Results, 1994 ARRL RTTY Roundup

The digital modes have some of the best operators in Amateur Radio today!—Maurice, KA1S

By Billy Lunt, KR1R Contest Manager

Warren C. Stankiewicz, NF1J Assistant Contest Manager

HH2PK

GØARE IK1HSR PAØXPQ

WH6I S53MJ

P.I2MI

DX-Low Power

DX-High Power KP2N A22MN (K8MN,op) PV2A (PT2BW,op) S57MM

(S56A,op)

AH6JF LA7AJ RW3PF

C6A/AA5AU URØHQ

95,880

52,500 34,188 31,856

24.904

28,884

10.971

9,920 9,273

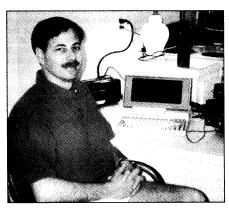
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you skipped this year's RTTY Roundup January 8 and 9, you really missed out. Wherever your interests in RTTY lie, this event offered something for everyone. If you've been looking for new people to work, there were certainly plenty of them. This event packs the signals in, giving you a great chance to try new gear, check out that new antenna or just make new friends.

and

Other operators fall into the awardhunter category. After all, you can get a certificate for making just 50 QSOs in the contest! If you've been hunting for that rare last state for your ARRL Worked All States (WAS) award, you'll be interested to know that we received logs from stations in 49 states. (North Dakota, where were you?) While we're on that subject, we'd like to thank Jay, WS7I, for making the trip to Montana and giving those who needed that state a great chance to work it. If you've been working on your RTTY DXCC, you probably picked up a couple of new ones you hadn't heard before. Stations in 29 DXCC countries sent in logs this year, from Oman (A4) to Djibouti (J2) to New Zealand (ZL), and we know there were more on the air that we didn't hear

Some people like the Roundup because of the low-power categories. Bagging a lot of contacts without having to heat your shack with an amplifier makes it that much more rewarding. As Don, C6A/AA5AU,



Ron, C6A/AA5AU, thinks, "This contest is too much fun to be legal!'

exclaims, "Low-power contesting from a DX location and only a 10 to 40 meter vertical was challenging. This contest is too much fun to be legal!" In fact, 73% of the entries we received ran 150 W or less.

Then there are those, as there are every year, who like to do things the hard way. For amateurs used to firing up the amplifier just to keep their fingers warm, consider the case of Dave, KFØLZ, and Susan, NØOSW, who operated from a tent trailer high in the Sacramento Mountains. Dave reports, "While the temperature dipped into the low 20s, I climbed into long underwear and established a new personal high

Top 10 Scores Single Operator Multioperator

W/VE-Low	/ Power	W/VE—Low Power						
WS7I	93,800	KFØLZ	34.43					
AA4M/6	56,662	W5VZF	30.10					
KK4DK	48,332	AB5EA	26.52					
VE6WQ	44,720	N1JEB	24,05					
WB8YJF	40,107	KB9ATR	23,82					
KØBX	39,501	KOØZ	19,24					
WA3DTO ·	36,603	VE3UR	15,77					
KA4RRU	35,866	KE7GH	14.56					
VE6ZX	35,712	WA2UKP	14,23					
WB8WRY	35,568	WS1E	12,64					
W/VE—Hig	h Power	W/VEHigh	Power					

W/VE—High	n Power	W/VEHigh	Power
WB7AVD	100,156	K9RS	105,545
AB5KD	99,800	KI5TI	80,560
WA7EGA	98,487	W4AQL	71,440
NV1G	94,120	W7LZP	45,680
K4JPO	91,665	VE7ZZZ	45,430
(AC6E,op)		WB2EAR	36,135
KG5EG	88,320	VE7YUK	32,010
WF5T	80,730	KN4IM	31,008
KØRC	80,171	AA7UN	28,116
AB8K	72,930	W8UMD	22,425
N9ITX	68,808	DV 1 D.	
		DX—Low Po	wer

VP5/WAØVQR 92,790 OH2AG 40,827

DX—High Power GW5NF 42.030 for me. Although there were no animals prowling in the area, I was concerned about the laptop display freezing up. Only another ham could understand why I do this." Anyone else have a story like this to share? Or wish they did?

This is a contest, of course—and what's a contest without the thrill of competition? When the Roundup was over and the dust had settled, there were close finishes in the standings. This was especially true in the single-operator classes. Jim, WB7AVD, narrowly beat Ron, AB5KD, and Hal, WA7EGA, for the top spot in the US highpower category. Hal later complained, "My choice to hunt and pounce for multipliers rather than sit on a frequency and call CQ during our two-hour 20-meter opening to Europe Sunday cost me eight easy multipliers. Competition in RTTY Roundup has become so tight that one mistake can make the difference." Some of the multioperator finishes were very close. For example, Brian, KE7GH, and Darrel, NU7I, topped Joe, WA2UKP, and Bob, WA2JQK, for eighth place US by just 737 points in the low power category. Among the highpower contingents, Bill, W7LZP, and Bryan, KD7LS, and the VE7ZZZ group were separated by a mere 322 points in the battle between fifth and sixth. Some will argue endlessly the benefits of running sta-



Although Dave, KFØLZ, may claim to have operated in his long johns, he looks spiffy

Regional Leaders

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

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Northeast Region	on		Southeast Regi	on			Central Region				Midwest Region	on			West Coast R	egion		
Atlantic Division	land, Hudson and Divisions; Labrado		(Delta, Roanoke Southeast Divis				(Central and Gr Divisions; Onta)	(Dakota, Midw Mountain and	West Gulf			(Northwestern Southwestern	Divisions,	,	
New Brunswick, Newfoundland, Prince Edward I	Nova Sc		KK4DK KA4RRU	48,332 35,866	s	Α	WB8YJF WA3DTO	36,603	S	Α	Divisions; Mar Saskatchewar	Province	s)		Alberta, Britis Yukon and NV	NT Provinc	es)	
Quebec Provinc		_	WB8WRY	35,568			KA9LAQ N8FEH	34,640	S		KØBX AlØY	39,501			WS7I	93,800		
W1BYH	34.884	S A	N4IQ KD4MM	33,187 30,261	S		VE3UMV	27,066 21,240	S		KØOAM		s		AA4M/6 VE6WQ	56,662		
K3SA		SA	KD4WW	30,201	0	^	VESCIVIV	21,240	٠	^	K4KIY	27,750	š		VE6ZX	44,720 35,712		
WM2U		SA	K4JPD (AE6E,op	91.665	s	В	AB8K	72,930	s	В	WK5M		š		VE7OR	30,418		
WA3GGM	23,205	S A	K4HSF	57,540		В	N9ITX					•				55,115	• .	•
N1JAC	21,384	S A	WA4MCZ	55,872			N9NCX	54,858	s		AB5KD				WB7AVD	100,156	SE	3
			KA5CQJ_	55,693			VE3FJB		S		KG5EG		S		WA7EGA		SE	
NV1G	94,120		WA4MME	42,960	s	В	W9IL	40,744	s	В	WF5T	80,730			WA7FAB			
NO2T NN2G		S B S B	W5VZF	20 100		٨	KB9ATR	23,828			KØRC WF5E		S		KE6XJ		SE	
KI1U		SB	WB4WOR	30,100 4,794			VE3UR		M		WFSE	61,824	0	ь	N6GG	51,686	SE	3
N2FF		SB	WD4WOH	4,734	141	^	VLOOM	13,770	IVI	^	KFØLZ	34,438	м	Δ	KE7GH	14,560		
.,	,000		KI5TI	80,560	м	В	W8UMD	22,425	М	В	AB5EA				W6JVE		MA	
N1JEB	24,053	МА	W4AQL	71,440						_	KOØZ	19,241			N7IZM		M A	
WA2UKP		МА	KN4IM	31,008		В					KBØJSU			Α		-,		•
WS1E		M A	W5GAD	18,709	М	В					N5SAO	10,716	М	Α	W7LZP	45,680	M E	В
WJ1Y		MA									14000			_	VE7ZZZ		M E	
VO2JD	2,573	МА									K9RS	105,545			VE7YUK		M	
WB2EAR	36,135	мв									N5RZ	16,897	iVI	В	AA7UN	28,116	M E	3
VE2CUA		МВ																

tions versus hunting for multipliers. Whichever method you choose, though, this is another example of how much of a difference a handful of QSOs or a multiplier can make, and how important it is to hang in there for just another couple of contacts.

In a continuation of a new feature in listing contest results, we've included the new regional boxes. These should give you a good view of what the competition was like in your area of the country. It should also give you an idea of what sort of score to shoot for next year.

When we processed the logs this year, we noticed that a number of operators claimed multipliers once per band, instead of once per contest. This led to several score reductions. If you fall into this category, that's probably the reason. Don't let a computer score your log without checking it over first! The time to look for mistakes is before you send your entry in, not after it appears in the results.

So what are you waiting for? If you talk to anyone who was on for this contest (or check the soapbox comments below), they'll tell you what a great time they had in the 1994 ARRL RTTY Roundup. Now's the perfect time to make preparations for the next one. The rules for the 1995 RTTY Roundup will be in December *QST*; we'll catch you then! We'd like to thank Contest Assistant Anne Jaworski for her help in preparing these results.

SOAPBOX

All year I look forward to this contest and although conditions were awful, I still had fun and look forward to 1995 (GMØ/WNIG). Because of the many snowstorms we had, my antenna was closer to the ground, which accounted for my poor signal (NIJAC). I had an absolute blast in the Roundup! Running 60 W into a G5RV and an old clunker of a VT with the TU, I was surprised at the number of RTTY contacts I could make. Maybe I'll learn to use AMTOR and packet before next RTTY comes around (KG8AP). I'd planned to participate in this contest, but because of a big snowstorm and ice,

most of my time was spent plowing (WA2ASQ). It seems like every year there are more stations, more states and more countries (AF8A). I made 71 contacts in casual operation and it was a lot of fun, as it was my first try at RTTY (KR4CZ). I enjoyed the contest, my first. My score may not be a winner, but I did work new states and countries, and I'm looking forward to receiving my certificate—which is a



Henry, KB2PFP, pounds the keys during his first RTTY Roundup.

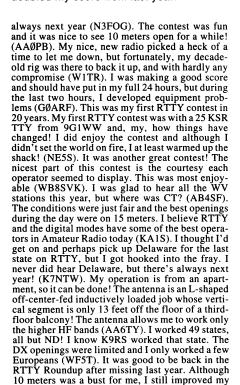


Gary, KC4WVC, seems excited about his first-place single-operator, low-power finish in the North Carolina Section.

great idea! (N1KCE). I ran across the activity on the bands and decided to join in. It was my first RTTY contest and it was fun (K8UC). This was the first contest where I didn't blow up any radios, amplifiers, antenna baluns or computers! (KØRC). If I'd known about the certificates, I would have made two more contacts (KM3D). I didn't make as many contacts as last year, but I did get more multipliers and was happy that the solar numbers were up a little bit (KG5EG). I had a hard time working locals, but once again, 80 meters saved the day! (NIJEB). This is a fun event for low-power operating! (N8FEH). It was a nice gentlemen's contest. I did a lot with a simple setup and 100 W! (NB9F). It was another good contest! I'm already looking forward to next year and hope to double my score (WA4GPA). Once again, the contest was a lot of fun. The sunspots were down, but my QSOs were up! (NN2G). I had a good time in the contest, although I was only able to operate on Sunday (KE7GH). How is it possible to miss Florida as a multiplier? I couldn't crack the DX pileups, but CQing on 15 meters got nice DX responses (N9AG). Every year I look forward to the RTTY Roundup and as usual, I thoroughly enjoyed it (KN4GC). didn't hear any signals on 10 meters, but I enjoyed taking part in the Roundup (JR4GPA). I decided to enter in the high-power category to have the amp warm up the old shack! (WA3INX). It seemed that Murphy was out to get me this year, but luckily, it was before the contest. My HF antenna came down, destroying my rotator. My two hard drives failed, as did my computer's backup system, but by contest day these problems had been solved (WH6I). Band conditions in central Canada were good, making it a great contest. The only problem is finding sufficient time on the weekend to operate for the full duration of the contest-maybe next year! (VE3IDJ). My final score isn't too exciting, but if the farmer next door's sheep hadn't broken into the field I keep the antennas in and pulled down the feed lines, it might have been better (GIØKOW). Unfortunately, I could only operate the first 13 hours of the contest. I did work 47 states, and KH6 and KL7. Where was North Dakota? 80 meters was booming! I had a ball and can't wait for Roundup time next year (N2DL). This is my favorite contest. Where else can you operate from a laid-back, relaxed position, work 46 states and make 300 contacts! (WA3MKB). Conditions weren't as good, and I'm 8000 miles from the East Coast. It was nice to work so many stations on 40 meters (A22MN). I enjoyed working this contest for the first time. 40 and 80 meters proved to be the bread-and-butter bands! (AD4NQ). This was my first RTTY contest and my goal was to make 50 contacts to get the certificate. I made 88! It was great fun (KB7OLZ/T). It was a great contest weekend, except for a terrible case of the flu, which became a weekend of misery for me. But there's



Gilberto, IK1HSR, reports, "I'm happy, as I doubled my score from last year!"





"Conditions were great, except for 10 meters!" Bob, KD1GG, completed 281 QSOs.



Chiharu, JA3DLE/1, is a popular station to work from Japan on RTTY, As Joe, KØBX, puts it, "He's always there when you need him!"

best effort of '92 (N9ITX). I ran multiop with two brand-new hams to get their feet wet and for them to feel the gusto of contesting. We had a lot of fun. The high point for me was the first day when I worked Zone 22 at a time 20 was about out. I've been looking for Zone 22 to finish my Worked All Zones (WAZ) award (AA7UN). I missed the big opening on 15 meters this year, but 40 meters was the place to be! (NY2U). I found this to be a nice,



Pat, HH2PK, not only handed out new multipliers, but set a record in the single-operator, low-power DX category.

easy-going contest, and wish to thank everyone, as it was fun (NM3U). This is my first attempt in the RTTY contest. I was amazed at the number of signals! Fortunately for me, 80 meters was wide open. I'll try again next year (VE3UMV). Once again, I had a great time (VE3VET). This was another great contest! I can tell that I need to get up some better low-band antennas. I spent more time on the low bands this time, with less QSOs, but had lots of fun (WA4VQD). This is the first year I've entered the RTTY Roundup from West Virginia. I hope this effort helped other participants pick up an additional somewhat-rare multiplier. I still wonder where the Alaska and North Dakota amateurs go during the RTTY Roundup (WB8WRY). I missed 40k by one multiplier, but it was still almost 10k better than last year (KØBX). I found the contest to be great fun! (WB8YJF). Conditions were favorable and I had a lot of fun operating (VE7YR). Everyone should have diddle turned on! It makes it easier to tune you in (W7LZP). This was my first RTTY Roundup and it was a lot of fun. I found 20 meters was too crowded for my 50 W, so I used 15 meters almost exclusively. Most of my QSOs were 1000+ miles away with lots of MN, NY, WA, etc. The participation awards caught my interest (W5QZ). Although conditions were poor, the turnout was better. A grand time was had by all. I was happy to work KP2N and C6A/AA5AU (VE6ZX). Because of poor conditions, I wasn't able to enjoy the contest too much (A45ZX). It was a pleasant surprise to find that CQs in the 10-meter Novice subband would provide so many QSOs (ZL3GQ). RTTY ops are always friendly! (K3UA). We enjoyed the contest, but wish 10 meters was in better shape (K9RS).

Scores

Scores are listed by continents, DXCC countries and ARRL Sections and Canadian provinces. DX stations are listed first, then US and Canada. Within each country or Section, scores are listed by power, with single-operator scores listed first and then multioperator scores. Each line score lists call sign, final score, number of QSOs, number of multipliers, hours operated and power (A = less than 150 W output; B = more than 150 W output). Divisional and Continental leaders are listed in **bold** type; new record holders are marked with an asterisk.

Africa Botswana				Kazakhsta UN5PR	an 4,326	103	42 24 B	Northern GIØKOW GI4SRQ	34,188 2,624	407 82	84 24 A 32 18 A	Bulgaria LZ1MC 1,150 Finland	50	23	24 A	Sweden SM4DHF SM4RGD	6,708 3,864	129 84	52 16 A 46 24 A
A22MN (K8M	IN,op) 45,849	527	87 22 B	Europe				Scotland				OH2LU 3,362	82	41	9 B	SM7BHM SM7ATL	3,150 1,421	90 49	35 17 A 29 24 A
	,.			Germany				GMØ/WN1G	6,223	127	49 24 A	OH2AG (OH2s GI,HF				SM7BGE	494	26	19 24 A
Asia				DJ2YE	2,040	60	34 24 A	Wales				40,827	439	93	23 A	Poland			
Israel				DL9YAJ	7,000	140	50 24 B	GW4KHQ	6,916	133	52 18 A	Czech Republic	171		47.4	SP4CHY	14,950	230	65 24 A
4Z85TA (4X6				Spain				GW5NF (+G	42.030	467	90 24 B	OK1AJN 10,602 OK1AGA 748	34		17 A 24 A	SP3BGD	3,864	84	46 24 B
0	10,152	188	54 24 A	EA7AXD EA3BT	18,576 5,060	258 92	72 23 A 55 24 A	Italy	42,000		00 24 5	Slovakia				Greece SV2BFN	10.150	175	58 24 A
Oman A45ZX	4.756	116	41 24 A	France				IK1HSR	26,376	314	84 24 A	OM3CPS 825	33	25	24 A	European	Russia		
Japan	1,700			F5TCN	1,444	38	38 24 A	IØKHP IN3XUG	1,716 8,000	52 125	33 7 A 64 24 B	Netherlands PAØXPQ 24,904	283	88	22 A	UA4LCQ RW3PF	13,970 9,273	254 281	55 24 A 33 24 B
JA3DLE/1	9,480	158	60 10 A	England GØARF	21 056	362	88 19 A	Norway				Slovenia					0,270		00 24 5
JA1SJV JQ1NGT JE9MFJ	644 476 247	28 28 19	23 13 A 17 24 A 13 24 A	G4XDD G4UDT	31,856 6,148 3,655	106 85	58 24 A 43 24 A	LA3YU LAØBX	3,680 1, 43 1	92 53	40 18 A 27 14 A	S53MJ 19,575	261	75	24 A	Ukraine URØHQ	52,500		
JR4GPA JH1HRJ	1,344 840	56 42	24 24 B 20 2 B	44001	0,000	00	40 24 7	LA7AJ	9,920	160	62 18 B	S57MM (S56A,op) 28,884	348	83	24 B	UXØFF UR5LBX	12,096 3,185	216 91	56 24 A 35 6 A

Yugoslavia YU7AM 8,492 193 44 15 A	*WA2UKP (+WA2JQK) 14,238 226 63 16 A	WA1MPB/4 24,966 342 73 16 A AC4HF 18,760 280 67 24 A	Sacramento Valley KD6PRF 7,200 150 48 19 A	NB9F 2,650 53 50 19 A WB9CEP 30,464 448 68 23 B
10/AM 6,492 193 44 13 A	*WB2EAR (+NET) 36,135 495 73 23 B	WB4TDB 12,726 202 63 24 A **WA4MCZ 55,872 576 97 22 B	N6YBZ 1,269 47 27 18 A	KB9ATR (+AE9U,KA9s QVM,SYE, TMW,KB9FYD,N9s IOX,OKD,PZN,
North America	NYC-Long Island	Virginia	N6GG 51,686 601 86 23 B	W9s JOE,XD,WB9CHW,WD9AKG,
Bahamas	KW2P 14,058 213 66 24 A	KA4RRU 35,866 454 79 24 A	7	WZ9H) 23,828 322 74 22 A Wisconsin
C6A/AA5AU 57,646 703 82 24 A	NN2G 57,316 623 92 24 B N2FF 42,588 468 91 14 B	AB4SF 21,140 302 70 21 A N6MW 7.650 150 51 10 A	Arizona	*KA9LAQ 34,640 433 80 23 A
Haiti *HH2PK 95,880 1020 94 24 A	Northern New Jersey	W4MFZ 3,600 80 45 24 A N1KCE 3,395 97 35 19 A	WA6VZI 23,501 331 71 24 A KA1S 10,353 203 51 21 A	N9CKC 15,665 241 65 13 A K9UJU 7,738 146 53 24 A
Panama	KD2YG 12,780 180 71 24 A	KR4CZ 2,627 71 37 9 A	KB7PDL 7,448 152 49 18 A	WA9HCZ 3,400 100 34 10 A
HP1AC 1,890 63 30 24 A	WA2PNI 11,286 209 54 13 A N2KJM 3,192 84 38 9 A	W3FTG 1,980 60 33 24 A KD4FBU/T 1 1 1 1 A	WB8SVK 6,370 130 49 12 A KC7V 2,952 72 41 24 B	KB9DMV 2,760 69 40 13 A KF9EZ 2,550 75 34 11 A
Alaska	WA2ASQ 644 28 23 24 A N2MZH 130 13 10 5 A	WA4MME 42,960 537 80 24 B	W4VZR 2,516 74 34 15 B	·
KL7WP 980 49 20 9 A	NO2T 63,825 575 111 24 B	5	*KE7GH (+NU7I) 14,560 260 56 24 A	Ø
Virgin Is	K2TW 41,032 446 92 24 B		N7IZM (+AA7BJ,W7EFQ) 5,358 114 47 17 A	Colorado
KP2N 112,700 1225 92 24 B	Southern New Jersey N2CQ 2,449 79 31 5 B	Arkansas W5YM (N5UWY,op)	Eastern Washington	AAØPB 2,730 78 35 24 A KIØG 1,794 69 26 8 A
Belize V31JU 14,280 255 56 24 A	Western New York	20,232 281 72 24 A	K7GS 23,064 372 62 10 A	KG5EG 88,320 920 96 24 B
Turks and Caicos Is	KE2UV 19,932 302 66 24 A	AA5BE 19,530 315 62 21 A KJ5QN 14,280 280 51 16 A	W1TR 8,957 169 53 24 A *WB7AVD 100,156 1022 98 24 B	lowa
*VP5/WAØVQR (+WBØVPK)	KF2OG 12,546 246 51 21 A WF2L 7,065 157 45 20 A	KA5MGL 4,725 105 45 15 A K5JH 3,276 91 36 11 A	WA7EGA 98,487 1059 93 24 B	KØOAM 28,440 395 72 24 A WKØF 8,823 173 51 9 A
92,790 1031 90 24 A	WF2V 2,460 60 41 11 A	WØLK 2,074 61 34 5 A	KB7HJM 4,810 130 37 24 B	NØKDI 1,080 54 20 7 A
Oceania	3	Louisiana	Idaho W7QDM 9,968 178 56 24 A	Kansas
Hawaii		WA5JWU 17,220 287 60 24 A K5KLA 7,280 130 56 24 A	AA7UN (+AB7AP,KB7WYG)	WK5M 24,004 353 68 21 A K6WZ 29,962 422 71 20 B
WH6I 20,398 329 62 15 A	Delaware KT3R 5,474 119 46 19 B	N5UKZ 3,120 78 40 24 A	28,116 426 66 23 B	Minnesota
AH6JF 10,971 207 53 24 B	Eastern Pennsylvania	KA5CQJ 55,693 671 83 19 B K5ARH 35,360 442 80 23 B	Montana *WS7I 93,800 938 100 24 A	AIØY 29,964 454 66 20 A
Australia	WA3MKB 21,012 309 68 18 A	*KI5TI (+KI5XP,WB5KLM) 80,560 848 95 24 B	AA7BG 4,662 111 42 7 A	WEØQ 16,758 266 63 20 A *KØRC 80,171 881 91 24 B
VK2RT (+op) 8,364 164 51 24 B	KC3ST 13,530 205 66 19 A WA3YON 8,874 174 51 16 A	W5GAD (N5s NBC,OGW,PRO,TKA,	WA7DEO 1,922 62 31 10 A	WAØPUJ 37,488 528 71 23 B
New Zealand ZL3GQ 12,800 200 64 24 A	N3HSH 6,120 120 51 12 A	UXT,VVB,YCQ,W5KSI,WB9VTN, ops) 18,709 353 53 16 B	Nevada KG7OR 1,189 41 29 3 A	WØML 2,574 66 39 24 B WAØQIT (+KBØJBZ)
12,000 200 04 24 A	N3FOG 3,913 91 43 6 A WA3RRS 2,880 80 36 10 A	Mississippi	Oregon	4,674 123 38 10 A
South America	KA3TOV 2,340 90 26 24 A	*W5VZF (+KB4HB,WA4DDE)	WA7FAB 62,946 807 78 24 B	Missouri
Bonaire, Curacao	KM3D 864 48 18 24 A W3FV 22,896 318 72 24 B	30,100 430 70 24 A	W7MI 8,512 152 56 24 B	*KØBX 39,501 513 77 21 A AAØGY 10,534 229 46 24 A
PJ2MI 81,738 478 171 14 A	W3DZH 2,280 60 38 5 B	New Mexico	Utah	KØJPL 1,064 38 28 24 A NØUHK/T 168 24 7 9 A
Brazil	Maryland-DC	K4KIY 27,750 370 75 24 A WF5T 80,730 897 90 24 B	KB7OKD 320 20 16 4 A N7LMO 8,878 193 46 7 B	KOØZ (+NFØQ)
PV2A (PT2BW,op) 30,186 351 86 15 B	K3SA 28,567 371 77 24 A WA3GGM 23,205 357 65 22 A	K5FSB 4,056 104 39 24 B *KFØLZ (+NØOSW)	Western Washington	19,241 271 71 22 A KIØW 6.758 109 62 24 B
	N3UN 14,214 206 69 24 A KN3P 13,845 195 71 24 A	34,438 514 67 24 A	NM7N 17,880 298 60 24 A	Nebraska
W	W3CPB 1,581 51 31 10 A	*K9RS (+AA5B) 105,545 1045 101 24 B	NE5S 8,265 145 57 16 A WAØRJY 4,662 111 42 24 A	WBØFNZ 21,417 363 59 24 A
1	W3DID 1,224 51 24 9 A N3AM 2,146 58 37 24 B	North Texas	KB7OLZ/T 2,520 84 30 12 A K7NTW 15,400 275 56 19 B	NØLAQ 1,980 60 33 4 A WØEGV 943 41 23 18 A
Connecticut	Western Pennsylvania	KI5MS 13,975 215 65 16 A	KI7T 950 38 25 24 B	KBØJSU (+NØUJT)
AA1BX 13,248 207 64 24 A AA1CB 6,784 128 53 14 A	K3UA 12,322 202 61 6 A	Oklahoma	W7LZP (+KD7LS) 45,680 571 80 23 B	11,766 222 53 24 A South Dakota
NI1L 4,100 100 41 11 A W1TSJ 2,701 73 37 15 A	WW3S 5,310 90 59 24 A N3NCS 5,104 116 44 21 A	AD1S 17,918 289 62 24 A KA5J 140 14 10 3 A	Wyoming	NØIQX 2,958 87 34 18 A
N9LYE (+KA1VMG)	WW3S 3,780 90 42 24 A	N5SAO (+N5PYD)	KB7MUP 14,478 254 57 18 A	,,,,
209 19 11 5 A	WA3INX 272 17 16 24 B	10,716 188 57 24 A	N7GVV 31,088 464 67 24 B	VE
Eastern Massachusetts WA1IML 10.269 163 63 24 A	4	South Texas N5KAE 17,458 301 58 12 A	8	Labrador
WO1L 5,355 105 51 6 A	Alabama	WD5CFJ 5,456 124 44 24 A	Michigan	VO2JD (+op) 2,573 83 31 12 A
WU1F 2,205 63 35 6 A KB2R 120 12 10 2 A	KE4BM 21,318 323 66 23 A W4DEC 19,170 270 71 24 A	AB5OX 4,446 114 39 10 A K5HX 4,104 108 38 10 A	N8FEH 27,066 347 78 24 A	Quebec
KD1GG 19,527 283 69 24 B KX1G 16,704 261 64 11 B	WA4OSR 12,996 228 57 24 A	KA5QAP 2,925 75 39 9 A W5QZ 2,310 70 33 5 A	W8HCS 6,149 143 43 18 A N8SFD 5,311 113 47 13 A	VE2BOB 13,500 225 60 24 A
Maine	KB4IJ 5,676 129 44 24 B	*AB5KD 99,800 998 100 24 B	KA8IZE 864 36 24 4 A KF8KW 14,681 277 53 24 B	VE2OWL 7,350 150 49 21 A VE2AXO 1,922 62 31 4 A
W1VXV 14,144 208 68 24 A	Georgia KD4W 27,738 402 69 20 A	AA5VN 7,050 141 50 21 B *AB5EA (+AB5EB,KB5SKN)	WD9GUF 2,070 69 30 6 B	VE2CUA (VE2s DUB,IRL,ops) 17,745 273 65 24 B
W9FXV/1 1,736 56 31 9 A *NV1G 94,120 905 104 24 B	AD4NQ 12,276 198 62 21 A	26,520 408 65 24 A	Ohio	Ontario
New Hampshire	WA4GPA 7,800 156 50 19 A N4XQN 4,350 87 50 24 A	West Texas	WB8YJF 40,107 461 87 24 A WA3DTO 36,603 441 83 24 A	VE3UMV 21,240 360 59 21 A
N1OAZ 31,185 405 77 24 A	K4JPD (AE6E,op)	K5GJ 5,000 125 40 19 A WF5E 61,824 736 84 24 B	KA8D 17,000 250 68 24 A	VE3IDJ 9,263 157 59 14 A VE3VET 2,145 65 33 24 A
WW1Y 23,004 324 71 24 A K1PTF 16,560 240 69 22 A	91,665 873 115 24 B K4ZTL 4,845 95 51 24 B	*N5RZ (+NET) 16,897 277 61 7 B	K8TL 16,415 245 67 16 A W8IDM 9,699 183 53 12 A	VE3EQF 1,372 49 28 24 A
AE1D 5,375 125 43 24 A	*W4AQL (+ops) 71,440 760 94 24 B	10,007 277 01 / 5	W8PBX 7,540 130 58 24 A	VE3FJB 44,022 506 87 24 B VE3UR (+VE3s JPT,NIT)
KT1E 3,526 82 43 6 A N1OEZ 2,964 76 39 19 A	Kentucky	6	WB8JBR 6,650 133 50 12 A NI8T 6,384 133 48 16 A	15,776 232 68 21 A
WS1E (+NET) 12,648 186 68 17 A	KN4CG 18,270 261 70 24 A	East Bay	WB8KQJ 5,368 122 44 16 A AF8A 5,148 117 44 7 A	Manitoba
12,048 180 08 17 A	KU4A 12,449 211 59 8 A K4KJQ (NM3U,op)	W6/GØAZT 16,443 261 63 24 A	KB8DP 3,393 87 39 10 A	VE4GN 615 41 15 6 A
K1HMO 10,602 186 57 24 A	32,193 441 73 14 B	Los Angeles	W8VLK 2,380 70 34 24 A KG8AP 2,030 58 35 16 A	Saskatchewan VE5SF 13,144 248 53 24 B
K1IU 58,028 652 89 24 B	W4TOY 11,385 207 55 15 B	KF6HI 14,942 241 62 18 A N6EU 6,240 130 48 18 A	KD8FW 1,881 57 33 11 A	Alberta
WF1B 29,850 398 75 24 B N4QN 1,372 49 28 24 B	North Carolina KC4WVC 25,901 439 59 24 A	KN6DV 48,100 650 74 24 B AB6CX 15,235 277 55 16 B	KA8OUT 437 23 19 24 A	VE6WQ 44,720 559 80 22 A
Vermont	KN4GC 11,440 208 55 22 A	Orange	NBIRS/T 42 7 6 2 A *ABBK 72,930 715 102 24 B	VE6ZX 35,712 558 64 19 A
N1FKR 8,517 167 51 16 A	KS4S 5,382 117 46 24 A W3TUX 1,288 46 28 5 A	KF6MP 6,946 151 46 14 A	*W8UMD (N8KPJ,WB8ENR,N9AG,	British Columbia
KL7DN/1 6,096 127 48 24 A Western Massachusetts	WB4WOR (+WN4BBJ) 4,794 102 47 10 A	KM6HB 27,846 442 63 21 B	KAØJTW,ops) 22,425 299 75 19 B	VE7OR 30,418 454 67 24 A VE7YR 5,880 147 40 21 A
W1BYH 34,884 459 76 19 A	Northern Florida	Santa Barbara	West Virginia	VE7SAY 42,402 573 74 24 B
N1JAC 21,384 264 81 24 A	KQ4NZ 2,409 73 33 16 A	WZ6P 18,354 322 57 18 A	WB8WRY 35,568 468 76 23 A	VE7ZZZ (VE7s AV,DBS,EME,RBL,
WN1E 10,521 167 63 17 A *N1JEB (+N1JIT)	*K4HSF 57,540 685 84 24 B	Santa Clara Valley AA6TY 5,390 110 49 22 A	WA8FLF 7,353 129 57 19 A K3JT 9,331 217 43 24 B	RKC,TCP,UBU, ops) 45,430 649 70 24 B
24,053 359 67 24 A WJ1Y (+KA1QGA,N1FDR)	South Carolina	WA6SDM 41,175 549 75 20 B	K8UC 7,446 146 51 24 B	VE7YUK (VE7s AV,DBS,EME,RBL,
5,248 128 41 24 A	N4IQ 33,187 431 77 20 A KC4UH 21,516 326 66 18 A	NQ6C 41,028 526 78 21 B W6IXP 5,805 129 45 24 B	9	RKC,TCP,UBU, ops) 32,010 485 66 24 B
3	KI4MI 18,072 251 72 20 A	*W6JVE (+ops)		Northwest Territories
2	*KN4IM (+N9PGJ,WW9Z) 31,008 456 68 23 B	9,288 172 54 24 A	IIIInois WA9ZXM 6,762 147 46 12 A	VE8NC 1,323 49 27 24 B
Eastern New York WM2U 26.904 354 76 24 A	Southern Florida	San Diego *AA4M/6 56,662 691 82 21 A	N9BHH 6,426 126 51 10 A	
NY2U 17,400 290 60 24 A	*KK4DK 48,332 562 86 24 A	KB5MU 2,244 68 33 5 A	W9FFQ 5,814 114 51 20 A WA9AXL 3,784 88 43 8 A	Checklogs
N2KAD 9,516 183 52 24 A KG2H 6,900 150 46 24 A	KF9CX/4 27,559 217 127 24 A KM4GU 10,136 181 56 20 A	KE6XJ 52,070 635 82 24 B	*N9ITX 68,808 732 94 23 B N9NCX 54,858 669 82 24 B	AAØCY, DF8MB, DL2BQV, EA3CRZ,
W2KHQ 5,280 132 40 18 A	KR4U 6,909 141 49 15 A	San Francisco W6JOX 11,685 205 57 17 A	W9IL 40,744 463 88 19 B	EA3GIV, J28JJ, N1MEO, N3JYD, N5UNE,RWØSR, SM3BJV, SM6APB,
N2LBZ 3,999 93 43 24 A KB2PFP 1,860 60 31 14 A	W3DHN 4,650 93 50 18 A WA4VQD 11,590 190 61 12 B	San Joaquin Valley	Indiana	SM7ATL, SP4BOS, VE3EP, VE5RC,
N7LOD 322 23 14 24 A N2DL 26,460 378 70 13 B	Tennessee	W8AKS/6 15,750 250 63 24 A	KE9CU 10,726 173 62 16 A N9GEU 10,065 165 61 20 A	VK3EDP, W2UH, XE3LMV, ZL2AMI.
NA2M 20,580 294 70 24 B	KD4MM 30,261 393 77 24 A	W6MTJ 2,736 76 36 12 B	10,000 100 01 20 A	Q ST -
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