

# CW Results of the 2023 CQ World Wide DX Contest

“The CQ WW is the king of all contests; huge participation and great fun.” – IZ8GUQ

By John Dorr, K1AR

## The CQ WW Never Ceases to Amaze!

**N**o matter how you measure the performance of a contest event, the CQ WW continues to set the standard for all others. As we close the book on the WW's 75th anniversary, record activity was noted with nearly 8,100 logs received (almost 18,000 logs for both modes), representing 4.9 million QSOs or 28 QSOs being made across the world during every second of the contest.

A question that is often asked (more frequently by our friends and family) is, “Why do we do this?” In some ways, staying cooped up in a small room with a headset clamped to our heads for hours at a time is odd behavior at best. We talk to people we can't see and more often don't even know. When we do communicate with others, we do so by exchanging an unusual set of letters and numbers, taking only a few seconds before doing it again with the next stranger that comes our way.

It turns out that Geoff Howard, W0CG (and also owner of the world-renowned PJ2T superstation), has expressed an answer to this question in a way that's better than anything I've ever seen.



*The Kediri DX Contest Team who entered the Multi-Explorer category using 4 different locations to put 7E3E on the air!*

## Why do We Contest?

### A Perspective from Geoff, W0CG

*"Contesting affords all of us worldwide a 48-hour escape to this fantasyland where politics, economics, misery, injustice, and all other suffering seem briefly distant and abstract. Sport is an escape from the burdens of everyday life. Contesting is our sport. And I'm most grateful for this sport – contesting -- and the friendships and fellowship and escape it brings us. In these brief hours yes, all seems right with the world."*

In keeping with Geoff's theme, one area of the contest that I especially enjoy reviewing is the soapbox comments that many of you include with your log entries. Indeed, you are often expressing in your own words the answer to the puzzling question of our enthusiastic participation. You can see them for yourself at: <https://cqww.com/soapboxcw.htm?yr=2023>. Here's just a small sample of what you'll find:

- *"Didn't have the time, but, even 5 minutes of CQWW CW is worth it! Until next year..." – EA1PJ*
- *"Brought the venerable Yaesu FTDX-3000 out of storage for this contest. My new 25-foot vertical with its remote tuner worked FB. Ten meters was FULL of signals!" – WA5RR*
- *"Wow – that was fun! After more than a 30 year hiatus, I reactivated my call this year and took part in the CQWW again (last time I participated was back in 1991 under the call Z21HQ)." – DF2RQ*

With the introductions complete, let's get on to reporting the results of the 2023 CQ WW CW contest.

## Another Year of Incredible CQ WW Contest Operating!

**E**ven with the sun acting up during part of the weekend, the 2023 CQ WW contest was nothing short of spectacular! When you measure success by band activity, there's little to debate as stations could be found calling CQ on frequencies such as 14115 or 21120. Bandscope displays from around the world were simply jammed with signals from one end of the band to the other.

In the highly competitive World Single Operator battle, there was yet again no surprise as Dan Craig, N6MJ, blew away the field with a record-setting 20.1 million point performance from ZF1A. As Dan "casually" logged over 11,800 stations, he easily beat his WRTC partner, Chris Hurlbut, KL9A, who rang up 15.6 million from TI7W. It's especially notable that each of these scores was achieved from "2-point" countries, making the results even more remarkable.

The U.S. Single Operator race also resulted in a dominant victory as N5DX, operating from the N2QV superstation, racked up an amazing 11.4 million points, as well as logging just short of 6,000 QSOs! Perhaps

you recall the days when 1,000 QSOs would take the USA prize. Dave McCarty, K5GN, showed us that hard work in assembling a world-class station can pay off as he delivered a #2 USA result of 7.5 million points from Texas – no easy feat in the typically East Coast-dominated competitive landscape.

The World Single Operator, Low Power category was a much closer affair as Dimitri, RA3CO, won the prize with a 14.3 million point result from PZ5CO, narrowly beating out Bud, AA3B, who posted 13.9 million points from his V26K station in Antigua paradise. You should take notice that Dimitri's score would have been #4 World amongst the high-power group!

Doug Zwiebel, KR2Q, led the world again with an amazing 1.7 million point win in the challenging Single Operator QRP group, logging 1300+ QSOs over the weekend. The improved conditions may indeed be a QRPers best friend.

There was some good, old-fashioned stiff competition within the Single Operator Assisted cluster (pun intended). In the end, Jack, R2AA, operating as P3AA, took first-place with an impressive score of 14.6 million – a new World record. There continues to be an opportunity for someone in the future to deliver a world-high single operator score while using assistance, but the unassisted group is doing their best to ensure that never happens! Randy, K5ZD, took the top USA position and was third overall with 12.1 million.

And, for the majority of us who find working 100 countries on any band to be a worthy accomplishment, it should be pointed out that Dave, K1ZZ, managed to do it on five bands (80-10 meters)!

Single-band efforts also impressed as Marko, N5ZO, traveled to Uruguay and demonstrated operating at its finest with a 2.2 million point effort on 10 meters. Perhaps even more impressive, however, was the world high result by “youngster” Jim Neiger, N6TJ, who took home the mono-15 prize by racking up over 900K points from KH7M, a difficult QTH that is essentially not located near anything!

With the COVID pandemic firmly in the past for most of us, the multi-ops were out in force for the 2023 CQ WW CW contest. The team from P33W did it again for Multi-Single High Power, delivering 23.4 million points, easily besting a solid 18.7 million point effort from the UP2L group. The Low Power Multi-Single gang was led by P40L at 16.7 million points. But, as they say, there is more! The CR3A crew showed the world how it's done in the Multi-2 category with an amazing score of 41.7 million points.

However, the winner of the multi operator giants goes to the D4C Multi-Multi team, delivering a remarkable 56.2 million point effort, logging over 20,100 QSOs or seven contacts for each minute of the contest! Equally worthy of mention was the heated Multi-Multi USA battle between KC1XX, K1LZ, and K3LR. In the end, the XX team won the plaque at 28.1 million points with the scoring separation between each of these three titans being only 4%.

As has been the case for several years, the overlay categories continue to demonstrate great interest amongst WW participants. Bob Shohet, KQ2M, narrowly won the World Single Operator Classic prize at 4.2M (reminder, that's achieved in only 24-hours of operating), while Janko, YT3EWW, continued to dominate the Rookies (his time is now up!) with 1.7 million points. Perhaps of greatest note is the 6.4 million point effort by Alek, RA9P, in the Youth group. Every time I hear Alek operating, he is bursting with enthusiasm and energy and will be a force in contesting for many years to come.



Lastly, a round of applause is in order for this year's contest club winners – Frankford Radio Club (USA) and the Bavarian Contest Club (DX), who yet again dominated the club listings. However, keep an eye on the group from the Italian Contest Club. Fresh off the last WRTC event, there is enormous enthusiasm for contesting in Italy, a potential sign of things to come in the competitive world of club entries.

The bottom line, however, is that everyone is a winner in the CQ WW. Your participation, large or small, is what makes this contest the biggest and best. Congratulations to all!



*Enthusiasm flows as a result of the effort by Don Jones, 7Q6M, introducing several Malawian youngsters to amateur radio and contesting (l-r) Urgent Jere and Abraham Moyo. Don will be forming a youth team for the upcoming Region 1 Youngsters on the Air (YOTA) Camp in August 2024.*

## How Much Time Do You Operate in the CQ WW?

**W**e all have different circumstances that determine the amount of time we can devote to a given contest, including the CQ WW. For U.S. hams, the decision-making process is even more complicated as the CW contest regularly falls on Thanksgiving weekend. Aside from the usual trade-offs of family time, work commitments and other factors, is the reality that none of us is getting any younger. I can speak personally about the reality that operating a full 48-hours is nothing more than a distant memory!

The sweet spot for the 2023 CW WW operating time turned out to be a median value of 12.8 hours, slightly higher than previous years, perhaps reflecting the continued improvement in conditions (See Table 1). I stand in amazement, however, of the elite group that operated 45+ hours, several of which claimed to be in the chair for the full duration of the contest. Someday, you'll have to explain to the rest of us how you do that!

### Total Operating Hours (SOAB only)

operating hours	AF	AS	EU	NA	OC	SA	ALL	% of all	Cum %
0.1-5	5	157	373	312	25	19	891	17.6%	17.6%
5.1-10	4	136	518	398	19	26	1,101	21.7%	39.3%
10.1-15	1	136	450	290	20	19	916	18.1%	57.3%
15.1-20	5	105	342	236	11	19	718	14.2%	71.5%
20.1-25	2	67	281	177	8	6	541	10.7%	82.1%
25.1-30		50	164	141	10	7	372	7.3%	89.5%
30.1-35		37	97	70	2	8	214	4.2%	93.7%
35.1-40	1	25	76	53	4	2	161	3.2%	96.8%
40.1-45	3	13	58	39	2	7	122	2.4%	99.3%
45.1-48	2	7	16	11	2		38	0.7%	100.0%
ALL	23	733	2,375	1,727	103	113	5,074	100.0%	

**Table 1 – Operating Time by Continent in the 2023 CQ WW CW Contest**

## The Elite of Accurate Contesting

The majority of logs we received this year were reasonably accurate with a median error rate of 2.9% (of course final scores were reduced further due to loss of multipliers and penalties as defined in the rules). Further, given the high percentage of WW participants actually submitting their logs, we are able to successfully crosscheck the vast majority of the QSOs made in the contest. Put another way, it's quite an accomplishment to make the list as shown in Table 2. Congratulations to each of you for a fine showing of accurate logging!

**Log Accuracy Data by Top CQ WW Operators**

Call	Cont	Power	Raw Qsos	% accuracy
E72U	EU	HIGH	1,398	99.64
KR2Q	NA	QRP	1,306	99.54
WQ5L	NA	HIGH	1,305	99.54
SK6KU	EU	HIGH	1,300	99.54
OK1OA	EU	HIGH	1,416	99.51
HB9HDC	EU	LOW	1,181	99.49
SP1AEN	EU	LOW	1,092	99.45
KQ4R	NA	HIGH	1,383	99.42
LN7TTT (LA5LJA)	EU	LOW	1,026	99.41
EU4E	EU	HIGH	2,885	99.41
LY9A	EU	QRP	1,819	99.39
WW4XX (LZ4AX)	NA	LOW	1,916	99.37
K6NA	NA	HIGH	1,992	99.35
YL2PJ	EU	LOW	1,014	99.31
N5AW	NA	HIGH	1,572	99.30
DK3YD	EU	LOW	1,281	99.30
VE3TM	NA	LOW	1,084	99.26
JE4MHL	AS	LOW	1,034	99.22
HB9ARF	EU	LOW	1,849	99.19
K6NR	NA	HIGH	1,205	99.17
OR2F	EU	LOW	2,509	99.16
YL2VW	EU	HIGH	2,243	99.15
W7YAQ	NA	HIGH	1,169	99.14
J11RXQ	AS	LOW	1,735	99.13
V26K (AA3B)	NA	LOW	9,067	99.12
K8GL	NA	HIGH	2,027	99.11
9A2AJ	EU	LOW	1,064	99.06
DL8ULF	EU	LOW	1,256	99.05
ZS4TX	AF	LOW	1,447	99.03
DL1USB	EU	LOW	1,020	99.02
ZD7BG	AF	HIGH	1,019	99.02
K3TC	NA	HIGH	1,119	99.02
R0WC	AS	HIGH	1,104	99.00

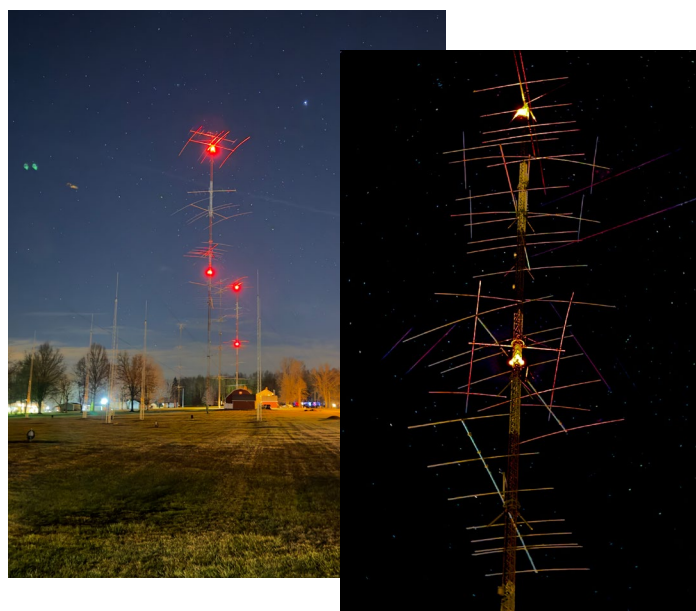
**Table 2 – Single-Op Accuracy Champions (>1000 QSOs) for the 2023 CQ WW CW Contest**

## Youthful Contesting in the CQ WW

While not an overwhelming number of entries this year, we did experience impressive global participation by the under-25 crowd in the 2023 CQ WW CW Contest – 20 countries in total (See Table 3). Let's continue to invest in this important group of operators and watch it grow in the coming years!

Youth Entries in 2023 CQ WW CW Contest					
Entity	AS	EU	NA	SA	ALL
9A		4			4
9V	1				1
BY	5				5
DL		3			3
E7		2			2
EI		1			1
F		1			1
G		1			1
I		2			2
JA	2				2
K			7		7
S5		1			1
SM		1			1
SP		2			2
UA		2			2
UA9	1				1
VE			1		1
YO		7			7
YT		1			1
ZP				1	1
ALL	9	28	8	1	46

Table 3 – Total Number of Youth Entries Received by Continent in 2023 CQ WW CW Contest



*Yes, this is an amateur radio station! A stunning view of Tim Duffy, K3LR's, antennas while "under the FAA lights" in West Middlesex, PA.*

## Let's Talk about Rate!

The hourly rates of top scorers in the WW continue to grow. With the advent of two radio operating techniques, it's now possible, for example, for single operators to log over 400 QSOs in one hour (See Table 4). Like many of you, I vividly recall when the benchmark used to be only 100 contacts. Did you forget we are talking about CW?

Of course, with high rates comes the need to also pay attention to accuracy. It's notable that most of the high-rate operators also submit extremely clean logs – a true testament to their outstanding operating skills.

If you want more data, an even more extensive analysis of rates can be found at [https://cqww.com/rates/.](https://cqww.com/rates/)



*Nate Moreschi, N4YDU, training up the next generation of contesters as the adorable 3-year-old, Mila, gives the bands a try!*

### Top QSO Rates (best 60-minute rate)

CALL	Cat	QRATE	Op	CALL	Cat	QRATE	Op	CALL	Cat	QRATE	Op
ZF1A	SOAB(U) HIGH	425	N6MJ	V26K	SOAB(U) LOW	327	AA3B	XE2S	SOAB(A) QRP	125	
T17W	SOAB(U) HIGH	408	KL9A	PZ5CO	SOAB(U) LOW	327	RA3CO	LY9A	SOAB(U) QRP	94	
V47T	SOAB(U) HIGH	353	N2NT	EA2W	SOAB(U) LOW	213		N3CZ	SOAB(U) QRP	92	
CR6K	SOAB(U) HIGH	345	CT1ILT	3V8SS	SOAB(U) LOW	202	KF5EYY	EA2ESB	SOAB(A) QRP	90	
EA8RM	SOAB(U) HIGH	314		4X7M	SOAB(U) LOW	188	4Z4AK	UZ5DM	SOAB(U) QRP	86	
8P5A	SOAB(U) HIGH	303	W2SC	UW5Y	SOAB(A) LOW	184	US2YW	ES2MC	SOAB(A) QRP	86	
EF6T	SOAB(U) HIGH	296	EA3M	PJ7EE	SOAB(A) LOW	182	KC9EE	OM0RX	SOAB(A) QRP	84	
TO7A	SOAB(A) HIGH	293	UT5UGR	K1BX	SOAB(U) LOW	182		OA4ASD	SOAB(A) QRP	84	
P3AA	SOAB(A) HIGH	292	R2AA	TF/OU2I	SOAB(U) LOW	176	OZ2I	OK6K	SOAB(A) QRP	82	OK5IM
LZ5R	SOAB(U) HIGH	286	LZ5DB	EA5M	SOAB(A) LOW	172		KR2Q	SOAB(U) QRP	78	

**Table 4 - High Hourly QSO Rates for the 2023 CQ WW CW Contest**



## What's your Power?

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The choice of a power category in the WW is usually determined by a combination of available equipment, personal goals or competing stations. Entering the low power category has proven to be the most popular operating class with over half of all single-op logs using less than 100 watts (See Table 5). It was also interesting to note that only North America has more entrants in the high power category when compared to low power entries.

I can't leave this topic without mentioning one other issue – abuse of power. Although unproven, it is well known that there are a disturbing number of stations running power over the 1500-watt limit as clearly defined in the rules. The same is true for some stations claiming low power, where amplifiers are either being used over the entire weekend or selectively in difficult pile-ups. At some point, we will take some form of action against these infractions. For now, you've been warned!

### Continental Breakdown Entries by Power Levels

Power Cat	AF	AS	EU	NA	OC	SA	ALL	% of all
SOAB HIGH	10	260	774	892	39	30	2,005	39.5%
SOAB LOW	11	440	1,466	771	59	78	2,825	55.7%
SOAB QRP	2	33	135	64	5	5	244	4.8%
SOAB totals	23	733	2,375	1,727	103	113	5,074	

**Table 5 – Breakdown of Power Categories by Continent for the 2023 CQ WW CW Contest**

## A Few Final Anecdotes

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One of the perks of being the CQ WW Director is that I receive a wide range of interesting stories and exciting anecdotes in my email inbox! Here are a few examples just to give you an idea – enjoy and remember!

### PP5JR and His Family of Hams

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This brief story is an inside view to some of the aspects of contesting that never make the scoring tables. Such is the case with Sergio, PP5JR. As is often the case, successfully delivering packages to international destinations through the global postal system can be difficult. This particular issue was amplified to even greater levels during the COVID pandemic. Much to Sergio's delight, his 2021 and 2022 CQWW plaques were hand-delivered by Oliver, W6NV, while preparing to operate in the WW CW Contest. The local ceremony turned out to be a household affair as Sergio's plaques were "formally" awarded at his home surrounded by his ham family – an event that he will always cherish.

The hams of Brazil are proud to note that for the last four years, Sergio, PP5JR, has been the world high

scorer for the CQ WW SSB Single Op/All Band Assisted category. From his well-built contest station, Sergio has also hosted many winning single and multi-band events with calls including ZX5J, PT5A, and PT5J. A particular highlight for Sergio was being the co-director of WRTC 2006 that took place in Florianopolis, Brazil.

Congratulations, Sergio, on your winning achievements and contributions to our radiosport!



*Sergio holding his well-deserved CQ WW plaques for 2021 and 2022 with his family of amateur radio enthusiasts (l-r) Eduardo, PU5FJR; Leonardo, PU5BOB; Beatriz, PU5BIA; Sergio, PP5JR; Fernanda, PU5FDA; and Juliana, PU5JDA (thanks to Oliver, W6NV).*

## Remembering Marco, CE1EW, by Dercel Williams, XQ3SK

A group of Chilean contesters set out to organize a tribute in recognition of the sudden passing of a great Chilean radio amateur, Marco, CE1EW. His contributions to radio, active participation in DX-peditions, PoTA and SOTA trips, and contest competitions have been a source of admiration and motivation for many radio amateurs in Chile and the world. In coordination with the Secretary of Telecommunications of Chile we were able to obtain approval to participate in the CQ WW CW 2023 with special callsigns (3G, XR, CB) that end with the suffix "EW" (the letters used by our friend Marco, CE1EW. There were a number of Chilean stations activated as a tribute to Marco including: 3G8EW (XQ3SK), XR1EW (XQ1KZ), XR8EW (XQ3SK), CB2EW (CE2GT), CB4EW (CE4WT), 3G4EW (XQ4CW), 3G6EW (XQ3OP), 3G7EW (CE3HDI), CB6EW (XQ3OP), 3G3EW (XQ3WD), CB3EW (XQ3WD), and CB1EW. Let's be sure to remember our friend and his many contributions to our sport.

## First Class Video from Team D4C

Have you ever wondered how an experienced contest team can work over 20,000 QSOs in one CQ WW CW weekend? Think about that number for a minute; that's 420 QSOs/hour in all 48 hours of the contest! Or, looking at it another way, the team individually worked over 4300 QSOs on 20-15-10 meters. If you'd like to see more, I encourage you to check out their outstanding video production here: [https://www.youtube.com/watch?v=2g\\_N6GM0QnE](https://www.youtube.com/watch?v=2g_N6GM0QnE)

## Youthful Experiences in the CQ WW by Sam Mauldin, WO5T

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My plans to operate the CQWW CW contest first started while I was with my grandfather, Mike, K5NU. I had just received my license and was visiting to borrow one of his HF radios, all in anticipation of operating in the CQ WW. As I visited, we tuned around the bands, listening together. My grandfather pointed out stations calling CQ and where they were located. I was amazed at how much we were able to hear and I knew at that point I had to try it for myself.

As time progressed, I practiced my CW skills, making steady progress along the way. In December 2022, I completed my first Parks on the Air activation on CW. The following month, I participated in my first contest! Before I knew it, November 2023 had rolled around and it was time, at the ripe old age of 22, for my first CQWW CW.



*Sam, WO5T, hard at work operating from George Freeman, K5TR's fine station.*

Early Friday afternoon of the WW contest weekend, I arrived at San Angelo State Park, my QTH for this contest. The clock was ticking towards midnight UTC, so I quickly got to work setting up my station. I strung up the wires and radials for my vertical, ran coax, and plugged in my radio. I discovered that I had forgotten the cable I needed for CAT control, so I would have to make do without it, but otherwise the station was working as planned. It wasn't long before the bands sprung to life, and it was time to operate. My main goals were to learn what this contest was like and get some experience trying to run. I discovered that running was still possible from Texas with low power and no directional antennas, but finding the right propagation that allowed for it was very important.

This first CQWW CW was a great weekend on the radio for me. I enjoyed working stations up until the last minute when the bands suddenly became quiet and the wait for the next contest began. It's safe to say that I'm hooked and am already thinking about how I can improve my score for next year. Maybe we'll work each other in the next one!



## Exploring in the CQ WW

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The response to our recently new Explorer category continues to be tremendous. It's been exciting to witness some of your creativity in pressing the limits of technology in contesting. The following comments are representative of what's happening in this slice of the contest scene.

### Maltese Exploring from 9H6A

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For many years, it has been the practice of our team to enter as a multi-operator group for CQ's contests, with entries either in the Multi-Single or Multi-2 categories. We have often been joined by visiting hams from several countries, like Greece, Italy, Netherlands, USA, Russia, Croatia, and others. Operators who came to our little shack were a real boost to our enthusiasm, even if we didn't expect to rank in the higher places of the results.

The 9H6A shack is actually a small room, about 9-ft by 14-ft, which houses all the rigs and amplifiers. The antennas include monobanders for 10-20 meters as well as a 2-el 40m Yagi at about 16m above ground level (AGL). We also have a 74' vertical with four wires making a capacitance hat assembly, which we tune for 160 and 80 meters. This vertical has 32 radials, spread around it at the base ranging from 30-130 feet in length.

With the advent of the Covid-19 pandemic in previous years, it was obvious that we could not accommodate multi-operator contests in the shack and still conform with the local regulations regarding the meeting of groups. The safety of the team members was even of greater concern. Apart from the regulations, everyone was apprehensive to risk the viral infection. We were simply scared.

The initial introduction of the distributed category in the WPX contest was, as we saw it, a solution to our problem. The idea was for operators to work from home, provided we could find a way to communicate between each participant the data necessary to network our computers reliably and smoothly while preserving the required isolation of each of the team members.

We set out to find a dependable setup. Use of N1MM+ suggested using port forwarding at all the localities involved. We spent a lot of time experimenting with this option. This involved a relatively complex set-up and I am sure it would have worked if we continued trying it. However, some of our operators had dynamic IPs, often changing several times during one day of operation. Given the likelihood of changing IP addresses, the port forwarding setting on each computer would repeatedly need to be adjusted. So, on to plan B.

Again, from the N1MM+ manual we adopted the idea of using a VPN. None of us had much experience with this, but luckily there was a very ample explanation in the help pages that facilitated a workable solution. This worked smoothly and we were able to run the WPX contests using the VPN system. The drawback of this software was that you could only run five computers. However, for the WW SSB contest, we had many more interested hams both locally as well as two visitors. Further there was no similar distributed category. Therefore, we moved onto plan C.

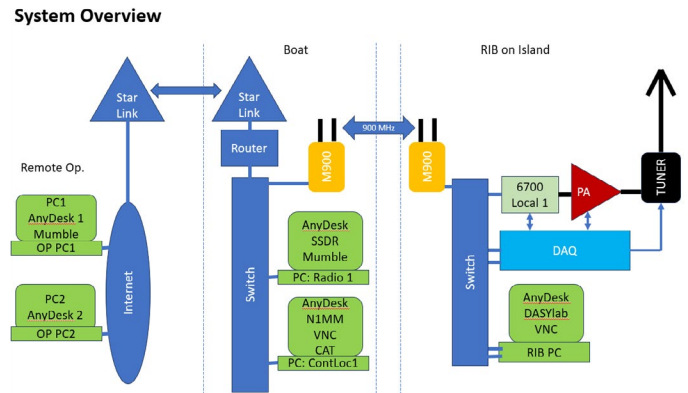


The research began for a VPN software solution which was reliable, robust, free, and could support more stations. Several hours of testing quite a few systems yielded one which satisfied these conditions.

By this time, the recommendations concerning in-person group size numbers were relaxed and we could have three operators in the main shack while others could work from their own shack. So, the model was set. The CQ WW Explorer category was the perfect and only category for us and thus the choice which justified all of the technology research, testing, and pain. We look forward to exploring with you next year!

## Exploring from Swains

Many of you worked K8R in the 2023 CQ WW CW Contest. Those QSOs seemed perfectly normal by contesting standards. However, the set-up was far from ordinary. Entering the multi-op Explorer category, K8R was operating from Swains Island (KH8S) using newly designed rig-in-a box (RIB)-based equipment (check out K3LR's interview with RIB designed AA7JV at <https://www.youtube.com/watch?v=1XqBhp7M2Uk> for more information). While the radio (RIB), generators and antenna were all located on the island, the radio was connected to the team's nearby boat via a 900 MHz IP link. This off-shore location was where the control systems, logging software and computers running Smart SDR were located. Amazingly, the operators were actually located in Europe and were linked to the boat via the Internet and Starlink. We were proudly exploiting the Explorer concept and look forward to the next opportunity!



*This station design is an example of the future of contesting for some, as operators, both locally and remotely, can experience the thrill of being DX as demonstrated by the K8R operation from Swains Island.*

## The Remote Base Contest Club – WX8S (Ryan, KL8X Operator)

Over time I have been evolving a remote base setup for contest and group use. The system revolves around the use of Microbit Remote Rig interface units, which uses the Internet as a virtual “cable separation kit” from control head to transceiver. My Icom IC-7100 is the perfect radio for this application as it is a compact unit designed for separated use with the control head, while being conveniently located at the operating position and the transceiver remotely mounted. The entire setup is professionally packaged in a 3U rack mount case with custom front and back panels to allow easy connection and setup. The remote unit can connect to the Internet via Ethernet or WiFi. This system allows operation from wherever a stable internet connection is available, even via a mobile phone hot spot. In the end, it has proven to be a perfect solution for the CQ WW Explorer category.

This project has been a two-year evolution of experimenting, refining, tweaking, and proving robustness. My longer-term goal is to potentially have the remote base unit located in Alaska for use during contest so I can operate with my KL8X call, no matter where I may be physically located and even allow other people to use it. There will surely be more exploring in my future!

### Without Further Ado...

Finally, I am given the opportunity to thank the real heroes of the CQ WW – our esteemed committee members. This group of dedicated contesters are the engine behind the best contest in the world! Let’s acknowledge their contributions together as follows: Bud Trench, AA3B; CT1BOH, José Nunes; EA4KD, Pedro Vadillo; ES5TV, Tonno Vahk; F6BEE, Jacques Saget; G0MTN, Lee Volante; IK2QEI, Stefano Brioschi; JH5GHM, Katsuhiko (Don) Kondou; K1DG, Doug Grant; K1EA, Ken Wolff; K3LR, Tim Duffy; K3WW, Charles Fulp; K5ZD, Randy Thompson; KR2Q, Doug Zwiebel; LA6VQ, Frode Iglund; N9RV, Pat Barkey; OH6LI, Jukka Klemola; PA3AAV, Gert Meinen; RA3AUU, Igor (Harry) Booklan; S50A, Tine Brajnik; S50XX, Kristjan Kodermac; UA9CDC, Igor Sokolov; VE3EJ, John Sluymer; VK2IA, Bernd Laenger; YO3JR, Andrei (Andy) Ruse.

Depending on the day you are reading these words, the 2024 edition of the CQ WW CW contest is no more than 227 days away! This year’s contest promises to be an epic event as solar conditions approach their peak. Until then, keep working on those antennas and stations. They’re going to be put to work in November!

73, John, K1AR

**WORLD SINGLE OPERATOR  
HIGH POWER All Band**

	<b>28 MHz</b>	<b>21 MHz</b>	<b>14 MHz</b>				
ZF1A (N6MJ) .....	20,188,620	CW5W (N5ZO) .....	2,230,970	KH7M (N6TJ) .....	915,090	VA1MM .....	1,614,255
TI7W (KL9A) .....	15,681,170	PX2W (PY2YU) .....	1,639,291	JA5DQH .....	740,072	OH8X (OH6UM) .....	1,021,372
CR6K (CT1ILT) .....	14,345,736	KP2B (WP3A) .....	1,146,830	XR1EW (XQ1KZ) .....	730,800	8P9A (GU4YOX) .....	895,083
V47T (N2NT) .....	13,883,553	OA4EA (EA7TN) .....	1,048,477	OK6W (OK1MU) .....	659,880	DM0A (DK3DM) .....	817,028
8P5A (W2SC) .....	13,348,944	K1TO .....	884,642	WP4WW (KP4JRS) .....	626,535	JJ0VNR .....	608,652
EA8RM .....	13,268,998	EF8BBM (EA4BQ) .....	882,880	SN5X (SP5GRM) .....	583,968	N8OO .....	567,892
N5DX (@N2QV) .....	11,479,530	4L8A .....	811,855	W6YA .....	577,456	OM5R (OM5WW) .....	564,045
VY2TT (K6LA) .....	9,258,540	9N7AA (S53R) .....	787,339	W7WA .....	566,865	YT7B .....	455,007
EF6T (EA3M) .....	9,257,261	7Q6M (K6ZO) .....	721,990	S50R .....	553,152	JA7FTR .....	413,618
P3D (VE3DZ) .....	8,355,141	JS6TSE .....	714,381	F6ARC .....	550,853	JR2SCJ .....	402,116

**7 MHz**

KP4AA .....	856,660
OM2XW .....	647,168
YT7A (YU7GM) .....	624,666
IB8A (IZ8JFL) .....	541,688
VK6T (VK6LW) .....	537,788
5Z4VJ .....	500,464
K9OM .....	338,892
IR2R (IZ2EWR) .....	324,951
HA2KMR .....	310,250
WF2W .....	278,256

**3.5 MHz**

4L0G (LY4ZZ) .....	464,812
IR0A (IS0JHQ/OK8WW) .....	316,020
UT5EL .....	202,188
W3BGN .....	187,936
OE6V (OE6JXA) .....	150,494
SP5ELA .....	128,040
EA4KD .....	111,274
HA4A (HA4FF) .....	110,700
SM6CPY .....	83,061
EA4IE .....	78,806

**1.8 MHz**

4L5O .....	232,716
K5RX .....	168,674
LX1NO .....	134,112
S53O .....	99,235
VE3ZI .....	49,335
VE3PN .....	24,700
SP6AEG .....	19,588
N4XD .....	16,380
OE3SGU .....	13,393
K5UR .....	12,760

**LOW POWER  
All Band**

PZ5CO (RA3CO @PZ5RA) .....	14,328,600
V26K (AA3B) .....	13,884,801
3V8SS (KF5EYY) .....	7,006,485
4X7M (4Z4AK) .....	6,218,274
EA2W .....	5,763,060
IY3A (IZ3EYZ) .....	5,050,032
ZL7IO (ZL3IO) .....	4,520,310
4L9M .....	4,293,792
N1UR .....	4,055,296
LY4L .....	2,973,203

**28 MHz**

NP3A .....	990,360
PR2E (PY2WH) .....	686,622
VR2T (VR2ZQZ) .....	452,210
LU4HK .....	324,710
WB4TDH .....	303,996
W0UO .....	303,242
GW4J (GW0ETF) .....	297,434
JA6WFM .....	294,872
DL4AAE .....	268,348
JH6WHN .....	259,482

**21 MHz**

LW1F (LU5FC) .....	569,468
EF3W (EA3CX) .....	562,400
FR8UA .....	556,542
S50A .....	531,960
J35X .....	485,504
YT9W .....	339,855
JR3EOI .....	319,858
7K4XNN .....	211,008
LY5I .....	187,270
JA1GQC .....	138,840

**14 MHz**

DL9ZP .....	176,343
I1XSG .....	111,864
GJ2A (MJ0ASP) .....	108,946
NP4L .....	96,702
S52GO .....	88,140
CO8RH .....	84,780
IK4MTF .....	78,982
OM0MW .....	71,173
M2U (M0DHP) .....	63,712
JH0EPI .....	59,660

**7 MHz**

4L2M .....	341,373
YU7WW .....	309,639
YU1RA .....	248,311
CO2JD .....	216,019
E7AA (E70Y) .....	213,858
OM3ZWA .....	158,508
OK2HBR .....	109,242
IV3EAD .....	103,428
OH9SE (OH9HDH) .....	101,834
YO5ODT .....	88,712

**3.5 MHz**

OM5NL .....	118,296
OL5J .....	113,119
DL6KWN .....	96,051
CS2C (OK1RF) .....	82,871
Z33F .....	60,368
OK1AGE .....	46,718
RO5X .....	42,350
S57X .....	40,515
HB9CPS .....	34,892
LY7X (LY3DA) .....	34,650

**1.8 MHz**

SM6CNN .....	29,510
YO8DHA .....	29,450
OK1MNV .....	28,980
OE6JTD .....	13,568
LC9X (LA9XGA) .....	13,250
SP2HMT .....	8,477
S59DR .....	4,864
UT4WT .....	4,641
I3PXN .....	4,408
I1MMN .....	2,880

**QRP  
All Band**

KR2Q .....	1,757,640
LY9A .....	1,112,342
W1FJ .....	572,480
JH1OGC .....	545,703
HA1BC (DL1MAJ) .....	540,540
W6JTI .....	530,848
HG6C (HA6IAM) .....	518,093
K8MR .....	485,072
JR4DAH .....	472,610
N3CZ .....	386,739

**28 MHz**

BV3FG .....	110,192
W5GAI .....	88,500
LY5G .....	79,326
4F3OM .....	62,846
US5VX .....	61,992
KV8Q .....	50,130
OK1LV .....	46,545
CO6EC .....	43,840
4L5P .....	36,515
EA8AQM .....	34,237

**21 MHz**

JQ1NGT	81,189
HA3JB	75,388
LZ2RS	70,900
NA1ME	67,362
DL2TM	47,610
JR1NKN	47,124
EA1BP	45,375
JR2EKD	37,730
HF5WIM	29,360
UT5EOX	27,470

**14 MHz**

YU1RK	66,708
SP1C	63,963
DL3NAA	58,240
UN7EG	25,140
EA3QC	19,152
OK1DSA	15,921
SP2HMY	15,680
IU1HCC	11,773
EA3BES	11,183
YO4BEX	9,747

**7 MHz**

OK6OK	55,800
SP5CTY	34,710
UT7AA	32,604
F5MOG	31,200
N5ER	29,260
M3F	15,060
M0IDL	15,036
OK6N (OK2PTS)	11,100
VE3CW	10,720
ON4ANE	8,946

**3.5 MHz**

E77Y	71,586
SP8OOE	19,703
YO4BEW	19,581
EA2AFV	9,984
UT5UUV	8,640
YO8RIX	5,781
HB9FSV	4,477
DL6NBC	3,162
OK6D (OK2TEO)	1,026
JH1APZ	810

**1.8 MHz**

S51Z	9,065
LY4T	7,220
OZ6OM	4,074
HA1TI	3,395
SP8D	1,830

**14 MHz**

YT3X	973,440
9A5Y (9A7DX)	920,368
HA8A (HA8DZ)	884,439
HG0Y (HA7GN)	857,172
SQ2A (SQ9UM)	853,332
K8CX	690,432
OH8L (OH8LQ)	689,751
HG5E (HA1AH)	666,750
UK9AA	623,267
SP4TKR	613,409

**LOW POWER  
All Band**

K11G	4,877,414
UN4Q	4,872,202
UW5Y (US2YW)	4,548,128
AB2E/VP9 (AB2E)	4,283,316
EA5M	4,082,210
SN7O (SP7IVO)	3,883,319
A71WW	3,821,397
LZ8E (LZ2BE)	3,744,612
DJ5MO	3,717,000
DK3WW	3,486,102

**SINGLE OPERATOR ASSISTED  
HIGH POWER All Band**

P3AA (R2AA)	14,642,920
TO7A (UT5UGR)	13,866,930
K5ZD	12,211,100
ED8M (EA8DIG)	11,992,734
P44W (W2GD)	11,680,160
NP4Z	10,282,446
ZF5T (ZF9CW)	10,053,890
K1ZZ	9,951,253
ER1KAA (UT5UDX)	8,856,576
N2IC	8,378,024

**7 MHz**

9A5DX	923,468
YT1A	753,280
4Z5LA	752,812
KA11S	748,960
MW5B (G3WVG)	521,520
S53X	493,317
G8X (G4FJK)	478,009
OE5TXF (G3TXF)	450,576
HA7A	377,784
K7NJ	356,001

**28 MHz**

TO1A (F5HRY)	1,240,758
PY2UD (PY1NX)	1,149,050
PY2EX	851,304
AH6KO	605,696
HA5PP	502,740
EA1R	466,343
EA7W	446,160
LY7Z	438,429
N4AO (WC4E)	427,197
PY2RSA	426,496

**28 MHz**

LU8DPM (LW8DQ)	1,424,436
PW2E (PY2ZEA)	1,282,420
4X1MM	1,003,914
HA5JI	927,654
XE2X	888,930
KV2K (K2NG)	826,794
9A5D (9A5DU)	815,325
F5MUX	814,271
VR2XAN	774,380
LX7I (DK9IP)	745,714

**3.5 MHz**

HA1TJ	367,026
PA1CC	363,285
SP2PIK (SP2MKI)	353,067
YL9W (YL3DW)	344,421
R8TT	340,487
M4T (M0BEW)	336,480
DJ0MDR	267,589
OL7D (OK1DG)	227,540
S54A	210,808
DL4UNY	197,000

**21 MHz**

FG/OK6RA (OK6RA)	1,241,520
HK3TU	666,406
TA3D	474,120
HA6FQ	360,882
ED7O	359,936
ON6NL	358,680
K4OAQ	354,508
K3ZU	340,956
HA8RD	294,196
WA1FCN	280,000

**21 MHz**

FY5KE (F6FVY)	2,313,096
PT5J (W6NV)	1,628,883
OM8CW	967,155
SN3A (SQ2GXO)	942,354
SN2M (SP2XF)	941,692
S50K	866,760
YT9A	826,446
UP0L (UN9LW)	812,160
S57Z	787,119
OG6N (OH6NIO)	777,018

**1.8 MHz**

LY0UKR (LY7M)	111,996
YL3FT	102,723
9A2KD	99,372
OT1A (ON4CCP)	71,995
8S0DX (SM0DSG)	66,830
DL6MHW	65,511
SP9JZU	61,908
OK1CF	60,588
HA8BE	58,158
SP3HLM	52,338

**14 MHz**

ZS6WN	370,560
OL3R (OK1VWK)	330,880
YU5M	321,200
S52OT	290,160
HG9X (HA9AX)	286,085
SP1R	221,270
N4IJ	202,038
SN6S (SP6ZC)	198,582
PY4XX	186,165
EW1TZ	173,734



**7 MHz**

HA7I (HA7JTR) .....	437,875
IZ5ICH .....	252,813
HA6NL .....	251,958
Z32TO .....	229,886
YT2B .....	199,512
YU1LA .....	178,029
DF4ZL .....	158,596
SV1BJW .....	150,288
OM5ALL .....	146,400
UT9FJ .....	142,140

**3.5 MHz**

YO5AVN .....	142,738
OE8TED .....	140,450
M3A (M0UKR) .....	129,471
DF1MM .....	124,280
9A2X .....	123,265
4Z4KX .....	105,412
OK1AY .....	101,952
G6A (G3VDB) .....	90,540
OM5KM .....	85,595
YU1ED .....	60,075

**1.8 MHz**

SN0R (SQ9IAU) .....	53,947
S57AW .....	47,730
HA8BT .....	26,656
IT9ZZO .....	25,012
SP7AS .....	15,950
RA3RA .....	12,936
SV2DSJ .....	6,912
UA3YCX .....	3,230
OL6B (OK6AB) .....	3,220
R4DI .....	1,102

**QRP  
All Band**

DM2M (DK3WE) .....	2,512,301
OM0RX .....	1,763,190
TM7Y (F8BDQ) .....	1,217,152
DL1EFW .....	1,055,085
MW9W (GW0KRL) .....	1,046,960
F5NZY .....	988,000
ES2MC .....	981,783
EA2ESB .....	511,638
HA5BA .....	488,565
YU1LM (YU1LM/QRP) .....	481,152

**28 MHz**

LT7D (LU7DZ) .....	146,960
K3TW .....	107,874
3G3EW (XQ3WD) .....	96,831
JA6VZB .....	79,968
JK7DWD .....	65,511
UX9Q (UR9QQ) .....	52,400
M3E (G4CWH) .....	35,616
SP5PDA .....	33,820
EA4HWT .....	28,413
W3EK .....	21,600

**21 MHz**

HG1S (HA1DAE) .....	283,840
LY2OU .....	109,671
N6MZ .....	96,656
UA4FCO .....	94,829
HG3C (HA3HX) .....	74,366
SP2QOT .....	68,591
4Z4UO .....	35,624
OH1Z (OH1LEG) .....	35,056
JR1LLD .....	13,593
NK5G .....	12,864

**14 MHz**

FY5FY .....	891,112
LY1FW .....	159,711
RT4W .....	53,128
DL1FY .....	46,041
LY4BF .....	34,686
RT1L .....	29,440
DL1DXA .....	27,632
LZ1AQ .....	23,177
YO3BL .....	20,619
LC2W (LB6RH) .....	16,146

**7 MHz**

HA4FY .....	64,768
DK1VD .....	63,630
EA3QP .....	47,310
IO5K (IK5TBK) .....	37,884
DJ2RG .....	36,498
J42T (OK1CDJ) .....	35,364
OK1FKD .....	34,496
EA2BO .....	33,000
IW3ILM .....	31,990
YU9YAU .....	29,039

**3.5 MHz**

OL4W (OK1IF) .....	83,268
YU1LD .....	36,876
UT4UBZ .....	14,820
DL5SFC .....	6,270
SQ9MR .....	5,508
UW1U (UT7UA) .....	4,716
SP3MKS .....	4,300
VA3OGG .....	128
JH3DMQ .....	72

**1.8 MHz**

OL1A (OK1CW) .....	35,210
YO8WW .....	6,624
YT1BD .....	2,448
UR5FEO .....	638

**MULTI-OP MULTI-TRANSMITTER  
All Band**

D4C .....	56,253,582
CN3A .....	46,014,627
CR3W .....	39,785,112
PJ2T .....	31,680,384
KC1XX .....	28,179,257
K1LZ .....	27,545,760
K3LR .....	27,204,912
9A1A .....	25,591,630
M6T .....	23,945,842
4W8X .....	23,117,280

**MULTI-OP SINGLE-TRANSMITTER  
HIGH POWER All Band**

P33W .....	23,425,100
UP2L .....	18,660,543
PJ4A .....	16,233,714
EW5A .....	14,011,868
9A7A .....	13,870,000
IR4X .....	13,316,674
9A1P .....	13,290,264
RL3A .....	12,810,375
RU1A .....	12,733,560
W2FU .....	12,563,060

**EXPLORER SINGLE-OP  
HIGH POWER All Band**

RU0LL .....	1,843,379
S53K .....	1,502,064
II1P .....	361,071
OT4A .....	347,693
9A1DR .....	347,190
PT1K .....	248,692
WX8S .....	156,600
E79D .....	58,408
OK2IT .....	2,640
VE3VC .....	2,412

**LOW POWER  
All Band**

P40L .....	16,676,240
TM6M .....	11,628,024
IR6T .....	7,863,615
SX9V .....	7,850,268
IB9T .....	7,488,450
DP7D .....	6,620,688
IO3F .....	6,052,200
IB9R .....	5,999,260
E7CW .....	5,935,201
B0A .....	5,095,779

**EXPLORER MULTI-OP  
HIGH POWER All Band**

RM9A .....	23,195,385
OT7T .....	15,067,264
EA4URE .....	7,166,432
9H6A .....	5,627,160
YR0K .....	2,214,630
K8R .....	2,004,926
YU1ANO .....	64,680
9M2S .....	4,522
7E3E .....	600

**MULTI-OP TWO-TRANSMITTER  
All Band**

CR3A .....	41,709,024
PJ4K .....	33,575,256
W3LPL .....	21,730,149
OM7M .....	18,227,808
PX2A .....	17,616,530
HQ9X .....	16,526,206
ED1R .....	16,119,943
VA2WA .....	15,661,737
RT4F .....	15,010,490
OL3Z .....	14,538,649

**ROOKIE  
HIGH POWER**

YT3EWW	1,720,740
W9DCT	984,400
KC3SVR	434,484
N3AML	212,436
EF5T (EA5JDN)	106,530
IU0PVM	54,560
YF3AQV	124
9V1PL	110

**YOUTH  
HIGH POWER**

RA9P	6,375,600
9A/N4XTT (N4XTT)	349,029
DM7XX	217,620
ZPOX (W3MLJ)	40,368
YT0C	16,530
9A/TA7AZC (TA7AZC)	10,710
IU1GHC	6,208
9A/KF0GVX	340
JQ7AXT	24

**21 MHz**

W6YA	577,456
W7WA	566,865
N4OX	512,616
N5JJ	170,746
KK0U	98,381
NX4N	18,620
NU5DE (N5KF)	12,474
N6IC	969

**1.8 MHz**

K5RX	168,674
N4XD	16,380
K5UR	12,760
W6RKC	11,032
W8KA	9,664

**LOW POWER**

D90M (DS1TUW)	654,948
HA3GC	308,460
BI3BX	228,866
KY4GS	203,528
YL3NU	167,846
KO4TFK	139,239
AI4B	108,272
DD5VL	99,781
W7VC	89,658
DL8AI	64,436

**LOW POWER**

BD4VGZ	1,170,567
DL7PIA	462,672
VE3OMV	426,648
BH6MWC	372,500
S56V (S52KJ)	224,852
YO8OLY	211,302
EI8KW	182,520
WO5T	180,616
9A/W0AAE	171,840
NI9F	157,488

**14 MHz**

N8OO	567,892
KW9A	239,268
K3GW	92,880
K0PK	18,144
K7PJT	16,698
N7TU	15,066
WA4EUL	11,520
N3ZZ	4,557

**ROOKIE  
HIGH POWER**

N1UR	4,055,296
WW4XX (LZ4AX)	2,967,922
NR3X	2,740,896
K1BX	2,735,280
K5WA	2,154,852
N4TB	1,732,458
K2PO	1,518,570
K3AJ	1,458,892
N7VM	1,253,109
WA7NB	1,231,412

**CLASSIC  
HIGH POWER**

KQ2M	4,235,968
K1DG	4,177,872
YT3D	3,255,549
N2MF	3,175,788
3B9KW (M0CFW)	3,164,498
KP2M (KT3Y)	2,992,564
9Z4A (N2TTA)	2,985,579
W4CB (W2RU)	2,884,501
9A9R	2,653,696
K2NV	2,632,104

**UNITED STATES SINGLE OPERATOR  
HIGH POWER All Band**

N5DX (@N2QV)	11,479,530
K5GN	7,468,022
K4ZW	6,676,454
NA8V	5,314,518
W9RE	5,131,208
K0EJ	5,076,181
N9RV	4,871,152
WX0B (AD5Q)	4,738,206
WC1M	4,289,988
K6XX	4,273,528

**7 MHz**

K9OM	338,892
WF2W	278,256
N0TT	145,824
N7RK	77,077
WO3Z	53,200
N3RW	1,484

**28 MHz**

WB4TDH	303,996
W0UO	303,242
WA7BNM	117,504
W6ZL	71,060
K8AJ5	67,620
N4NM	58,100
W2VRK	47,229
KM9R	45,235
N0UI	32,000
KD2P	26,623

**LOW POWER**

K1BX	2,735,280
K3AJ	1,458,892
PY2NY	1,378,944
9A1AA	1,324,830
TF/OU2I (OZ2I)	1,155,921
N1DC	1,131,870
N0AX	1,096,992
ZS4TX	999,259
ON4CT	959,576
K3JT	886,580

**28 MHz**

K1TO	884,642
KU2M	598,686
K8MFO	556,738
K1RM	505,393
K2PS	451,333
W1WEF	373,164
K6AR	277,264
K9BGL	267,168
N5YT	207,360
N6KN	201,488

**3.5 MHz**

W3BGN	187,936
W1HI	62,881
K4JPD	29,744
N3QQ	20

**21 MHz**

N4HA	80,028
K4AMC	65,100
WN0L	33,488
W0ETT	32,016
N9HDE	29,631
WA5ZKO	22,648
W5JMW	15,904
W6DVS	7,242
W9KHH	45
K3LO	12

**14 MHz**

W8GOC	42,750
AC9PG	5,945
WE9N	4,794
W3EH	3,570
AE5MM	2,016
KB4LA	1,575
N9EDL	64
W1NN	48
KC7CW	35

**28 MHz**

W5GAI	88,500
KV8Q	50,130
W5LA	27,798
W7USA	17,880
W0MB	16,669
N1AIA	16,320
WE6EZ	8,400
N0JK	627
NR7Z	448

**28 MHz**

KV2K (K2NG)	826,794
N6SS	535,608
W8AV	510,842
K3EST	443,080
A15IN	345,540
K4WI	311,696
AA7V	299,735
W6AX (K6AW)	257,040
K3EW	256,381
K7WP	250,488

**1.8 MHz**

W4AX (K5JR)	5,031
WN9O	4,000
K0KT	2,754
AD4TJ	540
N8NB	360
N9IO	220
K4ZRJ	6

**14 MHz**

N4IJ	202,038
K9RO	139,586
KA4RRU	111,410
NW4V	61,944
AA9D	44,690
W5/OE5OHO	17,630
K8TR	690
KD9OIN	30

**7 MHz**

WA3FAE	32,676
AA8BV	1,496
W2BEE	490

**21 MHz**

NA1ME	67,362
KF4AV	24,150
AB8FJ	300

**21 MHz**

W9SN	618,273
WW3S	532,614
N4ZR	464,772
N7DD	457,723
W7RN (K5RC)	399,000
K2LE	359,478
W9ILY	271,890
N9TK	259,718
WJ2D	257,580
K7GK	206,415

**LOW POWER  
All Band**

K11G	4,877,414
KS1J	3,056,130
N1EN	2,116,226
NS3T	2,114,775
W3KB	2,078,838
K3QP	1,981,720
AD5A	1,958,730
WE9R	1,943,476
NM2A	1,722,042
K1GU	1,665,555

**7 MHz**

AA8R	96,875
NS4T	81,510
K1IM	75,649
K4FN	51,914
KG1E	44,088
N1API	40,756
K11U	39,600
W4JM	34,689
W8IQ	5,040
K1IG	2,376

**3.5 MHz**

K4WY	22,294
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**7 MHz**

N5ER	29,260
NN1DX	5,106

**14 MHz**

K8CX	690,432
WU6P	369,342
WA2OAX	188,784
N4GU	129,076
K0DME	8,250
W3RMO	805

**7 MHz**

KA1IS	748,960
K7NJ	356,001
WX5S	342,414
WA3C	313,314
W9PA	163,020
NA3M	111,564
N4PSE	108,468
W3US	107,136
N6MA	92,290
W4PG	62,222

**28 MHz**

N4AO (WC4E)	427,197
KB3WD	411,060
W9XT	299,250
NT2A	179,080
K1IB	68,502
AB1J	38,038
KW7Q	36,432
K0XM	29,211
WV7S	23,460
N3RN	19,491

**3.5 MHz**

KO3T	2,210
NU4M	60
N2WPT	48

**1.8 MHz**

W7DRA	32
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**3.5 MHz**

KQ2RP	18
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**QRP  
All Band**

KR2Q	1,757,640
W1FJ	572,480
W6JTI	530,848
K8MR	485,072
N3CZ	386,739
KO1H	342,240
W6QU (W8QZA)	253,470
N7RCS	180,815
N9SE	123,000
NQ2W	118,272

**SINGLE OPERATOR ASSISTED HIGH  
POWER All Band**

K5ZD	12,211,100
K1ZZ	9,951,253
N2IC	8,378,024
W8FJ	7,844,064
NN7CW	7,797,770
N3RS	7,527,234
W1KM	7,156,160
K1AR	7,102,578
AB3CX	6,686,153
K3WW	6,640,956

**3.5 MHz**

N6RO	141,120
W3NO	127,987
K2AV	33,291
W4VIC	17,225
W1EG	17,040
W2VQ	16,470
N5JB	8,778
NI0K	3,914
KK7L	377

**21 MHz**

K4OAQ	354,508
K3ZU	340,956
WA1FCN	280,000
NN2NN	106,296
KR2H	93,500
W2UP	87,246
WA8ZNC	70,587
W5TMT	60,260
K3ORC	37,048
N5FL (K5JR)	12,060

**QRP  
All Band**

K6JS	446,600
WQ6X	260,820
AC2YD	181,188
W2/DL8CX	125,487
N5UE	119,504
K8ZT	82,368
W7RY	74,520
WO7T	66,768
K2AL	34,846
KR4AE	21,008

**7 MHz**

KM4CH	7,544
K6GHA	3,936

**MULTI-OP  
MULTI-TRANSMITTER All Band**

KC1XX	28,179,257
K1LZ	27,545,760
K3LR	27,204,912
NR4M	19,757,700
K1TTT	17,824,265
K9RS	12,011,760
K0RF	10,888,608
NE3F	3,744,664
K1KP	3,163,112
K1ESE	3,087,336

**LOW POWER**

K1BX	2,735,280
K3AJ	1,458,892
N1DC	1,131,870
N0AX	1,096,992
K3JT	886,580
N2EM	732,996
K1MD	637,972
W1FJ	572,480
N5XE	571,095
N8II	534,674

**21 MHz**

OK6W (OK1MU)	659,880
SN5X (SP5GRM)	583,968
S5OR	553,152
F6ARC	550,853
OK5D (OK1DTP)	527,670
SP5EXA	232,800
YL2BJ	176,336
DL1DTL	159,252
OK1AMF	123,000
SN2N (SP2FVN)	92,842

**28 MHz**

K3TW	107,874
W3EK	21,600
AD4IE	288

**MULTI-OP SINGLE-TRANSMITTER  
HIGH POWER All Band**

W2FU	12,563,060
N4RV	8,844,024
ND7K	8,651,775
NJ4P	6,591,300
AA7A	6,534,814
W9VW	5,690,229
K8AZ	5,587,463
AA9A	5,011,172
K5KG	4,910,475
KQ3F	4,406,864

**ROOKIE  
HIGH POWER**

W9DCT	984,400
KC3SVR	434,484
N3AML	212,436

**YOUTH  
LOW POWER**

WO5T	180,616
NI9F	157,488
KA4JAM	41,944
NC8R	18,404
KE8LQR	10,725
KE8RJU	10,140
KF0GVX	2,107

**14 MHz**

OH8X (OH6UM)	1,021,372
DM0A (DK3DM)	817,028
OM5R (OM5WW)	564,045
YT7B	455,007
SV1ME	161,785
YT2ISM	128,544
DL9LM	90,828
YO3JJ	79,206
UZ0U (UY5ZZ)	70,246
RC2O	66,560

**21 MHz**

N6MZ	96,656
NK5G	12,864

**LOW POWER  
All Band**

NT0K	3,559,869
W3ZGD	2,161,797
WW4LL	1,847,596
W1FM	1,330,938
K1RQ	846,075
KT3T	782,000
W4TG	618,540
K0UK	75,650
W8EDU	14,499

**LOW POWER**

KY4GS	203,528
KO4TFK	139,239
AI4B	108,272
W7VC	89,658
W4YDL	41,540
KN6VVQ	38,556
KI5PED	16,200
N9ATF	14,664
KI5PGL	7,488
W0ABE	4,984

**EUROPE SINGLE OPERATOR  
HIGH POWER All Band**

CR6K (CT1ILT)	14,345,736
EF6T (EA3M)	9,257,261
ES7A (ES7GM)	8,098,917
DJ5MW	8,026,770
ED7W (EB7A)	7,625,044
IR2Q (IK2PFL)	6,956,110
MD4K (G3NKC)	5,425,002
EF1A (EA1X)	4,758,486
OZ1AA	4,011,275
UB7K	4,007,850

**7 MHz**

OM2XW	647,168
YT7A (YU7GM)	624,666
IB8A (IZ8JFL)	541,688
IR2R (IZ2EWR)	324,951
HA2KMR	310,250
R4SA	214,472
SM6EAN	156,515
Z35F	141,246
OE8TIR	112,665
UT5NC	93,704

**14 MHz**

K9AXT	8,600
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**MULTI-OP****TWO-TRANSMITTER All Band**

W3LPL	21,730,149
K9CT	14,277,756
N4WW	11,426,220
N2AA	11,141,760
K8LX	7,750,336
K2AX	6,885,884
N7DX	6,837,136
N4IQ	6,261,192
W7RM	5,135,156
W2AA	5,113,360

**CLASSIC  
HIGH POWER**

KQ2M	4,235,968
K1DG	4,177,872
N2MF	3,175,788
W4CB (W2RU)	2,884,501
K2NV	2,632,104
N4AF	2,338,044
N5AW	2,259,400
K9MA	2,248,289
K1IR	1,754,298
W2XL	1,738,062

**28 MHz**

G9W (M0DXR)	584,040
PA4VHF	391,552
HA8DU	391,461
OH7K (OH7MA)	361,257
RA3XM	340,340
TM5T (F5VKT)	295,826
LZ4TX	294,078
YT1T	254,592
YO2LEA	230,715
DL4LBK	208,077

**3.5 MHz**

IR0A (IS0JHQ/OK8WW)	316,020
UT5EL	202,188
OE6V (OE6JXA)	150,494
SP5ELA	128,040
EA4KD	111,274
HA4A (HA4FF)	110,700
SM6CPY	83,061
EA4IE	78,806
UR7UD	77,868
OM0AS	70,274



**1.8 MHz**

LX1NO	134,112
S53O	99,235
SP6AEG	19,588
OE3SGU	13,393
9A/TA7AZC (TA7AZC)	10,710
R5WW	10,653
UT3QU	3,818
SP6ECA	2,812
G3VVI	1,316

**14 MHz**

DL9ZP	176,343
I1XSG	111,864
GJ2A (MJ0ASP)	108,946
S52GO	88,140
IK4MTF	78,982
OM0MW	71,173
M2U (M0DHP)	63,712
SP5ENG	51,058
YO4CSL	42,159
LZ2PS	42,000

**QRP  
All Band**

LY9A	1,112,342
HA1BC (DL1MAJ)	540,540
HG6C (HA6IAM)	518,093
DL1JDQ	328,485
SE0I (SM0HPL)	308,880
HA3GC	308,460
OL3M (OK1TGI)	262,080
G3YMC	239,766
GM4M (GM4UBJ)	220,500
OK2HIJ	218,304

**7 MHz**

OK6OK	55,800
SP5CTY	34,710
UT7AA	32,604
F5MOG	31,200
M3F	15,060
M0IDL	15,036
OK6N (OK2PTS)	11,100
ON4ANE	8,946
IZ5OVP	4,429
DK1DSA	2,304

**LOW POWER  
All Band**

EA2W	5,763,060
IY3A (IZ3EYZ)	5,050,032
LY4L	2,973,203
OR2F	2,742,480
OL5Y	2,716,250
DL3JAN	2,631,888
HG3N (HA3LN)	2,550,953
ED3Z (EA3DZ)	2,125,566
HA7UI	2,097,395
EA3FZT	1,620,000

**7 MHz**

YU7WW	309,639
YU1RA	248,311
E7AA (E70Y)	213,858
OM3ZWA	158,508
OK2HBR	109,242
IV3EAD	103,428
OH9SE (OH9HDH)	101,834
YO5ODT	88,712
YO8/LZ4UU	83,160
HA9RP	78,080

**28 MHz**

LY5G	79,326
US5VX	61,992
OK1LV	46,545
EI8FH	32,128
G3L (G3LHJ)	30,636
YO3DAC	30,162
9A2EY	29,492
GW4W (GW4EVX)	28,380
IZ2JPN	22,528
OK2MPB	18,734

**3.5 MHz**

E77Y	71,586
SP8OOE	19,703
YO4BEW	19,581
EA2AFV	9,984
UT5UUV	8,640
YO8RIX	5,781
HB9FSV	4,477
DL6NBC	3,162
OK6D (OK2TEO)	1,026
SP4ADZ	168

**28 MHz**

GW4J (GW0ETF)	297,434
DL4AAE	268,348
LZ2PEP	154,536
UF5A	131,180
SP3LWP	130,410
OH5BM	129,920
DL9GK	117,327
MU0FAL	108,847
MM7N (G3RWF)	103,356
SP2ERZ	99,840

**3.5 MHz**

OM5NL	118,296
OL5J	113,119
DL6KWN	96,051
CS2C (OK1RF)	82,871
Z33F	60,368
OK1AGE	46,718
RO5X	42,350
S57X	40,515
HB9CPS	34,892
LY7X (LY3DA)	34,650

**21 MHz**

HA3JB	75,388
LZ2RS	70,900
DL2TM	47,610
EA1BP	45,375
HF5WIM	29,360
UT5EOX	27,470
SP4NKJ	17,174
SP2FMN	17,020
DF3SM	16,632
SQ2RH	10,080

**1.8 MHz**

S51Z	9,065
LY4T	7,220
OZ6OM	4,074
HA1TI	3,395
SP8D	1,830

**21 MHz**

EF3W (EA3CX)	562,400
S50A	531,960
YT9W	339,855
LY5I	187,270
OH3NU	89,400
DL0RD (DL3CQ)	80,080
DM3CW	68,688
II2M	63,121
RW3X	54,008
YO2IS	52,052

**1.8 MHz**

SM6CNN	29,510
YO8DHA	29,450
OK1MNW	28,980
OE6JD	13,568
LC9X (LA9XGA)	13,250
SP2HMT	8,477
S59DR	4,864
UT4WT	4,641
I3PXN	4,408
I1MMN	2,880

**14 MHz**

YU1RK	66,708
SP1C	63,963
DL3NAA	58,240
EA3QC	19,152
OK1DSA	15,921
SP2HMY	15,680
IU1HCC	11,773
EA3BES	11,183
YO4BEX	9,747
LY2LF	6,916

**SINGLE OPERATOR ASSISTED  
HIGH POWER All Band**

ER1KAA (UT5UDX)	8,856,576
S57K	7,512,750
SN7Q (SP7GIQ)	7,366,250
HG8R (HA8JV)	7,182,360
YU5R (YT2AAA)	7,067,148
UW1M	6,616,666
OK1GK	6,056,028
YL7X (YL2LY)	5,859,396
OH0V (OH6LI)	5,777,460
RG6G	5,653,032

**28 MHz**

HA5JI	927,654
9A5D (9A5DU)	815,325
F5MUX	814,271
LX7I (DK9IP)	745,714
YT1X	703,824
OL9Z (OK2PVF)	655,254
OM0M (OM3CGN)	646,032
HA8FK	616,964
S50G (S56M)	616,113
I18K (IZ8EPX)	601,568

**21 MHz**

OM8CW	967,155
SN3A (SQ2GXO)	942,354
SN2M (SP2XF)	941,692
S50K	866,760
YT9A	826,446
S57Z	787,119
OG6N (OH6NIO)	777,018
OQ5M (ON5ZO)	756,812
OG9X	718,518
Z35T	708,617

**14 MHz**

YT3X	973,440
9A5Y (9A7DX)	920,368
HA8A (HA8DZ)	884,439
HG0Y (HA7GN)	857,172
SQ2A (SQ9UM)	853,332
OH8L (OH8LQ)	689,751
HG5E (HA1AH)	666,750
SP4TKR	613,409
YR9F (YO9FNP)	543,585
S52W	533,732

**7 MHz**

9A5DX	923,468
YT1A	753,280
MW5B (G3WVG)	521,520
S53X	493,317
G8X (G4FJK)	478,009
OE5TXF (G3TXF)	450,576
HA7A	377,784
SP4JCQ	322,014
RN3BL	287,664
SP3GTS	278,225

**3.5 MHz**

HA1TJ	367,026
PA1CC	363,285
SP2PIK (SP2MKI)	353,067
YL9W (YL3DW)	344,421
M4T (M0BEW)	336,480
DJ0MDR	267,589
OL7D (OK1DG)	227,540
S54A	210,808
DL4UNY	197,000
SP9LAS	195,924

**1.8 MHz**

LY0UKR (LY7M)	111,996
YL3FT	102,723
9A2KD	99,372
OT1A (ON4CCP)	71,995
8S0DX (SM0DSG)	66,830
DL6MHW	65,511
SP9JZU	61,908
OK1CF	60,588
HA8BE	58,158
SP3HLM	52,338

**LOW POWER  
All Band**

UW5Y (US2YW)	4,548,128
EA5M	4,082,210
SN7O (SP7IVO)	3,883,319
LZ8E (LZ2BE)	3,744,612
DJ5MO	3,717,000
DK3WW	3,486,102
M6W (G3WW)	3,268,904
DL2NBU	3,185,247
S53V	3,149,940
SP9XCN	3,144,150

**28 MHz**

HA5PP	502,740
EA1R	466,343
EA7W	446,160
LY7Z	438,429
EA3NO	378,432
EE3O (EA3O)	335,340
M5W	320,850
9A30T (9A5MR)	317,133
S51B	315,534
IT9LXX	299,621

**21 MHz**

HA6FQ	360,882
ED7O	359,936
ON6NL	358,680
HA8RD	294,196
EU1DX	260,750
RD4A	218,232
YU2A	215,307
G8P (G4CLA)	207,350
UT1AA	205,777
EA3IN	176,222

**14 MHz**

OL3R (OK1VWK)	330,880
YU5M	321,200
S52OT	290,160
HG9X (HA9AX)	286,085
SP1R	221,270
SN6S (SP6ZC)	198,582
EW1TZ	173,734
OM3TZZ	170,982
SP2EWQ	167,085
UR2Y (US0YW)	154,904

**7 MHz**

HA7I (HA7JTR)	437,875
IZ5ICH	252,813
HA6NL	251,958
Z32TO	229,886
YT2B	199,512
YU1LA	178,029
DF4ZL	158,596
SV1BJW	150,288
OM5ALL	146,400
UT9FJ	142,140

**3.5 MHz**

YO5AVN	142,738
OE8TED	140,450
M3A (MOUKR)	129,471
DF1MM	124,280
9A2X	123,265
OK1AY	101,952
G6A (G3VDB)	90,540
OM5KM	85,595
YU1ED	60,075
EU1AI	56,781

**1.8 MHz**

SN0R (SQ9IAU)	53,947
S57AW	47,730
HA8BT	26,656
IT9ZZO	25,012
SP7AS	15,950
RA3RA	12,936
SV2DSJ	6,912
UA3YCX	3,230
OL6B (OK6AB)	3,220
R4DI	1,102

**QRP  
All Band**

DM2M (DK3WE)	2,512,301
OM0RX	1,763,190
TM7Y (F8BDQ)	1,217,152
DL1EFW	1,055,085
MW9W (GW0KRL)	1,046,960
F5NZY	988,000
ES2MC	981,783
EA2ESB	511,638
HA5BA	488,565
YU1LM (YU1LM/QRP)	481,152

**28 MHz**

UX9Q (UR9QQ)	52,400
M3E (G4CWH)	35,616
SP5PDA	33,820
EA4HWT	28,413
GW9J (GW0GEI)	16,280
OQ4B (ON4BHQ)	15,635
YO8SAO	9,494
DL3NCR	4,223
UT0EM	3,700
SP5FKW	3,120

**21 MHz**

HG1S (HA1DAE)	283,840
LY2OU	109,671
UA4FCO	94,829
HG3C (HA3HX)	74,366
SP2QOT	68,591
OH1Z (OH1LEG)	35,056
9A5MP	2,318
EC2AFJ	1,830

**14 MHz**

LY1FW	159,711
RT4W	53,128
DL1FY	46,041
LY4BF	34,686
RT1L	29,440
DL1DXA	27,632
LZ1AQ	23,177
YO3BL	20,619
LC2W (LB6RH)	16,146
YU1NR	14,190

**MULTI-OP SINGLE-TRANSMITTER  
HIGH POWER All Band**

EW5A	14,011,868
9A7A	13,870,000
IR4X	13,316,674
9A1P	13,290,264
RL3A	12,810,375
RU1A	12,733,560
IR4M	12,416,550
HG6N	11,777,238
YR8D	11,211,427
EA5RS	11,098,428

**ROOKIE  
HIGH POWER**

YT3EWW	1,720,740
EF5T (EA5JDN)	106,530
IU0PVM	54,560

**YOUTH  
HIGH POWER**

9A/N4XTT (N4XTT)	349,029
DM7XX	217,620
YT0C	16,530
9A/TA7AZC (TA7AZC)	10,710
IU1GHC	6,208
9A/KF0GVX	340

**7 MHz**

HA4FY	64,768
DK1VD	63,630
EA3QP	47,310
IO5K (IK5TBK)	37,884
DJ2RG	36,498
J42T (OK1CDJ)	35,364
OK1FKD	34,496
EA2BO	33,000
IW3ILM	31,990
YU9YAU	29,039

**LOW POWER  
All Band**

TM6M	11,628,024
IR6T	7,863,615
SX9V	7,850,268
IB9T	7,488,450
DP7D	6,620,688
IO3F	6,052,200
IB9R	5,999,260
E7CW	5,935,201
YL4U	2,948,660
3Z1K	2,732,100

**LOW POWER**

HA3GC	308,460
YL3NU	167,846
DD5VL	99,781
DL8AI	64,436
DB3MI	47,740
SV1SXV	47,740
OM1HMI	43,498
OK3SN	42,828
IU2OQK	39,690
M7RDV	23,843

**LOW POWER**

DL7PIA	462,672
S56V (S52KJ)	224,852
YO8OLY	211,302
EI8KW	182,520
9A/W0AAE	171,840
E70AW	56,943
DK1YH	40,850
YO2NWW	38,544
R4WAW	12,480
E74CX	7,600

**3.5 MHz**

OL4W (OK1IF)	83,268
YU1LD	36,876
UT4UBZ	14,820
DL5SFC	6,270
SQ9MR	5,508
UW1U (UT7UA)	4,716
SP3MKS	4,300

**MULTI-OP TWO-TRANSMITTER  
All Band**

OM7M	18,227,808
ED1R	16,119,943
RT4F	15,010,490
OL3Z	14,538,649
TK4W	13,328,168
UA4M	13,309,376
OH5Z	13,089,760
HG7T	13,088,790
C37N	12,759,768
SK3W	12,354,982

**CLASSIC  
HIGH POWER**

YT3D	3,255,549
9A9R	2,653,696
UA2FZ	2,610,231
4U1A (YL2QN)	2,278,360
E71A	2,140,380
YL2VW	1,919,170
IK0YUT	1,793,880
DK5DQ	1,703,988
OH1VR	1,424,160
DJ2QV	1,410,332

**1.8 MHz**

OL1A (OK1CW)	35,210
YO8WW	6,624
YT1BD	2,448
UR5FEO	638

**MULTI-OP  
MULTI-TRANSMITTER All Band**

9A1A	25,591,630
M6T	23,945,842
YT5A	21,439,968
LZ9W	21,184,488
LN8W	17,793,849
DF0HQ	17,696,448
II2S	17,607,020
TM1A	11,667,366
DP9A	10,962,348
RO2E	4,473,007

**LOW POWER**

9A1AA	1,324,830
TF/OU2I (OZ2I)	1,155,921
ON4CT	959,576
SP1AEN	836,745
LN7TTT (LA5LJA)	688,576
IK1JJM	684,420
F5ICC	625,600
M0XUU	616,760
OL0A (OK1CZ)	564,460
RA7R	564,096

# TOP SCORES IN MOST ACTIVE ZONES

## Zone 3

K6XX .....4,273,528  
 K6NA .....3,029,949  
 WJ9B .....2,366,026  
 W7YAQ .....1,620,879  
 N6AA .....1,566,692  
 \*K2PO .....1,518,570  
 K6NR .....1,342,088  
 \*N7VM .....1,253,109  
 \*WA7NB .....1,231,412  
 VA7ST .....1,182,220

## Zone 4

XL3A (VE3AT) .....7,953,288  
 K5GN .....7,468,022  
 VE5MX .....5,675,670  
 NA8V .....5,314,518  
 W9RE .....5,131,208  
 K0EJ .....5,076,181  
 N9RV .....4,871,152  
 WX0B (AD5Q) .....4,738,206  
 K8GL .....3,117,912  
 W0EWD .....2,349,568

## Zone 5

N5DX (@N2QV) .....11,479,530  
 VY2TT (K6LA) .....9,258,540  
 K4ZW .....6,676,454  
 VE9AA .....4,688,384  
 WC1M .....4,289,988  
 KQ2M .....4,240,891  
 K1DG .....4,177,872  
 \*N1UR .....4,055,296  
 K2NV .....3,665,574  
 W4CB (W2RU) .....3,306,549

## Zone 14

CR6K (CT1ILT) .....14,345,736  
 EF6T (EA3M) .....9,257,261  
 DJ5MW .....8,026,770  
 ED7W (EB7A) .....7,625,044  
 \*EA2W .....5,763,060  
 MD4K (G3NKC) .....5,425,002  
 EF1A (EA1X) .....4,758,486  
 OZ1AA .....4,011,275  
 DL7FER .....3,875,183  
 G6XX (G4FAL) .....3,648,202

## Zone 15

ES7A (ES7GM) .....8,098,917  
 IR2Q (IK2PFL) .....6,956,110  
 \*IY3A (IZ3EYZ) .....5,050,032  
 OM7K (OM7RU) .....3,507,600  
 LY5R .....3,333,573  
 YT3D .....3,255,549  
 \*LY4L .....2,973,203  
 4U1A (YL2QN) .....2,810,784  
 \*OL5Y .....2,716,250  
 9A9R .....2,653,696

## Zone 16

UB7K .....4,007,850  
 EU4E .....3,302,984  
 RM2U (RU3UR) .....978,870  
 \*UT3UZ .....648,186  
 \*RA7R .....564,096  
 RA4PBE .....541,352  
 \*US7UK .....535,875  
 \*UA1CUR .....489,132  
 \*UV1IX .....484,188  
 \*R7KX .....481,492

## Zone 20

P3D (VE3DZ) .....8,355,141  
 \*4X7M (4Z4AK) .....6,218,274  
 C4W (5B4WN) .....4,548,724  
 LZ5R (LZ5DB) .....1,991,648  
 \*TC3AKSA (TA3X) .....901,832  
 \*LZ7M (LZ5VK) .....860,476  
 \*LZ1VKD .....480,055  
 \*LZ5I .....341,630  
 LZ4TX .....294,078  
 \*YO8BDW .....277,190

## Zone 25

JE6RPM (JH5GHM) .....4,980,213  
 JH4UYB .....4,431,863  
 DS4EOI .....2,279,880  
 JI0VWL .....2,202,100  
 \*JI1RXQ .....1,994,377  
 \*JA1BJI .....1,942,212  
 JR1IJV .....1,495,008  
 \*JJ2JQF/1 .....1,472,165  
 JA6BZI .....1,343,092  
 JH3CUL .....1,299,806

## WORLD SINGLE OPERATOR ALL BAND High Power

ZF1A	221/14/40	900/21/75	2255/33/104	2112/34/99	3150/35/116	3202/32/105
TI7W	214/12/31	1003/24/78	2203/34/104	1477/35/93	2424/33/102	2583/29/92
CR6K	456/13/53	1058/22/78	1889/30/99	1941/35/104	2496/36/114	2301/32/101
V47T	147/10/17	601/16/68	1776/34/97	1610/35/94	2674/34/104	2239/30/100
8P5A	179/13/33	646/21/71	1336/28/85	1580/33/87	2166/36/110	2563/34/105
EA8RM	90/8/35	654/20/64	1512/25/75	1525/29/86	2152/35/105	2259/31/100
N5DX	187/15/55	686/21/82	1512/32/102	1158/31/100	1332/30/100	1046/29/93
VY2TT	442/12/48	946/16/70	923/23/76	1372/31/81	1122/24/83	1621/25/91
EF6T	187/9/40	962/17/69	1695/28/85	1315/30/83	2268/33/93	1729/27/97
P3D	102/10/36	592/14/54	1119/23/71	1085/28/88	1089/29/83	1533/31/76

## Low Power

PZ5CO	12/5/12	354/15/60	985/28/91	1773/35/108	2147/35/117	2475/33/111
V26K	73/8/17	657/14/66	1551/27/92	1710/31/95	2385/32/104	2612/32/105
3V8SS	40/5/19	434/12/54	983/21/76	1064/23/77	1202/27/75	1210/26/86
4X7M	43/6/27	247/10/50	1101/23/70	765/25/76	1070/27/79	1248/29/80
EA2W	61/10/43	493/17/70	1087/25/89	761/28/84	1196/32/106	1076/31/99
IY3A	219/13/53	427/15/64	762/29/86	844/28/95	1330/31/101	422/28/81
ZL7IO	0/0/0	217/19/45	625/27/68	488/28/71	939/30/72	1299/25/60
4L9M	161/9/46	461/15/61	645/26/88	660/26/84	600/22/73	299/25/69
N1UR	36/8/21	259/13/63	465/26/91	436/28/90	582/30/95	750/25/94
LY4L	236/8/44	570/16/61	775/26/78	530/27/77	627/26/86	404/29/85

## QRP

KR2Q	6/4/4	61/12/32	323/22/87	196/27/77	346/25/86	368/24/85
LY9A	103/5/26	415/9/50	330/18/68	369/22/63	380/22/65	211/20/66
W1FJ	3/2/2	12/5/8	130/16/52	98/16/47	191/22/69	218/19/62
JH1OGC	2/1/2	54/17/18	120/23/33	80/18/29	227/28/62	226/25/47
HA1BC	30/4/20	198/7/47	148/11/48	138/18/57	169/18/57	159/22/55
W6JTI	4/2/2	22/8/7	113/23/35	136/24/50	183/25/65	167/25/47
HG6C	30/3/15	179/10/48	191/21/64	189/13/56	155/19/55	135/22/53
K8MR	0/0/0	3/2/2	98/13/40	102/13/47	189/20/59	239/19/69
JR4DAH	0/0/0	8/4/4	119/20/32	131/22/41	232/30/59	184/24/47
N3CZ	0/0/0	13/7/11	107/14/51	129/25/66	112/12/44	126/15/46

## WORLD SINGLE OPERATOR ASSISTED ALL BAND High Power

P3AA	147/13/48	803/22/87	1530/30/108	1179/32/118	1754/32/114	1682/32/124
TO7A	116/12/28	619/18/73	1493/30/104	1232/31/96	2749/35/118	2205/34/114
K5ZD	155/15/60	524/24/99	1138/31/120	1084/38/130	1093/37/133	1040/34/129
ED8M	248/11/44	560/17/70	1529/30/94	1273/32/105	1394/35/121	1084/29/101
P44W	85/10/22	436/17/79	869/32/112	923/36/114	1250/35/121	1963/36/126
NP4Z	106/13/39	639/19/78	1131/31/116	1281/36/110	1182/33/114	1590/34/116
ZF5T	139/12/25	744/25/95	656/33/112	782/35/113	1342/38/126	1785/34/122
K1ZZ	78/14/53	419/25/102	1076/35/127	794/38/136	724/37/137	921/33/126
ER1KAA	143/10/40	813/24/94	1265/32/113	1205/32/109	1401/35/118	1435/37/124
N2IC	33/11/21	212/26/76	828/34/122	507/35/116	1320/36/131	1053/33/123



## Low Power

KI1G	21/5/8	252/15/75	297/26/100	529/36/120	635/35/129	772/32/122
UN4Q	102/7/29	446/15/63	698/26/82	508/24/75	576/30/95	1054/26/91
UW5Y	110/10/46	500/17/78	755/31/102	677/31/96	901/32/97	642/34/102
AB2E/VP9	137/8/11	582/15/66	689/17/73	607/25/80	1167/26/95	424/20/80
EA5M	43/8/34	364/15/66	758/30/96	661/28/94	847/33/106	808/31/108
SN7O	357/12/60	744/16/75	563/28/97	399/30/104	466/32/117	384/30/118
A71WW	16/5/13	175/11/49	799/25/79	565/28/88	657/29/89	699/26/77
LZ8E	136/10/50	571/19/73	849/32/117	369/28/105	624/35/123	322/32/114
DJ5MO	93/12/55	399/20/79	368/31/106	406/32/108	492/36/117	408/35/119
DK3WW	157/10/52	356/24/93	448/33/116	351/37/119	470/38/130	404/35/135

## QRP

DM2M	187/12/52	396/16/74	255/28/90	311/27/100	420/33/104	334/32/79
OM0RX	72/6/30	258/10/56	407/24/85	484/27/99	330/28/97	221/28/95
TM7Y	63/7/38	228/12/58	234/17/73	217/25/83	237/24/78	238/29/70
DL1EFW	77/7/38	226/14/64	179/12/52	256/22/75	289/23/73	216/23/62
MW9W	108/7/35	264/10/54	215/13/56	217/21/69	248/25/75	250/25/70
F5NZY	58/4/27	323/10/58	239/12/55	340/22/82	205/25/79	148/24/77
ES2MC	74/5/26	183/9/51	202/23/83	199/28/80	256/25/87	178/23/77
EA2ESB	0/0/0	35/6/29	358/17/68	325/15/64	158/14/55	114/13/36
HA5BA	5/1/5	251/7/50	265/14/68	200/12/53	205/15/48	127/18/38
YU1LM	3/2/3	211/9/49	199/16/62	184/14/57	176/16/52	117/20/36

## WORLD MULTI-OPERATOR SINGLE-TRANSMITTER High Power

P33W	185/18/74	862/29/102	2137/37/137	1787/39/144	1493/39/147	2453/37/147
UP2L	180/14/61	1179/29/105	1921/37/132	1642/39/136	1188/37/142	1677/34/133
PJ4A	28/9/27	519/22/77	1362/35/117	1464/37/129	1851/37/136	1911/37/135
EW5A	164/21/71	844/30/106	1546/36/134	1396/39/135	1895/38/148	1427/37/139
9A7A	91/19/76	798/31/112	1767/37/138	1057/39/140	1454/39/144	1626/37/138
IR4X	68/16/66	716/29/107	1666/35/131	1027/37/138	1531/39/144	1483/37/138
9A1P	101/14/69	636/29/104	1818/37/136	1295/39/144	1379/39/148	1453/39/138
RL3A	92/21/79	612/33/111	1839/37/135	832/38/140	1846/39/152	1542/37/143
RU1A	156/16/70	607/29/107	1760/37/134	1287/38/140	1759/39/142	1404/38/140
W2FU	63/15/52	580/28/104	1092/34/125	966/37/142	1127/39/137	1303/34/134

## Low Power

P40L	39/9/23	421/19/79	1431/32/118	1523/37/122	1739/36/134	2285/36/131
TM6M	141/14/61	866/23/94	1556/33/122	1168/39/142	1302/39/137	1099/36/136
IR6T	79/11/60	619/18/80	1125/35/124	891/38/133	719/37/134	858/36/131
SX9V	108/12/54	563/23/81	1756/33/126	1245/36/130	1037/35/131	911/35/132
IB9T	130/13/58	414/18/77	741/31/103	1065/38/137	1105/36/131	1194/36/132
DP7D	199/12/59	690/21/88	664/31/119	851/35/129	827/36/137	722/33/128
IO3F	141/11/53	663/19/82	1260/33/114	1057/33/112	849/35/123	389/35/120
IB9R	58/10/57	500/21/76	1468/30/105	425/34/122	1060/37/131	835/36/131
E7CW	155/10/56	680/16/76	704/31/109	920/35/125	870/36/131	662/35/119
B0A	8/6/8	200/16/59	963/27/89	475/29/92	886/31/103	904/30/89

## WORLD MULTI-OPERATOR TWO-TRANSMITTER High Power

CR3A	396/17/70	1137/29/106	2972/36/134	2882/39/144	3784/39/152	3889/38/148
PJ4K	170/14/30	968/28/99	3133/34/129	2402/37/135	3593/38/140	3374/36/138
W3LPL	115/19/65	1091/28/109	1900/35/130	1410/39/135	2243/38/143	1756/34/142
OM7M	497/17/70	1422/29/107	2173/36/133	1955/38/133	1990/39/141	1607/37/138
PX2A	14/7/11	144/19/48	880/34/110	1627/36/118	2907/39/140	3012/38/143
HQ9X	288/12/25	675/20/73	1567/31/100	2107/35/111	2837/32/119	2591/36/124
ED1R	327/18/73	1179/26/101	2073/36/128	1553/39/138	2377/39/142	1689/38/139
VA2WA	290/13/51	1002/23/96	1735/31/116	1409/38/130	1758/37/131	1547/32/121
RT4F	412/19/71	1047/32/110	2012/36/134	1825/38/136	2019/39/147	1640/36/137
OL3Z	538/18/71	1464/29/108	1871/37/133	1687/38/136	1303/37/138	1241/36/130

## WORLD MULTI-OPERATOR MULTI-TRANSMITTER High Power

D4C	872/19/82	2082/28/102	3414/37/135	4375/39/151	4752/39/158	4668/39/149
CN3A	679/18/73	1974/27/96	3211/36/133	4054/39/143	3689/39/145	3615/39/145
CR3W	646/15/64	1889/26/96	3133/37/135	3678/38/143	2799/39/143	2862/37/136
PJ2T	338/16/45	1039/24/90	2597/35/116	3061/38/134	3439/36/120	3216/33/129
KC1XX	447/21/80	1300/26/108	2235/38/133	2245/39/143	2470/38/148	2201/35/144
K1LZ	495/20/76	1251/29/108	2237/37/133	2468/39/144	2251/38/144	2108/36/136
K3LR	260/21/72	1130/30/110	2184/38/142	2198/39/146	2428/39/146	2124/35/141
9A1A	1274/25/91	2047/31/114	3110/37/143	2606/39/145	2679/39/147	1830/37/138
M6T	1006/19/77	2092/28/106	3104/35/140	2733/39/142	2515/39/145	2182/37/140
4W8X	151/18/26	911/29/80	2224/35/126	2020/37/130	2559/37/139	2127/34/125

## USA SINGLE OPERATOR ALL BAND High Power

N5DX	187/15/55	686/21/82	1512/32/102	1158/31/100	1332/30/100	1046/29/93
K5GN	65/15/32	179/19/60	1014/32/98	719/33/99	1093/34/106	1142/33/101
K4ZW	42/12/32	372/16/59	999/27/79	860/34/91	702/30/94	1010/28/97
NA8V	89/14/38	318/15/61	534/26/88	737/33/90	754/31/102	750/29/94
W9RE	53/11/32	395/19/67	491/27/85	553/33/94	808/32/110	680/30/92
K0EJ	37/10/24	311/15/54	615/24/74	464/33/87	805/31/100	975/31/100
N9RV	30/12/15	193/23/49	620/29/79	675/32/83	973/35/106	667/29/80
WX0B	22/6/11	104/16/46	876/29/86	439/31/85	1144/33/97	672/31/90
WC1M	35/12/23	129/13/42	1031/27/84	489/26/81	633/26/88	692/23/79
K6XX	19/8/8	178/18/35	860/31/93	420/34/78	661/32/90	722/30/79

## Low Power

N1UR	36/8/21	259/13/63	465/26/91	436/28/90	582/30/95	750/25/94
WW4XX	10/5/6	110/14/50	312/29/90	261/30/86	603/31/103	608/28/90
NR3X	25/8/12	144/14/51	297/24/86	349/31/86	434/30/97	555/27/92
K1BX	19/5/11	119/13/51	298/20/75	413/20/70	499/23/73	724/24/79
K5WA	17/6/8	82/16/47	351/21/74	202/26/74	517/29/91	435/26/85
N4TB	3/3/3	71/13/42	236/23/79	260/27/81	324/31/91	369/25/76
K2PO	13/10/9	113/14/17	305/27/58	278/29/85	332/25/67	284/27/55
K3AJ	14/6/7	110/12/47	263/14/55	263/21/63	295/26/75	353/21/65
N7VM	6/5/4	29/10/12	215/25/59	275/27/67	357/27/63	401/24/58
WA7NB	0/0/0	19/5/5	236/24/61	134/26/50	370/23/71	553/29/70

## QRP

KR2Q	6/4/4	61/12/32	323/22/87	196/27/77	346/25/86	368/24/85
W1FJ	3/2/2	12/5/8	130/16/52	98/16/47	191/22/69	218/19/62
W6JTI	4/2/2	22/8/7	113/23/35	136/24/50	183/25/65	167/25/47
K8MR	0/0/0	3/2/2	98/13/40	102/13/47	189/20/59	239/19/69
N3CZ	0/0/0	13/7/11	107/14/51	129/25/66	112/12/44	126/15/46
KO1H	5/1/1	37/9/21	103/10/43	93/13/46	161/19/65	80/14/34
W6QU	1/1/1	17/8/8	51/14/18	62/19/36	145/27/65	97/23/35
N7RCS	0/0/0	0/0/0	65/13/32	49/13/30	49/16/33	148/19/59
N9SE	0/0/0	0/0/0	11/7/10	43/17/38	74/20/58	84/26/70
NQ2W	0/0/0	16/9/9	45/11/20	40/16/31	87/15/45	54/13/23

## USA SINGLE OPERATOR ASSISTED ALL BAND High Power

K5ZD	155/15/60	524/24/99	1138/31/120	1084/38/130	1093/37/133	1040/34/129
K1ZZ	78/14/53	419/25/102	1076/35/127	794/38/136	724/37/137	921/33/126
N2IC	33/11/21	212/26/76	828/34/122	507/35/116	1320/36/131	1053/33/123
W8FJ	108/13/55	364/22/91	776/33/118	563/36/119	871/36/131	751/33/122
NN7CW	30/9/19	411/18/81	992/30/96	721/33/108	751/34/123	1029/33/122
N3RS	56/13/46	358/20/93	696/32/117	655/37/123	661/37/135	863/31/122
W1KM	83/12/46	561/26/88	689/31/103	367/28/94	799/28/105	1041/31/112
K1AR	85/13/53	400/20/93	624/30/112	621/36/120	798/35/127	749/31/119
AB3CX	93/16/49	409/19/82	773/34/111	462/34/109	672/29/116	754/32/120
K3WW	84/15/56	275/23/93	448/31/114	664/36/125	723/33/122	842/31/119

## Low Power

K1IG	21/5/8	252/15/75	297/26/100	529/36/120	635/35/129	772/32/122
KS1J	21/8/17	102/10/61	341/22/92	412/28/98	485/28/102	479/27/101
N1EN	7/3/4	101/10/40	355/21/84	366/26/84	328/24/87	369/24/90
NS3T	37/10/17	145/14/64	264/25/91	233/26/87	395/27/105	249/27/92
W3KB	8/3/4	100/14/46	189/21/80	291/28/93	352/27/104	385/30/112
K3QP	0/0/0	52/12/30	236/25/84	386/29/100	310/28/92	381/25/95
AD5A	11/6/7	56/13/26	455/30/102	205/30/82	329/29/99	321/28/93
WE9R	15/8/10	16/10/11	214/28/90	309/30/95	359/30/110	369/31/110
NM2A	0/0/0	117/12/53	237/20/74	282/28/83	225/21/77	434/22/84
K1GU	9/4/4	88/13/55	221/26/92	170/28/88	320/30/100	277/25/90

## QRP

K6JS	0/0/0	15/7/6	46/20/31	89/27/46	193/26/73	175/25/58
WQ6X	0/0/0	9/6/5	81/19/31	65/19/32	129/24/43	156/19/32
AC2YD	0/0/0	35/10/27	41/11/31	42/13/30	95/19/58	57/15/38
W2/DL8CX	0/0/0	0/0/0	7/6/6	72/14/47	80/16/62	61/18/50
N5UE	2/2/2	1/1/1	30/9/21	39/14/26	75/14/46	81/22/36
K8ZT	6/2/2	13/7/8	42/12/32	30/18/27	40/16/38	35/15/31
W7RY	0/0/0	6/5/4	19/10/16	26/19/24	54/25/49	40/21/34
WO7T	0/0/0	0/0/0	8/6/6	1/1/1	50/19/40	110/26/57
K2AL	0/0/0	2/2/2	15/5/15	29/10/25	30/11/30	22/12/21
KR4AE	0/0/0	0/0/0	29/8/23	32/12/21	31/15/25	0/0/0

## USA MULTI-OPERATOR SINGLE-TRANSMITTER High Power

W2FU	63/15/52	580/28/104	1092/34/125	966/37/142	1127/39/137	1303/34/134
N4RV	88/15/55	352/24/96	772/31/117	604/39/135	1130/38/137	822/34/133
ND7K	30/16/29	203/29/84	1193/36/128	617/39/131	1125/37/136	914/35/125
NJ4P	26/12/19	155/23/78	869/33/121	609/35/122	764/37/127	954/33/122
AA7A	55/14/31	282/29/88	900/35/122	419/37/123	827/35/128	560/35/126
W9VW	26/12/25	148/21/76	820/32/111	662/36/115	606/31/120	716/32/116
K8AZ	43/15/40	208/24/96	556/31/115	531/38/126	765/36/129	366/35/132
AA9A	32/11/29	162/20/76	435/31/107	413/38/121	621/39/133	748/34/127
K5KG	15/7/10	189/19/80	691/31/109	602/34/115	583/37/116	561/32/109
KQ3F	15/9/14	107/14/64	324/29/100	588/35/117	541/32/119	710/33/120

## Low Power

NT0K	0/0/0	129/17/65	336/29/104	344/32/103	417/31/114	788/30/114
W3ZGD	4/4/3	86/14/45	247/29/98	306/30/98	370/30/114	294/31/105
WW4LL	0/0/0	31/11/25	418/25/87	223/28/87	335/26/98	399/25/96
W1FM	7/4/4	64/14/46	180/16/73	208/24/85	241/26/93	260/24/94
K1RQ	10/3/3	73/12/44	144/19/69	138/21/69	159/21/75	200/24/75
KT3T	4/4/4	51/11/29	183/16/71	105/21/55	160/25/79	217/29/81
W4TG	0/0/0	76/9/37	171/16/65	178/20/69	169/19/67	64/16/48
K0UK	5/3/3	6/5/4	9/5/7	31/9/22	77/19/37	68/22/34
W8EDU	0/0/0	0/0/0	0/0/0	6/3/6	17/10/13	53/16/33

## USA MULTI-OPERATOR TWO-TRANSMITTER High Power

W3LPL	115/19/65	1091/28/109	1900/35/130	1410/39/135	2243/38/143	1756/34/142
K9CT	71/15/48	442/27/95	1394/36/131	1070/37/133	1679/37/140	1406/35/133
N4WW	51/13/41	414/24/99	1032/34/128	697/39/132	1675/38/135	1084/36/136
N2AA	109/16/58	391/21/91	1019/32/119	955/38/127	1248/36/133	1097/32/126
K8LX	39/10/18	248/19/72	878/31/111	940/37/116	1164/36/125	859/29/100
K2AX	99/13/47	207/19/78	515/29/111	695/37/123	983/33/127	728/34/122
N7DX	16/7/7	231/23/54	774/34/113	899/36/115	1109/36/116	768/31/90
N4IQ	44/10/25	294/18/76	1038/29/114	673/35/114	789/32/116	720/29/109
W7RM	20/10/11	178/18/56	772/34/102	556/34/111	889/36/119	643/27/70
W2AA	73/13/38	173/16/59	740/26/96	497/34/104	868/29/105	701/29/95

## USA MULTI-OPERATOR MULTI-TRANSMITTER High Power

KC1XX	447/21/80	1300/26/108	2235/38/133	2245/39/143	2470/38/148	2201/35/144
K1LZ	495/20/76	1251/29/108	2237/37/133	2468/39/144	2251/38/144	2108/36/136
K3LR	260/21/72	1130/30/110	2184/38/142	2198/39/146	2428/39/146	2124/35/141
NR4M	267/19/63	955/29/109	1872/37/132	1802/38/138	1950/36/130	1599/34/135
K1TTT	367/20/73	911/29/104	1475/32/119	1704/38/142	1788/38/141	1281/32/119
K9RS	100/14/55	411/22/88	1063/31/115	1136/38/131	1368/37/136	1140/34/129
K0RF	90/16/39	268/22/67	1124/36/127	1302/38/138	1650/38/136	856/35/116
NE3F	37/9/26	147/14/59	440/28/97	378/33/96	864/30/112	567/26/86
K1KP	6/4/4	106/14/54	567/26/89	495/27/86	442/26/94	512/24/94
K1ESE	39/11/27	114/13/52	404/28/99	423/29/100	376/32/114	413/28/111

## EUROPE SINGLE OPERATOR ALL BAND High Power

CR6K	456/13/53	1058/22/78	1889/30/99	1941/35/104	2496/36/114	2301/32/101
EF6T	187/9/40	962/17/69	1695/28/85	1315/30/83	2268/33/93	1729/27/97
ES7A	193/11/48	765/24/89	1280/32/103	1261/33/99	1432/36/115	1105/33/110
DJ5MW	143/11/46	691/16/74	1350/32/97	1324/31/99	1199/35/111	945/33/105
ED7W	28/6/19	461/17/61	1244/24/87	1395/29/81	1754/33/102	1532/29/93
IR2Q	264/10/51	723/16/61	1296/29/86	996/25/79	1422/33/98	854/30/84
MD4K	336/10/47	965/21/71	1094/28/86	1090/25/88	1204/32/89	794/25/72
EF1A	162/11/42	522/14/50	1015/21/64	869/19/63	1444/27/67	1337/26/70
OZ1AA	190/9/44	461/14/64	667/27/87	507/21/79	894/30/82	822/29/85
UB7K	63/8/27	493/16/66	869/24/72	759/25/67	1277/31/97	740/26/66

### Low Power

EA2W	61/10/43	493/17/70	1087/25/89	761/28/84	1196/32/106	1076/31/99
IY3A	219/13/53	427/15/64	762/29/86	844/28/95	1330/31/101	422/28/81
LY4L	236/8/44	570/16/61	775/26/78	530/27/77	627/26/86	404/29/85
OR2F	163/11/48	500/15/75	391/26/80	351/22/65	464/30/94	619/28/92
OL5Y	227/9/45	548/14/61	536/26/88	378/21/67	595/28/78	314/28/65
DL3JAN	208/9/48	535/13/65	406/24/86	498/27/81	495/30/89	413/32/84
HG3N	128/8/40	484/11/57	489/22/82	394/24/71	653/29/99	413/29/91
TF/OU2I	0/0/0	160/8/38	491/17/62	586/18/54	1023/24/70	927/21/68
ED3Z	77/8/34	270/13/57	461/22/71	503/18/61	653/21/62	389/20/62
HA7UI	121/8/44	605/16/68	474/26/87	469/25/69	313/26/88	358/28/92

### QRP

LY9A	103/5/26	415/9/50	330/18/68	369/22/63	380/22/65	211/20/66
HA1BC	30/4/20	198/7/47	148/11/48	138/18/57	169/18/57	159/22/55
HG6C	30/3/15	179/10/48	191/21/64	189/13/56	155/19/55	135/22/53
DL1JDQ	12/4/10	189/10/49	190/16/57	106/13/42	129/19/48	71/14/23
SE0I	65/3/24	160/9/41	194/13/56	162/11/41	152/14/46	76/11/28
HA3GC	2/1/2	131/6/44	184/16/60	115/14/42	128/17/43	89/16/30
OL3M	41/4/21	199/8/48	126/12/42	104/10/40	95/13/35	124/19/36
G3YMC	11/2/8	73/4/29	150/11/45	149/12/45	139/12/47	146/14/38
GM4M	13/2/9	33/5/20	109/9/41	170/12/45	178/12/47	98/15/35
OK2HIJ	36/5/25	181/8/46	136/14/55	100/9/43	59/12/28	57/15/28

## EUROPE SINGLE OPERATOR ASSISTED ALL BAND High Power

ER1KAA	143/10/40	813/24/94	1265/32/113	1205/32/109	1401/35/118	1435/37/124
S57K	216/13/64	724/23/94	1525/35/128	780/32/114	775/35/122	773/36/114
SN7Q	166/14/63	649/27/101	815/33/113	1014/34/119	927/34/125	630/37/130
HG8R	151/12/60	258/24/90	1096/36/124	574/35/119	1091/37/137	686/37/132
YU5R	226/12/58	631/20/87	825/35/116	910/37/125	826/34/124	836/36/130
UW1M	155/12/56	563/18/82	1558/34/111	860/29/101	949/32/119	1169/34/121
OK1GK	233/10/48	409/19/74	767/33/104	722/32/111	857/33/119	789/36/127
YL7X	188/14/61	528/25/95	851/34/120	610/36/121	851/37/135	466/35/133
OH0V	262/13/51	543/20/74	891/32/103	804/31/93	1057/32/101	784/36/116
RG6G	111/15/53	361/24/88	861/32/109	765/33/103	879/34/119	994/31/118



## Low Power

UW5Y	110/10/46	500/17/78	755/31/102	677/31/96	901/32/97	642/34/102
EA5M	43/8/34	364/15/66	758/30/96	661/28/94	847/33/106	808/31/108
SN7O	357/12/60	744/16/75	563/28/97	399/30/104	466/32/117	384/30/118
LZ8E	136/10/50	571/19/73	849/32/117	369/28/105	624/35/123	322/32/114
DJ5MO	93/12/55	399/20/79	368/31/106	406/32/108	492/36/117	408/35/119
DK3WW	157/10/52	356/24/93	448/33/116	351/37/119	470/38/130	404/35/135
M6W	252/11/49	480/15/68	479/22/84	515/29/97	571/29/106	442/29/95
DL2NBU	154/11/49	353/16/69	372/28/94	447/30/99	505/35/115	461/33/110
S53V	76/10/42	212/18/71	308/30/99	371/29/96	536/33/120	575/36/121
SP9XCN	137/6/38	714/17/73	456/25/93	483/31/103	401/30/111	416/33/115

## QRP

DM2M	187/12/52	396/16/74	255/28/90	311/27/100	420/33/104	334/32/79
OM0RX	72/6/30	258/10/56	407/24/85	484/27/99	330/28/97	221/28/95
TM7Y	63/7/38	228/12/58	234/17/73	217/25/83	237/24/78	238/29/70
DL1EFW	77/7/38	226/14/64	179/12/52	256/22/75	289/23/73	216/23/62
MW9W	108/7/35	264/10/54	215/13/56	217/21/69	248/25/75	250/25/70
F5NZY	58/4/27	323/10/58	239/12/55	340/22/82	205/25/79	148/24/77
ES2MC	74/5/26	183/9/51	202/23/83	199/28/80	256/25/87	178/23/77
EA2ESB	0/0/0	35/6/29	358/17/68	325/15/64	158/14/55	114/13/36
HA5BA	5/1/5	251/7/50	265/14/68	200/12/53	205/15/48	127/18/38
YU1LM	3/2/3	211/9/49	199/16/62	184/14/57	176/16/52	117/20/36

## EUROPE MULTI-OPERATOR SINGLE-TRANSMITTER High Power

EW5A	164/21/71	844/30/106	1546/36/134	1396/39/135	1895/38/148	1427/37/139
9A7A	91/19/76	798/31/112	1767/37/138	1057/39/140	1454/39/144	1626/37/138
IR4X	68/16/66	716/29/107	1666/35/131	1027/37/138	1531/39/144	1483/37/138
9A1P	101/14/69	636/29/104	1818/37/136	1295/39/144	1379/39/148	1453/39/138
RL3A	92/21/79	612/33/111	1839/37/135	832/38/140	1846/39/152	1542/37/143
RU1A	156/16/70	607/29/107	1760/37/134	1287/38/140	1759/39/142	1404/38/140
IR4M	74/17/72	828/28/108	1839/36/132	898/38/141	1584/37/133	1178/37/136
HG6N	233/13/66	901/26/100	1550/36/135	1411/37/133	1271/35/138	1162/37/135
YR8D	164/16/68	980/28/104	1363/35/130	1369/38/138	1518/39/143	1021/36/132
EA5RS	96/15/63	308/26/101	1297/34/134	1221/38/139	1418/39/143	1303/39/142

## Low Power

TM6M	141/14/61	866/23/94	1556/33/122	1168/39/142	1302/39/137	1099/36/136
IR6T	79/11/60	619/18/80	1125/35/124	891/38/133	719/37/134	858/36/131
SX9V	108/12/54	563/23/81	1756/33/126	1245/36/130	1037/35/131	911/35/132
IB9T	130/13/58	414/18/77	741/31/103	1065/38/137	1105/36/131	1194/36/132
DP7D	199/12/59	690/21/88	664/31/119	851/35/129	827/36/137	722/33/128
IO3F	141/11/53	663/19/82	1260/33/114	1057/33/112	849/35/123	389/35/120
IB9R	58/10/57	500/21/76	1468/30/105	425/34/122	1060/37/131	835/36/131
E7CW	155/10/56	680/16/76	704/31/109	920/35/125	870/36/131	662/35/119
YL4U	235/9/50	863/20/81	668/29/100	486/33/108	358/31/119	397/25/110
3Z1K	214/11/45	536/23/88	425/30/102	457/29/96	345/30/107	260/35/104

## EUROPE MULTI-OPERATOR TWO-TRANSMITTER High Power

OM7M	497/17/70	1422/29/107	2173/36/133	1955/38/133	1990/39/141	1607/37/138
ED1R	327/18/73	1179/26/101	2073/36/128	1553/39/138	2377/39/142	1689/38/139
RT4F	412/19/71	1047/32/110	2012/36/134	1825/38/136	2019/39/147	1640/36/137
OL3Z	538/18/71	1464/29/108	1871/37/133	1687/38/136	1303/37/138	1241/36/130
TK4W	707/12/62	1741/29/101	2177/35/117	1114/32/112	1934/36/123	1573/33/120
UA4M	363/18/70	901/29/107	1994/36/135	1522/38/140	1729/38/144	1580/34/139
OH5Z	252/15/61	1007/28/103	1554/36/135	1788/39/142	1908/39/148	1082/36/138
HG7T	352/13/62	1270/26/102	1840/36/131	1474/37/136	1772/37/143	999/36/132
C37N	340/11/50	1270/20/85	1871/30/109	2042/36/121	2189/37/124	1326/29/104
SK3W	434/15/67	973/28/104	1279/36/132	1344/39/137	2108/38/144	1090/37/134

## EUROPE MULTI-OPERATOR MULTI-TRANSMITTER High Power

9A1A	1274/25/91	2047/31/114	3110/37/143	2606/39/145	2679/39/147	1830/37/138
M6T	1006/19/77	2092/28/106	3104/35/140	2733/39/142	2515/39/145	2182/37/140
YT5A	993/17/74	1854/31/109	2959/37/141	2480/39/142	2548/39/148	1674/37/134
LZ9W	880/17/71	1649/35/119	3049/37/134	2699/39/134	2142/38/141	2016/37/134
LN8W	823/15/68	1711/29/105	2416/36/135	2323/39/133	2082/38/128	1681/38/137
DF0HQ	903/17/70	1694/27/104	2575/38/143	2160/37/133	1593/38/144	1511/37/136
II2S	769/14/66	1679/27/100	2339/35/130	2392/39/141	2049/38/134	1595/36/123
TM1A	644/11/57	1668/22/92	2324/32/108	1819/37/130	1354/33/125	994/33/121
DP9A	621/14/67	1267/28/103	1938/34/129	1586/38/133	1196/36/126	570/36/123
RO2E	130/10/50	464/26/91	657/34/126	634/36/126	567/36/140	673/34/138