator Low Power is the most popular category in VHF contesting and this contest was no exception. Despite the large numbers of casual contesters in this category, there is intense competition at the top.



K7XC, long a stalwart on the VHF bands as both a fixed station and rover has returned to VHF operation in Nevada with a vengeance. This is his 3-band stack at sunrise. Tim rebuilt the 2-meter and 432 MHz antennas in the week before the contest and doubled his 2-meter QSO total over last year including several contacts at more than 400 miles - not bad for 100 W! (K7XC photo)

Winner N3RG found out that nothing worked on his antenna stack two days before the contest and rushed to arrange a bucket truck to replace a faulty control cable. This worked well for him, as he moved up from third place in 2017, and displaced perennial SOLP powerhouse K2DRH to second. K2DRH had an impressive effort on essentially flat bands with few Midwest rovers to compensate for the poor conditions. Despite this dearth of activity, Bob posted a category-leading 184 multipliers in his effort. The ice lifted just in time for AF1T to take third place, putting in an impressive eleven-band effort. It may not seem to be worth the trouble to activate the higher bands to work only one or two stations. However, the 8-point QSOs on bands above 2.3 GHz multiply the multipliers from all the other bands and the new grids picked up multiply the QSOs on other bands, so even a relatively small number of QSOs and grids on the microwave bands can contribute significantly to your score.

WA3GFZ and K1KG round out the top five SOLP scorers. WA3GFZ collected 61 grids while operating on 11 bands. K1KG made his way to the fifth place finish the old-fashioned way, no digital, no assistance, and no FM. He lost the battle of football vs contesting, though, and took part of the contest off to watch the New England Patriots win.

## Single Operator, High Power (SOHP)

The Single Operator High Power category is considered by many to be king of the contesting categories. These are usually stations that everyone can rely on for QSOs and that serve as beacons on otherwise dead bands. K1RZ took the SOHP category, taking advantage of perennial SOHP category winner K1TEO's computer crash and subsequent log loss to move up a notch from 2017. K3TUF, operating remotely from EL88, was in second place, despite his not being able to get his 10 GHz station up and running. His complaints about the sofa not being a comfortable operating position largely fell on deaf ears.

VE3ZV took third place, crediting contacts with rovers in grids with sparse activity for helping his score. W5ZN, noting good meteor scatter propagation on 6-meters and 2-meters, took fourth place with no other significant propagation. W3IP was close behind in fifth place, noting only a single sporadic E contact. Mike noted the predominance of FT8 contacts, many at the expense of SSB QSOs, and the relatively high meteor scatter activity on both 6-meters and 2-meters, primarily due to the effectiveness of MSK144. Nearly half of Mike's six meter QSOs were on FT8 or MSK144.



WZ1V's efficient 50 MHz to 1296 MHz stack at 55 feet helped him to sixth place in the Single Operator High Power category. (Photo courtesy of WZ1V)

## Single Operator Portable (SOP)

Single Operator Portable stations submitted 37 logs this year, more than double the number submitted in 2017! It is good to see this increase in activity in January in this potentially brutal category. Although the weather cooperated over much of the country, much of the increase in activity was driven by activation at VHF by Summits on the Air (SOTA) operators. This trend needs to be encouraged.



Dave, N7QNG, with his backpack SOP station. He hiked up Lone Mountain, SOTA peak W7A MN-101, to operate for 4.5 hours. Dave made 47 QSOs in 9 grids on three bands. Yes, that pack at 38 pounds is a bit top heavy, but the trail was good. (Photo courtesy N7QNG)

W4DVE in CN85 took the Single Operator Portable (formerly Single Operator QRP) category. As always, there was significant activity from the Pacific Northwest VHF Society to aid W4DVE's effort. WA7JTM, through strong SOTA efforts in AZ, finished a strong second from Scarlett Mountain near Phoenix. Peter took

advantage of strong SOTA activity in AZ, which he took the initiative to organize, to amass this score. Closely behind Peter, K6TJ took third with operation from Northern California with a strong six-band effort, unusual for SOP operators, yielding 26 multipliers. AA6XA took fourth from Loma Alta Summit in CM88, operating on all four bands from 6-meters to 70cm. K7JFD, also taking advantage of the SOTA activity in AZ and the increased activity from the Arizona Outlaw Contest Club, took fifth from AZ SOTA peak W7A/MN-119.

The remarkable Arizona SOTA efforts are discussed later in this article.

## Single Operator Three Bands (SO3B)

The SO3B category offers a competitive category for those numerous hams who own the common "dc-to-daylight" rigs with the three VHF/UHF bands incorporated. WA4GPM took this category by using FT8 and MSK144 to overcome flat band conditions, along with numerous Rover QSOs to add to the multipliers. This is a recipe for success in any category! K3SFX finished second on the strength of 33 multipliers, edging out K5QB. K5QB, operating at K5NA, had some enhanced propagation to the east on 2-meters. He did not operate the digital modes, and in an unusual twist for VHF contesting, had more 70cm contacts than 6-meters! He was dismayed by the lack of CW activity, only working three CW QSOs the entire contest. KO9A finished fourth only 16 points (out of 5,000), behind K5QB. In contrast to K5QB, Jim spent much of his time on FT8 and MSK144 to maximize his grid total. KO9A also noted that he worked ACØRA/R in several rare grids by way of MSK144. NE2U finished fifth in this category with 30 multipliers.

## Single Operator FM (SOFM)

The Single Operator FM category continues to gain traction and attract serious competitors. KG6IYN's move to the SOFM category from SO3B in 2017 paid off handsomely as he won the SOFM category, and set a new National and Southwestern Division record in doing so. Bruce used the contest to get local CERT, ARES, and RACES operators on the air and demonstrated that contesting, in offering a venue for disciplined emergency communications practice, serves a community broader than just the contesting community. W2UTH, with long time SOFM competitor W2EV as op, was in second place with 190 QSOs and 20 multipliers. Ev was one of the first competitors in the SOFM and a promoter of the category from its inception. N2HJD finished third,

bolstered by activity from the Rochester VHF Group. Last year's winner KM4KMU finished fourth, despite being shut out of his preferred operating location. He had to settle for another location near a ski area which turned out to be quite windy and noisy. K2SI finished fifth on the strength of only a 6-meter, 2-meter, and 220 MHz effort. One of the keys to a successful SOFM operation is operating on 222 MHz. There are a lot of QSOs to be had with those operators who only have FM capability on 222 MHz. Even a hand-held transceiver can round up enough QSOs and multipliers to make a significant increase to your score.



KM4KMU at sunrise at Blue Knob Ski Resort getting ready to set up for the contest under high wind conditions. (Photo by KM4KMU)

## Limited Multioperator (LM)

In the very competitive Limited Multioperator category, N2NT with N2NC and WW2Y as operators, put a new solid state 6-meter amp to work in the contest to move up from their 2017 second place finish, swapping places with K2LIM, last year's winner. This was a tight race, with less than 3,000 points (out of 137,000) separating first and second places. It was only after log checking that the winner was determined, a reminder to all of us that logging accuracy is paramount. K2LIM, with KA2LIM, W9KXI, KB2YCC, N2KI, and WA3CSP as operators, finished a close second. W3SO finished third with W3BTX, W3IDT, W3XOX, W3YOZ and WA3TTS as operators. K5QE, with operators K5QE, N5YA, K5MQ, AF8Z, W7XU, NØQJM, VE3WY, K2EZ, and N1XS, like many contestants, suffered from poor propagation, but made up for it with numerous meteor scatter contacts on 6-meters and 2-meters. Marshall noted that meteor scatter with MSK144 was much more effective for them than FT8. K5QE worked hard using both meteor scatter and EME to work 121 different grids on two meters, no mean feat. WØRSJ finished fifth.

## Unlimited Multioperator (UM)

The Unlimited Multioperator stations provide signals on the bands constantly as well as those often hard- to-find QSOs on bands above 1296 MHz. This is very significant in the January contest. While it is a labor of love to setup a competitive Unlimited Multioperator station, the benefits are many to other competitors, particularly those starting out on the microwaves. N3NGE repeated as Unlimited Multioperator champions. They are truly a dc-to-daylight operation, with RF operations to 47 GHz and Laser. W6TV finished second and was the only entry from the San Joaquin Valley section. W6TV operated from Bear Mountain east of Fresno on all bands through 24 GHz and worked several 11-band rovers to help his score. N8ZM finished third with a six-band effort. W6TOI finished fourth with N6TEB and K6WCI as operators operating the N6NB Panorama Heights home station while Wayne was out roving. They provided QSOs on all bands up to 24 GHz to ops throughout the lower half of California. KE1LI finished fifth. The KE1LI six meter tower was only erected a week before the contest and they put it to good use.

## Classic Rover

After a short hiatus, N6NB/R returned as winner of the Classic Rover category. Wayne continues to compete actively even after 61 years of VHF contesting! As a rover, Wayne visited 10 grids and operated on 11 bands. In an unusual move for a rover, Wayne operated FT8 to successfully increase his QSO and grid total with stations that were too weak to copy on SSB or even CW.



The N6NB rover with capability to 24GHz. Wayne has been participating in VHF contests for 60 years and still manages to stay at the state of the art in contesting. (Photo courtesy of N6NB)

W6TE/R, also visiting 10 grids and operating on 11 bands, finished second to Wayne. K8GP/R with K1RA and W8ZN manning the rover, finished third. They installed their pneumatic mast just in time for the contest and operated from 8 grids on 11 bands. They did not use FT8 and Terry lamented that several times when asking stations to QSY to six meters, he got the reply that the six meter station was busy on FT8 and hence, could not provide them with a QSO. VE3OIL/R finished fourth by operating from 9 grids with 12 bands. VE3ELE/R, operating from 8 grids and 12 bands, finished fifth, overcoming problems with a forgotten 902 feed line, an overloaded fuse box, fog, ice, and only three hours sleep.

Many operators, both fixed and rovers, had praise for the classic rover ACØRA/R, operated by ACØRA and KCØSKM. Of the 78 QSOs they made, 71 were digital, with 65 of them on meteor scatter with MSK144. Many of these meteor scatter contacts were done mobile(!), and many were made from rare grids in NE. They also made a 10 GHz QSO, but were discouraged that they could not make more.

## Limited Rover

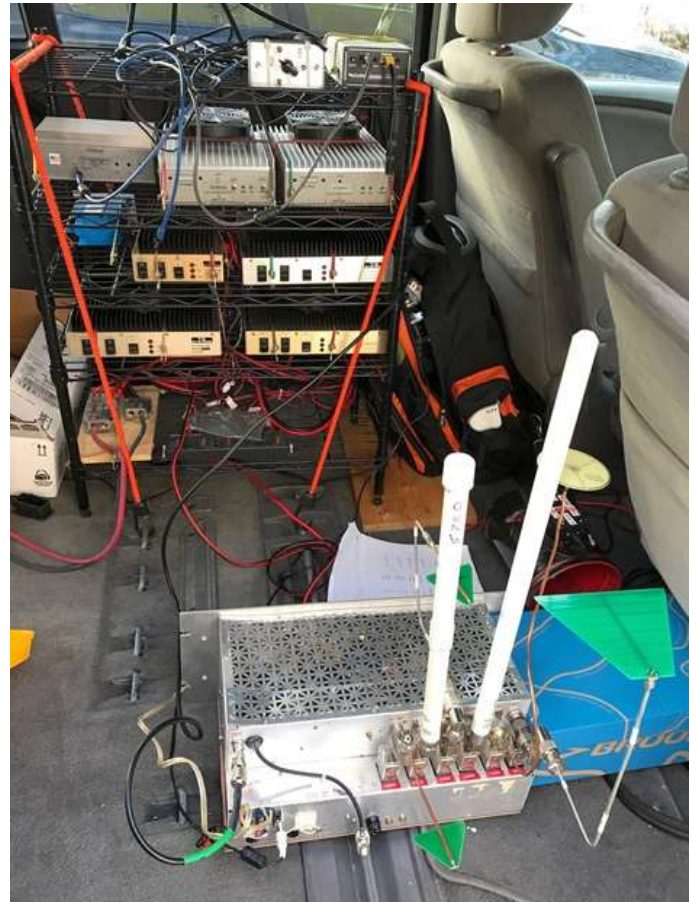
With only the four specified bands and limited to low power, antennas, strategy, and tactics are of paramount importance to the limited rover. WW7D/R, activating 10 grids, repeated his recent dominance of the limited rover category this year. This is in no small part due to the support and turnout of the Pacific Northwest VHF Society for the contest, once again pointing out the importance of the clubs in contest activity by supporting and encouraging other club members. WB2SIH/R, roving from four grids finished second. KA9VVQ/R and W9FZ/R finished in a tie for third place. Entering the Limited Rover category is a substantial change for Bruce and Janice as they are dedicated Classic Rover operators. However, weather takes its toll in January, both on equipment and psyche particularly when setting up an eight or more band rover in the Midwest. Throw in the “fiddle factor” in operating the bands above 902 MHz and the Limited Rover category starts to look pretty good!

KA5D/R finished fifth in the Limited Rover category operating from eight grids in central Texas.

## Unlimited Rover

There was a higher than normal 13 entries to the Unlimited Rover “anything goes” category. K6MI/R took the category, operating on 11 bands from 10 grids.

N6MTS/R was less than 1200 points behind in second and also operated from 10 grids on 11 bands. Both K6MI/R and N6MTS/R, who roved together, made more than 100 QSOs with other rovers and hence entered in the Unlimited Rover category. This is one of the major reasons the category was created, but it is not very often used for such.



The well-organized and well-equipped KØBAK/R station. The aluminum box with the printed-circuit-board log periodic (green triangle) and PVC tube antennas is a six-band microwave station that has had several Packrat owners and numerous updates in its 20 year life. The box remains in that position during the rove. When operating the microwave bands, Pete just opens the sliding side door and points to the stations to be worked by positioning the van. Pete had good weather for this rove. The rover operates 50 MHz to 10 GHz and LASER. KØBAK/R placed 10th in the Classic Rover category. (Photo KØBAK)

K7ATN/R was third operating from nine grids on seven bands in the Northwestern Division. N2SLN/R took advantage of the provision for more than 2 operators in Unlimited Rovers with W2BDN, KC2SFU, and N2SLN operating. This, too, was one of the reasons for creating the Unlimited Rover category.

K1SIG/R also took advantage of the multiple operator rule with operators WA1TE, KG6CIH, and Sarah to finish fifth in the category. In 900 miles of driving, they operated from 14 grids on six bands. An encounter with the police for a burned-out headlight and expired registration should remind everyone to check their rover vehicle status before the contest.

Of particular note was the effort of NØLD/R to operate from all of the grid squares in Oklahoma. High plains VHF contesters were thrilled with this opportunity to work grids in OK that are not normally on the air in VHF contests.



Nick, WØHGJ, and Harvey, KBØYHT, making a last minute check of NØLD/R outside of Boise City, OK. (Photo by NØLD)

## New Records

While it is rare that a January VHF Contest without sporadic E propagation generates much in the way of new records, there were a number set this year:

Overall SOFM - by KG6IYN with an impressive score of 8,172 from 156 QSOs and 36 multipliers using FM on all four of the allowed bands. This is also the new record for the Southwestern Division.

SOFM records were also set in:

- Midwest Division, by N2VHZ with a score of 1 point from 1 QSO and 1 multiplier on 144 MHz only. This was the first SOFM entry ever from the division, demonstrating that submitting a log, no matter how small, counts for more than you would think.

- Rocky Mountain Division, by WAØKXO with a score of 180 from 33 QSOs and 4 multipliers on 144 and 432.
- Canada, by VA6TDG with a score of 320 from 27 QSOs and 8 multipliers on 144 and 432.

SO3B Records were set in two Divisions:

- Southeastern, by WA4GPM with a score of 7,450 from 124 QSOs and 50 multipliers.
- West Gulf, by K5QB with a score of 5,032 on the strength of 115 QSOs and 34 multipliers.

W6TV set a new Unlimited Multioperator record in the Pacific Division by with a score of 83,880 points from 329 QSOs and 72 multipliers on all bands, 50 MHz through 24 GHz. This betters the previous record for the division that had stood since 1985, when the point values per QSO were double what they are now. That is an impressive effort, particularly when the bands are flat.

W6IT set the new Single Operator Low Power record in the Southwestern Division by with a score of 31,196 on 194 QSOs and 44 multipliers on all bands 50 MHz through 10 GHz.

VE3OIL/R's score of 109,242 was a new high for Canada in Classic Rover - 9 Grids Activated, 305 QSOs, 126 Multipliers (includes the 9 for Grid Activations), 50 MHz through 24 GHz plus Light.

In the Limited Rover category:

KA9VVQ/R and W9FZ/R tied for a new record in the Dakota Division in their first venture into Limited Roving. Their 7-grid trek netted each of them 236 QSOs and 46 multipliers (including the 7 for Grid Activation) on 50 through 432 MHz and final scores of 15,824.

KJ2G/R raised the bar for the New England Division Limited Rovers with 205 QSOs and 36 multipliers (including 4 bonus for the grids activated) producing a record-breaking final score of 9,756.

In Unlimited Rover Category two existing records were increased and a third was set for the first time.

The first-time record was in the Hudson Division by KJ1K/R with 99 QSOs across eight bands, 50 MHz through 3.4 GHz, and 35 Grids plus the 6 Grids activated (41 multipliers total) yielding a score of 9,225.

K1SIG/R's final score of 18,291 was a new best for the New England Division in the Unlimited Rover category. 15 Grids were visited with 189 Qs across the 50 MHz through 1.2 GHz bands and 67 multipliers including the 15 activations.

In the Dakota Division, KCØP more than doubled his own Unlimited Rover record from 2011. With bands 50 through 1296 MHz available and traversing 5 Grids, 142 QSOs were completed with 39 multipliers (including the 5 activation multipliers) netting a record score of 10,530.

Hats off to all those who set new records!

## Club Competition

The club competition drives much of the activity in VHF contests, particularly when conditions are down.

The Mt. Airy VHF Radio Club (Packrats) took first place in the Unlimited Club category with an impressive 66 members submitting logs totaling 1,898,766 points. This level of activity is the result of decades of work promoting VHF weak-signal operations by dedicated and conscientious club members. As an example of how the club competition can help individual scores: four of the overall category winners are Packrats: N2NT (LM), N3NGE(UM), K1RZ (SOHP), N3RG (SOLP).

The biggest club competition category is the Medium club competition, won this year by the Southern California Contest Club, largely on the strength of a strong rover showing. The Potomac Valley Radio Club finished second with 31 members contributing scores. The rest of the top five clubs were Contest Club Ontario, Rochester VHF Club, and the Northeast Weak Signal Group. Of note is the tenth place finish of the Arizona Outlaws Contest Club. They teamed up with The Arizona Microwave Group and local Arizona Summits on the Air group to produce in the words of N7IR, "The most active January VHF Contest ever in central Arizona." Added to the 11<sup>th</sup>-place finish of the New Mexico VHF Society, there was an unprecedented level of January VHF Contest activity in the Southwest.

The Eastern Connecticut Amateur Radio Association won the Local Club competition. They were followed by the Chippewa Valley VHF Contesters, Bristol (TN) Amateur Radio Club, and Niagara Frontier Radiosport.

Affiliated Club Competition		
Club	Score	Entries
<b>Unlimited</b>		
Mt Airy VHF Radio Club	1,898,766	66
<b>Medium</b>		
Southern California Contest Club	563,408	5
Potomac Valley Radio Club	406,783	31
Contest Club Ontario	305,287	13
Rochester VHF Group	285,266	22
North East Weak Signal Group	267,122	17
Society of Midwest Contesters	106,054	12
Pacific Northwest VHF Society	105,551	25
Northern Lights Radio Society	77,984	16
Yankee Clipper Contest Club	67,179	7
Arizona Outlaws Contest Club	27,014	16
New Mexico VHF Society	25,901	10
Bergen ARA	13,821	5
South Jersey Radio Assn	12,774	3
North Texas Microwave Society	10,984	3
Michigan VHF-UHF Society	7,507	3
Florida Contest Group	5,740	4
Central Texas DX and Contest Club	5,740	3
Northern California Contest Club	5,476	11
Six Meter Club of Chicago	4,950	8
Frankford Radio Club	4,726	5
Grand Mesa Contesters of Colorado	2,292	4
Mad River Radio Club	779	3
Alaska VHF-Up Group	425	3
<b>Local</b>		
Eastern Connecticut ARA	23,605	6
Chippewa Valley VHF Contesters	15,607	3
Bristol (TN) ARC	3,648	5
Niagara Frontier Radiosport	2,904	4

Clubs looking to increase participation in their area are encouraged to coordinate with other VHF, Microwave, and contest clubs, as well as emergency communications organizations, and SOTA participants in their area. Often we only look to our own circle when trying to increase

contest activity, but there are significant dividends to be had by looking into other local groups to increase activity. All that is really required for this coordination is for individuals to step up and organize and promote the activity as advantageous for each group. Start planning this coordination now with your club for increased future contest activity.

It is important to note that clubs must submit an eligible list of members prior to the start of the contest and that the members on that list must be members in good standing and reside in the club area. Several contestants credited scores to clubs that did not have an eligibility list on file at the beginning of the contest, while others who submitted logs for a club were not on the eligibility list or operated from outside the club territory. There is also a minimum of three submitted logs required for a club to be eligible for the club competition, which was not met in a couple of instances. The club competition is an important factor in contest activity, so please assign a responsible person from your club to submit an eligibility list to ARRL prior to the contest. Also, take time to inform your club members about the rules for submitting a log to count towards a club score.

## The use of FT8 and MSK144

There was significant use of the less than one year old FT8 digital mode in the January contest. This caused a significant change in the way many QSOs are made in the contest. To borrow a term coined by Thomas Kuhn in “The Structure of Scientific Revolutions”, FT8 represents a significant paradigm shift in how we make VHF contest QSOs, how we make the best use of openings, how we define weak signal operations, and how we prioritize contest activity.

Many calls that had not previously been seen in VHF/UHF contests were active on FT8. Both activity and number of QSOs made on six meters were up from previous years. This is good. Nearly a third of all QSOs made on the band were digital, predominantly FT8, with some MSK144 (Meteor Scatter) and JT65 (EME).

Despite these upsides to FT8, there were some complaints about the new digital activity, such as:

- FT8 is not suitable for VHF/UHF contesting
- Digital modes detract from potential QSOs on CW and SSB
- FT8 operators did not use or know proper contesting procedure or etiquette (using HF reports instead of VHF contest reports)

Many of these issues appear to be symptoms of beginners using a mode that is less than a year old. Many of these issues will undoubtedly be addressed as the mode matures. We can productively direct how these problems are resolved if we objectively and rationally deal with them.

Despite the vigorous complaints about FT8 there are many benefits to FT8:

- It is attracting newcomers to VHF contesting
- It is possible to make QSOs with stations that are too weak to hear on CW or SSB
- It improves logging and reporting accuracy
- It allows operators who do not know CW an effective weak signal mode
- It allows activity on a dead band.

While rates can be higher on SSB and CW, and sometimes much higher, it seems that FT8 has its place in contesting, and particularly in sparsely populated areas of the country, as one can make a higher score by adding FT8 to the available tools rather than with just CW and SSB alone.

N6NB made some comments likening the introduction of FT8 and the associated controversy to the introduction of SSB into the predominately CW and AM activity of contesting in the 50s and 60s, and the use of simplex FM in contesting in the 70s. There was resistance to those activities as well, yet a contest without SSB is unthinkable now and simplex FM now has its own category.



While some operators have embraced the latest rigs and new digital modes, KA4WJB had lots of fun in the contest with these 40 year old Icom “book ends”. Who remembers these? (Photo by KA4WJB)



There were many ops in the contest that did not have widespread, or any, sporadic E propagation but who found out that marginal, weak, and short-lived openings could be worked on FT8 and hence got a few more points than they would normally have gotten without FT8.

The digital modes offer great contesting opportunities for the entry-level operator and modestly equipped stations as well as for the experienced operator. We need to figure out how best to utilize them and integrate them into contesting to derive the best benefit. Education is a good place to start.

## Logging

One hundred percent log checking is an important part of compiling and reporting the contest results. By checking every log, there is significantly greater confidence in the accuracy of the outcome, particularly in close categories. Of equal importance is the log checking reports generated for each contestant. By going to your log checking report (LCR) on the ARRL contest results web page you can learn a lot about the quality of your log, and more importantly, how to avoid the mistakes in the future.

There are common errors, some of which the log checkers can fix and others that they cannot. It is best not to make these mistakes in the first place.

One problem is not logging rover QSOs with the “/R”. Rovers should be logged as CALL/R and not, as is often seen, CALL/GRID, CALL/ROVER, CALL/R# (where # is a one or two digit number) or just CALL (no /R) suffix. The latter is particularly bad when a rover also enters independently as a single op, which they are permitted to do. While the log checking tries to handle all of these variants, and usually does a good job of it, much of the correction process requires manual intervention which is becoming increasingly difficult and requires a good deal of additional time on the part of volunteer log checkers. Most, if not all, of the currently in use logging programs will handle CALL/R but may require some awareness and action by the contestant to overcome the initial warning, usually given before a grid is entered, that a Rover's call might be a dupe even though it is likely from a new grid. In this case of dupes, as in almost every contest, please do not modify the call. Instead, make sure the new rover grid is entered and that will usually cancel the warning about a dupe. If not, the log checking and scoring process will usually result in a correct entry and proper score.

Watch the exchanges that are copied and logged. For example, there is a fair amount of confusion or miscopying of Ms and Ns in the second character of the exchange. Also “fifty” gets confused with “sixty” as well as “fifteen” and “sixteen”. “D” can be confused for “E”. The extensive or exclusive use of phonetics is a straightforward way to solve these problems.

A surprising number of digits in the callsign are miscopied or mislogged. Typos between adjacent numbers on the keyboard, 2 and 3 for example, are common, as are the incorrect prefix letters (Ks, Ns, Ws). You can minimize typos by looking closely at the screen as you type and errors of all types can be avoided by paying careful attention to what was sent. Ask for a fill if you are uncertain of any component of the exchange.

A good strategy prior to a contest is to review your LCR from the last contest and formulate a strategy to avoid these mistakes. While it is dismaying to see your score reduced by the log checking process, it can be used as a learning process to improve your operating skills in the future. An error-free log, although difficult, is worth striving for and pays dividends.

## Summits on the Air Activity in Arizona

WA7JTM, long time VHF contester from Arizona, has taken up Summits on the Air (SOTA). Peter organized and coordinated an effort by SOTA operators to put Arizona Summits on the Air for the January VHF contest. It was no easy task keeping track of who is on what summit, educating novice contesters in contest operating techniques, coordinating with other VHF and microwave operators in Arizona, and shepherding in logs.



The view from WA7JTM's low power portable operation. From this elevation, not much antenna height is required and simple antennas really get out. (Photo by WA7JTM)

Here's what WA7JTM said about the SOTA activity:

*"Thirteen different SOTA peaks were activated Sunday morning by SOTA operators in support of the January VHF Contest and SOTA. I estimate that the SOTA activators made around 600 contacts on the VHF/UHF frequencies. The bands were alive with signals from all of the SOTA peaks, the locals, and the Rovers, and it was a pretty hectic contest for the five hours I operated.*

*I operated QRP Portable from Scarlet Mountain, Summits On The Air Ref# W7A/MN-143. I hiked up to the summit before dawn on Sunday morning and set up small beams on all four bands on a short mast.*



WA7JTM's simple and clean operating position atop Scarlet Mountain, SOTA W7A/MN-143. Peter operated four bands, using the FT-817 for SSB and CW and handle talkies for FM. Finishing second in SOLP, this shows what can be done with low power and simple equipment. (Photo by WA7JTM)

*No band opening on six meters this year, and my best DX was working Tucson and Prescott. I never heard any stations out of state. Activity for this contest was the best ever for a January VHF Contest that I have experienced. Other operators said they also thought it might be the best ever for Arizona due to the SOTA activity and the multiple Rover stations that participated.*

*It appears that all Activators had way too much fun on Sunday. The future plan is to top the thirteen summits we put on this year in the January 2019 contest. Twenty summits sounds like a reasonable number to me!"*

Other areas of the country, while not blessed with Arizona's January weather, can take note of this effective way to increase VHF contesting activity in the summer contests. Just get with your local SOTA ops and encourage a VHF operation from them during the contest. Educate them on contest operation if they are not already knowledgeable in that, help them with antennas,

and also help them with logging and log submission. SOTA ops are a perfect fit for the Single Operator portable category.



ABOVE: Brian, W7JET on Brushy Mountain (SOTA W7A/MN-049) near Bartlet Lake, AZ, making a 222 MHz contact on his handle talkie. (Photo by W7JET)



The mighty W7JET antenna farm (Photo by W7JET)

Several of the SOTA operators in this year's January contest made 60 or more QSOs. With many activators putting two or more peaks on the air in a weekend, perhaps it is time to rethink the Single Operator Portable category and allow operation from several locations during the contest.

## Logs Submitted

There were 742 logs submitted, 14 of which were check logs. This is an increase of 7% from the 679 logs submitted in 2017; and one needs to go back to 2012, a year with good and widespread sporadic E, to find a higher number of entrants to the January contests: 767. The January VHF contest is healthy, and it appears that FT8 and the SOTA activators have much to do with that health.

Log Summary by Category (without check logs):

Limited Multioperator	19
Unlimited Multioperator	16
Rover	26
Limited Rover	34
Rover Unlimited	13
Single Operator, 3 Bands	147
Single Operator, FM	32
Single Operator, High Power	162
Single Operator, Low Power	242
Single Operator Portable	37
<hr/>	
<b>Total Logs</b>	<b>728</b>

Thanks to all who submitted logs. It is not always easy to get a log together and the effort is appreciated.

## Summary

The January 2018 ARRL VHF Contest is in the books. Now is the time to look at lessons learned and prepare for the June, August, and September contests, as well as for next January's event, to be held January 19-21, 2019. Developing contacts with local SOTA operators and coordinating activity with them is a proven and straightforward way of increasing activity. Start doing that now.

Despite the controversy, FT8 has proved to be a way to make QSOs on a "dead" band, so consider adding that to your contest resources. MSK144 continues to be an effective tool for meteor scatter, particularly with rovers adopting it. K1JT has noted that by using the double-barreled digital approach of both FT8 and MSK144, every grid in a 1200-mile radius from which there is activity should be workable. Be sure that your computer is up to the task. Also, consider how best to incorporate the APRS page into your station to track Rovers, and add FM into your contest plans if you have not already done so.

## Top Ten Scores by Category

Rover					
Classic		Limited		Unlimited	
N6NB/R	280,350	WW7D/R	38,400	K6MI/R	264,348
W6TE/R	243,600	WB2SIH/R	21,600	N6MTS/R	263,154
K8GP/R	185,472	KA9VVQ/R	15,824	K7ATN/R	39,444
VE3OIL/R	109,242	W9FZ/R	15,824	N2SLN/R	27,375
VA3ELE/R	102,943	KA5D/R	14,850	K1SIG/R	18,291
KF2MR/R	75,999	KJ2G/R	9,756	KE7MSU/R	15,130
NN3Q/R	54,462	AE5P/R	8,700	KD5IKG/R	14,617
KV2X/R	35,112	KT5TE/R	8,640	N6JET/R	12,936
K2ET/R	34,224	N6RH/R	8,430	KCØP/R	10,530
KØBAK/R	32,085	K7BDB/R	5,712	KJ1K/R	9,225

Single Operator									
High Power		Low Power		Portable		3 Band		FM Only	
K1RZ	311,430	N3RG	106,250	W4DVE	5,460	WA4GPM	7,450	KG6IYN	8,172
K3TUF	116,394	K2DRH	92,000	WA7JTM	2,686	K3SFX	5,907	W2UTH (W2EV, op)	5,520
VE3ZV	74,648	AF1T	76,632	K6TJ	2,340	K5QB	5,032	N2HJD	2,704
W5ZN	68,364	WA3GFZ	49,288	AA6XA	1,245	KO9A	5,016	KM4KMU	840
W3IP	66,105	K1KG	46,645	K7JFD	1,068	NE2U	4,890	K2SI	768
WZ1V	55,200	VE3DS	31,360	VE2NCG	798	KR1ST	4,640	W6IA	756
WA3DRC	52,292	W6IT	31,196	NØJK	760	WV3P	4,158	KC9PCP	513
WB2RVX	49,532	WB2JAY	26,199	W7USA	660	N7IR	3,540	K6KQV	396
W2SJ	48,880	N3YMS	22,380	K7TAB	638	N3ALN	2,990	W7AIT	376
K1GX	48,411	W3EKT	16,775	WB2AMU	636	W3XY	2,754	VA6TDG	320

Multioperator			
Limited		Unlimited	
N2NT	137,298	N3NGE	471,835
K2LIM	134,758	W6TV	83,880
W3SO	99,351	N8ZM	38,720
K5QE	79,205	W6TOI	27,720
WØRSJ	25,864	KE1LI	20,064
W3HZU	14,711	WA3EHD	18,620
K2BAR	13,230	W4NH	18,040
W1QK	12,864	W3RFC	13,000
WB3IGR	4,500	W1XM	10,291
WB4WXE	3,502	W7QQ	6,890

## Division Winners

ROVER						
	Classic		Limited		Unlimited	
Division						
Atlantic	KF2MR/R	75,999	K6PFA/R	494	N2SLN/R	27,375
Central			N9GH/R	3,220		
Dakota			W9FZ/R KA9VVQ/R (tie)	15,824	KCØP/R	10,530
Delta			NC5AX/R	2,322		
Great Lakes			W9YOY/R	1,464		
Hudson			WB2SIH/R	21,600	KJ1K/R	9,225
Midwest			KBØZOM/R	2,449		
New England			KJ2G/R	9,756	K1SIG/R	18,291
Northwestern			WW7D/R	38,400	K7ATN/R	39,444
Pacific	N6NB/R	280,350	W6REK/R	2,834	K6MI/R	264,348
Roanoke	K8GP/R	185,472				
Rocky Mountain			ABØYM/R	247		
Southeastern	K4SME/R	23,310	W4POT/R	120	KC1BB/R	128
Southwestern	WA8WZG/R	13,862	N6ZE/R	2,112		
West Gulf	KG5UCA/R	7,728	KA5D/R	14,850	KD5IKG/R	14,617
Canada	VE3OIL/R	109,242	VE3RKS/R	2		

Single Operator										
	High Power		Low Power		Portable		3 Band		FM Only	
Division										
Atlantic	K1RZ	311,430	N3RG	106,250	AE3J	48	K3SFX	5,907	W2UTH (W2EV op)	5,520
Central	N9LB	14,190	K2DRH	92,000			KO9A	5,016	KC9PCP	513
Dakota	WØGHZ	23,250	WØZQ	8,190			NRØT	480	WCØAAA (AEØEE op)	64
Delta	W5ZN	68,364	WB5JJJ	80			KG5MD	1,376	K4NRT	15
Great Lakes	K8ZR	10,275	W8PEN	252	AA8CH	70	N2CB	483		
Hudson	W2BVH	21,448	WB2JAY	26,199	WB2AMU	636	KA2BPP	1,932	W2DPT	56
Midwest	WQØP	17,052	NØLL	12,549	NØJK	760	KØWDO	779	N2VHZ	1
New England	WZ1V	55,200	AF1T	76,632			N1JHJ	2,640		
Northwestern	KE7SW	11,567	WZ8T	8,478	W4DVE	5,460	N7KSI	1,944	KI7NQN	88
Pacific	KJ6KO	12,054	KC6ZWT	10,458	K6TJ	2,340	N6GHZ	1,309	W6IA	756
Roanoke	W3IP	66,105	K4FJW	3,024	KB1HQS	88	WA4LDU	285		
Rocky Mountain	AI5I	5,082	NJ7A	2,820	KØNR	312	KC7QY	294	WAØKXO	180
Southeastern	KØVXM	39,932	KX4R	13,764			WA4GPM	7,450		
Southwestern	N1RWY	8,170	W6IT	31,196	WA7JTM	2,686	N7IR	3,540	KG6IYN	8,172
West Gulf	K5AND	39,330	K5TRA	8,547	WD5AGO	162	K5QB	5,032	AF5CC	54
Canada	VE3ZV	74,648	VE3DS	31,360	VE2NCG	798	VO1KVT	1,804	VA6TDG	320

## Division Winners

Multioperator				
	Limited		Unlimited	
Division				
<b>Atlantic</b>	K2LIM	134,758	N3NGE	471,835
<b>Central</b>	W9RVG	864	N2BJ	1,520
<b>Delta</b>			W4GZX	36
<b>Great Lakes</b>			N8ZM	38,720
<b>Hudson</b>	N2NT	137,298	NY2NY	5,160
<b>New England</b>	W1QK	12,864	KE1LI	20,064
<b>Northwestern</b>	K7EFA	368		
<b>Pacific</b>			W6TV	83,880
<b>Rocky Mountain</b>			W7QQ	6,890
<b>Southeastern</b>	WB4WXE	3,502	W4NH	18,040
<b>Southwestern</b>			W6TOI	27,720
<b>West Gulf</b>	K5QE	79,205	KC5MVZ	168
<b>Canada</b>	VA2LGQ	25		

## Regional Leaders

West Coast Region		Midwest Region		Central Region		Southeast Region		Northeast Region	
(Pacific, Northwestern and Southwestern Divisions; Alberta, British Columbia and NT Sections)		(Dakota, Midwest, Rocky Mountain and West Gulf Divisions; Manitoba and Saskatchewan Sections)		(Central and Great Lakes Divisions; Ontario East, Ontario North, Ontario South, and Greater Toronto Area Sections)		(Delta, Roanoke and Southeastern Divisions)		(New England, Hudson and Atlantic Divisions; Maritime and Quebec Sections)	
<b>Classic Rover</b>									
N6NB/R	280,350	KG5UCA/R	7,728	VE3OIL/R	109,242	K8GP/R	185,472	KF2MR/R	75,999
W6TE/R	243,600	KØMHC/R	280	VA3ELE/R	102,943	K4SME/R	23,310	NN3Q/R	54,462
WA8WZG/R	13,862					N9ZL/R	10,249	KV2X/R	35,112
KK6MC/R	13,300							K2ET/R	34,224
								KØBAK/R	32,085
<b>Limited Rover</b>									
WW7D/R	38,400	W9FZ/R	15,824	N9GH/R	3,220	NC5AX/R	2,322	WB2SIH/R	21,600
K7BDB/R	5,712	KA9VVQ/R	15,824	W9YOY/R	1,464	W4POT/R	120	KJ2G/R	9,756
W6REK/R	2,834	KA5D/R	14,850	WD9HBF/R	225			W1RGA/R	1,428
N6ZE/R	2,112	AE5P/R	8,700	VE3RKS/R	2			KD2BKD/R	506
WB6BET/R	1,596	KT5TE/R	8,640					K6PFA/R	494
<b>Unlimited Rover</b>									
K6MI/R	264,348	KD5IKG/R	14,617					N2SLN/R	27,375
N6MTS/R	263,154	KCØP/R	10,530					K1SIG/R	18,291
K7ATN/R	39,444	NØHZO/R	6,732					KJ1K/R	9,225
KE7MSU/R	15,130	NØLD/R	6,084						
N6JET/R	12,936								
<b>Single Operator High Power</b>									
KJ6KO	12,054	K5AND	39,330	VE3ZV	74,648	W5ZN	68,364	K1RZ	311,430
KE7SW	11,567	K5LLL	31,120	N9LB	14,190	W3IP	66,105	K3TUF	116,394
N7EPD	11,466	WØGHZ	23,250	K8ZR	10,275	KØVXM	39,932	WZ1V	55,200
KD7UO	8,720	WQØP	17,052	W7JW	6,976	KE8FD	10,557	WA3DRC	52,292
N1RWY	8,170	KØTPP	11,844	K9MU	6,885	N4TWX	7,584	WB2RVX	49,532
<b>Single Operator Low Power</b>									
W6IT	31,196	NØLL	12,549	K2DRH	92,000	KX4R	13,764	N3RG	106,250
KC6ZWT	10,458	K5TRA	8,547	VE3DS	31,360	W4RAA	5,040	AF1T	76,632
K2GMY	9,555	WØZQ	8,190	VA3ZV	8,757	N4BRF	4,212	WA3GFZ	49,288
WZ8T	8,478	WBØNRV	5,424	VE3SMA	5,400	K4RSV	3,125	K1KG	46,645
N7QOZ	4,293	NJ7A	2,820	W9GA	3,162	K4FJW	3,024	WB2JAY	26,199

West Coast Region		Midwest Region		Central Region		Southeast Region		Northeast Region	
<b>Single Operator Portable</b>									
W4DVE	5,460	NØJK	760	AA8CH	70	KB1HQS	88	VE2NCG	798
WA7JTM	2,686	KØNR	312					WB2AMU	636
K6TJ	2,340	WD5AGO	162					KQ2RP	585
AA6XA	1,245	KØJJW	48					KD2AVU	360
K7JFD	1,068							AE3J	48
<b>Single Operator Three Band</b>									
N7IR	3,540	K5QB	5,032	KO9A	5,016	WA4GPM	7,450	K3SFX	5,907
N7RK	2,057	KØWDO	779	KA9VDU	1,647	KG5MD	1,376	NE2U	4,890
N7KSI	1,944	KØCQ	770	WB9TFH	1,568	WA4LDU	285	KR1ST	4,640
N6GHZ	1,309	NRØT	480	K9DDS	645	KK4MA	255	WV3P	4,158
WB7FJG	832	KC7QY	294	VE3SST	555	W2YE	240	N3ALN	2,990
<b>Single Operator FM-only</b>									
KG6IYN	8,172	WAØKXO	180	KC9PCP	513	K4NRT	15	W2UTH (W2EV, op)	5,520
W6IA	756	WCØAAA (AEØEE, op)	64	AC9EZ	114			N2HJD	2,704
K6KQV	396	AF5CC	54	WD9GDB	20			KM4KMU	840
W7AIT	376	WA5AZQ	45					K2SI	768
VA6TDG	320	AEØEE	18					VA2DG	129
<b>Limited Multioperator</b>									
K7EFA	368	K5QE	79,205	W9RVG	864	WB4WXE	3,502	N2NT	137,298
						AD4ES	232	K2LIM	134,758
								W3SO	99,351
								WØRSJ	25,864
								W3HZU	14,711
<b>Unlimited Multioperator</b>									
W6TV	83,880	W7QQ	6,890	N8ZM	38,720	W4NH	18,040	N3NGE	471,835
W6TOI	27,720	KC5MVZ	168	N2BJ	1,520	N9LHS	672	KE1LI	20,064
				W8RU	777	W4GZX	36	WA3EHD	18,620
								W3RFC	13,000
								W1XM	10,291