# "No doubt who won this contest -- Mother Nature. – K4AB"

As with all other HF contests, this one is very much influenced by the sunspot cycle. In 2016, sunspot activity was really going down very fast and degrading propagation on the higher bands. This is clearly visible in the scores of the bigger stations, especially in the Headquarters station category. However, the number of received logs is growing slightly, so the popularity of this contest is still very strong despite declining conditions. Also, the 2015 and 2016 events were WRTC2018 qualification events, which has raised interest. As a result, while conditions were generally poorer than 2015, there seemed to be more activity.

# **Space Weather**

The lower sunspot numbers impacted propagation for most stations. In fact, for a week-long period in late June the sunspot number dropped to zero. Ray, WQ5L, described conditions succinctly: "Cycle 24 fall down, go boom." K6WSC was operating in the Unlimited category and when he was tuning through the cluster spots in the band map and got to the end of the band, the N1MM+ software reported "No more spots". Bill got a hearty laugh out of the double meaning in the message.

Most entrants were not laughing and reported very poor conditions on 10 meters in particular. Bob, MDØCCE (operating as MD2C) said "checked 10M both days, I never heard a signal on the band, even when there were spots from stations to the south of me; however 20M was open all night". Steve, N2IC, in New Mexico, said "First time I have ever been completely shut-out on 10 meters. Nothing there. Not a peep." Another Steve (PJ4DX), on the island of Bonaire in the Caribbean where propagation is almost always excellent, commented "Worst ever conditions for the first 8 hours".

There were exceptions, however. VK2PN said "Conditions were not too bad. Plenty of stations to work", while VK2CZ noted "Great conditions with 20m never actually closing". HSØZIA had an interesting perspective: "Condx so bad here it felt like I was QRP! Nice to see 10 meters still alive though!"

Many stations reported zero intercontinental QSOs on 10-meters, but a lucky few caught a short multi-hop sporadic-E opening from Western and Southern Europe to the southeastern USA around 2200z. W2GD, who operated as P4ØW on Aruba to celebrate his 67<sup>th</sup> birthday noted that he worked a fair number of Europeans on 10 but only two USA stations. Within Europe, sporadic-E provided some excellent rates on 10 off and on throughout the day.

### **Terrestrial Weather**

July is thunderstorm season in the northern hemisphere, and many stations suffered. Some reported high local QRN, while others had to shut down during passing storms. Ed, N1UR, said he dodged thunderstorms literally the entire contest. One finally came directly over, requiring a shutdown. Jim, KM4HI, had to shut down and disconnect twice due to passing thunderstorms. Mary, N5AW, reported "Something about contests that seem to attract thunderstorms to our area. None were forecast but static crashes kept getting louder and louder. About midnight I heard thunder. Could see lightning to our west and north but fortunately it did not get any closer so did not have to shut down". Andy, N2NT, was not so lucky. His antenna switching system failed due to a nearby lightning strike at 0250z, and his contest was over.

Olivier, ON4EI, had a different weather-related experience. He traveled to Ireland again and operated as EI1A from his camping van atop a hill in County Tipperary. The wind blew at a constant 45 km/hr (28 mph) with gusts to nearly 60 km/hr (37 mph), but he used it to advantage and powered his station from his wind generator for the entire contest



Sunrise at the windy hilltop QTH of EI1A (ON4EI photo)

#### **Noteworthy Scores**

# Single Operator

In Single Operator, Mixed Mode, High Power category, the top score was achieved by P33W, operated by Igor "Harry" Booklan, RA3AUU, followed by 2015 winner UW2M (operated by URØMC) who had a comparable number of QSOs and more multipliers than P33W but could not overcome the scoring advantage of Harry's Asia QTH. The 2015 Single-Operator Low Power Phone Only winner, Julio, YV1KK added an amplifier and improved antennas this year, and won the High Power, Phone Only category by a wide margin. Julio reported that he enjoyed watching the real-time scoreboard at **cqcontest.net**. In the Single Operator, High Power, CW Only category, R3ZZ edged out UW1M by a narrow margin after log-checking was complete.

In the Single Operator, Low Power category HA3DX (HA4XH, operator) ran away with the Phone Only prize, nearly doubling the score of runner-up EI1A (ON4EI, operator), while the scores CW Only and Mixed Mode categories won by 5H3EE and EC2DX respectively, were much closer.

In the USA/Canada, SO Mixed winners were VY2ZM, W1UE, and K2GMY (HP, LP, QRP, in that order); SOHP Phone winners were K5TR, KX4R, and W8QZA operating W6QU; SOHP CW winners were W1KM, K7SV, and W7YAQ.

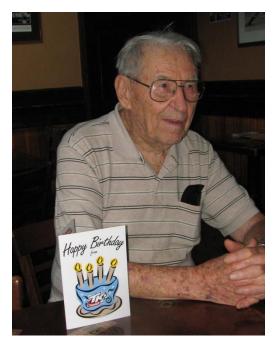
# Single Operator Unlimited

The Single Operator Unlimited category was introduced for the first time in 2015 and has proved to be quite popular. The High Power winners in this very competitive category were 4X6FR, ES6RW (ES5RW, op) and SN7Q (SP7GIQ, op) in the Mixed, Phone and CW sections. W/VE winners were VA2WA, W3LL, and K9NW.

In the Unlimited, Low Power category, Cyprus seemed to be the place to be. P3F (5B4AGN, operator) overpowered UZ3A (UX1AA, operator) for Mixed Mode honors, and C4I outpaced another Ukrainian station (UT4LW) in the CW Only category. The Cyprus stations took full advantage of the higher point value available working Europe and good openings on 10 meters. W/VE winners were NE9U, VE1WOW, and KØRF.

Unlimited, QRP winners were DK3WE (Mixed), LZ1DM (Phone Only), and OK2FD (CW Only), all by convincing margins. N1CC, AK8H, and KA7T topped USA/VE entrants.

Ted, N9NB, runner-up in the SO Unlimited CW LP category said he was amazed at the number of erroneous spots. If you use the cluster, make sure you verify the callsign of the station you are working, because miscopied callsigns are removed from your log!



97-year-old Ted, K2JMY operated in the 2016 IARU HF Championship contest (K2JMY, photo)

#### Multioperator, Single Transmitter

The Multioperator, Single Transmitter category is a good way to introduce new or casual operators to contesting. ES5E (@ES5EC) used the contest to demonstrate radio contesting to a group of enthusiastic young people. Their small club station, equipped with just a Kenwood TS-2000 rig and tribander + 40-meter dipole antenna, was sufficient. Their novice YL operator made about 15% of their total QSOs and was quite excited about her personal result.



PD1DX used this tractor to pull the out the weak ones at PI4DX (K1CC photo)

RM9A had the highest score in the category, followed by IR4X and IR4M from Italy. KE3X had the highest W/VE score.

The crew at PI4DX (9<sup>th</sup> place in the World) only had one radio set up with a QRO barbeque grill outside and took turns at the radio one at a time, taking full advantage of the nice weather. The K8AZ team (third place in the W/VE region) reported that their best hour was 00Z Sunday (Saturday evening) when they didn't make a lot of QSOs, but enjoyed their traditional grilled steak and fixings dinner.



Bram PH9B, checking propagation on the BBQ at PI4DX (K1CC photo)

#### **Remote Stations**

Several multiop teams included operators that were not physically located at the station. K2LE/1 in Vermont was operated By Andy himself; Lars, KE1J, in MA; and Gerry, W1VE, in NH. Likewise, the W4AAW station operators included Bryon, W7RIV, from Utah; Alex, KU1CW, in Oregon; and Eric, KJØD, in Missouri, and W4AAW actually in the shack. KEØHQZ in South Dakota was operated by KJ5Y from Texas and KEØHWZ from Colorado.

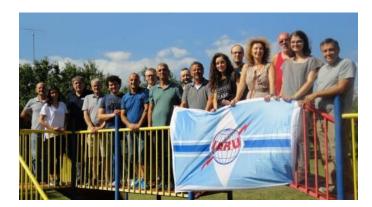
#### **HQ Station Competition**

Headquarters stations are a special part of this contest, where many operators work together using the callsign of their national amateur radio society, often involving stations at multiple locations. This year we had over 60 HQ stations active in the contest, with addition of 10 stations operated by IARU officers. They are counted as separate multipliers, which add another interesting dimension to this contest. In the HQ stations category, the biggest score this year was made by TMØHQ (REF – France), followed closely by EF4HQ (URE – Spain) and DAØHQ (DARC – Germany).



One of the stations used by second-place HQ station EF4HQ, representing the Unión de Radioaficionados Españoles

This contest marked the first entry for the headquarters station of the IARU's newest member society, the Shoqata e Radioamatorëve të Kosovës (SHRAK), using the callsign Z6ØA from several sites near Pristina, Kosovo.



Operators at Z6ØA included local Kosovar amateurs as well as visitors from Finland, Slovenia, Denmark, and the Netherlands.

#### HQ, IARU Official, and Advisory Council Scores

		•				
Call	Score	Call	Score			
TMØHQ	22,998,510	LX8HQ	2,884,798			
EF4HQ	22,878,720	J77HQ	2,851,970			
DAØHQ	22,542,704	BxHQ	2,746,944			
OL6HQ	19,489,256	UN1HQ	2,160,543			
S5ØHQ	19,484,842	CR5HQ	2,071,818			
9AØHQ	18,015,318	AT1HQ	1,988,772			
EM5HQ	17,687,980	E2HQ	1,861,571			
YTØHQ	17,574,258	T4ØHQ	1,728,480			
LYØHQ	15,538,303	DXØHQ	1,559,844			
R9HQ	15,514,597	G3BJ	1,491,952			
OEØHQ	14,226,669	A71HQ	1,253,888			
ZWØHQ	14,168,578	ER7HQ	1,178,736			
GR2HQ	13,641,771	нвøно	808,500			
LZ7HQ	13,416,126	вvøнq	779,394			
нбфно	13,320,285	YV5AJ	573,352			
SNØHQ	12,921,825	9M4CC	539,325			
YRØHQ	12,095,162	YBØAZ	353,726			
OZ1HQ	11,229,570	ZF1A	307,174			
OPØHQ	8,777,088	JA1CJP	258,361			
E7HQ	8,020,398	4K1HQ	242,902			
HB9HQ	7,976,892	7TØHQ	240,389			
YL4HQ	6,386,016	HB9FPM	194,532			
8NxHQ	4,391,626	J87HQ	166,192			
LS4AA	4,331,502	XE1KK	161,938			
W1AW/9	4,215,400	PT2ADM	139,296			
OH2HQ	4,114,026	XE1LM	116,205			
EIØHQ	4,046,856	VK5WIA	97,527			
LN2HQ	3,925,350	LA2RR	80,342			
Z3ØHQ	3,877,480	HC2HQ	37,966			
9K2RR	3,733,472	YEØHQ	30,456			
SK9HQ	3,418,366	DL9KCE	12,078			
PA6HQ	3,378,648	V84SHQ	11,151			
PJ2HQ	3,297,014	VE6SH	7,752			
NU1AW/6	3,287,468	ZS9HQ	5,346			

Thanks again to the World Wide Radio Operator Foundation (<u>www.wwrof.org</u>) for adjudicating the HQ station scores.

Boxes list call sign, score, and category:

SO = Single Operator
HP = High Power

SOU = Single Operator Unlimited MIX = Mixed Mode CW = CW Only PH = Phone Only
HP = High Power
LP = Low Power QRP = QRP MSHP = Multioperator, Single Transmitter, High Power

Wes	st Coast R	egion	Mid	west Regi	on	Ce	ntral Regi	on		Sout	theast Re	gion		Nortl	neast Regi	on
Southw	ic, Northweste restern ARRL British Columl RAC Section	Divisions; pia, and NT	and West	dwest, Rocky Gulf ARRL D nd Saskatche Sections	ivisions;	Divisions; Ontario E	nd Great Lak Greater Torc ast, Ontario N South RAC	onto Area, lorth, and	Delta, Roanoke, and Southeastern ARRL Divisi					New England, Hudson and Atlar ARRL Divisions; Maritime and Quebec RAC Sections		ne and
Call	Score	Cat	Call	Score	Cat	Call	Score	Cat		Call	Score	Cat		Call	Score	Cat
Single C	perator															
K7JR (KL9A, op)	1,235,520	MIX-HP	W5/MMØL	153,738	MIX-HP	VE3AT	1,731,240	MIX-HP		NR3X (N4YDU, op)	1,423,632	MIX-HP		VY2ZM	2,331,200	MIX-HP
ορ)	1,233,320	IVIIA-I IF	ID.	133,736	IVIIA-I IF	VLSAI	1,731,240	IVIIA-I IF		<b>υ</b> ρ)	1,423,032	IVIIA-IIF		K3CR	2,331,200	IVIIA-I IF
VA7AAA K6NR	520,625 324,870	MIX-HP MIX-HP	WØEA AD5MD	67,773 32,242	MIX-HP MIX-HP	VE3EJ VE3DZ	1,700,616 818,979	MIX-HP MIX-HP		K4AB K4BAI	984,312 955,584	MIX-HP MIX-HP		(LZ4AX, op) N2NT	1,786,428 821,920	MIX-HP MIX-HP
K2RD	104,517	MIX-HP	WØKIT	3,197	MIX-HP	K4WW	44,368	MIX-HP		N8II	752,556	MIX-HP		K3ZO	381,145	MIX-HP
W1PR	93,896	MIX-HP				W9TC	3,425	MIX-HP		K4PV	380,679	MIX-HP		K3RA	210,678	MIX-HP
K6XX W7RM (K2PO,	875,525	MIX-LP	N5AW	930,804	MIX-LP	NA8V	530,058	MIX-LP		AD4Z	655,200	MIX-LP		W1UE	978,538	MIX-LP
op)	460,698	MIX-LP	K5WA	900,210	MIX-LP	N4TZ	512,945	MIX-LP		NV4B	58,394	MIX-LP		VA2EW	919,674	MIX-LP
VE6EX	94,808	MIX-LP	КЗРА	607,128	MIX-LP	VE3BR	267,506	MIX-LP		WC4H	45,760	MIX-LP		WA1Z VO1TTT (VE9AA,	750,308	MIX-LP
WA5TVO	43,740	MIX-LP	KØAD	333,603	MIX-LP	WD8S	72,675	MIX-LP		N4CF	14,904	MIX-LP		op)	533,178	MIX-LP
KM9R	35,046	MIX-LP	AF5CC	24,624	MIX-LP	WB9HFK	42,636	MIX-LP		AI4GR	10,693	MIX-LP		WA2JQK	81,848	MIX-LP
K2GMY N7FG KFØX	12,312 1,500 1,445	MIX-QRP MIX-QRP MIX-QRP	VE5DLD	644	MIX-QRP	N9EP VA3QV AF9J	10,137 9,884 235	MIX-QRP MIX-QRP MIX-QRP								
N7XY	768	MIX-QRP				AF9J	233	IVIIX-QRP								
W7WA	979,755	PH-HP	K5TR	1,249,740	PH-HP	VA3ZNQ	38,420	PH-HP		NO5N	312,543	PH-HP		N2RJ N3NR	164,574	PH-HP PH-HP
NR6Q W7ZZ	266,988 161,092	PH-HP PH-HP	AD5XD W5GFI	285,090 84,159	PH-HP PH-HP	KE8FT VE3GNI	28,713 9,116	PH-HP PH-HP		K3ZJ K1KNQ	235,554 121,856	PH-HP PH-HP		K2JMY	150,516 40,326	PH-HP
W6AFA	47,011	PH-HP	K9MWM	23,580	PH-HP	W8DWC	9,072	PH-HP		K5ER	111,302	PH-HP		WB2KLD	18,668	PH-HP
K9QJS	13,806	PH-HP	K5YM	13,332	PH-HP	WB9ONU	6,355	PH-HP		W4KW	93,138	PH-HP		W1PEF	120	PH-HP
K7XE	5,290	PH-LP	K5DHY	54,360	PH-LP	ND4Y	163,875	PH-LP		KX4R	275,500	PH-LP		VE2HIT	47,175	PH-LP
W1DGL	4,080	PH-LP	N7MZW	51,127	PH-LP	KB8LFA	24,990	PH-LP		K4WES	27,010	PH-LP		VE1SQ	19,812	PH-LP
N7VZU	3,874	PH-LP	KI5YG	17,514	PH-LP	VA3GD	21,000	PH-LP		W4ADB	13,650	PH-LP		WA2QAU	18,370	PH-LP
K6MUG AE6YB	2,852 2,329	PH-LP PH-LP	KØBWQ W7KAM	11,476 11,286	PH-LP PH-LP	VA3TPS VE3KTB	17,178 16,606	PH-LP PH-LP		KJ4KKD WB2UKX	11,660 11,376	PH-LP PH-LP		VE2GT NV2K	15,226 12,691	PH-LP PH-LP
W6QU (W8QZA,	_,5_23	<u>-</u> .		11,130			20,000	2.			11,570	2.			12,001	
op)	11,100	PH-QRP	KIØII	1,872	PH-QRP	VE3LJQ	1,554	PH-QRP		N4ZAK	4,750	PH-QRP		AB3WS	608	PH-QRP
KK7VL	189	PH-QRP	WBØIWG	1,395	PH-QRP								J			

W7RN						VE3EID		
(N6TV,						(N2WQ,		
op)	1,061,956	CW-HP	K5GN	1,567,328	CW-HP	op)	621,639	CW-HP
К6ҮК	64,896	CW-HP	N2IC	1,401,504	CW-HP	N8BJQ	597,091	CW-HP
KOTK	04,890	CVV-FIP	WXØB	1,401,304	CVV-HP	NobjQ	397,091	CVV-HP
K6NA	60,800	CW-HP	(AD5Q, op)	1,030,744	CW-HP	VE3XB	432,970	CW-HP
W7PU	00,000	CVV III	(1030, 00)	1,030,744	CWIII	VESKB	732,370	CW III
(N7EPD,								
op)	39,273	CW-HP	N3BB	259,700	CW-HP	К8МР	304,590	CW-HP
. ,	ŕ			,			•	
W6AEA	38,970	CW-HP	K7IA	230,160	CW-HP	NF8R	134,040	CW-HP
\A/105	202.020	CWID	AFFCT	224 222	CM	10.000	202.025	CM IS
WJ9B	383,830	CW-LP	AE5GT	234,220	CW-LP	KV8Q	203,835	CW-LP
K7WP WA7NB	246,720	CW-LP	N5KWN W5RYA	181,722	CW-LP	K8BTU VE3IAE	145,530	CW-LP CW-LP
N6ZFO	81,938 78,813	CW-LP CW-LP	KØIO	155,155 84,135	CW-LP CW-LP	VE3IAE VE3VN	144,228 133,824	CW-LP CW-LP
VA7ST	47,040	CW-LP CW-LP	W7SE	81,984	CW-LP CW-LP	K8AJS	123,105	CW-LP CW-LP
VA/31	47,040	CVV-LF	W/3L	81,384	CVV-LF	KOAJS	123,103	CVV-LF
W7YAQ	131,784	CW-QRP	WDØT	10,350	CW-QRP	VA3SB	14,440	CW-QRP
			KEØTT					
AE6JV	2,750	CW-QRP	(KEØG, op)	4,925	CW-QRP	WO9S	9,579	CW-QRP
N6HI	1,680	CW-QRP	ADØBI	2,016	CW-QRP	KU4A	6,448	CW-QRP
N7RCS	1,248	CW-QRP				VE3IGJ	4,050	CW-QRP
N7VS	560	CW-QRP				AI9K	3,762	CW-QRP
Single O	perator Un	limited						
AA/CNIV/	1 172 100	MALV LID	KQOTI	264.054	NAIV LID	KOONA	624 400	MALV LID
W6NV	1,172,408	MIX-HP	KØOU	364,854	MIX-HP	K9OM	624,490	MIX-HP
KA6BIM	386,608	MIX-HP	N5ZC	135,440	MIX-HP	VE3CX	431,090	MIX-HP
N9NA	139,755	MIX-HP	KEØUI	98,514	MIX-HP	W9AV	101,824	MIX-HP
WO7V	49,860	MIX-HP	VE5MX	49,300	MIX-HP	KK9N	72,098	MIX-HP
NK6A	13,110	MIX-HP	KØVG	43,710	MIX-HP	K9CQ	49,432	MIX-HP
	,			,		-	•	1
N7UJJ	77,341	MIX-LP	KC5FP	63,825	MIX-LP	NE9U	386,100	MIX-LP
NC6B	28,550	MIX-LP	WØYJT	13,294	MIX-LP	K8GT	75,624	MIX-LP
K7JNA	13,968	MIX-LP	KC8R	12,717	MIX-LP	N9TF	52,535	MIX-LP
N6VH	640	MIX-LP	N5DTT	1,843	MIX-LP	KW9U	16,770	MIX-LP
WM5F	125	MIX-LP	NØWNV	1,572	MIX-LP	AB8OU	13,536	MIX-LP
				•			•	
			N1CC	7,850	MIX-QRP	K8ZT	2,662	MIX-QRP
N1KEZ	14,063	PH-HP	κØVXU	209,409	PH-HP	N8BI	158,760	PH-HP
KG7LKI	6,318	PH-HP	K5TXT	5,280	PH-HP	N8PCN	32,368	PH-HP
KE7SW	3,700	PH-HP	NØDOW	4,422	PH-HP	VE3QN	10,105	PH-HP
AI6EG	2,460	PH-HP	WØPPF	1,890	PH-HP	KC8RPV	9,102	PH-HP
ND1R/6	624	PH-HP	KØARY	525	PH-HP	KC9WAV	5,454	PH-HP

KØEJ N4WW	869,440	CW-HP
(WF3C, op)	759,066	CW-HP
КЗЈТ	277,042	CW-HP
WQ5L	264,684	CW-HP
N4OX	259,856	CW-HP
K7SV	682,962	CW-LP
W4YE	152,478	CW-LP
N4TB	104,998	CW-LP
K1TN	99,099	CW-LP
NM2L	96,600	CW-LP
K3TW	49,665	CW-QRP
KB8V	24,769	CW-QRP
KI4FW	7,276	CW-QRP
NQ4I (VE7ZO,		
op)	1,171,304	MIX-HP
W040	841,128	MIX-HP
KM4HI	218,790	MIX-HP
W3CL	187,625	MIX-HP
K4LM	149,602	MIX-HP
W4MY	48,389	MIX-LP
W4DAS	12,495	MIX-LP
WB3D	3,200	MIX-LP
WA8HSB	2,163	MIX-QRP
N4MM	137,760	PH-HP
K4ADR	51,600	PH-HP
KK4LGC	33,078	PH-HP
WJ2D	26,169	PH-HP
K4SBZ	10,144	PH-HP
	_3,	

W1KM	1,706,516	CW-HP
AA3B K1ZD	1,469,862	CW-HP
(K1ZZ, op)	1,385,290	CW-HP
W1WEF WR1TC	767,688	CW-HP
(K5ZD, op)	730,170	CW-HP
W1QK	367,780	CW-LP
WI2E	323,840	CW-LP
W1UJ	321,342	CW-LP
NB1N	221,112	CW-LP
K1GGI	102,133	CW-LP
K2YGM	43,875	CW-QRP
K8CN	39,808	CW-QRP
WA2NYY	2,100	CW-QRP
AE5RF	1,144	CW-QRP
K2YG	918	CW-QRP
VA2WA W3UA KC1XX	1,628,433 1,626,570	MIX-HP MIX-HP
(DL8DYL, op)	1,600,355	MIX-HP
N2PP	585,072	MIX-HP
W1GD	572,236	MIX-HP
	, -	
KC1DLY	140,400	MIX-LP
K3ZU	111,962	MIX-LP
кøоо	105,930	MIX-LP
NK3Y	79,856	MIX-LP
W3CQB	49,662	MIX-LP
W3LL	305,939	PH-HP
W1CTN	153,621	PH-HP
VE2NTT	62,952	PH-HP
AB1NE	41,876	PH-HP
N2MUN	27,777	PH-HP

KG7GYI	12,240	PH-LP	AB5NX	11,178	PH-LP	WS6K	12,455	PH-LP	WUØB	54,964	PH-LP	VE1WOW	89,046	PH-LP
WA7YXY	2,268	PH-LP	AB5XZ	1,818	PH-LP	VE3YV	7,037	PH-LP	N2ESP	35,175	PH-LP	KA2KON	88,008	PH-LP
AE7DW	378	PH-LP	NYØT	1,121	PH-LP	N9VPV	5,904	PH-LP	N2JF	20,466	PH-LP	KC2OSR	3,850	PH-LP
К6КНВ	115	PH-LP	N5EKW	952	PH-LP	KK4BKD	5,292	PH-LP	к4ввн	10,872	PH-LP	KC2YEA	288	PH-LP
KOKITE	113		KC8MFX	560	PH-LP	KE8XH	2,507	PH-LP	NN4RB	9,400	PH-LP	W3VYK	287	PH-LP
			KCOWII X	300		KLOXII	2,307	111 21	I INNAND	3,400		WSVIK	207	
						AK8H	21,945	PH-QRP						
						N9NBC	1,760	PH-QRP						
							•							
N7AT														
(K8IA,									1 1					
op)	952,134	CW-HP	N5XZ	900,060	CW-HP	K9NW	1,037,316	CW-HP	N4BP	878,085	CW-HP	K1MK	1,004,496	CW-HP
			K5CM						1 1					
			(W5CW,											
W6RW	214,935	CW-HP	op)	709,583	CW-HP	VE3RZ	215,166	CW-HP	N3UA	690,336	CW-HP	N3AD	979,368	CW-HP
W6TK	177,386	CW-HP	K5NA	583,848	CW-HP	KE4KY	168,096	CW-HP	W4NZ	578,900	CW-HP	VO1MP	949,725	CW-HP
W6SX	176,398	CW-HP	NSØR	288,496	CW-HP	KE8M	157,016	CW-HP	WX4G	547,927	CW-HP	K3WW	780,946	CW-HP
KN7K	168,302	CW-HP	NØKE	192,500	CW-HP	WT9U	59,780	CW-HP	K5EK	360,018	CW-HP	K1GQ	595,296	CW-HP
K6WSC	193,362	CW-LP	KØRF	753,948	CW-LP	WK4AA	170,291	CW-LP	N9NB	668,430	CW-LP	W3KB	277,884	CW-LP
K6AAB	21,216	CW-LP	NM5M	149,985	CW-LP	AB9YC	109,920	CW-LP	WA1FCN	227,768	CW-LP	K2XR	156,684	CW-LP
WA6DBC	20,631	CW-LP	W5ZO	89,775	CW-LP	VA3MJR	61,711	CW-LP	KK4XX	100,096	CW-LP	K2ZR	140,296	CW-LP
AA6EE	15,540	CW-LP	N5EIL	84,007	CW-LP	K4TXJ	53,820	CW-LP	кзко	94,500	CW-LP	NZ3D	65,016	CW-LP
K3WYC	2,125	CW-LP	KIØI	72,228	CW-LP	K9GY	39,424	CW-LP	N4KM	91,274	CW-LP	W2CVW	51,240	CW-LP
КА7Т	22,140	CW-QRP	NK5G	1,056	CW-QRP				WESEE	1,160	CW-QRP	AB3RU	9,135	CW-QRP
									KI4MZC	798	CW-QRP	VE9BWK	8,505	CW-QRP
									1 1			K2AL	6,440	CW-QRP
												NV1W	2,528	CW-QRP
												K3OQ	270	CW-QRP
Multiop	erator, Sing	le												
Transmi	tter													
NX6T	530,502	MSHP	WØLFA	732,222	MSHP	VE3UTT	1,312,598	MSHP	N1LN	1,023,960	MSHP	KE3X	2,046,656	MSHP
K7BTW	411,840	MSHP	NØAX	271,173	MSHP	K8AZ	1,221,024	MSHP	WW4LL	920,520	MSHP	K2R	849,780	MSHP
W7XQ	203,250	MSHP	KS5Z	157,311	MSHP	W5MX	489,090	MSHP	AD4ES	519,844	MSHP	K2LE	777,768	MSHP
N6MI	175,500	MSHP	wøgj	42,955	MSHP	VA3DF	199,652	MSHP	N4SVC	442,323	MSHP	N2GZ	183,080	MSHP
WS7L	141,426	MSHP	NØSSC	32,634	MSHP	W9MAR	6,210	MSHP	N4IQ	301,010	MSHP	N2CW	170,716	MSHP
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			To	p Ten Scores						
United States	and Canada	World	t	United States	and Canada	World				
	Single (	Operator			Single O	perator Unlimited				
	Mixed Mode	e, High Power		Mixed Mode, High Power						
VY2ZM	2,331,200	P33W (RA3AUU, op)	4,891,512	VA2WA	1,628,433	4X6FR	3,567,690			
K3CR (LZ4AX, op)	1,786,428	UW2M (URØMC, op)	3,846,974	W3UA	1,626,570	HA3NU	3,391,281			
VE3AT	1,731,240	UPØL (UN9LW, op)	3,655,175	KC1XX (DL8DYL, op)	1,600,355	P3Z (5B4AFM, op)	3,071,200			
VE3EJ	1,700,616	CR6K (CT1ILT, op)	3,284,286	W6NV	1,172,408	IR1G (IZ1LBG, op)	2,886,647			
NR3X (N4YDU, op)	1,423,632	OM5ZW	3,086,025	NQ4I (VE7ZO, op)	1,171,304	EU1A	2,347,526			
K7JR (KL9A, op)	1,235,520	ES5TV	3,074,990	WO40	841,128	HA6P (HA6PX, op)	1,814,310			
K4AB	984,312	A65BP	3,074,868	K90M	624,490	G2F (G4MKP, op)	1,674,486			
K4BAI	955,584	EF2A (EA2OT, op)	2,933,530	N2PP	585,072	VA2WA	1,628,433			
N2NT	821,920	RW1A	2,865,980	W1GD	572,236	W3UA	1,626,570			
VE3DZ	818,979	UA4S (UA4HTT, op)	2,811,924	W1WMU	481,730	KC1XX (DL8DYL, op)	1,600,355			
	Mixed Mode	e, Low Power			Mixed N	Mode, Low Power				
W1UE	978,538	EC2DX	2,402,278	NE9U	386,100	P3F (5B4AGN, op)	3,625,443			
N5AW	930,804	II9P (IZ8JAI, op)	2,218,705	KC1DLY	140,400	UZ3A (UX1AA, op)	1,897,454			
VA2EW	919,674	9A5Y (9A7DX, op)	2,168,478	K3ZU	111,962	EF8R (EA8RM, op)	1,836,552			
K5WA	900,210	LZ8E (LZ2BE, op)	2,128,687	кøоо	105,930	DK8ZB	1,761,032			
K6XX	875,525	S5ØA	1,970,326	NK3Y	79,856	P4ØXA (WT2P, op)	981,744			
WA1Z	750,308	YO3JR	1,842,321	N7UJJ	77,341	UA9MA	947,952			
AD4Z	655,200	UW5Y (US2YW, op)	1,631,982	K8GT	75,624	RA3Y	927,673			

КЗРА	607,128	KP3Z (NP4Z, op)	1,522,035	KC5FP	63,825	UR6EA	920,636
VO1TTT	533,178	NP2X (K9VV,	1,436,610	N9TF	52,535	NP2P (N2TTA, op)	900,882
(VE9AA, op) NA8V	530,058	op) 3V8SS (KF5EYY, op)	1,411,408	W3CQB	49,662	SP9H	769,436
		, , , ,					
	Mixed N	Mode, QRP	1		Mix	ed Mode, QRP	
K2GMY	12,312	HG6C (HA6IAM, op)	404,840	N1CC	7,850	DK3WE	656,460
N9EP	10,137	IZ3NVR	363,465	K8ZT	2,662	IZ8JFL/1	279,476
VA3QV	9,884	OK7CM	277,092	WA8HSB	2,163	LZ7H	71,280
N7FG	1,500	US2IZ	263,472			UR5XMM	41,406
KFØX	1,445	HA1WD	244,260			RT3W	16,182
N7XY	768	UX9Q (UR9QQ, op)	178,695			LY5G	11,092
VE5DLD	644	9A2EY	162,992			N1CC	7,850
AF9J	235	UX8IX	127,890			JK1TCV	5,600
		LY5Q	119,394			K8ZT	2,662
		KP4KE (NP4LW, op)	113,652			WA8HSB	2,163
	Phone Onl	y, High Power			Phone Only, H	igh Power	
K5TR	1,249,740	YV1KK	2,311,122	W3LL	305,939	ES6RW (ES5RW, op)	1,993,012
W7WA	979,755	V51WH	1,602,180	KØVXU	209,409	EF8U (EC5AN, op)	1,800,088
NO5N	312,543	EA1FDI	1,568,400	N8BI	158,760	IZ8EPX	1,555,984
AD5XD	285,090	K5TR	1,249,740	W1CTN	153,621	IKØPHY	1,518,690
NR6Q	266,988	PJ4DX	1,218,602	N4MM	137,760	IB4A	1,495,640
K3ZJ	235,554	W7WA	979,755	VE2NTT	62,952	YP7P (YO7LFV, op)	1,261,410
N2RJ	164,574	US5D (UT7DX, op)	821,408	K4ADR	51,600	YR9F (YO9FNP, op)	1,135,372
W7ZZ	161,092	EA3CI	762,773	AB1NE	41,876	IO4W (IZ4AFW, op)	1,051,050
N3NR	150,516	G1XOW	743,629	KK4LGC	33,078	HB2K (HB9OCR, op)	659,014
K1KNQ	121,856	RV3FF	697,392	N8PCN	32,368	8SØC (SMØMPV, op)	519,821

	Phone Onl	y, Low Power			Phone (	Only, Low Power	
KX4R	275,500	HA3DX	1,167,880	VE1WOW	89,046	UR2Y (USØYW,	464,202
		(HA4XH, op)				op)	
ND4Y	163,875	EI1A (ON4EI, op)	745,433	KA2KON	88,008	EC5NJ	418,000
K5DHY	54,360	EA5HRV	557,865	WUØB	54,964	YV2CAR	417,420
N7MZW	51,127	USØHZ	551,310	N2ESP	35,175	UT8EL	406,105
VE2HIT	47,175	DF2F (DF2SD, op)	386,022	N2JF	20,466	YT5IVN	335,475
K4WES	27,010	UT7QL	370,443	WS6K	12,455	RA9V	307,020
KB8LFA	24,990	RC7KY	333,697	KG7GYI	12,240	НВ9ЕҮР	280,160
VA3GD	21,000	KP2/AA1BU	298,333	AB5NX	11,178	SQ6DX	246,238
VE1SQ	19,812	WP4PGY	288,875	K4BBH	10,872	IT9EWR	217,080
WA2QAU	18,370	UA9R	280,158	NN4RB	9,400	SQ4JEN	208,890
	Phone	Only, QRP					
W6QU (W8QZA, op)	11,100	HA5BGG	84,185	AK8H	21,945	ne Only, QRP LZ1DM	177,140
N4ZAK	4,750	HB9EGA/P	68,663	N9NBC	1,760	UT3EK	52,503
KIØII	1,872	ON7BA	56,544			YP8W (YO8SEP, op)	34,408
VE3LJQ	1,554	SV3AUW	54,172			AK8H	21,945
WBØIWG	1,395	SP4LVK	53,482			PC2F	18,000
AB3WS	608	UT1PG	46,455			N9NBC	1,760
KK7VL	189	IK1BBC	37,300			PY2VQ	1,298
KJ5T	105	YO9XC/P	22,050			UN9LAB	589
		CT7AIX	21,190			KP3ER (NP4RA, op)	497
		TG9ANF/4	15,336				
						1 1	
\A/4		High Power	2 272 020	I/ONIVA/		nly, High Power	2.000.004
W1KM	1,706,516	R3ZZ	2,273,939	K9NW	1,037,316	SN7Q (SP7GIQ, op)	2,989,884
K5GN	1,567,328	UW1M	2,241,120	K1MK	1,004,496	RT9A	2,799,424
AA3B	1,469,862	IO2X (IK2NCJ,	1,995,357	N3AD	979,368	P4ØW (W2GD,	2,768,775

		op)				op)	
N2IC	1,401,504	RU9AC	1,789,864	N7AT (K8IA, op)	952,134	RT9S	2,675,100
K1ZD (K1ZZ, op)	1,385,290	W1KM	1,706,516	VO1MP	949,725	YR8D (YO8TTT, op)	2,239,200
W7RN (N6TV, op)	1,061,956	OG2P (OH2PM, op)	1,698,800	N5XZ	900,060	IR2C (IK2PFL, op)	2,219,425
WXØB (AD5Q, op)	1,030,744	EU5T (EW2A, op)	1,665,298	N4BP	878,085	UTØU (UT5UDX, op)	1,711,476
KØEJ	869,440	ZF2ET	1,604,955	K3WW	780,946	OQ5M (ON5ZO, op)	1,617,972
W1WEF	767,688	K5GN	1,567,328	K5CM (W5CW, op)	709,583	ED2C (EA2CW, op)	1,335,047
N4WW (WF3C, op)	759,066	AA3B	1,469,862	N3UA	690,336	SP2LNW	1,230,720
	CW Only	Low Power			CW O	nly, Low Power	
K7SV	682,962	Low Power 5H3EE	1,381,009	KØRF	753,948	C4I	2,509,578
WJ9B	383,830	S57K	1,373,922	N9NB	668,430	UT4LW	1,485,512
W1QK	367,780	LY5R	1,179,745	W3KB	277,884	S53V	1,307,538
WI2E	323,840	RU1A (RV1AW, op)	1,091,800	WA1FCN	227,768	DLØUM (DL7FER, op)	1,180,323
W1UJ	321,342	R3KQ	1,007,290	K6WSC	193,362	R7MM	1,037,768
K7WP	246,720	RX9AF	979,308	WK4AA	170,291	OL5Y	1,002,430
AE5GT	234,220	HA3LN	943,872	K2XR	156,684	YT2AAA	993,744
NB1N	221,112	UA5F	921,250	NM5M	149,985	YO5LD	966,440
KV8Q	203,835	UN6LN	903,364	K2ZR	140,296	R3QA	915,565
N5KWN	181,722	HA7GN	771,687	AB9YC	109,920	SCØN	906,840
	CW O	nly, QRP			CV	V Only, QRP	
W7YAQ	131,784	F5VBT	545,192	KA7T	22,140	OK2FD	704,352
K3TW	49,665	HA3MY	367,830	AB3RU	9,135	SDØT (SMØTHU, op)	110,484
K2YGM	43,875	UR5GAW	221,988	VE9BWK	8,505	UX5UU	109,375
K8CN	39,808	UA1CUR	160,965	K2AL	6,440	LZ8U	96,300

KB8V	24,769	HG3C (HA3HX, op)	156,220	NV1W	2,528	DL1RNN	71,955
VA3SB	14,440	OH5YU	147,678	WE5EE	1,160	F5IYJ	50,505
WDØT	10,350	W7YAQ	131,784	NK5G	1,056	JQ1NGT	22,366
WO9S	9,579	DL8TG	123,660	KI4MZC	798	KA7T	22,140
KI4FW	7,276	R1AT	122,400	K3OQ	270	CT1DRB	21,712
KU4A	6,448	RW3AI	111,510			HA4FY	16,107
Multioperate	or, Single Transr	mitter					
KE3X	2,046,656	RM9A	5,443,893				
VE3UTT	1,312,598	IR4X	4,679,200				
K8AZ	1,221,024	IR4M	3,914,394				
N1LN	1,023,960	RM5A	3,727,500				
WW4LL	920,520	HG7T	3,675,566				
K2R	849,780	HG6N	3,455,625				
K2LE	777,768	EA3PT	2,572,920				
WØLFA	732,222	RF9C	2,390,604				
NX6T	530,502	PI4DX	2,206,974				
AD4ES	519,844	KE3X	2,046,656				