



IARU HF World Championship 2022 Full Results

By Dave McCarty K5GN (k5gn80@gmail.com)

This was a perfect combination of amazing band conditions and a very fun 24-hour contest! – WN4AFP

Though the number of logs submitted was down in the 2022 Edition of the IARU HF World Championship, the fun was much increased with increased solar flux and improving conditions. 4,037 logs came in this year, down 20% from 2021. This drop may be the result of pent-up demand for other summer activities in the Northern Hemisphere after years of COVID-19 restrictions. The total is only just below the trend when correcting for WRTC-enhanced participation.

There were many first-timers from all continents expressing their enjoyment in the Soapbox comments. For example, Martin, 2EØIMA, jumped in with his IC-7300 and 50' random wire and reported, "My first ever contest entry. Only been licensed for two years and this was great fun!"

One fewer ITU Zone is represented in the logs received this year than last. Zone 28 (central Europe) had the most entries of all the 53 zones. Four fewer IARU Headquarters operations were mounted, but twelve IARU Administrative Council and ITU Region representatives were active to make those four multipliers available. Great conditions in the later part of the contest made the farther flung zones and HQ stations seem much closer than in recent years.

Propagation

Propagation for several days before the contest was very poor, with the lingering effects of coronal mass ejections (CMEs) giving us aurora and otherwise unsettled conditions at the start.

"The Fates did us no favors, 4 coronal mass ejections in less than 24 hours!" – F4FPR

However, the solar flux was rising to new heights, pushing MUFs higher, and conditions that began as rather unremarkable became better and better as the contest went on. Most notable were the openings after dark on 20M and 15M which seemed to be open around the clock in the Northern Hemisphere.

"The first half of the 24 hours was plagued by very poor conditions ... [but later] ... It was past midnight, and 20 was booming with wall-to-wall signals! Propagation had done a complete 180 turn." – KU2M

The contest caught the Solar Flux Index on the upswing as it ranged from 137 to 153. The higher solar flux made it tough going on the bands below 20M. 40 meters was good at times, but 80 and 160 seemed to be disappointments around the world. On the other hand, the increased solar flux made 20, 15, and even 10 at times, better than they had been in years.

"HF bands were fabulous – I had not seen condx like these in a decade – but the low bands were a disaster." – K2LE

"Great propagation helped my simple setup." – I2WIJ

Single Operator

Jozef, OM3GI, repeated as the World top Single-op scorer in the contest with his Single Operator, Mixed Mode, High Power entry from the CR3DX station in Madeira. His new World Record score rose 23% over last year, entirely from increased QSOs and multipliers on 15 and 10 meters. To the east, Aleks, RA9P, was second, and to the west, Mark, VY2EJ, was third.

Mark, KØEJ/VY2EJ, and his wife included a visit to the station of Jeff, VY2ZM, in Prince Edward Island on just the right weekend in their summer travel itinerary and piloted it to the top W/VE spot in the Single Operator, Mixed Mode, High Power category. Ron, VX3AT, went unassisted this time and again took second place with his very competitive station. Both scored well over two million points. Ken, K4ZW, nearly got to 2 million for third place, well ahead of the rest of the W/VE Top Ten.

"Operating a DX contest from Zone 9 has always been on my bucket list. Didn't realize it would be a North American Zone 9!! Fun conditions and location, location, location!!" – VY2EJ



Mark, KØEJ/VY2EJ, operating at VY2ZM on his way to a top score (K1ZM photo)

Matt, IZ3EYZ (as IY3A), overcame transceiver failure halfway through the contest to win World Single Operator, Mixed Mode, Low Power, but failed to reach his goal of a record score which had seemed to be in reach before the breakdown. Vladimir, UN6LN (operating as UP7L), came in second from north-central Kazakhstan in Asia, and Art, EU2F, took third from northern Europe with his big quad antennas.

The top score in W/VE Single Operator, Mixed Mode, Low Power was posted by Peter, KU2M, who overcame trouble with his 80M antenna to post a big win. Second place was taken by Mike, N2EM, with a good effort from his Pennsylvania QTH. Jeff, N8II, only had limited time but put in a solid third place score.

The Phone-Only category can be challenging in this CW-dominated contest. However, there can be high rates at times, and rare DX stations often show up only on SSB. World Single Operator, Phone Only, High Power was ruled by a big score from D4K atop Monteverde, operated by Max, IZ4DPV. Seth, 4X1DX, was second. In the fierce competition in Europe, Pavel, RA3OA, came out on top for third place in the world.

W/VE Single Operator, Phone-Only, High Power was dominated by Tariq, N2QV, at his top-notch station, with Mike, NT6X, and Mike, NG1M, following. It was NG1M's first time to go high power in this contest, and he had a ball.

"I read my postings & I sound like a giddy teenager – not someone in their early 60s." – NG1M

Stefan, YO7SR, and Mario, DG6IMR (as DM5B), fought the QRM in Europe to a 1-2 World finish in Single Operator, Phone Only, Low Power. QRP was also mostly a European affair, with only Om, YBØSSF, making the Top Ten from outside Europe and setting a new Oceania record in the process.

In W/VE, Alex, W6AFA, ran away with the Single Operator, Phone-Only, Low Power category, with a score big enough to be third in the world. Bill, W8QZA (as W6QU), put in the top W/VE score in the challenging Single Operator, Phone Only, QRP category. It is interesting to note that several of the high W/VE scores in Phone-Only were made from the USA West Coast.

The top scorer in Single Operator, CW-Only, High Power was Roger, EA3M, who traveled to the Ibiza station of Vicenç, EA6FO, to see if his 2BSIQ practice sessions had improved his performance, resulting in a new Europe record. Preparation pays off! Oleg, RM9I, and Phil, KT3Y (at KP2M), fought closely for the second and third place scores. With so much activity in Europe, it is surprising that only two other places in the Top Ten were taken by European efforts. Four of the top W/VE scores made the World Top Ten.

Single Operator, CW Only, High Power was hotly contested in W/VE again this year, with many scores over one million points. The top three positions were taken by stations west of the Mississippi. This is the second year in a row that a station from the west has won this category, which is typically dominated by stations in the northeast. Scores go up when one keeps his butt in the chair. Mike, N7MH, operating from the excellent club station at Stanford University, W6YX, put an emphasis on BIC, coming out on top. Pat, N9RV, lost time to thunderstorms but came in a close second. George, WØUA, at the station of his friend Chuck, KØRF, fought the summer QRN to a fine third place score.

“Summertime...and the living is easy, so goes the old song. But the LISTENING isn't easy! Well, that's what we get in July...and a little QRN ain't gonna' stop this party--noise, schmoise--we're contest ops & we're up for the tough ones!” – WØUA

It was a close race in the W/VE Single Operator, CW Only, Low Power category, too. Dave, K1VUT, wound up just ahead of Dan, W1QK, for top honors. The difference was his stronger high band multiplier. Will, WJ9B, came through with an excellent third place score from out west. World traveler Bob, W7YAQ, stayed home and ran away with the top slot in Single Operator, CW Only, QRP. His score placed third world wide.

The World top Single Operator, CW Only, Low Power was Zvi, 4X6FR, followed by DL3JAN, and Martin, OL5Y. Martin only entered CW Only at the last minute because he lost his voice while on vacation with his family. Rudolf, DK7HA, in first place and Ati, HA3HX (as HG3C), topped W7YAQ's third place score in the World Single Operator CW Only, QRP category.

Single Operator Unlimited

Scores continue to rise in the Single Operator Unlimited categories as more top-skill operators join in. Jack, R2AA, set a new World Record in Single Operator Mixed Mode, High Power, followed closely by Jon, EA2W, in second place.

Randy, K5ZD, took third place World and top W/VE honors in this running with a new record score. Randy kept enough of his antennas in working order during a major summer tower replacement project to stay competitive. In second was Alex, KU1CW, with a good effort from W7, but he admitted that he should have done less SSB at the start and more at night. Next was Charles, K3WW, with another mostly CW effort.

The Single Operator Unlimited, Mixed Mode, Low Power category World Top Ten was mostly a European competition. Laszlo, HA8QZ (as HG5D), proved he could do more than his preferred mode of CW and came up just short of the Europe record in first place, followed by Zlatko, 9A2EU, at club station 9A7T and Harry, LZ1GU (as LZ6E).

“I was committed to 24 hours so I continued!” – WN4AFP

Dave, WN4AFP, made this his “first 'start-to finish' full-time contest.” His score on the online scoreboard was behind the competition at midnight but, he stuck with it. This took him to the top W/VE score in Single Operator Unlimited, Mixed Mode, Low Power. Sebastian, KI2D, came in second using his wires near the lake. Third place finisher Kevan, N4XL, was ahead of his buddy Dave, but had to pull the plug early, and said,

“Wish I could have kept BIC!” – N4XL



Sebastian, KI2D, took a short break halfway through the contest for this “BIC” selfie (KI2D photo)

Pit, DK3WE, set a new World Record in Single Operator Unlimited, Mixed Mode, QRP, more than doubling the second-place score of DL2OE (as DM2X). Imre, HA6IAM (as HG6C), was third.

A new World Record in Single Operator Unlimited, Phone Only, High Power, was set by Didier, FY5FY. He was followed closely by Zoli, HA1AG, who set a new Europe Record. Max, ON5UR (as OR1X), was third. All three broke the two-million-point barrier.

Mike, WØEWD (as WIØWA), topped the W/VE Single Operator Unlimited, Phone Only, High Power class with a new record score.

A new Europe record was set by Laci, HAØNAR (as HGØR), in Single Operator Unlimited, Phone Only, Low Power. Close behind was John, IK4LZH, followed by Robert, YO7WC, in third. Gabi, YO8WW, set a new World Record in Single Operator Unlimited, Phone Only, QRP, with Steve, WB4OMM, and Daniel, YO5DSG, following. Steve's QRP score is third in W/VE Low Power and a new QRP W/VE record.

Luca, IK2PFL (as IR2Q), narrowly edged out Krzysztof, SP7GIQ (as SN7Q), for first place in the very crowded World Single Operator Unlimited, CW Only, High Power Top Ten. OH1TF, was close behind them in third place. Six stations in this category scored above three million points!

Single Operator Unlimited, CW Only, High Power was very competitive again in W/VE this year. Dave, K1ZZ, came out on top over Steve, NY3A, and Gator, N5RZ. All of them broke the two-million-points barrier. Gator's third place showing is remarkable as he is only part-way through rebuilding his station after a devastating ice storm in 2021.

Alex, UY4MK, operated from his war-torn country to set a new World Record in Single Operator Unlimited, CW Only, Low Power, taking first place World. Oleg, R8CT, and Boguslaw, SP7IVO (as SN7O), were second and third. Goran, DM7AA, and Bernie, GM4WZG (as GM4X), led the way in Single Operator Unlimited, CW Only, QRP.

Mike, AD5A, cobbled together enough working parts of his station after a bad lightning strike to come out as the top W/VE in Single Operator Unlimited, CW-Only, Low Power over Keith, W3KB. Bob, WA1FCN came in third from Alabama with a personal best score. KJ5T barely edged out K2AL for top W/VE honors in QRP.

Multioperator

Several operators mentioned in their Soapbox comments that this was their first entry in the IARU HF World Championship. Others mentioned it being their first time to join in as single operator entries, after training in multi-operator teams. Kudos to the team leaders who welcome new and learning operators to teach them how to do it right.

"First time I've joined [this contest in] 2021 with Club DXØHQ, now in 2022 I used my personal call. Mabuhay!" – 4I1EBD

The trend of returning to in-person teams, often supplemented by remote operators, continued in 2022 as fears of COVID-19 subsided. However, the number of logs in the Multioperator, Single Transmitter category remains below the long-term trend.



Brandon, KFØHOG, working hard at the Elayer Contest Club station in the Multi-operator Low Power category (NØAX photo)

The RM9A team who had won the Multioperator, Single Transmitter World title three out of the last four years set a new team-best score but were upset by the EW5A team, who posted the second highest QSO total and third highest multiplier total of all non-HQ stations this year. Their score set a new Europe Record. Third place went to perennial competitors RU1A.

George, K5TR, and Robert, K5PI, operating from George's growing station in Texas, beat their prior best score to lead all W/VE stations in the Multioperator, Single Transmitter category. Robert did most of the CW operating and George did all of the 'phone. The team at the growing station of Krassy, K1LZ, in New England came in a close second, though Krassy was in Bulgaria as part of the LZØHQ Headquarters operation. The W4WF team also broke two million points in third place.

A new special category approximating the WRTC 2018 competition rules was implemented this year (see discussion below and in the related sidebar Vedran 9A7DX, and Zvonimir 9A3LG, operated at club station 9A5Y to put in the top score in this category. Adherence to the WRTC limitations was varied among competitors in this category; many chose to exceed the limits and enter checklogs.

Headquarters and IARU Special Stations

Sixty IARU member societies fielded Headquarters Station entries this year. These efforts range from the major European entries networking eight or more superstations, with sixty or more of the nation's most capable operators on hand, to one or more authorized operators in simple one-station efforts. All are commended for getting on the air and making it happen.

IARU SOCIETY HQ STATIONS	
Station	Score
DAØHQ	28,119,618
TMØHQ	27,952,242
EF4HQ	25,717,824
SNØHQ	22,798,215
9AØHQ	22,565,360
S5ØHQ	22,039,760
GR2HQ	21,867,680
IOØHQ	21,502,024
LZØHQ	20,378,096
OH1HQ	19,419,328
YTØHQ	18,200,652
R1HQ	16,830,468
E7HQ	16,218,875
OPØHQ	14,745,130
OEØHQ	12,923,652
HGØHQ	12,330,048
C4HQ	11,017,216
YRØHQ	10,742,236
W1AW	10,297,154
OZ1HQ	10,260,900
PA6HQ	9,677,931
OM2HQ	6,751,590
LN2HQ	6,425,100
8NØHQ	6,389,586
Z3ØHQ	5,992,406
LT4RCA	5,497,275
SK9HQ	5,292,483
CX1AA	4,673,116
BØHQ	3,717,311
UN1HQ	3,354,351
DXØHQ	3,070,095
ER7HQ	2,280,855
EIØHQ	2,117,984
A47HQ	1,880,337
ZL6HQ	1,537,620

JU1HQ	1,422,018
PJ2HQ	1,263,240
E2HQ	1,232,075
7A1HQ	1,172,796
LX8HQ	886,907
HBØHQ	844,992
HZØHQ	817,904
NU1AW	801,420
OY1CT	605,748
PX2HQ	408,870
TC6ØHQ	346,764
HLØHQ	296,205
AT1HQ	293,778
HIØRCD	212,040
BVØHQ	177,240
XE1LM	109,005
4LØHQ	97,204
STØHQ	61,845
VK1WIA	47,321
YS1YS	42,180
IARU Administrative Council Stations	
W5ZN	1,116,960
VE6SH/7	941,261
SM6EAN	759,600
IARU R1	
DJ3HW	452,025
Z32TO	341,000
PA2LS	12,152
IARU R2	
XE1KK	55,158
VE3YV	31,080
PT2ADM	9,424
IARU R3	
JH1NBN	153,440
JA1CJP	11,115
VJ3O	9
Scoring of IARU HQ and Special Station logs provided by World Wide Radio Operators Foundation (WWROF).	



IARU President Tim Ellam, VE6SH, (shown here) was edged out by IARU Secretary W5ZN (VE7JH photo)

Tim, K3LR, and Frank, W3LPL, organized a distributed W1AW/3 operation across stations in all parts of W3-land. Station hosts were W3LPL, K3MM, N3OC, AA1K, AA3R, W3GH, NO3M, K9RS, and K3LR. They commented, “It was great to say hello to all operators worldwide! Conditions were fantastic! We had a great time!”

The number of available HQ multipliers fell from the prior year as a few societies which put in major entries in the past chose not to participate in protest over the Russian invasion of Ukraine. Others chose to get on and connect with people across the world and across such divides. As Jim, ON4PT, said in his comments,

“These last few months our world was shocked by war shaking our modern way of life and ham radio adventures, not in the least the friends and peoples in the Ukraine and Russia, leaving many casualties and lives lost. Many have lost a relative or their home. In times like these we first and above anything else have to think that our hobby is one for helping others in difficult situations and that contesting should be more a way to test our readiness for helping in catastrophes rather than competing. Let us have special thoughts and prayers for those that are the victims of wars, climate change and other twists of nature or men.” – ON4PT

DAØHQ (DARC) returned to the top spot in their head-to-head competition with TMØHQ (REF). The EF4HQ (URE) team in third place commented emphatically, “WE WILL BE BACK!” The rivalry between these three teams is illustrated in this table of the last ten years of HQ competition. Shading indicates the few Headquarters entries other than DARC, REF, and URE to reach the top three places in the past decade.

Year	First Place	Second Place	Third Place
2022	DAØHQ (DARC)	TMØHQ (REF)	EF4HQ (URE)
2021	TMØHQ (REF)	DA0HQ (DARC)	S5ØHQ (ZRS)
2020	DAØHQ (DARC)	TMØHQ (REF)	SNØHQ (PZK)
2019	TMØHQ (REF)	DAØHQ (DARC)	OL9HQ (CRC)
2018	TMØHQ (REF)	DAØHQ (DARC)	EF4HQ (URE)
2017	EF4HQ (URE)	DAØHQ (DARC)	TMØHQ (REF)
2016	TMØHQ (REF)	EF4HQ (URE)	DAØHQ (DARC)
2015	C4HQ (CARS)	TMØHQ (REF)	EF4HQ (URE)
2014	TMØHQ (REF)	EF4HQ (URE)	DAØHQ (DARC)
2013	DAØHQ (DARC)	EFØHQ (URE)	TMØHQ (REF)

Top Scoring HQ Stations, 2013-2022

The World Radiosport Team Championship

“Nice to work/hear WRTC practice stations. Hope they will prepare enough to do their best before the event” -- JA8RWU

The World Radiosport Team Championship (WRTC) is an on-site ham radio competition held every four years. Teams of two operators representing a geographical region of the world come to the host site to compete using similar antennas and locations, overseen by on-site referees. The WRTC competition is held as a contest-within-a-contest coincident with the IARU World HF Championship to capitalize on the high activity of a popular world-wide operating event.

The next World Radiosport Team Championship would have been held in Italy concurrently with the 2022 IARU HF World Championship. Unfortunately, WRTC 2022 had to be pushed back one year due to the worldwide public health challenges and government responses to the COVID-19 pandemic.

Teams have been preparing since last year, operating contests together and gathering and preparing their equipment. Several traveled to Europe to experience firsthand the unfamiliar propagation conditions on the continent. See the sidebar later in this article for the story of qualified teams getting together to practice and prepare.

Hosting the WRTC competition is a monumental task for the sponsoring organization. Donations of money and volunteer time are critical to their success and most

appreciated. Visit the website, <https://www.wrtc2022.it> for more information on WRTC 2022 Italia.

Onward to 2023

Save the date for the weekend of July 8-9, 2023, when the next IARU HF World Championship fills the airwaves. The contest always starts at 1200z on Saturday and runs a full 24 hours. Plan ahead so we're not hearing your excuses for not getting on more! The fact that 2023 will be a WRTC year adds exciting flavor to the on-air feast, with awards by the sponsor organization for making QSOs with the teams.

"I really enjoyed the contest and am looking forward for next year with the WRTC stations on air." --ON4EZJ

Cycle 25 is in full swing now. Let's hope conditions and activity continue to rise for the next running of this great contest.

Records

The improving conditions set the stage for many world, continental, and ARRL Division records to fall. Nine category records were set in Europe and seven in Oceania! Can you break your area's record in your favorite category next year?

NEW WORLD RECORDS		
CALL	CATEGORY	
CR3DX (OM3GI, op)	SO-MIX-HP	
R2AA	SOU-MIX-HP	
DK3WE	SOU-MIX-QRP	
YO8WW	SOU-PH-QRP	
UY4MK	SOU-CW-LP	
9A5Y	M2LP	
NEW CONTINENTAL RECORDS		
CALL	CATEGORY	CONTINENT
CR3DX (OM3GI, op)	SO-MIX-HP	Africa
4I1EBC	SO-MIX-LP	Oceania
YBØSSF	SO-PH-QRP	Oceania
EA6FO (EA3M, op)	SO-CW-HP	Europe
EA8RM	SOU-MIX-HP	Africa
R2AA	SOU-MIX-HP	Europe
4I1EBD	SOU-MIX-LP	Oceania
DK3WE	SOU-MIX-QRP	Europe
YV6BXN	SOU-MIX-QRP	South America
HA1AG	SOU-PH-HP	Europe
VJ4T	SOU-PH-HP	Oceania
FY5FY	SOU-PH-HP	South America
CN8SG	SOU-PH-LP	Africa
HGØR (HAØNAR, op)	SOU-PH-LP	Europe
YO8WW	SOU-PH-QRP	Europe
KH6AQ	SOU-CW-HP	Oceania
UY4MK	SOU-CW-LP	Europe
WP3C	SOU-CW-LP	North America
CT9/DK4SR	SOU-CW-QRP	Africa
YD9UW	SOU-CW-QRP	Oceania
EW5A	MSHP	Europe
E2WRTC	M2LP	Asia
9A5Y	M2LP	Europe
XE1CRG	M2LP	North America
DU1ED	M2LP	Oceania
ZY8AM	M2LP	South America

Operating category key:

M2: Multioperator, Two Transmitter
 MS: Multioperator, Single Transmitter
 SO: Single Operator; SOU: Single Operator Unlimited
 CW: CW Only; PH: Phone Only; MIX: Mixed Mode
 HP: >100W; LP: <=100W; QRP: < 5W

NEW USA/CANADA OVERALL RECORDS		
CALL	CATEGORY	
K5ZD	SOU-MIX-HP	
WIØWA (WØEWD, op @WØEWD)	SOU-PH-HP	
WB4OMM	SOU-PH-QRP	
N2AA	M2LP	
NEW ARRL DIVISION RECORDS (by Division)		
CALL	DIVISION	CATEGORY
W3EK	Atlantic	SOU-PH-QRP
W3KB	Atlantic	SOU-CW-LP
N2AA	Atlantic	M2LP
W9NZ	Central	SOU-PH-HP
NV9L	Central	MSHP
W4SDX	Delta	SOU-PH-HP
WN8Y	Delta	SOU-PH-LP
AD4EB	Delta	SOU-CW-HP
N8AA	Great Lakes	SO-CW-QRP
KU2M	Hudson	SO-MIX-LP
N2QV	Hudson	SO-PH-HP
KI2D	Hudson	SOU-MIX-LP
WA2DNI	Hudson	SOU-PH-HP
WIØWA (WØEWD, op @WØEWD)	Midwest	SOU-PH-HP
WØECC	Midwest	M2LP
K5ZD	New England	SOU-MIX-HP
W1FM	New England	M2LP
W7YAQ	Northwestern	SO-CW-QRP
KU1CW	Northwestern	SOU-MIX-HP
W6YX (N7MH, op)	Pacific	SO-CW-HP
W7ZR	Pacific	SOU-CW-LP
K2GMY	Pacific	SOU-CW-QRP
N6WM	Pacific	MSHP
K4ZW	Roanoke	SO-MIX-HP
KEØUI	Rocky Mountain	SOU-MIX-HP
NA4DA	Southeastern	SOU-PH-HP
WA4AH	Southeastern	SOU-PH-LP
WB4OMM	Southeastern	SOU-PH-QRP
WA1FCN	Southeastern	SOU-CW-LP
K4AB	Southeastern	M2LP
W6AFA	Southwestern	SO-PH-LP
NT6Q (N5ZO, op)	Southwestern	SOU-CW-HP
N5RZ	West Gulf	SOU-CW-HP
AD5A	West Gulf	SOU-CW-LP
K5TR	West Gulf	MSHP

Operating category key:

M2: Multioperator, Two Transmitter
 MS: Multioperator, Single Transmitter
 SO: Single Operator; SOU: Single Operator Unlimited
 CW: CW Only; PH: Phone Only; MIX: Mixed Mode
 HP: >100W; LP: <=100W; QRP: < 5W

Excuses, Excuses

Typically, it's work that gets in the way of our hobby, but summer in the Northern Hemisphere presents distractions from contest operating that winter contests may not. Here is the list of excuses for limited operating hours found in the Soapbox comments (callsigns withheld for anonymity):

Exhaustion after a twelve-hour drive back from vacation
Busy work week

Family commitments
Daughter's birthday
Grandson's birthday party
Babysitting the grandchildren
Visitors to the home
House guests
Previously scheduled dinner plans
Horse show

City water supply failure
Thunderstorms
Undiagnosed lightning strike damage

New puppy
New baby

Antennas not ready
Software issues
Unexpected Windows update
Transceiver failures
Unexpected amp issues

Commercial power outage
Hot water heater failure
Local line noise
Air conditioner RFI

Recovering from a root canal
Recovering from surgery

Busy with "other stuff"
Chores that needed doing
Cleaning the pool

Wimbledon
TV and naps

Didn't plan to participate

Constipation

One might say that many of these sound like inadequate planning and failure to prioritize preparing and clearing the decks for the most important thing going on that weekend. Don't cut short or miss out on the fun next year. Most of the commenters indicated regrets!

Getting Ready for the Next World Radiosport Team Championship

“Good luck to those who will be in WRTC next year. I hope that the conditions exceed those we encountered this year.” – KØOO

Qualifying for the WRTC is a grueling adventure. Top operators from across the world strove against their regional competitors in nearly all the major contests of 2019 and 2020 to see who would qualify to represent their region as Team Leader. Those who competed but did not qualify were eligible to be selected by Team Leaders as Teammates. Fifty teams were formed through this process; additional youth and sponsored teams plus the reigning champs from 2018 round out the field of potential champions.

The 2021 and 2022 IARU HF Championships have been practice grounds for the qualified team leaders and their chosen teammates. This year, with travel restrictions easing, several teams took “scouting trips” to Europe to enter the contest closer to where WRTC 2022 will be held. Such trips allow the ops to get some practical experience operating this specific contest from the host country ahead of the real event. Many who were unable to reach the continent nevertheless got together for the contest, albeit closer to home.



Dennis, W5KU, pronounces his station good to go for Nate, N4YDU, and Dave, K5GN, for their WRTC practice effort (photo by K5GN)

WRTC teams operate as two-person multioperator efforts using only two barefoot transmitters (aka Multi-Two, LP) without band change limitations. The antennas are the same for all teams. The teams bring their own inside equipment. The scoring uses different points per QSO and the multiplier is HQ Stations plus DXCC countries worked per band instead of ITU Zones. 80-10m are used for simplicity of antenna setup. Super Check Partial, CW decoding devices, internet spotting assistance, and the like are not permitted.

The rules for the IARU HF Championship were modified to accommodate such efforts by adding a Multioperator, Two-Transmitter Low Power entry class with rules and limitations similar to those expected to be in place for WRTC2022. WRTC teams – and many others intrigued by the new rules – chose to enter this category to prepare and compare their efforts. Some entered this category but chose to use high power and therefore turned in check logs. Some self-limited their antennas to something similar to what is expected in Italy, while others chose to use all the available aluminum.

The new rules for multioperator, two-transmitter did not specify a limit on the number of operators. Those serious about practicing kept it just to two. The rules also did not change the multiplier basis to include DXCC countries rather than ITU Zones. Most who chose to enter the new category for practice chose to chase countries rather than zones. Logs were received from 121 DXCC countries this year, so there were plenty of countries to chase!



Ted, N9NB, and Mike, W9RE, experiencing European propagation from IR4X (I4UFH photo)

In WRTC 2018, as Sunspot Cycle 24 was winding down toward its minimum in late 2019, high band conditions with very few sunspots meant limited openings on the high bands and less absorption on the low bands. This year’s IARU HF Championship experienced a significantly more energetic ionosphere, with a mix of disturbed and quiet

conditions and elevated MUFs. This was much closer to the kind of conditions we may expect to see in 2023.

The WRTC on-site competition is not just about operating. Since the teams bring their own radios, computers, accessories, and antenna switching hardware to the host location, having everything working is of paramount importance. Some chose to practice setting up and using their gear at home for this contest as an end-to-end evaluation to identify gaps or needed improvements.

In the end, bragging rights among W/VE team entries goes to N2AA (W2GD and AA3B). Of those who traveled to Italy, the IR4X team of W9RE and N9NB had the top score. Overall, they were bested by the 9A5Y team (9A7DX and 9A3LG) operating from home in Croatia.

CALL	CW QSOs	SSB QSOs	Mults	Score*
9A5Y	2270	967	434	4,184,194
IR4X	2228	801	423	3,932,631
IR7T	2205	1174	399	3,693,942
DM5W	1967	399	410	3,293,120
N2AA	1854	675	346	3,154,482
IR2M	2101	487	390	3,007,290
IR4K	1966	279	392	2,591,120
IQ4FA	1624	388	353	1,923,497
K4AB	1635	280	289	1,789,488
E2WRTC	1231	134	323	1,777,792

*Scores calculated using the WRTC-2018 method for QSO Points

WRTC Practice Station (Multi-two, Low Power) Results

Top Ten Scores

United States and Canada		World		United States and Canada		World	
Single Operator				Single Operator Unlimited			
Phone Only, High Power				Phone Only, High Power			
N2QV	821,808	D4K	4,279,410	WIØWA (WØEWD, op @WØEWD)	773,310	FY5FY	2,597,561
NT6X	304,292	4X1DX	1,787,775	VE2NTT	554,898	HA1AG	2,504,754
NG1M	194,139	RA3OA	1,600,665	NA4DA	413,877	OR1X	2,023,924
K9MWM	92,684	EA3CI	1,509,868	W3ICM	286,810	PV2K (PY2KNK, op)	1,655,736
KE8FT	86,496	ED3C (EA3IBV, op)	1,354,620	W4SDX	195,891	F8KGM (F5USK, op)	1,425,060
N4MM	72,048	PY6RT	1,087,740	AA5H	184,646	SN7D (SQ7D, op)	1,332,604
VA3ZNQ	63,648	9A3B	964,964	W9NZ	143,208	IKØPHY	1,125,451
W2CN	51,688	N2QV	821,808	WW5L	133,104	DM6ØUEA (DL3BQA, op)	1,072,996
W4SLT	50,490	SP7MC	661,400	KØOO	114,402	HG1A (HA1ZN, op)	929,392
KW6S	36,972	RW9LL	490,056	K4SBZ	102,830	8SØC (SMØMPV, op)	922,064
Phone Only, Low Power				Phone Only, Low Power			
W6AFA	480,704	YO7SR	700,480	WA4AH	128,656	HGØR (HAØNAR, op)	1,235,934
VE2HIT	82,711	DM5B (DG6IMR, op)	539,552	VA3IDD	104,190	IK4LZH	1,151,403
K5DHY	76,700	W6AFA	480,704	NY2A	71,298	YO7WC	465,270
VE3GJP	76,000	IK4RQJ	413,354	VE3HZ	43,488	CT2HOV	412,224
VE2IAA	62,238	PFØØT (PA2TMS, op)	398,096	KG2MM	37,741	IT9FRX	376,014
VA3KRT	56,335	UA3BL	314,018	KN4MIV	33,684	UA9R	289,648
N2ESP	48,043	LA9TY	300,810	AB5KM	21,052	SV3RPQ	278,604
AB1F	41,426	F4BHK	290,320	W2TAD	9,374	DL4VAI	271,728
WA4JA	41,013	UF2F	251,952	W5IOH	9,350	OK1K (OK1XOE, op)	263,006
WØCN	28,885	M1T	194,580	N2OG	7,869	ED7R (EA7GX, op)	230,600
Phone Only, QRP				Phone Only, QRP			
W6QU (W8QZA, op)	10,718	MI7DGO	81,351	WB4OMM	90,528	YO8WW	289,804
KE8TUJ	663	SP9TKW	70,528	W3EK	665	WB4OMM	90,528
VE3RXH	66	HB9EGA	58,429	WO7A	3	YO5DSG	4,032
		YBØSSF	43,258			CE3UVT	1,065
		SP4LVK	36,432			W3EK	665
		HA1TI	22,352			YT5DEY	656
		SP5LCT	21,690			F4HWD	120
		EW8ZO (EW8RX, op)	21,038			YC8EJ	120
		IZ4AIF	20,055			JA1NEZ	66
		DKØBM (DK7CH, op)	17,408			WO7A	3

Top Ten Scores

United States and Canada		World		United States and Canada		World	
Single Operator				Single Operator Unlimited			
CW Only, High Power				CW Only, High Power			
W6YX (N7MH, op)	1,782,368	EA6FO (EA3M, op)	3,933,719	K1ZZ	2,706,048	IR2Q (IK2PFL, op)	4,075,500
N9RV	1,692,417	RM9I	2,548,557	NY3A	2,286,270	SN7Q (SP7GIQ, op)	3,929,634
WØUA	1,499,860	KP2M (KT3Y, op)	2,235,084	N5RZ	2,009,364	OH1F (OH1TM, op)	3,554,144
NA8V	1,296,770	W6YX (N7MH, op)	1,782,368	W1ZE	1,915,434	R8OM	3,272,035
N6TV	1,231,389	N9RV	1,692,417	N9NC	1,729,762	OK3C (OK2ZC, op)	3,185,280
W1KM	1,199,340	EF8BBM	1,621,024	K3JO (AE2W, op)	1,656,190	OM8CW	3,043,415
K8GL	977,823	WØUA	1,499,860	NT6Q (N5ZO, op)	1,654,556	K1ZZ	2,706,048
K6NA	968,200	R3ZZ	1,421,160	AD4EB	1,489,672	R8TT	2,655,828
K1IMI (N4CW, op)	770,012	NA8V	1,296,770	VE9AA	1,257,856	RT9A	2,514,761
NI6W (W4EF, op)	706,014	TF3D (UT4EK, op)	1,270,675	N3AD	1,127,529	OG2P	2,512,086
CW Only, Low Power				CW Only, Low Power			
K1VUT	575,016	4X6FR	1,808,400	AD5A	721,240	UY4MK	3,145,780
W1QK	568,296	DL3JAN	1,422,576	W3KB	667,152	R8CT	2,197,566
WJ9B	416,760	OL5Y	1,349,418	WA1FCN	440,115	SN7O (SP7IVO, op)	1,978,736
N7VM	397,111	J11RXQ	763,812	WO1N	410,942	RA3AN	1,829,172
KØAD	392,880	DL9ZP	657,580	VE3YT	323,330	UN4Q	1,591,912
WB4TDH	377,244	AH6KO	598,320	VE3MV	242,214	UN4L	1,547,923
AA8CA	314,314	K1VUT	575,016	N2YO	228,346	WP3C	1,448,931
VE3TM	283,878	W1QK	568,296	W2CDO	222,112	SP2R	1,431,360
K3JT	253,896	SP1AEN	561,924	AB9YC	219,398	SP4JCQ	1,381,504
WQ5L	241,296	TA7I	510,840	AD1C	206,360	NH6V	1,367,442
CW Only, QRP				CW Only, QRP			
W7YAQ	217,986	DK7HA	570,492	KJ5T	9,954	DM7AA	317,156
N8AA	172,544	HG3C (HA3HX, op)	238,875	K2AL	9,324	GM4X (GM4WZG, op)	216,460
W1FJ	38,420	W7YAQ	217,986	K9AXT	3,248	PE2K	97,750
K8CN	28,200	N8AA	172,544	KA8HDE	1,551	PC5D	87,000
W7ZI	16,377	OK6OK	171,838	K2GMY	315	LY3G	81,679
VE3RSA	12,560	YT5YTT	169,197	AB8FJ (AB8F, op)	243	G4OZG	69,819
N7JI	6,885	S53AR	151,890	AC6DF	126	DL7VEA	29,109
K3WWP	5,792	SFØA (SMØLPO, op)	108,046	NØLMQ	12	OM3WZ	21,962
K2YG	4,920	YL3FW	105,672			R3IBT	19,386
K1RO	2,363	EW8G	62,580			YD9UW	16,769

Top Ten Scores							
United States and Canada		World		United States and Canada		World	
Multioperator, Single Transmitter, High Power				Multioperator, Two Transmitter, Low Power			
K5TR	2,858,141	EW5A	6,377,959	N2AA	1,912,837	9A5Y	2,576,208
K1LZ	2,777,956	RM9A	6,282,038	K4AB	1,153,197	IR4X	2,453,080
W4WF	2,183,100	RU1A	5,877,765	WØECC	850,005	IR7T	2,167,120
K8AZ	1,764,180	UA4M	4,643,856	W1FM	233,730	DM5W	2,121,418
VE3CT	1,609,750	HG6N	3,268,392			N2AA	1,912,837
N6WM	1,532,928	HG8A	3,265,200			IR2M	1,826,260
N4FCG	1,475,716	K5TR	2,858,141			IR4K	1,646,960
K3AJ	1,361,328	CQ9T	2,808,908			E2WRTC	1,253,316
W3UA	1,296,828	K1LZ	2,777,956			JR2GRX	1,242,354
NV9L	1,270,308	HG7T	2,546,542			K4AB	1,153,197

Regional Leaders

HP: Over 150W; LP: 150W or less; QRP: 5W or less; SO: Single Operator; MS: Multi-Single; MIX: Mixed-Mode

West Coast Region			Midwest Region			Central Region			Southeast Region			Northeast Region		
Pacific, Northwestern, and Southwestern ARRL Divisions; Alberta; British Columbia, and NT RAC Sections			Dakota, Midwest, Rocky Mountain and West Gulf ARRL Divisions; Manitoba and Saskatchewan RAC Sections			Central and Great Lakes ARRL Divisions; Greater Toronto Area, Ontario East, Ontario North, and Ontario South RAC Section			Delta, Roanoke, and Southeastern ARRL Divisions			New England, Hudson and Atlantic ARRL Divisions; Maritime and Quebec RAC Sections		
Call	Score	Cat	Call	Score	Cat	Call	Score	Cat	Call	Score	Cat	Call	Score	Cat
Single Operator														
K6XX	1,452,524	MIX-HP	K5WA	1,461,048	MIX-HP	VX3AT (VE3AT, op)	2,293,600	MIX-HP	K4ZW	1,944,245	MIX-HP	VY2EJ (KØEJ, op)	2,874,987	MIX-HP
AJ6V	419,608	MIX-HP	K5TU	73,391	MIX-HP	KD9MS	146,694	MIX-HP	NF4A	60,900	MIX-HP	KQ2M	1,233,860	MIX-HP
W1PR	79,596	MIX-HP	W5GFI	70,928	MIX-HP	KE8E	22,800	MIX-HP	N4LZ	11,045	MIX-HP	N3QE	997,218	MIX-HP
NK6A	64,141	MIX-HP	KA9OZP	10,098	MIX-HP	N9EP	18,908	MIX-HP	K4KZ	6,080	MIX-HP	W2XL	153,235	MIX-HP
W7PV	3,717	MIX-HP	VE5CPU	4,402	MIX-HP	K9YZ	0	MIX-HP	W4EMB	80	MIX-HP	W1HNZ	32,946	MIX-HP
K6GHA	112,808	MIX-LP	AF5CC	119,556	MIX-LP	VA3IJK	52,390	MIX-LP	N8II	194,224	MIX-LP	KU2M	745,008	MIX-LP
WA7BNM	48,052	MIX-LP	VE5SF	33,450	MIX-LP	W8TB	32,469	MIX-LP	W4SUN (WØPV, op)	99,484	MIX-LP	N2EM	238,290	MIX-LP
WA6URY	28,365	MIX-LP	KØVG	16,928	MIX-LP	N8OH	28,152	MIX-LP	KB4CG	62,985	MIX-LP	KA2FIR	99,296	MIX-LP
WA8ZNC	13,260	MIX-LP	W3PWF	420	MIX-LP	W9VQ	17,595	MIX-LP	AB3AI	50,232	MIX-LP	W2NTV	61,503	MIX-LP
N7VS	10,570	MIX-LP	KEØEJS	5	MIX-LP	AC8WC	16,256	MIX-LP	N4QI	38,033	MIX-LP	KX1E	40,650	MIX-LP
			VE4SF	660	MIX-QRP				K2EKM	22,950	MIX-QRP			
									N1MT	480	MIX-QRP			
NT6X	304,292	PH-HP	K9MWM	92,684	PH-HP	VE3BFU	35,862	PH-HP	N4MM	72,048	PH-HP	N2QV	821,808	PH-HP
KE8FT	86,496	PH-HP	N7RBL	7,904	PH-HP	K9GX	17,664	PH-HP	W4SLT	50,490	PH-HP	NG1M	194,139	PH-HP
KW6S	36,972	PH-HP	K9TWW	1,407	PH-HP	W8GNT	3,190	PH-HP	N4DN	18,700	PH-HP	W2CN	51,688	PH-HP
AJ6TL	4,110	PH-HP	WØPPF	372	PH-HP	KE8PUB (KC8FQD, op)	340	PH-HP	KJ4BIX	15,372	PH-HP	AD2BO	34,444	PH-HP
WA6PY	1,540	PH-HP							W5XNA	2,997	PH-HP	KD2UBH	25,560	PH-HP
W6AFA	480,704	PH-LP	K5DHY	76,700	PH-LP	VE3GJP	76,000	PH-LP	N2ESP	48,043	PH-LP	VE2HIT	82,711	PH-LP
K6EGF	13,310	PH-LP	WØCN	28,885	PH-LP	VA3KRT	56,335	PH-LP	WA4JA	41,013	PH-LP	VE2IAA	62,238	PH-LP
K7STU	5,928	PH-LP	WØIZ	27,816	PH-LP	N9EAX	24,776	PH-LP	KM4IAJ	26,364	PH-LP	AB1F	41,426	PH-LP
N7JVJ	4,800	PH-LP	N7MZW	18,696	PH-LP	W8LYO	21,056	PH-LP	KN4UND	24,768	PH-LP	N2MTG	20,945	PH-LP
VE6CLG	3,564	PH-LP	AE5LQ	18,200	PH-LP	VE3IDT	18,921	PH-LP	WX4DAT	24,156	PH-LP	KS2G	20,876	PH-LP
W6QU (W8QZA, op)	10,718	PH-QRP				KE8TUJ	663	PH-QRP						
						VE3RXH	66	PH-QRP						
W6YX (N7MH, op)	1,782,368	CW-HP	WØUA	1,499,860	CW-HP	NA8V	1,296,770	CW-HP	KU8E	688,617	CW-HP	W1KM	1,199,340	CW-HP

Single Operator																	
N9RV	1,692,417	CW-HP		N5AW	633,417	CW-HP		K8GL	977,823	CW-HP		KQ4R	276,780	CW-HP	K1IMI (N4CW, op)	770,012	CW-HP
N6TV	1,231,389	CW-HP		WDØT	546,383	CW-HP		N8PW	466,284	CW-HP		W4JKC	196,884	CW-HP	K3ZO	446,850	CW-HP
K6NA	968,200	CW-HP		WA2VYA	442,390	CW-HP		K8MP	284,592	CW-HP		N4OX	163,392	CW-HP	WA2BCK	436,396	CW-HP
N16W (W4EF, op)	706,014	CW-HP		N3BB	245,336	CW-HP		VE3VN	101,600	CW-HP		AF4T	132,616	CW-HP	K3UL	229,596	CW-HP
WJ9B	416,760	CW-LP		KØAD	392,880	CW-LP		AA8CA	314,314	CW-LP		WB4TDH	377,244	CW-LP	K1VUT	575,016	CW-LP
N7VM	397,111	CW-LP		AKØA	156,197	CW-LP		VE3TM	283,878	CW-LP		K3JT	253,896	CW-LP	W1QK	568,296	CW-LP
W6ZL	134,439	CW-LP		KØEA	153,438	CW-LP		KV8Q	195,377	CW-LP		WQ5L	241,296	CW-LP	N1QY	151,050	CW-LP
W7TMT	102,680	CW-LP		N5IF	139,305	CW-LP		W1NN	159,376	CW-LP		NO5W	143,532	CW-LP	KB3AAY	120,522	CW-LP
WS7V	56,856	CW-LP		NN5T	129,092	CW-LP		VE3MGY	138,677	CW-LP		N4IJ	127,500	CW-LP	N1DC	99,456	CW-LP
W7YAQ	217,986	CW-QRP		WB5ACT	14	CW-QRP		N8AA	172,544	CW-QRP		NU4B	10,120	CW-QRP	W1FJ	38,420	CW-QRP
W7ZI	16,377	CW-QRP		KW7R	1	CW-QRP		VE3RSA	12,560	CW-QRP					K8CN	28,200	CW-QRP
N7JI	6,885	CW-QRP						K9TR	1,414	CW-QRP					K3WWP	5,792	CW-QRP
N6HI	1,800	CW-QRP						VA3IIF	1,152	CW-QRP					K2YG	4,920	CW-QRP
N6AN	1,520	CW-QRP													K1RO	2,363	CW-QRP
Single Operator Unlimited																	
KU1CW	1,435,107	MIX-HP		KEØUI	432,864	MIX-HP		WT2P	1,196,862	MIX-HP		WO4O	1,008,420	MIX-HP	K5ZD	2,963,610	MIX-HP
KH6ND	644,640	MIX-HP		W7CXX (WA7LW, op)	265,990	MIX-HP		K9OM	789,447	MIX-HP		K4RO	954,858	MIX-HP	K3WW	1,351,891	MIX-HP
KC7EFP	184,864	MIX-HP		KVØI	185,122	MIX-HP		K9WO	56,682	MIX-HP		K3IE	829,322	MIX-HP	W1GD	1,108,330	MIX-HP
WA7CPA	176,824	MIX-HP		K7TD	10,656	MIX-HP		W9HT	45,360	MIX-HP		N6AR	616,740	MIX-HP	K1AR	705,575	MIX-HP
N6ZFO	155,610	MIX-HP		WØGAS	8,904	MIX-HP		KV8O	41,683	MIX-HP		W4ATL	142,344	MIX-HP	K3MD	701,510	MIX-HP
WN6W	56,080	MIX-LP		KØKX	202,608	MIX-LP		VE3PJ	196,725	MIX-LP		WN4AFP	326,916	MIX-LP	KI2D	293,592	MIX-LP
KW6AA	54,132	MIX-LP		KE5LQ	34,398	MIX-LP		VA3PAF	36,582	MIX-LP		N4XL	271,284	MIX-LP	N3RM	8,413	MIX-LP
AJ6WB	16,302	MIX-LP		ACØW	20,466	MIX-LP		AB8OU	36,330	MIX-LP		W4RN	181,944	MIX-LP	VA1CC	7,670	MIX-LP
W4IDX	6,475	MIX-LP		VE4DL	7,140	MIX-LP		VE3JZT	12,903	MIX-LP		KT3T	122,616	MIX-LP	W3IDT	3,185	MIX-LP
W7TMD	1,501	MIX-LP						KC9UJS	11,950	MIX-LP		WA4IPU	115,304	MIX-LP	WA3AFS	2,482	MIX-LP
								K8ZT	4,356	MIX-QRP							
NA6MB	34,804	PH-HP		WIØWA (WØEWD, op @WØEWD)	773,310	PH-HP		W9NZ	143,208	PH-HP		NA4DA	413,877	PH-HP	VE2NTT	554,898	PH-HP
KØNG	16,758	PH-HP		AA5H	184,646	PH-HP		VA3LR	7,137	PH-HP		W4SDX	195,891	PH-HP	W3ICM	286,810	PH-HP
KE6GFI	7,462	PH-HP		N5KWD	46,501	PH-HP						WW5L	133,104	PH-HP	KØOO	114,402	PH-HP
N6REK	2,610	PH-HP		W5GCX	10,035	PH-HP						K4SBZ	102,830	PH-HP	WA2DNI	77,319	PH-HP
				NØAJN	150	PH-HP						KF7RO	6,216	PH-HP	A14MD	56,604	PH-HP
W6APH	704	PH-LP		AB5KM	21,052	PH-LP		VA3IDD	104,190	PH-LP		WA4AH	128,656	PH-LP	NY2A	71,298	PH-LP
K7JKM	96	PH-LP		W5IOH	9,350	PH-LP		VE3HZ	43,488	PH-LP		KG2MM	37,741	PH-LP	KD2UVT	2,968	PH-LP
N7GRC	6	PH-LP		WØADL	5,181	PH-LP		KD9QHQ	4,961	PH-LP		KN4MIV	33,684	PH-LP	W3RFX	2,822	PH-LP
				K5TMH	1,440	PH-LP		KB9FPY	4,056	PH-LP		W2TAD	9,374	PH-LP	K2KJ	736	PH-LP
				KEØUNV	870	PH-LP						N2OG	7,869	PH-LP			

Single Operator Unlimited															
										WB4OMM	90,528	PH-QRP	W3EK	665	PH-QRP
NT6Q (N5ZO, op)	1,654,556	CW-HP	N5RZ	2,009,364	CW-HP	VE3NZ	865,872	CW-HP	AD4EB	1,489,672	CW-HP	K1ZZ	2,706,048	CW-HP	
K7QA	376,896	CW-HP	N5OT	1,044,908	CW-HP	K9NW	625,596	CW-HP	NY4A	954,164	CW-HP	NY3A	2,286,270	CW-HP	
KA6BIM	289,037	CW-HP	NG7M	370,576	CW-HP	WI9WI	511,844	CW-HP	N4UU	869,400	CW-HP	WI2E	1,915,434	CW-HP	
VE7KW	235,752	CW-HP	KTØA	320,416	CW-HP	K9MMS	60,918	CW-HP	N1RM	641,160	CW-HP	N9NC	1,729,762	CW-HP	
K7ZQ	232,092	CW-HP	K4IU	267,435	CW-HP	N8KR	35,850	CW-HP	K4OAQ	640,332	CW-HP	K3JO (AE2W, op)	1,656,190	CW-HP	
K7TQ	173,310	CW-LP	AD5A	721,240	CW-LP	VE3YT	323,330	CW-LP	WA1FCN	440,115	CW-LP	W3KB	667,152	CW-LP	
W6TK	166,455	CW-LP	AD1C	206,360	CW-LP	VE3MV	242,214	CW-LP	N2YO	228,346	CW-LP	WO1N	410,942	CW-LP	
K6WSC	152,874	CW-LP	WY7M	108,491	CW-LP	AB9YC	219,398	CW-LP	K2MK	180,594	CW-LP	W2CDO	222,112	CW-LP	
W7ZR	114,918	CW-LP	NN7A	100,100	CW-LP	N8BJQ	204,469	CW-LP	N9TF	107,632	CW-LP	W1WBB	192,228	CW-LP	
AA2IL	105,844	CW-LP	KØRC	85,212	CW-LP	K3DMG	95,325	CW-LP	K4DR	82,810	CW-LP	KA1YQC	155,115	CW-LP	
K2GMY	315	CW-QRP	KJ5T	9,954	CW-QRP	AB8FJ (AB8F, op)	243	CW-QRP				K2AL	9,324	CW-QRP	
AC6DF	126	CW-QRP	KA8HDE	1,551	CW-QRP										
			NØLMQ	12	CW-QRP										
Multioperator Single Transmitter															
N6WM	1,532,928	MSHP	K5TR	2,858,141	MSHP	K8AZ	1,764,180	MSHP	W4WF	2,183,100	MSHP	K1LZ	2,777,956	MSHP	
N7DX	1,189,856	MSHP	W5FMH	297,066	MSHP	VE3CT	1,609,750	MSHP	N4FCG	1,475,716	MSHP	K3AJ	1,361,328	MSHP	
NX6T	1,133,160	MSHP	KG5VK	160,770	MSHP	NV9L	1,270,308	MSHP	K4RM	840,304	MSHP	W3UA	1,296,828	MSHP	
KT7E	651,585	MSHP	KØMD	146,280	MSHP	N4SS	1,009,470	MSHP	K4TCG	337,900	MSHP	WW4LL	1,243,424	MSHP	
K7BTW	282,672	MSHP				K8LX	478,920	MSHP	WA1S	202,538	MSHP	K3CCR	303,668	MSHP	