



N.E.W.S. LETTER



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President: WZ1V Ron Klimas
Vice President: AF1T Dale Clement

CURRENT OFFICERS

Secretary: N1LZC Mark Casey
Treasurer: N1DPM Fred Stefanik

NEXT MEETING

THE NEXT MEETING IS ON MARCH 15, 1:00 PM AT THE HARLEY INN
ALL ARE WELCOME TO THE DIRECTORS MEETING AT 11:00 AM

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N.E.W.S. GROUP NET EVERY THURSDAY 8:30 PM LOCAL 144.250

MEMBERSHIP in the N.E.W.S. Group is \$10 per year. Apply to Fred Stefanik, N1DPM, 50 Witheridge St., Feeding Hills, MA 01030 (413) 786-7943 You may download an application from our web page <http://uhavax.hartford.edu/newsvhf>

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ON THE BANDS **BY RON KLIMAS WZ1V, FN31**

January 11th I had just come down after a cold day's work on the tower preparing for the contest. I come in to the shack about 2130Z to thaw out, flip the 2 meter rig onto 144.2, and to my amusement I hear a KD4ZAT calling CQ. I think Ahh, no big deal, probably someone in FM18 looking for a local QSO. A few more of his CQ's go unanswered. Then he calls again, THIS time dropping with "EL99, go 'head". Excitement thaws my frostbitten body. I answer with "KD4ZAT how copy WZ1V, Whisky Zulu One Victor, WZ1V, FN31 Connecticut?". My S-meter goes to +10 dB while a southern drawl replies "Where you all at, Why Vee Zulu Victor?". To make a long story short, several attempts to phonetically get my call through this guy's head get me nowhere. I finally say, "OK 73, call back later if you figure it out, QRZ WZ1V FN31". Mini-pile-up. I work WA4CHA EL88 (25 watt station), WA4LOX EL87, and my old friend Jon WB4JEM in EL89. I call a few more CQ's. Nothing. Then to my astonishment, this southern drawl "Whisky Zebra Won Victor, U copy KD4ZAT EL99?". He'd been listening to me work everyone else and he finally got it! Small miracles, they're great aren't they? Some others sharing the fun were Art WITDS in FN32 who hooked up with both EL89 and EL98 stations. Jerome K3GNC FM29 worked WA4CHA EL88 and WA4LOX EL87. Congrats to all who got in on this. Winter-time 2 meter Es is rare indeed!

January contest. What a bust! I spend the previous week going nuts. Things are self-destructing in the shack and on the tower faster than I can keep up with them. I spend multiple nights working on 2304 gear on the tower in the dark while it snows on me 1010 feet up in the cold winter air. By the time the contest starts I'm dead-tired. Saturday the temperature falls below zero and so do band conditions. By noon Sunday the bands finally begin to thaw a bit. Six meters opens up with about an hour of Eskip around 2100Z. Finally my score breaks the 200K mark and I surpass my goal by 2300Z. I wonder if all that fuss to get a lousy 1 watt station working on 2304 was worth it. You bet - my score would have been a whopping 38K less without it! Despite mediocre conditions, several NEWS Group members report substantially improved scores this year, with N1DPM leading the pack at a 50 percent improvement over last year. Congratulations to all!

February 15 some of you may have heard N2MSS mobile up in Maine. Hank was scouting out some possible contest locations in FN43, 53, and 54. Temperatures and band conditions warm up around the 21st of February. KD1DU and I catch some new (to us) activity up in FN44 Maine. Look for N3LYT/1 on 6, 2, and 432. Tim runs 170W on 2 and 60W on 432. Also active on 6 and 2 in FN44 look for WA1JOF. Don runs 600W on 2 meters and is planning on 1296 soon. On the 22nd K4QI in FM06 is calling CQ on 144.2 and Rus is putting in a 5-5 signal here on USB.

That's all I have, Folks. See you at the March 15 meeting and on the bands in the April Sprints! Don't forget to check into our Thursday night net on 144.250 starting around 8:30pm local, KD1DU net control (WZ1V alternate). And Please Send reports of DX or Expeditions to me, Ron Klimas, 458 Allentown Rd., Bristol, CT 06010 or call 860-589-0528 if you have something you'd like to share about an unusual contact, etc.

73, Ron WZ1V

internet email: wz1v@connix.com 50 through 3456 MHz.

FROM THE PRESIDENTS SHACK **BY: RON KLIMAS WZ1V**

I hope everyone survived the winter relatively unscathed. Here in CT we've had hardly any snow this year, and mild temperatures. Not half-bad to do outside chores and even get some antenna work done. Since our last January 4 club meeting, I've only had opportunity to talk to a few of you about our new meeting place in Enfield. I thought it was a pretty nice facility myself. We had a few wrinkles, but that's to be expected. We'll get an amplified mic and switch to theatre-style seating this time so we can all sit up a bit closer. The only thing I didn't like was the restaurant, I waited nearly 45 minutes for a cold sandwich. To be fair, they probably deserve a second chance though, we probably overwhelmed them with our numbers! If not, there's always Friendly's out in front. Please let me know what you think this time.

Not too much progress on our 2M beacon project. As of Feb. 22 I still don't have the beacon unit from VE2UG, but I got some news from VE2NRN that Rene is working on it. If it comes in time I'll bring it along to our March meeting. This will eventually be run at a commercial tower site we can use on Cape Cod, MA near Brewster. We still need an antenna and some committee volunteers for installers/maintainers. We'll discuss this in more detail at our March meeting.

WE DID it, gang! The gavel for the Medium Club category is OURS, of this I am 99 percent sure. The membership of the North East Weak Signal Group has more reason than ever to be proud. Each and every one of us should hold our heads high and revel in the joy of victory. And so we shall! Every one of the 40 who turned in a score to me will be ceremoniously awarded at our March meeting. Both the club aggregate score and number of entries was up nearly 20 percent from last year. If that's not cause for celebration, I don't know what is! (See the rumored scores listings elsewhere in this issue).

At our March 15 meeting, you might want to bring your sunglasses along as Paul Cianciolo KB1RP will be demonstrating Laser Communications Techniques. If you recall, there was a short article in last month's QST World above 50 MHz column on this very topic, which now has more than a few of us intrigued on what one can expect on the TeraHertz bands! We'll also have a January Contest wrap-up, or is that rap-up session. We'll go around the room and give anyone who wants to the opportunity to share what their biggest thrill (or heartbreak) was in the contest. As always, we'll have a break in the middle for swapping gear, lies, or laughs. Looking forward to seeing you all there!

'Til then, 73's, and I'll see you on the bands...and on our NEWS Group Thursday night net!

Ron, WZ1V, 50 - 3456 MHz

SECRETARY'S REPORT JAN. 4, 1997

The January meeting, first at our new location in Enfield, Ct., was an outstanding success with 57 recorded attendees. The facility at the Harley Hotel is an easy one to find, just off Exit 49, the last Exit in CT. from the south, and first coming down I-91 from the north, then take the turn-off at the Friendly's Restaurant.

New President, Ron Klimas, WZ1V, opened the meeting at 1:20pm. Ron announced future meeting dates of Mar. 15, May 24, July 12, August 23 (@ VHF Conference), and Nov. 8, 1997. The Eastern VHF-UHF Conference will be held at The Harley Hotel, Aug. 22, 23, 24, `1997.

The Trans-Atlantic Beacon Project, headed by W3EP was discussed briefly. The freq. is coordinated at 144.299, the location will be just outside of Chatham, Mass., on Cape Cod. There was a vote as to whether to split the field of radiation from the Beacon so that areas down the Atlantic coast could use this as a propagation marker but it was voted by overwhelming majority to stick with the original plan to put as much power towards the U.K. as possible. The secretary, N1LZC, has several other coastal sites available for beacons and any group of club members are encouraged to put together another beacon for Atlantic coastal purposes

Ron reminded everyone participating in the upcoming VHF Contest to hand in their logs for N.E.W.S.

The room was filled and seats were in short supply so a short discussion of future seating at the Harley was discussed. The room is big enough but we need more chairs and a larger overhead screen.

The main program was on the upcoming contest.

WA2TEO was the first one of 5 with a presentation. Jeff put a VHF contesting questionnaire on the Reflector and recieved a low response (25), but will put it on again. Jeff discussed likes, dislikes, preparation, changes to improve the station, suggestions, and scoring. One of the most comfortable improvements is addition of a Boom Microphone.

Jeff put together a great presentation which ended with a top 10 list:

10. Know Who's On
9. Fill in the Map
8. Allocate Time Effectively
7. Identify Openings/Enhanced Conditions Early
6. Maintain Desire/Optimism
5. Ability to Deal with Problems
4. Operate Maximum Hours
3. Test Equipment and then Retest
2. Ease Operation (Boom Mikes, Keyers, Computer)
1. Have Fun

Ron, WZ1V was next with a discussion of station set-up focusing on antennas on the tower & mast, switching, relays and efforts to get on new bands. Ron entertained several questions about antenna spacing on his tower and commented that little degradation was shown with some antennas spaced as close as a foot apart vertically.

Del, KD1DU talked about the importance of station location. Del looked for quite a while for a new home location and finally found a nice place to satisfy his station requirements and make the rest of the family happy! He also mentioned the ease of operation with a boom mike and computer logging.

Fred, N1DPM was up next and mentioned cleanup of dirty signals, and putting transverters on the tower, as improvements to contest stations. Fred also focused on the satisfaction of helping others get active and on new bands. Fred, and all of this meeting's speakers have been, and continue to be extremely helpful and are due a large THANK-YOU from many of us that have been on the recieving end of their helpfulness. Fred also touched on the subject of long distance microwave contacts--they're not as tough as you think and can be very rewarding!

Stan, KA1ZE was our final speaker, and talked about contesting as a main ham operation on both VHF and HF. Stan continues to be the stand-out rover operator in the area. Stan related a story about all-out winning efforts vs. efforts to be a competitor and have some fun too! History shows that the operator that has some fun during the contest, comes back year after year.

The last item at the January meeting was the silent auction. Participating members brought items of little or no value and took another item of little or no value home.

Our next meeting is Sat. March 15, 1997 at the Harley Hotel, Rt. 5, Enfield, Ct. at 1:00 PM. A Board of Directors meeting will be held at 11 AM. All are welcome!

Respectfully Submitted, Mark Casey, N1LZC, Secretary
n1lzc@juno.com

SECRETARY'S REPORT OF BOARD MEETING JAN. 4, 1997

The meeting opened at 11 AM and the first topic of discussion was the Jan. Contest Awards. NEWS is considering a trophy to be passed to the non-member working NEWS stations and/or an award to be passed between the major Northeast Clubs.

We will have a plaque for the top operator and 9 certificates for the remaining top 10 contesters as well as certificates for all club members sending in scores.

NEWS is continuing to sponsor the 3rd place award in the June

Contest. Fred, N1DPM has sent in our \$50 sponsorship to the league.

The beacon was briefly discussed, although NEWS is not the sponsor, many members are interested in its progress.

Possibilities for the March meeting's topic include a speakers from one of the major feedline manufacturer's, a talk on the Spring Sprints, June Contest, or antenna care and refurbishing.

The club has been gaining new members and is in good financial shape.

The VHF Conference was touched upon and Stan, KA1ZE, felt that structured Band Sessions may be discontinued in favor of a lab room type of approach. More discussion on this in the future.

The Board meeting was adjourned for lunch at 11:50 AM

Board Members in attendance: WZ1V, AF1T, N1LZC, N1DPM, K1LXD, N2MSS, WA2TEO and several regular members of NEWS.

Mark Casey, N1LZC, Secretary

DEAR ZACK AND FRIENDS,

To answer your question (non-quantitatively), yes, nearby trees can cause a non-reciprocal path sensitivity. I experienced the problem when I first got my TVRO satellite receiving system. For simplicity, I first mounted "the dish" on the roof of the house. I knew that in certain directions it would be looking through the branch of a tree. I said "I'm a microwave engineer, the branch will cause an attenuation of 1 or 2 dB, no problem -- just a little more snow".

Well, in those directions there was NO RECEPTION -- nada. I said, "gee, that's interesting". One day I left the dish aimed at a satellite in the direction of the tree branch. While walking around the house I noticed that the picture would occasionally pop in for a second and then disappear. I soon noticed that the wind was periodically blowing the branch out of the beam of the dish antenna.

The conclusion was that the branch attenuated the signal by 1 or 2 dB -- that was the minor effect. The big effect was that the leaves of the tree were at 300 degrees kelvin. Compared to my 25 degree C-band front end LNA, those leaves were a blow torch of thermal energy. They were raising the effective noise figure of my system by almost 10 dB. In a satellite system, you can go from a snow-free picture to nada with a change of 4 dB in C/N (wideband FM systems have "a crashing effect").

The bottom line is that you suffer the degradation of both effects -- attenuation and raised system noise temperature. The degradation effect gets worse when you use an LNA of lower noise figure (don't allow this to stop you from using good LNAs). Some earth stations spread window screening on the ground around the dish to reflect cold sky (instead of "hot earth") into the antenna backlobes, as a method of controlling the system noise

The total effect can be estimated to a reasonable accuracy:

1. The attenuation weakens the signal.
2. The "black body" effect raises the system noise temperature. It is a function of about six factors:
 - o What percentage of the antenna pattern has the tree?
 - o What is the physical temperature of the tree?
 - o What is the antenna gain in that direction?
(dB down from the boresight gain)
 - o What is the loss of the tree in that direction?
 - o What is your LNA noise temperature?
 - o What was your antenna temperature before adding the tree?

Here is a simplified example. Let us assume you had an LNA of 150 K (1.81 dB NF)** and the tree had 3.01 db (2:1 factor) of loss and the tree was spread out over the total antenna pattern (in all main lobe directions), and the tree was physically at 300 K temperature, assume that the antenna temperature (without the tree) is near 20 K when aimed at cold sky (due to the back lobes viewing "hot earth", a little optimistic).

1. The signal would be 3.01 dB weaker.
2. The tree would add to the antenna temperature 150 K (300/2).
3. The change in system noise temperature is:
 - o 150 K + 20 K = 170 K (old system temp.)
 - o 150 K added due to the tree in the main lobe.
 - o 170+150=320 K, new system temp. (delta 320/170 = 2.75 dB)
4. Total system degradation: 3.01 dB Signal loss
2.75 dB Delta Sys. Temp.
Total = 5.76 dB change in C/N ratio.

C/N = Carrier to noise ratio (that's what determines the satellite signal quality). A good TVRO requires 9 dB of C/N for 47 dB of Polychrome TV SNR (essentially snow-free).

Notice that -3.01 dB of tree loss caused a -5.76 dB in C/N. The effect would be even more dramatic if we started out with a 19 K LNA (which you can buy now). Notice also that with cryogenic systems (any modern LNA is cryogenic), only degrees Kelvin behaves in a linear manor -- dBs do not! Don't convert the answer to dBs until you have done all the calculations in degrees kelvin.

Each time you double or half the system noise temperature (in degrees Kelvin), you have doubled or half the system noise power and thus change the C/N by 3.01 dB. If you could change the system noise temperature from 10 K (0.147 dB NF) to 5 K (0.074 dB NF) you would experience half the noise power (delta C/N of 3.01 dB) even though you only changed the NF by 0.073 dB. Now I understand why some customers give a \$ incentive bonus for each 0.1 dB of system noise figure improvement.

** Noise Figure (NF) [in dBs] = 10Log(Te/290 + 1)

Te = Temperature Equivalent (K).

Te (degrees K) = 290(AntiLog[NF/10] - 1)

NF = Noise Figure (in +dBs).

Noise added (K) = Tx(1 - AntiLog[L/10])

L = Loss of object (tree)in -dBs

Tx = Temp. of object in K (tree).

I believe that a 10 GHz antenna aimed at a clear horizon experiences an antenna temperature close to 150 K (half of the pattern is viewing 300 K earth, half is viewing cold sky). We have come to the point where most of our system noise power is now coming in the antenna. For decades the major X-band system noise power came from the electronics connected to the antenna.

73,
Dick, K2RIW

JAN. '97 ARRL VHF SS CONTEST RUMORED SCORES: BY KOOU AND WZ1V REV.3

CALL	WA8WZG	WA2TEO	N2CEI	WC2K	WA3AXV	AA2UK	WZ1V	W2FU	K1RZ	WA3NUF	KD1DU	KE8FD	N1DPM
GRID	EN81	FN31	FN20	FM29	FN20	FM29	FN31	FN13	FM19	FN20	FN31	EM89	FN32
CLAS	S	S	S	S	S	S	S	S	S	S	S	S	S
50	145/39	219/53	257/50	???	129/30	70/19	162/44	98/29	185/32	???	144/28	87/36	85/38
144	190/44	413/46	308/36	???	249/27	251/35	207/33	222/38	314/43	???	435/38	216/55	155/24
222	89/34	108/29	104/26	???	118/20	85/25	85/23	67/22	80/24	???	79/21	75/40	66/17
432	149/45	157/33	108/26	???	139/20	100/31	127/26	111/31	121/26	???	109/23	109/41	98/20
903	40/19	49/20	39/12	???	49/14	42/14	40/14	37/13	31/12	???	35/14	14/11	34/14
1.2	65/30	48/17	48/16	???	64/16	63/19	45/14	39/14	40/13	???	37/13	28/17	44/13
2.3	32/18	25/10	23/8	???	31/7	27/7	22/8	16/6	6/3	???	0/0	0/0	18/9
3.4	13/9	0/0	13/4	???	18/2	8/2	6/2	4/3	0/0	???	0/0	0/0	9/5
5.7	18/9	0/0	3/2	???	10/2	8/2	0/0	4/3	0/0	???	0/0	0/0	0/0
10G	11/7	0/0	1/1	???	7/2	4/2	0/0	1/1	0/0	???	0/0	0/0	0/0
24G	0/0	0/0	1/1	???	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
LAS	1/1	0/0	0/0	???	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
TOT	753/255	1019/208	905/182	???	814/140	658/156	693/164	599/160	777/153	???	839/137	529/200	509/140
SCORE	466905	364000	303030	276000	262080	231972	222384	188800	188649	177800	170291	167800	153440
CALL	WA8WZG	WA2TEO	N2CEI	WC2K	WA3AXV	AA2UK	WZ1V	W2FU	K1RZ	WA3NUF	KD1DU	KE8FD	N1DPM

CALL	WB3JYO	W2UR	W3OR	K1TR	WB3KRW	N2SB	N3EXA	WB2DNE	NOHJZ	W3KM	VE3KDH	AF1T	K2UOP/8
GRID	FN20	FM29	FM28	FN42	FN20	FM29	FN20	FM19	EN34	FN20	FN03	FN43	FM09
CLAS	S	S	S	S	S	S	S	S	S	S	S	S	S
50	???	???	???	218/52	93/20	???	129/14	116/20	130/37	46/8	136/37	145/52	63/25
144	???	???	???	250/24	252/25	???	218/22	193/36	174/31	193/24	185/43	155/21	121/33
222	???	???	???	70/16	94/22	???	93/16	72/22	36/15	75/18	39/21	42/14	41/19
432	???	???	???	80/18	115/23	???	105/17	96/24	68/22	80/15	56/24	51/14	63/22
903	???	???	???	14/5	34/11	???	45/9	18/9	7/5	36/7	8/6	14/6	28/14
1.2	???	???	???	19/7	53/14	???	53/7	27/12	23/8	45/8	11/6	18/7	31/16
2.3	???	???	???	7/4	0/0	???	26/4	0/0	6/4	19/3	4/2	6/4	0/0
3.4	???	???	???	1/1	0/0	???	0/0	0/0	4/4	3/1	0/0	0/0	0/0
5.7	???	???	???	1/1	0/0	???	0/0	0/0	0/0	0/0	0/0	0/0	0/0
10G	???	???	???	2/2	0/0	???	0/0	0/0	2/1	0/0	0/0	0/0	0/0
24G	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
LAS	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
TOT	???	???	???	662/130	641/115	???	669/119	522/123	450/127	497/84	439/139	432/120	349/129
SCOR	150000	140400	139500	128440	127765	122300	119000	101475	92456	88116	86041	82320	81000
CALL	WB3JYO	W2UR	W3OR	K1TR	WB3KRW	N2SB	N3EXA	WB2DNE	NOHJZ	W3KM	VE3KDH	AF1T	K2UOP/8

CALL	WB2VVV	WA1MBA	K9OYD	K3GNC	KB8ZW	WB2ELB	N2LIV	N1LZC	AA2WV	N4KWX	N1MUW	W1AIM	NOEC
GRID	FN21	FN32	FM18	FM29	EN91	FN03	FN30	FN32	????	FM08	FN32	FN34	DN70
CLAS	S	S	S	S	S	S	S	S	S	S	S	S	S
50	112/25	0/0	48/15	???	122/31	43/8	???	114/26	???	71/18	150/38	123/52	89/24
144	220/25	162/22	138/30	???	120/32	103/25	???	167/15	???	122/26	146/19	87/23	61/20
222	62/20	0/0	48/18	???	37/21	54/15	???	43/10	???	40/16	36/7	26/17	21/11
432	69/18	95/17	67/21	???	59/24	0/0	???	69/11	???	54/17	58/7	26/16	48/17
903	20/9	21/14	16/8	???	0/0	1/1	???	3/2	???	0/0	0/0	1/1	3/2
1.2	22/8	38/14	17/8	???	12/9	22/4	???	6/3	???	15/8	9/2	2/2	15/7
2.3	0/0	18/9	0/0	???	0/0	3/3	???	4/2	0/0	0/0	0/0	0/0	4/2
3.4	0/0	11/7	0/0	0/0	0/0	0/0	???	3/2	0/0	0/0	0/0	0/0	0/0
5.7	0/0	3/3	0/0	0/0	0/0	0/0	???	0/0	0/0	0/0	0/0	0/0	0/0
10G	0/0	3/2	0/0	0/0	0/0	24/4	???	1/1	0/0	0/0	0/0	0/0	2/2
24G	0/0	0/0	0/0	0/0	0/0	12/4	0/0	0/0	0/0	0/0	0/0	0/0	0/0
LAS	0/0	0/0	0/0	0/0	0/0	6/2	0/0	0/0	0/0	0/0	0/0	0/0	0/0
TOT	505/105	361/88	334/110	268/66	350/117	268/66	???	410/72	???	???	399/73	265/111	243/85
SCOR	80010	79904	54800	54000	53394	46596	45800	43560	40000	38367	37960	36186	34680
CALL	WB2VVV	WA1MBA	K9OYD	K3GNC	KB8ZW	WB2ELB	N2LIV	N1LZC	AA2WV	N4KWX	N1MUW	W1AIM	NOEC

CALL	K8MR	WQ0P	N3RN	W8KX	N2DKP	WB5OMF	K1FO	N0LL	KD4UPF	KB9IEC	WB1FKF	N8ZJN	KE8RO
GRID	EN91	EM19	FN11	????	FN13	CM98	FN31	EM09	FM08	EM69	FN42	EM79	EN81
CLAS	S	S	S	??	S	S	S	S	S	S	S	S	S
50	88/27	34/18	117/35	43/19	61/19	29/9	0/0	94/51	56/15	0/0	22/7	54/25	79/31
144	137/27	91/29	144/29	126/36	174/29	119/22	0/0	85/33	112/25	189/51	60/12	63/24	100/31
222	28/14	15/11	18/9	29/19	20/5	33/8	0/0	10/9	39/16	0/0	23/8	32/16	0/0
432	63/20	51/23	21/12	44/24	24/11	81/17	254/58	21/17	55/17	58/31	43/8	41/17	48/20
903	0/0	2/1	2/2	0/0	14/4	0/0	0/0	0/0	0/0	0/0	12/5	0/0	0/0
1.2	0/0	8/8	1/1	0/0	12/4	22/8	0/0	4/4	0/0	0/0	17/5	7/2	0/0
2.3	0/0	2/1	1/1	0/0	0/0	0/0	0/0	0/0	0/0	0/0	6/4	0/0	0/0
3.4	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	2/2	0/0	0/0
5.7	0/0	5/1	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	2/2	0/0	0/0
10G	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	4/3	0/0	0/0
24G	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
LAS	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
TOT	316/88	208/92	304/89	242/98	305/72	284/64	0/0	214/114	???	247/82	191/56	197/84	227/82
SCOR	33816	32476	31951	30870	30744	29696	29464	29298	25988	25010	24752	24444	22550
CALL	K8MR	WQ0P	N3RN	W8KX	N2DKP	WB5OMF	K1FO	N0LL	KD4UPF	KB9IEC	WB1FKF	N8ZJN	KE8RO

CALL	N2SCJ	W3EP	KH2CY	NS4W	KX1C	KC8CSD	W1COT	W3SE	K0GU	AA2GV	N6KBX	N2MSS	K9PW
GRID	FM29	FN31	FM19	EM76	FN42	EN81	FN31	DM03	DN70	FN02?	CM98	FN31	EN50
CLAS	S	S	S	S	S	S	S	S	S	S?	S	S	S
50	65/7	224/54	43/17	50/26	82/22	46/21	38/7	43/5	131/46	0/0	50/15	???	247/59
144	200/10	66/20	130/24	69/30	81/13	98/38	115/17	147/13	54/20	99/27	116/21	???	0/0
222	63/6	0/0	0/0	26/16	28/10	0/0	34/11	46/7	4/2	26/16	0/0	???	0/0
432	91/8	0/0	61/16	33/17	32/10	46/25	48/12	94/14	19/7	39/16	64/19	???	0/0
903	0/0	0/0	0/0	0/0	6/3	0/0	0/0	0/0	0/0	0/0	0/0	???	0/0
1.2	29/3	0/0	12/7	0/0	8/3	0/0	12/5	0/0	0/0	7/5	0/0	???	0/0
2.3	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
3.4	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
5.7	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
10G	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
24G	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
LAS	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
TOT	448/34	290/74	246/64	178/89	237/61	190/84	247/52	330/39	208/75	257/64	230/55	???	247/59
SCOR	22440	21460	21184	21093	20679	19824	18980	18330	17325	16448	16170	16000	14573
CALL	N2SCJ	W3EP	KH2CY	NS4W	KX1C	KC8CSD	W1COT	W3SE	K0GU	AA2GV	N6KBX	N2MSS	K9PW

CALL	WB9AJZ	N7STU	AA4ZZ	K1CPJ	N3VBG	NB2T	N2UAH	WA2ZFH	WA1ECF	KB2UZB	K1LPS	WA5YWC	N9JR
GRID	CM87	DM07	EM96	FN31	FM19	FN30	FN20	FN30	FN41	FN21	FN34	CM98	EN63
CLAS	S	S	S	S	S	S	S	S	S	S	S	S	S
50	47/11	0/0	22/10	61/20	101/24	0/0	52/10	13/4	74/24	0/0	49/28	22/7	38/15
144	124/21	107/20	152/45	73/11	48/12	140/13	132/14	123/15	43/11	224/28	49/16	104/19	49/14
222	98/14	0/0	9/7	12/4	0/0	30/4	0/0	12/4	16/8	6/4	9/6	0/0	13/8
432	0/0	51/17	0/0	19/4	47/7	85/11	54/11	58/12	12/3	13/4	15/7	46/10	20/10
903	0/0	0/0	0/0	2/2	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
1.2	0/0	17/7	0/0	4/2	0/0	0/0	0/0	1/1	5/3	0/0	0/0	0/0	0/0
2.3	0/0	0/0	0/0	3/2	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
3.4	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
5.7	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
10G	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
24G	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
LAS	8/1	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
TOT	277/47	175/44	183/62	174/45	196/43	255/28	238/35	207/36	150/49	243/36	122/57	172/36	120/47
SCOR	13019	12188	11904	10980	10449	10360	10220	10080	9457	9432	8322	7848	7191
CALL	WB9AJZ	N7STU	AA4ZZ	K1CPJ	N3VBG	NB2T	N2UAH	WA2ZFH	WA1ECF	KB2UZB	K1LPS	WA5YWC	N9JR

CALL	WB4ZUG	AJ1X	K1WVX	K6YK	KE6DPV	N0TMQ	N7EIJ	WA3LTB	NA1W	N2NCQ	W2GKR	N0UK	N1RXM
GRID	EM75	FN31	FN31	CM97	????	EN34	CN85	??	FN32	FN22	FN31	EN34	FN31
CLAS	S	S	S	??	??	S	S	S	S	S	S	S	S
50	57/26	178/35	36/17	0/0	28/7	54/10	26/5	0/0	4/2	21/7	40/14	7/2	14/3
144	41/20	0/0	47/11	136/21	74/12	95/13	77/23	111/34	28/10	58/5	74/14	65/9	82/12
222	0/0	0/0	10/3	17/3	0/0	0/0	0/0	0/0	6/2	11/4	0/0	0/0	0/0
432	16/9	0/0	23/4	20/3	30/11	16/2	11/3	0/0	15/5	29/4	0/0	33/4	22/7
903	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	3/2	0/0	0/0	0/0	0/0
1.2	0/0	0/0	2/2	0/0	4/1	0/0	0/0	0/0	5/2	0/0	0/0	11/2	0/0
2.3	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	2/2	0/0	0/0	0/0	0/0
3.4	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	3/2	0/0	0/0	0/0	0/0
5.7	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
10G	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
24G	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
LAS	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
TOT	114/55	178/35	118/37	173/27	136/31	165/25	114/31	111/34	62/25	119/20	114/28	116/17	118/22
SCOR	7150	6230	5809	5670	5518	4525	3875	3774	3550	3339	3192	3094	3080
CALL	WB4ZUG	AJ1X	K1WVX	K6YK	KE6DPV	N0TMQ	N7EIJ	WA3LTB	NA1W	N2NCQ	W2GKR	N0UK	N1RXM

CALL	WA1OFR	KD6EFQ	W1NWE	N7DB	W1RIL	N1SAG	N1EKV	N2YYU	KC5UZY	KD6RXT	KB9MLA	KB2VDR	K1LXD
GRID	FN42	DM12	FN31	CN85	FN42	FN31	FN42	FN31	EM04	EN61	EN61	FN21	FN31
CLAS	S	S	S	S	S	S	S	S	??	S??	S	S	S
50	34/15	7/2	0/0	29/11	4/2	32/11	15/9	0/0	???	26/8	0/0	0/0	19/4
144	34/6	31/4	73/11	47/11	25/5	21/4	46/10	46/4	???	18/2	40/4	31/4	0/0
222	0/0	33/5	0/0	1/1	5/2	0/0	0/0	5/4	0/0	0/0	0/0	0/0	0/0
432	11/3	32/4	29/7	5/1	4/2	16/4	4/1	20/4	0/0	6/1	0/0	0/0	0/0
903	0/0	0/0	0/0	0/0	4/2	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
1.2	2/2	2/2	0/0	0/0	0/0	5/2	0/0	0/0	0/0	0/0	0/0	0/0	0/0
2.3	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
3.4	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
5.7	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
10G	0/0	0/0	0/0	0/0	0/0	2/2	0/0	0/0	0/0	0/0	0/0	0/0	0/0
24G	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
LAS	0/0	1/1	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
TOT	82/27	168/15	102/18	82/24	47/17	69/19	65/20	71/10	???	50/11	40/4	31/4	19/4
SCOR	2862	2520	2358	2112	1649	1615	1380	960	777	616	160	124	76
CALL	WA1OFR	KD6EFQ	W1NWE	N7DB	W1RIL	N1SAG	N1EKV	N2YYU	KC5UZY	KD6RXT	KB9MLA	KB2VDR	K1LXD

QRP AND ROVER SCORES

CALL	W8TL	W1VT	ROVERS	Score	Totals	GrdAct.	Bands
GRID	FM09	FN31	AB4CR/R	143606	497/118	10	ABCD9EFIJ
CLASS	QRP-P	QRP-P	NR1L/R	108000	572/93	10	BCD9EFG
50	50/30	18/4	NC7K/R	82820	767/82	18	ABD
144	111/27	96/13	KB3PW/R	66872	540/46	6	ABCD9EFGHIJ
222	30/17	28/9	WZ8D/R	62952	468/86	11	ABCDE
432	44/21	55/11	KA2CKI/R	34776	360/46	6	ABCD9EFL
903	14/9	9/4	N3OC/R	24076	289/52	7	ABCD9E
1.2	18/10	10/3	N3KKM/R	16744	302/46	7	ABCD
2.3	0/0	8/3	N2MNZ/R	14000	???	10	BD
3.4	0/0	4/2	KB2VGH/R	7581	210/21	4	ABDIJ
5.7	0/0	2/2	N1MJD/R	7296	180/32	9	BD
10G	0/0	3/2	K9JK/R	5876	148/26	4	ABCDE
TOT	267/114	233/53	W5DF/R	4402	100/31	6	ABDEL
SCOR	49818	26076	NL7CO/R	3488	109/32	10	B
CALL	W8TL	W1VT	N3LJK/R	3240	98/27	6	ABC

CLUB SCORES

Mt. Airy VHF Radio (Pack Rats)
club score: 57 logs / 2.9 Million (Unlim.)

North East Weak Signal Group club score:
2.3 Million/40 logs (Medium)

Northern Lights Radio Society club score:
0.5 Million/55 logs (Unlim.)

Highlighted scores (in boxes) are the club members whose scores counted towards our overall club score.

LIMITED AND UNLIMITED SCORES

CALL	K3MQH	W2UTH	N2ODK	K1WHS	K2TVI	WA2AAU	N1BWT	KB5IUA
GRID	FM19	FN03	FN12	FN43	FN21	FN22	FN42	EL29
CLAS	M/U	M/U	M/U	M/U	M/U	M/U	M/U	M/U
50	463/69	223/47	216/39	284/69	???	83/23	118/38	67/20
144	847/64	404/48	294/42	207/25	???	194/26	138/19	124/25
222	198/43	127/37	111/32	53/18	???	42/16	50/12	7/6
432	333/52	175/37	156/32	87/21	???	62/17	67/14	49/15
903	18/11	37/12	40/16	16/6	???	30/14	15/6	3/2
1.2	32/15	53/15	45/15	24/7	???	37/14	17/5	11/7
2.3	0/0	23/6	17/7	10/6	???	19/11	0/0	0/0
3.4	0/0	12/4	3/3	0/0	???	9/4	0/0	0/0
5.7	0/0	11/4	0/0	0/0	???	6/4	0/0	0/0
10G	0/0	20/2	3/1	0/0	???	0/0	2/1	0/0
24G	0/0	10/2	0/0	0/0	???	0/0	0/0	0/0
LAS	0/0	10/2	3/1	0/0	???	0/0	0/0	0/0
TOT	1891/254	1105/216	888/188	681/152	990/113	482/129	407/95	261/75
SCOR	650000	492264	299296	141512	140256	132225	60230	26925
CALL	K3MQH	W2UTH	N2ODK	K1WHS	K2TVI	WA2AAU	N1BWT	KB5IUA

CALL	N2XTX	N4UK	NC1I	NO2T	N6RMJ	WB1FLD	N2VOT	WA8BCA
GRID	FN02	EM84	FN32	FN30	DM14	FN42	FN22	EN91
CLAS	M/L	M/L	M/L	M/L	M/L	M/L	M/L	M/L
50	292/63	183/84	96/15	137/24	89/31	123/37	149/40	433/79
144	403/64	189/59	342/30	447/31	117/34	201/23	149/17	0/0
222	52/30	51/31	40/12	50/17	56/24	58/14	68/14	0/0
432	78/33	90/54	222/46	149/15	89/33	91/17	90/16	0/0
TOT	825/190	513/228	700/103	781/87	251/122	473/91	456/87	433/79
SCOR	181450	149112	98986	65086	60512	56602	53418	34207
CALL	N2XTX	N4UK	NC1I	NO2T	N6RMJ	WB1FLD	N2VOT	WA8BCA

CALL	W2KV	KA1EKR	NG4C	KF0M	N1WPB	KE7OT	K1EP	KO0U/6
GRID	FN20	FN42	FM16	EM17	FN31	DM34	FN51	DM04
CLAS	M/L	M/L	M/L	M/L	M/L	M/L?	M/L	M/L
50	0/0	82/31	80/34	0/0	???	17/8	29/8	9/3
144	526/47	88/14	78/25	78/29	???		46/9	25/9
222	0/0	25/9	13/8	7/7	???		11/3	8/2
432	0/0	46/12	23/14	37/20	???		2/1	15/4
TOT	526/47	241/66	194/81	122/56	???	71/26	88/21	57/18
SCOR	24769	20592	18630	9296	6396	2340	2163	1152
CALL	W2KV	KA1EKR	NG4C	KF0M	N1WPB	KE7OT	K1EP	KO0U/6

ALTERNATE RESTAURANTS NEARBY THE NEWS MEETING SITE IN ENFIELD, CT.:

Friendly's Rt. 5 (walk-to, from the Harley)

Country Buffet Rt. 190 (2 miles south on Rt. 5, then Rt. 190 E.
1/4 mile, or exit 47e off I-91-----all you can eat and plenty of it!)

McDonald's Rt. 5 (1/2 mile south of the Harley)

I thought lunch at the Harley was very good but they were a little slow serving it. ED.

N.E.W.S. GROUP NET EVERY THURSDAY 8:30 PM LOCAL 144.250

**LOOKING FOR HAM/ENGINEERING SOFTWARE OR TECH INFO? TRY OUR INTERNET
WEBPAGE AT [HTTP://UHAVAX.HARTFORD.EDU/NEWSVHF](http://UHAVAX.HARTFORD.EDU/NEWSVHF)**

1996 N.E.W.S. GROUP VHF+ CALENDAR:

DON'T FORGET!

**N.E.W.S GROUP 2 METER AND ABOVE NET
EVERY THURSDAY NIGHT 8:30 PM LOCAL 144.250
KD1DU, WZ1V OR WA2TEO NET CONTROL
NET CONTROL WILL START NORTH EAST AND
MOVE AROUND TO SOUTH**

MARCH:

15 - N.E.W.S. Meeting, Harley Hotel, Enfield, CT at 1 PM.

APRIL:

14 - 144 MHz Spring Sprint Contest, 7 - 11 P.M.. local time.
22 - Lyrids meteor shower peaks at 1450 UTC.
22 - ARRL 222 MHz Spring Sprint Contest, 7 - 11 P.M.. local
30 - ARRL 432 MHz Spring Sprint Contest, 7 - 11 P.M.. local

MAY:

5 - e Aquarids meteor shower peaks at 0520 UTC.
10 - ARRL 902-2304 MHz Spring Sprint, 6 A.M. 1 PM local
17 - ARRL 50 MHz Spring Sprint Contest, 2300 - 0300 UTC.
24 - N.E.W.S. Meeting, Harley Hotel, Enfield, CT at 1 PM.

JUNE:

7 - Arietids meteor shower peaks at 0910 UTC.
14-16 - ARRL JUNE VHF QSO Party.

JULY:

?-? - CQ WW VHF Contest
12 - N.E.W.S. Meeting, Harley Hotel, Enfield, CT at 1 PM.
25-26 - 31st Annual Central States VHF Society Conference.

AUGUST:

2-3 - ARRL UHF Contest, 1800 - 1800 UTC.
12 - Perseids meteor shower peaks at 0640 UTC.
16-17 - ARRL 10 GHz Cumulative Contest, 1st weekend.
22-24 - 23rd Annual Eastern VHF/UHF Society Conference

SEPTEMBER:

13-15 - ARRL September VHF QSO Party.
20-21 - ARRL 10 GHz Cumulative Contest, 2nd weekend.

OCTOBER:

? - 21st Annual Mid Atlantic States VHF Conference.
? - Pack Rats' Hamarama '97 hamfest.

NOVEMBER:

8 - N.E.W.S. Meeting, Harley Hotel, Enfield, CT at 1 PM.
17 - Leonids meteor shower peaks at 1400 UTC.

DECEMBER:

13 - Geminids meteor shower peaks at 2230 UTC.

VHF WEAK SIGNAL GROUP DAYTON BANQUET

The VHF weak signal group that meets Monday nights at 0200 UTC, on 3.843 MHz, would like to invite everyone that is coming to the Dayton Hamvention to our annual banquet.. we have reserved a room, that will seat 150, on Friday night May 15th from 7:00 PM until 11:00 PM at the Holiday Inn North, Wagoner Ford Rd., Dayton Ohio. There will be a cash bar as well as plenty of seating to allow you to mix and mingle with other vhfers from all over the country and the world. There will be over 50 prizes with two grand prizes worth over \$300 dollars each being drawn starting at 9:00 PM., Also, there will be a guest speaker who will provide a short talk on VHF activity. There will be a noise figure measuring table so bring your preamps to tweek.

The cost of a ticket to attend this function which includes the 2 entree banquet dinner, is only \$29.00 per person, and they are limited to 150. You may order your tickets by sending \$29.00 plus an sase to either Tony Emanuele, WA8RJF, 7156 Kory Court, Concord Township, Ohio 44077 or Tom Whitted, WA8WZG, 4641 Port Clinton East Road, Port Clinton, Ohio 43452, Website info is WWW.WA8WZG.COM

This is one of the largest gatherings of VHF weak signal enthusiasts in the U.S. , so get your tickets early and join us for an enjoyable evening at the Dayton Hamvention!

Thanks and 73's Tom Whitted WA8WZG

OMARC AUCTION APRIL 12

The Overlook Mtn. ARC will hold an Auction which is open to the general public. Various electronic items will be offered for sale to the highest bidder. Items will consist of, but not limited to, computers, test equipment and ham radio gear. It's time to clean out your closets and get some dollars for that equipment you never use! Admission will be \$2.00, and there will be food and drink available; a door-prize and 50-50 will also be offered. This event will be held April,12,1997 at the Hurley Reformed Church, just off US Rte. 209 in Hurley, NY. Sellers are requested to have their equipment there by 8AM and the auction will start at 10AM. Talk-in is on 147.255 (no PL) . Arrangements and further information can be obtained by contacting: Art at 914-336-0369 or Bill N2VOT at 914-626-0154. E-Mail on the OMARC BBS at 914-679-3257 - KG2HR@AOL.COM or N2VOT@AOL.com .

N.E.W.S. GROUP NET EVERY THURSDAY 8:30 PM LOCAL 144.250

FOR SALE OR SWAP

ULTIMATE TVI FILTERS FOR WEAK SIGNAL OPERATORS

Commercial CATV quality 75ohm 6 pole traps for 50.125 and 144.200. These filters are weatherproof and temperature compensated with typical loss at the tuned freq. of >90 dB and loss across the VHF/UHF TV channels of <.3 dB. They have a male F conn. on one end and female on the other and are 4" by .75" dia. Over 100 of them are in use and I have been getting very good feedback that they work well. They are \$13.50 each plus \$5.00 shipping and handling per order. I will bring them to the next meeting and you can save the shipping.
Del Schier, KD1DU, 126 Old West Mountain Road, Ridgefield, CT 06877, (203) 431-4233 or KD1DU@AOL.COM

JPS NIR-10 DSP. Good condition with manual and box. \$125

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CHECK IN TO PROMOTE BAND ACTIVITY AND OUR CLUB

The first net which was to be held only monthly was such a tremendous success that we have decided to hold it weekly. There were 34 check ins from all over the North East FN34/44 to FM08 and out West to EN81.

NEXT N.E.W.S. GROUP MEETING MARCH 15 AT THE HARLEY HOTEL

FEATURING - Paul Cianciolo KB1RP demonstrating Laser Communications Techniques.

BOARD MEETING - From 11 AM to noon - open to all.

LUNCH BUFFET - At noon in the hotel restaurant.

MEETING - From 1 PM to 4 PM.

Harley Hotel of Enfield, CT (FN31qx) (15 miles north of Hartford, I-91 to exit 49, if Southbound left off exit - 1st right / if Northbound right off exit - 1st right).

North East Weak Signal Group

c/o KD1DU

Del Schier

126 Old West Mountain Road

Ridgefield, Connecticut 06877

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