# Results, Second ARRL RTTY Roundup

### This is a FUN contest!—WA3UXZ

By Hal Blegen, WA7EGA and Billy Lunt, KR1R 12910 Broadway Contest Manager Spokane, WA 99216

he first weekend in January must have been circled in red this year for the 500-plus digital-mode operators who took part in the 1990 ARRL RTTY Roundup. Operator enthusiasm, undaunted by high winds in the Northwest, heavy snows in Canada, ice storms on the Eastern Seaboard, and flood-producing rains in the Southeast, produced record-breaking scores in all but one category.

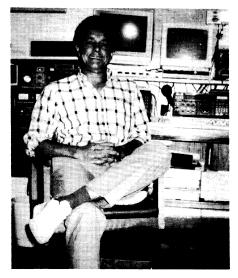
A world-winning effort by Jay, WS7I (Eastern Washington), topped a 23-hour effort by W3LPL (Ed, W3EKT at the helm) by 68 QSOs to garner first place in the single-operator, high-power class. Third-place NJØM finished eight multipliers behind W3LPL.

Although WS7I kept his never-say-die attitude right to the end, he said the results were a surprise. "Early the second day, solder melting from the tank circuit dripped into the band switch and wiped out my amp. Then the wind blew my 40-meter wire down and stripped my rotator brake so my tri-bander just free-wheeled at 30°. I figured I was out of it!"

In the low-power, W/VE group, fewer than 4000 points separated the top three finishers. "It was near non-stop action," said Tom, KEØKB, who ferreted out a few more multipliers for 48,598 points—a first-place finish and another category record breaker. Tom runs a 3-element tri-bander at 55 feet. Only eight QSOs and a single multiplier separated second place—won by KG5EG—from last year's low-power winner, AA5AU, who finished third this year.

The low-power category has become the most popular competitive class in the Roundup. There are nearly four times as many entries from barefooters as from those who run normal contest power levels (which usually means sufficient ERP to ionize a 1952 Buick). W8EJN's reaction was pretty typical. "I think I'm hooked," he said. "It was a fantastic contest and for once I didn't have to try to compete with the big guns."

The nice thing about a contest which has lots of activity is that the secret, winning



Paul, HK1LDG, operated 5K1R and finished first in the single-op, DX high-power category.

strategy can be very simple: Work everybody and then look around for somebody else (WA7EGA). The down-side of popularity occurs when several hundred crazed RTTY operators try to squeeze into three 20-kHz segments. "I enjoyed the contest," said N5OVV, "but there just wasn't enough room, especially on 15 and 20!" WA2PNI also felt the squeeze: "The turnout seemed to be larger this year, which led to very crowded band conditions. I had a great time honing my operating skills."

"It was a great contest," said AL7BK, "even better than last year! It appeared that there was a great deal more activity on all bands this year than last." KC4CSD wrote, "I was amazed at all of the activity and DX, even on 40 and 80 meters!"

Although the number of DX logs received was down a little from the previous year, scores were not! Congratulations in the low-power, DX category go to 4M5RY (YV5KAJ at the keyboard) for

#### **Single-Operator Division Leaders**

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	Low Power		High Power	
Division	Call	Score	Call	Score
Atlantic Canada	KD2XN VE6ZX	15,696 36,176	W3LPL (W3EKT,op)	62,933
Central	W9KDX	19,275	WA2USA	10,192
Dakota	KEØKB	48,598	NJØM	58,045
Delta	KG5EG	46,371	WA5VBE	2,277
Great Lakes	WW8Q	15,960	AB8K	40,320
Hudson	KC2FD	32,648	NO2T	30,770
Midwest	NØGYN	16,284	K6WZ	40,970
New England	NO1Y	32,120	KB1EM	50,313
Northwestern	WB7RBJ	31,995	WS7I	64,315
Pacific	W6/GØAZT	27,075	N6GG	40,572
Rocky Mountain	W7LHO	22,997	NQØI	12,954
Roanoke	K4JYS	23,940	WA8FLF	6,728
Southeastern	KD4W	21,284	W4HBK	46,092
Southwestern	NZ7D	20,235	AA4M/6	30,266
West Gulf	K5LTW	19,175	WF5E	56,932

#### **Single Operator Continental Leaders**

	Low Power		High Power	
Continent	Call	Score	Call	Score
Africa	EA9JV	28,835	9J2AL	26,720
Asia	JA3DLE/1	9,350		_
Europe	GØATX	27.924	OH2LU	25,160
North America	AL7BK	16,120	KL7XD	48.598
Oceania	WH6I	5,566	KE9A/DU3	1,386
South America	AMSBY (VVSKA Lon)	52 427	5K1R (HK1LDG on)	52 116

#### Single Operator Top Ten

W/VE—Low Power		W/VE—High Power		
Call	Score	Call	Score	
KEØKB	48.598	WS7I	64,315	
KG5EG	46,371	W3LPL		
AA5AU	45,150	(W3EKT,op)	62,933	
VE6ZX	36,176	NJØM ' '	58,045	
KC2FD	32,648	WF5E	56,932	
NO1Y	32,120	KB1EM	50,313	
WB7RBJ	31,995	W4HBK	46,092	
VY9CC		K6WZ	40,970	
(VE3JPC,op)	31,902	N6GG	40,572	
NU1E	27,540	AB8K	40,320	
WJ7S	27,120	AA4TH	33,136	
DX-Low Po	wer	DX—High Po	wer	
Call	Score	Call	Score	
4M5RY	-	5K1R		
(YV5KAJ,op)	52,427	(HK1LDG,op)	52,116	
EA9JV	28.835	KL7XD	48,598	
GØATX	27,924	AL7BB	29,100	
EA8AKQ	18,462	9J2AL	26,720	
GØARF	17.537	OH2LU	25,160	
PA3DBS	16,848	I2KYM	11,088	
AL7BK	16.120	EA8RA	10,384	
SP3SUN	13.802	SP9BCH	8.085	

#### **Multioperator High Scores**

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W/VE-Low	Power	W/VE—Hig	h Power
Call	Score	Call	Score
N2DCP	21.842	WA7EGA	60,819
VE3UR	12,358	VE7ZZZ	55,091
W3/VK1GN	11,700	NØBG	48,633
W5VZF	8,272	KY1F	27,375
N4UNE	6,936	W7ZAC	16,065
DX-Low Po	ower	DXHigh P	ower
Call	Score	Call	Score
SP2ZCD	340	UZ9CWA	48,500
<del>-</del>		LZ2KIM	33,670

5,734 3,741



Pasquale, YV5KAJ, operated 4M5RY to the tune of 52k points to win the DX single-operator, low-power class.

52,427 points, a 20k improvement over his last year's score. This year's effort earned him first-in-class as well as a new record. EA9JV was second in a photo-finish race with GØATX, who placed third.

HK1LDG piloted 5K1R to a new record and first place in the high-power DX section. He parlayed a three-hour operating edge over second-placed KL7XD into a seven-multiplier advantage for the win. Third place went to AL7BB in the 49th state. Most of us would agree with Billy's assessment of the state of flux for the con-



The gang at VE3UR finished second-place, multioperator, low power. Shown (I-r) are: Gary, VE3NIT; Bert, VE3AXJ; Ray, VE3UR; and Jack, VE3IW.

test. "Propagation conditions were very good at this location, making it a most enjoyable weekend," he said.

Logs were received from 24 DXCC countries, 46 states, and four Canadian provinces. SM6ASD observed, "The low number of European participants was a disappointment. However, this was well compensated for by the impressive number of US stations to be found on the bands."

Still, there were lots of happy DXers. N2FF was one of them. "It was great to be able to work KE9A/DU3 and BY1QH," he said. W1HFN wasn't complaining either. "I would like to thank the operator of BY1QH for his tenacity in sticking with me through numerous QRZs and repeats," he said. "I can't wait until next year!"

The bulk of the activity was for WAS. "I was surprised," wrote OH2LU, "to have 42 of the lower 48 states in the log in one weekend. N1DM actually built a pileup!

"There's an amazing difference," he said, "in responses between CQ TEST DE NIDM and CQ TEST FROM RI DE NIDM. I had quite a shock when I asked a station how many Rhode Island stations he had heard. He said that I was the second he had heard in 30 years, and he is in Massachusetts!" K1HKI, who also got a lot of attention, said, "It would seem that I was the 50th state for many working RTTY WAS and was a new multiplier time and again. I'm glad I decided to go on 40 for the last hour—I was very busy!"

In multiop, first place went to WA7EGA (and friends K7DSR, WB7AVD and N7KRG) who established a new class record by slipping past an enthusiastic bunch of Canadians (VE7s ARS, AV, DRS, DSN, EME, SK and SSS) operating VE7ZZZ. They spent nine hours plowing

snow-drifted roads to reach their mountain contest site for the Roundup but, according to VE7ZZZ, "It was worth it!" A two-op effort by NØBG and KAØKPG nosed past UZ9CWA by 133 points to place third in a field of 16 multioperator entries.

UZ9CWA lamented, "We worked 49 states, but we have never heard KH6." Maybe there was a northern path problem. From KL7XA, "I just about did WAS RTTY in one day but I'm not sure if anyone lives in South Dakota or Hawaii."

Somehow, mid-winter contests always seem to spell antenna trouble. WJ7S summed up the pattern: "It was a little hard to turn the beams with 50-60 mi/h winds." At WA7EGA we had the same problem as we stripped gears trying to rotate a 42-foot boom in 65 mi/h gusts. Although I suspect that wintertime in Hawaii has a slightly different flavor, AH6IX grumbled, "I finally got my 40-meter dipole up...after the contest!" Dipoles do seem to have been a problem. I can sympathize with KD8GC who wrote. "My worst moment was installing a homebrew dipole for 40 meters in the rain." WA8FLF was testing his smoke detector. "Loading 14 MHz into the 7-MHz delta loop resulted in some crazy SWR readings and some weird crackling noises with sparks from the antenna tuner," he said. "I don't recommend it!" The antenna situation was pretty well summed up by AB4SF, with his observation that "Wintertime contests are events designed to point out serious and recently developed troubles in one's antenna system." Heh, AMEN! At least there was one success story. VE6EZ proudly proclaimed, "My haywire lash-up worked OK!"

"It was a super contest, very enjoyable, without a lot of pressure," said KA2WYE. In the Roundup, there always seemed to be

a second or so to add an encouraging word or a quick hello. Comparing his previous contest experience to RTTY, WH6I said, "This seemed a lot friendlier and more relaxed than SSB or CW." N3GLE remarked, "I made a lot of new friends in the test."

It also was nice to see some new call signs on the bands. What's that sound? N2FTR said, "I just 'discovered' the other modes besides packet on my PK-232!" SP2ZCD wrote, "This was our club's first contest. We'll be a lot better next year!" KM4IG got caught. "I didn't plan to enter the contest at first," he said, "but once I got on the air and made a few QSOs I decided to enter." WF5T also did the right thing. "I had never seriously entered a contest in 20 years—until this one." It's about time, Paul!

Everyone agrees, the Roundup is the one to run. NT3B exclaimed, "This was one great contest! I waited all year for this one, and then it was over too soon. After a



Lee, WB6SSW, pounds away at the keyboard working one of his 252 QSOs and 64 multipliers from LAX.

while, my brain got slower than my hands." Don, AA5AU, pretty much said it all. "This is by far the most exciting of all RTTY contests!"

#### **SOAPBOX**

Many of my contacts were with non-contesters (9J2AL). I had a lot of fun improving my personal record of RTTY QSOs per hour-it's now up to 35! (YO2IS). It seemed like there was more activity this year! It was a great contest, I wish that conditions had been better here for more DX contacts (NU1E). My new "high-tech" contest rig arrived two days before the contest, only to have Murphy strike. I wish we had a contest logger like CT, but with RTTY capability so we wouldn't need two computers to work the contest! (KC2FD). I wish that I had an additional couple of hours, but had to squeeze the contest in between my harmonics soccer games. I only operated 50 watts into dipoles this year, as my linear and beam had failed, and still did better (KD2BW). Although I couldn't spend as much time as I would have liked to, I still enjoyed the time I was able to indulge (WA2SYN). I was more confident this year, and had a lot more fun (WA3SDV). I just got started on RTTY in late October and am having a lot of fun with it (WA9AQE). As a relative newcomer to RTTY, this really gave me a chance to hone my operating skills, as well as contact many new states and countries. My XYL is great. Saturday was her birthday and she still let me operate (AB4GR). I spent more time in front of the monitor and keyboard than I did in front of the transceiver (W7LHO). I can't speak from experience, but this seemed to be a good contest (N6RJB). It can get frustrating as a Novice when no one seems interested in moving above 28.100! (KB8HZE). My objective this year was to double my number of QSOs from last year, and I did it! (VE2OWL).

#### **Scores**

Scores are listed by continents, DXCC countries and ARRL/CRRL Sections. DX stations are listed first, then US and Canada. Within each country or section, single-operator scores are listed first, 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).

Africa	Belgium	Colombia	2	KN3P 5.253- 103- 51- 10- A
	ON9CEB 2,800- 80- 35- 14- A	5K1R (HK1LDG,op)	Eastern New York	K9RRB/3 4,692-102- 46-14- A
Canary Islands	-,	52,116- 516- 101- 24- B	WM2U 13,740-229- 60-21-A	W3/G3ZCZ 1,450- 50- 29-10-A
EA8AKQ 18,462-181-102-15-			N2HOS 12,496- 176- 71- 24- B	W3TUX 1,344- 42- 32- 7- A
EA8RA 10,384- 176- 59- 23-	OZ7FN 1.092- 42- 26- 7- A	Brazil	W2KHQ 5,564- 107- 52- 13- A	W3/VK1GN (+ WD4KYI)
Ceuta and Melilla		PY4HH 476- 28- 17- 9- A	W2ZPO 3,276- 78- 42- 11- A	11,700- 195- 60- 24- A
EA9JV 28,835- 365- 79- 24-	, Netherlands		KE2JY 2,046- 62- 33- 7- A	Western Pennsylvania
EASUV 28,835-305-79-24-	PA3DBS 16,848-234-72-24-A	Venezuela	N2FTR 1,802- 53- 34- 7- A	WA9AQE 1,479- 51- 29- 6- A
Zambia		4M5RY (YV5KAJ,op)	WB2VTD 1,666- 49- 34- 15- A KB2GKY/T 612- 36- 17- 11- A	WASAGE 1,479- 51- 29- 6- A
9J2AL 26,720-334- 80-24-	<sub>B</sub> Sweden	52,427- 509- 103- 22- A	KB2GKY/I 612- 36- 17-11-A	4
9J2AL 20,720-334-80-24	SM6ASD 13,481-221- 61-24-A	_	NYC-Long Island	Alabama
Asia	SM4GVR 2,208- 69- 32- 8- B	Paraguay		
	SM4CMG 840- 42- 20- 3- B	ZP6XDW 1,344- 48- 28- 24- A	KC2FD 32,648- 424- 77- 24- A N2FF 22,437- 277- 81- 20- B	AB4GR 7,400- 148- 50- 22- A
Japan	SM4CJY 456- 24- 19- 7- B		KD2BW 6,000- 125- 48- 19- A	Georgia
JA3DLE/1 9,350-170- 55-14- JA3BSH 546- 26- 21-12-	•	Trinidad and Tobago	W2JGR 4,300- 100- 43- 7- B	AA4TH 33,136-436- 76-24-B
JA1WYQ 300- 20- 15- 4-	. A Polatiu	9Y4BU 2,016- 63- 32-10-B	K2LCK 3,952-104- 38-24- B	KD4W 21,284-313- 68-22-A
0/1111 G	SP3SUN 13,802- 206- 67- 24- A		.,	KL7TF/4 4,992-104-48-14-A
Asiatic RFSFR	SP9BCH 8,085-147- 55-24- B	W	Northern New Jersey	WA4DYD 2,343- 71- 33-24- A
UZ9CWA (UA9s CFV,CGA,UV90	SP2ZCD (SP2UUU,SPØs 289GD,	1	NO2T 30.770- 362- 85- 24- B	
UZ9CU, ops)	CAF 313GD,ops) 340- 20- 17-24- A	Connecticut	WA2PNI 15,820- 226- 70- 23- A	Kentucky
48,500- 500- 97- 24		NO1Y 32,120-365-88-20-A	ND2K 6,273- 123- 51- 10- A	W4TOY 9,932-191- 52-18-A
10,000 000 01 01	Franz Josef Land	NY1V 1,947- 59- 33-10-A	N2KAW/T 1,728- 54- 32-14- A	KN4CG 3,984- 83- 48- 12- B
Europe		NF1J 1,584- 48- 33- 6- A		
Federal Republic of	UA1OT 2- 2- 1- 1- A	WA3VIL 182- 14- 13- 7- A	Western New York	North Carolina
Germany	European Russian RFSFR	KY1F (+KA1RJJ,KD3HN)	KD2XN 15,696- 218- 72- 21- A	K4JYS 23,940- 285- 84- 16- A
DK3EA 5,229- 83- 63- 10		27,375- 365- 75- 13- B	WB2ZQP 11,590- 190- 61- 18- A	KI4MI 12,104- 178- 68- 19- A
5,525 55 55 15	- A UA3TN 2,928- 61- 48- 14- A	Eastern Massachusetts	W2PDT 8,415- 153- 55- 19- A	WD4JBL 4,368-112-39-18-B
France	Romania		W2YRH 5,772-111- 52-24-B WA2SYN 3,240- 81- 40- 9-B	
F6GVK 1,404- 52- 27- 7		KA1SDI 10,976- 196- 56- 22- A W1HFN 10,920- 168- 65- 18- A	WA2SYN 3,240- 81- 40- 9- B WT2Y 3,040- 76- 40- 22- A	Northern Florida
1,101 02 27	- A YO2IS 2,937- 89- 33- 24- A	W1AX 8.640-135- 64- 6- A	KA2WYE/T 814- 37- 22- 13- A	W4HBK 46,092-501- 92-24-B
England	North America	N1FIO 6,650- 133- 50- 10- A	NA2Q 520- 26- 20- 2- B	KC4CSD 17,696-224-79-20-A
GØATX 27,924-358- 78-24		K1CGJ 5,824- 112- 52- 12- A		WC4E 4,410- 105- 42- 24- B
GØARF 17.537- 247- 71- 22	A Fallallia	KC1JP 5,184- 108- 48- 19- A	3	N2DCP (+ KA4WJP) 21.842- 326- 67- 15- A
G4MKO 5,418- 126- 43- 18	A HP1AC 3,741- 87- 43- 24- B		Delaware	21,842-326- 67-15-A
	Alaska	Maine	WA3ZKZ 14,868- 236- 63- 18- A	South Carolina
Wales		N1FJG 11,956- 196- 61- 23- A	KA3LNA 6,118-133- 46-10-A	
GWØANA 4,859-113-43-21	- A KL7XD 48,598-517- 94-21-B AL7BB 29,100-388- 75-24-B	W9FXV/1 2,211- 67- 33- 13- A	,	WA4BHK 8,001- 127- 63- 13- A NU7F/4 5,355- 105- 51- 11- A
	AL7BK 16,120-260- 62-15- A	NS1Z 1,947- 59- 33- 8- A	Eastern Pennsylvania	W8CNL 3,840- 80- 48-12-B
Hungary	AL7LD 4,935-105- 47-14- A	KA1SSU/T 1,092- 39- 28- 9- A	W3FV 32,718-399- 82-24-B	VIOLITE 0,040- 00- 40-12-0
HA5CP 9,954-158- 63-16			NT3B 30,627-369-83-22-B	Southern Florida
	Oceania	New Hampshire	NM3E 14,981- 211- 71- 24- A	KK4DK 7.860- 131- 60- 18- A
Italy	Philippines	NU1E 27,540- 324- 85- 24- A	KC3ST 7,398- 137- 54- 18- A	N4ONQ/T 2.345- 67- 35- 6- A
I2KYM 11,088-168- 66- 7	'-B KE9A/DU3 1,386- 63- 22- 4- B	KA1LMR 7,869- 129- 61- 14- B	N3GLE 6,858- 127- 54- 24- A	W1UDB/4 1,134- 42- 27- 8- A
IOØKHP 4,004- 91- 44- 13	+ A (KESADOO 1,550 05 22 1 2	W1UBG 3,344- 76- 44- 8- A KC1HH 80- 10- 8- 10- A	NT3C 2,520- 60- 42- 9- B	N4UNE (+KF4WB)
	Hawaii	KC1HH 80- 10- 8-10-A	WA3SDV 1,188- 44- 27-14- A KA3AFY 117- 13- 9- 4- A	6,936- 136- 51- 23- A
Norway	WH6I 5.566-121- 46- 9- A	Rhode Island	KA3AFY 117- 13- 9- 4- A KA3DSX (+ KA3HNM)	
LAØBX 1,980- 55- 36-10	O-A AH6IX 2.079- 63- 33- 10- A	KB1EM 50.313-541- 93-24- B	6,837- 129- 53- 17- B	Tennessee
	A101X 2,010 00 00 10 11	N1DM 3,420- 90- 38- 12- A	0,007-123- 33-17-1	K4IBP 27,060- 330- 82- 24- A
Bulgaria	Australia	141DW 3,420- 90- 30-12-7	Maryland-DC	K4IBP 26,811-331- 81-24- A
LZ2KIM (LZ2MP,op)	VK3EBP 1,560- 52- 30- 20- A	Vermont	W3LPL (W3EKT,op)	KD4MM 11,440-176- 65-22- A
33,670- 370- 91- 24	VK2BQQ 1,008- 48- 21- 12- A	K1HKI 14.460- 241- 60- 20- A	62,933- 611- 103- 23- B	WA4MCZ 7,695- 135- 57- 12- A
		KIRKI 14,400-241- 00-20-A	NO3X 20,232- 281- 72- 24- B	M1-1-
Finland	South America	Western Massachusetts	WB8WRY 15,314- 247- 62- 20- A	Virginia
OH2LU 25,160-296- 85-16		W1BYH 15.675- 209- 75- 17- A	KM3V 15,042-218- 69-15-A	KM4IG 5,424-113- 48-20-A
	CE3BFZ 5,734- 122- 47- 24- B	KA1QFU 11.408-184- 62-24-A	WB3DDF 14,701- 241- 61- 23- A	K4FPF 2,211- 67- 33- 9- A AB4SF 456- 24- 19- 7- A
	0000.2 0,	KA1IFE 6,732- 132- 51- 18- A	WA3UXZ 10,710- 210- 51- 24- A	AD40F 400- 24- 18- /- A
		-,,		

5 Arkansas WA5VBE	3 2,277- 69- 33- 6-B	
<b>Louisian</b> KG5EG AA5AU	46,371-533- 87-23-A 45,150-525- 86-24-A	
<b>Mississip</b> N5OVV W5VZF (KE	opi 8,424- 156- 54- 18- A 84HB,WA4DDE,ops) 8,272- 176- 47- 22- A	
New Mex W7LHO WF5T	dico 22,997- 377- 61- 24- A 10,296- 143- 72- 11- B	
North Te KB5ILS KG5QG	<b>xas</b> 3,492- 97- 36- 7- A 2,665- 65- 41-12- A	
Okiahom W5NBI KØWM WBØQIR/T	8 16,524- 243- 68- 13- A 3,296- 103- 32- 11- A 384- 32- 12- 7- A	
South Te K5LTW KB5FDV WB5YLT	9 <b>X88</b> 19,175-295- 65-24-A 11,041-181- 61-23-A 425- 25- 17- 5-B	
West Tex WF5E	( <b>as</b> 56,932- 662- 86- 24- B	
6 East Bay W6/G0AZT	/ - 27,075- 361- 75- 24- A	
Los Ang		
Santa C	lara Valley 13,920- 232- 60- 24- A 2,046- 66- 31- 19- A	
San Die		
San Fra	n <b>cisco</b> 17,068- 251- 68- 22- B	ı
San Joa W8AKS/6 N6RJB	quin Valley 4,140- 90- 46- 8- A 2,318- 61- 38- 3- A	
	ento Valley 40,572- 483- 84- 23- B	
<b>7</b> Arizona NZ7D WBØIBZ	20,235- 285- 71- 20- A 1,428- 51- 28- 10- A	
WS7I WB7RBJ K7GS	<b>Washington</b> 64,315- 677- 95- 24- B 31,995- 395- 81- 24- A 5,772- 148- 39- 8- A	
KD7H Idaho WB7Y	1,701- 63- 27- 18- A	
KB7FNI/T		
Oregon		
Oregon WJ7S AI7B NJ7H	27,120-339- 80-23- A 12,528-216- 58-24- E 6,210-115- 54-16- A	
Oregon WJ7S AJ7B NJ7H Western WA7PVE KC7QR N6RY/7 WA7EGA	27,120-339-80-23-A 12,528-216-58-24-B 6,210-115-54-16-A .Washington 15,759-309-51-24-A 9,636-146-68-17-B 1,014-39-26-6-A + K7DSR, N7KRG,	i i
Oregon WJ7S AI7B NJ7H Western WA7PVE KC7QR N6RY/7 WA7EGA WB7AVE	27,120-339-80-23-A 12,528-216-58-24-E 6,210-115-54-16-A 1.Washington 15,759-309-51-24-A 9,636-146-66-17-E 1,014-39-26-6-A (+K7DSR, N7KRG, ) 60,819-627-97-24-E	i i
Oregon WJ7S AJ7B NJ7H Western WA7PVE KC7QR N6RY/7 WA7EGA	27,120-339-80-23-A 12,528-216-58-24-E 6,210-115-54-16-A 1.Washington 15,759-309-51-24-A 9,636-146-66-17- 1,014-39-26-6-A (+K7DSR, N7KRG, 90,819-627-97-24-E 9	
Oregon WJ7S AI7B NJ7H Western WA7PVE KC7QR N6RY/7 WA7EGA WB7AVE	27,120-339-80-23-A 12,528-216-58-24-E 6,210-115-54-16-A 15,759-309-51-24-A 9,636-146-66-17-E 1,1014-39-26-6-A 1,1014-39-26-6-A 1,016-39-26-6-A 2,266-103-22-5-A 2,266-103-22-5-A 16,065-255-63-18-E	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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9	KAØSIX	14,580- 270- 54- 20- A	VE
Illinois	WO0E	11,816-211- 56-15-A	Quebec
W9KDX 19.275- 257- 75- 2	4-A NØHYG	10,812- 204- 53- 21- A	VE2OWL 11,275- 205- 55- 22-
W9HLQ 10.675- 175- 61- 2		1,512- 54- 28-11-A	VE2GDZ 1,378- 53- 26- 8-
KA9ZVI 5,760- 120- 48- 1		(AØREN,NØFMR)	VE2FFE 450- 25- 18- 4-
WA9YII 5,719-133- 43-1		2,666- 86- 31-10-A	V22.12 400 20 10 47
W9FFQ 3.654- 87- 42-1			Ontario
	Minneso	ota	VY9CC (VE3JPC.op)
Indiana	NJØM	58,045- 611- 95- 24- B	31,902- 409- 78- 24- /
WA2USA 10.192-182- 56-2	n_B KEØKB	48,598- 517- 94- 20- A	VE3CZ 8,294-143- 58-18-7
WB9CEP 8,745-159- 55-2		11,501- 217- 53- 20- A	VESUAN 3,120- 65- 48- 20-
KB9ATR 5,290-115- 46-1			VESUR (+ VESS AXJ,IW,NIT)
KA9DZM 3.600- 75- 48- 2		4,240-106- 40- 9-A	12,358- 167- 74- 24- /
KC9UU 2,775- 75- 37- 2		3,534- 93- 38-24- B	12,330-107- 74-24-7
1,0000 2,770 70 01 2	NØIWL	2,145- 65- 33-24- B	Manitoba
Wisconsin	WØBKS	1,550- 50- 31-24-B	
	NØBG (+1	KAØKPB)	VE4GV 17,856- 279- 64- 24- /
W9XU 13,826- 223- 62- 1	5- A	48,633- 559- 87- 24- B	
•			Alberta
0	Missour	i	VE6ZX 36,176-476- 76-23-7
Colorado	WR8F.IN	15,080- 260- 58- 16- A	VE6EZ 4,326- 103- 42- 13- /
NQØI 12.954- 254- 51-		13,794- 209- 66- 20- B	
	K00Z (+1		British Columbia
lowa		1.533- 73- 21-11-A	VE7ZZZ (VE7s ARS,AV,DRS,
KØDJW 4.635-103- 45-1	17. A	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	DSN,EME,SK,SSS,ops)
NBD344 4,030-103-40-1	North D	skots	55,091- 619- 89- 24- 8
<b>V</b>	WOLHS	5,883- 111- 53- 24- B	33,007 313 33 21 1
Kansas		5,883-111- 53-24-B	Checklogs
K6WZ 40,970- 482- 85- 2			
WK5M 15,660-261- 60-2			KA1FW, EA6ZS, G4SKA, KS8O,
	NØGYN	16,284- 276- 59- 16- A	N4WIO, NW8E, PY5BF, RA3AL,
	WØEGV	200- 20- 10- 8-A	SP2UUU, SP4KM, UA3XBB, W4MTE
			W4M1E QST-

## W1AW Schedule

	2-October 29, 1990 V code practice and bull	MTWThFSSn = Days of Week Dy = Dailetin transmissions are sent on the following schedule:
UTC	Slow Code Practice Fast Code Practice CW Bulletins Teleprinter Bulletins Voice Bulletins	MWF: 0200, 1300, 2300; TThSSn: 2000; Sn: 0200 MWF: 2000; TTh: 0200, 1300; TThSSn: 2300; S: 0200 Dy: 0000, 0300, 2100; MTWThF: 1400 Dy: 0100, 0400, 2200; MTWThF: 1500 Dy: 0130, 0430
EDT	Slow Code Practice Fast Code Practice CW Bulletins Teleprinter Bulletins Voice Bulletins	MWF: 9 AM, 7 PM; TThSSn: 4 PM, 10 PM MWF: 4 PM, 10 PM; TTh: 9 AM; TThSSn: 7 PM Dy: 5 PM, 8 PM, 11 PM; MTWThF: 10 AM Dy: 6 PM, 9 PM, 12 PM; MTWThF: 11 AM Dy: 9:30 PM, 12:30 AM
CDT	Slow Code Practice Fast Code Practice CW Bulletins Teleprinter Bulletins Voice Bulletins	MWF: 8 AM, 6 PM; TThSSn: 3 PM, 9 PM MWF: 3 PM, 9 PM; TTh: 8 AM; TThSSn: 6 PM Dy: 4 PM, 7 PM, 10 PM; MTWThF: 9 AM Dy: 5 PM, 8 PM, 11 PM; MTWThF: 10 AM Dy: 8:30 PM, 11:30 PM
MDT	Slow Code Practice Fast Code Practice CW Bulletins Teleprinter Bulletins Voice Bulletins	MWF: 7 AM, 5 PM; TThSSn: 2 PM, 8 PM MWF: 2 PM, 8 PM; TTh: 7 AM; TThSSn: 5 PM Dy: 3 PM, 6 PM, 9 PM; MTWThF: 8 AM Dy: 4 PM, 7 PM, 10 PM; MTWThF: 9 AM Dy: 7:30 PM, 10:30 PM
PDT	Slow Code Practice Fast Code Practice CW Bulletins Teleprinter Bulletins Voice Bulletins	MWF: 6 AM, 4 PM; TThSSn: 1 PM, 7 PM MWF: 1 PM 7 PM; TTh: 6 AM; TThSSn: 4 PM Dy: 2 PM, 5 PM, 8 PM; MTWThF: 7 AM Dy: 3 PM, 6 PM, 9 PM; MTWThF: 8 AM Dy: 6:30 PM, 9:30 PM
21.07	75, 28.0775, 50.08*, 147.	and CW bulletin frequencies: 1.818*, 3.5815, 7.0475, 14.0475, 18.0975 555* MHz.

Teleprinter bulletin frequencies: 3.625, 7.095, 14.095, 18.1025, 21.095, 28.095, 147.555 MHz. Voice bulletin frequencies: 1.89, 3.99, 7.29, 14.29, 18.160, 21.39, 28.59, 50.19, 147.555 MHz.

Slow code practice is at 5,  $7\frac{1}{2}$ , 10, 13 and 15 WPM. Fast code practice is at 35, 30, 25, 20, 15, 13 and 10 WPM.

Code practice texts are from QST, and the source of each practice is given at the beginning of each practice and at the beginning of alternate speeds. For example, "Text is from January 1989 QST, pages 9 and 100" indicates that the main text is from the article on page 9 and the mixed number/letter groups at the end of each speed are from the contest scores on page 100.

On Fridays, UTC, a DX bulletin replaces the regular bulletin transmissions.

On Tuesdays and Saturdays at 2230 UTC, Keplerian Elements for active amateur satellites will be sent on the regular teleprinter frequencies.

Teleprinter bulletins are 45.45-baud Baudot, 110-baud ASCII and 100-baud AMTOR, FEC mode. Baudot, ASCII and AMTOR (in that order) are sent during all 1500 UTC transmissions, and 2200 UTC on WThFSn. During other transmission times, AMTOR is sent only as time permits.

CW bulletins are sent at 18 WPM.

W1AW is open for visitors Monday through Friday from 8 AM to 1 AM EDT and on Saturday and Sunday from 3:30 PM to 1 AM EDT. If you desire to operate W1AW, be sure to bring a copy of your leanse with you. W1AW is available for operation by visitors between 1 and 4 PM Monday through

In a communications emergency, monitor W1AW for special bulletins as follows: voice on the hour, teleprinter at 15 minutes past the hour, and CW on the half hour.

W1AW will be closed on September 3.

\*Temporarily off the air on 160, 6, 2

55- 22- A 26- 8- A 18- 4- A

74- 24- A

64- 24- A

76- 23- A 42- 13- A

89-24-B

Q5**T**-