



# N.E.W.S. LETTER



The Publication of the North East Weak Signal Group

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President: N2LIV Bruce Wood  
Vice President: WZ1V Ron Klimas

## CURRENT OFFICERS

Secretary: N1LZC Mark Casey  
Treasurer: NC1I Frank Potts

## NEXT MEETING

**THE NEXT MEETING IS ON MAY 25TH, 1:00 PM AT THE QUALITY INN, VERNON, CT.  
THE GUEST SPEAKER IS HANK, N2MSS ON "BATTERY CARE AND HANDLING"  
ALSO, DON'T FORGET, BRING YOUR PREAMPS, STAN, KA1ZE WILL HAVE HIS N.F. METER**

## FUTURE MEETINGS

**JULY 13, AUG. 24,25 MEETING & CONFERENCE PLUS NOV. 9.**

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MEMBERSHIP in the N.E.W.S. group is \$10 per year. Apply through Frank Potts, NC1I, at 65 Hastings Road, Southwick, MA. 01077 (413) 569-0314 You may download an application from our web page <http://uhavax.hartford.edu/newsvhf>

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**SECRETARY'S REPORT**  
**MARCH 16, 1996 MEETING**

NEWS Group meetings continue to attract an increasing number of VHF+Amateurs. 46 members were in attendance when Pres. Bruce Wood opened the meeting at 1:30. Future meeting dates - May 25, July 20, Aug 24, & Nov 9 were announced. Bruce noted some new generation 10Ghz building blocks becoming available.

In response to the FCC's Spread Spectrum proposal, both Ron, WZ1V and Del, KD1DU wrote to the Commission. Dick Knadle, K2RIW noted that many California microwave group members are in favor of spread spectrum operations. A short but lively discussion followed with a consensus of impending interference in some areas.

Ron, WZ1V showed a low power 10Ghz CW transmitter available from Transel, and amplifiers for both 903 and 1691(1296)Mhz.

Steve, N2CEI passed around a modified 70cm Teletec amp that he will be handling. Down East Microwave will have the entire Teletec line and Steve also mentioned new Mini-Circuits products as well as a new 903 amp and transverter interface board.

The 1996 Eastern VHF/UHF Conference is Aug 23,24 and 25. Conference Chairman Stan Hilinski, KA1ZE has openings for speakers, band session leaders, and needs an Editor for the Proceedings. Contact Stan or Ron, WZ1V, last yrs' editor, if you can help out. Fred Stefanik, N1DPM will be in charge of prizes this year.

Emil, W3EP reported progress on the Trans-Atlantic Beacon project. KA1ZE, K1MNS, N2LIV and others are involved in building and funding the beacon. Kurt Jackson, KAIJVC and myself, N1LZC, have obtained siting on a tower near Chatham, Cape Cod and Emil has targeted June 1 as sign-on date for the beacon. VE1SMU is now aimed toward Europe with 40w from Sable Island, Nova Scotia. Beacon GB3NGI, Londonderry, N. Ireland is on 144.938, aimed toward the U.S..

K1TR has a new beacon on 903.065, low power, near Lowell, Mass.

After a break, Paul, N1BWT, spoke about his IF switch design for transverters.

Our main speaker for the day was Dave Robinson, WG3I. If you want to get on 24GHz Dave is the guy to talk with. Dave gave an interesting detailed view of multiplier circuitry, filters, frequency use worldwide, and types & design of equipment used on the band. One of Dave's friends on the NW Coast of England has worked 9 grids from his home station. Thanks for the interesting presentation, Dave.

Our next meeting is May 25th. Members and Guests are encouraged to bring items to swap or sell to meetings. Small to Medium size equipment can be brought in to the meeting hall while larger items can be left for the usual parking lot trunk-swap.

Respectfully submitted, Mark Casey, N1LZC, Secretary

**PRESIDENTS REPORT**  
**DE N2LIV**

The March N.E.W.S. meeting provided some lively discussion over the Spread Spectrum issue. If someone is knowledgeable in this area and would like to volunteer, we could have a short forum on this topic at an upcoming meeting. Dave's, WG3I, presentation on 24 GHz kit modules available from England and Germany displayed a uniform approach for the experienced builder to populate this band. All we need is the test equipment and I thought 10 GHz was the limit.

Just to provide you with a brief update of the 10 GHz progress in the Long Island area by the TEN-X Group. Eight people have now made contact with K2RIW's home station and have low power rigs of sorts (many just mixers and horns). Del, KD1DU is the farthest so far from his mountain top QTH. We are attempting to develop these stations into 1 watt rigs with LNA's and dishes. Four or five stations have completed Qualcomm setups and need to perfect packaging everything for portable use. We had a work group meeting in March to build Shepherd's Crook feeds and hope to perform sun noise measurements in late April, early May, on dish antennas. We look forward to an active Summer and numerous New England contacts during the contest weekends.

The upcoming May N.E.W.S. meeting presents Hank, N2MSS on "Battery Care and Handling". The June contest approaches rapidly along with the July N.E.W.S. Show & Tell, Swapmeet. N1BWT and myself plan to provide equipment for performing 10 GHz sun noise measurements at the July meeting. Prepare to bring all your 10 GHz antennas and other goodies for show and swap.

Bruce Wood, N2LIV

**FM13 ON SIX**

The Southern Wireless Society (KF4IAH) will activate FM13, Fort Fisher, New Hanover County, North Carolina during the spring & summer of 1996. On SIX METER (50.125 - 50.140).

FM13 is a very small area, dry that is, Fort Fisher is a former US Air Force base in S. E. North Carolina.

FM13 will be on the air during the ARRL June VHF QSO Party, June 8-10 and the S.M.I.R.K. Contest June 15-16.

Hope to CU on SIX METERS this season.

With the best of numbers, 73's

EDWARD a.k.a. "de old DXer"  
KE4GKA

Trustee, SOUTHERN WIRELESS SOCIETY

## ON THE BANDS:

### BY RON KLIMAS, WZ1V, FN31MP

6 meters sprung to life the evening of March 19 with a nice double-hop Es opening to the west coast. Clint N1KTM alerted me around 2330 UTC that he had been working W7's. I flipped 6 on and sure enough, worked K7NO DM43, N0IPL DM76 (that's Wilt ex-WA1MMD formerly of FN33), K6LGL DM04, N5JHV DM62, and others through about 0115 UTC. Cool !

April 15 brought more 6MEs - this time down to N0KBHEL88, KQ4PI EL99, CO2OJ EL83, and others 2100-2200 UTC. This was also the date of the ARRL 2M Sprint Contest, for which there was a good turn-out this year. Best Dx for me was WA8WZG EN81 and VE9AA FN65.

Some ARRL 2M Sprint score rumours:

CALL	GRID	Q's	GRIDS	SCORE
KF3P	FM19	242	45	10890
(operated at K3MQH's QTH)				
K1RZ	FM19	178	42	7476
WA2TEO	FN31	197	34	6698
KD1DU	FN31	173	32	5536
N3AHF	FN20	155	35	5425
K3UZY	FN11	112	41	4592
WZ1V	FN31	150	29	4350
WB2DNE	FM19	125	34	4250
K2SMN	FN20	142	29	4118
WD8ISK	FM08	113	31	3503
WB2VVV	FN21	118	26	3068
K1TR	FN42	117	25	2925
ND3F	FM28	60	21	1260
N1LZC	FN32	73	13	949
N3KKM	FN00	45	20	900
NB2T	FN30	65	13	845
N2UAH	FN20	56	13	728
WB2ELB	FN03	32	19	608

I attended the Pack Rats club meeting April 18 to pick up my "worked the most Rats in January" trophy, and was overwhelmed with hospitality - dinner, drinks, and an open invite to operate W3CCX with them in June. The Pack Rats are surely our good friends to the south! Jon Bloom KE3Z gave a nice DSP talk, Atlantic Div. Director Kay WT3P discussed weak-signal concerns, and Paul WB3JYO showed off a low-cost 28 (24 mod?) GHz 30 dB gain patch antenna with an integrated receiver.

6M Es again April 22 2130-0130 UTC - worked K0GJX EN35, KC8BAK EN66, WA9LWJ EN54, W7XU EN13, W0OSP EN17, K0TLM EM29 and others. N1LZC FN32 reported 6M wide open again April 23rd. I got home late that night to work

the end of the ARRL 222 Sprint, here's some score rumours:

CALL	GRID	Q's	GRIDS	SCORE
N3KTV	FM19	73	28	2044
(operated at K3MQH's site)				
AA2UK	FM29	68	17	1156
WA6GVC	FM18	60	16	960
(operated at WD8ISK's QTH)				
N2DSY	FN30	45	17	765
WB2VVV	FN21	42	14	588
N3EXA	FN20	40	13	520
K1TR	FN42	34	14	476
KD1DU	FN31	38	12	456
W1QK	FN31	32	12	384
WZ1V	FN31	27	13	351
N1DPM	FN32	27	11	297
N1LZC	FN32	23	10	230
W2GIO	FN31	13	9	117

Station profile updates: KA1OTP FN41 is now active on 903 with about 9W to an M2 yagi (averages about 5/3 SSB with me). K3GNC FM29 now has 80W on 1296. K4QIF is now active from his new FM06 QTH on 2M, 432, and 1296 - worked him on 2 and 432 April 20th. Rusty runs 700W out on 1296 to the delight of Colonel Sanders who fills those buckets.

That's it for now, gang. See you at our May 25 meeting. Don't forget to check out the Pack Rat's new microwave bands activity night, meeting on 144.260 the 4th Thursday each month 8-10 pm. 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?

-try our landline BBS at 860-768-4758 (14400,8,N,1 weeknites/weekends).

-or our Internet Webpage at <http://uhavax.hartford.edu/newsvhf> -73, Ron WZ1V, Internet email: [klimas@uhavax.hartford.edu](mailto:klimas@uhavax.hartford.edu)

**LAST MINUTE 432 SPRINT REPORT....** Pretty decent activity last night. Ron's best DX was EN81 and EN93.

Some ARRL 432 MHz Sprint score rumours

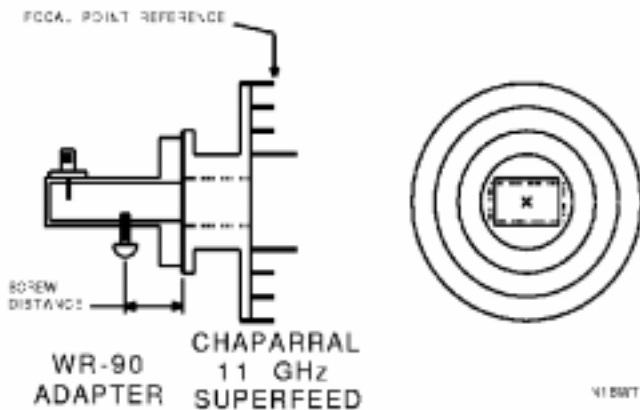
CALL	GRID	Q's	GRIDS	SCORE
WZ1V	FN31	76	25	1900
NC1I	FN32	82	21	1722
WA8WZG	EN81	69	24	1656
N2DSY/QRP	FN30	68	12	816
KD1DU	FN31	51	15	765
N3OPM	FM19	42	12	504
N1DPM	FN32	25	11	275
N3KKM	FM19	30	8	240
N2MSS	FN31	28	7	196
W2GIO	FN31	13	9	117
N2ZVS	FN30	20	5	100

**USING THE CHAPARRAL 11 GHZ  
SUPERFEED AT 10.368 GHZ  
N1BWT 1995**

The best feed I have tested for a prime-focus dish is a Ku-band TVRO scalar feed from Chaparral, which they call the 11 GHz Superfeed (catalog #11-0148). Although it is specified for 11 GHz, it works as well as a Chaparral feed that K1DPP made from the ARRL UHF/Microwave book, dimensioned for 10.3 GHz. Since it took Don 6 hours work to machine a feed, the TVRO one seems like a bargain.

The Chaparral feed works well on dishes with  $f/D \sim 0.39$  to  $0.45$ ; we measured efficiency as high as 60% on a 24-inch dish at 10.368 GHz. For slightly shallower dishes,  $f/D \sim 0.45$  to  $0.47$ , efficiency was improved slightly by shortening the projecting central ring so it was level with the outer rings. With this modification we measured efficiency of 64% on a 30-inch dish of  $f/D = 0.45$ . In a direct comparison on a 25-inch dish with  $f/D = 0.45$ , efficiency increased to 61% with the modified Superfeed compared to 56% unmodified. On the other hand, a 22" dish of  $f/D = 0.39$  showed better efficiency with an unmodified feed.

**CHAPARRAL FEED FOR 10.368 GHZ**



As shown in the sketch, the input waveguide to the feed is narrower and taller than standard WR-90 waveguide, but we have obtained good results by centering the alignment in both dimensions by eye, then drilling and tapping holes in the feed flange to mate with the waveguide flange. Another approach is to bore out the flange to mate with 3/4 inch copper pipe used as circular waveguide; I have not tried this, and the example I've seen did not work as well when measuring sun noise.

With no further tuning, a return loss of 10 to 12 dB is obtained, which is usable, but could cause a reflection loss of about 0.3 dB. The return loss is easily improved with a tuning screw, as shown in the sketch. To reduce corrosion, I used an aluminum screw to match an aluminum waveguide; brass screws are better for

brass or copper waveguides, and stainless steel is lossy. The location of the screw is quite critical; I measured the impedance with a WR-90 slotted line and calculated the location. For the unmodified Superfeed, the screw distance is 11 mm. from the flange interface, centered in the broad face of the waveguide. If the Superfeed is modified by cutting the central waveguide ring level with the outer rings, then the screw distance is 14.5 mm. For any other modification or frequencies other than 10.368 GHz, you are on your own. The screw is adjusted for best return loss — better than 20 dB is normal. All efficiencies cited above were measured with the tuning screw adjusted for best return loss, which did increase gain by about the expected 0.3 dB. However, if you are unable to measure return loss, no tuning screw is better than a misadjusted one.

We experimented with the focal distance for this feed, using one that N1IOL modified to make the outer choke rings adjustable. It appears that the focal point is controlled by the outer choke rings, labelled "focal point reference" in the sketch, independent of the projection of the center ring, which makes small adjustments to the illumination angle for different  $f/D$ . My best estimate for the focal point of this feed is 3 mm. behind the "focal point reference," inside the feed horn.

Paul Wade, N1BWT n1bwt@iii.net

**CABLE LOSS AT 10 GHZ**

I problem with a cable chart published on page 4 of the recent NEWS letter—no mention is made that coax cables have an \*upper\* frequency limit.

When the coaxial cable gets thick enough, it can start to accommodate waveguide modes. While this could result in lower than expected losses, it can also result in much higher than expected losses—In my experience RG-58/U works a whole lot better than RG-213/U on 10.368 GHz.

The chart left out LDF4-50, which a lot of people have had good luck with on 10.368 GHz (around 10 dB/100 ft).

In short, if you want to use thick coax on 10 GHz, I think it is really important to test your cable assemblies.

Zack, KH6CP/1 zlau@arrl.org

**BEACONS DE NB2T, FN30bt**

Lou reports he heard the 144MHz beacons as follows:

CALL	GRID	JAN	FEB	MAR
W3VD/B	FM19	8	10	10
WA2UMX/B	FN23	9	8	11
N4MW/B	FM17			3
W2RTB/B				4
W9IP/B		1/20 for 40 seconds		
VE3SMU	GN03	2/7 for 3 minutes		

## THE WG3I CQ KEYS

**Introduction:** Since the WG3I PIC keyer was published in Feedpoint(1) and the Eastern Coast VHF Proceedings (2) there have been requests to adapt the design for automatically calling CQ in contests.. The cycle requested has generally been as follows:-

- Key transmitter
- Short delay to allow relays to settle (~100mS)
- Send message
- Unkey transmitter
- Wait to see if anyone responds
- Start again

The advantages of using a PIC keyer to call CQ is that it doesn't tie up an expensive "fully functioned keyer" on each band to do the job, also it always has the correct message; no more trying to work out how to program a keyer with frozen fingers that you have never seen before (this may explain why one hears "CQ NST" being sent so often in contests?)

Investigation of the code of the original PIC keyer has revealed that the CQ mode of operation can be accommodated with few program changes in the same PIC16C54 chip with the addition of a few extra interface components. For details of the philosophy behind the original design and how it works see my original article (1) (2). I will only discuss the modifications here. There are two independent cw keyed outputs from pin 6 and pin 13 of the PIC and two independent PTT outputs, pins 7 and 8 . Pin 6 and 7 are used to drive transistors which may be used to drive external relays a requirement especially if the transmitter's PTT line is high voltage or high current. Pins 7 and 8 are used to drive LEDs through current limiting resistors to indicate the state of the keyer. It should be noted that altering the cw sending speed with VR1 alters the PICs clock speed which also controls the length of the "wait". The "wait" was designed to provide a 25s delay at 12wpm but will alter proportionally with cw speed, the delay is around 20s at 15wpm.

**Hardware:** A new small PCB, designated WG3I015 has been designed for the project and is shown TWICE FULL SIZE in Fig 2. The component overlay is shown in Fig 3.. The component list is shown in Table 1. Components including the blank chips and programming hardware and software are available from a number of sources, however, as before both the software elements and a kit of parts including a programmed PIC chip are available from the Author.

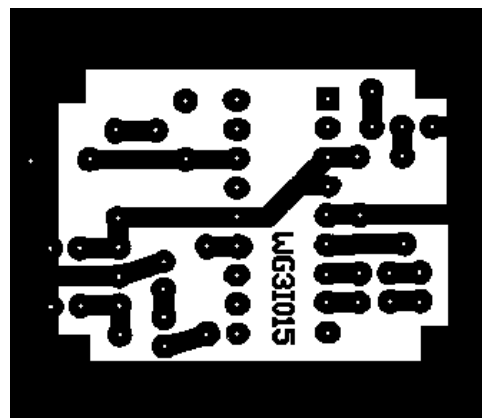
**Conclusions:** This article was written to update a previous design to hopefully allow contestants to easily activate as many bands as possible during UHF/SHF contests. It is hoped that this will facilitate the discovery of many previously unworkable microwave paths

**Acknowledgments:** To Meg Robinson, G7FRE/N2NQI for supporting the execution of the project, also to Sam, K2DNR for his original request that inspired this project.

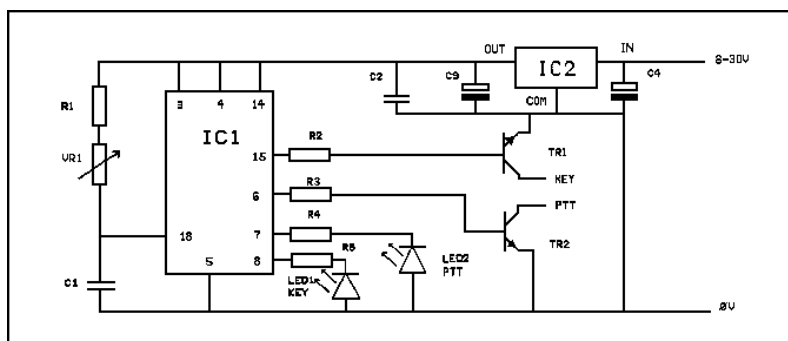
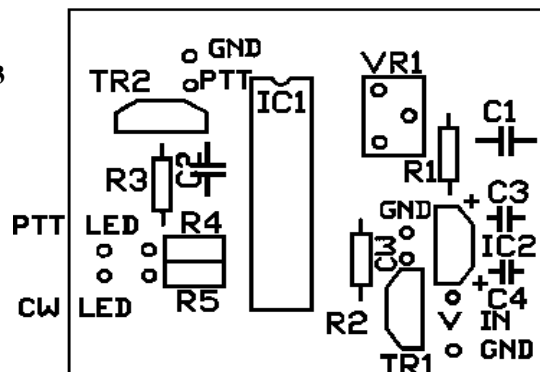
**TABLE 1**

C1	100pF ceramic	R2	3K0
C2	0.22uF 16V Tantalum	R3	3K0
C3	0.01 ceramic	R4	910
C4	2.2uF 16V Tantalum	R5	910
IC1	PIC16C54-RCP	TR1	2N2222A or similar
IC2	78L05	TR2	2N2222A or similar
R1	47K	VR1	10K submin preset

**FIGURE 2**



**FIGURE 3**



**References:**

1. Feedpoint, Newsletter of North Texas Microwave Society, Dec 95/Jan 96 issue
2. Proceedings of the 21st Eastern VHF/UHF Conference, Aug 95 p74-76

**Dave Robinson, WG3I 3/7/96**

## **USING THE SVETLANA 4CX400A ON 432 MHZ**

**BY: FRED STEFANIK N1DPM**

Back in 1984, I decided that 100 watts of "brick" power wasn't enough for me on 432 so a home-brew project was in order. An article appeared in QST shortly before my decision that helped spark my decision to build an amplifier. This article was by Fred Merry, W2GN, and it was on a tetrode amplifier for the 70 cm band. This amplifier was based on the good ol' 4CX250B or you could also use an 8930. I proceeded to "whip up" one of these especially since I already had most of the parts, and a power supply ready to go.

After building the amplifier the only difference was that the tube that I was going to use was a 4CX350A/DX553 by Amperex since I had a few of these. These seemed to work OK on 432 although they did experience quite a bit of power drift. Even though, this amplifier would quite happily produce 350+ watts. It also proved to be quite reliable surviving over 10 years of contesting, etc. on the original tube. (just like a Timex!!)

About a year ago I heard about a new tube being built by the Russian manufacturer Svetlana, called a 4CX400A. This tube had full ratings to 500 MHz, and was virtually the same size as the popular 8930. I thought I'd give one a try in the 432 amp. The only modifications that were made to the amplifier was a new plate line and top cover. These had to be made to allow for the larger size anode cooler on this tube than the 4CX350A that was in the amp already.

When I first fired the amp up a few things became apparent very quickly. The gain seemed to be slightly less than the 4CX350A, and there was virtually NO power drift! The amplifier tuned right up easily and was stable. With a plate supply of 2500 VDC (no load) and screen voltage at 400VDC, this amplifier would now produce 500 watts of stable, clean RF. The high voltage under key down conditions would sag to approximately 2000 VDC. The plate current was set to the recommended 160 mA at idle and would draw approximately 500 mA key down. This shows a plate efficiency of 50% with a dissipation of 500 watts, 100 watts over specification for C.C.S. type operation. I ran the amplifier this way during the 1996 January VHF Sweepstakes and it performed flawlessly.

Being the power hungry, spec ignoring, VHF'er, I thought that there was more to be had from this hot little tube since the grid current meter even at this power level was still not showing any current draw. So what's next, I said...."MORE POWER IGOR" and the little tube that could responded with..."YES MASTER!" I couldn't believe it! This tube just starts to draw control grid current at 625 watts output!! This is with 2000 VDC on the plate, and it's rated for 2500 VDC. I do not recommend this as it really exceeds the maximum ratings on the tube, but it shows

just what this thing will do. So I turned the drive back down to run this at the 500 watt level, gave my 500 mA plate current meter a rest, and hopefully this tube will provide at least as many years of trouble free service as the last in this amplifier.

Some closing comments. Everyone who has listened to this amplifier on the air has said it is very clean and splatter free. This includes a number of stations that are less than 25 miles away. I'm not exactly sure just what issue the original article appeared in, but it was back around 1982 or 1983. Don't forget to use plenty of cooling air, remember more is better. And finally, for all of you guys with either 2 x 8930's for 144, 222, or 432, or AM6154/6155 type amplifiers, when you need to re-tube them this is one to be considered as it ought to plug right in, and fire up easily.

### **WANTED CT.BIN FILES**

For the past couple of years I have asked some of the big multiops and single ops in the various VHF contests to send me their CT .bin files so a new up-to-date master.dta file could be made available to everyone. I am making the same request this year. Here is the deal: You send me one or more substantial .bin files from VHF/UHF contests you have worked in the last two years and I will send you the new master.dta file in return.

This could be handled by U.S. Mail or via uuencoded e-mail, your choice.

Last year I created a master.dta file with 50 bin files, spanning 3 years, submitted from the following: W2SZ, W0UC, AA4S, W3EP/4, K9PW, AA9D, K3UA, W3ZZ and K1TR

This year I would like to add to this group, especially with more single-op logs and stations in the west.

Once the master.dta file has been created, I send you your copy and post it to interested VHF BBSs and Web Sites.

To create a good master.dta file you need many large recent .bin files. Please send me your quality .bin files for the period 1994-1996.

Thanks and 73,

Ed Parsons, K1TR  
9 Grandview Road  
Windham, NH 03087

## **22ND ANNUAL EASTERN VHF/UHF CONFERENCE** **REQUEST FOR PROCEEDINGS PAPERS**

The 22nd Annual Eastern VHF/UHF Conference is to be held August 23, 24, & 25, 1996 at the Quality Inn and Conference Cntr., Vernon, CT.

We are once again requesting articles to be contributed for the Annual Proceedings which is published in conjunction with the ARRL.

All material is to be forwarded by July 8, 1996 in a hardcopy format to Lili Lopez, N2RDN.

Documents must be "ready for press" quality, material cannot be reworked due to time constraints. Photographs are reproducible, black & white preferred for better resolution. Color will be accepted if b/w is not available. Photo mounting positions must be identified on an 8 1/2 x 11 page with a 1 inch margin on all sides. Draw boxes and label within the box Photo 1, Photo 2, etc. Label the backs of photos as Photo 1, Photo 2, etc. with a self-stick removable note. Captions may be typed above or below the photo outline and text should be presented within the same margin if possible.

We are also looking for Guest Speakers for the conference. Anyone interested should contact Stan Hilinski, KA1ZE.

Please do not hesitate to contact us with any other questions you may have.

Thank you for your continued support in making the Conference better than ever!

73, Stan Hilinski, KA1ZE Conference Chairman 17 Pilgrim Drive Tolland, Ct. 06084 860-649-3258 Work 860-872-6197 Home	Lili Lopez, N2RDN Conference Secretary/Proceedings Editor 34 Bell Lane Tappan, N.Y. 10983 914-644-4723 Work 914-359-6977 Home E-mail: HLOPEZ@delphi.com
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### **N4MW FM17 BEACONS**

I see in the Letter that you have been hearing the 2 meter beacon, apparently pretty well, from CT. Thanks for the good report.

The 2 meter beacon is the only one running at present. It consists of 30 watts to an M2 Sqloop up about 70 feet. Currently it is located at my QTH in FM17kn. Eventual plans are to move it to a site near Ford, VA, which is about 45 miles southeast of here. That will put it a bit further from you, with about half the antenna height. So if it dips a bit, don't be too concerned. Along with the move, I will be able to reinstate several other of the beacons, including (subject to some frequency/power adjustments):  
28.250 4 W>dipole 50.070 15 W>dipole 144.280 30 W>Sqloop  
222.055 8 W>squalo 432.395 10 W>Sqloop

Also, I still have beacon equipment for 903-10368 MHz, which I will be putting on from my QTH unless a better site materializes. I will supply more details as things progress.

Regular beacons receivable here are W3VD 2 meters and KL7GLG 222 MHz. I was receiving WA4PGIFM07 on 432 but have not heard that in a while. I will do some listening and try to get you an update later.

Please address any replies to 71571.1744@compuserve.com.

73 for now, Dave N4MW

### **BEACONS FROM UP NORTH**

Hi Del !

I saw in the NEWS WWW page that you are now the editor of the NEWSletter.

My call is VE2UG, Rene from FN08. Me and Randy, VE2NRN are old timer's of Eastern VHF/UHF conferences.

I maintain the VE2TWO beacon in FO13, near Radisson, James Bay. I read in previous QST articles that beacon activity is needed to investigate aurora and other unknowns mode of propagation up north (thank to Larry VE8HL).

Right now VE2TWO have only a transmitter at 50.089 MHz. I am now in the process of building auxiliary outputs on 10M (28.218 MHz) and 2M (144.298 MHz).

Upon completion I will send you the specifications of the whole beacon assembly plus tales of the process. I hope it will be useful for a future article of NEWSletter.

73 and beam up north !

Rene VE2UG, FN08

# 22ND EASTERN VHF/UHF CONFERENCE

**AUGUST 23, 24, & 25, 1996**  
**QUALITY INN AND CONFERENCE CENTER**  
**51 HARTFORD TURNPIKE (RT.83)**  
**VERNON, CT 06066**

<b>8/23/96 FRIDAY</b>	<b>LODGING</b>
<b>1600 'til</b>	<b>HOSPITALITY ROOM</b>
<b>8/24/96 SATURDAY</b>	<b>REGISTRATION, FORMAL TALKS, VHF-SHF BANDESESSIONS &amp; MUCH MORE.</b>
<b>0800</b>	<b>REGISTRATION BEGINS ADJACENT TO HOSPITALITY ROOM</b>
<b>0840</b>	<b>TALKS BEGIN</b>
<b>1200 - 1300</b>	<b>LUNCH</b>
<b>1300</b>	<b>TALKS RESUME</b>
<b>1630 - 1830</b>	<b>NOISE FIGURE MEASUREMENT WORKSHOP 50 MHz-10 GHz.</b>
<b>1900</b>	<b>BANQUET (7 PM - 8:30 PM)</b>
<b>2030</b>	<b>VHF - MICROWAVE TRIVIA QUIZ</b>
<b>2100</b>	<b>DOOR PRIZE DRAWINGS EXTRAVAGANZA</b>
<b>8/25/96 SUNDAY</b>	
<b>0800</b>	<b>VHF-UHF SWAP 'n' SELL &amp; ANTENNA GAIN MEASURING 222 &amp; up</b>

FROM SOUTH/WEST, I-84 E TO EXIT 63, LEFT OFF RAMP, ABOUT 1 MILE ON LEFT.  
 FROM BOSTON, I-84 W TO EXIT 64, RIGHT ONTO RT. 83, ABOUT 1/2 MILE ON RIGHT  
 Please notify us in advance if you plan to arrive via nearby Bradley International Airport so we can arrange to pick you up.

EACH REGULAR REGISTRANT RECEIVES A COPY OF THE PROCEEDINGS AND IS ELIGIBLE FOR THE DRAWINGS.  
 ALTERNATIVE DINING IS AVAILABLE NEAR-BY.  
 OVERNIGHT RATES, MENTION EASTERN VHF/UHF SOCIETY, CALL LORI TORIZER AT (800)-235-4667.

Please fill out & return with payment

Name & Call: \_\_\_\_\_

Street: \_\_\_\_\_

Town, State, Zip \_\_\_\_\_

REGULAR MAIL REGISTRATIONS	_____ @ \$20 = _____	REGISTRATION AT DOOR \$25
SUNDAY ONLY REGISTRATIONS	_____ @ \$5 = _____	
EXTRA PROCEEDINGS BOOKS	_____ @ \$12 = _____	
BANQUET TICKETS (by mail only)		
PRIME RIB	_____ @ \$23 = _____	
STUFFED SHRIMP	_____ @ \$23 = _____	
CHICKEN CAPON*	_____ @ \$19 = _____	* (scrod, vegetable lasagna available as sub - ask server)
	TOTAL = _____	

Make check or m.o. payable to Eastern VHF/UHF Society

Mail to :RAE BRISTOL, K1LXD  
 328 MARK DRIVE  
 COVENTRY, CT 06238  
 860-742-8650

SWAP n Sell INFO:  
 MARK CASEY, N1LZC  
 303 MAIN ST.  
 HAMPDEN, MA 01036  
 413-566-2445



## FOR SALE OR SWAP

**SSB ELECTRONICS LT70S TRANSVERTER.....\$280**

28 MHz I.F. and 25 watts output. Looks and works fine.

Frank Potts, NC1I Evenings 6:00 PM to 10:00 PM (413) 569-0314: Days 8:00 AM to 4:30 PM (413) 768-7000

**MICROWAVE MODULES MMT 220-28 220 MHZ TRANSVERTER.....\$250**

**WANTED: HEWLETT PACKARD HP8660A FREQUENCY GENERATOR PLUG INS**

**WANTED: PACIFIC MEASUREMENTS #1038-D10 NETWORK ANALYZER #13782 OR 18783 OR 18784 CABLE & DETECTOR HEADS**

**WANTED: SYSTRON DONNER / KRUSE-STORK RF SWEEP PLUG IN MODULE FOR MODEL5000 (ANY BAND)**

Bruce Wood, N2LIV 3 Maple Glen Ln., Nesconset, N.Y. 11767 (516) 265 1015

**ICOM IC R70 HF RECEIVER, EXCELLENT CONDX. WITH ALL MANUALS.....\$525**

**WANTED: ANDREW LDF6-50 TYPE N CONNECTORS, MALE (L46PW) OR FEMALE (L46PN)**

Del Schier, KD1DU Home: 7 PM to 10 PM (203) 431-4233: Work Mon-Thurs AND SAT 10-6 (203) 637-3621

**CUSTOM TUNED 902-903 MHZ 4 SECTION BANDPASS RX FILTERS.....\$15**

These are miniature TOKO helical resonators (2x2 in cascade), intended for installation after your preamp.

Specs: -5dB I.L. 902-910, -20 dB @ 890, -35 dB @ 880, -45 dB @ 870, etc. PPD with sweep and hookup data.

Ron Klimas WZ1V 458 Allentown Rd., Bristol CT 06010.

**TOKYO HIGH POWER 2 METER TO HF TRANSVERTER.....\$250**

(thats right) 5w in 20 w out

Marc Casey, N1LZC (413) 566-2445

## **DOWN EAST MICROWAVE**

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

- MICROWAVE LOOP YAGIS
- VHF/UHF YAGIS
- NO-TUNE LINEAR TRANSVERTERS
- LINEAR POWER AMPLIFIERS
- LOW NOISE PREAMPS
- COAX RELAYS, COAX CABLE, CONNECTORS
- CRYSTALS, CHIP COMPONENTS, MMIC'S, TRANSISTORS, RF MODULES

**FOR ALL EQUIPMENT & ANTENNAS:**

**STEVE KOSTRO, N2CEI, 954 RT. 519, FRENCHTOWN, NJ. 08825**

**PHONE: 908-996-3584**

**FAX: 908-996-3702**

## **DIRECTIVE SYSTEMS**

**ANTENNAS AND ACCESSORIES**

**NOW FEATURING THE K1FO 17' BOOM YAGIS FOR 144, 222, & 432 MHZ!**

**DAVE OLEAN, K1WHS, RR1, BOX 282, LEBANON, ME. 04027,**

**PHONE: 207-658-7758**

## **SHF MICROWAVE PARTS COMPANY**

**COMPLETE LINE OF 10GHz AND 24GHz GUNN SOURCES PLUS HORNS AND 12" DISHES**

**ALAN, WA9GKA, 7102 W. 500 S., LA PORTE, IN, 46350 EMAIL: prutz@shfmicro.com**

**HAM RADIO TAG SALE.....50 YEARS OF ELECTRONICS**

**MAY 25, 26, 27, 1996 SALE HOURS 9 AM - 5 PM.  
328 MARK DR. COVENTRY, CT. 06238  
(860)742-8650**

**ANTIQUE RADIO, MIKES & SPEAKERS  
TOWERS, ROTATORS, ANTENNAS  
CABLE & HARD LINE  
RADIOS & PARTS OF ALL KIND, MIKES & SPEAKERS  
CQ, QST & RADIO MAGAZINES STARTING IN THE 30'S - '95 ELECTRONIC BOOKS & MANUALS**

**NOTE: THIS IS THE SAME DAY AS OUR MEETING AND IS NEARBY AT RAE'S HOUSE, N1LXD**

**NEXT N.E.W.S. MEETING**

**THE NEXT MEETING IS ON MAY 25, 1:00 PM AT THE QUALITY INN, VERNON, CT.  
THE GUEST SPEAKER IS HANK, N2MSS ON "BATTERY CARE AND HANDLING".**

**North East Weak Signal Group**

**c/o KD1DU  
Del Schier  
126 Old West Mountain Road  
Ridgefield, Connecticut 06877**

**FIRST CLASS MAIL**