



# N.E.W.S. LETTER



The Publication of the North East Weak Signal Group

MARCH 1999

VOLUME SEVEN

ISSUE TWO

President: KB1VC Matt Reilly  
V P: WA1HOG, Dennis Hennigan

## CURRENT OFFICERS

Secretary: K1MAP Mark Casey  
Treasurer: N1DPM Fred Stefanik

## NEXT MEETING

THE NEXT MEETING IS ON SATURDAY MARCH, 13TH, 1:00 PM AT THE HARLEY INN  
ALL ARE WELCOME TO THE DIRECTORS MEETING AT 11:00 AM  
GUEST SPEAKER FROM TIMES FIBER MICROWAVE

## IN THIS ISSUE

FROM THE VIRTUAL SHACK OF KB1VC	PAGE 2
SECRETARY'S REPORT BOARD MEETING 1-2-99 DE K1MAP	PAGE 2
SECRETARY'S REPORT NEWS MEETING 1-2-99 DE K1MAP	PAGE 2,3
TO ALL WEAK SIGNAL OPS: DE WA8WZG	PAGE 3
W1GHZ MICROWAVE ANTENNA BOOK ONLINE	PAGE 3
K1ZKR SILENT KEY	PAGE 3
CALCULATIONS FOR THE W2IMU FEED DE W1GHZ (PART 2)	PAGE 4,5
BRENDAN TROPHY NOTICE DE ON2BBP	PAGE 5
ON THE BANDS DE WZ1V	PAGE 5
1999 SPRING VHF/UHF SPRINTS DE WZ1V	PAGE 6
W1RJA BEACON NEEDS A POWER SUPPLY: DE WZ1V	PAGE 6
JANUARY VHF SWEEPSTAKES TOTALS DE WZ1V AND KB1VC	PAGE 7
WEAK SIGNAL BAND COORDINATION DE K1MAP	PAGE 8
1999 N.E.W.S. GROUP VHF CALENDAR DE WZ1V	PAGE 8
FOR SALE OR SWAP	PAGE 9

## N.E.W.S. GROUP NET EVERY THURSDAY

8:30 PM LOCAL 144.250

K1UHF NET CONTROL, WZ1V AND W1COT AS ALTERNATES  
STARTS EAST THROUGH NORTH THEN SOUTH FOR DIRECTIONAL CHECKINS  
THEN BACK AROUND AGAIN FOR COMMENTS AND GRID HUNTING

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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## FROM THE VIRTUAL SHACK OF KB1VC

By the time you read this, we'll have all commented to the League's contest committee on the proposed changes to the 10GHz Cumulative Contest.

As a participant, I can see that some changes might be in order. (Though I've always had a great deal of fun in the cumulative contest.) The rules seem to be aimed at increasing the opportunities for stations to take advantage of changes in propagation conditions over the two weekends. We've all heard stories about the bodacious opening that popped up at 8:17 PM after the contest had ended.

At the same time, many folks have commented that the changes are of greatest advantage to the home stations. The addition of home stations in the last few years has been a boon to the mountain-toppers. It has also provided the microwave community with lots more evidence of really neat propagation modes and quirks. Encouraging home station operation is a worthy goal.

But, I'd like to encourage the home station operators to do a little portable operation as well. Don, WB1FKF, has shown that a combination home/rover effort can really rack up a pretty impressive score. Paul, W1GHZ, has shown that even a less-than-ideal home station location (Paul's home is obstructed by trees.) can provide ample opportunity to exploit rain/snow scatter as well as "normal" atmospheric enhancements. Paul and Dale, AF1T, have both had good results with simple portable systems pointed through a window or skylight. There's no need to shut down when it gets dark or the weather is so bad that even a Vermont 10GHz operator goes indoors.

So, for the home operators out there, grab your roll of duct tape, an old tripod, and head for the hills. And for the mountain-toppers among us, maybe its time we heeded the call and put up a home station. You can use duct-tape for that too.

73, Matt KB1VC

### SECRETARY'S REPORT OF THE NEWS BOARD MEETING 1-2-99

President Matt Reilly, KB1VC, opened the Board Meeting at 11:22 AM with a majority of Board of Director's Members present.

**Old Business:** It was agreed that a decision on the club logo will be made at the March 13 meeting. The closing date for the next newsletter is Feb 13.

**New Business:** An authorization for Tom Williams to purchase a word processing program for the amount fo up to \$100 was passed unanimously. Incorporating into a non-profit organization was discussed and

we will look for a volunteer(s) to obtain further information. The upcoming auction was discussed and it was agreed that the club would not take a percentage of the sale price of items. Matt suggested we have a board at each meeting where members could hang an envelope for QSL exchange. A move to start Board meetings at 11:30 AM Sharp was passed. Tom Williams will present ideas on the definition of "Weak Signal" at today's general meeting.

Mark Casey will present a motion for NEWS to be the primary coordinator in the Northeast US for Amateur operations in the weak signal portion of all bands above 50Mhz.

Mark Casey brought up a proposal for NEWS to consider petitioning to allow Amateur use of a small portion of 72-76 Mhz.

Ron Klimas was authorized to spend up to \$50 to obtain a W1RJA Connecticut license plate from a collector, for the NEWS Group.

A big THANKS to Bruce Wood, N2LIV, for the donation of a power supply to run the NEWS beacon.

With the agreement of the Board members, and our Treasurer, Fred Stefanik, it was agreed that NEWS will send 1 newsletter after a membership expires.

Art Needham, W1TDS, recommended that we do something, such as a plaque, for the Harley Hotel that has been very cooperative in hosting our meetings and events. The Board Meeting was adjourned at 12:03PM

### SECRETARY'S REPORT OF THE NEWS MEETING 1-2-99

New President Matt Reilly, KB1VC, opened the meeting at 1:25 PM. All present introduced themselves, and noted their upcoming VHF contest schedule.

One issue of the newsletter will be sent after the expiration of membership. The deadline for the next newsletter is Feb 13.

Thanks to Tom Williams, WA1MBA, NEWS was mentioned in a recent article in the Hampshire Gazette (Northampton, MA, daily) which featured Tom's Amateur operations.

WZ1V thanked Bruce Wood, N2LIV, for the donation of a power supply for our beacon.

New Business:

The incorporation of the group as a non-profit organization was discussed, and W1GHZ, Paul Wade, will receive information from anyone that can help.

Tom Williams presented some basics in the definition of "Weak Signal". After additions from other members we came up with the following list.

1. Communication beyond what is expected to be the "line of sight".
2. 50 Mhz & Up.
3. The signal is expected to be weak at a given distance, but more often than not, is not a QRP signal.
4. More emphasis is on the Receive side of the system
5. Weak signal is essentially VHF-DX
6. Weak signal can be any mode including FM & digital, but is primarily CW & SSB.

The group unanimously approved the NEWS Group taking the reigns for the Northeast USA as Spectrum Coordinator for the Weak Signal areas of the bands from 50 Mhz & up. NEWS asks for input from all other VHF W/S groups.

A presentation to consider asking for Amateur privileges in the 72-76 Mhz band was tabled until the next meeting in order that we receive more information on this. Please send any comments to the secretary (map@map.com).

The duct tape auction was next, and quite a few items were auctioned off. Several items were donated to the club, from which the club realized \$42.

We took a break from 2:40 to 3:00 PM.

Paul Wade, W1GHZ, was our speaker for the day. Paul's topic was "Resources for Metalbashing" or, how to make things for VHF use from machines and machine tools.

Paul brought a demonstration mini-multi use machine and also described the operation of full and small sized Lathes, Milling Machines, Drill Presses, and other machinery relative to building Amateur gear. Paul printed up a resource sheet, copies of which can be obtained from the Secretary. Paul conducted a demonstration and answered questions after the presentation. Thank-you, Paul, for this interesting program.

We adjourned at 4:00 PM.

41 Members and Guests had a great time at this meeting!

Next meeting, Saturday, March 13, 1999, at the Harley Hotel. 11:30 AM for the Board Meeting, 1 PM for the General Meeting- See You There!

Respectfully Submitted,  
Mark Casey, Secretary, NEWS

## TO ALL WEAK SIGNAL OPS:

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 125 on Friday night May 14, 1999 from 6:30 PM until 11:00 PM at the Holiday Inn North, Waggoner Ford Rd. Dayton, OH.

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 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 also be a noise figure-measuring table so bring your preamps to tweak.

The cost of a ticket to attend this function which includes the 2-entrée-banquet dinner, is only \$30 per person, and they are limited to 125. You may order your tickets by sending \$30 plus a SASE to either Tony Emanuele, WA8RJF, 7156 Kory Court, Concord Township, OH 44077 or Tom Whitted, WA8WZG, 4641 Port Clinton East Rd., Port Clinton, OH 43452.

Website info is WWW.WA8WZG.COM.  
E-mail WA8WZG@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, Tom WA8WZG

## W1GHZ MICROWAVE ANTENNA BOOK ONLINE

This winter I've made some good progress on the W1GHZ Microwave Antenna Book ONLINE. You might be curious, and I'd appreciate your feedback.

go to [www.qsl.net/n1bwt](http://www.qsl.net/n1bwt) and click on the book icon.

73, Paul W1GHZ

## K1ZKR SILENT KEY

I apology for the late news, but I only recently heard that Milt Columbus, K1ZKR became a silent key in early December, apparently from a sudden heart attack. An avid 6 Meter enthusiast, Milt always had a big signal from eastern Connecticut and was also active on 2M and 70cM. He is survived by his widow (Laurie), who I'm sure would appreciate a kind note.

73, Ron WZ1V

# CALCULATIONS FOR THE W2IMU

## DUAL-MODE FEEDHORN

### PAUL WADE W1GHZ

#### PART #2 TEXT

(ex-N1BWT)

© 1998 [wade@tiac.net](mailto:wade@tiac.net)

From the example in Figure 4, we can infer that the dual-mode feed must be dimensioned properly to work well.

#### **Dual-mode horn calculations**

A sketch of the W2IMU dual-mode feed is shown in Figure 5. The input circular waveguide flares out to a larger output section. Only the TE<sub>11</sub> mode will propagate in the smaller input waveguide, but both the TE<sub>11</sub> and TM<sub>11</sub> modes can propagate in larger output waveguide. Our goal is for the relative phases and amplitudes of the TE<sub>11</sub> and TM<sub>11</sub> modes to cancel the electric field at the aperture boundary.

The length of the output section controls the relative phase of the two modes, while the flare angle controls the relative amplitude of the two modes. To achieve cancellation of current in the rim of the horn and thus minimize lobes, we must find the right combination of flare angle and output phasing section length.

The transition between the input waveguide diameter, A in Figure 5, and the output section diameter, B, generates the TM<sub>11</sub> mode; the flare angle adjusts the amplitude of the two modes. We can easily calculate the flare angle:

Since different waveguide modes travel at different phase velocities, we can calculate a length, C, for the output phasing section that will result in mode cancellation. At the flare end of the phasing section, the TM<sub>11</sub> mode is 90° out of phase with the TE<sub>11</sub> mode. Then the phasing section should have a length C which results in the two modes being shifted by an additional 270°, or 3/4λ. We can calculate the desired length as:

where

(λ is the guide wavelength for the TE<sub>11</sub> mode and λ is the guide wavelength for the TM<sub>11</sub> mode, where λ<sub>c</sub> is the cutoff wavelength for the mode for which we are calculating lg.) In the output phasing section with diameter B, the cutoff wavelength for the TE<sub>11</sub> mode λ<sub>c</sub> = 1.706B, while the cutoff wavelength for the TM<sub>11</sub> mode λ<sub>c</sub> = 0.82B.

Thus, with a bit of arithmetic we can calculate the optimum dimensions for any desired aperture diameter. For a quick estimate of the optimum aperture diameter for any f/D, try this approximation: B1 = 2.35(f/D). As the diameter gets larger, the length of the larger output phasing section also increases to maintain the phasing relationship between the two modes.

The consequences of not achieving the proper phasing are clearly illustrated in Figure 4. Using the above equations, we find that the length of the larger pipe should be 2.72 inches rather than the 1.24 inch length of the fitting alone. Also, the flare half-angle should be 29.1°, while the angle in the plumbing fitting is 39°, so the fitting needs serious modification to become a dual-mode feed.

From the cutoff wavelength equation above for λ<sub>c</sub>, the minimum aperture diameter which will propagate the TM<sub>11</sub> mode is 1.22λ; if the diameter is any smaller, it can only be a single-mode feed. On the other

hand, if the aperture diameter is too large, then additional modes may be generated. The cutoff wavelength for the next higher mode, the TE<sub>12</sub> mode, is λ<sub>c</sub> = 0.589B. Thus the maximum aperture diameter without additional modes is 1.7λ. Since one of Dick's original examples had an aperture diameter of 1.86λ, this limit may apparently be stretched a bit without performance degradation.

These calculations might seem daunting at first glance, but only require a couple of minutes on a hand calculator. As an alternative, I have included the calculations in version 3 of my HDL\_ANT computer program - download it from [www.qsl.net/n1bwt](http://www.qsl.net/n1bwt).

#### **Dual-mode feed examples**

As examples of actual dual mode feeds, we can examine three versions which have been published in Britain. I modeled both using NEC2 in order to evaluate their performance.

The first example is a 10 GHz version described by G3PHO6 using British plumbing fittings. The plot in Figure 6 shows a clean pattern and good dish efficiency for an f/D around 0.6, a bit smaller than the DSS dishes require, but very usable. Peter has done a good job with this version.

The second example is the 5.7 GHz "plumbers delight" by G0HNW7. Paul states that the aperture with the available plumbing is a bit small for an offset dish, and the plot in Figure 7, bears this out, showing best efficiency for an f/D of about 0.4. In fact, the aperture diameter is 1.21λ, which is smaller than the cutoff wavelength for the TM<sub>11</sub> mode, so it is unlikely that this feed supports dual-mode operation. Further evidence is the radiation pattern with several significant sidelobes, including one rather large one. I suspect that it is behaving more like a simple coffee-can feed. Despite the sidelobes and lack of dual-mode operation, it would be quite a good feed for f/D in the 0.45 to 0.5 range. For good illumination of an offset reflector, the aperture diameter should be around 1.5λ, or about 3 inches.

Although this version is not optimized for an offset dish, Paul reports a significant improvement compared a triband feed. Since the triband feed gives best results with very deep dishes, we would expect poor performance when feeding an offset dish. Also, the triband feed has been shown to be rather lossy at 5.7 GHz, further reducing efficiency. Almost anything is better than a triband feed for an offset dish at 5.7 GHz.

The third example is a 24 GHz version by G8ACE. The plumbing fitting used in this version provides an aperture of 22mm, or 1.75λ, which is about right for an offset dish. The input waveguide is 10mm pipe, and there are apparently no plumbing reducers from 22mm to 10mm. Instead, a reducer to an intermediate size of 15mm is used, so that there are two flare sections with a length of 15mm waveguide between them. This combination makes it difficult to predict how the two modes will end up, but I was able to calculate the radiation pattern using NEC2. The results are shown in Figure 8. The E-plane pattern has large sidelobes and a null at about 30° off-axis, suggesting that modes do not have the desired relationship at the aperture.

Rapid changes in amplitude, like the null in the E-plane pattern, are usually accompanied by rapid phase changes. This is clearly illustrated in Figure 8 - the feed phase plot in the upper right exhibits a large change in phase around 30° off-axis. The effect on dish efficiency is evident in the lower graph, showing significant phase error at the larger illumination angles required for small f/D.

We can deduce from this last example that a single flare section offers much better mode control. At 24 GHz, dimensions are small enough so that it should be easy to fabricate a short conical section. My HDL\_ANT program will prepare a paper template for any desired flare dimensions.

### Conclusion

The W2IMU dual-mode feed can provide excellent performance for both offset and conventional parabolic dishes. Dimensions are somewhat critical, but optimum dimensions may be calculated for a range of f/D, and performance can be analyzed using the NEC2 program.

### References

For more information, see the W1GHZ Microwave Antenna Book - Online at [www.qsl.net/n1bwt](http://www.qsl.net/n1bwt).

1. R.H. Turrin, (W2IMU), "Dual Mode Small-Aperture Antennas," IEEE Transactions on Antennas and Propagation, AP-15, March 1967, pp. 307-308. (reprinted in A.W. Love, Electromagnetic Horn Antennas, IEEE, 1976, pp. 214-215.)
2. G.J. Burke & A.J. Poggio, Numerical Electromagnetic Code (NEC) - Method of Moments, Lawrence Livermore Laboratory, 1981.
3. P. Wade, W1GHZ, "Parabolic Dish Feeds - Phase and Phase Center," Proceedings of Microwave Update '98, ARRL, 1998, pp. 50-73.
4. D. Turrin, W2IMU, "A Paraboloidal Reflector Antenna for 1296 mc/s," Crawford Hill Technical Report #5, 1971.
5. R.C. Johnson, Antenna Engineering Handbook, McGraw-Hill, 1993, pp. 15-23 to 15-25.
6. P. Day, G3PHO, "Dual Mode Horn for 10GHz", RSGB Microwave Newsletter, April 1995, with further notes in October 1995
7. P. Widger, G0HNW, "Plumber's Delight for 5.76 GHz," RSGB Microwave Newsletter, May 1998.
8. J.Hazell, G8ACE, "A Dual Mode Horn for 24GHz," RSGB Microwave Newsletter, April 1998.

**Editors Note: Due to a computer glitch, hi, hi; Paul's article was missing the forgoing text in the last issue and I hope it all makes sense now that it is complete. The NEWSletter was a last minute job due to the holiday's time pressures for all the contributors and myself.**

73, Del K1UHF

## BRENDAN TROPHY NOTICE

Hi all,

We are a group of contesters in Europe and we want to make the first transatlantic qso on VHF from Europe to North America. So we are searching for people stateside that are willing to participate in this project. For more detailed information you can contact ON7WP, our OT9D Brendan Coordinator at [ON7WP@planetinternet.be](mailto:ON7WP@planetinternet.be) You can also visit our homepage to download the latest Bulletin: <http://place.to.be/on4aob> Go there to Misc. Info

73's de ON2BBP, Joost

## ON THE BANDS BY RON KLIMAS WZ1V, FN31MP

It's been awhile since I've done a column, and a lot has happened since then. I got to operate again this past September contest at the NC11 Limited Multi from FN32, and had a blast. What a thrill to work into Michigan on tropo on 222! We traveled down to the PackRats VHF Conference and Hamarama in Eastern PA with some of the gang in October, and I must say it was the best PackRats conference I've seen. (The fact that half of their speakers were from our club couldn't have hurt).

What happened to the F2 we were supposed to get on 6 meters by now? I've only caught one DX opening, back on November 8 down to TI5KD and HP2CWB. Better luck to us all in '99 I hope.

The November Leonids meteor shower on Nov 17 provided some fun, thanks to many longer than normal burns. I really had no time to operate, but managed to easily work AG4V in EM55 on 144.210 one morning before work. Del K1UHF FN31 managed to work W7XU EN13 on 222 for a new grid and state. Congrats, Del.

The January contest brought much needed activity to our bands. I got off to a great start, but lost steam after 2 of my preamps blew - still I managed to pull out about 154K on 8 bands. K1UHF reported having his best ever contest, pulling in 225K! There were even rare grids to catch like W4EUH (ex-KH2CY) FM09 on 6-432, VE3IEY FN14, VE3BFM FN04, and WA3LTB out in EN92. I didn't notice any unusual propagation enhancement here, but KB2ZVP in FN22 said 6M was open almost all of Sunday with weak Es, meteor scatter, and even some aurora. Randy worked an incredible 540 QSOs in 116 grids on 6M only for a score of 62K! You can check out more scores elsewhere in this issue. At this writing I'm missing scores from several members, but so far we have about 1.6 Million points from 33 members! Congratulations to all that participated.

If you haven't heard by now, the ARRL cancelled the Spring Sprints, but several clubs and individuals banded together and have now resurrected the 1999 Spring Sprints! Our club is sponsoring the 432 MHz Sprint this year, and logs for this one go to me, [wz1v@ntplx.net](mailto:wz1v@ntplx.net) or via snail-mail to my callbook address.

Check out the details elsewhere in this issue. A reminder that Roger K2SMN FN20 runs a Sunday morning net 10:30 A.M. EST on 144.250. And don't forget to check into our N.E.W.S. Group Thursday night net on 144.250 starting around 8:30 PM EST, K1UHF net control (with W1COT alternate net control).

OK gang, keep checking the bands and looking for those openings. See you at the March 13 N.E.W.S. Group meeting and on the bands! 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. Looking for Ham/Engineering software or tech info? Did you know you can download a free database of club members and what bands they're on from <http://qsl.net/vhfnews/news99.zip>

-Try our Internet Webpage at <http://qsl.net/vhfnews>  
-or subscribe to our NEWS VHF E-mail Reflector at [newsvhf@qth.net](mailto:newsvhf@qth.net)  
-by Emailing [majordomo@qth.net](mailto:majordomo@qth.net) with the message subscribe newsvhf  
-73 and good DX, Ron WZ1V, internet email: [wz1v@ntplx.net](mailto:wz1v@ntplx.net)  
-50 through 3456 MHz.

## 1999 SPRING VHF/UHF SPRINTS

1. Object: To work as many amateur stations in as many 2 degrees by 1 degree grid squares as possible, using authorized amateur frequencies on the 50, 144, 222, 432, 902, 1296 and 2304 MHz bands.

2. Contest Period:

2.1. The 144 MHz Sprint will be from 7 PM until 11 PM local time on Monday (April 12, 1999).

2.2. The 222 MHz Sprint will be from 7 PM until 11 PM local time on Tuesday (April 20, 1999).

2.3. The 432 MHz Sprint will be from 7 PM until 11 PM local time on Wednesday (April 28, 1999).

2.4. The 902 MHz, 1296, and 2304 MHz Sprint will be on Saturday (May 8, 1999) from 6 AM until 1 PM local time.

2.5. The 50 MHz Sprint will be from 2300Z Saturday until 0300Z Sunday (May 15-16, 1999).

3. Exchange: Grid-square locator - signal report is optional.

4. Scoring:

4.1. QSO Points: Count one point for each complete QSO.

4.2. Multiplier: The total number of different grid squares worked. Each 2 degrees by 1 degree grid square counts as one multiplier.

4.3. Final score: Multiply QSO points by multipliers. Each Sprint is scored separately.

5. Reporting: Logs must be submitted no later than two weeks after the closing of the event.

6. Certificates for top three finishers in each Sprint (courtesy WA8WZG).

Mail or email complete logs to:

144 Mhz SPRINT -  
<mailto:nrclog@aol.com>nrclog@aol.com  
Rocky Mountain VHF+ Group  
P.O. Box 473411  
Aurora, CO 80047

222 Mhz SPRINT-  
<mailto:frank@horizon.sri.com>frank@horizon.sri.com  
50 Mhz DX Bulletin  
12450 Skyline Blvd  
Woodside, CA 94062

432 Mhz SPRINT -  
<mailto:wz1v@ntplx.net>wz1v@ntplx.net  
North East Weak Signal Group  
458 Allentown Rd.  
Bristol, CT 06010

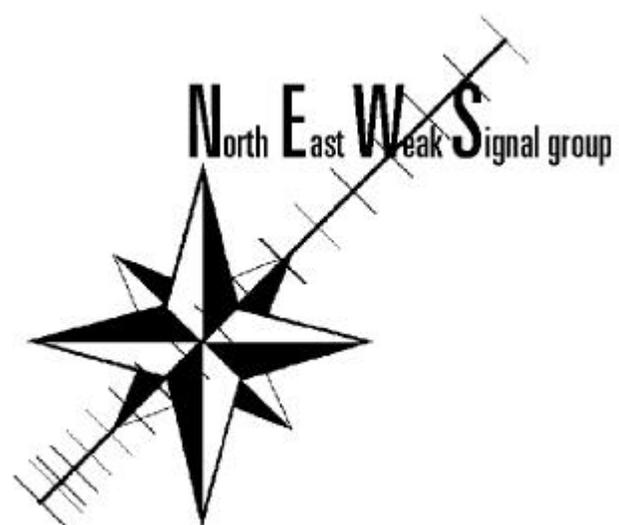
902, 1296 and 2304 Mhz SPRINT -  
<mailto:akyser@edci.com>akyser@edci.com  
Badger Contesters  
2342 Glendale  
Appleton, WI 54914

50 Mhz SPRINT -  
<mailto:vhfuhf@voyager.net>vhfuhf@voyager.net  
Great Lakes VHF/UHF Group  
434 Pattie Ave.  
Jackson, MI 49202

DEMI (Down East Microwave Inc.) has offered two \$100 credit participation awards. One is for 222 operation and the other is for 903 operation. Every body that operates on those bands and sends in a log, (that's the important part!) will get put into the hat and some lucky callsign will be pulled out and notified of a \$100 dollar credit at DEMI!  
(re: WA8WZG)

## HELP! OUR W1RJA BEACON NEEDS A POWER SUPPLY:

The club needs a replacement 13.8 VDC, 35 A regulated power supply for our 2 meter beacon. Please contact me ASAP if you have one you can sell, wz1v@ntplx.net or phone 860-589-0528.



**THE NORTH EAST WEAK SIGNAL GROUP'S JANUARY VHF SWEEPSTAKES TOTALS**  
**(NEWS SCORES ONLY)**

Call	Grid	Points	6m	2m	222	432	903	1.2G	2.3G	3.4G	5.7G	10G
<b>SINGLE OPERATOR</b>												
K1TEO	FN31	415776	275/54	437/45	122/31	180/35	49/19	62/17	15/6	9/6	-	-
K1UHF	FN31	225295	223/25	426/43	85/26	114/28	24/12	37/11	11/5	-	-	7/7
WZ1V	FN31	154187	189/34	184/25	86/21	124/22	23/10	39/11	13/6	4/2	-	-
N1DPM	FN32	133701	124/24	153/23	81/19	90/21	27/12	40/12	16/7	9/5	-	-
K1TR	FN42	87696	148/25	182/27	70/20	89/22	11/6	20/5	5/3	-	-	-
WB2VVV	FN21	69608	61/15	200/24	61/12	58/10	18/8	19/8	13/6	5/5	-	-
W1GHZ	FN42	67890	124/22	188/24	54/17	83/18	11/5	17/5	-	-	-	4/2
KB2ZVP	FN22	62640	540/116	-	-	-	-	-	-	-	-	-
WA1MBA	FN32	59046	-	169/24	-	76/16	20/10	25/9	14/7	9/6	3/3	6/3
AF1T	FN43	53679	86/20	97/20	39/16	50/11	14/6	16/4	8/4	1/1	1/1	7/4
W1COT	FN31	33370	65/13	157/29	40/14	64/13	-	10/2	-	-	-	-
WA1HOG	FN42	31525	91/17	106/19	20/5	62/13	-	19/7	-	-	-	6/4
N1GJ	FN42	24957	54/13	105/17	41/11	45/10	8/3	11/3	2/2	-	-	-
N1MUW	FN32	18928	82/13	108/17	28/12	38/11	-	4/3	-	-	-	-
WA2ZFH	FN30	17892	45/6	95/13	39/8	64/9	-	20/6	-	-	-	-
NC1I	FN32	15244	-	2/2	2/2	203/33	-	-	-	-	-	-
K1MAP	FN32	13950	89/13	71/11	12/5	33/8	2/2	5/2	2/2	2/2	-	-
WB1FKF	FN42	9880	8/4	26/8	8/4	23/8	7/3	10/3	4/3	2/1	1/1	5/3
K1FO	FN31	9180	-	-	-	153/30	-	-	-	-	-	-
KU2A	FN42	8679	71/13	30/4	16/3	37/7	6/3	8/3	-	-	-	-
KE1CO	FN31	7956	66/13	73/12	-	41/11	-	-	-	-	-	-
WA1ECF	FN41	6992	19/6	65/14	19/7	13/6	4/2	5/3	-	-	-	-
K1WVX	FN31	5115	44/10	43/9	16/5	15/5	-	4/2	-	-	-	-
W2GKR	FN31	4884	83/17	65/16	-	-	-	-	-	-	-	-
K1LPS	FN34	4551	15/8	62/19	-	23/10	-	-	-	-	-	-
W1NWE	FN32	4292	-	100/21	-	20/6	-	2/2	-	-	-	-
KB1VC	FN42	3375	43/11	34/11	-	24/5	-	-	-	-	-	-
W1TDS	FN32	3312	23/10	47/19	-	11/7	-	-	-	-	-	-
N2LIV	FN30	3294	26/7	34/9	-	17/6	3/2	4/3	-	-	-	-
W1QWJ	FN32	1995	56/11	29/8	-	5/2	-	-	-	-	-	-
K1WHS	FN43	55	11/5	-	-	-	-	-	-	-	-	-
<b>ROVER</b>												
KA1ZE	ROV	43254	96/25	310/42	40/20	-	-	-	-	-	-	-
W1VT	ROV	7392	12/4	61/9	13/4	26/6	6/2	8/2	1/1	1/1	-	1/1

Club Total Score: 1609590 from 33 entries as of 2/14/99

North East Weak Signal group's President, Matt Reilly KB1VC <reilly@tiac.net> was nice enough to once again put up a webpage to collect and display January ARRL VHF SS scores, <http://www.tiac.net/users/reilly/janscores.html> I also linked the NEWS page to it at <http://uhavax.hartford.edu/~newsvhf> (click on Rumored Scores from recent VHF contests) Feel free to enter your totals and check out how others did. This is a really cool thing. Thanks Matt!

-73, Ron WZ1V

P.S. - for anyone that can't browse the web, email me your totals and I'll enter them for you.

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

## TO ALL WEAK SIG OP'S INTERESTED IN BAND COORDINATION

Here's what the North East Weak Signal Group (NEWS) approved 1-2-99

North East Weak Signal Group Jan 2, 1999

Spectrum Coordination—Primary Frequency Range

The NEWS Group will approve Spectrum Plans for all bands above 50 Mhz in the following geographic area: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, and West Virginia. The NEWS Group will support the primary coordination status of a known active weak signal group, such as the Mt Airy VHF Group and the Rochester VHF Group, willing to coordinate their respective geographic area(s). The NEWS group's primary area is the New England States, Eastern New York, Long Island/NYC, and Northern New Jersey.

The NEWS Group, Spectrum Committee, will be the Primary Frequency Coordinating body and will assign a Frequency Coordinator for each of the following band segments:

50.0-50.6 Mhz.; 72.0-76.0 Mhz. (possible future amateur allocation within these limits); 144.0-144.5 Mhz.; 222.0-222.3 Mhz.; 431.5-433.0 Mhz.; 902.0-904.0 Mhz.; 1294.0-1297.0 Mhz.; 2300.0-2310.0 Mhz.; 3 Ghz. And higher—All Areas of Amateur use.

The Present Spectrum Committee Chairman and Frequency Coordinator for the above bands is:

Mark Casey, 303 Main St., Hampden, Mass. 01036  
map@map.com

The NEWS Group asks the Mt. Airy VHF Group, and the Rochester VHF Group, and all other Weak Signal Organizations in North America and the Caribbean for their endorsements and/or comments and suggestions relative to the above plan, and to elect or appoint 1 or more Spectrum Coordinator(s) from each of their organizations.

The duty of the Spectrum Coordinator will be:

1. Keep a list of known uses of the weak signal areas of each band in their geographic area such as, calling freqs, regular nets, informal nets, beacons, centers of activity for different modes (ex: in the Northeast US for 2 meters, USB Calling Freq on 144.200, USB Microwave Liason on 144.260, AM use on 144.400 & .425, NEWS & Eastern VHF USB Net on 144.250, etc)
2. Point of Contact-- To Communicate with other Weak Signal

Coordinators & Other Amateurs regarding any issues, new uses, problems, etc

3. Help Coordinators from other WS Groups formulate Weak Signal Area Spectrum Coordination Plans
4. Bring up to the general membership for a vote, any changes or additions to the Weak Signal Area Spectrum Coordination Plans
5. Help in any way to publicize Weak Signal Operations

At the Jan 2, 1999 NEWS Group meeting we had a discussion of what is meant by "Weak Signal", and the members listed with the following:

1. 50 Mhz & up.
2. The signal is expected to be weak at a given distance, but most often not QRP.
3. All modes such as FM(SimplexDX)& digital are included although the prime focus is on SSB & CW (note: this does not mean any FM should be used below 144.3 or in the SSB/CW areas of the other bands)
4. More emphasis is on the receive side of the Amateur station.
5. Weak Signal is essentially VHF-DX.

### 1999 N.E.W.S. GROUP VHF CALENDAR:

February 24 - deadline for ARRL January VHF Sweep Stakes logs

March 13, 1PM - 4PM - N.E.W.S. Group Meeting

April 12, 7PM - 11PM local time - 144 Mhz Sprint \*

April 20, 7PM - 11PM local time - 222 Mhz Sprint \*

April 23, 0310Z - Lyrids meteor shower

April 28, 7PM - 11PM local time - 432 Mhz Sprint - sponsored by NEWS \*

May 5, 1740Z - e-Aquarids meteor shower

May 8, 6AM - 1PM local time - 902, 1296 and 2304 Mhz Sprint\*

May 15, 2300Z - May 16 0300Z - 50 Mhz Sprint\*

May 22, 1PM - 4PM - N.E.W.S. Group Meeting

June 12-14, 1800Z - 0300Z - ARRL June VHF QSO Party

July 17, Noon - 4PM - N.E.W.S. Group Meeting

August 7-8, 1800Z - 1800Z - ARRL UHF Contest

August 12, 2150Z - Perseids meteor shower

August 21-22, 8AM - 8PM - ARRL 10-GHz Cumulative Contest

August 27-29 - Eastern VHF-UHF Conference

September 11-13, 1800Z - 0300Z - ARRL September VHF QSO Party

September 18-19, 8AM-8PM - ARRL 10-GHz Cumulative Contest

November 6, 1PM - 4PM - N.E.W.S. Group Meeting

November 18, 0140Z - Leonids meteor shower

December 14, 1530Z - Geminids meteor shower

\* for details see <http://www.arrl.org/contests/>

## FOR SALE OR SWAP

**Kenwood TR-851A** SSB/CW/FM Mobile 430-440 Mhz. (twin to the Tr 751a). Good working condition. \$475

**Icom IC-736** SSB/CW/FM/AM Base Transceiver. 115 volts, tone board, auto tuner, RX & TX .3-30Mhz, 45-60Mhz. Excellent Shape, Nice Radio! Orig. Owner \$1100

**Channel Master** 1 meter plastic offset microwave dishes. \$30 each Rear post mounting bracket for Channel Master 1 meter dishes \$10 each

**Yaesu FT-290r** 2m ssb/cw/fm 144-148Mhz portable/mobile for parts or repair \$75

**Yaesu FT-480** 2m ssb/cw/fm 144-148Mhz mobile for parts or repair \$75

**Icom IC-706** HF+VHF Mobile Transceiver tx 160m-2m rx.3-200Mhz. Good working condition. Recent complete service check at the factory. Orig Owner \$750

**Mark Casey, K1MAP**, Hampden, Mass. (near Springfield) daily 8am-9pm 413-566-2445 or map@map.com

**Icom 255H** wwith High Stability Oscillator, Mic, PS-55 Power Supply, Ins. & Serv. Manuals, \$1000.00 plus shipping.

**Boonton 92C and 92E** RF Millivolt Meters with Sensor \$150 plus shipping.

**Boonton Microwattmeters** with Sensor and cable, Models 42B, 42C, 4200 digital, 4210 digital \$200 plus shipping.

**HP 432A** power meter with 478A sensor and cable, \$250 plus shipping.

**Bruce Wood N2LIV** (516) 265-1015 home

**Wanted to buy/trade:** a 1st call area 1x2 Connecticut ham plate pair from 1956 or before, the old style plate.

This will be used as trading material to get back the original W1RJA plate for our club.

[wz1v@ntplx.net](mailto:wz1v@ntplx.net) or 860-589-0528.

**Kenwood TS 140S** HF Transceiver w/ matching speaker & desk mic in mint condition + matching Kenwood SP-23 speaker + Kenwood MC-60 powered desk mic + original hand mic. with manual. The rig has excellent transmit audio and extended operation 500 KHz to 35 MHz - great for use w/ transverters. Original manual, never mobile and non-smoker. \$575.00 includes shipping.

**Kenwood TR-751A** 2 meter all mode mobile transceiver 25 watts out + Kenwood MC-48B DTMF mobile mic. Excellent condition, never mobile - have worked satellites and VHF contests. One of the most popular rigs as IF for UHF/SHF transverters. Includes mobile mounting bracket, power cord and original manual. \$465.00 shipped within US

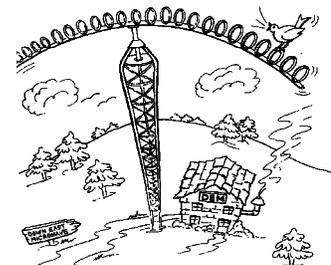
**Yaesu FT-470** Dual Band HT w/ desk charger, spkr mic & 2 batteries Original owner, bought it new in 1993 and have the small Yaesu speaker mic, NC-29 rapid desk charger, original wall charger, FNB-17 7.2v batt, FNB 12 12v batt, complete PA-6 DC car adapter w/ cig lighter plug and slide on base unit and 2 yaesu soft cases (CSC-45 & CSC 43) to fit both batteries. I will also throw in a Smiley extendable whip original boxes and manual. It's a great HT but I must sell for a new purchase. I will sell the whole package for \$200 plus shipping.

E-mail **Frank, KE1GB**, [ke1gb@amsat.org](mailto:ke1gb@amsat.org)

## DOWN EAST MICROWAVE

MANUFACTURERS AND DISTRIBUTORS OF VHF/UHF/SHF EQUIPMENT AND PARTS 50 TO 10,368 MHZ

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STEVE KOSTRO, N2CEI, 954 RT. 519, FRENCHTOWN, NJ. 08825 PHONE: 908-996-3584, FAX: 908-996-3702

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## DIRECTIVE SYSTEMS

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PHONE: 207-658-7758 [HTTP://WWW.DIRECTIVESYSTEMS.COM](http://WWW.DIRECTIVESYSTEMS.COM)



**NEXT N.E.W.S. GROUP MEETING SATURDAY**  
**MARCH 13TH 1:00 PM AT THE HARLEY HOTEL**  
**1:00 PM AT THE HARLEY INN**  
**GUEST SPEAKER FROM TIMES FIBER**  
**MICROWAVE**

**ALL ARE WELCOME TO THE DIRECTORS MEETING 11:00 AM**

**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 K1UHF  
Del Schier  
126 Old West Mountain Road  
Ridgefield, Connecticut 06877



**CHECK YOUR MEMBERSHIP EXPIRATION DATE  
ON THE MAILING LABEL!!**

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