Results of the 2024 CQ WW DX SSB Contest

By John Dorr, K1AR

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"My first ever contest! It was great fun giving out a rare multiplier to so many. – 7Q5MLV"

As another year passes, it never ceases to amaze me that we can celebrate the 76th running of the CQ WW SSB Contest. In looking back over those early years, the very first CQ WW SSB contest had only 158 entries. In fact, it wasn't until 1966 that we broke the 1000 log entry barrier. However, as interest in contesting has grown over the years, a remarkable achievement happened in the 2024 CQ WW – we smashed through the 10,000 log level as 10,098 logs were received, representing over 5 million QSOs (Note: that's approximately 1800 QSOs per minute for the entire contest)! Hurrah for 10 meters! I've said this before, but it would seem this contest is catching on in the contest community.

Speaking of 10 meters, activity this year took place well above 29 MHz – absolutely amazing. One commentator said in his log submission that he was so high in the band that he was afraid he wouldn't be able to climb back down after the band closed!

It's always enjoyable to read the soapbox comments that accompany your log submissions (Note that all comments are available at: https://cqww.com/soapbox.htm?yr=2024.). A few representative samples follow below:

"Enjoyed using my Xiegu G90 and realizing what's possible with only 20W!" – DL3SDW

"In all my years of operating I haven't seen 10 Meters so busy." – GM2T

"With 53 years of contesting experience, this was my first using a mega antenna site. WOW doesn't describe it enough!" – W4QNW So, without any further delay, let's get to the results of the 2024 CQ WW SSB Contest!

The 2024 SSB CQ WW – An Amazing Year!

Words simply cannot fully describe the 2024 SSB CQ WW contest experience. The conditions were simply amazing! Unlike the doldrums of solar minimum conditions, this year's event was enjoyable for all, regardless of your station's capabilities or personal expertise. In fact, the hardest decision that many of you had to make was your entry category. The common question was: "Should I go mono-10 and make hay with conditions (and more sleep) or slug it out as a single-op all band entry?" Ten meters was tempting indeed as 1696 of the total entries selected mono-28 MHz (that's 17% of all received logs). That compares to only 42 submissions on 160 meters!

The World single-operator horserace was intense as usual this year as Tom, W2SC, won the battle again from 8P5A with an impressive result of 16.5 million, beating out Rich, N6KT, from the very capable PJ4K station. Tom not only overcame the "3-point advantage" afforded by Rich being in Bonaire, but he also broke the 10,000 QSO barrier as well! In the end, both competitors have invested enormous hours and resources into their contest operations and are to be congratulated!

In the low-power, single-operator world group, perennial competitor, John, W2GD, piloted his P40W station to another win, ringing in a final score of 7.8 million with 5,000 QSOs while running only 100 watts. Felipe, NP4Z, offered plenty of competitive heat for GD with a 6.1 million second-place effort.

A relatively newcomer returned to the World QRP stage this year as Jeff, K1ZM, posted an amazing score of 2.1 million, blowing away his competition while setting a new record. Put another way, imagine making over 1500 QSOs with just 5 watts – on SSB! That number simply boggles the mind.

There was serious competition in the world assisted group this year as the top four entries were within a million points of each other. In the end, however, Sergii, UT5UDX, won the battle from ED5D, posting a final tally of 11.4 million.

The U.S. single-op race never disappoints as demonstrated by Bob, KQ2M, handily winning the category with a score of 9.3 million. The outstanding conditions were certainly demonstrated in his log as he snagged Zones 23-26, 28, and 40 in the first 20 minutes of the contest on 15 meters. Ed, N1UR, hung in there with a final second place result of 7.5 million. Another significant result in this year's group is that half of the top ten were not East Coast U.S.-based stations, who typically dominate this category. A round of applause is in order for K5TR, ND7K (N6MJ-op), K5GN, W9RE, and K6JO!

As previously mentioned, the temptation of single-band operating was higher than ever this year and the results speak for themselves. Fernando, PY2LED, racked up a 2.0 million result on 10 meters from PX2A, logging over 4400 QSOs! We'll certainly remember these days of primo propagation in the years to come. Another CQ WW regular, Antonio, CT1ESV, also produced an amazing 4600 contacts on 15 meters from CR6T. Not be outdone, Salim, HK1T, racked up 1.9 million on 20 meters.

One of the more challenging categories in contesting is multi-operating. More operators, transmitters, antennas, interfaces, and endless other details can be a planning nightmare, especially if logistics force set-ups to be arranged the week before the contest. There was quite a war that took place in the multi-single category with the team from PJ4G beating out the experienced E7DX crew, posting a final score of 19.8 million. The E7DX result of 19.1 million is impressive in its own right as it's rare for a

European-based station to beat a wellestablished team such as PJ4G from the Caribbean.

The Mult-2 finals were even closer – really close! In the end, Team P33W won, tallying 37.49 million as Team CR3A was right on their heels with 37.33 million! Although both entries were excellent, it should be noted that P33W moved into the #1 slot after log checking, proving again that accuracy matters. The team from V47T also pulled off an impressive 31.3 million final score, all resulting from hard work and determination.

Then there's the granddaddy of all categories – the behemoth multi-multi giants. The determined group at CN3A showed the world how it's done with a final score of 56.5 million. That was made possible with a total QSO count of 21,289 or 443 QSOs per hour for the entire contest! The D4C group gave it their all as well with an amazing 43.4 million points. And let's not forget the team from K3LR, who drove Tim's station to a #3 world result of 32.3 million from Western Pennsylvania.

Finally, let's acknowledge our Youth entries. Alexsey, RA9P, dominated the under-25 crowd with an amazing 9.6 million point final result that also placed #8 amongst all single-op, all band operators. RA9P operated alongside 131 other Youth entries in this year's WW. Although not necessarily "young," there was also 452 rookie entries, led by Luka, KC1TNO, with a 6.1 million point effort. Based on these numbers, we indeed have some reason to be optimistic about the future of contesting – at least for the CQ WW.

Categories for Everyone!

There is one point we can all agree upon – the CQ WW is not lacking in categories for one to enter. While this reality presents an administrative challenge for us, it also provides opportunities for competitors to enter the contest in a way that maximizes their station capabilities, available time, and experience.

In reviewing Table 1, it should be no surprise that most single operators enter the low power category. This is probably due to a combination of budget and "keeping the peace in the

neighborhood." For others, the challenge of discovering what is possible with only 100 watts is attractive.

Another interesting data point is the discovery that 38.6% of all-band, single ops entered the assisted categories – 48.7% did not use spotting assistance. When drilling into the data a bit further, it's notable to point out that assistance appears to be a more favorable mode of operation in North America with nearly half of the single

operators using some spotting. In contrast, spotting assistance in Europe is dramatically lower as over 56% of this year's entries were unassisted.

Finally, a shout-out is in order for the QRPers in our midst as 154 determined souls entered the contest with only five watts or less! Of course, solar conditions were a key driver for this, but five watts is still five watts!

Table 1 - 2024 CQ WW SSB Logs by Entry Class

Category	AF	AS	EU	NA	ОС	SA	ALL	% of total
SOAB High Assisted	2	99	569	637	40	36	1,383	19.5%
SOAB High Unassisted	9	131	301	300	70	26	837	11.8%
SOAB Low Assisted	7	111	672	437	37	57	1,321	18.6%
SOAB Low Unassisted	11	287	1,248	726	149	72	2,493	35.2%
SOAB QRP Assisted		5	21	6	2	2	36	0.5%
SOAB QRP		14	78	16	8	2	118	1.7%
Unassisted								
СК	4	26	238	44	3	13	328	4.6%
EM			5	1	4	2	12	0.2%
ES		4	18	4	4	5	35	0.5%
M2	3	13	38	27	10	3	94	1.3%
MM	2	7	23	16	2	4	54	0.8%
MSH	5	30	134	33	9	15	226	3.2%
MSL		41	70	21	9	9	150	2.1%
ALL	43	768	3,415	2,268	347	246	7,087	100%
% by continent	0.6%	10.8%	48.2%	32.0%	4.9%	3.5%	100%	

entries by category and continent (single-band excluded)

Accuracy Champions!

It's important each year to point out the crème de la crème in our midst who submit the most accurate logs. After all, the point of any contest is not to simply work the most people; it's also to do it with accuracy. With many categories resulting in close races at the top, precision can make the difference between being #1 or #2 in the final results.

Table 2 is a list of operators who truly stood out amongst their peers and should be congratulated for a job well done! Submitting a log with an error rate of 1% or less is a fantastic accomplishment. In last year's WW, the median error rate was 2.6% before application of penalties. One of many highlights was the effort by Sergey, EU1A, operating from EW5A, who logged 58 busted QSOs out of 7,219 contacts, an error rate of only 0.8%!

Table 2 – Entrants with >99% QSO Accuracy – SOAB Unassisted, over 1,000 QSOs

Entrant	Cont	Power	Raw QSOs
EW5A (EU1A)	EU	High	7219
TK9R (IK8UND)	EU	High	6857
DR0W (DJ5MW)	EU	High	6493
LX1NO	EU	High	4810
WH7T (WH7W)	ОС	High	4735
V48K (VE3DZ)	NA	Low	4356
W9RE	NA	High	3800
LY4L	EU	Low	3655
AA4NC (N4YDU)	NA	High	3522
V85RH (JO1RUR)	ОС	High	3364
NN7CW	NA	Low	3213
RM9I	AS	Low	3116
PY2UD	SA	Low	3028
EA3CI	EU	High	3016
DL2CC	EU	High	2660
VE3VN	NA	High	2646
HZ1TT	AS	Low	2424
VC3R (VE7VR)	NA	High	2156
WW4XX (LZ4AX)	NA	Low	2061
3W9A (KU1CW)	AS	Low	1844
OH2PQ	EU	High	1652
OL5Y	EU	Low	1623
SP2GMA	EU	Low	1604
OO40 (ON4APU)	EU	High	1530
DF5RF	EU	Low	1519
AE1P	NA	High	1518
PC2T	EU	High	1506
K6NA	NA	High	1364
EI4GNB	EU	Low	1323
LY9A	EU	QRP	1319
AB7YQ	NA	High	1245
DP5P (DL1MHJ)	EU	Low	1191
ES6RW	EU	QRP	1121
LC5C (LA6KOA)	EU	High	1073
ZD7BG	AF	High	1033
W6YX (N7MH)	NA	High	1018
EA7Z	EU	Low	1006

Some Final Thoughts from the Director...

As it turns out, last year was a great time for contesting and the CQ WW in particular. Not only did we receive a record number of logs, but I'm pleased to note that the median error rate for all logs was down almost a full point from 2023 at 2.6%. I suspect that's a combination of improved focus on accuracy as well as higher average signal strengths of participants fueled by our solar friend.

Speaking of activity, this year's log checking efforts worked its way through an astounding 5.3 million QSOs with the ability to cross-check over 91% of them! This combined with our other checking techniques means that the results you are reading are more accurate than ever before. Naturally, if you observe any problems, be sure to reach out and we will do our best to make necessary corrections.

Finally, as obvious and perhaps as unnecessary as it may seem, I want to thank you for simply observing the rules of the contest. In the 2024 SSB contest we had a relatively low number of disqualifications and category adjustments. However, there continues to be concern about signal quality and power abuse, both areas being difficult to adjudicate. There will be more on this subject in the upcoming CW results.

Well Deserved Acknowledgements

I've mentioned this many times in the past but the one aspect of the CQ WW that makes it the world's largest contest is the team that produces the results you are reading now. We are fortunate to have a group of world-class contesters that volunteer countless hours. It's with profound thanks that I share this year's team members with you: AA3B, Bud Trench; CT1BOH, José Nunes; EA4KD, Pedro Vadillo; F6BEE, Jacques Saget; GOMTN, Lee Volante; HA1AG, Zoli Pitman; IK2QEI, Stefano Brioschi; JH5GHM, Katsuhiro (Don) Kondou; K1DG, Doug Grant; K1EA, Ken Wolff; K3LR, Tim Duffy; K3WW, Charles Fulp; K5ZD, Randy Thompson; KR2Q, Doug Zwiebel; N3QE, Tim Shoppa; LA6VQ, Frode Igland; N9RV, Pat Barkey; OH6LI, Jukka Klemola; PA3AAV, Gert

Meinen; RA3AUU, Igor (Harry) Booklan; S50A, Tine Brajnik; UA9CDC, Igor Sokolov; VE3EJ, John Sluymer; VK2IA, Bernd Laenger; and YO3JR, Andrei (Andy) Ruse.

We are at the peak of Cycle 25. With conditions like we're currently experiencing, this upcoming

CQ WW season is going to be simply amazing. I'm looking forward to all of it. Don't miss it!

73, John, K1AR

CQ WW Contest Director

Stories from the 2024 SSB CQ WW

A Tale from Oman - A41DV

My name is Abdullah Al Khadhoori and I am a 23year-old from the Sultanate of Oman. I received my A-class license on October 10, 2024, just a few

weeks before the CQ WW contest. As a matter of great pride, I am the youngest fully licensed operator in the country, currently in university majoring in statistics in my last year.

For this year's CQWW



Abdullah, A41DV

personal QTH under my new callsign A41DV. I have come to truly love contests and how the whole community joins together to make as many contacts as possible. One week before the contest and as a new ham, I made a plan to understand propagation conditions and maintenance of the antennas. My station only has two small antennas: a Comet H-422 Trapped Dipole Antenna for 40 meters and a Cushcraft MA5B for 10, 15, and 20 meters. Both antennas are on separate masts and with only two days before the contest I finally received the rotator for my tri-bander. As good fortune would have it, I

contest I decided that I will operate from my

As this was my first solo contest (I had some contest exposure with other local hams), I made

also received my new Yaesu FTDX101MP

preparation for the contest.

transceiver on the same day and I set it up in

my operating plan. Unfortunately, in Oman we have many hours of the day where the bands are dead and not a single transmission can be heard, so I made sure that on those times I would rest. After setting up the logging software and some other last-minute station adjustments, everything was ready. At exactly 00:00 UTC which is 4:00 AM here in Oman I started the contest strong. Later on, while calling CQ and enjoying a moderate pileup, including many stations a bit above and below my frequency, there was a lot of QRM for this new ham. Although I was only running 100W, this is THE contest – the CQ WW -- so I continued.

This year's CQ WW was a new and amazing experience for me personally. I really learned many things during the contest hopefully will do even better in future contests. I hope to work you in the future from A41DV!

The Fun and Challenges of Operating QRP from Estonia -- ES6Q

I've been in contesting for many years, mostly HP and some LP. However, during last years, several circumstances have led me to



Rein, ES6RW

discover the wonderful world of QRP. In combination with decent antennas and favorable

propagation, one can achieve surpringly good scores.

I operated from our superb contest station at ES6Q, taking advantage of the impressive antenna farm at the club. To be fair, I was not a typical QRP operator with a tribander and wires. Rather, I had 6-ele monobanders on the higher bands, a 2 ele quad on 40 meters, verticals on 80 and 160 meters and a tribander fixed to Europe. And, there is the added benefit of zero external noise at the OTH.

It looks like I managed to choose an optimal operating strategy and take the advantage of great band conditions. In Northern Europe we need a good number of friendly sunspots to compete with guys further south and this was the case. As expected, the propagation on higher bands was better than in 2023.

The money band was 10 meters. As people say there are no meters like 10 meters. Stations were spread out for over one megahertz from 28250 to 29250. Most signals were strong with US stations being S9+ most of the time, a perfect opportunity for QRP operating. Spending a lot of time on 10 meters resulted in my making 43 percent of my total qso count on that band as well as having a respectable multiplier total.

A nice surprise was the decent propagation towards east on 20 meters late on Sunday evening. There were not many Asia/Oceania stations active, but the ones I worked were strong, producing several new mults including a few juicy double mults. It's almost always worthwhile to check unusual propagation paths from time to time – especially as a QRP station.

Finally, I want to offer my congratulations to K1ZM for the magnificent 2 million point QRP score. Jeff was a real S9++ on 10 meters for several hours.

What's next? Time will tell how long I will stick with QRP. I would like to thank everyone for the patience in pulling out my signal. And, a special thank-you to Gedas, LY9A, for competition.

73, Rein ES6RW / ES5RW



Using this 6-el 20M beauty from ES6Q makes QRP operating more enjoyable for Rein, ES6RW!

Frequent Flying to Madeira - CQ3W

The CQ WW SSB 2024 contest was my 23rd (!) trip to Santana Madeira for contesting. I had returned home only a short few weeks before from there after joining the CR3W WW RTTY crew, where we claimed the world high in the M/M category.

The biggest
difference
between the
September (RTTY)
and October (SSB)
timeframe is the
weather. There
was a lot of rain,
but enough dry
times to set up all



Helmut, DF7EE

the antennas for the contest. For the US, I use a 4-element monoband beam on a 10 meter portable mast, a 3-element, 5 band Spider beam at 18 meters for EU and another three-element tri-band Yagi for Africa and other parts of the world. Ironically, Africa is the most difficult location to work from this location as the terrain rises steeply up to 1800 meters, blocking the takeoff to many multipliers.

The radio setup is very simple as well. I have been using my ICOM IC-7300 travel buddy for years,

that fits nicely into my luggage and an ACOM 2000A that is on site together with N1MM logging software. I also have a second station for hot-swap backup with a Kenwood 590S and another ACOM. Thankfully I never had to move seats during any contest.

I was highly motivated for this year's contest as I made over 5100 QSOs last year on 10 meters and the propagation seemed even better!

Unfortunately, the band was too crowded, making it very difficult to keep any running frequency with my small pistol antennas. The band was packed wall-to-wall from 28.300 to 29.500. As a result, I never had the perfect hour near 300 QSOs/hour that I had in the past. What can you do?

Surrender? NO WAY! Although getting bounced around on my run frequencies, I would often work 1-2 mults while trying to find a new spot and establish a run. However, this is just part of the game. At the end I was still able to pile up 4400 QSOs and 2.4 million points.

A big thanks to Team CR3W who let me use this beautiful place over and over. My flights for the 2025 CQ WW SSB contest are already booked!

73, Helmut CQ3W aka DF7EE



Helmut, DF7EE, operating from the "brutal" environment offered at CR3A.

Operating from the Dream QTH of D4C

For the D4C team, preparations for the 2024 CQ WW SSB contest officially started at 0001 UTC on October 30th, 2023 —the exact moment we wrapped up the last one. Over the past year, we not only built, bought, and restored different hardware, but also held countless team video calls, face-to-face meetings in Europe, and made

several trips to Cape Verde to work on the station, test it during other contests, and (of course) occasionally enjoy the local beer (okay, maybe more than occasionally).

This year, we tackled a major project: expanding the physical shack with an additional room. We repurposed the outdoor terrace—because let's face it, with 95% of the time being wind, rain, or clouds, no one was out there sipping tea anyway. The new space became the perfect home for our amplifiers, freeing up the old amplifier room, which we turned into a "relaxation room" for operators. In theory, it's a place for ops to rest while others take their shifts. In practice, it's where we end up fixing things when the inevitable mid-contest Murphy strikes.

On the technical side, we made steady progress upgrading amplifiers, as the humid environment takes its toll over time. We also replaced all the antenna switches at the bottom of the towers, maintaining our rotator-free station design.

A big shoutout goes to Max IZ4DPV, who achieved a personal milestone by visiting the island five times this year!

The first group of operators—Louis DK4EE, Heiko DK3DM, Piotr SQ9D, and Massimo IZ4DPV— arrived at the station eight days before the contest. They immediately got to work, repairing the 15-meter tower that had collapsed a couple of weeks earlier due to vandalism. Among other things, they also had to deal with an unexpected challenge: fixing control cables that had become an unwelcome snack for local rats!



Collapsed 15-meter tower at D4C that was quickly repaired for the contest.

The second group, consisting of Kelly NOVD, Andrea HB9DUR, Giorgio I2VXJ, and Luca IK2NCJ, joined a few days later by Marco HB9CAT and Tomi HA8RT. Together, they tackled pre-contest preparations, including repairs to the 160-meter vertical damaged by a hurricane and the 80-meter four-square array, which, for some reason, wasn't working correctly.

On Friday, the day before the contest, we faced a final hurdle: the station's power generator stopped working completely. Securing and installing a replacement on such short notice in Cape Verde was no small feat, but the team came together to get it done just in time.



Last minute power generator replacement at D4C

Despite a hectic lead-up, the contest itself was a rewarding experience. While Saturday presented challenging propagation conditions on 20- and 15-meters, 10-meters performed well throughout. The low bands, however, were below expectations, with 160-meters being particularly poor. A technical issue with the 15-meter amplifier did cause some distraction, but we ensured it didn't hold us back for long.

This year's result didn't quite match the effort we put into preparation, but it provided valuable lessons and has made us even more eager for 2025! A huge thank-you to Marc, D44FF, for his excellent technical support and in keeping the team well-fed, and to Magic Mike, DM5XX, for his outstanding remote support.

Congratulations to CN3A on their stellar score! 73, D4C Team



World contest traveler Kelly, NOVD, made the trip to D4C from Arizona



Louis, DK4EE, putting D4C on the air, one of 25 other calls he's used in contesting



2024 CQWW SSB D4C team
Top (L-R): Giorgio I2VXJ, Tomi HA8RT, Kelly N0VD,
Louis DK4EE, Piotr SQ9D, Heiko DK3DM, Massimo
IZ4DPV, Marco HB9CAT
Bottom (L-R): Andrea HB9DUR, Marc D44FF, Kelly
N0VD, Luca IK2NCJ

Learning the Ropes Remotely - KC1TNO

I operated the contest remotely from K3JO's home station in Mendon, MA. Velimir is my uncle and my ham radio mentor. I'd like to express my thanks for everything he's done for me over the years and all the tremendous help and expertise he provides.

The station is very wellequipped, SO2R capable, with good antennas although it's a single tribander working on higher bands. The radio setup consists of an FTDX101MP and a 7610, SO2R box, PC running DXLOG, HP BPFs,



Luka, KC1TNO

HP Triplexer, ACOM 2000A ACOM 2020S. The RF switching and interlock is custom-made by K3JO and works flawlessly with DXLOG. For remote operation, in addition to Yaesu ICOM rig control apps, we used some interfaces for proper audio routing.

Setting everything up for remote phone operation was challenging! Remaudio was used for voice TX/RX as well as remote PTT switching with the antenna setup consisting of a 70-foot tower, C31XR for higher bands, 2-element beam for 40, GP for 80 and a 4-square for 160. Three bidirectional beverages were used for improved receiving.

My pre-contest preparation consisted of months of practice for remote operation and how to maximize the potential of SO2R on SSB. I'm still a rookie ham so I've got a lot to learn! I also studied the logs of contestants from eastern USA to catch some trends in propagation conditions. I've already operated contests with K3JO and K1LZ during the past couple of years, so I had some experience on how conditions work from this part of the world. My general class license meant I had to be careful with frequencies. The goal was to set a new rookie record, set by EW6W in 2015, and I managed to do it!

As the contest got underway, I got the hang of operating SO2R with almost no downtime.

Unfortunately, halfway into Day 1, the 7610 remote audio was compromised so I continued as SO1R.

I feel quite happy even though my final score was not a big boy record by any means. The bottom line, however, is that I was satisfied and more importantly had a lot of fun!

73, Luka / YT3WA / KC1TNO

Being a Rookie at K3LR - KE8LQR

There's nothing quite like the atmosphere of a multi-multi contest team made up of enthusiastic, supportive, and encouraging members. Being able to be a part of the CQWW SSB team at K3LR was a truly amazing experience!

As a young ham who is just getting started in the world of contesting, I try to use every contest as a learning opportunity and having a team of ardent and seasoned operators helps immensely.

Everyone on the K3LR team possesses a wealth of knowledge and is more than willing to share everything that they know with those getting started in contesting. I got to experience this generosity first-hand through their help for me during every step of the contest, including the preparation beforehand, discussion of contesting strategies, and explanations of any aspects of the operating setup that I was unfamiliar with.

I was on 80 meters for the vast majority of the contest, so I focused primarily on looking at that band's statistics from previous years with important questions such as: How many contacts were made per hour? What times of day could I expect to have a greater or fewer number of contacts? What portions of the band would yield better results?

Upon my arrival at the station, we discussed contest strategies. Being the 80-meter daytime operator put me in a particularly unique situation where, although I was contesting, the most efficacious tactic was to slow down and work casual operators for valuable QSOs. In my brief stints on 15- and 40-meters, the approach that I had to take was very different – operating on both

of those bands required significantly more communication with the run station operator to ensure that we wouldn't be doubling. I had to adapt to a significantly faster pace as well.

A few of the more notable triumphs from the weekend included major increases in contacts with PYs and CEs, as well as an increase in QSOs with France. On the other hand, there was a notable decrease in the number of Qs with Japan and the UAs, and fewer URs as well. Regardless of these minor disappointments, I consider this year's effort a tremendous success. The team had a great time, made lots of memories, and personally, I was able to pick up an abundance of new skills and deepen my understanding of a variety of aspects of contesting. The experience left me feeling invigorated and excited to contest more and improve my skills, and eager to take what I had learned back to my school amateur radio club!

73, Katie, KE8LQR



Katie, KE8LQR, alongside the experienced contest team of K3LR

Exploring from Brazil - PV2K

For the first time, our team decided to try the Explorer Multi category. Our strategy was to take advantage of using the best station in each region of our country. With that in mind, two stations located in the state of Bahia operated by Hamilton PY6HD and Beto PY6RT (three full-size 40 meter elements) were tasked with making the most of the 40m band. In the state of São Paulo, Leonardo PY2KNK had the enviable job of maximizing 10 meters with 7X7 stacked Yagis. PY2KJ's station

together with PY2MP achieved top performance on 15 meters with stacked Yagis. We also had a dedicated station at Marco, PY4ME, designed to exclusively hunt for as many multipliers as possible. To finish off the configuration, our friend Átila, PP1KV, operated his station on 20 meters successfully operating at earlier times than the other high band stations because they are in the geographically advantageous state of Espirito Santo (ES). None of this could have been possible with the technical support by Wesley, PP1WW, providing outstanding Internet and VPN network connectivity across all the stations.

PV2K Team - CQWWSSB 2024 - Explorer category -



It takes a village to achieve a #1 score in the CQ WW Multi-Op Explorer category.

The very nature of our operation was very dynamic and as a result we were in constant contact through the N1MM program chat feature so that we could make adjustments and necessary strategy changes based on the results and statistics provided by the program.

Thank you for the opportunity to explore. We hope to work you in the next operation!!!

73, Leonardo, PY2KNK for the PV2K Team

A Family Operation - PU2LVW

Using a Yaesu FTDx-3000 and a 5-element OWA antenna for the 10-meter band, I participated in the CQ WW SSB. The main goal was to encourage my 11-year-old son to take an interest in amateur radio. He currently operates on the CB band (hope to repair this soon!). Honestly, I had low expectations for a high score and certainly were

surprised to reach first place in my category.

As the start of the contest approached, we went to the contest station, located in a fantastic spot at 1,200 meters



Vinicius, PU2VLW and his 11year-old son, Gabriel

above sea level with low noise levels. However, as Murphy would have it, the weather conditions were not ideal with strong gusts of wind, which left us without power for a few hours.

Something that certainly contributed was the studies I carried out using WSPR and FT8 signals, in order to determine a strategy of schedules and azimuthal positions. And the goals set by my son who got excited with me as we logged each new multiplier.

73, Vinicius, PU2VLW



A view of the antenna farm owned by Vinicius, PU2VLW

Siberian Contesting - RA9P

We live in Siberia in remote Zone 18. Operating from my part of the world is quite a challenging experience, but at the same time amazing.

I love contesting. For me, my favorite aspect of any contest is when you find multipliers from far away islands or rare countries. However, to catch good conditions at my QTH require a special strategy with lots of moving from band to band. The antenna never stays in one place!

Running pileups is a dream for me, so that's why I usually work with two radios. One is on the pile-up frequency, the second on a different band used for searching and pouncing. This year the propagation was fantastic, especially on the high bands. Usually, it is nearly a miracle for me to catch a US station on 10 meters. This time 10 meters was wide open, so I decided to run on two radios (with appropriate interlocks), with the rate often up to 200-250 QSOs per hour.

When preparing for a contest, a lot depends on my state-of-mind, with the ability to concentrate and be in top physical shape



Alexsey, RA9P

being the main contributors to success. The day before a contest always includes a long workout at the gym with a long nap before the contest. Even during the contest, I always try to stretch, do a few push-ups or squats to get the blood going. In addition, sleep and rest during contests is part of my formula. I prefer to take a 15-20 minute nap every 6-7 hours, which is more than enough to feel better and keep going. This strategy allows me to maintain my concentration and stamina during the contest.

Another important part is food -- nothing fatty, oily, or spicy. Black tea, sandwiches with ham and vegetables, and a few cubes of sugar. Dark chocolate really helps to get the brain working. Hydration is also very important, but I never drink

too much water for obvious reasons! I plan my diet and the exact time of eating the day before. The main rule – "never do anything extraordinary before the contest". This rule helps me in my studies as well. I am 19-years-old and a third-year student at our state university. My future profession is to be a financial analyst, and radio sport is helping me master my future career like nothing else. It develops my attention, speed, and accuracy in decision-making, especially when there are numerous signals and voices providing information all around me.

All of this is what my coach and father RC9O taught me. For over 20 years, he has meticulously built a radio station, with a network of numerous antennas. Their design mainly relies on stacks due to the vast distances, over 6,000 kilometers, to our nearest neighboring countries. Our arsenal boasts a 3-element yagi for the 160-meter band and 3-element yagi for the 80-meters. We also have a 7-over-7 stack of yagi antennas for the 20-meter band, a 6-over-6 stack for the 10- and 15-meter bands, several H-frames, and an array of single-band multi-element fixed antennas.

Altogether, it is a lot of preparation to do, not only equipment, but also mentally and physically. The bottom line: if you take something seriously, you get serious results!

73, Aleksey, RA9P

A Siberian Explorer – RG9A

My choice of the Explorer overlay was not accidental, as there are problems with receiving DX on low-frequency bands in the Urals (Grid MO04) while trying to navigate through a "fence" of relatively close and powerful European radio stations. As a result, remote WEB-SDR receivers located on various continents were used for this purpose.

Unfortunately, the propagation on the high frequency bands was so good that not all of the DX visited the bands of 80- and 160-meters. Thus, expectations from the miraculous help of the WEB-SDR turned out to be greatly exaggerated.

Also, as a matter of advice for North American stations, with maximum solar activity, I had many unanswered calls when the band was open, despite numerous CQs.

For those that are interested, the main "weapon" at RG9A is SO2R-configured equipment (FTdx9000D and IC-756ProIII transceivers) with 1 KW power amplifiers.

Antennas:

160 m vertical with a height of 51 m for TX and 4 "double flags" for RX;

80 m system of 6 phased half–wave vertical dipoles with a switchable radiation pattern with a height of 51 m;

40 m - 3 full-size element YAGI at a height of 25 m; 20 m – 5 elements YAGI at a height of 25 m; 15 m – bidirectional antenna (Europe + Asia + rotating antenna) – stack of 2 stage 8 + 2x6 elements YAGI;

10 m – bidirectional antenna - stack of 3 stage (Europe + Asia + rotating antenna) 8 + 2x6 + 2x6 elements YAGI.

Until the next time...

73, Yuri, RG9A



Keeping all of Yuri, RG9A's antennas pointing in the right direction is a challenge over the course of 48 hours in the CQ WW.



Speaking of the RG9A antenna farm...

A Canadian Rookie Story - VE1RGO (VE3RGO)

As a new contester, the time for one of the majors of the year arrived – the CQ WW. In a relatively short period of time since joining the ranks of contesters and getting the thrill of competitive results in radiosport and the camaraderie of a

major weekend on the air, this event has become something I eagerly look forward to. In addition, spending much of the year operating in POTA activations and



Stuart VE1RGO

State QSO Parties results in a busy October, November and December for me!

My Nova Scotia-based station (VE1) is a modest Yaesu FT-710, at 100W (LP) with a homebrew 80-10 EFHW strung from the third-floor attic to a tree in the backyard. As a rookie, my superpowers are mostly perseverance (also known as a fair amount of chair time!). I spend most of my time searching and pouncing as I chase the available QSOs in my N1MM spotting window.

The 2024 CQWWSSB was my last contest to qualify as a Rookie, so my goals were to try to improve my Canadian position for the Rookie overlay from #2 to #1 and to improve upon last year's score.

One of my unexpected triumphs was receiving feedback from a station who worked me, saying that he had heard me everywhere during the contest. That was so motivating as was support from club members encouraging and cheering me on. My only true disappointment was not making enough opportunities to run stations. The outstanding band conditions encouraged more people to run resulting in far fewer available frequencies to use. However, both times I found an opportunity to run on 10 meters above 29.0 MHz!

The bottom line for me: a great contest with great conditions!

73, Stuart, VE1RGO (VE3RGO)

Operating Remotely from Remote Labrador – VO2AC

It'd been a dream of mine for some time, especially when remote operating became more popular and equipment became more available, to have a contest station in my hometown in Labrador. I pulled together my first remote station in 2015 and have been slowly improving the setup ever since. This past summer I moved everything to a new location and installed a tower.

Here's the rundown on the station:

Rig: Flex-6600 Amps: 2x KPA500

Antenna Switch: Antenna Genius Filters and Triplexer: VA6AM

Rotor: T2X (with Easy-Rotor-Control and

PSTRotator software)

Tower: 72ft Trylon (#13 base, #5 top)

Antennas:

160m: Inverted L

80m: Wire verticals (CW SSB)

40m: Aluminum mast vertical, and wire vertical

20m-10m: JK Mid-tri at 72ft

20m-10m: EX-14 (fixed on EU, at about 35ft) RX: 200ft Reversible (NE/SW) Beverage (DX Engineering), and 200ft BOG (NE) (KD9SV)

The CQWW SSB was the first real test of the new setup. The first night wasn't that great, with only 339Qs logged before I took a one-hour nap around 0930Z. I was having trouble getting anything going on 80- and 160 meters and was wondering if there was something wrong with my antennas. I started again on 15 meters around 1030Z before making my way to 10 meters about an hour later. I found a spot below 28.300 and stayed there for six hours running EU with four of those six hours resulting in rates over 200/hour making it difficult for me, relatively new to SO2R, to work anything on another band. I then QSYd to a spot higher in the band and ran for another hour and a half, with rates again exceeding 200/hour, finishing the day with 1514 QSOs on 10 meters. Of course, the trade-off was that I only had 600 QSOs on 20 meters and 255 contacts on 15 meters, but that was deliberate on my part. My plan was to spend Sunday running on 15 meters, while working other QSOs/multipliers on 10- and 20-meters.

The low bands were a little better the second night and I was able to make a little progress on 80 meters, working 40 more QSOs, three more zones, and 15 more countries. Despite only a single element on 40m, I felt loud and was able to both bust European pileups and hold a run frequency to EU below 7.100.

After a nap from 0700Z to 1015Z, I SPd for an hour making Qs on 40m-10m, before settling in below 21200 to run EU. I stayed there for about 8 hours, not at the same rate as on 10m on Saturday, so I was able to more effectively take advantage of my SO2R setup and work guys on 10 and 20 meters.

I'm sure I made some strategic errors along the way, including not asking many mults to QSY to different bands, but I was having fun! In the end I more than tripled my score from last year when I was using a much simpler setup. That's a big win for me!

73, Chris, VO2AC / VE3FU

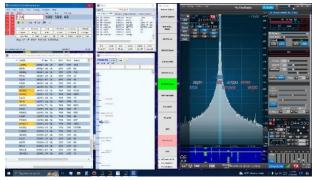


Sometimes you can actually see the grass at the cold northern Labrador QTH of Chris, VO2AC.

Youthful Operating in the CQWW - WV4AM

I had so much fun operating this year's CQWW SSB contest. I knew that I wouldn't do very well with my G5RV and my IC-7300 (though it might get me somewhere) so I decided to use my grandpa's (W9SN) remote station setup.

I fired up SmartSDR along with the CAT and DAX and turned on the radio via a remote controller. Then I got everything configured and set up in N1MM Logger+ and anxiously waited until the clock hit 0000Z. The second it started all the contesters broke out. From that point, for the next 48 hours, it was all just fun and with lots of great multipliers to be worked.



Representative remote set-up by WV4AM operating at W9SN.

I operated with some beams pointed towards different parts of the world (Caribbean, Asia, Europe, etc.) and just had a blast. I learned a lot from last years' experience, and I didn't waste my time calling CQ for hours, operating almost

exclusively in SP mode. I only made one contact calling CQ out of my entire log, because I had worked all the stations I could hear on 10 meters.

Boy was 10 meters booming! I never heard it so active. It seems that every year the bands magically open for the CQ WW contest.



Antenna farm at W9SN



There's always something to fix with so many antennas at W9SN

Conditions were astonishing to Europe on 10 meters. I worked hundreds of contacts on that band and even made several with stations in Africa as well as the Caribbean.

Not every station could hear me clearly, however. My call is, after all, a little tricky. Since I'm in NC, and I used a station in TN (where the remote station is) my CQ Zone flips from 5 to 4. I'm certain that there will be many incorrectly copied call/zones in other logs. However, just the thrill of the fast-paced contesting and hundreds of QSOs is a huge treat by itself.



WV4AM at my grandpa's house (W9SN) working XT2MD with his SteppIR Yagi and 600 watts

I want to give a huge thank-you to my grandpa, W9SN, for providing me with such a tremendous contesting station to work the world. I also want to extend my thanks to everyone who worked me. I really hope to see you in the next CQWW – SSB and CW!

73, Jacob, WV4AM

Contesting from Turks and Caicos - VP5M

VP5M is the contest call for the Turks Caicos station at Harbour Rock Villa near Turtle Cove on Providenciales island with the 2024 CQWW SSB team being KU4V, K4QPL, NR4O, and WT3K. At the contest QTH, the only permanent antennas are a 3-element SteppIR at 10 meters and an 80meter inverted-V dipole at 9 meters above ground level (about 30 meters above the ocean). A northfacing takeoff from the ridge compensates well for the otherwise low height above ground. Additional antennas for a multi-op station must be put up on a temporary basis. Since the villa was rented through Thursday before the contest, it made our setup time very short this year. Upon arrival, we installed an A3S and a 40 meter inverted-V dipole up about 7 meters from the pool deck.

We also needed to set up the station for multi-op. This consisted of two Elecraft K3 transceivers with an EA4TX hardware interlock for in-band operations. SDRs with N1MM display helped monitor and maximize multiplier opportunities. While testing all the equipment to make sure everything was in order, we ran into several

problems with the audio which were mostly resolved only 15 minutes before the contest started!

Everyone was so focused on setup that we had little time to discuss strategy. We decided upon a two-operator rotation every three hours, which we mostly maintained for the entirety of the contest. In addition to working multipliers, the mult station's job was also to work in-band when rates slowed, finding a good CQ frequency, and monitoring the other bands to determine when it was time for the run station to switch.

Since the station is low-band challenged, conditions this year were almost ideal. The high bands were open with good rates for most of the contest. In fact, the run station stayed on 10 meters for about ten of the last 12 hours in the contest, achieving rates and geographical coverage very unusual for stations in the upper Caribbean. Nevertheless, low power makes it tough to break through the pile-ups but we were able to eventually work a majority of the spotted multipliers.

The biggest setback was when the island lost power around 2 hours before the end of the contest. Fortunately, the disruption was minimal, and we were back on the air in around 15 minutes.

The station, owned by K4QPL, has had many M/S LP CW and SSB wins for CQ and ARRL contests since 2016 and the team looks forward to many more.

73, Daryl, WT3K



Photo 18 – Pool -- contest? Pool -- contest? Tough decision when operating from VP5M!



The team at VP5M decided to enter the contest after all! (l-r: Daryl, WT3K, Eric, NR4O, and Wayne, KU4V).

Photo Gallery



Takuro, JI1NZA, worked 58 QSOs, 17 Zones and 25 countries while operating QRP with this set-up!



Dennis, 4I1EAY, was #1 in Oceania, Single Operator, Low Power, 10M



The Multi-Op Explorer crew at IQ3PN processing one of their many pileups – this one before the contest!

Band Breakdowns

WORLD SINGLE OPERATOR ALL BAND

			Ui ~h	Dorrow		
		/ /	_			
8P5A	14/3/11	365/15/61	1185/30/94	2183/36/102	2727/38/113	3736/36/115
PJ4K	67/7/16	291/15/46	1144/27/88	1905/32/98	2048/34/89	3613/31/99
6Y1V EW5A	55/5/13 99/10/45	414/14/57 453/17/69	1003/28/84 923/28/89	2180/32/99 1485/35/110	2170/35/104 1447/33/103	3621/32/101 2754/36/114
DROW	117/6/43	435/13/59	610/27/90	1785/36/114	1004/34/112	2489/38/123
CF3A	15/3/4	483/15/61	929/25/83	1452/32/102	1383/31/104	2170/28/106
OM2VL	189/12/43	426/13/56	632/26/92	1711/37/114	1139/35/100	2198/37/123
RA9P	15/5/13	526/14/60	887/25/81	1554/34/116	1283/33/109	1279/33/129
KQ2M	12/6/11	233/13/55	547/22/73	1506/35/106	1315/32/101	2124/31/116
TK9R	129/7/38	324/12/54	623/23/75	2154/32/111	1639/33/100	1953/31/96
			Low	Power		
P40W	19/4/13	135/12/43	368/23/73	774/29/92	1504/32/91	2219/34/101
KP2B	14/3/12	92/11/35	201/14/51	1343/29/94	1281/32/92	2225/28/87
V48K	4/3/4	101/10/29	366/17/62	1472/32/101	826/31/96	1547/25/85
RM9I	0/0/0	20/7/17	233/17/70	809/30/99	730/30/88	1298/31/109
NN7CW	6/4/4	86/12/42	236/20/68	690/25/83	749/24/78	1423/25/79
UW5Y	44/4/29	320/13/53	368/20/70	660/31/89	1022/30/93	1262/31/99
LY4L	173/5/34	442/10/49	767/22/80	637/29/97	595/28/94	1007/27/96
PY2UD	0/0/0	0/0/0	14/7/9	180/25/72	1107/32/92	1706/33/103
HA3NU	107/5/34	312/12/52	310/21/72	752/32/95	552/31/96	705/27/93
C40C	14/3/11	56/6/28	317/17/67	552/24/84	628/26/88	985/24/66
			-	RP		
K1ZM	11/4/7	91/13/47	119/22/65	142/25/70	255/28/89	940/25/94
ES6RW	32/3/20	67/6/27	160/12/58	166/25/70	217/24/71	473/25/81
LY9A	17/3/13	126/4/30	216/12/58	244/20/67	346/19/65	364/21/60
VA2IW	2/2/2	6/1/1	12/5/4	130/15/48	98/17/51	424/16/76
ND0C	0/0/0	3/3/1	32/13/17	92/22/55	131/21/54	267/27/79
SO2U	0/0/0	21/3/15	104/14/45	150/17/51	158/17/55	127/20/47
0 7 7 7777						
GI7JYK	0/0/0	62/4/25	97/11/41	148/11/41	169/13/50	221/12/52
HA5BA	0/0/0 0/0/0	62/4/25 73/7/30	97/11/41 108/11/39	148/11/41 150/11/47	169/13/50 113/9/35	221/12/52 168/17/40
HA5BA PY2PLL	0/0/0 0/0/0 0/0/0	62/4/25 73/7/30 0/0/0	97/11/41 108/11/39 1/1/1	148/11/41 150/11/47 36/10/22	169/13/50 113/9/35 99/16/46	221/12/52 168/17/40 252/19/61
HA5BA	0/0/0 0/0/0	62/4/25 73/7/30	97/11/41 108/11/39	148/11/41 150/11/47	169/13/50 113/9/35	221/12/52 168/17/40
HA5BA PY2PLL	0/0/0 0/0/0 0/0/0 0/0/0	62/4/25 73/7/30 0/0/0 0/0/0	97/11/41 108/11/39 1/1/1 1/1/1	148/11/41 150/11/47 36/10/22 28/11/18	169/13/50 113/9/35 99/16/46 73/19/38	221/12/52 168/17/40 252/19/61 276/25/67
HA5BA PY2PLL	0/0/0 0/0/0 0/0/0	62/4/25 73/7/30 0/0/0 0/0/0	97/11/41 108/11/39 1/1/1 1/1/1	148/11/41 150/11/47 36/10/22 28/11/18	169/13/50 113/9/35 99/16/46 73/19/38	221/12/52 168/17/40 252/19/61 276/25/67
HA5BA PY2PLL KE0WPA	0/0/0 0/0/0 0/0/0 0/0/0 WORLD	62/4/25 73/7/30 0/0/0 0/0/0	97/11/41 108/11/39 1/1/1 1/1/1 OPERATO High	148/11/41 150/11/47 36/10/22 28/11/18 OR ASSIS Power	169/13/50 113/9/35 99/16/46 73/19/38	221/12/52 168/17/40 252/19/61 276/25/67
HA5BA PY2PLL KE0WPA	0/0/0 0/0/0 0/0/0 0/0/0 WORLD	62/4/25 73/7/30 0/0/0 0/0/0 SINGLE 314/14/65	97/11/41 108/11/39 1/1/1 1/1/1 OPERATO High 731/24/94	148/11/41 150/11/47 36/10/22 28/11/18 OR ASSIS Power 1731/37/122	169/13/50 113/9/35 99/16/46 73/19/38 STED ALI 1704/36/127	221/12/52 168/17/40 252/19/61 276/25/67 BAND 2647/37/137
HA5BA PY2PLL KE0WPA ED5D EA2W	0/0/0 0/0/0 0/0/0 0/0/0 WORLD 40/6/25 36/6/34	62/4/25 73/7/30 0/0/0 0/0/0 SINGLE 314/14/65 139/15/73	97/11/41 108/11/39 1/1/1 1/1/1 OPERATO High 731/24/94 665/28/103	148/11/41 150/11/47 36/10/22 28/11/18 OR ASSIS Power 1731/37/122 1719/38/138	169/13/50 113/9/35 99/16/46 73/19/38 STED ALI 1704/36/127 1675/37/131	221/12/52 168/17/40 252/19/61 276/25/67 BAND 2647/37/137 1915/38/146
HA5BA PY2PLL KE0WPA ED5D EA2W LY4A	0/0/0 0/0/0 0/0/0 0/0/0 0/0/0 WORLD 40/6/25 36/6/34 244/13/57	62/4/25 73/7/30 0/0/0 0/0/0 SINGLE 314/14/65 139/15/73 701/21/96	97/11/41 108/11/39 1/1/1 1/1/1 OPERATO High 731/24/94 665/28/103 1471/32/117	148/11/41 150/11/47 36/10/22 28/11/18 OR ASSIS Power 1731/37/122 1719/38/138 1050/37/132	169/13/50 113/9/35 99/16/46 73/19/38 STED ALI 1704/36/127 1675/37/131 1546/38/129	221/12/52 168/17/40 252/19/61 276/25/67 BAND 2647/37/137 1915/38/146 1656/37/151
HA5BA PY2PLL KE0WPA ED5D EA2W LY4A PT5J	0/0/0 0/0/0 0/0/0 0/0/0 WORLD 40/6/25 36/6/34 244/13/57 4/3/3	62/4/25 73/7/30 0/0/0 0/0/0 SINGLE 314/14/65 139/15/73 701/21/96 24/12/16	97/11/41 108/11/39 1/1/1 1/1/1 OPERATO High 731/24/94 665/28/103 1471/32/117 222/30/79	148/11/41 150/11/47 36/10/22 28/11/18 OR ASSIS Power 1731/37/122 1719/38/138 1050/37/132 1119/38/117	169/13/50 113/9/35 99/16/46 73/19/38 STED ALI 1704/36/127 1675/37/131 1546/38/129 1386/38/122	221/12/52 168/17/40 252/19/61 276/25/67 BAND 2647/37/137 1915/38/146 1656/37/151 3111/36/136
HA5BA PY2PLL KE0WPA ED5D EA2W LY4A PT5J 9A1P	0/0/0 0/0/0 0/0/0 0/0/0 WORLD 40/6/25 36/6/34 244/13/57 4/3/3 84/6/46	62/4/25 73/7/30 0/0/0 0/0/0 SINGLE 314/14/65 139/15/73 701/21/96 24/12/16 214/16/70	97/11/41 108/11/39 1/1/1 1/1/1 OPERATO High 731/24/94 665/28/103 1471/32/117 222/30/79 661/29/102	148/11/41 150/11/47 36/10/22 28/11/18 OR ASSIS Power 1731/37/122 1719/38/138 1050/37/132 1119/38/117 1440/37/134	169/13/50 113/9/35 99/16/46 73/19/38 STED ALI 1704/36/127 1675/37/131 1546/38/129 1386/38/122 864/38/131	221/12/52 168/17/40 252/19/61 276/25/67 BAND 2647/37/137 1915/38/146 1656/37/151 3111/36/136 2107/39/154
HA5BA PY2PLL KE0WPA ED5D EA2W LY4A PT5J 9A1P II2Q	0/0/0 0/0/0 0/0/0 0/0/0 0/0/0 WORLD 40/6/25 36/6/34 244/13/57 4/3/3 84/6/46 103/11/52	62/4/25 73/7/30 0/0/0 0/0/0 8 INGLE 314/14/65 139/15/73 701/21/96 24/12/16 214/16/70 283/15/65	97/11/41 108/11/39 1/1/1 1/1/1 1/1/1 OPERATO High 731/24/94 665/28/103 1471/32/117 222/30/79 661/29/102 471/28/103	148/11/41 150/11/47 36/10/22 28/11/18 OR ASSIS Power 1731/37/122 1719/38/138 1050/37/132 1119/38/117 1440/37/134 1638/38/136	169/13/50 113/9/35 99/16/46 73/19/38 STED ALI 1704/36/127 1675/37/131 1546/38/129 1386/38/122 864/38/131 1100/37/136	221/12/52 168/17/40 252/19/61 276/25/67 BAND 2647/37/137 1915/38/146 1656/37/151 3111/36/136 2107/39/154 1572/38/146
HA5BA PY2PLL KE0WPA ED5D EA2W LY4A PT5J 9A1P II2Q S57AL	0/0/0 0/0/0 0/0/0 0/0/0 0/0/0 WORLD 40/6/25 36/6/34 244/13/57 4/3/3 84/6/46 103/11/52 95/7/39	62/4/25 73/7/30 0/0/0 0/0/0 8 SINGLE 314/14/65 139/15/73 701/21/96 24/12/16 214/16/70 283/15/65 380/15/69	97/11/41 108/11/39 1/1/1 1/1/1 1/1/1 OPERATO High 731/24/94 665/28/103 1471/32/117 222/30/79 661/29/102 471/28/103 517/27/97	148/11/41 150/11/47 36/10/22 28/11/18 OR ASSIS Power 1731/37/122 1719/38/138 1050/37/132 1119/38/117 1440/37/134 1638/38/136 1840/39/138	169/13/50 113/9/35 99/16/46 73/19/38 STED ALI 1704/36/127 1675/37/131 1546/38/129 1386/38/122 864/38/131 1100/37/136 1062/36/130	221/12/52 168/17/40 252/19/61 276/25/67 BAND 2647/37/137 1915/38/146 1656/37/151 3111/36/136 2107/39/154 1572/38/146 1651/37/134
HA5BA PY2PLL KE0WPA ED5D EA2W LY4A PT5J 9A1P II2Q S57AL VE3JM	0/0/0 0/0/0 0/0/0 0/0/0 0/0/0 WORLD 40/6/25 36/6/34 244/13/57 4/3/3 84/6/46 103/11/52 95/7/39 35/8/14	62/4/25 73/7/30 0/0/0 0/0/0 8 SINGLE 314/14/65 139/15/73 701/21/96 24/12/16 214/16/70 283/15/65 380/15/69 468/13/67	97/11/41 108/11/39 1/1/1 1/1/1 1/1/1 OPERATO High 731/24/94 665/28/103 1471/32/117 222/30/79 661/29/102 471/28/103 517/27/97 667/27/98	148/11/41 150/11/47 36/10/22 28/11/18 OR ASSIS Power 1731/37/122 1719/38/138 1050/37/132 1119/38/117 1440/37/134 1638/38/136 1840/39/138 823/34/115	169/13/50 113/9/35 99/16/46 73/19/38 STED ALI 1704/36/127 1675/37/131 1546/38/129 1386/38/122 864/38/131 1100/37/136 1062/36/130 988/32/116	221/12/52 168/17/40 252/19/61 276/25/67 BAND 2647/37/137 1915/38/146 1656/37/151 3111/36/136 2107/39/154 1572/38/146
HA5BA PY2PLL KE0WPA ED5D EA2W LY4A PT5J 9A1P II2Q S57AL	0/0/0 0/0/0 0/0/0 0/0/0 0/0/0 WORLD 40/6/25 36/6/34 244/13/57 4/3/3 84/6/46 103/11/52 95/7/39	62/4/25 73/7/30 0/0/0 0/0/0 8 SINGLE 314/14/65 139/15/73 701/21/96 24/12/16 214/16/70 283/15/65 380/15/69	97/11/41 108/11/39 1/1/1 1/1/1 1/1/1 OPERATO High 731/24/94 665/28/103 1471/32/117 222/30/79 661/29/102 471/28/103 517/27/97	148/11/41 150/11/47 36/10/22 28/11/18 OR ASSIS Power 1731/37/122 1719/38/138 1050/37/132 1119/38/117 1440/37/134 1638/38/136 1840/39/138	169/13/50 113/9/35 99/16/46 73/19/38 STED ALI 1704/36/127 1675/37/131 1546/38/129 1386/38/122 864/38/131 1100/37/136 1062/36/130	221/12/52 168/17/40 252/19/61 276/25/67 BAND 2647/37/137 1915/38/146 1656/37/151 3111/36/136 2107/39/154 1572/38/146 1651/37/134 1657/34/125
ED5D EA2W LY4A PT5J 9A1P II2Q S57AL VE3JM NU4E	0/0/0 0/0/0 0/0/0 0/0/0 0/0/0 WORLD 40/6/25 36/6/34 244/13/57 4/3/3 84/6/46 103/11/52 95/7/39 35/8/14 9/5/8	62/4/25 73/7/30 0/0/0 0/0/0 8 SINGLE 314/14/65 139/15/73 701/21/96 24/12/16 214/16/70 283/15/65 380/15/69 468/13/67 83/14/49	97/11/41 108/11/39 1/1/1 1/1/1 1/1/1 OPERATO High 731/24/94 665/28/103 1471/32/117 222/30/79 661/29/102 471/28/103 517/27/97 667/27/98 281/26/85 155/23/78	148/11/41 150/11/47 36/10/22 28/11/18 OR ASSIS Power 1731/37/122 1719/38/138 1050/37/132 1119/38/117 1440/37/134 1638/38/136 1840/39/138 823/34/115 884/37/123 1013/35/118	169/13/50 113/9/35 99/16/46 73/19/38 STED ALI 1704/36/127 1675/37/131 1546/38/129 1386/38/122 864/38/131 1100/37/136 1062/36/130 988/32/116 517/35/123	221/12/52 168/17/40 252/19/61 276/25/67 BAND 2647/37/137 1915/38/146 1656/37/151 3111/36/136 2107/39/154 1572/38/146 1651/37/134 1657/34/125 2034/34/130
ED5D EA2W LY4A PT5J 9A1P II2Q S57AL VE3JM NU4E NN3L	0/0/0 0/0/0 0/0/0 0/0/0 0/0/0 WORLD 40/6/25 36/6/34 244/13/57 4/3/3 84/6/46 103/11/52 95/7/39 35/8/14 9/5/8 14/7/11	62/4/25 73/7/30 0/0/0 0/0/0 8 SINGLE 314/14/65 139/15/73 701/21/96 24/12/16 214/16/70 283/15/65 380/15/69 468/13/67 83/14/49 205/14/63	97/11/41 108/11/39 1/1/1 1/1/1 1/1/1 OPERATO High 731/24/94 665/28/103 1471/32/117 222/30/79 661/29/102 471/28/103 517/27/97 667/27/98 281/26/85 155/23/78	148/11/41 150/11/47 36/10/22 28/11/18 OR ASSIS Power 1731/37/122 1719/38/138 1050/37/132 1119/38/117 1440/37/134 1638/38/136 1840/39/138 823/34/115 884/37/123 1013/35/118 Power	169/13/50 113/9/35 99/16/46 73/19/38 STED ALI 1704/36/127 1675/37/131 1546/38/129 1386/38/122 864/38/131 1100/37/136 1062/36/130 988/32/116 517/35/123 684/33/114	221/12/52 168/17/40 252/19/61 276/25/67 BAND 2647/37/137 1915/38/146 1656/37/151 3111/36/136 2107/39/154 1572/38/146 1651/37/134 1657/34/125 2034/34/130 1728/33/121
ED5D EA2W LY4A PT5J 9A1P II2Q S57AL VE3JM NU4E	0/0/0 0/0/0 0/0/0 0/0/0 0/0/0 WORLD 40/6/25 36/6/34 244/13/57 4/3/3 84/6/46 103/11/52 95/7/39 35/8/14 9/5/8	62/4/25 73/7/30 0/0/0 0/0/0 8 SINGLE 314/14/65 139/15/73 701/21/96 24/12/16 214/16/70 283/15/65 380/15/69 468/13/67 83/14/49	97/11/41 108/11/39 1/1/1 1/1/1 1/1/1 OPERATO High 731/24/94 665/28/103 1471/32/117 222/30/79 661/29/102 471/28/103 517/27/97 667/27/98 281/26/85 155/23/78	148/11/41 150/11/47 36/10/22 28/11/18 OR ASSIS Power 1731/37/122 1719/38/138 1050/37/132 1119/38/117 1440/37/134 1638/38/136 1840/39/138 823/34/115 884/37/123 1013/35/118	169/13/50 113/9/35 99/16/46 73/19/38 STED ALI 1704/36/127 1675/37/131 1546/38/129 1386/38/122 864/38/131 1100/37/136 1062/36/130 988/32/116 517/35/123	221/12/52 168/17/40 252/19/61 276/25/67 BAND 2647/37/137 1915/38/146 1656/37/151 3111/36/136 2107/39/154 1572/38/146 1651/37/134 1657/34/125 2034/34/130
ED5D EA2W LY4A PT5J 9A1P II2Q S57AL VE3JM NU4E NN3L	0/0/0 0/0/0 0/0/0 0/0/0 0/0/0 WORLD 40/6/25 36/6/34 244/13/57 4/3/3 84/6/46 103/11/52 95/7/39 35/8/14 9/5/8 14/7/11	62/4/25 73/7/30 0/0/0 0/0/0 0/0/0 SINGLE 314/14/65 139/15/73 701/21/96 24/12/16 214/16/70 283/15/65 380/15/69 468/13/67 83/14/49 205/14/63	97/11/41 108/11/39 1/1/1 1/1/1 1/1/1 OPERATO High 731/24/94 665/28/103 1471/32/117 222/30/79 661/29/102 471/28/103 517/27/97 667/27/98 281/26/85 155/23/78 Low 792/27/102	148/11/41 150/11/47 36/10/22 28/11/18 OR ASSIS Power 1731/37/122 1719/38/138 1050/37/132 1119/38/117 1440/37/134 1638/38/136 1840/39/138 823/34/115 884/37/123 1013/35/118 Power 691/35/127	169/13/50 113/9/35 99/16/46 73/19/38 STED ALI 1704/36/127 1675/37/131 1546/38/129 1386/38/122 864/38/131 1100/37/136 1062/36/130 988/32/116 517/35/123 684/33/114	221/12/52 168/17/40 252/19/61 276/25/67 BAND 2647/37/137 1915/38/146 1656/37/151 3111/36/136 2107/39/154 1572/38/146 1651/37/134 1657/34/125 2034/34/130 1728/33/121
ED5D EA2W LY4A PT5J 9A1P II2Q S57AL VE3JM NU4E NN3L UZ7C VY2TT	0/0/0 0/0/0 0/0/0 0/0/0 0/0/0 WORLD 40/6/25 36/6/34 244/13/57 4/3/3 84/6/46 103/11/52 95/7/39 35/8/14 9/5/8 14/7/11	62/4/25 73/7/30 0/0/0 0/0/0 0/0/0 SINGLE 314/14/65 139/15/73 701/21/96 24/12/16 214/16/70 283/15/65 380/15/69 468/13/67 83/14/49 205/14/63	97/11/41 108/11/39 1/1/1 1/1/1 1/1/1 OPERATO High 731/24/94 665/28/103 1471/32/117 222/30/79 661/29/102 471/28/103 517/27/97 667/27/98 281/26/85 155/23/78 Low 792/27/102 433/23/84	148/11/41 150/11/47 36/10/22 28/11/18 OR ASSIS Power 1731/37/122 1719/38/138 1050/37/132 1119/38/117 1440/37/134 1638/38/136 1840/39/138 823/34/115 884/37/123 1013/35/118 Power 691/35/127 558/29/101	169/13/50 113/9/35 99/16/46 73/19/38 STED ALI 1704/36/127 1675/37/131 1546/38/129 1386/38/122 864/38/131 1100/37/136 1062/36/130 988/32/116 517/35/123 684/33/114	221/12/52 168/17/40 252/19/61 276/25/67 BAND 2647/37/137 1915/38/146 1656/37/151 3111/36/136 2107/39/154 1572/38/146 1651/37/134 1657/34/125 2034/34/130 1728/33/121
ED5D EA2W LY4A PT5J 9A1P II2Q S57AL VE3JM NU4E NN3L UZ7C VY2TT WP3C	0/0/0 0/0/0 0/0/0 0/0/0 0/0/0 0/0/0 WORLD 40/6/25 36/6/34 244/13/57 4/3/3 84/6/46 103/11/52 95/7/39 35/8/14 9/5/8 14/7/11 118/7/40 14/3/4 19/3/13 0/0/0 81/6/34	62/4/25 73/7/30 0/0/0 0/0/0 0/0/0 SINGLE 314/14/65 139/15/73 701/21/96 24/12/16 214/16/70 283/15/65 380/15/69 468/13/67 83/14/49 205/14/63	97/11/41 108/11/39 1/1/1 1/1/1 1/1/1 OPERATO High 731/24/94 665/28/103 1471/32/117 222/30/79 661/29/102 471/28/103 517/27/97 667/27/98 281/26/85 155/23/78 Low 792/27/102 433/23/84 466/21/71	148/11/41 150/11/47 36/10/22 28/11/18 OR ASSIS Power 1731/37/122 1719/38/138 1050/37/132 1119/38/117 1440/37/134 1638/38/136 1840/39/138 823/34/115 884/37/123 1013/35/118 Power 691/35/127 558/29/101 1002/27/77	169/13/50 113/9/35 99/16/46 73/19/38 STED ALI 1704/36/127 1675/37/131 1546/38/129 1386/38/122 864/38/131 1100/37/136 1062/36/130 988/32/116 517/35/123 684/33/114 976/33/122 676/28/106 928/26/62	221/12/52 168/17/40 252/19/61 276/25/67 BAND 2647/37/137 1915/38/146 1656/37/151 3111/36/136 2107/39/154 1572/38/146 1651/37/134 1657/34/125 2034/34/130 1728/33/121 1067/36/130 1436/27/115 1917/27/84
ED5D EA2W LY4A PT5J 9A1P II2Q S57AL VE3JM NU4E NN3L UZ7C VY2TT WP3C PY7ZC TM3Z ZL7IO	0/0/0 0/0/0 0/0/0 0/0/0 0/0/0 0/0/0 WORLD 40/6/25 36/6/34 244/13/57 4/3/3 84/6/46 103/11/52 95/7/39 35/8/14 9/5/8 14/7/11 118/7/40 14/3/4 19/3/13 0/0/0 81/6/34 0/0/0	62/4/25 73/7/30 0/0/0 0/0/0 0/0/0 SINGLE 314/14/65 139/15/73 701/21/96 24/12/16 214/16/70 283/15/65 380/15/69 468/13/67 83/14/49 205/14/63 182/14/65 80/10/37 165/11/37 0/0/0 384/13/63 26/8/13	97/11/41 108/11/39 1/1/1 1/1/1 1/1/1 OPERAT(High 731/24/94 665/28/103 1471/32/117 222/30/79 661/29/102 471/28/103 517/27/97 667/27/98 281/26/85 155/23/78 Low 792/27/102 433/23/84 466/21/71 193/18/69 479/23/91 287/28/55	148/11/41 150/11/47 36/10/22 28/11/18 OR ASSIS Power 1731/37/122 1719/38/138 1050/37/132 1119/38/117 1440/37/134 1638/38/136 1840/39/138 823/34/115 884/37/123 1013/35/118 Power 691/35/127 558/29/101 1002/27/77 1119/30/94 848/35/126 707/33/86	169/13/50 113/9/35 99/16/46 73/19/38 STED ALI 1704/36/127 1675/37/131 1546/38/129 1386/38/122 864/38/131 1100/37/136 1062/36/130 988/32/116 517/35/123 684/33/114 976/33/122 676/28/106 928/26/62 940/29/85 475/34/115 1088/33/97	221/12/52 168/17/40 252/19/61 276/25/67 BAND 2647/37/137 1915/38/146 1656/37/151 3111/36/136 2107/39/154 1572/38/146 1651/37/134 1657/34/125 2034/34/130 1728/33/121 1067/36/130 1436/27/115 1917/27/84 1297/29/89 756/36/115 1103/26/59
ED5D EA2W LY4A PT5J 9A1P II2Q S57AL VE3JM NU4E NN3L UZ7C VY2TT WP3C PY7ZC TM3Z ZL7IO II8K	0/0/0 0/0/0 0/0/0 0/0/0 0/0/0 0/0/0 WORLD 40/6/25 36/6/34 244/13/57 4/3/3 84/6/46 103/11/52 95/7/39 35/8/14 9/5/8 14/7/11 118/7/40 14/3/4 19/3/13 0/0/0 81/6/34 0/0/0 36/5/30	62/4/25 73/7/30 0/0/0 0/0/0 0/0/0 SINGLE 314/14/65 139/15/73 701/21/96 24/12/16 214/16/70 283/15/65 380/15/69 468/13/67 83/14/49 205/14/63 182/14/65 80/10/37 165/11/37 0/0/0 384/13/63 26/8/13 139/14/59	97/11/41 108/11/39 1/1/1 1/1/1 1/1/1 OPERAT(High 731/24/94 665/28/103 1471/32/117 222/30/79 661/29/102 471/28/103 517/27/97 667/27/98 281/26/85 155/23/78 Low 792/27/102 433/23/84 466/21/71 193/18/69 479/23/91 287/28/55 390/22/91	148/11/41 150/11/47 36/10/22 28/11/18 OR ASSIS Power 1731/37/122 1719/38/138 1050/37/132 1119/38/117 1440/37/134 1638/38/136 1840/39/138 823/34/115 884/37/123 1013/35/118 Power 691/35/127 558/29/101 1002/27/77 1119/30/94 848/35/126 707/33/86 630/35/122	169/13/50 113/9/35 99/16/46 73/19/38 STED ALI 1704/36/127 1675/37/131 1546/38/129 1386/38/122 864/38/131 1100/37/136 1062/36/130 988/32/116 517/35/123 684/33/114 976/33/122 676/28/106 928/26/62 940/29/85 475/34/115 1088/33/97 870/37/127	221/12/52 168/17/40 252/19/61 276/25/67 BAND 2647/37/137 1915/38/146 1656/37/151 3111/36/136 2107/39/154 1572/38/146 1651/37/134 1657/34/125 2034/34/130 1728/33/121 1067/36/130 1436/27/115 1917/27/84 1297/29/89 756/36/115 1103/26/59 966/37/136
ED5D EA2W LY4A PT5J 9A1P II2Q S57AL VE3JM NU4E NN3L UZ7C VY2TT WP3C PY7ZC TM3Z ZL7IO II8K UN4Q	0/0/0 0/0/0 0/0/0 0/0/0 0/0/0 0/0/0 WORLD 40/6/25 36/6/34 244/13/57 4/3/3 84/6/46 103/11/52 95/7/39 35/8/14 9/5/8 14/7/11 118/7/40 14/3/4 19/3/13 0/0/0 81/6/34 0/0/0 36/5/30 48/7/22	62/4/25 73/7/30 0/0/0 0/0/0 0/0/0 SINGLE 314/14/65 139/15/73 701/21/96 24/12/16 214/16/70 283/15/65 380/15/69 468/13/67 83/14/49 205/14/63 182/14/65 80/10/37 165/11/37 0/0/0 384/13/63 26/8/13 139/14/59 137/10/41	97/11/41 108/11/39 1/1/1 1/1/1 1/1/1 OPERATO High 731/24/94 665/28/103 1471/32/117 222/30/79 661/29/102 471/28/103 517/27/97 667/27/98 281/26/85 155/23/78 Low 792/27/102 433/23/84 466/21/71 193/18/69 479/23/91 287/28/55 390/22/91 318/14/62	148/11/41 150/11/47 36/10/22 28/11/18 OR ASSIS Power 1731/37/122 1719/38/138 1050/37/132 1119/38/117 1440/37/134 1638/38/136 1840/39/138 823/34/115 884/37/123 1013/35/118 Power 691/35/127 558/29/101 1002/27/77 1119/30/94 848/35/126 707/33/86 630/35/122 402/25/81	169/13/50 113/9/35 99/16/46 73/19/38 STED ALI 1704/36/127 1675/37/131 1546/38/129 1386/38/122 864/38/131 1100/37/136 1062/36/130 988/32/116 517/35/123 684/33/114 976/33/122 676/28/106 928/26/62 940/29/85 475/34/115 1088/33/97 870/37/127 495/28/83	221/12/52 168/17/40 252/19/61 276/25/67 BAND 2647/37/137 1915/38/146 1656/37/151 3111/36/136 2107/39/154 1572/38/146 1651/37/134 1657/34/125 2034/34/130 1728/33/121 1067/36/130 1436/27/115 1917/27/84 1297/29/89 756/36/115 1103/26/59 966/37/136 1274/28/97
ED5D EA2W LY4A PT5J 9A1P II2Q S57AL VE3JM NU4E NN3L UZ7C VY2TT WP3C PY7ZC TM3Z ZL7IO II8K	0/0/0 0/0/0 0/0/0 0/0/0 0/0/0 0/0/0 WORLD 40/6/25 36/6/34 244/13/57 4/3/3 84/6/46 103/11/52 95/7/39 35/8/14 9/5/8 14/7/11 118/7/40 14/3/4 19/3/13 0/0/0 81/6/34 0/0/0 36/5/30	62/4/25 73/7/30 0/0/0 0/0/0 0/0/0 SINGLE 314/14/65 139/15/73 701/21/96 24/12/16 214/16/70 283/15/65 380/15/69 468/13/67 83/14/49 205/14/63 182/14/65 80/10/37 165/11/37 0/0/0 384/13/63 26/8/13 139/14/59	97/11/41 108/11/39 1/1/1 1/1/1 1/1/1 OPERAT(High 731/24/94 665/28/103 1471/32/117 222/30/79 661/29/102 471/28/103 517/27/97 667/27/98 281/26/85 155/23/78 Low 792/27/102 433/23/84 466/21/71 193/18/69 479/23/91 287/28/55 390/22/91	148/11/41 150/11/47 36/10/22 28/11/18 OR ASSIS Power 1731/37/122 1719/38/138 1050/37/132 1119/38/117 1440/37/134 1638/38/136 1840/39/138 823/34/115 884/37/123 1013/35/118 Power 691/35/127 558/29/101 1002/27/77 1119/30/94 848/35/126 707/33/86 630/35/122	169/13/50 113/9/35 99/16/46 73/19/38 STED ALI 1704/36/127 1675/37/131 1546/38/129 1386/38/122 864/38/131 1100/37/136 1062/36/130 988/32/116 517/35/123 684/33/114 976/33/122 676/28/106 928/26/62 940/29/85 475/34/115 1088/33/97 870/37/127	221/12/52 168/17/40 252/19/61 276/25/67 BAND 2647/37/137 1915/38/146 1656/37/151 3111/36/136 2107/39/154 1572/38/146 1651/37/134 1657/34/125 2034/34/130 1728/33/121 1067/36/130 1436/27/115 1917/27/84 1297/29/89 756/36/115 1103/26/59 966/37/136

			QF	RP.		
SP5PDA	9/2/5	65/5/30	73/5/32	199/12/50	194/15/53	178/18/37
IZOFUW MW7FON	1/1/1 0/0/0	13/3/9 38/6/18	46/9/30 56/9/26	117/20/47 65/12/37	96/17/42 68/13/33	296/23/66 367/23/65
PC2F	6/2/6	39/3/21	98/8/44	95/13/43	113/12/40	196/18/46
YO8FC RA7C	18/4/12 0/0/0	33/5/19 0/0/0	43/10/26 0/0/0	68/10/34 116/17/52	136/19/52 147/15/59	215/23/56 230/17/58
KB4EE	0/0/0	0/0/0	74/16/43	56/16/43	51/22/41	61/23/38
PE2K HB9CU	0/0/0 0/0/0	0/0/0 0/0/0	78/5/28 32/7/24	219/13/53 53/11/28	92/8/31 14/10/14	113/13/32 158/16/37
YU1LM	0/0/0	21/3/13	73/7/35	90/12/39	95/11/34	55/10/20
	WORLD	MULTI-O	PERATOF	RSINGLE	-TRANSM	IITTER
			High	Power		
PJ4G	19/6/16	299/17/67	693/29/99	2242/35/119	2131/37/129	4159/38/133
E7DX RU1A	56/10/56 54/12/53	216/18/77 371/23/82	837/32/120 1252/37/130	2982/40/154 2438/40/155	1784/39/149 2533/40/146	3777/38/163 2982/39/159
EI7M	100/11/49	203/16/77	1155/31/108	1336/37/142	1969/39/140	3903/40/154
IP4X	51/9/50	80/18/78	719/33/112	2477/39/145	1742/39/149 2672/40/152	2738/38/158 2786/39/160
ES9C UP2L	119/14/64 61/9/40	413/20/84 388/17/64	930/36/122 1134/30/109	1986/39/154 2314/38/146	1848/38/138	1778/36/152
ZF1A	33/6/13	139/15/59	1311/31/107	2514/36/127	1859/37/130	3408/37/133
TM6M	69/9/43	172/16/73	861/28/106 Low E	2535/38/145	1861/37/136	2495/38/155
VP5M	9/4/9	28/10/26	547/22/74	932/29/94	1497/32/101	2667/34/98
IB9T	106/7/42	133/14/63	228/22/90	1145/37/137	1037/37/134	1759/37/140
ED70 HZ1BC	25/4/25 4/2/4	132/13/58 27/5/16	416/21/92 819/20/71	1020/34/123 1006/32/105	1448/35/124 1039/33/92	1477/37/135 1102/29/88
HI3LT	10/3/10	130/12/35	707/26/89	448/30/96	802/33/102	1799/28/86
IO3F LZ8E	107/7/41 71/6/41	294/15/61 243/17/67	558/23/102 743/23/92	571/34/127 767/32/123	556/36/124 936/36/120	1297/38/144 1162/36/132
E7CW	30/5/30	138/12/58	367/22/88	885/36/130	543/35/122	902/36/130
ED1B	34/5/32	116/11/55	225/21/85	550/32/119	828/34/118	972/34/122
	WORL	D MULTI-	-OPERAT	OR TWO-	TRANSMI	TTER
			High	Power		
P33W	162/10/56	435/17/75	1728/31/113	4069/38/148	3649/38/144	5162/39/156
CR3A V47T	51/7/45 64/10/28	251/15/70 487/17/70	1469/32/115 1382/30/104	3977/37/141 3598/39/132	4592/38/145 4635/39/141	5093/39/151 5181/39/144
CR6K	55/7/43	482/19/80	1219/29/109	2990/38/145	3938/38/141	4027/36/148
KC1XX W3LPL	23/8/17 23/8/20	559/16/78 376/19/76	1627/32/118 838/28/105	2054/37/134 1869/39/138	2618/38/137 2387/38/143	3314/38/147 2817/38/155
II2S	124/8/48	494/16/69	1219/31/113	2758/36/143	2390/37/143	2426/38/148
9A5Y J62K	177/10/48 32/5/14	780/17/77 296/15/53	1116/26/108 1206/27/88	2611/37/141 2233/31/95	2623/38/136 2814/32/105	2914/37/151 4551/37/130
00210	32/3/11	230, 10, 00	1200,21,00	2233731733	2011/32/103	1331/37/130
	WORLD	MULTI-	OPERATO:	R MULTI	-TRANSM	ITTER
			High	Power		
CN3A	237/14/58	1261/22/91	2850/36/128	5065/38/145	5825/40/155	5951/40/160
D4C K3LR	104/10/45 281/13/39	753/20/81 833/22/85	2143/37/127 2366/36/124	4327/38/143 3308/39/158	4657/39/149 3385/39/152	5031/39/156 3666/39/161
V26B	53/6/16	484/16/76	2145/28/107	3198/37/129	4817/38/137	4617/37/124
M6T PJ2T	553/13/60 148/13/34	1699/22/97 469/19/65	3222/35/123 1752/30/103	3438/40/154 2578/33/120	3395/39/153 3369/35/125	2894/39/159 4391/37/131
9A1A	806/16/71	2029/22/98	2065/33/117	4082/40/150	3777/40/155	2011/38/143
DF0HQ LZ9W	798/14/63 432/10/58	1690/22/95 1510/20/91	2978/36/130 2288/32/117	3743/40/159 4392/39/152	2357/40/150 2883/38/140	2354/40/157 2918/37/158
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Top Scores – WORLD

SINGLE OPERATOR	1.8 MHz	3.7 MHz
HIGH POWER	OK4U (OK1TP) 21,840	EA3MR29,323
112011 1011211	IW7EBE	DJ9DJ29,110
All Bands	VE3PN 9,246	LY7X (LY3DA)26,352
8P5A (W2SC)16,500,420	YT5T 7,728 EA8TH 420	DJ9MC
PJ4K (N6KT)15,207,660	UA9UUD	SP6DZ
6Y1V (LU9ESD)13,626,844	AG4W	UT1WW9,600
EW5A (EU1A)	I5WHC 80	OM4AJA6,854
DROW (DJ5MW)10,101,825	SQ50VL 6	DO6NI6,321
CF3A (VE3AT)9,997,614 OM2VL9,682,912		EA4IS
RA9P9,612,436	LOW POWER	1.8 MHz
KQ2M9,301,076	711 Pand	SNOR (SQ9IAU)29,279
TK9R (IK8UND)8,568,612	All Band	E79D
20 ми-	P40W (W2GD)	UA7K21,054
28 MHz	V48K (VE3DZ) 5,728,140	RK3E2,952
PX2A (PY2LED)2,027,956 WP3Z (EB7DX)1,633,440	RM9I 4,167,762	LC9X (LA9XGA)2,628
IP9T (IT9GSF)1,478,204	NN7CW 4,077,168	SP7MOQ1,961
\$5500	UW5Y (US2YW) 3,894,098	VA3AC
OL9Z (OK2PVF)1,466,799	LY4L 3,363,761	EI3ENB
YL2SM1,291,212	PY2UD 3,237,640 HA3NU 3,186,300	G3VYI
WA3A1,238,573	C40C (S50B) 3,143,520	
RTOF	,	QRP
GM5X (GM4YXI)1,217,370 JS6TSE (JM1UWB)1,213,600	28 MHz	
05015E (0F10WD)1,215,000	CT5KAO 765,648	All Band
21 MHz	VR2T (VR2ZQZ) 751,970	K1ZM2,084,118
CR6T (CT1ESV)1,614,460	EASTX 674,163	ES6RW851,174
VR2P (VR2XAN)	XE1CQ 533,170 N8II 521,554	LY9A
PP4T (PY4BZ)	ED30 (EA3CX) 484,848	NDOC
PY2PT	PY2CX 433,376	SO2U (SP2UUU)259,860
OG8M (OH8MCT)1,005,888 JA5OVU977,119	JA6WFM 357,717	GI7JYK243,620
TI1K (TI5CDA)879,902	E7AA (E7OY)	HA5BA206,886
OM5R (OM5WW)877,880	CA3VAK 333,135	PY2PLL
JJ0VNR806,339	21 MH ₂	11
P43A	21 MHz KP4NZ (KP4PUA)	
P43A792,414	21 MHz KP4NZ (KP4PUA) 740,979 LZ2VU 718,904	28 MHz FY5FY808,300
P43A792,414	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 HI3T 557,536	28 MHz
P43A792,414 14 MHz HK1T1,858,788	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 HI3T 557,536 ME5W (M0HMJ) 471,276	28 MHz FY5FY .808,300 AC4G .160,080 PY2BN .141,772
P43A792,414	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 HI3T 557,536 ME5W (M0HMJ) 471,276 FK8GM 470,662	28 MHz FY5FY 808,300 AC4G 160,080 PY2BN 141,772 G4CWH 102,690
P43A .792,414 14 MHz HK1T .1,858,788 4L6AM .1,483,820 K5RX .476,470 OZ7X .420,197	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 HI3T 557,536 ME5W (M0HMJ) 471,276 FK8GM 470,662 4K6FO 326,263	28 MHz FY5FY .808,300 AC4G .160,080 PY2BN .141,772 G4CWH .102,690 JR4DAH .96,903
P43A .792,414 14 MHz HK1T .1,858,788 4L6AM .1,483,820 K5RX .476,470 0Z7X .420,197 EA5RC .358,908	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 HI3T 557,536 ME5W (MOHMJ) 471,276 FK8GM 470,662 4K6FO 326,263 SP1NQH 173,880	28 MHz FY5FY 808,300 AC4G 160,080 PY2BN 141,772 G4CWH 102,690 JR4DAH 96,903 SV9/DH8BQA 83,970
P43A. .792,414 14 MHz HK1T. 1,858,788 4L6AM. 1,483,820 K5RX. 476,470 OZ7X. 420,197 EA5RC. 358,908 YL2BJ. 352,365	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 HI3T 557,536 ME5W (M0HMJ) 471,276 FK8GM 470,662 4K6FO 326,263	28 MHz FY5FY .808,300 AC4G .160,080 PY2BN .141,772 G4CWH .102,690 JR4DAH .96,903
P43A. .792,414 14 MHz HK1T. 1,858,788 4L6AM 1,483,820 K5RX. 476,470 OZ7X. 420,197 EA5RC. 358,908 YL2BJ. 352,365 JA7FTR. 295,098	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 HI3T 557,536 MESW (M0HMJ) 471,276 FK8GM 470,662 4K6FO 326,263 SPINQH 173,880 JJ1RJR 170,743	28 MHz FY5FY 808,300 AC4G 160,080 PY2BN 141,772 G4CWH 102,690 JR4DAH 96,903 SV9/DH8BQA 83,970 IZ4AIF 80,745 CS7AXM 78,422 A61FJ 75,917
P43A. .792,414 14 MHz HK1T. 1,858,788 4L6AM 1,483,820 K5RX. 476,470 OZ7X. 420,197 EA5RC 358,908 YL2BJ. 352,365 JA7FTR 295,098 LU9MBY. 232,848	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 HI3T 557,536 ME5W (M0HMJ) 471,276 FK8GM 470,662 4K6FO 326,263 SP1NQH 173,880 JJ1RJR 170,743 VA3SP 142,592 VE7COR 138,992	28 MHz FY5FY 808,300 AC4G 160,080 PY2BN 141,772 G4CWH 102,690 JR4DAH 96,903 SV9/DH8BQA 83,970 IZ4AIF 80,745 CS7AXM 78,422
P43A. .792,414 14 MHz HK1T. 1,858,788 4L6AM 1,483,820 K5RX. 476,470 OZ7X. 420,197 EA5RC. 358,908 YL2BJ. 352,365 JA7FTR. 295,098	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 HI3T 557,536 ME5W (M0HMJ) 471,276 FK8GM 470,662 4K6FO 326,263 SP1NQH 173,880 JJ1RJR 170,743 VA3SP 142,592 VE7COR 138,992	28 MHz FY5FY 808,300 AC4G 160,080 PY2BN 141,772 G4CWH 102,690 JR4DAH 96,903 SV9/DH8BQA 83,970 IZ4AIF 80,745 CS7AXM 78,422 A61FJ 75,917 OM7PY 69,106
P43A. 792,414 14 MHz HK1T. 1,858,788 4L6AM 1,483,820 K5RX. 476,470 OZ7X. 420,197 EA5RC. 358,908 YL2BJ. 352,365 JA7FTR. 295,098 LU9MBY. 232,848 LY2LL 170,847 YU7RPX. 147,015	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 HI3T 557,536 ME5W (M0HMJ) 471,276 FK8GM 470,662 4K6FO 326,263 SP1NQH 173,880 JJ1RJR 170,743 VA3SP 142,592 VE7COR 138,992 14 MHz YV4EK 352,660	28 MHz FY5FY 808,300 AC4G 160,080 PY2BN 141,772 G4CWH 102,690 JR4DAH 96,903 SV9/DH8BQA 83,970 IZ4AIF 80,745 CS7AXM 78,422 A61FJ 75,917 OM7PY 69,106
P43A. .792,414 14 MHz HK1T. .1,858,788 4L6AM. .1,483,820 K5RX. .476,470 OZ7X. .420,197 EASRC. .358,908 YL2BJ. .352,365 JA7FTR. .295,098 LU9MBY. .232,848 LY2LL .170,847 YU7RPX. .147,015	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 HI3T 557,536 ME5W (M0HMJ) 471,276 FK8GM 470,662 4K6FO 326,263 SPINQH 173,880 JJ1RJR 170,743 VA3SP 142,592 VE7COR 138,992 14 MHz YV4EK 352,660 IP9P 234,248	28 MHz FY5FY 808,300 AC4G 160,080 PY2BN 141,772 G4CWH 102,690 JR4DAH 96,903 SV9/DH8BQA 83,970 IZ4AIF 80,745 CS7AXM 78,422 A61FJ 75,917 OM7PY 69,106 21 MHz PI4X (PD8DX) 117,400
P43A. .792,414 14 MHz HK1T. 1,858,788 4L6AM 1,483,820 K5RX. 476,470 OZ7X. 420,197 EA5RC 358,908 YL2BJ. 352,365 JA7FTR 295,098 LU9MBY. 232,848 LY2LL 170,847 YU7RPX. 147,015 7 MHz CT9ACD (EW6W) 930,020	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 HI3T 557,536 ME5W (M0HMJ) 471,276 FK8GM 470,662 4K6FO 326,263 SP1NQH 173,880 JJ1RJR 170,743 VA3SP 142,592 VE7COR 138,992 14 MHz YV4EK 352,660	28 MHz FY5FY 808,300 AC4G 160,080 PY2BN 141,772 G4CWH 102,690 JR4DAH 96,903 SV9/DH8BQA 83,970 IZ4AIF 80,745 CS7AXM 78,422 A61FJ 75,917 OM7PY 69,106
P43A. .792,414 14 MHz HK1T. .1,858,788 4L6AM. .1,483,820 K5RX. .476,470 OZ7X. .420,197 EA5RC. .358,908 YL2BJ. .352,365 JA7FTR. .295,098 LU9MBY. .232,848 LY2LL. .170,847 YU7RPX. .147,015 7 MHz CT9ACD (EW6W) .930,020 ED5R (EA5Z) .747,384	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 H13T 557,536 ME5W (M0HMJ) 471,276 FK8GM 470,662 4K6FO 326,263 SP1NQH 173,880 JJ1RJR 170,743 VA3SP 142,592 VE7COR 138,992 14 MHz YV4EK 352,660 IP9P 234,248 J8AA (J88BTI) 234,088	28 MHz FY5FY 808,300 AC4G 160,080 PY2BN 141,772 G4CWH 102,690 JR4DAH 96,903 SV9/DH8BQA 83,970 IZ4AIF 80,745 CS7AXM 78,422 A61FJ 75,917 OM7PY 69,106 21 MHz PI4X (PD8DX) 117,400 JQ1NGT 51,460
P43A. .792,414 14 MHz HK1T. 1,858,788 4L6AM. 1,483,820 K5RX. 476,470 O27X. 420,197 EA5RC. 358,908 YL2BJ. 352,365 JA7FTR. 295,098 LU9MBY. 232,848 LY2LL. 170,847 YU7RPX. 147,015 7 MHz CT9ACD (EW6W) 930,020 ED5R (EA5Z) 747,384 S51CK. 304,776	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 HI3T 557,536 ME5W (M0HMJ) 471,276 FK8GM 470,662 4K6FO 326,263 SPINQH 173,880 JJ1RJR 170,743 VA3SP 142,592 VE7COR 138,992 14 MHz YV4EK 352,660 IP9P 234,248 J8AA (J88BTI) 234,088 WW4LL (KU8E) 175,848 ISOGRB 153,720 3V8CB 125,035	28 MHz FY5FY 808,300 AC4G 160,080 PY2BN 141,772 G4CWH 102,690 JR4DAH 96,903 SV9/DH8BQA 83,970 IZ4AIF 80,745 CS7AXM 78,422 A61FJ 75,917 OM7PY 69,106 21 MHz PI4X (PD8DX) 117,400 JQ1NGT 51,460 SP4LO 40,375 TI3GB 34,020 SP4LVK 34,000
P43A. .792,414 14 MHz HK1T. .1,858,788 4L6AM. .1,483,820 K5RX. .476,470 OZ7X. .420,197 EA5RC. .358,908 YL2BJ. .352,365 JA7FTR. .295,098 LU9MBY. .232,848 LY2LL. .170,847 YU7RPX. .147,015 7 MHz CT9ACD (EW6W) .930,020 ED5R (EA5Z) .747,384	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 HI3T 557,536 ME5W (M0HMJ) 471,276 FK8GM 470,662 4K6FO 326,263 SPINQH 173,880 JJ1RJR 170,743 VA3SP 142,592 VE7COR 138,992 14 MHz YV4EK 352,660 IP9P 234,248 J8AA (J88BTI) 234,088 WW4LL (KU8E) 175,848 ISOGRB 153,720 3V8CB 125,035 OK4D (OK1MGJ) 115,338	28 MHz FY5FY 808,300 AC4G 160,080 PY2BN 141,772 G4CWH 102,690 JR4DAH 96,903 SV9/DH8BQA 83,970 IZ4AIF 80,745 CS7AXM 78,422 A61FJ 75,917 OM7PY 69,106 21 MHz PI4X (PD8DX) 117,400 JQ1NGT 51,460 SP4LO 40,375 T13GB 34,020 SP4LVK 34,000 SP4NKJ 32,109
P43A. .792,414 14 MHz HK1T. 1,858,788 4L6AM. 1,483,820 K5RX. 476,470 OZ7X. 420,197 EA5RC. 358,908 YL2BJ. 352,365 JA7FTR. 295,098 LU9MBY. 232,848 LY2LL. 170,847 YU7RPX. 147,015 7 MHz CT9ACD (EW6W) 930,020 ED5R (EA5Z) 747,384 S51CK. 304,776 4L2M. 303,264 ZD7W (W6NV) 221,648 HA4A (HA4FF) 143,335	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 H13T 557,536 ME5W (M0HMJ) 471,276 FK86M 470,662 4K6FO 326,263 SP1NQH 173,880 JJ1RJR 170,743 VA3SP 142,592 VE7COR 138,992 14 MHz YV4EK 352,660 IP9P 234,248 J8AA (J88BTI) 234,088 WW4LL (KU8E) 175,848 ISGGRB 153,720 3V8CB 125,035 OK4D (OK1MGJ) 115,338 M1G (GOUWS) 109,032	28 MHz FY5FY 808,300 AC4G 160,080 PY2BN 141,772 G4CWH 102,690 JR4DAH 96,903 SV9/DH8BQA 83,970 IZ4AIF 80,745 CS7AXM 78,422 A61FJ 75,917 OM7PY 69,106 21 MHz PI4X (PD8DX) 117,400 JQ1NGT 51,460 SP4LO 40,375 T13GB 34,020 SP4LVK 34,000 SP4NKJ 32,109 UT5EOX 30,225
P43A. 792,414 14 MHz HK1T. 1,858,788 4L6AM. 1,483,820 K5RX. 476,470 Q27X. 420,197 EA5RC. 358,908 YL2BJ. 352,365 JA7FTR. 295,098 LU9MBY. 232,848 LY2LL. 170,847 YU7RPX. 147,015 7 MHz CT9ACD (EW6W) 930,020 ED5R (EA5Z) 747,384 S51CK. 304,776 4L2M. 303,264 ZDTW (W6NV) 221,648 HA4A (HA4FF) 143,335 K4JPD. 133,086	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 HI3T 557,536 ME5W (M0HMJ) 471,276 FK8GM 470,662 4K6FO 326,263 SP1NQH 173,880 JJIRJR 170,743 VA3SP 142,592 VE7COR 138,992 14 MHZ YV4EK 352,660 IP9P 234,248 J8AA (J88BTI) 234,088 WW4LL (KU8E) 175,848 ISOGRB 153,720 3V8CB 125,035 OK4D (OK1MGJ) 115,338 M1G (GOUWS) 109,032 OG16M 96,840	28 MHz FY5FY 808,300 AC4G 160,080 PY2BN 141,772 G4CWH 102,690 JR4DAH 96,903 SV9/DH8BQA 83,970 IZ4AIF 80,745 CS7AXM 78,422 A61FJ 75,917 OM7PY 69,106 21 MHz PI4X (PD8DX) 117,400 JQ1NGT 51,460 SP4LO 40,375 TI3GB 34,020 SP4LVK 34,000 SP4NKJ 32,109 UT5EOX 30,225 IV3LNQ 29,736
P43A .792,414 14 MHz HK1T 1,858,788 4L6AM 1,483,820 K5RX 476,470 OZ7X 420,197 EA5RC 358,908 YL2BJ 352,365 JA7FTR 295,098 LU9MBY 232,848 LY2LL 170,847 YU7RPX 147,015 7 MHz CT9ACD (EW6W) 930,020 ED5R (EA5Z) 747,384 \$51CK 304,776 4L2M 303,264 ZD7W (W6NV) 221,648 HA4A (HA4FF) 143,335 K4JPD 133,086 XE2S 116,686	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 H13T 557,536 ME5W (M0HMJ) 471,276 FK86M 470,662 4K6FO 326,263 SP1NQH 173,880 JJ1RJR 170,743 VA3SP 142,592 VE7COR 138,992 14 MHz YV4EK 352,660 IP9P 234,248 J8AA (J88BTI) 234,088 WW4LL (KU8E) 175,848 ISGGRB 153,720 3V8CB 125,035 OK4D (OK1MGJ) 115,338 M1G (GOUWS) 109,032	28 MHz FY5FY 808,300 AC4G 160,080 PY2BN 141,772 G4CWH 102,690 JR4DAH 96,903 SV9/DH8BQA 83,970 IZ4AIF 80,745 CS7AXM 78,422 A61FJ 75,917 OM7PY 69,106 21 MHz PI4X (PD8DX) 117,400 JQ1NGT 51,460 SP4LO 40,375 TI3GB 34,020 SP4LVK 34,000 SP4NKJ 32,109 UT5EOX 30,225 IV3LNQ 29,736 JR1NKN 25,542
P43A. 792,414 14 MHz HK1T. 1,858,788 4L6AM. 1,483,820 K5RX. 476,470 OZ7X. 420,197 EA5RC. 358,908 YL2BJ. 352,365 JA7FTR. 295,098 LU9MBY. 232,848 LY2LL. 170,847 YU7RPX. 147,015 7 MHz CT9ACD (EW6W) 930,020 ED5R (EA5Z) 747,384 S51CK. 304,776 4L2M. 303,264 ZD7W (W6NV) 221,648 HA4A (HA4FF) 143,335 K4JPD. 133,086 XE2S. 116,686 NP4L. 90,816	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 HI3T 557,536 ME5W (M0HMJ) 471,276 FK8GM 470,662 4K6FO 326,263 SP1NQH 173,880 JJIRJR 170,743 VA3SP 142,592 VE7COR 138,992 14 MHZ YV4EK 352,660 IP9P 234,248 J8AA (J88BTI) 234,088 WW4LL (KU8E) 175,848 ISOGRB 153,720 3V8CB 125,035 OK4D (OK1MGJ) 115,338 M1G (GOUWS) 109,032 OG16M 96,840	28 MHz FY5FY 808,300 AC4G 160,080 PY2BN 141,772 G4CWH 102,690 JR4DAH 96,903 SV9/DH8BQA 83,970 IZ4AIF 80,745 CS7AXM 78,422 A61FJ 75,917 OM7PY 69,106 21 MHz PI4X (PD8DX) 117,400 JQ1NGT 51,460 SP4LO 40,375 TI3GB 34,020 SP4LVK 34,000 SP4NKJ 32,109 UT5EOX 30,225 IV3LNQ 29,736
P43A .792,414 14 MHz HK1T 1,858,788 4L6AM 1,483,820 K5RX 476,470 OZ7X 420,197 EA5RC 358,908 YL2BJ 352,365 JA7FTR 295,098 LU9MBY 232,848 LY2LL 170,847 YU7RPX 147,015 7 MHz CT9ACD (EW6W) 930,020 ED5R (EA5Z) 747,384 \$51CK 304,776 4L2M 303,264 ZD7W (W6NV) 221,648 HA4A (HA4FF) 143,335 K4JPD 133,086 XE2S 116,686	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 H13T 557,536 ME5W (M0HMJ) 471,276 FK86M 470,662 4K6FO 326,263 SP1NQH 173,880 JJ1RJR 170,743 VA3SP 142,592 VE7COR 138,992 14 MHz YV4EK 352,660 IP9P 234,248 J8AA (J88BTI) 234,088 WW4LL (KU8E) 175,848 ISGGRB 153,720 3V8CB 125,035 OK4D (OK1MGJ) 115,338 M1G (GOUWS) 109,032 OG16M 96,840 NG3Q 74,704 7 MHz EA8DEG 223,294	### 28 MHz FY5FY 808,300 AC4G 160,080 PY2BN 141,772 G4CWH 102,690 JR4DAH 96,903 SV9/DH8BQA 83,970 IZ4AIF 80,745 CS7AXM 78,422 A61FJ 75,917 OM7PY 69,106 ###################################
P43A. 792,414 14 MHz HK1T. 1,858,788 4L6AM. 1,483,820 K5RX. 476,470 OZ7X. 420,197 EA5RC. 358,908 YL2BJ. 352,365 JA7FTR. 295,098 LU9MBY. 232,848 LY2LL. 170,847 YU7RPX. 147,015 7 MHz CT9ACD (EW6W) 930,020 ED5R (EA5Z) 747,384 S51CK. 304,776 4L2M. 303,264 ZD7W (W6NV) 221,648 HA4A (HA4FF) 143,335 K4JPD. 133,086 XE2S. 116,686 NP4L. 90,816	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 HI3T 557,536 ME5W (M0HMJ) 471,276 FK8GM 470,662 4K6FO 326,263 SPINQH 173,880 JJ1RJR 170,743 VA3SP 142,592 VE7COR 138,992 14 MHZ YV4EK 352,660 IP9P 234,248 J8AA (J88BTI) 234,088 WW4LL (KUSE) 175,848 ISOGRB 153,720 3V8CB 125,035 OK4D (OKIMGJ) 115,338 M1G (GOUWS) 109,032 OG16M 96,840 NG3Q 74,704 7 MHZ EA8DEG 223,294 YV4YC 141,024	### 28 MHz FY5FY
P43A. 792,414 14 MHz HK1T. 1,858,788 4L6AM. 1,483,820 K5RX. 476,470 Q27X. 420,197 EA5RC. 358,908 YL2BJ. 352,365 JA7FTR. 295,098 LU9MBY. 232,848 LY2LL. 170,847 YU7RPX. 147,015 7 MHz CT9ACD (EW6W) 930,020 ED5R (EA5Z) 747,384 S51CK. 304,776 4L2M. 303,264 ZD7W (W6NV) 221,648 HA4A (HA4FF) 143,335 K4JPD. 133,086 XE2S. 116,686 NP4L. 90,816 MOMCV. 71,638	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 HI3T 557,536 ME5W (M0HMJ) 471,276 FK8GM 470,662 4K6FO 326,263 SPINQH 173,880 JJ1RJR 170,743 VA3SP 142,592 VE7COR 138,992 14 MHz YV4EK 352,660 IP9P 234,248 J8AA (J88BTI) 234,088 WW4LL (KU8E) 175,848 ISOGRB 125,035 OK4D (OK1MGJ) 115,338 M1G (GOUWS) 109,032 OG16M 96,840 NG3Q 74,704 7 MHz EA8DEG 223,294 YV4YC 141,024 CO2JD 95,669	28 MHz FY5FY 808,300 AC4G 160,080 PY2BN 141,772 G4CWH 102,690 JR4DAH 96,903 SV9/DH8EQA 83,970 IZ4AIF 80,745 CS7AXM 78,422 A61FJ 75,917 OM7PY 69,106 21 MHz PI4X (PD8DX) 117,400 JQ1NGT 51,460 SP4LO 40,375 TI3GB 34,020 SP4LVK 34,000 SP4NKJ 32,109 UT5EOX 30,225 IV3LNQ 29,736 JR1NKN 25,542 CT4QB 23,200 14 MHz IZ1ANK 67,515 HAOGK 67,515
P43A. 792,414 14 MHz HK1T. 1,858,788 4L6AM. 1,483,820 K5RX. 476,470 OZ7X. 420,197 EASRC. 358,908 YL2BJ. 352,365 JA7FTR. 295,098 LU9MBY. 232,848 LY2LL 170,847 YU7RPX. 147,015 7 MHz CT9ACD (EW6W) 930,020 ED5R (EA5Z) 747,384 S51CK. 304,776 4L2M. 303,264 ZD7W (W6NV) 221,648 HA4A (HA4FF) 143,335 K4JPD. 133,086 XE2S. 116,686 NP4L. 90,816 M0MCV. 71,638 3.7 MHz TU3QMK (OE6MBG) 180,200 G6XX (G4FAL) 141,588	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 HI3T 557,536 ME5W (M0HMJ) 471,276 FK86M 470,662 4K6FO 326,263 SPINQH 173,880 JJ1RJR 170,743 VA3SP 142,592 VE7COR 138,992 14 MHz YV4EK 352,660 IP9P 234,248 J8AA (J88BTI) 234,088 WW4LL (KU8E) 175,848 ISOGRB 125,035 OK4D (OK1MGJ) 115,338 M1G (GOUWS) 109,032 OG16M 96,840 NG3Q 74,704 7 MHz EA8DEG 223,294 YV4YC 141,024 CO2JD 95,669 SP4CUF 55,935	28 MHz FY5FY
P43A. 792,414 14 MHz HK1T. 1,858,788 4L6AM. 1,483,820 K5RX. 476,470 Q27X. 420,197 EA5RC. 358,908 YL2BJ. 352,365 JA7FTR. 295,098 LU9MBY. 232,848 LY2LL. 170,847 YU7RPX. 147,015 7 MHz CT9ACD (EW6W) 930,020 ED5R (EA5Z) 747,384 S51CK. 304,776 4L2M. 303,264 ZD7W (W6NV) 221,648 HA4A (HA4FF) 143,335 K4JPD. 133,086 XE2S. 116,686 NP4L. 90,816 MOMCV. 71,638 3.7 MHz IU3QMK (OE6MBG) 180,200 G6XX (G4FAL) 141,588 OK5D (OK1DTP) 117,450	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 HI3T 557,536 ME5W (M0HMJ) 471,276 FK8GM 470,662 4K6FO 326,263 SPINQH 173,880 JJ1RJR 170,743 VA3SP 142,592 VE7COR 138,992 14 MHz YV4EK 352,660 IP9P 234,248 J8AA (J88BTI) 234,088 WW4LL (KU8E) 175,848 ISOGRB 125,035 OK4D (OK1MGJ) 115,338 M1G (GOUWS) 109,032 OG16M 96,840 NG3Q 74,704 7 MHz EA8DEG 223,294 YV4YC 141,024 CO2JD 95,669	28 MHz FY5FY 808,300 AC4G 160,080 PY2BN 141,772 G4CWH 102,690 JR4DAH 96,903 SV9/DH8EQA 83,970 IZ4AIF 80,745 CS7AXM 78,422 A61FJ 75,917 OM7PY 69,106 21 MHz PI4X (PD8DX) 117,400 JQ1NGT 51,460 SP4LO 40,375 TI3GB 34,020 SP4LVK 34,000 SP4NKJ 32,109 UT5EOX 30,225 IV3LNQ 29,736 JR1NKN 25,542 CT4QB 23,200 14 MHz IZ1ANK 67,515 HAOGK 67,515
P43A. 792,414 14 MHz HK1T. 1,858,788 4L6AM. 1,483,820 K5RX. 476,470 Q27X. 420,197 EA5RC. 358,908 YL2BJ. 352,365 JA7FTR. 295,098 LU9MBY. 232,848 LY2LL. 170,847 YU7RPX. 147,015 7 MHz CT9ACD (EW6W) 930,020 ED5R (EA5Z) 747,384 S5ICK 304,776 4L2M 303,264 ZDTW (W6NV) 221,648 HA4A 143,335 K4JPD 133,086 XE2S 116,686 NP4L 90,816 M0MCV 71,638 3.7 MHz IU3QMK (OE6MBG) 180,200 G6XX (G4FAL) 141,588 OK5D (OK1DTP) 117,450 W3BGN 51,333	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 H13T 557,536 ME5W (M0HMJ) 471,276 FK86M 470,662 4K6FO 326,263 SP1NQH 173,880 JJ1RJR 170,743 VA3SP 142,592 VE7COR 138,992 14 MHz YV4EK 352,660 IP9P 234,248 J8AA (J88BTI) 234,088 WW4LL (KU8E) 175,848 ISGGRB 153,720 3V8CB 125,035 OK4D (OK1MGJ) 115,338 M1G (GOUWS) 109,032 OG16M 96,840 NG3Q 74,704 7 MHz EA8DEG 223,294 YV4YC 141,024 CO2JD 95,669 SP4CUF 55,935 NP3F 45,144	### 28 MHz FY5FY
P43A .792,414 14 MHz HK1T 1,858,788 4L6AM 1,483,820 K5RX 476,470 OZ7X 420,197 EA5RC 358,908 YL2BJ 352,365 JA7FTR 295,098 LU9MBY 232,848 LY2LL 170,847 YU7RPX 147,015 7 MHz CT9ACD (EW6W) 930,020 ED5R (EA5Z) 747,384 \$51CK 304,776 4L2M 303,264 ZD7W (W6NV) 221,648 HA4A (HA4FF) 143,335 K4JPD 133,086 XE2S 116,686 NP4L 90,816 M0MCV 71,638 3.7 MHz IU3QMK (0E6MBG) 180,200 G6XX (G4FAL) 141,588 OK5D (OK1DTP) 117,450 W3BGN 51,333 R3VR (RV3VR) 25,134	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 HI3T 557,536 ME5W (M0HMJ) 471,276 FK86M 470,662 4K6FO 326,263 SPINQH 173,880 JJ1RJR 170,743 VA3SP 142,592 VE7COR 138,992 14 MHz YV4EK 352,660 IP9P 234,248 J8AA (J88BTI) 234,088 WW4LL (KU8E) 175,848 ISOGRB 125,035 OK4D (OK1MGJ) 115,338 MIG (GOUWS) 109,032 OG16M 96,840 NG3Q 74,704 7 MHz EA8DEG 223,294 YV4YC 141,024 CO2JD 95,669 SP4CUF 55,935 NP3F 45,144 EA5EOR 37,996 YC5LCZ 27,600 M0HPF 21,904	### 28 MHz FY5FY
P43A. 792,414 14 MHz HK1T. 1,858,788 4L6AM. 1,483,820 K5RX. 476,470 Q27X. 420,197 EA5RC. 358,908 YL2BJ. 352,365 JA7FTR. 295,098 LU9MBY. 232,848 LY2LL. 170,847 YU7RPX. 147,015 7 MHz CT9ACD (EW6W) 930,020 ED5R (EA5Z) 747,384 S5ICK 304,776 4L2M 303,264 ZDTW (W6NV) 221,648 HA4A 143,335 K4JPD 133,086 XE2S 116,686 NP4L 90,816 M0MCV 71,638 3.7 MHz IU3QMK (OE6MBG) 180,200 G6XX (G4FAL) 141,588 OK5D (OK1DTP) 117,450 W3BGN 51,333	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 H13T 557,536 ME5W (M0HMJ) 471,276 FK8GM 470,662 4K6FO 326,263 SP1NQH 173,880 JJ1RJR 170,743 VA3SP 142,592 VE7COR 138,992 14 MHz YV4EK 352,660 IP9P 234,248 J8AA (J88BTI) 234,088 WW4LL (KU8E) 175,848 ISOGRB 153,720 3V8CB 125,035 OK4D (OK1MGJ) 115,338 M1G (GOUWS) 109,032 OG16M 96,840 NG3Q 74,704 7 MHz EASDEG 223,294 YV4YC 141,024 CO2JD 95,669 SP4CUF 55,935 NP3F 45,144 EASDEOR 37,996 YC5LCZ 27,600 M0HFF 21,904 M5Y (GOVDZ) 17,301	### 28 MHz FY5FY
P43A .792,414 14 MHz HK1T 1,858,788 4L6AM 1,483,820 K5RX 476,470 Q27X 420,197 EA5RC 358,908 YL2BJ 352,365 JA7FTR 295,098 LU9MBY 232,848 LY2LL 170,847 YU7RPX 147,015 7 MHz CT9ACD (EW6W) 930,020 ED5R (EA5Z) 747,384 S5ICK 304,776 4L2M 303,264 ZDTW (W6NV) 221,648 HA4A 143,335 K4JPD 133,086 XE2S 116,686 NP4L 90,816 MOMCV 71,638 3.7 MHz IU3QMK (OE6MBG) 180,200 G6XX (G4FAL) 141,588 OK5D (OK1DTP) 117,450 W3BGN 51,333 R3VR (RV3VR) 25,134 W1HI 22,890 F4AYI 21,385	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 HI3T 557,536 ME5W (M0HMJ) 471,276 FK86M 470,662 4K6FO 326,263 SPINQH 173,880 JJ1RJR 170,743 VA3SP 142,592 VE7COR 138,992 14 MHz YV4EK 352,660 IP9P 234,248 J8AA (J88BTI) 234,088 WW4LL (KU8E) 175,848 ISOGRB 125,035 OK4D (OK1MGJ) 115,338 MIG (GOUWS) 109,032 OG16M 96,840 NG3Q 74,704 7 MHz EA8DEG 223,294 YV4YC 141,024 CO2JD 95,669 SP4CUF 55,935 NP3F 45,144 EA5EOR 37,996 YC5LCZ 27,600 M0HPF 21,904	### 28 MHz FY5FY
14 MHz HK1T 1,858,788 4L6AM 1,483,820 K5RX 476,470 Q27X 420,197 EA5RC 358,908 YL2BJ 352,365 JA7FTR 295,098 LU9MBY 232,848 LY2LL 170,847 YU7RPX 147,015 7 MHz CT9ACD (EW6W) 930,020 ED5R (EA5Z) 747,384 S51CK 304,776 4L2M 303,264 ZD7W (W6NV) 221,648 HA4A (HA4FF) 143,335 K4JPD 133,086 XE2S 116,686 NP4L 90,816 MOMCV 71,638 3.7 MHz IU3QMK (OE6MBG) 180,200 G6XX (G4FAL) 141,588 OK5D (OK1DTP) 117,450 W3BGN 51,333 R3VR (RV3VR) 25,134 W1HI 22,890 F4AYI 21,385	KP4NZ (KP4PUA) 740,979 LZ2VU 718,904 H13T 557,536 ME5W (M0HMJ) 471,276 FK8GM 470,662 4K6FO 326,263 SP1NQH 173,880 JJ1RJR 170,743 VA3SP 142,592 VE7COR 138,992 14 MHz YV4EK 352,660 IP9P 234,248 J8AA (J88BTI) 234,088 WW4LL (KU8E) 175,848 ISOGRB 153,720 3V8CB 125,035 OK4D (OK1MGJ) 115,338 M1G (GOUWS) 109,032 OG16M 96,840 NG3Q 74,704 7 MHz EASDEG 223,294 YV4YC 141,024 CO2JD 95,669 SP4CUF 55,935 NP3F 45,144 EASDEOR 37,996 YC5LCZ 27,600 M0HFF 21,904 M5Y (GOVDZ) 17,301	### 28 MHz FY5FY

7 MHz	OK1DUG	3.7 MHz
HK1J39,942	0.12500 1111111111111111111111111111111111	OK2BFN
OK6OK	3.7 MHz	IP4R (IK4RVG)52,002
OL4W (OK1IF)	CQ9A (DJ1CW)	OU8A
YDONVU	HA1TJ 168,864	YU4NMO35,910
GW9Z (GW1YQM)4,816	DL2SAX 165,036	SP4AWE
SV1DZB3,002	SQ2PHG 152,193	M1U (MOUTD)
DLOKYF (DM2HEY)	SN9B (SQ9OB) 114,483	OK1AY
JR1ABS	YU3DKO 110,952	OM6TX
SQ9DEO850	SP3GTS 99,441	9A2GA25,560
	OT7J 66,360	DJ7GS18,411
3.7 MHz	SP7M (SP5EWX)59,860	
SQ8NGV10,512	W1NA 56,330	1.8 MHz
SP8D4,816	1.8 MHz	HF7A26,400
OE3MDB		LC1P (LA1DSA)924
JH1APZ78	S56X	CT1BWU432
	IV3RYP	YU1LD285
1.8 MHz	SQ10D 5,510	ODD
HA1TI3,744	RW9SW 4,384	QRP
	EA3QP	All Bond
LY4T	OE6VIE	All Band
ORSTEO, 330		SP5PDA (SP5XSL)301,488
	LOW POWER	IZ0FUW
SINGLE OPERATOR ASSISTED		PC2F238,370
	All Band	YO8FC
HIGH POWER	UZ7C (UT9CZ) 4,917,294	RA7C175,490
333 m3	VY2TT (K6LA) 4,868,829	KB4EE
All Band	WP3C 4,847,958	PE2K
ED5D (UT5UDX)11,435,580	PY7ZC 4,474,300	HB9CU (HB9VQQ)83,643
EA2W11,059,711	TM3Z (F4DSK) 4,032,676	YU1LM81,328
LY4A	ZL7IO (ZL3IO) 3,988,866	
9A1P (9A1UN)	II8K (IZ8EPX) 3,878,875	28 MHz
II2Q (IK2PFL)9,503,025	UN4Q (UA4Z)	OMORX306,735
S57AL9,132,288	K3ZU 2,953,104	MI1M171,831
VE3JM	CO8ZZ 2,632,487	TI2KI109,354
NU4E	28 MHz	UX9Q102,168
NN3L (AA3B)6,932,250	IB9U (IT9XTP) 595,766	BA7LOK (BD7IXG)94,340
	HGOR (HAONAR) 583,940	IZ3NVR88,028
28 MHz	LZ8A (LZ2FU) 571,650	K3TW87,108
CQ3W (DF7EE)2,344,360	EA8DED (OH2BP) 561,454	PU2UAF85,540
SN2M (SP2XF)2,039,778	VE9AA	W3EK
VE3EJ	PY2HT 513,099	LAJF43,/98
5R8WE (SP9FIH)1,739,584	HA5PP 491,205	21 MHz
LU8DPM (LU7DW)1,697,370	PY7RP 485,601	HG1S (HA1DAE)
TI7W (N3KS)	W9XT 464,439	OQ4B (ON4BHQ)
ZZ5K (PP5RT)1,620,674 S53F1,555,884	OK1K (OK1XOE) 441,428	G1G (G4KIV)41,265
· · ·	0.4	IZ5CMI29,640
WX3B1,499,300 RK4FD1,449,400	21 MHz	EA5AX20,944
KM41D,449,400	PZ5TW (PY8WW) 1,106,892	TA3E19,468
21 MHz	IK4LZH 794,770	JL1UTS10,761
FY5KE (F4CWN)2,234,414	TI1D (TI2SD) 434,974	BI7KKA (VR2WAA)8,268
DF7A (DL2ARD)1,716,899	IT9STX	YB1RDH
RW9USA1,575,786	PY2VZ	EA6UP3,504
EA8AM	PY2IB	1 / MII-
VA2WA	N9TGR	14 MHz
SN2B (SP2WKB)1,416,456	SV2AEL 222,438	S51Z106,496
SN3A (SP3GEM)1,395,985	SN8J (SP8ALT) 220,320	HG6C (HA6IAM)
S50K		EW8G12,852
OK8NM (OM6NM)1,189,476	14 MHz	MMODHQ9,750
OM2KI1,095,536	IH9/OK1M 707,599	JM4WUZ9,676
14 MHz	S52OT 509,292	VE3ETE2,160
	YU5M 433,500	MOPLA
OK7K (OK1BN)	EE30 (EA30) 413,205	7Z1AV
YT3X	IZ4REF 379,962	UT7AA1,496
HG5E (HA1AH)1,389,407	HZ7C (7Z1SJ) 265,668	=
PD9DX1,178,226	OMOA (OMOAAO) 243,040	7 MHz
TI1T (TI2CC)952,519	OM4AGW 211,554	YO5PCB18,557
F8DVD	IB2C (IK2AQZ) 179,568	LY5I8,208
TI1I (TI2VVV)862,575	SP1R 178,200	VE30K1,134
OH8L (OH8LQ)780,440	7 MHz	JH3DMQ220
SP4TKR768,222	EI9HX 312,976	YB8EJ
	HZ1TL 126,635	YG2BQP16 F/DF8DX2
7 MHz	YO6XK	r/Df0DA2
YT1A560,176	NP3Y	3.7 MHz
HA2KMR325,908		
	PD4RD 70,143	ξ P / Δ ξ
JH7MQD259,350	PD4RD	SP7AS
JH7MQD259,350 VE3BY249,642	HA6NL 56,764 PD1RP 31,239	9A/IZ3NVR (IZ3NVR)9,020
JH7MQD. 259,350 VE3BY. 249,642 S570. 156,755	HA6NL	
JH7MQD 259,350 VE3BY 249,642 S570 156,755 RY3D 116,232	HA6NL	9A/IZ3NVR (IZ3NVR)9,020
JH7MQD 259,350 VE3BY 249,642 S570 156,755 RY3D 116,232 N6AR 112,560	HA6NL	9A/IZ3NVR (IZ3NVR)9,020 UT7A (UT7AA)391
JH7MQD 259,350 VE3BY 249,642 S570 156,755 RY3D 116,232	HA6NL	9A/IZ3NVR (IZ3NVR)9,020 UT7A (UT7AA)391 1.8 MHz

SINGLE-TRANSMITTER	HIGH POWER	HIGH POWER
HIGH POWER	RG9A 3,790,160	P40L (W6LD)
PJ4G19,796,850	OO7P 1,010,670	EA8RM4,605,340
E7DX19,059,712	AZ6H 607,675	YT3D4,146,450
RU1A	JG3RPL 224,924	UA9MA4,013,580
EI7M	9A1DR 196,779	S53MM3,892,224
IP4X	SO80 112,500	VE3VN3,509,633
ES9C	KE8WMF 97,515	4U1A (OE1ZZZ)3,367,152
UP2L	UAOFF 94,080	S56M3,186,601
ZF1A15,922,642	EA7DHT 86,620	ER4A (UW7LL)2,939,310
TM6M	EA7AKK 74,928	EC5K2,849,620
ZF5T15,236,560	EXPLORER MULTI-OP	LOW POWER
	EXPLORER MODIT-OF	V48K (VE3DZ)2,548,056
LOW POWER	HICH DOWED	HZ1TT
VP5M7,294,638	HIGH POWER	3W9A (KU1CW)
IB9T6,666,720	PV2K	KH6CJJ
ED706,178,614	EA4URE 2,879,120	DJ3HW
HZ1BC5,373,067	DY10 2,525,820	PY2NY
HI3LT4,811,950	ED2R 1,187,376	ON7CL878,576
IO3F4,797,760	DAORR 1,161,132	EI4GNB
LZ8E4,152,800	IQ3PN 607,258	IK1JJM
E7CW4,048,000	9M8J 363,258	K8ZM
ED1B3,623,900	WX8S 216,770	ROZPI
LX5M3,274,964	7E3E 4,998	YOUTH
MULTI-OP	ROOKIE	
MINO MDANONTHMED		HIGH POWER
TWO-TRANSMITTER	HIGH POWER	RA9P9,612,436
P33W37,489,965	HIGH POWER KC1TNO (YT3WA) 6,134,297	
P33W37,489,965 CR3A37,325,335		RA9P9,612,436
P33W 37,489,965 CR3A 37,325,335 V47T 30,045,977	KC1TNO (YT3WA) 6,134,297	RA9P9,612,436 K6JO5,302,888
P33W 37,489,965 CR3A 37,325,335 V47T 30,045,977 CR6K 22,204,448	KC1TNO (YT3WA) 6,134,297 KI5GTR 1,728,374	RA9P 9,612,436 K6JO 5,302,888 DM7XX 3,093,048
P33W. 37,489,965 CR3A. 37,325,335 V47T. 30,045,977 CR6K. 22,204,448 KC1XX. 22,107,200	KC1TNO (YT3WA) 6,134,297 KI5GTR 1,728,374 WB5SKM 946,860	RA9P
P33W. 37,489,965 CR3A. 37,325,335 V47T. 30,045,977 CR6K. 22,204,448 KC1XX. 22,107,200 W3LPL 18,657,840	KC1TNO (YT3WA) 6,134,297 K15GTR 1,728,374 WB5SKM 946,860 IV3JAK 762,785	RA9P
P33W. 37,489,965 CR3A. 37,325,335 V47T. 30,045,977 CR6K. 22,204,448 KC1XX. 22,107,200 W3LPL 18,657,840 II2S 17,369,410	KC1TNO (YT3WA) 6,134,297 K15GTR 1,728,374 WB5SKM 946,860 IV3JAK 762,785 VE2HTC 655,956	RA9P
P33W. 37,489,965 CR3A. 37,325,335 V47T. 30,045,977 CR6K. 22,204,448 KC1XX. 22,107,200 W3LPL. 18,657,840 II2S. 17,369,410 9A5Y. 16,912,350	KC1TNO (YT3WA) 6,134,297 KI5GTR 1,728,374 WB5SKM 946,860 IV3JAK 762,785 VE2HTC 655,956 DL5EP 574,896	RA9P
P33W. 37,489,965 CR3A. 37,325,335 V47T. 30,045,977 CR6K. 22,204,448 KC1XX. 22,107,200 W3LPL 18,657,840 II2S 17,369,410 9A5Y 16,912,350 J62K. 16,097,672	KC1TNO (YT3WA) 6,134,297 KI5GTR 1,728,374 WB5SKM 946,860 IV3JAK 762,785 VE2HTC 655,956 DL5EP 574,896 EA8DPX 573,420	RA9P
P33W. 37,489,965 CR3A. 37,325,335 V47T. 30,045,977 CR6K. 22,204,448 KC1XX. 22,107,200 W3LPL. 18,657,840 II2S. 17,369,410 9A5Y. 16,912,350	KC1TNO (YT3WA) 6,134,297 KI5GTR 1,728,374 WB5SKM 946,860 IV3JAK 762,785 VE2HTC 655,956 DL5EP 574,896 EA8DPX 573,420 DL9LA 564,067	RA9P
P33W 37,489,965 CR3A 37,325,335 V47T 30,045,977 CR6K 22,204,448 KC1XX 22,107,200 W3LPL 18,657,840 II2S 17,369,410 9A5Y 16,912,350 J62K 16,097,672 S53M 15,760,080	KC1TNO (YT3WA) 6,134,297 KI5GTR 1,728,374 WB5SKM 946,860 IV3JAK 762,785 VE2HTC 655,956 DL5EP 574,896 EA8DPX 573,420 DL9LA 564,067 SA3MGL 554,452 EA5JNP 532,530	RA9P
P33W 37,489,965 CR3A 37,325,335 V47T 30,045,977 CR6K 22,204,448 KC1XX 22,107,200 W3LPL 18,657,840 II2S 17,369,410 9A5Y 16,912,350 J62K 16,097,672 S53M MULTI-OP	KC1TNO (YT3WA) 6,134,297 KI5GTR 1,728,374 WB5SKM 946,860 IV3JAK 762,785 VE2HTC 655,956 DL5EP 574,896 EA8DPX 573,420 DL9LA 564,067 SA3MGL 554,452 EA5JNP 532,530 LOW POWER	RA9P
P33W. 37,489,965 CR3A. 37,325,335 V47T. 30,045,977 CR6K. 22,204,448 KC1XX. 22,107,200 W3LPL 18,657,840 II2S 17,369,410 9A5Y 16,912,350 J62K 16,097,672 S53M 15,760,080 MULTI-OP MULTI-TRANSMITTER	KC1TNO (YT3WA) 6,134,297 KI5GTR 1,728,374 WB5SKM 946,860 IV3JAK 762,785 VE2HTC 655,956 DL5EP 574,896 EA8DPX 573,420 DL9LA 564,067 SA3MGL 554,452 EA5JNP 532,530 LOW POWER VE1RGO (VE3RGO) 1,498,456	RA9P 9,612,436 K6JO 5,302,888 DM7XX 3,093,048 LY7J (LY1LB) 3,048,188 TM4Y (F4IEY @F6KGL) .1,885,998 YT9X (YT0C) 942,310 SA6NIA 503,676 VE3FCT 411,180 DK1YH 391,142 DLOMT 380,256 LOW POWER DJ4MX 2,454,624 A41DV 1,327,620
P33W 37,489,965 CR3A 37,325,335 V47T 30,045,977 CR6K 22,204,448 KC1XX 22,107,200 W3LPL 18,657,840 I12S 17,369,410 9A5Y 16,912,350 J62K 16,097,672 S53M 15,760,080 MULTI-OP MULTI-TRANSMITTER CN3A 56,551,635	KC1TNO (YT3WA) 6,134,297 K15GTR 1,728,374 WB5SKM 946,860 IV3JAK 762,785 VE2HTC 655,956 DL5EP 574,896 EA8DPX 573,420 DL9LA 564,067 SA3MGL 554,452 EA5JNP 532,530 LOW POWER VE1RGO (VE3RGO) 1,498,456 IU8RIA 1,335,600	RA9P
P33W 37,489,965 CR3A 37,325,335 V47T 30,045,977 CR6K 22,204,448 KC1XX 22,107,200 W3LPL 18,657,840 I12S 17,369,410 9A5Y 16,912,350 J62K 16,097,672 S53M 15,760,080 MULTI-OP MULTI-TRANSMITTER CN3A 56,551,635 D4C 43,369,924	KC1TNO (YT3WA) 6,134,297 K15GTR 1,728,374 WB5SKM 946,860 IV3JAK 762,785 VE2HTC 655,956 DL5EP 574,896 EA8DPX 573,420 DL9LA 564,067 SA3MGL 554,452 EA5JNP 532,530 LOW POWER VE1RGO (VE3RGO) 1,498,456 IU8RIA 1,335,600 DS1TUW 862,383	RA9P
P33W 37,489,965 CR3A 37,325,335 V47T 30,045,977 CR6K 22,204,448 KC1XX 22,107,200 W3LPL 18,657,840 II2S 17,369,410 9A5Y 16,912,350 J62K 16,097,672 S53M 15,760,080 MULTI-OP MULTI-TRANSMITTER CN3A 56,551,635 D4C 43,369,924 K3LR 32,367,202	KC1TNO (YT3WA) 6,134,297 KI5GTR 1,728,374 WB5SKM 946,860 IV3JAK 762,785 VE2HTC 655,956 DL5EP 574,896 EA8DPX 573,420 DL9LA 564,067 SA3MGL 554,452 EA5JNP 532,530 LOW POWER VE1RGO (VE3RGO) 1,498,456 IU8RIA 1,335,600 DS1TUW 862,383 9A5AFF 664,240	RA9P
P33W 37,489,965 CR3A 37,325,335 V47T 30,045,977 CR6K 22,204,448 KC1XX 22,107,200 W3LPL 18,657,840 II2S 17,369,410 9A5Y 16,912,350 J62K 16,097,672 S53M 15,760,080 MULTI-OP MULTI-TRANSMITTER CN3A 56,551,635 D4C 43,369,924 K3LR 32,367,202 V26B 27,919,927	KC1TNO (YT3WA) 6,134,297 KI5GTR 1,728,374 WB5SKM 946,860 IV3JAK 762,785 VE2HTC 655,956 DL5EP 574,896 EA8DPX 573,420 DL9LA 564,067 SA3MGL 554,452 EA5JNP 532,530 LOW POWER VE1RGO (VE3RGO) 1,498,456 IU8RIA 1,335,600 DS1TUW 862,383 9A5AFF 664,240 HJ3ESF 585,480	RA9P
P33W 37,489,965 CR3A 37,325,335 V47T 30,045,977 CR6K 22,204,448 KC1XX 22,107,200 W3LPL 18,657,840 II2S 17,369,410 9A5Y 16,912,350 J62K 16,097,672 S53M 15,760,080 MULTI-OP MULTI-TRANSMITTER CN3A 56,551,635 D4C 43,369,924 K3LR 32,367,202 V26B 27,919,927 M6T 27,314,830	KC1TNO (YT3WA) 6,134,297 K15GTR 1,728,374 WB5SKM 946,860 IV3JAK 762,785 VE2HTC 655,956 DL5EP 574,896 EA8DPX 573,420 DL9LA 564,067 SA3MGL 554,452 EA5JNP 532,530 LOW POWER VE1RGO (VE3RGO) 1,498,456 IU8RIA 1,335,600 DS1TUW 862,383 9A5AFF 664,240 HJ3ESF 585,480 W1TKO 494,760	RA9P 9,612,436 K6JO 5,302,888 DM7XX 3,093,048 LY7J (LY1LB) 3,048,188 TM4Y (F4IEY @F6KGL) 1,885,098 YT9X (YT0C) 942,310 SA6NIA 503,676 VE3FCT 411,180 DK1YH 391,142 DLOMT 380,256 LOW POWER DJ4MX 2,454,624 A41DV 1,327,620 JG1ZUY (JJ1AHS) 929,556 SP3GTP 683,920 WV4AM 647,191 SV8SYK 475,138 Y08OLY 397,420
P33W 37,489,965 CR3A 37,325,335 V47T 30,045,977 CR6K 22,204,448 KC1XX 22,107,200 W3LPL 18,657,840 I12S 17,369,410 9A5Y 16,912,350 J62K 16,097,672 S53M 15,760,080 MULTI-OP MULTI-TRANSMITTER CN3A 56,551,635 D4C 43,369,924 K3LR 32,367,202 V26B 27,919,927 M6T 27,314,830 PJ2T 26,550,310	KC1TNO (YT3WA) 6,134,297 K15GTR 1,728,374 WB5SKM 946,860 IV3JAK 762,785 VE2HTC 655,956 DL5EP 574,896 EA8DPX 573,420 DL9LA 564,067 SA3MGL 554,452 EA5JNP 532,530 LOW POWER VE1RGO (VE3RGO) 1,498,456 IU8RIA 1,335,600 DS1TUW 862,383 9A5AFF 664,240 HJ3ESF 585,480 WITKO 494,760 ES5TVI 464,830	RA9P
P33W 37,489,965 CR3A 37,325,335 V47T 30,045,977 CR6K 22,204,448 KC1XX 22,107,200 W3LPL 18,657,840 I12S 17,369,410 9A5Y 16,912,350 J62K 16,097,672 S53M 15,760,080 MULTI-OP MULTI-TRANSMITTER CN3A 56,551,635 D4C 43,369,924 K3LR 32,367,202 V26B 27,919,927 M6T 27,314,830 PJ2T 26,550,310 9A1A 26,215,969	KC1TNO (YT3WA) 6,134,297 K15GTR 1,728,374 WB5SKM 946,860 IV3JAK 762,785 VB2HTC 655,956 DL5EP 574,896 EA8DPX 573,420 DL9LA 564,067 SA3MGL 554,452 EA5JNP 532,530 LOW POWER VE1RGO (VE3RGO) 1,498,456 IU8RIA 1,335,600 DS1TUW 862,383 9A5AFF 664,240 HJ3ESF 585,480 W1TKO 494,760 ES5TVI 464,830 DD1SB 455,928	RA9P 9,612,436 K6JO 5,302,888 DM7XX 3,093,048 LY7J (LY1LB) 3,048,188 TM4Y (F4IEY @F6KGL) 1,885,098 YT9X (YT0C) 942,310 SA6NIA 503,676 VE3FCT 411,180 DK1YH 391,142 DLOMT 380,256 LOW POWER DJ4MX 2,454,624 A41DV 1,327,620 JG1ZUY (JJ1AHS) 929,556 SP3GTP 683,920 WV4AM 647,191 SV8SYK 475,138 Y08OLY 397,420
P33W 37,489,965 CR3A 37,325,335 V47T 30,045,977 CR6K 22,204,448 KC1XX 22,107,200 W3LPL 18,657,840 II2S 17,369,410 9A5Y 16,912,350 J62K 16,097,672 S53M 15,760,080 MULTI-OP MULTI-TRANSMITTER CN3A 56,551,635 D4C 43,369,924 K3LR 32,367,202 V26B 27,919,927 M6T 27,314,830 PJ2T 26,550,310 9A1A 26,215,969 DF0HQ 24,014,210	KC1TNO (YT3WA) 6,134,297 KI5GTR 1,728,374 WB5SKM 946,860 IV3JAK 762,785 VE2HTC 655,956 DL5EP 574,896 EA8DPX 573,420 DL9LA 564,067 SA3MGL 554,452 EA5JNP 532,530 LOW POWER VE1RGO (VE3RGO) 1,498,456 IU8RIA 1,335,600 DS1TUW 862,383 9A5AFF 664,240 HJ3ESF 585,480 WITKO 494,760 ES5TVI 464,830 DD1SB 455,928 KD9YOO 370,488	RA9P
P33W 37,489,965 CR3A 37,325,335 V47T 30,045,977 CR6K 22,204,448 KC1XX 22,107,200 W3LPL 18,657,840 II2S 17,369,410 9A5Y 16,912,350 J62K 16,097,672 S53M 15,760,080 MULTI-OP MULTI-TRANSMITTER CN3A 56,551,635 D4C 43,369,924 K3LR 32,367,202 V26B 27,919,927 M6T 27,314,830 PJ2T 26,550,310 9A1A 26,215,969 DF0HQ 24,014,210 L29W 22,370,468	KC1TNO (YT3WA) 6,134,297 K15GTR 1,728,374 WB5SKM 946,860 IV3JAK 762,785 VB2HTC 655,956 DL5EP 574,896 EA8DPX 573,420 DL9LA 564,067 SA3MGL 554,452 EA5JNP 532,530 LOW POWER VE1RGO (VE3RGO) 1,498,456 IU8RIA 1,335,600 DS1TUW 862,383 9A5AFF 664,240 HJ3ESF 585,480 W1TKO 494,760 ES5TVI 464,830 DD1SB 455,928	RA9P
P33W 37,489,965 CR3A 37,325,335 V47T 30,045,977 CR6K 22,204,448 KC1XX 22,107,200 W3LPL 18,657,840 II2S 17,369,410 9A5Y 16,912,350 J62K 16,097,672 S53M 15,760,080 MULTI-OP MULTI-TRANSMITTER CN3A 56,551,635 D4C 43,369,924 K3LR 32,367,202 V26B 27,919,927 M6T 27,314,830 PJ2T 26,550,310 9A1A 26,215,969 DF0HQ 24,014,210	KC1TNO (YT3WA) 6,134,297 KI5GTR 1,728,374 WB5SKM 946,860 IV3JAK 762,785 VE2HTC 655,956 DL5EP 574,896 EA8DPX 573,420 DL9LA 564,067 SA3MGL 554,452 EA5JNP 532,530 LOW POWER VE1RGO (VE3RGO) 1,498,456 IU8RIA 1,335,600 DS1TUW 862,383 9A5AFF 664,240 HJ3ESF 585,480 WITKO 494,760 ES5TVI 464,830 DD1SB 455,928 KD9YOO 370,488	RA9P

EXPLORER SINGLE-OP

CLASSIC

MULTI-OP