

CW Results of the 2024 CQ WW DX Contest

By John Dorr, K1AR

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“Stations were everywhere!! I wish it could be like this all the time! — G3OJL”

One Word for the 2024 CQ WW CW Contest -- Wow!

What were you doing 76 years ago? An increasing number of hams can answer that question. For those of you that were around at that time, you had the opportunity to operate in the first CQ WW CW contest – the 1948 edition! Imagine a contest where there is no spotting, computers, automation, solid-state equipment, remote operating, etc. Try to envision a contest where the “big VFO knob” on your radio had a dominate role. Indeed only 817 contacts won the world single-operator title in 1948 (W4KFC won the U.S. prize with 433 QSOs). That compares to this year’s winning effort where CR6K (CT1ILT operator), the top rate winner, made a similar number of QSOs in approximately the first two hours of the contest!

Fast-forwarding to today, you can quickly realize how much has changed in the world of contesting and, in particular, with the CQ WW. Instead of just 559 entries in 1948, we received 8313 logs this time around representing a staggering total of 5,409,004 QSOs! It’s no wonder that the CQ WW leads the world of contesting – both in terms of participation and adjudication.

Before we jump to the results, take a minute and check out this year’s collection of soapbox comments. You can find them at: <https://cqww.com/soapboxcw.htm?yr=2024>. It’s always fun to read what others have accomplished or a brief description of their first CQ WW experience. Here’s just a small sample of what you’ll find:

“Ham radio bucket list item checked off -- single op on top of a volcano on a South Pacific island!” – FO/NX1P

“Wow, six bands open at once! This was one for the record books.” – K3PA

“This was my very first contest in CW apart from Field Day. Great fun!” – VE1GY

“Wow – that was fun! After more than a 30-year hiatus, I reactivated my call this year and took part in the CQ WW again (last time I participated was back in 1991 under the call Z21HQ).” – DF2RQ

So, without further ado, let’s get on with the results!

Some Incredible Scores!!

Nothing beats a solar disk filled with sunspots. It is the ultimate equalizer for contesters as large stations post incredible scores and the little guys wonder at what they can achieve with modest stations. As you review the 2024 CQ WW CW results, be advised there are no typos (or at least ones we know about!). Indeed, many records were set with 207 participating DX entities across the world. Whether you were able to land a run frequency on 28000.9 or enjoyed the relative comfort of 28119, the bands were simply filled with end-to-end activity, one of the marvels of the CQ WW contest.

The World Single-operator battle did not disappoint this year. In the end, Braco, E77DX, piloted the D4C superstation as D4DX to a new

record-setting score of 20.2 million, beating Andy, N2NT, from his very fine V47T station, who racked up 15.9 million points. The combination of D4DX's location and being a "3-point" country was just too much for Andy to overcome this time around.

In a much closer battle, Bob, KQ2M, prevailed and took the U.S. Single-operator, All-band crown, posting an 8.4-million-point effort, just 300K above his closest competitor, Greg, W1KM, at 8.1 million. Greg had an especially accurate log with only a 1.1% error rate, losing just 54 QSOs out of 5076 entries – a fine accomplishment indeed! One last point is that the rankings of 4 through 10 for U.S. single-ops did not originate from the East Coast. Axel, KI6RRN, manning WA6TQT's California station, placed just behind the leaders with a fourth-place finish of 7.8 million.

Two regulars took the World Single Operator Low Power stage this time around. In the end, Bud, AA3B, delivered an amazing 14.2 million point result from V26K, beating Dimitri, RA3CO, at PZ5DX, who ended with a final score of 12.6 million. It's notable that Bud's low power score is #6 in the world amongst the high-power group – quite an achievement!

There was a shift in the Single Op QRP winners' circle this year as Dragan, 4O4A, operating from 4O3A, took the honors, posting a tremendous score of 2.2 million. Doug, KR2Q, was hot on his heels at 1.7 million for the silver medal. In the end, however, Dragan's effort was also impressive in that he made over 3000 QSOs with only five watts!

The World Single Operator Assisted group was actively involved in their own collective battles this year. The world-class station at P3X was skilfully driven by Serhiy, 5B4AMM (M0SDX) to a final score of 17.2 million points. Randy, K5ZD, went out in style with his final CQ WW effort from his Massachusetts (W1) location, generating a #2 World result of 13.8 million.

The single-band results provided some outstanding entertainment for us. The invasion of Saint Helena by Oliver, W6NV, and Andy, 5Z4VJ, resulted in top scores on single-bands 20 and 10 meters respectively with ZD7W and ZD7VJ

callsigns. Ash, KF5EYY (also known from 3V8SS), produced a great single-band 15-meter effort of 1.2 million points. It was great to see most continents being represented in the Top 10 tables for this highly competitive group.

As is always the case, there were an abundance of multi-op stations to be worked in the 2024 CQ WW contest. Hard work and good planning paid off for the team from TK0C, who took the Multi-Single prize with a score of 20.0 million beating out the UP2L team who were not far behind at 19.7 million. The Multi-Two race also generated some impressive scores as the CR3A team won with 39.3 million besting the stellar operating team of PJ4K. Lastly, in what's becoming a regular event, the Multi-Multi titans were led again by CN3A, whose 13-member operating team from the Czech Republic produced a final score of 47.5 million points! There was also a huge battle in the U.S.-based Multi-Multi class with Team K1LZ narrowly beating the crew at KC1XX with a final tally of 32.14 million. Matt's "XX" crew was right behind at 32.08 million, demonstrating that every minute and every QSO matters.

And, not to be ignored, a shout-out for the Youth entries. Relatively new to our contesting ranks, KC1TNO, showed what perseverance and a good station can deliver for results as Luka generated an amazing score of 3.7 million, blowing away his youthful competitors. Well done, indeed!

As a final point, let's not forget the highly competitive club competitions. For yet another year, the perennial winners Frankford Radio Club and the Bavarian Contest each won their respective categories. Submitting scores on behalf of your radio club has become an extremely popular aspect of the CQ WW contest as nearly half of all entries indicate a club affiliation as part of their log submission.

With nearly 20,000 total logs received in the 2024 CQ WW contests, the only word that can be used is bravo; bravo to all of you that participated and bravo to those that helped produce this year's results!

Rate Machines at Work!

The hourly QSO rates on CW (and SSB as well) continue to amaze (see Table 1). I recall the days when 300+ total QSOs were a reasonable result from an average station in the CQ WW contest. Now, with the latest in 2-radio operating techniques, top stations are achieving this hour after hour – and, often with great accuracy. I’m not sure which of these data points are more impressive: the 394-hour from CR6K, V26K’s 332-hour with low power, or a rate of 144/hour by 4O4A while operating QRP!

CALL (OP)	CATEGORY	RATE
CR6K (CT1ILT)	SOAB(U) HP	394
V47T (N2NT)	SOAB(U) HP	369
ZF5T (N5DX)	SOAB(U) HP	341
EF6T (EA3M)	SOAB(U) HP	334
V26K (AA3B)	SOAB(U) LP	332
D4DX (E77DX)	SOAB(U) HP	320
8P5A (W2SC)	SOAB(U) HP	313
TO4A (VE3DZ)	SOAB(U) HP	302
PZ5DX (RA3CO)	SOAB(U) LP	296
KP2B (NP4Z)	SOAB(A) HP	288

CALL (OP)	CATEGORY	RATE
V26K (AA3B)	SOAB(U) LP	332
PZ5DX (RA3CO)	SOAB(U) LP	296
NN7CW	SOAB(U) LP	197
EA5M	SOAB(A) LP	192
WP3C (WP3C)	SOAB(U) LP	184
4K6FO (4K6FO)	SOAB(U) LP	182
UW5Y (US2YW)	SOAB(U) LP	181
UT4LW (UT4LW)	SOAB(A) LP	178
CO8ZZ (CO8ZZ)	SOAB(A) LP	170
3W9A (KU1CW)	SOAB(U) LP	170

CALL (OP)	CATEGORY	RATE
4O4A	SOAB(U) QRP	144
FS/KC9EE	SOAB(A) QRP	123
W1FJ	SOAB(U) QRP	100
KR2Q	SOAB(U) QRP	99
K7SV	SOAB(U) QRP	99
SF0A	SOAB(A) QRP	87
UZ5DM	SOAB(U) QRP	87
M1X (G0CKP)	SOAB(A) QRP	86
LY9A	SOAB(U) QRP	85
DM2M (DK3WE)	SOAB(A) QRP	79

Table 1 - High Single-Op 60-Minute QSO Rates by Power Category for the 2024 CQ WW CW Contest.

If you want more data, a full reporting of top rates for all entries can be found at <https://cqww.com/rates/>.

What Power Category Did You Enter?

In what proves to be both a blessing and a curse is the number of operating categories available to CQ WW participants. It’s a blessing in that you have more opportunity to match your station’s capabilities and personal skills against peer competitors. It’s a curse from a contest administration point-of-view as more categories create more work in producing the final results and distributing awards.

This year’s summary, found in Table 2, shows that Low Power entries continue to dominate the CQ WW landscape. There are likely several reasons for this, ranging from QTH limitations to budget constraints. It’s notable that only North America leads with high power entries as compared to Europe, where low power carries a nearly 2:1 advantage.

Power Category	AF	AS	EU	NA	OC	SA	ALL	% Total
HIGH	10	303	861	895	35	35	2139	41%
LOW	12	466	1510	780	44	57	2869	55%
QRP	2	25	130	66	9	6	238	4%
Total	24	794	2501	1741	88	98	5246	100%

Table 2 – 2024 CQ WW CW Single-op breakdown of power categories by continent (Assisted and Unassisted combined).

Some Straight Talk from the Director

The task of checking logs can be overwhelming at times for the CQ WW contest committee as we approach 20,000 annual entries. There are a few focal points that we concentrate on as part of our work. In addition to the usual cross-verification of QSOs as well as exchanges and times, we also look for violations in several other areas. These include unauthorized use of assistance, self-spotting, station interlocking, and out-of-band operating.

One area of the rules that has been in place for several years is the topic of signal quality and its applicability to proper sportsmanship. For the most part, we have not aggressively enforced this rule. However, it's become clear that the problem of dirty signals is growing in both modes. Wide signals, clicks, buzz/hum, and other issues are increasingly populating the bands.

It's rare that I choose to call out specific examples, but these stations and others need to heed the following warning: we will be taking more extreme actions next year up to and including disqualifications, if signals are not cleaned up. This list includes the following stations who possessed serious signal issues at times this year: TM6M, OK7O, 9A1P, RU1A, YT0A, and others. "We've done what we can" will not be an acceptable answer.

Lastly, be aware that it's relatively easy to detect these problems as we possess global SDR

recording capabilities that can replay virtually any part of the contest. For the moment, however, you have been warned.

And Finally...

As I finish my 7th year as your CQ WW Contest director, I want to pause a moment to acknowledge some of the best teammates in contesting --- the CQ WW Contest Committee. These guys serve in various roles, which collectively make my job so much easier, but more importantly allow us to produce the most accurate results possible. So, with profound thanks, I recognize: AA3B, Bud Trench; CT1BOH, José Nunes; EA4KD, Pedro Vadillo; F6BEE, Jacques Saget; G0MTN, Lee Volante; HA1AG, Zoli Pitman; 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; N3QE, Tim Shoppa; LA6VQ, Frode Iglund; N9RV, Pat Barkey; OH6LI, Jukka Klemola; PA3AAV, Gert Meinen; RA3AUU, Igor (Harry) Booklan; S50A, Tine Brajnik; UA9CDC, Igor Sokolov; VE3EJ, John Sluymmer; VK2IA, Bernd Laenger; and YO3JR, Andrei (Andy) Ruse.

The sun continues to percolate, which will likely make for another banner year in the 2025 CQ WW. Hope to see you there!

73, John, K1AR

CQ WW Contest Director

Stories from the 2024 CW CQ WW Contest

Operating from Zambia – 9J2FI

By way of introduction, I am Tom, DL2RMC, (also known as 9G5FI, HZ1FI, A65CW, SU9TH and several other calls). At the moment, I work at the Fountain Gate Crafts and Trades Vocational School in Lusaka, Zambia. Fortunately for contesters and DXers, I expect to be here until the end of 2026.

The process of obtaining my 9J2FI license was quick and straightforward. The local communications authority, ZICTA, issued the license without any issues. Two weeks before the start of the WWDX CW contest, I arrived in Zambia with my equipment and antennas. The school, located about 15 km east of Lusaka, quickly approved the installation of my antennas. It turns out that there is a lot of space for antennas at the school. Although the school primarily teaches PV

solar technology with many inverters and solar panels running 24/7, there is surprisingly very little local QRM.



Photo 1 – Tom, 9J2FI, gives a sign of approval to his local helpers assisting with the antennas.

Most of the students at the vocational school live on-site, as they come from all parts of the country, and travel can take several days. To provide the students with extracurricular activities, an electronics club and a ham radio club were established. Due to the limited available time before the contest, the antennas were only set-up temporarily. Many students helped with the setup. I used a Hexbeam, fixed to the north, installed six meters above the ground along with a 10-meter vertical wire tuned for 40 meters for the WW contest. A SUNSDR 100W transceiver was used for the station.

Propagation conditions were excellent during the contest. Due to my other commitments at the school, however, I was unable to participate over the full 48 hours and opted for the Classic category. In those 24 hours, I worked 2500 QSOs, primarily operating in RUN mode. Calling other stations was generally unsuccessful, as my signal was too weak.

Currently, Zambia is in the rainy season. Three days after the contest, lightning struck a tree next to the Hexbeam, felling the tree and causing light damage to the antenna. Since the antenna had only been temporarily set up, everything will be rebuilt at a better location along with other antennas. A separate radio room is also planned, and I expect to be very active on all bands over the

next two years. Visitors and supporters are very welcome.

CU in the next Contest!

73, Tom, 9J2FI (DL2RMC)



Photo 2 – The mighty Hexbeam from 9J2FI performed surprisingly well.



Photo 3 – Nothing beats having local helpers to get the 9J2FI antenna farm on the air.



Photo 4 – Tom, 9J2FI, alongside one of the students demonstrating ham radio.

Location Matters! – UN4Q

My contest station is located at 1650 meters altitude above the clouds. As usual, I was operating with my SO2R setup: (2) Elecraft K3 transceivers. The antennas included both quads and monoband Yagis for 10-15-20-40 meters as well as 80/160 slopers and 300-meter beverages for five directions.

After placing in 2nd place in 2023, I decided to improve my 80/160 meter antennas, especially towards Asia, and spend more operating time on 10 meters each day, reaching almost 1500 QSOs on that band! Thanks to perfect weather conditions, no long wire antennas were damaged this year and propagation was excellent, resulting in my highest personal score in the CQ WW. Thanks to everybody who worked me!

73, Ruslan, UN4Q (also UA4Z)



Photo 5 – Here is Ruslan, UN4Q, at his well-appointed shack ready for the CQ WW.



Photo 6 – Location of UN4Q – what a view!!



Photo 7 – This is one way to be loud as demonstrated by the UN4Q antennas.



Photo 8 – It's good to be above the clouds at UN4Q.

Another Day of Contesting on St. Helena – ZD7W & ZD7VJ

ZD7W, Oliver W6NV, and ZD7VJ, Andy 5Z4VJ/G3AB, operated from a very quiet location at an old St. Helena farmhouse where they set-up portable antennas. Oliver's 20-meter effort yielded the high single band score and a new Zone 36 record. Andy's 10-meter score is also a high single band score, and an all-time 10-meter world record. Operating from a storage room, Andy deployed some contest nostalgia by using the antique Alpha 76A amplifier formerly manned by Jim, N6TJ/ZD8Z, who set many WW records decades ago.

In contrast, Oliver, ZD7W, using a modest set-up from the "comfort" of a kitchen table. Sometimes, simple is better. In the end, simplicity from a good QTH can produce amazing results!

73, Oliver, ZD7W (W6NV) and Andy, ZD7VJ (5Z4VJ/G3AB)



Photo 9 – Andy, ZD7VJ (5Z4VJ/G3AB) enduring a chilly shack to provide the masses with a rare 10 meter multiplier in the 2024 CW CQ WW.



Photo 10 – Here is Oliver, ZD7W (W6NV) rattling away on 20 meters!

Field Day Style Operating from Corsica – TK0C

The TK0C operations have now completed their 9th year. What started as a single van expedition to ISO (IIO C) in 2014 and continued as a M/S TK0C experiment in 2015, has evolved into a series of serious contest expeditions where we were first place EU every year since 2016 (4x - M2, 2x - M/S and 1x - MM).

Although we took a "sabbatical" in 2023 to taste how it feels to operate from D4C (WW#1 in MM), we knew we had to return to Corsica again!

TK0C is a pure "field day style" operation. All the equipment is transported there in one cargo van. Setting up the antennas, cables, and shack takes us three full days. If we are lucky with the weather, we get one day and a few nights of test operating before the contest. This year we were not lucky. In the previous seven years we never experienced the winds and seas of 2024. The wind was blowing at 50 km/h with gusts of 100 km/h the whole week and only calmed down on Friday evening. We kept all of the antennas low above the ground (the Spider beam was actually on the ground!), made several repeated repairs of the 40-meter verticals and were not able to operate much before the contest. The sea finally became usable on Saturday morning so we could finally raise the last

three antennas (10/15/20 meter VDA), while we fixed our 40-meter TX phased verticals just an hour before the beginning of the contest.

As always, our main goal was to be a world winner in the number of QSOs. This year we set the bar to 12K QSOs but were a bit short (looks like 12K is at the very limit for the us). The behind-the-scenes approach is to get as close as possible to the theoretical 100% time utilization for transmission and reception. In practice, the maximum achievable TX time is somewhere around 70% as you need to account for switchover time between the RUN TX and in-band TX. This year we took a one-hour video recording of the TX indicating LED to measure total TX time. The result was fascinating in a way: RUN was 40% of the time on TX, two in-band stations captured 23% of available TX time with no TX time coming in at 37%. In the end what matters is the in-band operating rate. For example, we know that one in-band station can log 50 or 60 QSOs per hour. With two in-band stations this potential rises 100-120 additional QSOs that are unavailable to the run station. BUT (there is always at least one but), to make this happen, every hour 120 new stations must be there calling CQ. So, call CQ even if you are QRP, as our motto is, **“If you are missing the**

TK multiplier in your log, just call CQ and we will find you.”

A maximum number of in-band QSOs are to be expected in the M/S category, which was confirmed in practice. This year we made exactly 3000 in-band QSOs which accounted for 27% of our total contacts (MULT station QSOs excluded).

Now, the “technology” behind our “RUN + 2x in-band” setup can be summarized in just three requirements:

- In-band antennas shall be as good as the RUN antennas
- Isolation between the RUN and in-band 1, RUN and in-band 2 and between in-band 1 and in-band 2 shall be between 50 and 90dB (50dB on 160 meters; 90dB on 10 meters)
- Utilize an HF radio with extremely low composite TX noise.

You can find more details about our setup and operating approach in a NCJ article (July/August 2023) and on my web page (<https://lea.hamradio.si/~s53ww/>). Also be sure to check out our videos on qrz.com.

73, Robi, S53WW, on behalf of the TK0C team



Photo 11 – Antenna farm of TK0C for the 2024 CQ WW CW Contest.



Photo 12 – At the edge of the sea from TK0C.



Photo 15 – It takes a village to win M/S in the 2024 CQ WW CW contest as demonstrated by the team from TK0C.



Photo 13 – Computers and wires at TK0C. Look hard and you’ll also see some radios!

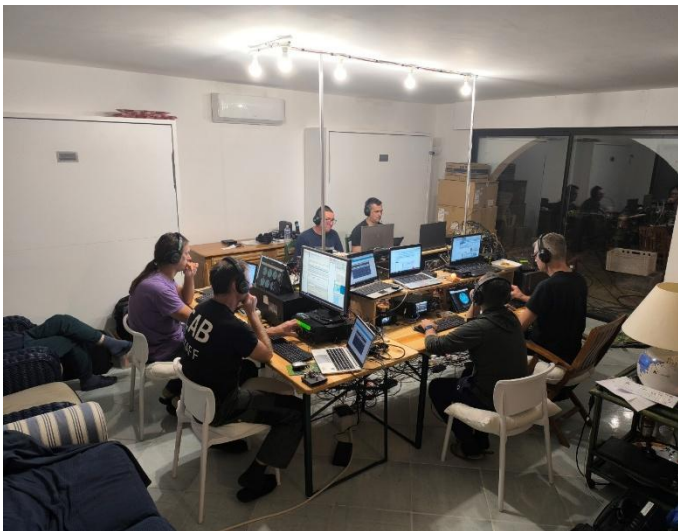


Photo 14 – TK0C operating team hard at work in the 2024 CQ WW CW Contest.

Exploring from Siberia – RG9A

Based on last year's experience, we decided to participate in the Multi-op Explorer category given that none of the contest positions in the Chelyabinsk region and indeed the entire Urals supported a fully capable, traditional Multi-Multi entry. This year we were able to organize three stations operating from two contest-positions – RG9A and R8AEC, the distance between them being about 130 km. Our Explorer entry utilized remote SDR web applications. However, even though the 2024 result decreased relative to 2023, we ended with a victory. The operators' on-air schedule was designed for six hours of work followed by a six-hour rest period. Of course, until the very last minute of the contest, we did everything possible to achieve the best result!

73, Yuri, RG9A (Chief of RM9A)

RG9A position:

3.5 MHz: 6-el phase ½ wave vertical array @50 meters

7 MHz: 3-el rotary Yagi @25 meters

14 MHz: 5-el rotary Yagi @25 meters

21 MHz: 8-el rotary over bi-directional (W-E) 2x6-el Yagi stack @35 meters

28 MHz: 8-el rotary over bi-directional (W-E) 2x6-el over 2x6-el Yagi stack @35 meters

Rig: FTdx9000D / IC-756ProIII and 1 kW PA

R8AEC position:

1,8 MHz: 41-meter vertical on TX, 4 x Beverages (320 meters) on RX

3,5 MHz: 41-meter vertical on TX, 4 x Beverages (320 meters) on RX

7 MHz: 2-el quad @35 meters

14 MHz: 4-el quad @35 meters

Rig: IC-7700 and 1KW PA



Photo 16 – Yuri, RG9A (formerly UA9AM), at WRTC Russia!



Photo 17 – Some cool antennas can be found at R8AEC's "Explorer" station.



Photo 18 – There's a lot of fire power inside that fenced property at RG9A.

A Record-setting Weekend from Cape Verde – D4DX

Last year, I operated twice from the D4C multi-operations. Unexpectedly this summer, after more than 11 years, I finally received an offer to operate the dream category of Single-Op, All Bands from D4C in the CQ WW DX contest. As a keen contester, I simply couldn't refuse the offer.



Photo 19 – This is not a military installation; it's the powerhouse station of D4C/D4DX!

D4C is primary configured as a Multi-Multi station. Ironically, for serious single-op efforts, extra equipment is needed. In my case, this included two additional large bags plus hand luggage to carry: a second Yaesu FTDX-10, two sets of automatic bandpass filters, automatic antenna switching for RX and TX, stack match switches for 40-10 meters with 300 meters of control cables, four microHAM Stack controllers, microHAM SO2R accessories and many other small items – a grand total of about 75 kg in extra equipment.

My decision to arrive at the station as early as possible before the contest was a very good one. To be fully prepared, I arrived at the station a full ten days before the contest, taking a total of 15 days for the entire adventure.

My journey started on 12th of November from Vienna, Austria, with an overnight stopover in Lisbon. Upon arriving at D4C, I immediately set-up the station on the same day. Mark D44FF, was there as he lives at the station. I was very thankful for his help and everything he did during my stay.



Photo 20 – Contesting with a view from D4C/D4DX.

Prior to departing for my trip, I started to prepare more seriously for 2BISQ (Two band synchronized interleaved QSO) operating by participating in small contests from E7 and listening to on-line N6MJ sound files. However, I quickly discovered that real-world pile ups before the contest were insane and a total mess.

In the week before the contest some other repairs were completed around the station with many of them were not directly related to the contest. One of the main problems couldn't be solved. The D4C power generator was broken and my search for a backup solution was not successful, which proved to be a serious exposure.

The Thursday before the contest was a rest day, which we spent in downtown Mindelo, enjoying good food and wine. Friday was devoted to fine-tuning and playing with my software logger. As afternoon approached, I managed to have 3-4 hours of sleep. Waking up two hours before the contest, I had a great pre-contest dinner, switched everything on and then one hour before the contest my worst nightmare took place -- a power outage.

Just a few minutes before the contest started, power was restored, however my DX-log configuration file was damaged, and I lost all my logger data. It took some time to reset everything, finally being prepared to go 15-20 minutes after the contest started! In some ways, I still don't know how I managed, but I was back in the game.

The first day produced many hours around 300 QSOs/hour. Even though 10/15 meters closed a bit early by D4 standards, I finished the first day with 6K QSO in the log and around 10 million points. The second night was very difficult, with high noise levels and difficult pileups on the low bands, killing the rates achieved in the first day.

On the second day, propagation was not as good. Even though 10/15 meters produced some solid rates, the bands closed early, and I was forced to move to lower bands. 20 and 40 meters were very difficult with a lot of echoes and huge pileups. In the end I missed 10K QSO by a little bit but still finished the contest by claiming a new World Record.

This was my first SOAB CQ WW DX contest from the real DX side. The use of 2BISQ-style operating from this side is completely different in many ways forcing you to operate at a new and challenging level.

My sincere thanks to Luca, IK2NCJ, Max, IZ4DPV, and the whole D4C team for letting me use this great station and for their support and encouragement.

73, Braco, E77DX



Photo 22 – Fine dining is just one of the benefits of operating from Cape Verde!



Photo 21 – Braco, E77DX, managed to share a “sleepy smile” after completing his record-setting 20.2M point effort from D4DX.

The Montenegro Experience – 4O3A

It was a dream to utilize the 4O3A station. My short story is that I operated remotely from my office, which is about 12 km away on Obosnik Hill. The contest went so smoothly that I'm still not sure if this should be classified as "remote" or "non remote" operation. The same, or almost the same behavior was as if I was in the same room as the rack in Photo 25!

Thanks for a great contest and amazing experience!

73, Dragan, 4O4A

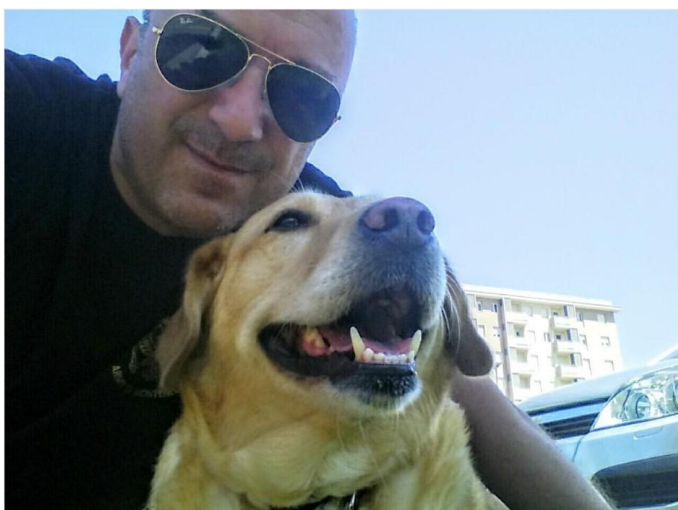


Photo 23 – Here is Dragan, 4O4A, along with his loyal assistant!



Photo 24 – Some of the impressive antennas at 4O3A. Note that there is much more on the ground waiting to be raised!



Photo 25 – 4O3A utilizes a FlexRadio 6700 as well as a Power Genius XL amplifier and Tuner Genius XL antenna tuner..

Band Breakdowns

WORLD SINGLE OPERATOR ALL BAND

High Power

D4DX	249/15/53	886/24/78	1475/31/91	1599/34/102	2801/35/125	2553/32/108
V47T	103/10/18	454/14/57	1858/31/97	2285/37/106	2714/34/112	2618/32/99
ZF5T	314/14/49	761/19/68	1673/29/83	2019/38/99	2550/32/99	2583/35/94
8P5A	185/10/29	578/20/67	1388/31/88	1722/35/94	2282/34/111	2843/34/110
CR6K	260/15/50	1079/21/72	2061/32/95	2072/36/96	2473/36/104	2342/35/98
TO4A	102/9/24	619/16/60	1443/31/92	1565/35/99	2057/34/100	2222/35/100
EF6T	178/8/40	1072/19/71	2097/32/95	2057/33/91	1930/33/97	2024/34/98
VE3JM	295/14/39	792/14/58	1457/27/84	1352/31/89	870/30/84	1554/32/96
VY2TT	21/7/13	1010/15/61	1366/27/86	1395/33/89	1451/27/88	1424/26/88
RA9P	222/11/47	711/22/74	1220/30/92	903/36/105	1021/29/104	1201/30/99

Low Power

V26K	92/9/22	420/14/60	1767/30/93	1646/38/100	2302/35/106	2615/33/104
PZ5DX	8/2/8	175/17/46	979/32/91	1459/36/101	1676/35/112	2609/38/119
UB7K	181/11/48	503/20/72	1209/31/105	802/33/100	1022/35/113	899/35/107
NN7CW	12/5/8	202/13/53	645/23/71	816/31/84	877/26/77	1192/31/86
N1UR	44/8/24	288/14/48	742/25/87	533/31/82	817/29/92	695/28/92
4X7M	73/5/31	438/10/47	710/17/60	992/21/69	762/22/66	785/25/66
UW5Y	169/9/41	420/16/61	811/28/77	622/26/66	927/29/77	841/33/96
LY4L	235/8/40	454/16/62	815/26/92	612/25/78	582/31/90	694/31/97
OR2F	133/10/45	479/16/66	679/28/88	475/24/71	796/32/89	500/29/59
OL5Y	157/9/45	532/16/64	821/24/78	687/25/66	552/26/83	562/27/68

QRP

4O4A	0/0/0	96/5/29	974/20/72	754/19/68	630/23/69	630/24/67
KR2Q	3/2/2	44/10/25	207/19/68	305/24/79	319/32/100	424/27/84
LY9A	84/4/26	405/9/45	335/23/72	349/22/62	482/22/76	299/24/63
IZ3NVR	30/3/17	286/15/70	217/26/77	263/20/65	311/24/74	307/31/74
DK7HA	105/6/34	322/12/50	211/18/57	293/18/52	302/22/70	305/22/40
W1FJ	7/3/4	43/9/29	181/17/63	207/22/65	231/18/65	256/19/68
DF0BV	10/3/10	108/7/34	168/15/48	208/22/60	257/23/66	244/25/56
ND0C	3/2/2	13/7/5	73/12/35	174/26/65	204/22/67	276/28/73
JR4DAH	0/0/0	9/5/5	140/20/40	171/23/46	281/24/56	264/27/51
JH10GC	3/1/2	46/15/14	148/24/48	107/24/45	254/25/48	280/23/50

WORLD SINGLE OPERATOR ASSISTED ALL BAND

High Power

P3X	160/12/50	992/25/85	1555/34/124	1368/35/116	1586/37/119	2147/37/120
K5ZD	130/15/53	375/20/81	1476/36/126	1193/38/128	1078/37/137	1475/34/131
KP4AA	170/14/40	338/20/75	1116/32/109	1404/38/124	1378/38/132	1975/37/139
P44W	143/12/35	313/18/64	887/32/108	981/38/118	1358/38/120	1790/36/127
OM0R	286/18/62	779/25/87	1336/36/124	1118/36/122	1353/38/131	1444/38/131
VA2WA	288/13/55	527/19/78	1105/27/117	1248/38/123	1129/37/132	1008/35/132
K1ZZ	59/12/39	358/25/88	1092/36/128	1034/37/130	1009/38/139	1001/35/133
II2Q	137/15/62	439/22/85	1103/33/118	1099/37/127	1350/38/130	1054/36/128
KP2B	81/11/30	323/15/58	1087/28/104	1264/37/110	1526/38/116	1623/34/103
ED7W	119/14/46	363/22/80	889/33/115	1289/38/125	1564/38/128	1277/36/126

Low Power

UN4Q	97/9/38	450/19/73	793/29/95	671/33/95	703/28/99	1436/32/101
ZM1A	0/0/0	34/13/17	1108/33/95	1151/30/83	800/31/84	927/28/70
DM7A	113/11/52	535/16/76	663/30/105	733/36/125	661/38/127	564/37/121
KI1G	26/7/17	196/15/66	425/25/99	610/38/117	696/38/130	769/32/125
DJ4MX	70/9/45	241/16/70	576/31/106	480/36/119	538/37/123	654/37/125
EA5M	30/6/26	173/15/64	737/28/91	475/28/90	998/37/112	1102/32/111
R8CT	57/8/28	262/17/62	619/28/104	381/34/115	493/32/111	588/31/107
SN7O	231/9/52	647/17/69	571/29/94	444/35/113	490/37/119	475/35/117
DL4FN	16/2/16	296/12/58	332/21/80	558/36/115	556/36/120	586/36/110
SP1D	97/11/41	259/23/78	319/33/104	573/33/100	363/38/119	531/37/113

QRP

DM2M	124/11/48	358/14/62	307/23/85	347/33/105	485/33/107	426/34/99
DR3W	120/10/43	299/13/58	295/25/84	346/32/92	244/32/88	312/30/76
M1X	0/0/0	246/10/48	289/16/64	326/18/58	308/20/66	99/19/32
HG5O	0/0/0	292/12/56	259/22/68	201/21/60	164/23/58	112/20/36
M7R	26/2/13	216/8/40	244/12/51	139/16/49	167/19/55	200/21/48
SQ2ICX	41/5/26	71/9/38	107/15/55	108/26/71	115/24/68	115/24/65
K6JS	0/0/0	18/6/5	51/13/16	45/16/22	190/26/65	293/28/78
N3CZ	0/0/0	3/3/3	49/13/29	180/22/63	121/24/57	160/21/58
DK3UW	77/4/27	187/10/40	159/12/42	122/12/38	113/16/40	155/21/38
HB9HWI	15/3/10	65/5/33	66/10/41	71/19/62	135/23/69	148/23/54

WORLD MULTI-OPERATOR SINGLE-TRANSMITTER

High Power

TK0C	438/21/80	1260/30/101	2070/34/132	2050/38/135	2437/38/147	2630/37/145
UP2L	188/14/58	925/28/94	2117/35/135	1630/37/134	1762/38/139	1768/37/140
ZF1A	223/14/44	465/21/75	2239/37/131	1934/38/134	1938/38/136	2463/38/141
ES9C	133/21/74	651/31/103	1680/36/138	2191/37/135	2158/38/143	1987/38/146
PJ4A	140/11/33	354/20/68	1752/36/131	1366/38/132	1415/38/137	2268/38/130
TM6M	139/16/63	754/27/96	1632/36/135	1488/38/138	1802/38/143	1988/38/140
W2FU	91/16/54	658/24/92	1258/38/133	1220/38/140	1104/38/141	1924/37/142
VE3EJ	181/16/52	820/22/86	1595/34/131	1212/38/133	1334/38/140	1579/38/138
IO4X	62/15/60	529/29/100	1730/36/132	1669/37/141	1672/37/141	1695/39/140
9A1P	83/15/60	596/26/93	1673/37/132	1653/38/140	1575/38/141	1725/37/143

Low Power

VP5M	132/9/21	506/19/66	1341/32/98	1330/38/109	1663/33/108	1563/34/116
IO6T	85/12/57	481/22/79	833/35/124	1128/36/132	922/38/130	992/35/124
E7CW	188/12/55	562/21/76	1052/32/114	747/36/125	898/38/130	846/36/122
IO3F	112/10/49	538/19/73	963/33/111	1030/36/116	941/38/127	817/35/122
EI8X	87/8/42	599/16/65	1063/24/88	1035/35/118	995/36/123	891/31/112
CT8/PA4O	0/0/0	24/7/24	1126/22/94	1181/32/97	1303/33/109	1459/26/87
HD8CW	0/0/0	18/5/4	367/21/46	553/32/73	1464/34/94	1206/28/93
ZB2BU	0/0/0	255/9/43	538/18/63	1164/31/93	1012/30/92	1096/27/79
AG4TT	1/1/1	88/12/54	233/22/73	504/34/102	454/33/116	567/33/113
JT5DX	44/9/21	558/23/70	592/23/70	414/24/71	394/24/79	238/17/63

WORLD MULTI-OPERATOR TWO-TRANSMITTER

High Power

CR3A	209/16/61	1013/28/92	2983/36/126	2808/38/138	3931/38/140	4184/38/145
PJ4K	229/14/47	975/26/84	3028/36/128	3062/38/138	3515/38/143	3458/37/141
W3LPL	62/16/46	914/26/96	1988/37/131	1726/38/135	2341/39/147	2028/37/149
RU1A	206/23/75	1145/29/104	1810/38/137	2463/38/138	2887/38/146	2260/39/145
A60A	171/11/49	733/23/78	1679/33/120	1670/38/129	2108/37/132	2197/38/135
K9CT	62/14/35	353/22/82	1393/36/134	1708/38/135	1893/38/144	2067/38/149
9A5Y	264/15/64	1421/30/97	2033/36/125	1866/36/130	2176/38/137	2193/38/141
OH5Z	173/16/65	573/30/97	1841/38/138	2159/37/137	2376/38/142	1706/39/142
SK3W	294/20/72	994/29/101	1637/36/133	1805/36/133	2150/38/142	1795/39/139
IP2A	185/16/61	848/27/94	1754/36/131	1746/37/136	2080/38/138	1551/38/136

WORLD MULTI-OPERATOR MULTI-TRANSMITTER

High Power

CN3A	517/16/66	1809/27/96	3463/36/137	4326/38/143	3841/39/150	3645/39/152
CR3W	503/15/64	1371/22/89	2853/38/134	4012/38/144	3187/38/146	2761/37/140
K1LZ	536/23/75	1322/26/102	2466/38/144	2723/38/143	2540/38/146	2608/38/145
KC1XX	414/20/71	1073/29/102	2370/38/141	2732/38/146	2601/38/147	3042/39/153
K3LR	214/21/61	1166/27/102	2448/38/143	2776/38/149	2589/39/150	2719/39/149
PJ2T	416/13/43	848/21/75	2460/33/112	2845/38/129	3453/38/136	2922/38/128
3B8M	85/14/41	501/27/68	1760/35/113	2814/39/140	3206/39/140	3293/39/145
9A1A	1094/24/85	1939/29/98	3075/37/138	3052/38/144	2514/38/141	2246/38/138
M6T	872/17/74	1969/27/100	3379/37/140	3305/38/137	2784/38/142	2112/38/141
LN8W	869/21/77	1864/31/103	2685/35/129	2968/38/142	2356/38/141	1834/39/142

OE8TED 254,625
HA8FK 200,914
I5MXX 171,402
R5WW 155,376
W3NO 155,040
YT4T 155,034

1.8 MHz

MW5B (G3WVG) 145,332
YL3FT 143,008
LY0UKR (UX6IZ) 111,456
S51V 98,826
S53O 91,816
8S0DX (SMODSG) 79,608
9A3JH 65,415
9A2KD 54,880
YT0A 53,331
OG3B 42,947

LOW POWER

All Bands

UN4Q 7,069,860
ZM1A (ZL3CW) 5,595,040
DM7A (DL3JAN) 5,499,270
KI1G 5,456,464
DJ4MX 4,667,260
EA5M 4,447,360
R8CT 4,346,340
SN7O (SP7IVO) 4,256,538
DL4FN 3,611,250
SP1D 3,387,930

28 MHz

PP5RT 739,941
ES7GN 545,337
N4AO (WC4E) 544,431
VE1ANF 543,466
K2SG 521,763
VE9AA 516,384
VA3FF 499,216
RA9AP 492,912
EA1R 489,978
9Z4Y 488,160

21 MHz

FY5FY 1,577,030
FR8UA 623,350
N3UA 582,205
CT7BJG 455,855
E73B 398,898
M5W (MOHMJ) 387,444
E7OX 357,520
G8P (G4CLA) 352,916
UN8PT 351,734
JE1CKA 315,570

14 MHz

EA8/OK6RA (OK6RA) 1,443,240
EA3IN 438,340
9A1AA 408,618
S52W 324,837
YU5M 298,000
SN6S (SP6ZC) 258,217
LY5I 243,386
4X1VF 242,649
N4IJ 228,384
EW1TZ 224,850

7 MHz

R7NW 607,990
HG9X (HA9AX) 280,840
HA8IB 278,535
HA6FJ 224,388
HA6NL 221,392
YT2B 210,307
YU1LA 210,012
DL0VV (DL6KWN) 187,929
HB9HTF 185,132
OM5ALL 170,796

3.5 MHz

PC3T 157,800
4Z4KX 142,044
OK2BFN 107,712
S51W 103,200

YO5AVN 97,064
LZ4T 93,900
HA7NK 85,262
HA8WY 81,356
EW1M 68,848
LZ1ZM 67,956

1.8 MHz

HA0HV 56,334
HA8TKS 48,764
EA6SX 16,592
YU1LD 9,975
YL3GAZ 9,798
DL1RNW 8,178
LZ2ZG 7,488
DM4MN 3,145
OL6B (OK6AB) 3,128
DL5ANS 1,550

QRP

All Bands

DM2M (DK3WE) 2,878,254
DR3W (DL6MHW) 1,932,062
M1X (GOCKP) 810,108
HG5O (HA5OB) 667,024
M7R (G0TPH) 507,680
SQ2ICX 449,004
K6JS 422,675
N3CZ 414,009
DK3UW 360,000
HB9HWI 356,928

28 MHz

M3A (M0UKR) 282,240
HA5PP 229,758
BH4TQX 166,738
LT7D 163,880
DL1EFW 147,378
JA6VZB 128,344
VR2VRC 123,849
4L5P 110,316
JK7DWD 91,200
OM7PY 81,168

21 MHz

HG1S (HA1DAE) 334,695
EF3O (EA3O) 277,290
K3TW 121,323
HA3JB 119,908
VK4KW (VK4BAA) 67,122
RT4W 57,225
W3EK 41,492
SM0OEK 14,112
YB8RW 4,194
4Z4UO 3,625

14 MHz

OM0RX 372,855
UR2Y (US0YW) 227,680
S51Z 109,101
LY4BF 54,902
DL1FY 41,895
S51RW 9,686
HB9FBG 7,458
9A2VX 6,350
JR1LLD 3,403
UT7AA 3,266

7 MHz

S52P 190,092
LY2F 99,004
DK1VD 84,102
HA4FY 71,122
S58R 70,658
UT3N (UT3NK) 44,310
DL1YAW 42,845
EA3QP 39,870
MM8Z (GM7VSB) 34,960
S52CQ 32,844

3.5 MHz

OK1FKD 41,875
SQ9MR 13,560
SN0R (SQ9IAU) 2,822
RM3G 2,233

UT7A (UT7AA) 999

1.8 MHz

OL1A 26,650
UR5FEO 4,366
YO8WW 3,813
IO5T (IK5TBK) 3,071

**MULTI-OP
SINGLE-TRANSMITTER**

HIGH POWER

TK0C 20,011,292
UP2L 19,690,461
ZF1A 19,458,978
ES9C 17,153,120
PJ4A 16,765,364
TM6M 16,325,840
W2FU 15,789,133
VE3EJ 15,029,430
IO4X 15,025,362
9A1P 14,476,500

LOW POWER

VP5M 10,178,066
IO6T 8,341,352
E7CW 6,867,749
IO3F 6,711,832
EI8X 6,175,904
CT8/PA4O 5,132,115
HD8CW 4,300,860
ZB2BU 3,588,515
AG4TT 3,040,686
JT5DX 2,840,994

**MULTI-OP
TWO-TRANSMITTER**

CR3A 39,345,152
PJ4K 35,875,320
W3LPL 22,826,856
RU1A 21,367,400
A60A 19,131,458
K9CT 18,035,250
9A5Y 17,215,783
OH5Z 16,923,385
SK3W 16,519,410
IP2A 15,382,824

**MULTI-OP
MULTI-TRANSMITTER**

CN3A 47,542,509
CR3W 38,914,095
K1LZ 32,142,632
KC1XX 32,075,966
K3LR 31,407,468
PJ2T 29,915,232
3B8M 27,856,920
9A1A 26,301,312
M6T 25,527,062
LN8W 23,010,624

**EXPLORER
SINGLE-OP
HIGH POWER**

SP5LST 2,861,694
OH2XX 963,820
WX8S 548,886
N6GQ 514,017
HG0R 376,365
S53K 369,261
R2PU 305,146
JG3RPL 290,780
SP3WKW 241,264
A26H 217,674

**EXPLORER
MULTI-OP
HIGH POWER**

RM9A 19,604,673
OT7T 17,752,098
PV2K 5,423,837
YU1A 4,628,890
DP5X 1,339,470
RT4D 572,970

7E3E 348

ROOKIE

HIGH POWER

KC1TNO (YT3WA) ... 3,750,929
HA6KG 227,484
WN6A 84,280
SA3MGL 72,756
EA4HQV 3,066
AI5QK 1,776
YF3AJJ 1,387
KN6UDK 540

LOW POWER

BG0DLA 1,927,954
R8CI 852,012
KN6VQ 730,474
SO7NA 646,116
YL3NU 348,000
OM2ADM 300,271
PY7MM 215,760
HA5AX 149,200
VE3RGO 140,184
2E0JLZ 138,976

CLASSIC

HIGH POWER

VK9DX 4,679,520
P49Y (AE6Y) 4,596,600
OH0Z (OH6EI) 4,498,532
EA8RM 4,475,504
3B9KW (MOCFW) 3,573,276
9N7AA (S53R) 3,182,824
YT3D 3,174,000
W4CB (W2RU) 3,102,216
OE4A (DK6XZ) 3,049,680
K9MA 2,973,940

LOW POWER

9J2FI (DL2RMC) ... 2,325,102
N8II 2,049,200
KG9X 1,804,978
S57Q 1,670,632
TA7I 1,494,767
S52NR 1,475,622
3W9A (KULCW) 1,448,064
N0UR 1,336,968
UW8SM 1,188,292
DJ3HW 1,058,064

YOUTH

HIGH POWER

RA9P 9,357,299
DL3ON 4,543,128
WI0WA (W0AAE) ... 4,270,440
DM7XX 304,876
R2BW 302,974
R2BFL 285,570
HA1KHJ (HA1TMP) 62,995
YC3CZV 12,150
W4IPC 11,450
HA3MAR 10,764

LOW POWER

DJ4MX 4,667,260
JG1ZUY (JJ1AHS) .. 1,719,816
DL7PIA 1,439,911
WV4AM 876,418
VE30MV 358,385
YO8OLY 282,338
BI4QKE 270,648
S52KJ 242,262
PY2POA 136,681
SV8SYK 112,944