

Results, 1988 September VHF QSO Party

Au = Gold = Aurora = Buzz-buzz = VHF DX!

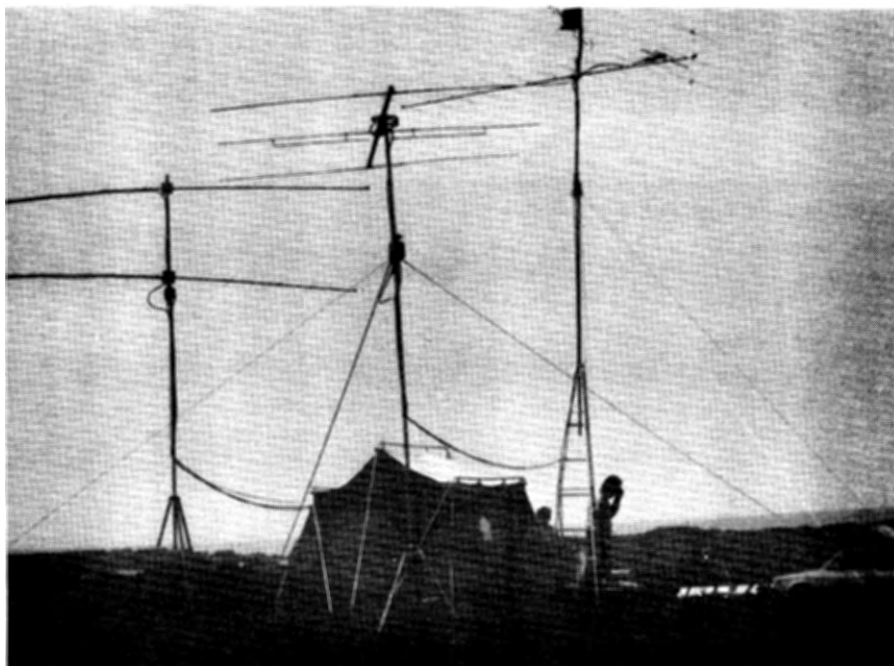
By Billy Lunt, KR1R and Mark Gamble, N1FOZ
Contest Manager Assistant Contest Manager

Going for the gold was the battlecry of participants in the 24th Olympiad in Seoul. Likewise, Mother Nature provided the golden opportunity for DX in vast areas of the continent in the September 1988 VHF contest. According to Mendeleev's periodic table of the elements, the chemical symbol for gold is Au. To the VHF world, Au means AURORA. Yes, aurora—the buzzsaw mode—which made a dramatic appearance in the September fracas, much to the delight of the world above 50 MHz. Joy was not confined to just the northern latitudes either, as such well-equipped stations as WQ4V in North Carolina experienced extensive golden Au propagation.

The aurora was certainly the highlight of the contest, as WB2JSJ facetiously offered: "I found the aurora on 50, 144, and 220 MHz very annoying. Here I was ready for a nice quiet Sunday afternoon of painfully slow QSO rates when, all of a sudden, all hell broke loose and I didn't know which mike or keyer, on which band, to grab first." "The aurora was fantastic. This goes to show you that if you're patient the propagation gods will eventually smile upon you."—N8DGN. From 9-land: "Sunday morning was wild—all bands were open with simultaneous aurora and tropo! The three aurora openings totaled about nine hours here."—W0UC/9. WA4VWV rasped: "It sounded like spark gap!"

DX was also to be had by other routes, as WB8K took advantage of "very short and selective tropo openings on 432 MHz." In the Southwest, some limited F2 6-meter openings were recorded by W5FF, whose "contest highlight was logging LU8YYO," and K5CM, who found it "great to hear some rare South American grids coming in at the end of the contest."

Amazing as it may seem to the VHF contest faithful, some have not yet discovered the joy of VHF competition. N4LBJ here destroys the myth that you will get a nosebleed above 29 MHz. "After 32 years on HF exclusively, I decided to take the VHF plunge only recently. I was afraid



The Northern Michigan hilltop location of the KB8JI team.

if I operated above 10 meters, I would get altitude sickness. In fact, it was a blast. Having duked it out in many a DX and 160-meter contest, I found I could take time off to be civil to the family, and eat three meals a day, without blowing the whole thing." Let's all work to get a few more converts from the dc bands.

In our regular "rare squares" feature, marine mobile W1TUM earned the coveted 52² award with 52 contacts from FN52, off the coast of Cape Cod, Massachusetts. Running 6-meters through 432 MHz, Dex reports nobody got seasick! Please give us your rare square escapades for future consideration (and a player to be named later).

The ultimate measure of success of the contest is in the scores produced. This one saw eight Division records tumble: single ops K0IR in Dakota, K5CM in West Gulf, and VE3ASO in Canada; multiops W1XX/3 in Atlantic, NV2D in Hudson,

WB0DRL in Midwest, W2SZ/1 in New England and VE3LNX in Canada.

Multiop W2SZ/1 on Mt Greylock utilized the microwave bands extensively to break all previous September records with 751k points. This superlative effort illustrates what happens to the scores with a little propagational enhancement. W1XX and his band of merry men put on the Central Pennsylvania rare square FN00 in a big way, finishing second with just over 600k. This effort beat out a fine performance by the K3YTL group at 554k, finishing in show position. Of special note is the big Roan Mountain effort of WQ4V, making the top ten listing.

In the single-op category, we're glad to note that contest regular WA2TEO made it to the top, edging out a very competitive field. Jeff was the only station to break the 100k mark. Hats off to VE3ASO, KB3QM, W9IP/2 and N2WK who finished two through five in that order, all bunched in

Single Operator Top Ten

Call	Score
WA2TEO	109,475
VE3ASO	99,188
KB3QM	95,850
W9IP/2	94,872
N2WK	90,216
K1RZ	88,128
WB3JYO	82,137
K2UOP/4	76,076
W3IP	67,539
W1RIL	65,611

Multioperator Top Ten

Call	Score
W2SZ/1	751,215
W1XX/3	600,655
K3YTL	554,000
K1TR	367,310
WQ4V	331,890
W2DRZ	301,653
WB0DRL	267,384
KA1ZE	249,613
K1WHS	199,690
VE3LNX	189,435

QRP Portable Top Ten

Call	Score
WA5NFC	2,166
K6LMN	
(CM94)	1,911
N1EWB	
(FN32)	1,470
KH6CP/1	
(FN31)	1,160
KB4NFI	943
N1EWB	
(FN42)	585
NN1G	560
KB6MEG	200
K6LMN	
(DM04)	91
KA1LMR	84

at 90k points plus.

Although QRP portable entries did not yield big scores this time, the fun factor was nonetheless S9. Finishing one-two were WA5NFC and K6LMN, the latter operating from two different grid squares. Incidentally, this category has been extended to the January Sweepstakes, although this will probably appeal only to

Single Operator QSO Leaders By Band

50 MHz

W3EP/1	159
W9IP/2	157
VE3ASO	136
WA1TRE	129
WA2TEO	125
WA1VRH	105
K9ES	104
KB3QM	100
WB2DNE	92
K3ZO	91
K1RZ	85
K2UOP/4	84
WB1GQR	
(WB2JSJ,op)	84
K5CM	77
WA4NJP	75

144 MHz

WB2QOQ	294
KA1KRJ	283
WA2TEO	269
K9ES	251
KA2WKA	250
WB1BXS	249
VE3PCW	239
WA1VRH	214
N3FYD	211
VE3ASO	208
VE3QZB	204
K1RZ	202
KB3QM	201
WB1GQR	
(WB2JSJ,op)	189
N8DEJ	188

220 MHz

WA2TEO	66
KA2WKA	53
N2WK	52
WB3JYO	51
K1RZ	45
WB1GQR	
(WB2JSJ,op)	45
K2UOP/4	45
KB3QM	44
K9ES	42
WB0WAO/8	41
W1RIL	40
W3ZZ	40
W9IP/2	39
W3IP	38
WB2YEH	37
W6CPL	37
WA1HYN	37

432 MHz

K1FO	130
K2OS	103
WB8K	90
WA2TEO	77
WB2DNE	75
KB3QM	71
N8DGN	69
K1RZ	68
N2WK	67
KD5RO	66
W1RIL	65
K2UOP/4	62
W9IP/2	61
K9ES	57
W2HRW	57

902 MHz

W1RIL	24
KD5RO	23
WB3JYO	17
N2WK	16
WB2YEH	15
WB1FKF	13
N5WS	12
WA3JUF	12
K2GAL	11
VE3ASO	10
AB1U	10
W0RAP	10
W3IP	9
KF6AJ	8
WA1MBA	8

1296 MHz

W1RIL	41
WA2LTM	41
K2GAL	38
KB3QM	36
WB3JYO	35
KD5RO	31
K2UOP/4	28
WB2YEH	26
WA3JUF	25
WA2TEO	25
N2WK	22
W3IP	22
WB1FKF	21
K1RZ	21
W6CPL	19
W3ZZ	19
K1PXE	19

2304 MHz

WB3JYO	12
WA3JUF	10
WB2YEH	9
KD5RO	9
WB1FKF	8
W1RIL	7
W1JR	3
N1W	3
WA1MBA	3
N2WK	3
W5RCI	2
WA4GPM	2
VE3ASO	2

Single Operator Multiplier Leaders By Band

50 MHz

VE3ASO	60
W9IP/2	59
W3EP/1	47
WA1TRE	45
KB3QM	41
WB2DNE	40
KU8P	40
WA4NJP	39
K9ES	38
WA1VRH	38
K2UOP/4	37
WD4MGB	36
K5CM	34
K1RZ	33
VE3QZB	33
K3ZO	33

144 MHz

N8DEJ	76
W9IP/2	65
KD9JQ	64
VE3QZB	63
VE3ASO	62
N8DGN	61
K1RZ	54
VE3PCW	54
K0IR	53
W3ZZ	52
W3IP	52
WA2TEO	51
WA8TJL	51
WA4VWV	51
WB9MSV	50
KD5RO	50

220 MHz

N2WK	30
WA2TEO	28
WB0WAO/8	28
W0VB	26
W9IP/2	25
W3ZZ	25
K1RZ	24
W3IP	23
KB3QM	23
K2UOP/4	23
VE3ASO	22
KA2WKA	22
WB3JYO	21
K1LPS	20
WB1GQR	
(WB2JSJ,op)	20

2304 MHz

KD5RO	7
WB3JYO	4
WA3JUF	4
WB2YEH	4
W1RIL	4
WB1FKF	3
N1W	3
W1JR	2
WA1MBA	2
N2WK	2
W5RCI	2
WA4GPM	2
VE3ASO	2

432 MHz

WB8K	43
K2OS	40
N8DGN	38
K1FO	36
K1RZ	31
KB3QM	29
WB2DNE	29
W9IP/2	28
N0LL	28
K2UOP/4	27
N2WK	26
WA2TEO	26
W3ZZ	26
W3IP	26
KD5RO	26

902 MHz

N2WK	15
KD5RO	15
WB3JYO	9
W0RAP	9
VE3ASO	9
W1RIL	9
WB2YEH	8
WA3JUF	8
N5WS	7
K2GAL	6
AB1U	6
WB1FKF	5
KF6AJ	5
WA1MBA	5
W3IP	4

1296 MHz

K2GAL	16
WA2LTM	16
N2WK	15
KD5RO	15
KB3QM	14
WB3JYO	13
K2UOP/4	13
W3ZZ	13
W1RIL	12
WB2YEH	12
WA3JUF	11
K1RZ	11
WA2TEO	10
WB9MSV	10
W0HU	10
WA3EOQ	10
K2GK	10

2304 MHz

KD5RO	7
WB3JYO	4
WA3JUF	4
WB2YEH	4
W1RIL	4
WB1FKF	3
N1W	3
W1JR	2
WA1MBA	2
N2WK	2
W5RCI	2
WA4GPM	2
VE3ASO	2

Division Leaders

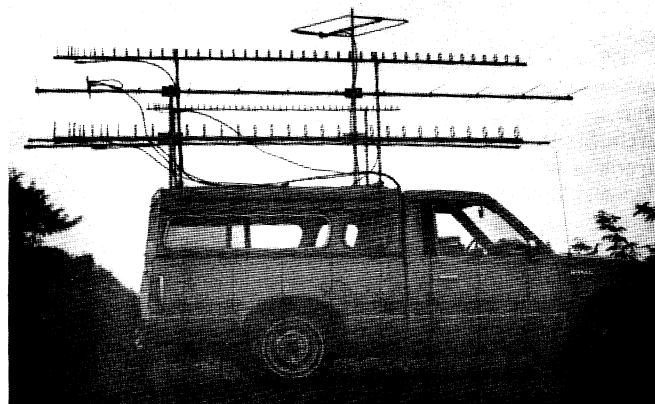
Single Operator

Call	Score	Division
KB3QM	95,850	Atlantic
WB9MSV	32,292	Central
K0IR*	21,944	Dakota
W5RCI	13,600	Delta
WA8TJL	33,580	Great Lakes
N2BJ	22,308	Hudson
K0IFL	17,952	Midwest
WA2TEO	109,475	New England
KE7CX	4,050	Northwestern
W6RXQ	7,880	Pacific
W5FF	3,195	Rocky Mountain
K2UOP/4	76,076	Roanoke
WA4NJP	31,740	Southeastern
W6CPL	19,778	Southwestern
K5CM*	43,470	West Gulf
VE3ASO*	99,188	Canada

*Denotes new Division record

Multioperator

Call	Score
W1XX/3*	600,655
W0UC/9	170,680
—	
KG5MD	10,011
WD8ISK	171,580
NV2D*	140,524
WB0DRL*	267,384
W2SZ/1*	751,215
—	
WB6PFJ	7,359
N6ENU	138
WQ4V	331,890
—	
K8MEP	46,136
WB5VYE	10,912
VE3LNX*	189,435



Dean, WA0TKJ, operated on 7 bands and from 16 different grids totaling over 900 miles.

Multioperator QSO Leaders By Band

50 MHz		902 MHz	
K1TR	338	K3YTL	40
W2SZ/1	297	W1XX/3	38
W0UC/9	246	W2SZ/1	32
K3YTL	237	K2BWR	29
W1XX/3	230	K1TR	28
KA1ZE	220	W2DRZ	27
W2DRZ	193	VE3LNX	25
WQ4V	186	K2XR	24
K1WHS	170	WB0DRL	19
N2CEI	155	KA1ZE	18
N4EQT	155	WD8ISK	17
NV2D	150	W2DMC	17
K2XR	145	WB2PSI	12
VE3LNX	116	K1WHS	11
W4BFB	106	NM8X	11

144 MHz		1296 MHz	
W1XX/3	573	W1XX/3	66
K3YTL	551	K3YTL	64
W2SZ/1	523	W2SZ/1	59
K1TR	483	K1TR	54
KA1ZE	383	WB0DRL	47
W2DRZ	383	KA1ZE	36
WQ4V	368	K1WHS	35
K1WHS	345	K2XR	34
NV2D	340	WQ4V	31
WD8ISK	313	NV2D	31
VE3LNX	289	W2DRZ	30
N4EQT	276	W2DMC	30
W18L	271	VE3LNX	25
W3KWH	267	W3KWH	22
W1QK	254	K6MEP	21

220 MHz		2304 MHz	
W2SZ/1	138	W2SZ/1	53
K3YTL	127	K3YTL	21
K6MEP	118	W1XX/3	16
K1TR	108	WB0DRL	16
W1XX/3	107	VE3LNX	13
WQ4V	77	K2XR	9
KA1ZE	73	N2CEI	9
K1WHS	73	K1WHS	7
WD8ISK	63	WB2PSI	7
K2XR	61	WQ4V	7
W2DRZ	58	W2DRZ	6
N2CEI	58	K1TR	1
NV2D	56		
VE3LNX	49		
WB0DRL	48		

432 MHz	
W2SZ/1	207
K3YTL	201
W1XX/3	200
K1TR	141
KA1ZE	136
WQ4V	123
WD8ISK	102
W2DRZ	101
WB0DRL	99
K1WHS	96
W2DMC	93
VE3LNX	80
K2XR	64
NM8X	64
NV2D	61

those in the warm-weather climes. Or do we have some hardy souls out there with snow shoes and dog sleds?

Speaking of the VHF Sweepstakes, that event is the next stop on the VHF contest calendar, January 14-16—the weekend before the Super Bowl. Get ready to “CQ SS.” C ya!—W1XX

SOAPBOX

How about that aurora! It was here in central Connecticut only Saturday and Sunday night, but I could hear stations not much further north running aurora Sunday morning, too. I was also on the edge of the western tropo Sunday evening as well. But what more could a September weekend offer—even if everyone couldn't get in on the aurora and tropo (W3EP/1). After getting off to a slow start, aurora activity Sunday provided me with my best 2-meter DX to date, when I worked W18L (EN82) and N8DEJ (EN74) using an indoor beam! (WA1NLD). Shared the trip with KH6CP/1. At one point we



Jack, N6XQ, and Dennis, WA5LIG, the operators of XE2GFH, set a new North American record of 595 miles on 10 GHz.



Bruce, WD4JQV, racks up some of the 51 grids that WQ4V earned on 432 MHz during their 5th place overall finish.

were both on 2 meters at the same time, but we didn't think to work each other (NN1G). K1WHS was putting out a big signal on 3456 MHz, 59 + 20, from over 80 miles away! (WB1FKF). Since upgrading to Technician this past February, and purchasing my first 2 meter hand-held in June, this contest was the first in which I was eligible to participate. Although I probably hold the record for the fewest contacts and points, I still had a lot of fun participating and look forward to trying again next year (KA1IOD). A new 6-meter stacked antenna system was put to good use although there was little DX to be worked. A good aurora Sunday night enabled the 144-MHz and 220-MHz stations to work quite a few DX stations (K1WHS). I missed operating on Sunday, so naturally the bands opened up (NI1W). If it wasn't for the FB aurora on Saturday and Sunday night, this would have been a very dull contest! (W1BDC). 6-meter and 2-meter aurora contacts were very interesting. Other than aurora, 6 meters was mostly dead. 2 meters was also not as active as the June contest (K9ES). Conditions were pretty good and grid square totals on 2 meters were excellent because of the aurora. Contacts were hard to make though (WA2SLY). First aurora of the season . . . what timing! (WB2ZSY). I tried to get my 2-year-old daughter to do logging on the computer for me, but the only thing she typed was

Multioperator Multiplier Leaders By Band

50 MHz		902 MHz	
W0UC/9	95	W1XX/3	23
WQ4V	76	W2DRZ	19
W2DRZ	73	WB0DRL	18
W1XX/3	69	K3YTL	18
K1TR	67	VE3LNX	17
W2SZ/1	63	W2SZ/1	16
N4EQT	58	K2BWR	16
WB0DRL	56	WD8ISK	15
K3YTL	54	K1TR	12
W4BFB	51	K2XR	12
KA1ZE	50	KA1ZE	10
K1WHS	47	WB2PSI	10
NV2D	47	NM8X	9
N2CEI	47	W2DMC	8
VE3LNX	44	N2CEI	8

144 MHz		1296 MHz	
WD8ISK	102	WB0DRL	38
WQ4V	93	W1XX/3	30
W1XX/3	88	K3YTL	26
W2DRZ	85	W2SZ/1	25
WB0DRL	84	WQ4V	19
W0UC/9	82	W2DRZ	18
K9MRI	82	K1TR	17
N4EQT	77	WD8ISK	16
W3KWH	75	KA1ZE	16
K3YTL	74	W3KWH	14
VE3LNX	74	K1WHS	14
W2SZ/1	71	VE3LNX	13
W18L	71	W2DMC	13
KA1ZE	66	NV2D	13
K1TR	65	K2XR	12

220 MHz		2304 MHz	
W1XX/3	51	W2SZ/1	15
WQ4V	49	W1XX/3	12
WD8ISK	45	WB0DRL	12
WB0DRL	41	K3YTL	10
W2SZ/1	40	VE3LNX	9
K3YTL	37	WB2PSI	6
W2DRZ	33	W2DRZ	6
KA1ZE	33	K2XR	5
VE3LNX	32	WQ4V	5
K1TR	31	N2CEI	3
W0UC/9	30	K1TR	3
K1WHS	29	K1WHS	2
W3KWH	25		
NV2D	24		
N2CEI	23		

432 MHz	
W1XX/3	62
WB0DRL	62
WQ4V	51
WD8ISK	51
W2SZ/1	43
K3YTL	43
W2DRZ	43
KA1ZE	36
W0UC/9	33
K1TR	32
W3KWH	32
VE3LNX	30
W0RPK	30
NV2D	29
K2XR	29

GX*/R2B7DHJ! (WA2YEI). The aurora was great in the north, but the 6-meter kW decided to go south (NV2D). The K2XR group is back, a little older and wiser! (K2XR). The aurora was very good to me (W9IP/2). It was a great contest; I had my all-time high on 220 MHz (N2WK). Good to have an aurora during a contest (K2GK). This was my first contest using 432 MHz. I was pleasantly surprised that I did so well using low power (W2WGL). Not much of a score, but we did have fun operating from FM14 (W2HAX). The aurora was the icing on the cake! (WB3JYO). The aurora was a nice surprise. It was still difficult, however, to break through some of the stations on 2 meters (K3ZO). Best DX was N4EQT in EM86. Too bad we didn't stick around for the aurora opening! (K3HKK). Would have been great to have the conditions experienced on September 8th (WA4LIT). Poor conditions, low activity and limited operating time made for a dull contest (WA4CQG). Good activity level on 2 meters, but propagation was nothing special (AB4JA). Everyone in our crew had a great time (WQ4V). Not much action, but still it was fun (WA4JNE). Not bad for a September

contest, except that I had to towel dry my 432 Yagi after the rain on Saturday. Special surprise was the three contacts from Argentina, one to Honduras and an opening to Texas, Oklahoma and Louisiana (WD4MGB). This was my first time on 220 MHz (W4DO). No exceptional conditions were observed here, but working the old regulars is always fun! Maybe the January contest will give us a break (W5FYZ). Conditions were poor as usual this September. Activity lower on 144 MHz than last year (W5FF). I wish people would spread out from 144.2 to 144.2 ± 10-20 kHz. It's a real mess sometimes (K9MK/5). There was good tropo Sunday morning to the north, but 50 MHz was dead the entire contest (W5NZS). This was my first contest. I'm 11 years old. I plan to participate in more contests like this, because everyone was so nice (N5JWD). I had a good time on the Glendora Mountain road up out of the smog. I'm looking forward to the next contest (W7ERH/6). Thanks to all the stations who pulled me out of the noise. Due to budgetary constraints, I couldn't get the antenna and amps I wanted. Next contest watch out! To all my friends in 2-land, I'm back! (WY6U). I would like to thank the local cable company for all that interference to the east and west (WB6VYH). There wasn't much activity, but I still managed new grids on 144 and 432 (N7CFC). I missed the aurora opening Sunday afternoon while taking a coffee break. I should swear off the stuff (WB7ATP). This is not like the Northeast corridor in terms of making QSOs (WA1KIR/7). This was the first time on 902 and 1296 MHz for both NM8X and VE3CKU—it worked out great! (NM8X). Excellent conditions from our hilltop location. There was no Murphy amazingly enough (KB8JI). Some of the locals made a special effort to get on 220 MHz in an effort to save 220. Even though not as many turned out as hoped, some of us plan to send a copy of our logs with an explanation to our Senators and Congressmen (N8CCC). I hadn't intended on entering, but things got so wild by Sunday that I decided to give it a shot (KD9JQ). Things were rather dead

until the aurora came along (WA9LZM). This is the third time we've placed EN20 on the air, but the QSLs keep rolling in. We'll be there again in June 1989 (W0RPK). Had a great time, there were a lot of stations on the air (N0IGZ). The VE gang's activity on 50, 144 and 432 MHz is great. Let's get

more Canadians on 220, 903, 1296 and 2304 MHz (VE3DSS). My first contest of any kind (VE3OYH). We had a poor location for VHF contesting. There aren't enough hams nearby (VE7PRC). We had a great cruise and a great day, but the number of QSOs was a disappointment (W1TUM/MM).

AURORA

The aurora borealis, or "northern lights," is a beautiful spectacle which is seen occasionally by those who live in Canada, the northern part of the USA and Europe.

The aurora is caused by the Earth intercepting a massive number of charged particles thrown from the Sun during a solar "storm." These particles are funneled into the polar regions of the Earth by its magnetic field. As the charged particles interact with the upper atmosphere, the air glows, which we see as the aurora. And, important to VHFers, these particles also provide an irregular, moving curtain of ionization which can propagate signals for many hundreds of miles.

You'll notice Au by its characteristic hiss. Signals are disturbed by reflection and scattering off the rapidly moving curtain of ionization. They sound like they are being transmitted by a leaking high-pressure steam vent rather than radio. SSB voice signals are so badly distorted that often you cannot understand them unless the speaker talks very slowly and clearly. The amount of distortion increases with frequency. Most 50-MHz Au contacts are made on SSB, where distortion is the least. On 144, 220 and 432 MHz, CW is the only really useful means of communicating via Au.

If you suspect Au... listen with the antenna to the north... Try swinging the antenna as much as 45 degrees either side of due north to peak signals. In general, the longest-distance DX stations peak the farthest away from due north... to work stations far south of you... your antenna is often pointed north.—*The ARRL Operating Manual*, 1987, p.12-10, 12-13.

Scores

Scores are listed by ARRL Sections. Within each section, single-operator scores are listed first and then multioperator scores. From left to right, each line lists: call, score, QSOs, multipliers and bands worked (A = 50 MHz; B = 144 MHz; C = 220 MHz; D = 432 MHz; 9 = 902 MHz; E = 1296 MHz; F = 2.3 GHz; G = 3.4 GHz; H = 5.7 GHz; I = 10 GHz; J = 24 GHz; K = 48 GHz; L = Light). An asterisk before the call sign denotes a QRP-Portable station. Among the single-operator stations, the single-band winners are noted with band letter(s) being in boldface print indicating the band won. For example, in Connecticut, WA2TEO is the section winner as well as the single-band leader on 144, 220 and 1296 MHz. W3EP/1 is the single-band leader on 50 MHz. AB1U is the single-band leader on 902 MHz. K1FO is the single-band leader on 432 MHz.



1

Connecticut

WA2TEO 109,475-562-145-ABCD
W3EP/1 28,670-294-94-ABD
WA1VRH 25,201-319-79-AB
K1PXE 24,450-205-75-ABCD
AB1U 22,200-186-75-ABCD9E
KF6AJ 10,251-129-51-ABCD9E
WB1BXS 9,711-249-39-B
K1FO 9,360-130-36-D
WA1NLD 1,608-67-24-B
*KH6CP/1 1,160-38-20-BD9
W1WHL 646-38-17-A
K1WVX 570-38-15-B
*NN1G 560-40-14-AB
KH6CP/1 (FN31) 308-15-11-ABCE
KE1A 160-20-8-B
KA1ZE (+AC1T,N1DPM,NC1I,WB1FVS) 249,613-866-211-ABCD9E
W1QK (+KA1RLX,KB1US,N1ABY,NA1S,WA1WV,WB1CVW) 47,090-439-85-ABCD
Eastern Massachusetts
WB1KF 22,061-166-71-ABCD9EFG

W1JR 16,472-135-71-ABCD9EF
KX1C 9,163-145-49-ABCD
K1YT 2,844-62-36-ABCD
K1VZI 2,147-73-19-ABCD
W1GXT 1,065-34-15-CE
KA1DHO 756-34-18-ABDE
*N1EWB (FN42) 585-28-13-BCDE
Maine
WA1TRE 5,805-129-45-A
W1PLX 2,117-73-29-B
KA1IOD 14-7-2-B
K1WHS (+K1s LL,MNS,TOL,KK1W,KY1K,WA1s NIE,TFH,W3HOT,K0ZK) 199,690-745-190-ABCD9EFGHIJ

New Hampshire

AC1J 18,626-200-67-ABCD
N1HW 6,930-96-42-ABCD9EF
K1KA 4,998-119-42-B
W1BDC 2,324-83-28-AB
WA1YZN 1,536-64-24-B
*KA1LMR 84-11-6-ABCD
Rhode Island
WA1HYN 11,770-114-55-BCDE
KB1EM 1,216-50-19-BCD
W1AQ (K1s AGA,CH,KM1X,N1IS,NO1U,WA1VEK,WA1VPC,ops) 19,668-240-66-ABCD

Vermont

WB1GQR (WB2SJ,op) 53,788-372-113-ABCD
K1LPS 21,504-173-84-ABCD
W1AIM 16,356-147-87-ABCD

Western Massachusetts

W1RIL 65,611-378-103-ABCD9EFG

K9ES 49,217-454-89-ABCD
KA1KRF 8,773-283-31-B
WA1MBA 4,828-76-34-BD9EF
NA1W 4,290-77-30-BCDE
*N1EWB (FN32) 1,470-47-21-BCDE
W1KK 1,083-57-19-A
K1JG 63-9-7-B
W2SZ/1 (K1DH,KA1DZV,WA1s UGE,ZMS,K2s MM,TR,KA2FWN,N2GXH,W2ARQ,WA2s AAU,GFP,SCA,SPL,WB2KMY,AK4L,WA8USA,ops) 751,215-1426-305-ABCD9EFGHIJ
K1TR (+K1s BA,BG,EA,N1AFQ,NR1E,WA1s PBU,VFJ,K3WM,KM3T) 367,310-1160-230-ABCD9EFGHI

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Eastern New York

N2BJ 22,308-236-66-ABCD9E
WA2BAH 12,870-171-65-ABCD
WA2FUZ 10,030-141-58-ABD
WA2MJP 9,016-184-48-B
KD2IX 1,596-84-19-B
W2DMC (K2MME,KA2IBV,KB2s EMB,DJJ,N2s BJ,HIG,W2GQ,WA2s EHI,KFS,WB2NEC,WI2E,ops) 87,483-496-121-ABCD9E

NYC—Long Island

WB2CMI 5,694-148-39-AB
WA2EIO 5,624-116-37-BD
WA2SLY 4,375-125-35-B
K2OVS 2,992-72-34-ABD
WB2ZSY 2,175-75-29-B
WA2EUS 912-24-16-DE
WA2YEI 468-36-13-AB
WA1OUB/2 (+ops) 2,093-91-23-B

Northern New Jersey

WB2OOQ 13,230-294-45-B
K4BNC 8,642-119-58-ABD
N3AHF 2,365-55-43-B
WA2LTM 1,968-41-16-E
WA2UDT 1,924-60-26-ABC
WB2BPY 1,173-51-23-AB
NV2D (+KX2O,N2WM,W2EZ) 140,524-638-172-ABCD
K2KR (K2s JWE,OWR,KA2UHS,KB2ENE,KC2PX,KT2B,N2GUF,ops) 128,370-510-165-ABCD9EF
N2CEI (+WB2ONA) 94,752-475-144-ABCD9EF

Southern New Jersey

WB2YEH 48,195-278-105-ABCD9EF
K2WKA 48,100-377-100-ABCD
K2GAL 41,370-246-105-ABCD9E
W2HRW 24,786-249-81-ABD
W2EIF 23,023-208-77-ABCD9F
W2PAU 7,095-108-55-ABD
N2BCF 644-46-14-B
K2BWR (+K2ZRJ) 46,410-252-119-ABCD

Western New York

W9IP/2 94,872-436-177-ABCD
N2WK 90,216-333-168-ABCD9EF
KD5RO 50,850-249-113-8D9EF
K2GK 22,500-169-90-ABCD
KU2A 12,920-134-76-ABCD9E
K2OS 8,240-103-40-D
NM2J 7,076-95-58-ABCD
K2MPE 4,165-85-49-AB
W2AWF 1,053-39-27-B
W2WGL 800-25-16-D
W2DRZ (+K2s SMN,TXB,KB2s CQ,FLO,NY2Z,N13X) 301,853-798-277-ABCD9EF

WB2PSI (KA1AVC,K2OEQ,KD2OM,N2a
AJX,AJY,WA2AV,WA2ZK,WB2a KAO,QCJ,ops)
55,544- 287-131-ABD9EFIL
NA20 (+WB3JSU)
7,300- 95- 50-BCDE
W2HAX (+NV2S)
1,092- 39- 28-AB

3

Delaware

KB3QM 95,850- 452-150-ABCD

Eastern Pennsylvania

WB3JVO 82,137- 386-131-ABCD9EF
WA3JUF 14,787- 115- 53-BCD9EF
KZ3X 10,773- 142- 57-ABD
WB3LNZ 9,690- 135- 57-ABCD
K3YTL (WA1MKE,KD2NW,NA2T,K3MKZ,
KA3EEQ,KB3QI,KS3Y,WA3s JWP,JWV,NVS,
YON,WB3s FAA,FYT,WZ,ops)
554,000-1281-277-ABCD9EFGHJ

Maryland—DC

K1RZ 88,128- 421-153-ABCD
W3IP 67,539- 327-141-ABCD9E
W3ZZ 63,510- 304-146-ABCD
WB2DNE 45,942- 328-114-ABD
K3ZO 20,636- 268- 77-AB
WA3EOQ 12,383- 117- 61-BCDE
KB3HH 3,330- 78- 30-BD
W6AUX 2,268- 84- 27-B
N3FHD 1,100- 50- 22-B
W3GN 570- 31- 15-ABD
KA3CXG 528- 33- 16-B
WA3GYW 476- 28- 17-AB
W3MSN 253- 21- 11-ABD

Western Pennsylvania

N3FYD 9,495- 211- 45-B
W3HDH 2,144- 67- 32-A
W3KJM 560- 28- 20-A
W1XX/3 (+K1s GX,JX,W1OD,AA2Z,KA3s JRI,
MMM,WA3FFC)
800,655-1230-335-ABCD9EF
W3KWH (K3s RYA,TP,KA3KSD,N3EQP,W3s HH,
SVJ,WA3TTS,WB3EML,ops)
127,262- 476-187-ABCD9EFHI
K3HKK (AFIT,KA3RRF,KB3KJ,ops)
651- 31- 21-B

4

Alabama

WA4LIT 5,508- 86- 51-BD
WA4CQG 3,002- 61- 38-ABCD
KD4ZO 84- 12- 7-B
WA4VUG 60- 10- 6-B

Georgia

WA4NJP 31,740- 212-115-ABCD
KX4R 8,614- 112- 59-ABCD
KJ4BF (EM74) 6- 2- 2-BD

Kentucky

KC4EG 3,157- 52- 41-BCD
KX4BD 2,048- 64- 32-B
N4EQT (+KA8SSB,WB4LC,WF8Z)
113,322- 516-187-ABCD
WB8IGY (EM77) (+WA8NJR)
858- 27- 22-ABCD9E
WB8IGY (EM87) (+WA8NJR)
510- 20- 17-ABCD9E

North Carolina

N2CJP 5,400- 96- 45-ABCD
AB4JA 2,112- 64- 33-B
KJ4BF (EM85) 266- 11- 11-BD9E
WQ4V (+NSAII,AA4S,NA4s AH,OOT,WB4s NMA,
SLM,WD4s IIS,JQV,MBK,WS4F,WW4T)
331,890- 802-289-ABCD9E
N4DT (+AJ4N,KJ4X,NA4YD)
34,776- 248-108-ABCD9E

Northern Florida

WA4JNE 1,092- 34- 28-ABD

South Carolina

NB4S 2,077- 67- 31-B
N4LBJ 1,352- 52- 26-AB
WA4LDJ 416- 19- 16-ABD
KJ4BF (EM84) 77- 8- 7-ABCD
W4BFB (WB2NHQ,AA4ZZ,K4s JQU,TP,KB4UFO,
KC4s AIG,AJ,FSC,KK4L,WB4s PCS,QCS,ops)
65,512- 337-152-ABCD

Southern Florida

WD4MGB 5,671- 101- 53-ABD
WB4HXT 1,827- 57- 29-ABD
K1FJMJ/4 1,457- 44- 31-ABD
K4SC 920- 40- 23-A
WD4AHZ 768- 40- 16-BD

Tennessee

K4RWP 4,459- 79- 49-ABD
KF4FL 3,280- 82- 40-AB
WB8IGY (EM76) (+WA8NJR)
1,728- 42- 27-ABCD9E

Virginia

K2UOP/4 76,076- 389-143-ABCD
W4DO 16,536- 181- 78-ABCD
WA4SBC 14,058- 150- 66-ABCD
K9OYD/4 10,230- 132- 62-BD
K4FTO 4,264- 85- 41-ABD
WD4GXN 4,251- 109- 39-B

W4DR 1,479- 51- 29-A
N4BDH 1,127- 49- 23-B
*KB4NFY 943- 41- 23-B
W4LMJ 165- 15- 11-A
WA4MMP 30- 5- 5-ABD
K4HWG (+K4RI)
32,736- 280- 88-ABCD
KB4VIR (+KB4WYR,KD4R,NQ4C)
2,888- 67- 38-ABCD

5

Arkansas

*WA5NFC 2,166- 46- 38-ABCD
KG5MD (+KA5NTT,NSDL,WD5CAP)
10,011- 115- 71-ABD

Louisiana

NSKWB 741- 35- 19-BC
W5FYZ 406- 29- 14-B

Mississippi

WSRCI 13,600- 102- 85-ABCD

New Mexico

WSFF 3,195- 71- 45-AB
KN5S 910- 35- 26-AB

North Texas

K9MK/5 27,090- 252- 86-ABD9E
NSWS 26,481- 211- 97-ABDE
AA5AM 8,004- 119- 58-ABD
KF5PE 900- 33- 20-BE
KY5N 55- 11- 5-A
WB4GWX/5 (+KC5ST)
840- 48- 15-ABD
NQ5X (+KB5GBN,N5MUJ)
796- 42- 19-AB

Oklahoma

K5CM 43,470- 284-120-ABCD
W5NZS 10,628- 109- 66-ABCD
NSJWD 2,928- 74- 38-ABC
WSUGO 1,431- 42- 27-BD
KB5FCH 1,350- 34- 27-ABCD
KA5ZKJ 544- 29- 16-ABD
WB5VYE (+K5BZH,WA5ZKO)
10,912- 144- 62-ABD9

South Texas

WB5OBS 5,811- 110- 38-BCDE
WSUWB 4,005- 69- 45-ABCD
WD5ERG 425- 22- 17-ABD
WA5S (+KC5FP)
2,325- 60- 31-ABCD

West Texas

W8CM 1,770- 53- 30-ABD

6

East Bay

WB6PFJ (+WB6LRV)
7,359- 174- 33-ABD

Los Angeles

W6CPL 19,778- 215- 58-ABCD9E
KB6PHX 2,200- 87- 22-ABCD
N6NVF 440- 55- 8-AB
W7ERH/6 429- 30- 13-ABC
WB2CDH/6 368- 41- 9-B
W6PFE 240- 24- 10-AB
W6UE (DM84) (N6DLU,op)
2- 2-AB
N6RMJ (+WA6HXD)
17,940- 205- 60-ABCD

Orange

WB6FCS 8,800- 136- 50-ABCD
KB6IJ 4,142- 80- 38-ABCD
N6NJI 2,574- 64- 33-ABCD
K6DJ 1,235- 50- 19-BD

Santa Barbara

*K6LMN (CM94)
1,911- 64- 21-ABCD9E
WD6BCN 792- 37- 18-ABD
N6QCA 464- 29- 16-B
N6MA 462- 27- 14-BCD
*K6LMN (DM84) 91- 12- 7-ABC
K6MEP (NS6X,W6YLZ,WA6s DJS,FPX,HSI)
46,136- 385- 79-ABCD

Santa Clara Valley

W6RXQ 7,880- 127- 40-ABCD
K6KM (CM87) 868- 52- 14-ABCD
WY6U 572- 41- 11-BCD
N6RER 85- 11- 5-ABCD
K6KM (CM97) 2- 1- 1-C

San Diego

WA5BNH 4,290- 99- 30-BCDE
W6OYJ 363- 27- 11-B
*KB6MEG 200- 20- 5-C

San Francisco

WB6FFC 336- 20- 16-ABD

San Joaquin Valley

W6UE (DM85) (N6DLU,op)
1,387- 48- 19-ABCD
WB6COT (+AA6AH,N6PNZ,WA6YDI,WB6ITM)
3,132- 79- 27-ABCD

Sacramento Valley

WB6VYH 150- 15- 10-A

7

Arizona

WA6PZL (+N6ENU)
552- 36- 12-BD
WB7OHF (+KB7CRT)
98- 14- 7-A

Idaho

KC7IJ 25- 5- 5-A

Nevada

W7LQV 1,518- 53- 22-ABD
N7CFV 1,320- 50- 20-BD
K7KYT 420- 35- 12-B
KD7YZ 9- 3- 1-E

Oregon

KE7CX 4,050- 113- 30-ABCD
NR6E/7 975- 32- 25-ABDE

Utah

WA4GPM 180- 10- 9-ABDEF
N6ENU (+WA6PZL)
138- 19- 6-BD

Washington

WB7ATP 152- 19- 8-B
*WA1KR/7 75- 13- 5-BE

Wyoming

WA7KYM 1,406- 56- 19-ABD

8

Michigan

N8DGN 33,330- 249-101-BD
WB8WAO/8 31,527- 206-113-ABCD
KU8P 27,621- 245- 99-ABD
N8DEJ 14,288- 188- 76-B
N8FUJ 4,329- 93- 39-BD
WB8OOA 4,200- 105- 40-B
WA8GVK 2,240- 80- 28-B
N8IOV 522- 29- 18-B
NM8X (+VE3CKU)
80,631- 378-153-ABCD9E
KB8JI (+N8TTY,WB8CPW)
34,809- 214-123-ABCD
W8L (+WB8G)
19,241- 271- 71-B

Ohio

WA8TJL 33,580- 236-115-ABCD
WB8K 22,594- 196- 79-BD
KB8FD 6,077- 103- 59-AB
NB8CC 3,815- 79- 35-ABCD
WB8HBG 3,239- 99- 41-BD
N8ZM 2,664- 74- 36-B
WB8CTX 2,280- 60- 38-AB
WB8IGY (EM88)
966- 24- 23-ABCD9E
WA8SVV 792- 35- 22-ABC
NB8BF 371- 38- 7-BC
WB8IGY (EM89)
242- 11- 11-ABCD9E
WB8ISK (WA3OJX,KB4QZK,KA8IFC,N8GYE,
WA8s OGS,R,WB8GEX,W9VNE,ops)
171,580- 512-230-BCD9EF
WB8IGY (EM78) (+WA8NJR)
819- 23- 21-ABCD9E
WB8IGY (EM79) (+WA8NJR)
228- 13- 12-ABCD9E

9

Illinois

WB9MSV 32,292- 187-117-ABCD
AF9Z 18,252- 196- 78-ABD
KD9JO 11,392- 178- 64-B
NC9F 3,526- 82- 41-ABCD
NS9A 1,764- 49- 38-B
N9HSP 380- 24- 15-B
N9JF 273- 21- 13-B

Indiana

WA4VWV 8,109- 159- 51-B
K9MRI (+K9TVZ)
48,824- 312-136-ABCD9
WB9EEA (+N9KC)
4,988- 79- 43-ABCD9E
W9YB (KA9CCR,KC9RG,ops)
364- 26- 14-B

Wisconsin

WA9LZM 4,450- 80- 50-ABD
W9YCV 4,418- 83- 47-BD
WA9OKB 3,040- 76- 40-AB
KD9TH 2,856- 84- 34-B
WB9OCY 1,288- 47- 27-B
KB8ZQ/9 (EN44) 1- 1- 1-A
WBUC/9 (+K8s FVF,GJX,N8s AKC,BSH)
170,680- 585-251-ABCD

9

Colorado

W1XE 1,968- 66- 24-ABCD
W9KJY 1,955- 51- 23-BCDE
W9MXY (DM78)
637- 33- 13-ABCD
W9MXY (DM89)
264- 15- 12-BD
W9MXY (DM88)
144- 11- 9-BD

Iowa

WB9AP 12,166- 110- 77-BDE
NB9CH 6,864- 83- 56-ABCD
KA8TLJ 6,460- 170- 38-B
KD9BT 154- 14- 11-A
WB9PK (+WA8s BGU,JFS)
24,582- 190-102-ABDE

Kansas

N8LL 16,016- 143- 88-ABD
K8SML 15,048- 131- 72-BCDE
WB9T 11,778- 121- 78-ABD
KB9VUA 3,003- 62- 39-BD
WB9G 2,232- 62- 36-AB
NB9GZ 1,769- 61- 29-B
WA8TKJ (EM19)
646- 22- 17-ABCD9EF

Missouri

WA8TKJ (EM18)
312- 13- 13-ABCD9EF
WA8TKJ (EM89)
276- 13- 12-ABCD9EF
WA8TKJ (EM88)
231- 11- 11-ABCD9EF
WA8TKJ (DM99)
200- 10- 10-ABCD9EF
WA8TKJ (DM98)
200- 10- 10-ABCD9EF
WA8TKJ (DM97)
112- 7- 7-ABCD9EF
WA8TKJ (EM87)
112- 7- 7-ABCD9EF
WB8DRL (+K8BO,N8BY,WA8D,WB8HYV)
267,384- 527-312-ABCD9EFG

Minnesota

K8IR 21,944- 173-104-ABDE
WB9VB 11,592- 90- 72-BCDE
WB9OHU 2,992- 43- 34-BDE
KB8ZO (EN34)
2,728- 60- 44-ABD
WA8BWE 1,748- 38- 23-D
NB9JZ (EN14) 126- 14- 9-B
NB9JZ (EN24) 60- 12- 5-B
NB9JZ (EN15) 40- 8- 5-B
NB9JZ (EN25) 30- 6- 5-B
NB9JZ (EN16) 20- 5- 4-B
NB9JZ (EN26) 12- 4- 3-B

Missouri

K8IFL 17,952- 134- 96-ABCD
KM8A 16,992- 140- 96-ABCD
WB9JP 5,985- 83- 57-ABCD
WB9AV 544- 32- 17-B
AJ8E (+NSJJI,K8TLM,N8HOB,NJ8X,WB8ROQ)
26,656- 174-112-ABCD

North Dakota

K8ALL 2,368- 48- 37-ABCD

Nebraska

N8BTN 10,382- 110- 66-BCD
WA8TKJ (DN90)
420- 16- 15-ABCD9E
WA8TKJ (EN80)
364- 14- 14-ABCD9EF
NB9JU 352- 22- 16-AB
WA8TKJ (EN11)
253- 11- 11-ABCD9EF

Nebraska

WA8TKJ (EN81)
231- 14- 11-ABCD9E
WA8TKJ (EN10)
200- 10- 10-ABCD9EF
WA8TKJ (DN92)
200- 11- 10-BCD9E
WA8TKJ (EN82)
105- 7- 7-BCD9E
WA8TKJ (DN91) 72- 6- 6-ABCD9E

VE

Maritime—NFLD

K1GVM/VE1 198- 22- 9-B

Ontario

VE3ASO 99,188- 435-181-ABCD9EF
VE3OZB 42,721- 310-119-ABD
VE3DSS 15,066- 137- 81-ABCD
VE3PCW 12,906- 239- 54-B
VE3SMA 6,468- 104- 49-ABDE
VE3OAT 2,496- 64- 39-B
VE3DJ 738- 30- 18-BD
VE3OYH 465- 31- 15-B
VE3FVW 192- 18- 8-BD
VE3LNX (+VE3s ADJ,NSO)
189,435- 597-219-ABCD9EF

Saskatchewan

VE5LY 100- 10- 10-AB

Alberta

VE6AFO 1,326- 84- 13-ABD
VE6BQJ 740- 74- 10-B
VE6KC 84- 21- 4-B

British Columbia

VE7PRC (+VE7s BEE,EHQ,GSB,SKP,TAJ)
287- 41- 7-B

Marine Mobile

W1TUM/MM (+KB1KM,W1ZNY,WA1s YFZ,ZVA,
WB1AB)
1,679- 52- 23-ABCD

DX

XE2GBO 1,224- 61- 17-ABCD
XE2GFH (WA5LIG,N6XQ,ops)
150- 8- 5-9I