

1998 ARRL RTTY Roundup Results

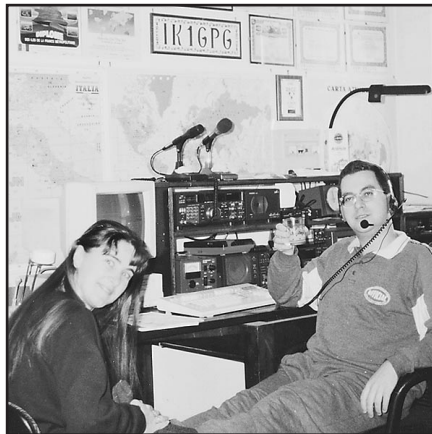
You could feel the tension in the air as digital operators from around the world anxiously awaited the start of the tenth annual RTTY Roundup. This is one operating event that the digital crowd looks forward to each year. There is nothing better than starting the new year by participating in your favorite contest. Ron, K5DJ, sums it up nicely, "This year's roundup was awesome from the starting gun until the end! The RTTY Roundup is the king of all contests!"

Propagation is the key to any successful contest. Without at least a couple of good openings, a contest can be on the boring side. This year, band conditions were improved by the early stirrings of Cycle 23. With an additional 30 or so points in solar flux levels, long-haul openings were commonplace on 20 meters which, as usual, was the backbone for serious competitive efforts. But 15 meters was probably the big surprise this year, with openings that supplied almost as many contacts as 20 meters. As darkness closed in, the activity shifted to 40 and 80 meters.

Despite the foul weather that January brings—ice, snow, rain, and wind—participation is always great in the RTTY Roundup. We received 452 entries in this year's contest. Due to the positive publicity we get for this contest from the participants, you can count on attracting a fair amount of first timers. One of these newcomers was Egbert, ON4CAS. He was quite excited to work a new country, "This was my very first ARRL RTTY Roundup, and I was able to work a new country—New Caledonia."

Digital contests become truly enjoyable if you have only one computer to do everything. We noticed that most participants who used a computer were using the WF1B software package. Hats off to Ray for all his hard work and effort in the software department. He's no slouch when it comes to operating either, as the WF1B multioperator effort in this year's contest netted his crew a second place finish among the high power multiops, just behind the eventual winner.

One problem observed here is that some versions of *RTTY* by WF1B don't count the multipliers correctly. If you're using version 3.0 or 3.2A, your multipliers should be checked before submitting logs. These versions were noted as not giving credit for a



Max, IK1GPG, takes a well-deserved break during the RTTY Roundup. Pictured with Betty, IK1QFM.

lot of multipliers! It's amazing the number of testers who are not even looking at their calculated scores. The Contest Branch had to recalculate the multipliers for quite a few testers who used these versions of the software. It's to your benefit to compare the QSOs and multipliers on your summary sheet against the log itself before submission.

Score Records

Last year, we were quite excited when 27 division records were broken, but this year we blew right past that high-water mark—three new overall score records and 33 division records! That's a clue that propagation is definitely improving. During this year's contest, low and high power single-operator records were broken, as well as the multioperator low-power record. AA5AU set the new single-operator low-power record at 130,020 points, while K5DJ set the single-operator high-power record at 182,390 points. K2DS goes into the multioperator low-power record book with 98,333 points. Also 33 new division records were set: Single-operator low-power—W1TY, N9CK, AA5AU, WB8YJF, N2FF, N1RCT, N6NT, KA4RRU, WT4I, KN6DV, WW2R, VA3MM; Single-operator high-power—K3MM, N9NCX, K0KO, KK5OQ, W7MMQ, N8PR, K5DJ; Multioperator low-power—N3IXR, W5VZF, N8LRG, K2DS, KG0QG, N1JEB, N7IZM; Multioperator high-power—W0SD, N8NR, NO2T, K00Z, WF1B, W7RY, W4MR. Not all winners set new records, so be sure to look over the score boxes for the rest of the winners. Congratulations to all the new record holders, and winners!

You don't have to set a new record to have fun. That's what is nice about contesting—there's something for everyone. During contests, you can find stations from around the world. When the bands are full like this, it's easier to work that last state for your Worked All States, or work a new country toward your DXCC. Local competition is very popular among the "little guns." Even the casual operator tuning across the bands finds the fun and excitement of fast-paced competition.

While you're looking over the contest results is the perfect time to start planning for next year's contest. Check out your antennas and take a look at your band-by-band strategy—there's always room for

Top Scores

Single Operator

W/VE—Low Power

AA5AU	130,020
KA4RRU	106,275
WW2R	103,929
WT4I	99,200
VA3MM	91,164
KD5ZM	90,524
KN6DV	88,452
N1RCT	87,255
NX4W	87,163
W1TY	87,026
K4ZAM	84,630

W/VE—High Power

K5DJ	182,390
K3MM	175,200
W7MMQ	128,010
N8PR	126,996
K7WM	96,236
KK5OQ	95,200
W7GG	92,120
W7NN	88,976
W7TI	88,412
K0KO	86,142
N9NCX	85,280
N2DL	80,244

DX—Low Power

PT2BW	76,501
EU1AZ	53,184
CE8SFG	49,000
EA5BHK	44,814
UN5PR	43,290
LU9VET	42,144
IV3FSG	41,538
HA5BSW	40,950
P40X	39,864

(NX9O,op)

J8/DF2SS	31,284
XE3/5JHW	26,950
KP4VP	21,900

DX—High Power

CT3BX	97,060
CT1AOZ	89,688
UT0I	87,156
9A8A	79,501
CE8ABF	76,529
DJ5JK	66,528
OH1AF	66,126

(OH1MDR,op)

HA2SX	62,274
EA2IA	61,110
YL8M	60,424

(YL2KL,op)

Multioperator

W/VE—Low Power

K2DS	98,333
N1JEB	63,308
VE6RAJ	53,120
KG0QG	51,840
N8LRG	44,238
W5VZF	41,194
N3IXR	34,602
W0EEE	18,414
WA4QDM	15,170
N7IZM	14,880
K7UB	9,898

W/VE—High Power

KE3ZR	131,445
W0SD	124,232
WF1B	121,980
W7RY	117,327
W4MR	105,561
N8NR	104,095
NO2T	70,300
W4CV	66,048
N0ISE	60,060
VE3FJB	57,960
K4WWW	57,950

DX—Low Power

IK7YUA	20,664
VP2E/NM7N	15,535
SP5ZCC	13,910
KL7IWC	12,540
LZ1MC	8,811

DX—High Power

GW5NF	69,936
S55A	25,520
SN1I	22,330

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)				Southeast Region (Delta, Roanoke and Southeastern Divisions)				Central Region (Central and Great Lakes Divisions; Ontario Section)				Midwest Region (Dakota, Midwest, Rocky Mountain and West Gulf Divisions; Manitoba and Saskatchewan Sections)				West Coast Region (Pacific, Northwestern and Southwestern Divisions; Alberta, British Columbia and NWT/Yukon Sections)			
N1RCT	87,255	S	A	AA5AU	130,020	S	A	VA3MM	91,164	S	A	WW2R	103,929	S	A	KN6DV	88,452	S	A
W1TY	87,026	S	A	KA4RRU	106,275	S	A	N9CK	63,984	S	A	KØBX	60,900	S	A	N6NT	70,434	S	A
WA6ILT/1	51,417	S	A	WT4I	99,200	S	A	WB8YJF	61,544	S	A	N5XUS	47,440	S	A	KJ7TH	48,370	S	A
K3MM	175,200	S	B	N8PR	126,996	S	B	N9NCX	85,280	S	B	K5DJ	182,390	S	B	W7MMQ	128,010	S	B
N2DL	80,244	S	B	KK5OQ	95,200	S	B	AB8K	55,182	S	B	KØKO	86,142	S	B	W7NN	88,976	S	B
ND8L/3	76,398	S	B	W4WX	69,700	S	B	W9IL	53,568	S	B	WBØO	64,614	S	B	W7TI	88,412	S	B
K2DS	98,333	M	A	W5VZF	41,194	M	A	N8LRG	44,238	M	A	KGØQG	51,840	M	A	N7IZM	14,880	M	A
N1JEB	63,308	M	A	WA4QDM	15,170	M	A	VE3AA	7,000	M	A	WØEEE	18,414	M	A				
N3IXR	34,602	M	A				VA3HL	6,916	M	A									
WF1B	121,980	M	B	W4MR	105,561	M	B	N8NR	104,095	M	B	WØSD	124,232	M	B	W7RY	117,327	M	B
NO2T	70,300	M	B	W4CV	66,048	M	B	VE3FJB	57,960	M	B	NØISE	60,060	M	B	K6CT	35,346	M	B
							K4WW	57,950	M	B	KØØZ	32,984	M	B					

improvement. Don't wait till the last minute. See you January 2-3, 1999 for the next ARRL RTTY Roundup.

SOAPBOX

I was able to improve my score from last year by 40% due to better conditions, activity, and strategy. It will be much better if the higher bands open next year (DJ5JK). The conditions on 15 meters were pretty good. I was able to reach a couple of USA stations (DL7VOG). Always very enjoyable! Propagation wasn't too bad, however I hope it will be better next year (IK6CAC). Thanks for a nice contest. Nice conditions in the beginning, on 80 meters, and soon after on 15 meters and also 40 meters (SM4RGD). Thank you for a very nice contest. We are rather new on RTTY and don't have a lot of experience, but we like this kind of ham radio very much (SP5ZCC). The band conditions were much better this year

(KL7/KG5EG). Had a ball! Fifteen meters was really hot for me this year (NH6XM). Activity seemed higher than last year and band conditions were certainly better. I was able to pick up all 48 continental states, but missed KL7 and KH6 (WA6ILT/1). This was my first contest and I had a great time (N1RDN)! Not sure why, but it seems I had to work harder for contacts this year; I had fun anyway (W1LEE). Had a great time operating! No frequency conflicts with other RTTY testers (WF1B). This was the first contest in which we worked all states during this contest including KL7 and KH6 (N1JEB). I was surprised I was able to run as much as I did on low power. When you run, you have to think big, it works (N2FF). Best score ever, but would not have been possible without the WF1B software; had a ball (K3WNI)! It was nice to see the bands in better shape than in previous years (W3WKR). What a great time! No interfering, no haggling, simply a great bunch of testers. Thanks to all (N3IXR)! Had a blast looking forward to the next one (KA4RRU)! Great contest! Participation is really

up (KD5ZM). My best roundup yet! Moving to a new location improved my 80-meter score (AC5DK). It was tremendous fun (KR6E)! Amazing how much fun one can have with just 100 W into a pair of ground-mounted vertical antennas (AA6TY). It's hard to believe 40 meters was my best band. Fifteen was strange, I could hear W1s working W7s, but I couldn't work either side (K8SIA). Good activity, both domestic and DX, but not much in the way of variety of DX (N8NR). Last year the flu, this year an ice storm... I have to find another hobby (KF8KW). Forty meters really held up well throughout the entire contest (N9THC). This was my first real contest in almost 20 years. Unfortunately, due to a gremlin in the shack affecting some equipment I was limited to 30 W on 20 meters (WD9EKA). I really enjoyed the contest. Everyone exhibited old-fashioned manners. What a pleasant change from many of the other tests I've been in in the last 10 years (NØISL). Had lots of fun and that's what it's all about (VE3WZ)!

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.

Asia			CT1BNW	2,052	57	36	24	A	GUØSUP	5,400	100	54	11	A	I1COB	52,477	541	97	7	B	OK1AXB	5,202	102	51	24	A			
Kyrgyzstan			CT3BX	97,060	844	115	24	B	Wales			IK2GWH	9,558	162	59	24	B	OK2BJT	2,470	65	38	24	A						
EX2M	12,896	248	52	24	B	CT1AOZ	89,688	808	111	22	B	IK7YUE	2,074	61	34	24	B	OK2PCL	2,400	60	40	24	A						
Tajikistan			CT4DX	5,005	91	55	24	B	GW5NF	69,936	744	94	24	B	IT9JOF	1,785	51	35	24	B	OK2BMC	1,888	59	32	8	A			
EY8CQ	3,180	106	30	24	B	Fed. Rep. of Germany			GW4KHQ	20,448	288	71	24	A	IK7YUA (+IK7XIV)	20,664	328	63	24	A	OK1CZ	651	31	21	24	A			
Japan			DL5ZB	14,137	211	67	24	A	Hungary			Norway	5,177	167	31	24	A	OK1CM	54,900	549	100	24	B						
JA3DLE/1	10,032	176	57	9	A	DL8SDC	10,269	163	63	24	A	LA5TFA	16,974	246	69	24	A	OK2BXX	13,286	182	73	24	B						
JA1WSK	8,241	123	67	24	A	DJ5JK	66,528	616	108	24	B	LA7AJ	16,974	246	69	24	A	OK2SG	11,661	169	69	24	B						
JA2BY	6,344	104	61	24	A	DJ6QT	58,194	549	106	24	B	Italy			Slovakia			OM3TA	13,568	212	64	24	A						
JH3SIF	2,442	66	37	10	A	DL7VOG	28,170	313	90	24	B	IV3FSG	41,538	483	86	24	A	OM3PR	2,332	53	44	24	A						
JA1SJV	2,146	58	37	24	A	Spain			IV4WVH	13,650	210	65	24	A	Belgium			ON6CR	8,892	156	57	24	A						
JR1KSK	1,624	58	28	24	A	EASBHK	44,814	462	97	24	A	I2HWI	13,570	230	59	14	A	ON4CAS	8,505	135	63	24	A						
JA7KM	143	13	11	22	A	EA4CI	15,867	369	43	24	A	IK6CAC	13,298	218	61	24	A	Denmark			OZ9AG	1,551	47	33	24	A			
JF3PNQ	16,056	223	72	24	B	EA2BNU	10,688	167	64	24	A	IK2XRW	12,726	202	63	24	A	OZ7XE	1,750	70	25	24	B						
Austria			EA1AHA	5,668	109	52	24	A	ØKHP	12,210	185	66	18	A	Finland			PAØEHF	1,610	46	35	24	B						
Kazakhstan			EA4BNQ	4,600	100	46	24	A	IK1GPG	11,088	168	66	24	A	OH3KOK	6,536	152	43	24	A	Netherlands			PA3DHR	22,630	310	73	24	B
RA0FF	13,490	190	71	24	A	EA1BAF	2,592	72	36	24	A	OH5KUY	540	27	20	24	A	PAØEHF	1,610	46	35	24	B						
Belarus			EA2IA	61,110	630	97	24	B	OH1AF (OH1MDR.op)	66,126	642	103	24	A	Slovenia			S57KM	9,350	187	50	24	A						
UN5PR	43,290	555	78	24	A	France			IK2AUV	4,650	90	45	24	A	S53MJ	51,360	535	96	24	B									
Europe			EU1AZ	53,184	554	96	24	A	IK2XVB	4,050	90	45	24	A	S55A (+S57NTW)	25,520	319	80	24	B									
Croatia			England			GØLLI	6,655	121	55	24	A	Portugal																	
9A1CEI	651	31	21	24	A	F6AUS	15,862	206	77	24	A																		
9A3SM	220	20	11	24	A	FSYJ	5,405	115	47	24	A																		
9A8A	79,501	743	107	24	B																								

Sweden			
SM7BHM	21,216	272	78 24 A
SL4ZVC	5,031	129	39 24 A
SM7ATL	2,112	66	32 24 A
SM4DXC	1,500	50	30 24 A
SM4RLD	459	27	17 24 A
SM4EGT	22,100	325	68 24 B
SM5EIT	1,050	50	21 24 B
Poland			
SP4TXI	19,950	266	75 24 A
SP9LKS	9,780	163	60 24 A
SP2IEW	6,148	116	53 24 A
SP3RBT	5,720	110	52 24 A
SP2FAV	5,358	114	47 24 A
SP7FOJ	5,175	115	45 24 A
SP4BOS	2,201	71	31 24 A
SP2UJU	2,040	60	34 24 A
SP8FHJ	1,400	50	28 24 A
SP6FBD	864	32	27 24 A
SP3XR	6,517	133	49 24 B
SP5GRM	4,018	98	41 24 B
SP1MHV	130	13	10 24 B
SP5ZCC (SP5UAF, SQ5BPM, SQ5BPT, SQ5EB7, SQ5EBL, SQ5HAB, SQ5V7B, 325AAN, ops)	13,910	214	65 23 A
SN11 (SP1MHV, SP10304KO, ops)	22,330	319	70 24 B
European Russia			
UA6LP	7,536	157	48 24 A
Ukraine			
UT01	87,156	807	108 24 B
Latvia			
YL2KF	4,264	104	41 24 A
YL8M (YL2KL, op)	60,424	664	91 24 B
Yugoslavia			
YU7AE	12,540	220	57 24 A
YU7YG	46,035	495	93 24 B
North America St. Vincent			
J8/DF2SS	31,284	396	79 24 A
Alaska			
KL7/KG5EG	21,300	355	60 24 A
KL7WP	8,772	172	51 13 A
KL7WC (+WL7CQA)	12,540	209	60 24 A
Puerto Rico			
KP4VP	21,900	300	73 24 A
Anguilla			
VP2E/NM7N (+AI4K)	15,535	239	65 22 A
Mexico			
XE3/ISJHW	26,950	350	77 24 A
XE2DV	8,100	162	50 24 A
XE1J	23,100	300	77 12 B
Oceania New Caledonia			
FK8VHN	21,243	291	73 24 A
Hawaii			
NH6XM	17,670	285	62 24 A
Australia			
VK3BP	2,646	63	42 20 A
VK6GM	10,437	213	49 24 B
New Zealand			
ZL2AMI	12,180	174	70 24 B
South America Chile			
CE8SFG	4,900	490	500 18 A
CE8ABF	76,529	743	103 24 B
Argentina			
LU9VT	42,144	439	96 24 A
LU6AUM	1,950	75	26 24 A
Aruaba			
P40X (NX90, op)	39,864	453	88 24 A
Brazil			
PT2BW	76,501	677	113 24 A
South Shetland Islands			
LZ0A (LZ2UU, op)	23,100	220	105 24 B
Venezuela			
YV1DIG	54,000	540	100 24 B
United States 1 Connecticut			
WA1EHK	12,936	196	66 19 A
KA1IXG	7,728	138	56 24 A
WB8IMY/1	4,275	95	45 5 A
N1HPP	3,995	85	47 24 A
WR1B	1,134	42	27 4 A
Eastern Massachusetts			
WA6LTL/1	51,417	591	87 24 A
W1TE	38,857	427	91 24 A
W1DEA	38,857	427	91 24 A
WZ1Q	34,744	404	86 24 A
WU1F	11,328	177	64 10 A
AE1M	4,662	126	37 24 A
N1RDN	2,960	74	40 24 A
W1RY	34,572	402	86 24 A
Maine			
N1RCT	87,255	831	105 24 A
N1AFC	1,887	51	37 24 A
W1LEE	9,135	145	63 15 B
New Hampshire			
K1PTF	37,474	457	82 24 A
WW1Y	28,002	359	78 24 A
KA1O	18,288	254	72 24 A
WB1EDI	13,735	205	70 24 A
Rhode Island			
WF1B (+K01X)	121,980	1070	114 24 B
Vermont			
N1FKR	7,395	145	51 24 A
W1MAG	52,724	538	98 24 B
W1CX	36,326	443	82 24 B
Western Massachusetts			
W1HFN	14,472	201	72 24 A
W1BYH	14,364	252	57 9 A
WN1E	12,480	192	65 24 A
WB1HGL	10,324	178	58 14 A
K5ZD	74,152	713	104 24 B
N1JEB (+N1JIT)	63,308	646	98 24 A
2 Eastern New Jersey			
W2KI	40,680	452	90 24 A
WJ2RM	32,960	412	80 24 A
AA2QR	5,830	106	65 6 A
N2DL	80,244	743	108 24 B
KB2DJJ	2,640	66	40 5 B
K2DS (+WA2JQK)	98,333	919	107 24 A
NYC-Long Island			
N2FF	46,084	562	82 22 A
WY2E	37,030	385	78 16 A
N2AUK	20,004	314	86 19 A
WA2CNV	8,493	149	57 24 A
N2LEB	8,062	139	58 24 A
AA2WM	304	19	16 6 A
WB2KHO (+KB2NOW)	8,802	163	54 24 A
North New Jersey			
N2QLQ	15,368	226	68 24 A
KF2OS	15,050	215	70 23 A
K2YG	10,140	156	65 24 A
ND2K	7,137	117	61 7 A
KO2FB	2,600	65	40 44 A
W2HCA	3,960	90	44 6 B
N02T	70,300	703	100 22 B
Southern New Jersey			
KC2SZ	7,889	161	49 24 A
Western New York			
W1TY	87,026	821	106 24 A
WA2EYA	19,028	268	71 15 A
N2ZDL	9,940	142	70 23 A
KF2VX	5,500	110	50 13 A
Delaware			
KE3ZR	131,445	1143	115 24 B
3 Eastern Pennsylvania			
K3WNI	19,728	274	72 24 A
K3SWZ	19,272	264	73 24 A
W3KB	10,920	195	56 24 A
W6ORZ	6,930	126	55 15 A
KA3TOV	3,256	88	37 24 A
N3ZKK	143	13	11 4 A
W3WKR	46,092	501	92 15 B
Maryland-DC			
N3UN	33,864	408	83 24 A
AF3D	17,024	224	76 24 A
NS3X	2,926	77	38 6 A
K3MM	175,200	1460	120 24 B
Western Pennsylvania			
KA3JWJ	28,612	311	92 24 A
WW3S	26,124	311	84 24 A
K3FH	17,748	261	68 24 A
KC3LV	14,080	220	64 24 A
WA3GPP	12,028	194	62 14 A
KB3AFT	8,316	189	44 8 A
N3UE	6,027	123	49 10 A
N3YEA	4,500	100	45 15 A
KA3FUR	2,046	62	33 9 A
K3JA	444	37	12 2 A
ND8L/3	76,398	714	107 24 B
N31XR (+W3SES)	34,602	474	73 24 A
4 Alabama			
AG4W	36,860	485	76 22 A
W4DEC	28,644	341	84 22 A
N4WIO	2,952	72	41 18 A
Georgia			
W4AQL (W4RU, N2NSZ, KE41WN, ops)	20,100	300	67 24 A
Kentucky			
AA2GS	32,494	422	77 22 A
KN4CG	26,781	339	79 24 A
WL3C	25,500	340	75 24 A
K4WW (+K4AT)	57,950	610	95 24 B
North Carolina			
K4ZAM	84,630	806	105 24 A
N2NFG	61,506	603	102 24 A
KB5WIA	3,698	86	43 12 A
W4MR (AA4NC, W4CC, K4MA, ops)			
105,561	951	111	24 B
Northern Florida			
NK4W	87,163	863	101 23 A
W4WX	69,700	697	100 24 B
South Carolina			
VE7CPN/W4	23,874	346	69 21 A
KS4YX	14,012	126	62 19 A
K14MI	9,179	137	67 24 A
K4DB	66,624	694	96 16 B
N4IQ	40,035	471	85 21 B
Southern Florida			
WT4I	99,200	992	100 24 A
K4C4HW	82,170	830	99 23 A
K4PX	12,320	220	56 24 A
AF4Z	10,332	164	63 24 A
W3DHN	4,230	90	47 8 A
N8PR	126,996	1114	114 24 B
Tennessee			
W4AUI	12,090	186	65 18 A
W4CZ	58,776	632	93 24 B
K4ZQX	4,095	91	45 8 B
W4CV (+ops)	66,048	688	96 24 B
Virginia			
K44RRU	106,275	975	109 24 A
W4JLS	19,656	252	78 24 A
W6IHG	5,880	120	49 14 A
N3TG	308	22	14 24 A
K4GMH	21,320	328	65 24 B
W0YR/4	11,151	177	63 24 B
W44QDM	15,170	205	74 18 A
5 Arkansas			
KD55A	90,524	854	106 24 A
K5XH	47,348	532	89 24 A
AC5DK	14,632	236	62 15 A
WA0TDG	7,904	152	52 24 A
AE5H	23,250	375	62 24 B
Louisiana			
AA5AU	130,020	1182	110 24 A
Mississippi			
NSQDE	7,812	126	62 24 A
KA5LGP	6,966	129	54 24 A
KK5OQ	95,200	952	100 24 B
W5VZF (+WA4DDE, KB4HB)	41,194	479	86 24 A
New Mexico			
WB1GSO/5	24,616	362	68 24 A
K4KIY	12,139	199	61 24 A
North Texas			
W5PLN	31,840	398	80 24 A
K5WI	14,592	228	64 18 A
K5YO	6,201	117	53 12 A
Oklahoma			
W5WYN	9,699	183	53 14 A
N8EU	29,898	453	66 18 B
South Texas			
WW2R	103,929	1029	101 22 A
NSXUS	47,440	593	80 24 A
KZ5E	24,412	359	68 24 A
KK5CA	7,140	140	51 9 A
K5DJ	182,390	1495	122 24 B
WA5IZE	12,322	202	61 24 B
6 East Bay			
G0AZ7/W6	48,132	573	84 24 A
AC4DR	24,003	381	63 24 A
Los Angeles			
KN6DV	88,452	972	91 24 A
KR6E	45,444	541	84 24 A
WS6E	36,404	479	76 24 A
W6LAX	27,324	414	66 18 A
K8DI	6,450	129	50 12 A
KO6VG	3,219	87	37 6 A
WB6CGZ	480	24	20 6 A
K6HGF	37,118	554	67 24 B
Orange			
WA6NOL	7,497	147	51 24 A
WM7D	6,298	134	47 24 A
AB6PA	1,568	56	28 8 A
KC6QLZ	1,376	43	32 5 A
N6HC	75,257	827	91 22 B
Santa Clara Valley			
N6NT	70,434	819	86 24 A
N2ALE	50	10	5 24 A
W6ISO	17,612	238	74 24 B
AD6AG	2,178	66	33 16 B
K6XX	2,016	63	32 24 B
K16NC (+W6JVE)	23,184	336	69 16 B
San Diego			
W6CN	13,728	208	66 15 A
KD6VKF	713	31	23 6 A
K6CT	35,346	411	86 19 B
San Francisco			
WN6W	26,100	348	75 24 A
WA2EWE/6	2,808	72	39 24 A
W6JOX	25,752	348	74 24 B
San Joaquin Valley			
K6MI	13,560	226	60 24 A
Sacramento Valley			
KD6MS	13,680	240	57 24 A
7 Arizona			
AB7LU	38,352	564	68 24 A
AA6TY	28,490	385	74 23 A
KD4HTX/7	15,930	270	59 18 A
K7ON	10,600	212	50 24 A
W7ZT	7,380	164	45 16 A
KB7SLJ	2,706	66	41 10 A
N7GLE	1,530	51	30 5 A
KCV7	59,585	701	85 14 B
AA7A	53,944	613	88 24 B
N71ZM (+KB7YEB, KC7SAK, KB7YEE)	14,880	248	60 24 A
Eastern Washington			
K7GS	17,556	266	66 24 A
K7UK	10,324	178	58 16 A
W7RY (+K7DSR, WST1)	117,327	1057	111 24 B
Idaho			
KJ7TH	48,370	691	70 24 A
W7RH	5,640	120	47 24 A
AA7UN	53,884	709	76 24 A
N7UVH	20,801	341	61 23 B
Montana			
K7VK	20,860	298	70 20 A
W7MMQ	128,010	1255	102 24 B
N7MNY	6,292	121	52 24 B
Oregon			
WJ7S	28,884	348	83 22 A
AA7CP	15,447	271	57 24 A
W7XN	12,720	212	60 14 A
AA7IH	2,528	79	32 13 A
W7GS	92,120	940	98 24 B
KG7DK	12,288	192	64 24 B
Utah			
KB7OKD	5,535	123	45 17 A
K7HHK	1,891	61	31 9 A
K7UB (+K17VL, K7NWX)	9,898	202	49 22 A
Western Washington			
W7LD	41,230	589	70 24 A
N7VGO	23,694	359	86 21 A
WA7VNI	19,845	315	63 24 A
KB7N	1,947	59	33 24 A
W7NN	88,976	1072	83 24 B
W7TI	88,412	961	92 24 B
8 Michigan			
K			