

# Results, 1996 ARRL RTTY Roundup

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**G**eorge paced nervously. "Do I have everything ready?" he murmured to himself. He scanned back and forth, up and down, not missing a single inch of his modest shack. The transceiver is ready, the computer is on with software running, the magic RTTY box connected, the antennas are pruned for resonant frequencies on each band, the feed lines are only a year old, some high-protein snack bars within arm's reach, the refrigerator is full of juices, and there's lots of steaming hot coffee. I guess everything is ready.

"Gawd, I wonder if I have any chance at all to break into the top-ten boxes with the big guns. Probably not on high power," he thought. "I'll leave the amp off and try my luck with low power." George knew he would have a better-than-average chance of winning at least a section certificate on low power, but probably no chance at all on high power. George realized that running low power was his best chance at being competitive, and it would even keep the electricity bill lower, not to mention keeping the temperature in his shack a good 10° cooler!

Last night while George was talking to his friends on the local repeater about the RTTY Roundup, trying to drum up more activity, he was still undecided as to which entry class he should try in the contest. Yes, George was even soliciting more hams to compete with him in the contest. Was he shooting himself in the foot for a chance of winning an award? No, probably not—just letting his enthusiasm excite others. Maybe this will be the best RTTY Roundup yet, with lots of local activity.

At the stroke of 0000 UTC, George had more decisions: Which band should he start on? Which direction should he beam? After a good deal of thought, George decided on 20 meters, beaming to the East Coast. That way maybe he could hear some Europeans coming through.

George took right off, tuning up and down the band, and working every station he could hear. Once he worked all the loud stations, he gave a try at calling CQ. A few stations called him, but he didn't have much luck with his CQs. His rate was holding fairly steady, but he wasn't hearing any DX stations. "Maybe it's time to try another band," George thought. He switched to 15 meters. Again he tuned up and down the

## Top Scores

### Single Operator

#### W/VE—Low Power

AA5AU	87,290
N1RCT	66,794
AA4M	66,392
KA4RRU	61,318
KK4DK	56,191
KN6DV	53,586
KD8FS	52,812
N9CKC	49,410
N1OAZ	47,227
K5ED	46,332

#### W/VE—High Power

AB5KD	137,235
N9ITX/7	124,300
WF1B	108,324
KF3P	107,484
K1IU	97,118
AI7B	86,172
WA7FOE	85,813
WA7FAB	82,710
W9KDX	76,230
VE3XO	74,900

#### DX—Low Power

V31JU	58,800
ON7KK	44,352
G5LP	28,105
ON9CNC	24,080
YU7AM	23,184
8P6SG	21,866
OZ5MJ	14,322
SM4CMG	13,608
LZ3RR	13,050
GW4KHQ	12,992

#### DX—High Power

WP2/KS9W	139,230
UT0I (UT2IZ,op)	72,808
OI2BP	53,888
IV3FSG	44,082
CE8SFG	40,664
ZV2BW (PT2BW,op)	40,514
GW5NF	40,368
DJ5JK	35,144
S53MJ	34,611
US9QA	34,452

### Multipoperator

#### W/VE—Low Power

WA2UKP	71,610
WS1E	59,605
AA7UN	53,625
AA6KX	51,030
AB5EA	44,162
N5MTS	39,600
N1JEB	37,760
KB0JSU	33,701
WB8YTZ	32,080
K0BJ	29,400

#### W/VE—High Power

WU3V	81,236
AA4NC	73,108
N9NCX	64,635
VE3FJB	64,152
W8UMD	63,244
NE3H	61,946
W7LZP	54,901
WD6L	21,912

#### DX—Low Power

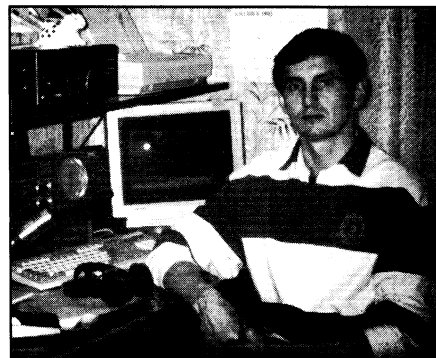
IK2ZUT	39,732
T91ENS	31,995
RU4L	20,586
PA3EVY	13,420
PA3AQL	3,888

#### DX—High Power

RU1A	40,014
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John, WN4BBJ (l), visited Will, AA4NC (r), for a little multipoperator effort. They finished second in the multipoperator, high power class.



Yuri, RA0FU, managed 149 QSOs from Sakhalin Island.

band and worked all the loud stations. CQing on 15 meters didn't bring him many replies either. George wondered, "Could it be my antennas or maybe propagation just isn't favoring me. My rate's fairly good, but I am just not working any exotic DX, as I was hoping to."

## Propagation

The propagation may have been down, but the QSOs were still high—as high as the enthusiasm! Conditions for this year's Roundup were about the same as they've been for anything else on the HF bands lately—but that didn't stop us dedicated RTTY ops! We kept pounding away on the keys until smoke signals rose from our key-

boards. This was a lot of fun!

Besides, with large numbers of hams still new to RTTY operating, DX is a relative thing. No, you couldn't work the world during the weekend. However, there were a lot of stations you could work that went beyond the everyday, run-of-the-mill description. A lot of people reported working VK6HD on 80 meters—from as far away as the East Coast. Whether you were looking for Bahrain, Albania, South Africa or just South Dakota, they were on.

## How Do You Measure Your Success?

Did you get on and make at least a few contacts? For some, just figuring out how



Dave, WA6ILT, enjoys his success after the Roundup (see the sidebar).

to get the stuff to work is hard enough. For folks like Ron, AB5KD, or Don, AA5AU, the challenge is to roll up enough contacts to stay on top—and they both did, claiming top W/VE single-op honors. In the multi-operator, high power class, James, WU3V, and crew took the top spot, but the fight for third was a close one between N9NCX and VE3FJB—they were less than 500 points apart. Now, *that's* competition!

Some ops measure success one QSO at a time. Many of us set out with the goal of trying to beat our score of a year ago. Dave, WA6ILT, on the other hand, aimed for something even more ambitious—he set out to triple his score from the year before. Check out his experience in the sidebar, “How I Tripled My Score—Almost.” This could be you! Why not give it a shot?

Don't wait until next year to figure out how to work RTTY—start reading that manual now! Don't forget that only 50 RTTY Roundup QSOs will earn a new piece of wallpaper for your shack. Next year's RTTY Roundup will be January 4-5, and we'll be looking for your call sign!

## SOAPBOX

This is always the most “gentlemanly” contest of the year (NO1J). I got on the bands late, and 20 was already packed. I did notice that many RTTY ops are catching contest fever—with snappy exchanges, no RYs, and big signals (WF1B). What a difference a beam makes! We actually could be heard in Europe! (N1JEB). The low bands were the big QSO-getters (KW2P). My score was lousy, thanks to the blizzard (NN2G). The big thrill was having VK6HD come back to my CQ on 80, when I was hoping for a Delaware station to come through, just as I was about to QSY (N2FF). This was my first time on RTTY in 10 years, and things have changed (K2NJ). This was my first RTTY Roundup; I had a ball! (WA2JHN). Ten meters sure was dead! (KQ4GC). I guess that when you run QRP, search-and-pounce becomes hunt-and-peck (KX5U). I only had a vertical and a Zepp this year, but I still enjoyed myself, as always (N4IQ). It was great to achieve a new personal high score while using a homebrew tuning unit (WA4VQD). Conditions were not bad, considering conditions. There didn't seem to be much DX, though (W4AZR). The TU wouldn't start, the software dumped, but once I got on the air, everything went smoothly (W5YM). My goal was to break the 1000 QSO barrier with low power. I did it with 30 minutes to go, and still managed a QSO every two minutes until the end. It was an awesome contest (AA5AU). This will be real fun when the sunspot

## How I Tripled My Score—Almost

By David Reinhart, WA6ILT

This effort was more than a year in the planning. I bought a DSP right before the contest, and had a new logging software package, but didn't have good antennas. While I had a lot of fun, my score certainly wasn't outstanding.

In the fall of 1994, I had talked with Martin, AA1ON, about operating from his QTH. He's an avid DXer and is working hard to become a serious contest contender. He's on a nice hill, and has a 100-foot tower with a TH-11—and his wire antennas for 80 and 40 are certainly better than my G5RV. What he didn't have was HF gear ready to handle the “key-down” rigors of RTTY.

Logistical problems kept me from moving my station to his place last year. Remember, this is January, and I'm in Massachusetts. The temperature, road conditions, etc, made me shy away from moving so much gear. This year, I plucked up my nerve and took the plunge. On Thursday, I disassembled everything, and took Friday afternoon to pack it up, transport it, and set it up. I was ready for the big day, or so I thought.

I arrived about an hour before the contest, powered up the gear and made a couple of trial contacts. The contest started, and I was off and running. Murphy's first visit was what we at work call a “PEBKAC” computer problem. PEBKAC means “Problem Exists Between Keyboard And Chair.” My software's default time zone is UTC. When I set my computer's time, I didn't do this correctly, and everything was five hours off.

I operated until about 0400Z, mostly hunt and pounce on 40 and 80. Then I took my first three-hour break, hoping to catch the Europeans coming on around 0700 (their time) when I came back. This worked, but not as well as I thought. Murphy then paid his second visit: when I tried to turn the beam away from Europe and start working W/VE stations again, the rotator would *not* go past North! It took 15 minutes or more to finally coax the beam around while trying to continue making contacts. I had visions of trying to work off the back of the beam for the duration of the contest!

The big thrill of the contest came that morning. From 1530 to 1900Z I was able to hold a frequency on 20 meters. About 25% of my total QSOs were made on that one frequency. I spent my last couple of hours looking mostly for multipliers. I never did find Hawaii, South Dakota or Delaware. I heard a Vermont station, but couldn't work him. Thanks, AL7WB, for Alaska.

At the end, my score was 31,600. That doesn't quite triple my score from last year, but it sure feels good. I packed up and headed home just as the first flakes of the Blizzard of '96 started to fall.

My special thanks to Martin for the use of his antennas and for his gracious hospitality; and to my wife, Chris, for her help and support. My thanks, too, to all the hams who worked the contest. It was certainly my impression that activity was up. I'll be looking for you all next year!

cycle comes around and the propagation improves (AB5VC). Maybe I can do a full-time effort next time (N5NMX). The openings to Europe were not very productive (AB5EA). This was my first time in the contest. I was surprised to see some call signs pop up on the screen when I couldn't even hear them (W6TKV). South Dakota was like rare DX—what a pileup! (N6QEK). Conditions were very weird. I worked VK6HD on 80, but 10 meters was dead (N6GG). I'd only been on RTTY a week. What a ball! (KJ7GU). Murphy struck again, this time taking the cooling fan in the rig. RTTY really tests the courage of any rig (W1TR). Stateside participation was at an all-time high. This contest gets better every year. I never thought I would make it to 1200 QSOs in a RTTY contest (N9ITX). My highlights were making 1000 QSOs and WAS (A17B). I didn't hear DE, ND, SD, UT or HI stations—I guess I'll have to wait until next year to do a 24-hour 100-W WAS (N8FEH). I've been looking for UT for two years now (AF8A). I hope to have better antennas by next year (KD0AV). We had no problems except for the band conditions (N9NCX). There was less QRM to fight than in a phone or CW contest (K9OSH). I see operator proficiency rising every year. I never worked a 10-meter contact, even though I heard plenty of phone stations on the band (K0RC). My big surprise was working both VK6HD and IV3FSG, since I was running barefoot to a quarter-wave sloper (AA4M). Conditions seemed to be fairly good, as there was always a tremendous amount

of activity. It was a thrill to finally work SD on RTTY! (VE3LPE). When I went on 40 and called CQ, I had a pileup! (VE3FMC). Murphy struck in the form of fever and the flu, but my QSO count was still up from last year (VE3VAC). I doubled last year's totals, and hope to do it again next year! (VE3HOL). It was another nice reason to keep inside—out of the weather (VE3EVV). At 1000Z Sunday, the bands closed. Forty was very good, but I only heard one East Coast station (JH5ZCP). The first day, my modem wouldn't work (9A8A). I hoped to work some new countries, but only A9 was new. The only Caribbean station I heard was WP2/KS9W (DL7VOG). Despite my modest station, the poor propagation, and the high noise level, it was a very interesting contest (EA3ALV). I sure miss 15 meters (GM0/WN1G). This was our first experience with our new homebrew PA (IK2ZUT). I tested out my RTTY modem with my 40-meter beam disconnected, and used a wire antenna lying in the snow on the roof (S56A). My rotators were frozen with heavy ice, but I managed to work a number of W/VE stations on 20 and 40 with my 40-meter Windom (SM4CMG). The RTTY Roundup is always fun! (T91ENS). I still had software troubles, but did better than last year (YU1BO). Propagation to North America was lousy, particularly on 15; and there was nothing on 10 (ZL2AMI). I'm still learning about propagation from Alaska. I don't think I've ever worked so hard for so few contacts (KL7/KG5EG).

## Region Leaders

Boxes list call sign, score, class (S = Single Operator, M = Multioperator), and power (A = Low Power, B = High Power).

### Northeast Region (New England, Hudson and Atlantic Divisions; Maritime and Quebec Sections)

N1RCT	66,794	S	A
N1OAZ	47,227	S	A
K2NJ	44,712	S	A
KEZUV	41,064	S	A
WA6ILT/1	31,600	S	A

WF1B (at K1NG)	108,324	S	B
KF3P	107,484	S	B
K1IU	97,118	S	B
W3GG	62,865	S	B
N2DL	56,100	S	B

WA2UKP	71,610	M	A
WS1E	59,605	M	A
N1JEB	37,760	M	A
N1EDM	3,480	M	A

NE3H	61,946	M	B
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### Southeast Region (Delta, Roanoke and Southeastern Divisions)

AA5AU	87,290	S	A
KA4RRU	61,318	S	A
KK4DK	56,191	S	A
KD5ZM	44,362	S	A
WA4ZXA	40,640	S	A

K4HSF	72,558	S	B
WA4VQD	59,760	S	B
KB4GID	59,160	S	B
KQ4QM	57,327	S	B
WA4MME	53,867	S	B

WU3V	81,236	M	A
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AA4NC	73,108	M	B
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### Central Region (Central and Great Lakes Divisions; Ontario Section)

KD8FS	52,812	S	A
N9CKC	49,410	S	A
N8FEH	25,840	S	A
W8ERN	20,592	S	A
N9GEU	16,483	S	A

W9KDX	76,230	S	B
VE3XO	74,900	S	B
AB8K	49,664	S	B
W9IL	34,861	S	B
WB9CEP	26,670	S	B

WB8YTZ	32,080	M	A
VE3UR	24,644	M	A
KE4ISW	16,986	M	A
W8VM	15,789	M	A
K9TSM	13,860	M	A

N9NCX	64,635	M	B
VE3FJB	64,152	M	B
W8UMD	63,244	M	B

### Midwest Region (Dakota, Midwest, Rocky Mountain and West Gulf Divisions; Manitoba and Saskatchewan Sections)

AA4M	66,392	S	A
K5ED	46,332	S	A
K0BX	44,115	S	A
N5NMX	31,960	S	A
K0OAM	29,120	S	A

AB5KD	137,235	S	B
K0RC	69,454	S	B
WA0ACI	48,944	S	B
KB5HVN	41,480	S	B
NA4M	27,456	S	B

AB5EA	44,162	M	A
N5MTS	39,600	M	A
KB0JSU	33,701	M	A
W8VJ	29,400	M	A
KA0SIX	20,032	M	A

### West Coast Region (Pacific, Northwestern and Southwestern Divisions; Alberta, British Columbia and NWT/Yukon Sections)

KN6DV	53,586	S	A
KE7GH	45,120	S	A
CF6FR	38,480	S	A
W7LD	37,881	S	A
WA6SDM	37,512	S	A

N9ITX/7	124,300	S	B
AI7B	86,172	S	B
WA7FOE	85,813	S	B
WA7FAB	82,710	S	B
VE6JY	68,556	S	B

AA7UN	53,625	M	A
AA6KX	51,030	M	A
KI6CK	16,131	M	A
KE6WEH	4,633	M	A

W7LZP	54,901	M	B
WD6L	21,912	M	B

## Scores

Scores are listed by DXCC countries and ARRL/RAC sections. Line scores list call sign, score, QSOs, multipliers, hours, and power (A = Low Power, B = High Power). Division and Continental Leaders are listed in **bold**.

### Africa

South Africa				
Z96BRH	3,362	82	41	24 B

### Asia

Bahrain				
A92GD	9,225	205	45	24 B

### Japan

JA7KBR/1	3,572	94	38	24 A
JA2BY	2,412	67	36	24 A
JR4GPA	1,925	73	25	24 A
JH3WKE	1,204	43	28	24 A
JA3DLE/1	950	50	19	3 A
JA2KPV	405	27	15	24 A
JH3CUL	384	24	16	24 A
JH8DBJ	112	16	7	24 A
JA2AXB	54	9	6	24 A
JA1AFF	35	7	5	2 A
JH5ZCP (JR5JAC,op)	13,041	207	63	8 B

7J6ACT (KP4FP,op)	1,768	68	26	24 B
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JA7QXJ	1,377	51	27	2 B
JA2CMM	84	14	6	24 B

### Asiatic Russia

R50F (UA0FZ,op)	3,232	101	32	24 A
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RW0FO	736	46	16	24 A
RA0FU	4,917	149	33	10 B

### Kazakhstan

UN5PR	15,100	302	50	24 B
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### Europe

Croatia				
9A8A	11,072	173	64	24 B

### Fed. Rep. of Germany

DL4RCK	10,017	189	53	24 A
DJ1OJ	4,332	114	38	24 A
DJ5JK	35,144	382	92	24 A
DJ6JC	22,862	322	71	24 B
DL7VOG	15,552	216	72	24 B
DJ5NN	170	17	10	24 B

### Spain

E3ALV	6,016	94	64	24 A
E2BNU	3,264	64	51	14 A
EA4AFP	2,480	80	31	24 A
EA3ELZ	154	14	11	24 A
EA1DLN	36	6	6	24 A
EA1BLF	36	6	6	24 A

### England

G5LP	28,105	365	77	24 A
G8LII	5,800	145	40	24 A

### Scotland

GM6WN1G	9,016	161	56	24 A
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### Wales

GW4KHQ	12,992	232	56	20 A
GW5NF	40,368	464	87	24 B

### Italy

I2HWI	10,730	185	58	14 A
IK7XCV	6,020	140	43	24 A
IT9AJP	2,944	64	46	24 A
I8BYW	1,800	60	30	24 A
I7ICU	1,104	48	23	24 A
I0KHP	819	39	21	3 A
IK7WPD	416	26	16	24 A
IV3PSG	44,082	474	93	24 A
I1COB	32,287	389	83	17 B
IK2HKT	15,663	227	69	24 B
IK6CAC	4,815	107	45	24 B
IK0CNA	2,924	68	43	24 B
IK2ZUT (+I2GXS,IK2s BUF,MPV,SGF)	39,732	462	86	24 A

### Norway

LA7AJ	11,200	200	56	24 B
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### Bulgaria

LZ3RR	13,050	261	50	24 A
LZ2MP	5,720	104	55	24 A
LZ1KBB	11,988	148	81	24 B

### Finland

OI2BP	53,888	421	128	24 B
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### Czech Republic

OK2PAD	4,455	99	45	24 A
OK2BXW	7,524	132	57	24 B
OK1MP	588	28	21	24 B

### Slovakia

OM3PR	3,645	81	45	14 A
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### Belgium

ON7KK	44,352	336	132	22 A
ON9CNC	24,080	301	80	24 A
ON6AM	7,688	124	62	24 A
ON6CR	1,485	55	27	7 A

### Denmark

OZ5MJ	14,322	217	66	24 A
OZ7XE	1,488	62	24	24 B

### Netherlands

PA3DHR	12,462	201	62	24 A
PA3GKT	9,048	156	58	24 A
PA3GQF	4,860	135	36	24 A
PA3ERC	13,166	227	58	24 B
PA3EWP	2,511	81	31	24 B
PA3EVV (+NET)	13,420	220	61	24 A
PA3AQL (+ops)	3,888	108	36	24 A

### Slovenia

S57J	4,900	100	49	24 A
S57U	4,788	114	42	24 A
S52SK	2,070	69	30	16 A
S57KM	1,344	64	21	8 A
S53MJ	34,611	417	83	24 B
S56A	13,041	161	81	24 B

### Sweden

SM4CMG	13,608	243	56	24 A
SM7ATL	7,392	154	48	24 A
SM7BHM	7,175	175	41	12 A
SM6BSK	5,940	132	45	24 A
SM4RGD	4,305	123	35	24 A
SM3KOR	24,336	312	78	24 A
SM3AFR	14,942	241	62	22 B

### Poland

SP2EIV	4,305	123	35	24 A
SP6CYV	3,115	89	35	12 A
SP6FJH	1,144	52	22	22 A
SP6GRM	16,940	242	70	24 B
SP3FAR	340	20	17	24 B
SP2UUU	266	19	14	24 B

### Greece

SV2BFN	21,896	322	68	24 B
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### Bosnia-Herzegovina

T91ENS (T94s EU,NF,TF,T95s LIG, MJB,MJN,ops)	31,995	405	79	23 A
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### European Russia

UA6LP	2,184	69	30	16 A
UA4ANZ	1,976	78	26	24 A
RU1AF	1,210	55	22	19 A
RU4L (UA4s CVR,LL, UA4-164-435,ops)	20,586	219	94	24 A
RU1A (RU1AM,RU1AA,RV1AW, RW1AC,ops)	40,014	494	81	24 B

### Ukraine

UT4PR	1,377	51	27	24 B
UT9I (UT2IZ,op)	72,808	479	152	24 A
US9QA	34,452	319	108	24 B
UT2II	2,900	100	29	24 B

### Latvia

YL2KL	1,725	75	23	24 A
YL2KF	30,733	421	73	24 B

### Romania

YO2BS	396	22	18	24 A
YO3FRI	10,050	150	67	24 B

### Yugoslavia

YU7AM	23,184	252	92	13 A
YU1BO	7,308	116	63	24 A
YU7AE	735	35	21	24 A

### Albania

ZA1AJ (OK2ZV,op)	2,030	58	35	24 B
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### North America

#### Barbados

8P6SG	21,866	377	58	24 A
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#### Panama

HP1DGX	24	6	4	24 A
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#### Alaska

KL7KG5EG	12,656	226	56	24 A
KL7WP	646	34	19	10 A
KL7BB	17,829	283	63	24 B

#### Virgin Islands

**South Texas**

N5NMX	31,960	470	68	24	A
N5XUS	25,285	389	65	21	A
KK5CA	3,922	106	37	8	A
KG5IT	2,220	74	30	24	A
WA5IZE	1,485	55	27	24	A
AB5KD	137,235	1307	105	24	B
NA4M	27,456	416	66	12	B
AB5EA (+AB5EB)	44,162	622	71	24	A

**West Texas**

K5ED	46,332	572	81	21	A
K5GL	8,272	188	44	24	A

**6****East Bay**

W6/G0AZT	27,122	382	71	21	A
AC6DR	2,343	71	33	10	A

**Los Angeles**

KN6DV	53,586	687	78	24	A
AC6EF	6,345	135	47	24	A
KK6DH	1,215	45	27	7	A
KN6VW	13,695	249	55	9	B
K0DI	1,944	54	36	4	B
KE6WEH (KC6YHF, KD6s FJV, OKN, QWU, ZHC, KE6s GHX, MSW, RJE, KJ6VZ, N6s WZR, XAC, ops)	4,633	113	41	24	A

**Orange**

W6TKV	7,065	157	45	11	A
AF6F	4,730	110	43	14	A
KD6CCP	2,442	74	33	8	A
N6HC	63,960	820	78	22	B
WD6L (+NET)	21,912	332	66	20	B

**Santa Clara Valley**

WA6SDM	37,512	521	72	24	A
AA6TY	10,550	211	50	23	A
KD6TO	22,770	330	69	24	B
W6ISO	3,588	92	39	24	B
KO6CL	2,698	71	38	17	B
AA6KX (+NET)	51,030	729	70	24	A
KI6CK (+W6JVE)	16,131	283	57	24	A

**San Diego**

KD9E	20,900	275	76	24	A
W6IWO	4,928	112	44	24	A
N6QEK	2,960	80	37	9	A

**San Francisco**

W6JOX	12,255	215	57	24	A
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**Sacramento Valley**

N6GG	45,322	527	86	24	B
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**7****Arizona**

KE7GH	45,120	705	64	24	A
KC7MJ	14,098	266	53	24	A
N7UJJ	13,727	259	53	24	A
KA1S	11,985	255	47	24	A
WB9EXL	10,140	195	52	24	A
W4VZR	4,797	117	41	12	A
KJ7GU	2,691	69	39	7	A
WV7P	1,848	56	33	7	A
WA7KLK	1,118	43	26	24	A

**Eastern Washington**

N0DH/7	10,971	207	53	24	A
K7DSR	7,644	147	52	24	A
KB7HJM	2,574	78	33	24	A
W1TR	6,705	149	45	18	B
KI7AO	532	28	19	7	B

**Idaho**

W7QDM	12,350	247	50	24	A
W7RH	2,622	69	38	9	A
AA7UN (+KJ7TH)	53,625	715	75	24	A

**Montana**

WA7DEO	12,825	225	57	18	A
AA7BG	1,512	54	28	3	A
N9ITX/7	124,300	1243	100	24	B

**Oregon**

AA7CP	7,755	165	47	15	A
KK5CP	4,100	100	41	16	A
AB7NV	1,012	44	23	6	A
N7IXI	270	18	15	24	A
AI7B	86,172	1002	86	24	B
WA7FAB	82,710	919	90	24	B

**Utah**

KB7OKD	6,622	154	43	18	A
KI7ST	2,190	73	30	14	A

**Western Washington**

W7LD	37,881	621	61	23	A
W7KSK	10,700	214	50	24	A
N7VGO	2,380	70	34	12	A
WA7FOE	85,813	943	91	24	B
K7WUW	19,215	315	61	24	B
W7LZP (+K7LS, WA7BAY)	54,901	713	77	24	B

**Wyoming**

KI7MH	6,688	152	44	15	A
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**8****Michigan**

KD8FS	52,812	652	81	24	A
N8FEH	25,840	340	76	24	A
W8ERN	20,592	264	78	24	A
K8ODW	10,488	184	57	24	A
W8HCS	6,533	139	47	19	A
KG8CY	20,496	336	61	24	B
AA8UG	20,468	301	68	24	B
KF8KW	16,677	327	51	24	B
K8CV	6,552	126	52	24	B

**Ohio**

W8PBX	15,860	260	61	23	A
WB8JBR	13,140	219	60	24	A
WB8KQJ	6,392	136	47	23	A
KA8OUT	5,616	117	48	24	A
AF8A	5,382	117	46	7	A
WB8IEA	3,737	101	37	11	A
N8TPS	2,046	62	33	16	A
WD8DOS	1,820	70	26	20	A
W8EXI	1,274	49	26	24	A
AB8K	49,664	512	97	24	B
KF8TM	12,528	232	54	20	B

**WB8YTZ (K8PYD, KB8KQ, NM8O, WB8YJF, ops)**

	32,080	401	80	24	A
W8VM (AF8C, W8IDM, ops)	15,789	277	57	21	A
W8UMD (KC8AKA, N8s KPJ, OBE, QAL, WB8ENR, N9AG, ops)	63,244	652	97	24	B

**West Virginia**

K8UC	21,744	302	72	24	A
WB8WRY	18,786	303	62	18	A

**9****Illinois**

KF9LI	6,930	154	45	13	A
W9FFQ	6,624	138	48	13	A
KD0AV	5,368	122	44	24	A
WI9N	4,182	102	41	22	A
AA9NF	2,485	71	35	7	A
W9ILY	224	16	14	3	A
W9KDX	76,230	770	99	24	B
W9IL	34,861	491	71	24	B
K9UQN	9,486	186	51	14	B
N9NCX (+KB9FYB, N9ENA)	64,635	695	93	24	B

**Indiana**

N9GEU	16,483	311	53	19	A
WB9CEP	26,670	381	70	14	B
K9VQK	2,920	73	40	10	B
K9TSM (N8DLY, AA9DG, KA9SYE, KB9s ATR, BBI, N9s HKF, KKR, OKD, W9s JOE, XD, WZ9M, ops)	13,860	231	60	21	A

**Wisconsin**

N9CKC	49,410	610	81	24	A
AA9PB	8,131	173	47	24	A
K9OSH	2,850	75	38	24	A
KB9KWL	1,710	57	30	14	A
W9PVD	5,900	118	50	10	B

**0****Colorado**

W7LHO	22,620	377	60	24	A
N0IBT	6,424	146	44	16	A
N0XWN	500	25	20	4	A

**Iowa**

K0OAM	29,120	416	70	24	A
WK0F	25,020	417	60	22	A
KB5HVN	41,480	610	68	24	B

**Kansas**

AK0A	2,590	70	37	24	A
WA8ZNC	561	33	17	3	A
K0BJ (+KG0PI)	29,400	420	70	20	A
KA0SIX (+KB0RCN)	20,032	313	64	24	A

**Minnesota**

WE0Q	24,318	386	63	19	A
KG0RK	4,000	100	40	12	A
W0BKS	2,480	80	31	24	A
AA0SM	756	36	21	5	A
K0RC	69,454	847	82	24	B
WA0ACI	48,944	644	76	24	B
N0AEV	21,452	346	62	24	B
W0ML	14,454	219	66	24	B
W2JGR/0	10,710	210	51	24	B
AA0KJ	8,127	189	43	21	B
K0SK	1,740	60	29	4	B

**Missouri**

AA4M	66,392	772	86	24	A
K0BX	44,115	519	85	20	A
KI0W	23,643	333	71	24	A
KG0QG	11,556	214	54	24	A
WB0DBM	11,526	226	51	17	A
KB0MSE	6,030	134	45	18	A
AA0ZS	2,394	63	38	10	A
KO0Z (+NF0Q)	14,820	260	57	19	A

**North Dakota**

KE6WU	4,318	127	34	13	A
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**Nebraska**

KG0FE	6,644	151	44	24	A
KG0EJ	2,701	73	37	9	A
KB0JSU (+N0s RHL, UJT)	33,701	503	67	24	A

**South Dakota**

K0WIU	4,680	117	40	8	A
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**VE****Quebec**

VE2AXO	10,962	203	54	13	A
VE2BOB	7,200	160	45	24	A

**Ontario**

VE3UMV	15,660	348	45	22	A
VE3LPE	12,906	239	54	20	A
VE3FMC	6,426	126	51	24	A
VA3HL	6,149	143	43	14	A
VE3VAC	5,632	128	44	13	A
VE3HOL	5,148	117	44	24	A
VE3EVV	1,456	56	26	24	A
VE3BEE	1,219	53	23	9	A
VE3XO	74,900	749	100	24	B
VE3RGL	23,180	380	61	24	B
VE3UR (+VE3s DEH, JPT, PKA)	24,624	244	101	23	A

VE3FJB (+VA3CW, VE3s IJM, NDA, OY, THR, VSM)	64,152	729	88	24	B
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**Saskatchewan**

VE5CPU	630	35	18	3	A
VE5SF	7,009	163	43	24	B

**Alberta**

CF6FR	38,480	592	65	23	A
VE6KRR	37,422	567	66	24	A
VE6ZX	35,945	553	65	24	A
VE6JY	68,556	788	87	24	B

**British Columbia**

VE7CFD	11,679	229	51	12	A
VE7IN	28,560	408	70	24	B

**Northwest Territories**

VE8NC	4,469	109	41	24	B
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**Checklogs**

AA7IH, EA5GMB, GU0SUP, IK3SCB, KB3A, KK5OQ, K8PYD, KD8FW, LA3RIA, SM6MPJ, SM6TKQ, YO6OBH, ZS6YA.					
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**QST**