2013 ARRL September VHF Contest

Propagation forecasts were nothing special, but tropospheric ducting held some pleasant surprises for contesters.

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Good band conditions and increased activity levels are key ingredients for a successful VHF contest. While submitted logs were up, a number of stations across North America observed that activity seemed modest. In actuality, the numbers (see the table titled, "Participation by Year") show submissions were actually up over 10 % this year!

2013 marked the first year of two new VHF+ contesting Single Operator categories — FM only (SOFM) and Three-band (SO3B). SO3B proved to be fairly popular in the initial go-round while the SOFM category still has a good deal of potential upside.

From the standpoint of band conditions, many anticipated a fairly blasé weekend based on the various propagation tools available. According to forecasting tools like the Hepburn tropospheric map (**www.dxinfocentre.com/tropo.html**), nothing all that exciting was expected. Even during the contest, the live Automatic Packet Reporting System (APRS) maps failed to show any enhanced tropo conditions. Likewise, solar reports also indicated that nothing unusual was to be expected. Those looking at these reports on Saturday, before the start of the contest, would not have anticipated any enhancement. Fortunately, that was not the case for much of the eastern half of the country, particularly in the Southeast and Middle Atlantic areas.

Band Conditions

After last year's great E-skip and TEP openings on 6 meters during the contest, there was hope that perhaps this year would bring a repeat. It was hoped that the Sun would act up and give us an aurora as we neared the solar maximum. Alas, neither was in the cards for the weekend, so that focused hope on some tropo enhancement.

In California and the Pacific Northwest, several contesters noted coastal tropo that enhanced signals during the contest. Both areas enjoyed some signals that were stronger than normal, though there were no reports of great distances being worked via this mode.

Operating from the highest point in Missouri — Taum Sauk Mountain — George, ABØRX, was in the right place at the right time to pick up some great tropo contacts into the East Coast. [George Mackus, ABØRX, photo]

During a noontime team meeting of the AA4ZZ group on North Carolina's Boone Mountain in EM96 before the start of the contest, Roger, W4MW, announced that there might be tropo even though the Hepburn map showed nothing was expected. Roger had looked at the weather maps to determine his own forecast for the bands.

At the same time, George, ABØRX, was setting up his portable station on Missouri's Taum Sauk Mountain in EM47, the highest point in the state. All of his antennas are homebrewed from *The ARRL Antenna Book*. As it turned out, Roger was correct and both stations were in the right place at the right time to enjoy some great tropo on 144 MHz and up.

AA4ZZ started working tropo Saturday night on 144, 222, and 432 MHz. The band was open primarily in two directions — to the west as far as Oklahoma and Kansas, and to the Northeast as far as New England. Their best DX and some real excitement was working Todd, KØKAN, in EM19 who noted it was the "absolute highlight of the weekend for me. I heard AA4ZZ calling CQ on SSB. When they had difficulty with my call, I called back on CW. We worked on 2 meters and then moved to 432 and then to 222." On Sunday morning the tropo moved around as AA4ZZ worked W9s and WØs, as well as some W2s and W5s. On Sunday evening they managed to work K1TEO in FN31 on 222 and 432. In the end, the AA4ZZ team worked 68 grids on 144 MHz, 55 on 432 MHz, and had many 500+ mile QSOs.

A little to the south in EM85, the Limited Multioperator group at W4NH in Georgia probably experienced the best tropo of the contest. They also started working the tropo Saturday night with QSOs to the west as far as Oklahoma, even more toward VE3, W2 and W3, and even one into southern New England. Conditions continued to be excellent, with perhaps their best opening coming in during the last hours of the contest as they were pounding into New England. Their best DX was almost 1000 miles to K1WHS in

Participation by Year

Class	2011	2012	2013
SOLP	226	233	220
SOHP	86	101	111
LM	23	21	25
MO	29	36	35
SO-Port	16	16	19
R	31	25	29
RL	18	16	24
RU	5	6	7
SO-FM			7
SO-3B			37
Total	434	454	514

This colorful map shows all of the grids worked by the K8GP Multioperator team. The darker the color, the higher the number of QSOs worked in that grid. [Map provided by Google Maps]

Club Competition

Class	Count	Club Name	Score
Medium	20	Potomac Valley Radio Club	1,235,925
	11	Southern California Contest Club	1,010,852
	17	Mt Airy VHF Radio Club	802,148
	18	North East Weak Signal Group	556,187
	9	Contest Club Ontario	264,718
	12	Society of Midwest Contesters	196,192
	11	Yankee Clipper Contest Club	165,852
	3	Carolina DX Association	163,621
	23	Pacific Northwest VHF Society	141,274
	9	Northern Lights Radio Society	87,622
	5	Cold Brook Contest Club	79,292
	9	Northern California Contest Club	9,799
	11	Bristol (TN) ARC	7,215
	6	Arizona Outlaws Contest Club	153
		Florida Contest Group	71
Local	9	Badger Contesters	96,053
	3	Bergen ARA	71,832
	3	Chippewa Valley VHF Contesters	17,843
	4	Granite State ARA	16,439
	3	DFW Contest Group	9,798
	7	Rochester (MN) ARC	8,865
	3	Florida Weak Signal Society	6,049
	3	Stoned Monkey VHF ARC	4,280
	4	Lawton Fort Sill ARC	3,180

Maine late in the contest on 144 MHz, while on 432 MHz they contacted K1TR in FN42 at about 900 miles. I can attest that they were a solid S-9 for the last several hours of the contest at my own location in Southwestern Connecticut, and easily worked through 432 MHz. The bottom line was 76 grids on 144 MHz!

Meanwhile, in Missouri, ABØRX had beautiful weather, and a pleasant surprise on Sunday morning as he worked long-haul contacts to the East, as far as W2LV in FN21. The opening lasted about 2 hours at his location. "I've been operating VHF for about 7 years now and those 2 hours were the best tropo conditions I have ever experienced."

Another station in the right place was K8GP operating from FM19 in Virginia. The tropo reached them early Sunday morning and until mid-afternoon they were working DX to the Southwest on the bands. On 2 meters they made QSOs to Alabama, Tennessee, Missouri, and Mississippi. Their best DX at over 1000 miles was to K5QE in EM31 (TX). On 432 they worked as far as W5MRB in EM35 (AR), a distance of almost 900 miles! Their final tally was 82 grids worked on 144, 47 on 222, and 56 on 432. Others in their area including W3PAW, K1RZ, W3SO, and K8EP also enjoyed the great conditions.

Sunday morning DX QSOs were made on 2 meters from Texas and Arkansas toward Indiana, Illinois and Ohio. Late in the contest the tropo drifted into the Northeast. K1TEO in FN31 (CT) worked into Tennessee, South Carolina, Georgia, and Alabama — a QSO with W4ZRZ in EM63, a path of over 900 miles. Jeff noted that signals were strong from the stations worked but not many

Top Ten

Single Operator, Low Power

K1TR	156,772
K2DRH	132,104
WB1GQR	103,768
AF1T	65,520
K2KIB	56,050
N3RN	47,952
N4QWZ	45,780
WB2JAY	35,939
K1KG	35,112
WA2VNV	32,508

Single Operator, High Power

K1TEO	323,323
WA2FGK	261,010
K1RZ	251,127
K3TUF	232,780
W3PAW	147,634
W5MRB	59,503
WØUC	57,625
VE3ZV	56,625
K8TQK	56,580
W4ZRZ	50,196

Single Operator, Portable

N6NB	112,765
W7LUD	11,960
W9SZ	3,162
KB5WIA	2,704
KC2VLG	2,185
N6LB	1,476
WB2AMU	1,368
NIØW	1,219
VE3EG	966
KI6QEL	730

Single Operator, 3-Band

N1ZN	7,380
K9MU	6,655
AC8HU	4,465
KV2M	4,012
WB9TFH	2,139
K3YDX	2,052
N3UM	2,030
KG9Z	1,769
NT9E	1,650
K1VO	1,136

Single Operator, FM Only

W2EV	688
N9VM	75
K4QWZ	56
K2SI	55
KG6VFO	20
KE5GFY	16
N4ZKS	6

Limited Multioperator

K1WHS	213,280
W3SO	197,354
K8EP	166,470
AA4ZZ	163,400
W4NH	160,460
W2LV	117,245
K5QE	78,470
K2BAR	68,796
N8ZM	54,954
NE5BO	13,363

Multioperator

W2SZ	920,816
K8GP	546,621
K2LIM	187,200
W4IY	173,935
W6TE	143,330
W2EA	123,224
KBØHH	59,800
K3EOD	38,592
KØKAN	30,392
N3MK	26,320

Rover

K6FGV/R	189,849
K6AH/R	179,928
N6VI/R	138,635
N6HD/R	113,709
VE3SMA/R	99,964
VE3OIL/R	96,336
AF6O/R	83,076
WA3PTV	51,525
W9SNR/R	40,495
W9FZ/R	37,341

Limited Rover

K2QO/R	63,900
WW7D/R	26,542
AL1VE/R	22,848
N2ZBH/R	19,080
K9JK/R	12,528
NL7B/R	11,799
WB2SIH/R	10,918
W5VY	6,996
KØBBC/R	5,916
W1PL	2,666

Unlimited Rover

N2SLN/R	46,736
KF8QL/R	14,094
KJ1K	9,315
N4DBR	3,379
WA2TTP/R	3,161
WAØRKQ/R	946
W2TAU/R	110

Regional Leaders

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 East, Ontario North, Ontario South and Greater Toronto)			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 Sections)		
K1TR	156,772	A	N4QWZ	45,780	A	K2DRH	132,104	A	AB0RX	14,850	A	AF6RR	13,916	A
WB1GQR	103,768	A	KX4R	25,894	A	WZ8T	22,692	A	N0LL	9,035	A	KE0CO	9,847	A
AF1T	65,520	A	K4FJW	4,838	A	N9DG	22,616	A	W0JT	5,640	A	K6TSK	8,118	A
K2KIB	56,050	A	K5YPV	4,400	A	K8MR	10,985	A	WB0HHM	2,822	A	K2GMY	6,018	A
N3RN	47,952	A	WA7TOF/4	2,464	A	VA3ZV	10,309	A	WA0ARM	2,673	A	K6ATZ	5,499	A
K1TEO	323,323	B	W5MRB	59,503	B	W0UC	57,625	B	KF0M	14,060	B	VE7JH	19,494	B
WA2FGK	261,010	B	W4ZRZ	50,196	B	VE3ZV	56,625	B	K9MK	9,672	B	KC6ZWT	16,555	B
K1RZ	251,127	B	W3IP	32,736	B	K8TQK	56,580	B	K0AWU	5,700	B	N7EPD	16,400	B
K3TUF	232,780	B	WA4NJP	15,762	B	K9CT	35,793	B	KA0RYT	4,900	B	KE7SW	11,132	B
W3PAW	147,634	B	KG5MD	7,788	B	K9EA	33,152	B	W0ZQ	4,176	B	K7ND	8,299	B
KC2VLG	2,185	Q	KC8KSK	12	Q	W9SZ	3,162	Q	NI0W	1,219	Q	N6NB	112,765	Q
WB2AMU	1,368	Q				VE3EG	966	Q	W0LLN	180	Q	W7LUD	11,960	Q
N1PRW	494	Q							N5ZPG	24	Q	KB5WIA	2,704	Q
KQ2RP	392	Q							N0JK	0	Q	N6LB	1,476	Q
W3MEO	30	Q										KI6QEL	730	Q
K1WHS	213,280	L	K8EP	166,470	L	N8ZM	54,954	L	K5QE	78,470	L	K6EU	2,987	L
W3SO	197,354	L	AA4ZZ	163,400	L	VE3RB	714	L				W6RKC	1,064	L
W2LV	117,245	L	W4NH	160,460	L				W5CSC	3,996	L	W6AJF	990	L
K2BAR	68,796	L	NE5BO	13,363	L				K0GU	680	L			
N2NT	9,024	L	N4HB	9,912	L				K5GZR	209	L			
W2SZ	920,816	M	K8GP	546,621	M	N2BJ	12,685	M	KB0HH	59,800	M	W6TE	143,330	M
K2LIM	187,200	M	W4IY	173,935	M				K0KAN	30,392	M	W7VB	1,650	M
W2EA	123,224	M	N3MK	26,320	M				KC5MVZ	2,139	M	KF7PCL	392	M
K3EOD	38,592	M	N4JQQ	11,715	M				W0KAN	880	M	WE6C	256	M
W1XM	14,352	M	W4YCC	1,176	M				W0GN	1	M			
WA3PTV	51,525	R	AG4V/R	34,104	R	VE3SMA/R	99,964	R	W9FZ/R	37,341	R	K6FGV/R	189,849	R
NN3Q/R	35,998	R	W4WNT/R	56	R	VE3OIL/R	96,336	R	K0DAS/R	26,070	R	K6AH/R	179,928	R
KB1EKZ/R	34,568	R				W9SNR/R	40,495	R	KC0P/R	6,304	R	N6VI/R	138,635	R
W1AUV/R	25,418	R				K9TMS/R	2,996	R	KC0SKM/R	5,922	R	N6HD/R	113,709	R
K1DS/R	11,960	R				K9PLS/R	780	R	N0HZO/R	1,335	R	AF6O/R	83,076	R
K2QO/R	63,900	RL	W5VY	6,996	RL	K9JK/R	12,528	RL	K0BBC/R	5,916	RL	WW7D/R	26,542	RL
N2ZBH/R	19,080	RL				W8ISS/R	969	RL	AF5Q	2,436	RL	AL1VE/R	22,848	RL
WB2SIH/R	10,918	RL				VE3RKS/R	36	RL	NL7CO/R	1,992	RL	NL7B/R	11,799	RL
W1PL	2,666	RL							W3DHJ/R	867	RL	KE7IHG/R	1,408	RL
KA3KSP	72	RL							AB0YM/R	816	RL	N6ZE/R	1,386	RL
N2SLN/R	46,736	RU	N4DBR	3,379	RU	KF8QL/R	14,094	RU	WA0RKQ/R	946	RU			

seemed to be on from the Southeast, perhaps having given up earlier in the contest before the tropo arrived. Or, as AA4ZZ noted, it is possible that the poor forecasts on Hepburn and the APRS maps caused many to miss the tropo. This entire event was a great example of why checking the Internet for band conditions, while helpful, is not always accurate. Expect the unexpected on VHF — the only way to know is to make noise!

New Single Operator Categories

2013 marked the addition of two new Single Operator categories for VHF contesting. The Three-band (SO3B) category saw 37 participants in its initial September contest. Jim, N1ZN, earned a narrow victory over K9MU. Close behind were AC6HU and KV2M. With many rigs equipped for 50, 144, and 432, this should be a popular category going forward. Who is up for topping Jim's category record in 2014?

Many VHF+ contesters began their operating on the FM part of the bands. For the first time, there was an FM-only (SO-FM) category of competition in 2013. Participation was minimal in this event as only seven logs were submitted. Hopefully word will spread among the FM fans on the VHF bands and bolster the activity in the future. In this first competition, W2EV from Western New York was the top scorer.

Club Competition

More than 40% of entrants (24 clubs) participated in this aspect of the competition. After a very close 2nd place finish in 2012, the Potomac Valley Radio Club returned to the top spot in the Medium Class with a convincing win. Registering 1,235,925 points, they topped the Southern California Contest

Limited Multioperator Grid Totals

Call	50 MHz	144 MHz	222 MHz	432 MHz	Total
K1WHS	52	50	32	38	172
W3SO	48	64	45	45	202
K8EP	51	64	32	39	186
AA4ZZ	56	68	36	55	215
W4NH	62	76	40	48	226

Roger, W4MW, turned out to be a secret weapon for the AA4ZZ team, suggesting that tropo propagation was quite possible even though the prediction tools said just the opposite. Turn on those radios and call CQ! [Paul Trotter, AA4ZZ, photo]

Club, who also cracked the million point level. These totals are significantly higher than last year — a tribute to the hard work of both clubs. The perennial January Sweepstakes winners from the Mt Airy VHF Radio Club improved their score by almost 100k to take 3rd place, followed by last year's champs from the North East Weak Signal Group. Contest Club Ontario had a nice jump in their score to retain 5th overall followed by the Society of Midwest Contesters, who had a showed a nice jump in entrants and score from last year.

The Badger Contesters from Wisconsin dropped down to the Local Class and took the top prize with the same number of entrants but a higher score. The Bergen ARA from New Jersey had huge improvement in results and moved up to 2nd followed by the Chippewa Valley VHF Contesters.

Conclusion

The introduction of operating aids available on the Internet — propagation forecasts, live propagation information, chat pages, etc, has been a great help to VHF+ operators in recent years. During contests, some of them cannot be used but others are allowed, such as the propagation forecasts like Hepburn and WWV solar reports. However, sometimes these tools do not show the full story of what is happening on the bands. There is some chance that we are more likely to miss enhancement on the bands because when we check the computer the tools say nothing is going on and we never turn on the rig.

The September 2013 contest was a great example of why the Internet information can never replace actual on-the-air checks. None of the great tropo ever showed up in the tool forecasts or real-time predictions. But savvy operators were there to enjoy some really good DX and fun during the contest. Or, you can invite Roger, W4MW, to join your team to let you know when the band will be open! Make your plans now to be active on September 13 – 15, 2014.

Thanks to the AA4ZZ, W4NH, and K8GP teams for sharing their log information, along with ABØRX. And special thanks to Andy, K1RA, who worked really hard to create the maps available in the online report. Also to Curt, K9AKS, for updating the September contest records. Thanks, OMs!

More Openings Online

For details about the top scoring stations shown in the Top Ten table, more maps, and more photos, go to the ARRL Contest Results Page at **www.arrl.org/contest-results-articles**.

Radiosport

The 2014 ARRL April Rookie Roundup — Phone

1800 UTC – 2359 UTC Sunday, April 20

Rookies aren't just in the US and Canada! Ali, HZ1TT, in Saudi Arabia made plenty of QSOs in the 2013 SSB Rookie Roundup. [Ali Al Dubie, HZ1TT, photo]

- Get ready for the 'RR! This 6-hour event is aimed at amateurs who have been licensed for 3 years or less. Rookies work everybody; Non-Rookies work only Rookies. If you were first licensed in 2014, 2013, or 2012, you can enter as a Rookie.
- Rookies can enter as a Single Operator or invite some Rookie friends over and operate as Multioperator. Up to five Single Operator Rookies can also enter from their individual stations and submit their total score as a team!
- This is a great way for clubs to get their newer members on the air. Be a good Elmer!
- All scores must be submitted online by 2359 UTC Wednesday, April 23. No late entries will be accepted.

Complete rules, logging sheets, and links for submitting your score can be found at www.arrl.org/rookie-roundup