N.E.W.S. LETTER

The Publication of the North East Weak Signal Group

NOV 2002 VOLUME TEN ISSUE FIVE

MICROWAVE UPDATE 2002

AND THE

28TH EASTERN VHF/UHF CONFERENCE OF THE EASTERN VHF/UHF SOCIETY

OCTOBER 24 - 27, 2002 RADISSON HOTEL, ENFIELD, CONNECTICUT

NOTICE: NEXT MEETING CHANGED

OUR NEXT MEETING WILL BE ON SATURDAY, NOVEMBER 16TH, AT THE RADISSON HOTEL IN ENFIELD

IN THIS ISSUE

DON'T FORGET

THE NORTH EAST WEAK SIGNAL GROUP
2 METER VHF AND ABOVE NET
EVERY THURSDAY NIGHT AT 8:30 p.m. LOCAL 144.250
W1COT, WZ1V, K1UHF OR K1PXE NET CONTROL

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://www.newsvhf.com

FROM THE PRESIDENT

November meeting
Our next meeting has been changed from Saturday, November 9th to the 16th, at the Radisson Hotel in Enfield. I don't know what the program will be yet, but we will have one. There will also be a duct tape auction - a chance for you to pass along those items that seemed like such a great deal at the flea market.

We also need to elect officers for next year.

VHF Conference and Microwave Update - October 24-27

The joint conference is coming together, and looks to be a good one. Get your reservations and registration in now if you haven't done it already - the deadlines are approaching fast.

During the conference, there will be free breakfast for all the volunteers each morning at 7:30 AM, to give us a chance to get the day organized, and to get your new shirts.

July Picnic
Our fabulous chefs did a great job at the picnic - if you left hungry, it was your own fault.

We also did MDS testing on 10 GHz, with good results reported elsewhere in this NEWSletter. The proof was during the 10 GHz and Up contest, with excellent activity and almost all the stations working well. W1AIM and I had a fantastic opening on 10 GHz from Block Island last Saturday night. The downside was that almost everyone had already packed up. We worked K2SMN running 15 milliwatts in New Jersey - S9+ on SSB. You can see where we were - go to www.blockisland.com and click on the panoramic view. The house we operated from is the roof in the foreground to the northwest.

September Contest
Don't forget to get your entry in, and list the North East Weak Signal Group as your club.

Paul W1GHZ

SECRETARY'S REPORT OF THE NEWS MEETING FOR 20 JULY 2002

Because of the nature of the meeting for July, there was no separate Board meeting.

As in the past, the July NEWS Meeting was a cookout held at the Knights of Colombus Hall in Enfield, CT. The cookout was a big success and everyone had more than enough to eat. The menu consisted of hot dogs, hamburgers, drinks and all the fixings. Special thanks go to Ron, WZ1V, who did most of the setup and cooking. Thanks also to everyone that brought food for the group.

The main theme for the meeting was operation and testing of microwave rigs. There were approximately twenty 10 and 24 GHz rigs on hand. Formal field testing was done on the 10 GHz rigs only. Everyone had plenty of ideas to share. After all the rigs were set up and everyone had his/her trips through the food line, a quick meeting was called to order by President Paul Wade, W1GHZ at 1:43 PM. Paul announced that a special meeting of all the volunteers who would be working on "the Conference" would be held after the rig measurements were complete. Several members brought goodies to sell and these were displayed on several of the picnic tables in the area.

The "formal meeting" was adjourned at approximately 2:00 PM, and the rig measurement started. Rig measurement covered three areas:

1-Measurement of minimum detectable signal where a test signal was reduced in amplitude until it could no longer be detected by the operator.

2-Measurement of a test signal as it is brought up in amplitude out of the noise.

3-Measurement of transmitted signal amplitude against a reference signal level. In this case, the reference was chosen to be that put out by the rig of Don, W1FKF.

Test results are listed in the three tables that follow:

Minimum Detectable Signal Test

Call	Signal Level (dBm)
K2YMR	-88
N2MSS	-95
AA1YN	-96
W1GHZ	-97
K2CBA	-97
N1LZK	-97
KJ1K	?
KB1VC	-99
N1JEZ	-100
K2AEP	-100
W1FKF	-102
W1FKF (operated by WA1MBA)	-102
AF1T	-104
W1RIL	-105
KA1OJ	<-105*

*Detection by ear ended at -94 dBm. Detection by special computer detection program was still going when the test was concluded at -105 dBm.

Detection Level from Noise Test

Call	Signal Level (dBm)
KB1VC	-99
W1RIL	-99
W1FKF	-99
W1FKF (operated by WA1MBA)	-99
AF1T	-99
N1JEZ	-96
W1GHZ	-93
N2MSS	-93
K1LZK	-93
K2AEP	-93
KJ1K	-93
K2CBA	-90
AA1YN	-87
N2YYU	-75

Transmitter Power Output Test

Call	Relative Power Output (dB)
W1FKF	0 *
KA1OJ	-4.0
N1JEZ	-2.0
W1GHZ	-11
W1RIL	-15
W1FKF (operated by WA1MBA)	-7.0
N2MSS	-20
K2AEP	-16
AF1T	-5.5
AA1YN	-26
KJ1K	-17.5
N2YYU **	-9.0
N2YYU **	-30
N2YYU **	-30
N2YYU **	-45

* This transmitter was established as the reference because it had the highest output.
** Four different transmitters were tested.

After the testing was completed, Paul, W1GHZ, Matt, KB1VC and Bruce, N2LIV, met with the members of NEWS who had volunteered to work on the combined Microwave Update/ Northeast VHF/UHF Conference coming up in October. Committee assignments were reviewed and further decisions made. Additional persons (volunteers) would be welcome. Contact Paul or Matt if you feel you can help in any way.

The event ended at approximately 4:30 PM.

ARRL VHF/UHF CONTESTING AND AWARDS SURVEY

NEWINGTON, CT -- October 7, 2002

With a higher proportion of VHF-only licensees than ever before, one might expect that VHF/UHF contesting would be experiencing a surge in popularity. To the contrary, while the total QSOs being made in the multi-band contests seems steady, the number of logs - and thus the number of serious participants - has fallen off considerably since 1996. This has led the ARRL to ask you for your thoughts on why this might be happening and how to best address and reverse the trend. We'd also like to hear from you about the ARRL VHF/UHF awards program in general.

The survey is the result of a request from the ARRL Board to look into ways to increase participation. It is being sent to a random sample of regular top-scorers and average participants, regardless of their score, plus clubs that regularly participate in VHF/UHF club competitions. Our interest is in gathering information we can use to improve the participation and quality of both the various ARRL VHF/UHF contests and the ARRL VHF/UHF awards programs. The detail and quality of information in your answers is especially important to us.

The Survey - The survey is organized into several areas of inquiry. The first group deals exclusively with contesting:

Existing contests - how can their formats, rules, or reporting be improved such that activity and log submissions are increased? This survey refers to the following ARRL sponsored contests: January VHF Sweepstakes, June & September VHF QSO Parties, August UHF Contest, 10 GHz and Up competition, and the Oct/Nov EME Contest
New contest formats - are there new formats that would be attractive to the existing contest community?

New participants - what improvements or additions to VHF/UHF contesting would attract more operators to the sport? How can these operators be reached?

A second area of interest is the ARRL VHF/UHF awards program and increasing the level of interest and participation. The existing awards such as VUCC, WAS, and DXCC, are derivatives of the HF awards program. There is some concern that these awards either have too high an initial qualification level or may be missing some interests of VHF/UHF operators. There are two groups of questions:

Existing awards - how can their rules or categories might be improved so that more activity is encouraged?

New awards - are there new award programs that would be attractive to VHF/UHF operators? Responding Each topic has a series of questions related to either VHF/UHF contesting or awards. Please select the answer that best matches your position or situation. Please feel free to extend your remarks (use additional pages if necessary). Your detailed comments are very important.

The survey is downloadable as an Adobe Acrobat file on the web at http://www.arrl.org/contests/announcements/vhf-survey.pdf

It should be completed and returned by regular mail to: VHF/UHF Survey, attn: Wayne Mills, N7NG, ARRL, 225 Main St, Newington CT 06111. We would like to have the returned surveys by October 31st. You may copy the blank survey and distribute it to other amateurs, particularly to operators that may not be active in VHF/UHF contesting now. A summary of the results will be available in the future.

Thanks and 73

Dan Henderson, N1ND ARRL Contest Branch Manager

A SIMPLE, YET STILL "FOOL-RESISTANT," SEQUENCER FOR TRANSVERTERS

PAUL WADE W1GHZ ©2002
W1GHZ@ARRL.NET

The availability of reasonably high-power microwave amplifiers has made switching in transverters more troublesome. At milliwatt power levels sequenced switching was not essential, and even at powers up to one watt, many operators get by without any sequencing. However, at higher power levels, like the 40-watt amplifiers for 3456 MHz which recently became available as surplus, the possibility of damaging a coaxial relay by "hot-switching" (with RF power applied) becomes significant. Even at 10 GHz, with amplifier outputs of 3 watts and more becoming common, we are pushing the hot-switch (switching with RF power already applied) capability of small SMA relays. The DB6NT1 10 GHz transverter MK2 instructions state: "Urgently the use of a sequence controlers is recommended."

All RF relays are capable of safely handling much more RF power than they are capable of hot-switching without damage. A sequencer ensures that the relay has time to switch before RF power is applied. Several years ago, I described2 a "Fool-resistant" transceiver interface and sequencer, which improved some of the shortcomings of previous sequencer designs. Now that packaged transceivers (including the IF interface) for most microwave bands are readily available from Down East Microwave3 and from DB6NT, such a complex interface is not necessary. The addition of a power amplifier, however, brings with it the need for sequenced switching.

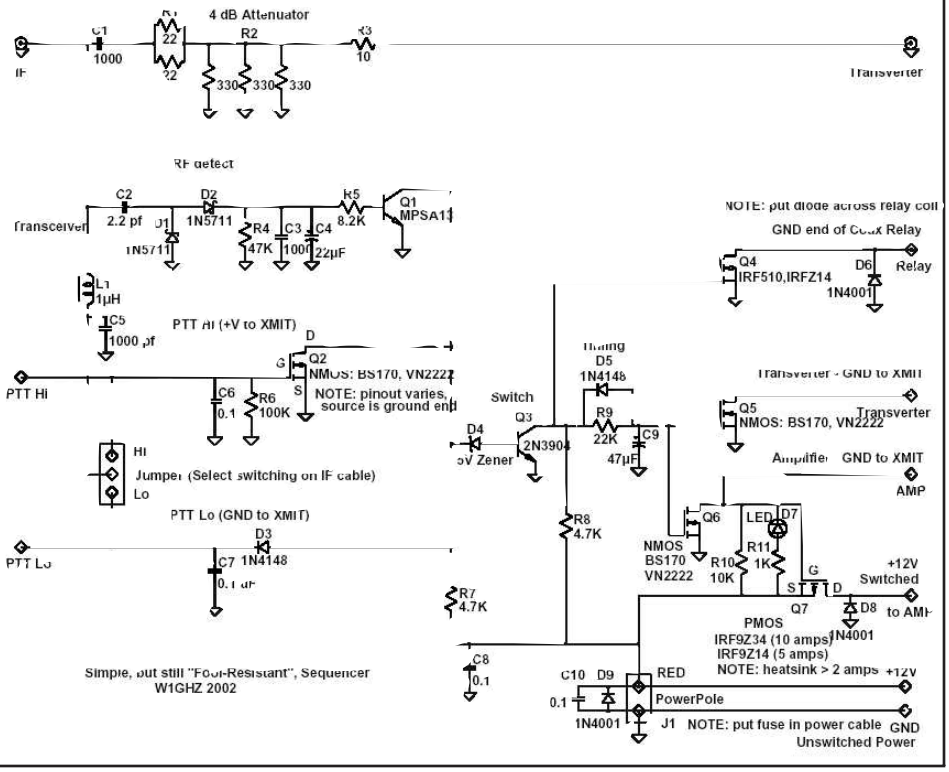
A very attractive new IF transceiver is the Yaesu FT-817. One of its features is break-in CW – touch the key to transmit. I tested mine to see how quickly the transmitter is activated, and found it to be perhaps 10 milliseconds, not enough time for a relay to operate. Amongst the myriad menus in the FT-817 is a setting for break-in delay, but the setting unfortunately only affects the time before returning to receive, not the transmit start time.

One alternative to a sequencer is to turn off the break-in feature and rely on manual switching. But how long will it be before you throw the switch with the key already closed, or start shouting before the mike button is depressed? Only a fool would say never!

For 3456 MHz, I wanted to integrate a Down East Microwave transverter with a surplus amplifier. Rather than tear apart a finished transverter to add the "fool-resistant" interface, I decided to make a small, simple, external sequencer which retains the fool-resistant functions: switch the relay before activating the transverter and amplifier, and make the switching as fail-safe as possible. One fail-safe feature is provided by RF sensing in addition to hard switching, so that even if the control cable fails (or is forgotten), the transverter will be switched safely. Since I prefer to run the control signal up the IF coax cable, I added this capability also.

The schematic diagram of the sequencer, shown in Figure 1, is drawn to separate and label functional sections. At the top left is the IF input; the RF is passed through a small 4-dB attenuator to reduce the nominal 2.5 watt output of many portable transceivers to the 1-watt level needed by many of the packaged transverters. If the control signal is on the IF cable, it is separated from the RF by C1 and L1.

There are three potential sources to activate the sequencer: RF, PTT hi, and PTT lo. The RF sensing circuit, between C2 and Q1, detects any transmit power from the IF transceiver and begins the switching sequence. PTT hi is the input for transceivers that supply a positive voltage on transmit, while PTT lo is the input for transceivers that ground the control line on transmit. Normally, only one of these is used in any installation, but both variations are common. The jumper is used to select whichever polarity is expected on the IF cable.



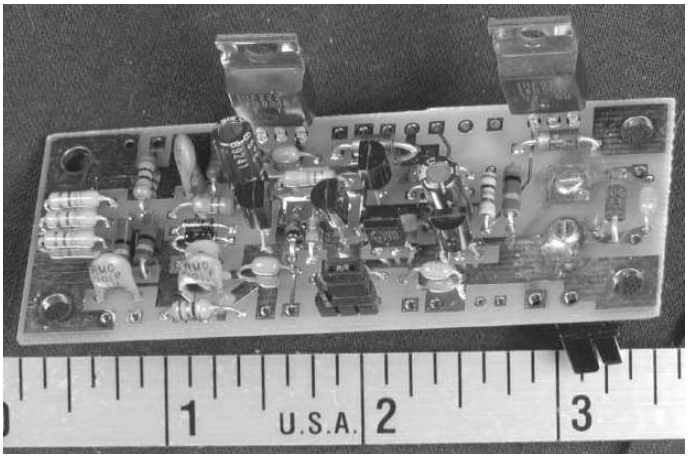
Any of the three inputs will activate the switch transistor, Q3, which will immediately drive the relay driver, Q4. After a delay time set by R9 and C9 (roughly ¼ second with the values shown), the switches for the transverter and amplifier are activated. To return to receive, all inputs cease and Q3 switches back to the receive state, turning off all outputs; diode D5 removes the delay in this direction so all outputs switch off immediately. The immediate turnoff is another fail-safe – it resets the delay time if the PTT is "stuttered" – so the coax relay may chatter but no RF will be applied so it won't be damaged. The transmit delay may be increased or decreased by changing the value of C9 – the delay is proportional to the capacitance.
-NOTE: put fuse in power cable
NOTE: heatsink > 2 amps
NOTE: put diode across relay coil
Transceiver

The three outputs are all FET switches to minimize size and power comsumption; the whole sequencer should only draw a few milliamps, mostly for the LED transmit indicator:

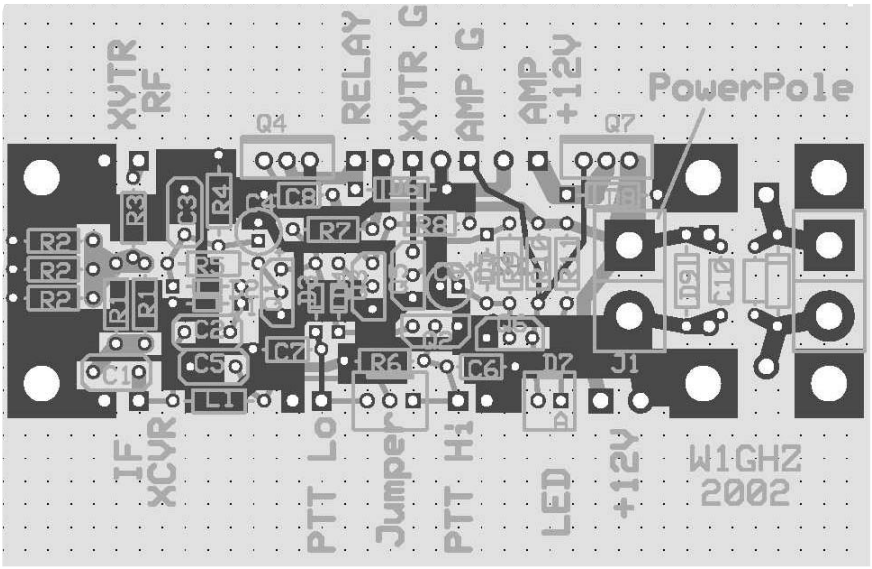
• The first output is the relay driver, Q4, an NMOS power FET which grounds the low end of the coax relay, with the other end connected to +12 or +28 volts, whatever is required. The FET is capable of driving a hefty relay, but don't forget to put a diode directly across the relay coil.

• The second output switches the transverter; a small power FET, Q5, pulls this output to ground. It is adequate to drive the small relays inside most transverters.

• The third output switches the power amplifier. Here we have two possibilities: the first, for amplifiers with a control input, Q6 pulls the terminal marked "AMP – GND to XMIT" to ground to activate the amplifier. The second, for amplifiers without any switching like those from DL2AM4, require that the 12 volt supply to the amplifier be switched (we don't want to leave the amplifier drawing power continuously). In this case, Q6 drives a PMOS power FET, Q7, which switches the voltage with little voltage drop. The schematic lists an inexpensive FET good for 5 amps or so, and a heftier one good for 10 amps or more. If the amplifier draws more than a couple of amps, a heat sink is needed on Q7. The circuit fits on a small printed circuit board. I included an Anderson PowerPole5 connector for the power input in the layout, so that the sequencer can be mounted on the panel as the power connector for the complete rig. Two circuits fit on the "Miniboard" size from ExpressPCB6, so I ordered the standard three Miniboards for $62 and ended up with six sequencer boards. The layout and connection diagram for one board is shown in Figure 2, while the file seq2c_2.pcb has two circuits on one board, plus two extra PowerPole patterns in some unused



space at one end. A photograph of a completed sequencer is shown in Figure 3. Construction is straightforward with common thru-hole components, and assembly goes pretty quickly. I tried to use cheap, common components so I could use one in each transceiver without pain – if you buy everything from Digi-Key7, total cost including the PC board should be under $20. Getting the total quantity up to 100 would cut the cost in half, so let me know if you would be interested in some kits.



Since the schematic is organized into functional sections, you may leave out the components for any unneeded functions. Inclusion of this simple, easy to build, sequencer in a transverter should help to make microwave operation more fool resistant, but never foolproof.

NOTES:
1. www.db6nt.com
2. P. Wade, N1BWT, "A Fool-Resistant Sequenced Controller and IF Switch for Microwave Transverters," QEX, May 1996, pp. 14-22.
3. www.downeastmicrowave.com
4. www.dl2am.de/
5. www.andersonpower.com
6. www.expresspcb.com
7. www.digikey.com

THE NORTH EAST WEAK SIGNAL GROUP'S SEPT VHF CONTEST TOTALS

UNLIMITED MULTI OP

Call	Grid	N	C	Points	6m	2m	222	432	903	1.2G	2.3G	3.4G	5.7G	10G	24G	47G	75G	120G	145G	240G	LAS
W2SZ	FN32	N	U	1679952	586/56	572/52	251/42	370/46	114/34	122/35	109/32	87/28	83/25	60/12	8/5	5/5	-	-	-	-	-
K8GP	FM08	N	U	1380672	589/94	566/76	191/55	306/61	77/30	88/33	50/22	38/19	30/16	30/12	3/3	2/1	2/1	-	-	-	-
W2FU	FN13	N	U	698394	299/68	352/59	132/41	181/42	42/23	52/29	42/22	32/17	21/13	28/13	9/6	-	-	-	-	-	1/1
K1WHS	FN43	Y	U	588723	403/64	297/49	109/35	136/37	52/27	53/26	32/21	23/17	18/15	20/16	4/4	-	-	-	-	-	-
VA7ISL	CN88	N	U	46084	138/21	140/18	28/12	57/13	10/5	16/7	7/4	2/2	-	-	-	-	-	-	-	-	-

LIMITED MULTI OP

Call	Grid	N	C	Points	6m	2m	222	432	903	1.2G	2.3G	3.4G	5.7G	10G	24G	47G	75G	120G	145G	240G	LAS
K3YTL	FN11	N	L	366950	438/56	528/60	154/41	258/48	-	-	-	-	-	-	-	-	-	-	-	-	-
NC1I	FN32	Y	L	306775	474/54	517/49	152/34	229/38	-	-	-	-	-	-	-	-	-	-	-	-	-
W4IY	FM08	N	L	290547	311/51	458/65	128/50	176/45	-	-	-	-	-	-	-	-	-	-	-	-	-
W3SO	FN00	N	L	176176	247/46	266/50	100/38	144/42	-	-	-	-	-	-	-	-	-	-	-	-	-
N2NK	FN21	N	L	142830	313/40	334/43	88/27	106/28	-	-	-	-	-	-	-	-	-	-	-	-	-
K8CC	EN82	N	L	84528	140/38	193/47	55/29	72/30	-	-	-	-	-	-	-	-	-	-	-	-	-
KB1DFB	FN41	N	L	41100	222/28	140/19	37/13	56/15	-	-	-	-	-	-	-	-	-	-	-	-	-
KY5R	EM64	N	L	15247	62/31	77/32	-	27/16	-	-	-	-	-	-	-	-	-	-	-	-	-
K1ALJ	FN42	N	L	4470	60/13	47/10	-	21/7	-	-	-	-	-	-	-	-	-	-	-	-	-

SINGLE OP HIGH POWER

Call	Grid	N	C	Points	6m	2m	222	432	903	1.2G	2.3G	3.4G	5.7G	10G	24G	47G	75G	120G	145G	240G	LAS
K1RZ	FM19	N	H	303468	145/36	210/45	95/39	115/39	41/24	48/23	26/17	-	12/9	15/10	-	-	-	-	-	-	-
K1TEO	FN31	Y	H	273033	200/39	305/45	97/34	112/34	38/16	46/17	15/8	13/8	-	8/6	-	-	-	-	-	-	-
K3DNE	FM19	N	H	205920	139/36	182/46	76/37	106/39	33/18	42/19	20/13	-	-	-	-	-	-	-	-	-	-
WB9Z	EN60	N	H	160186	169/55	193/55	64/36	99/38	-	35/18	-	-	-	-	-	-	-	-	-	-	-
K1GX	FN31	Y	H	116748	124/28	153/30	61/19	79/23	25/11	36/12	12/8	4/4	2/2	4/4	-	-	-	-	-	-	-
K8TQK	EM89	N	H	101354	45/23	94/45	47/32	50/33	18/16	25/20	10/9	6/5	2/2	2/2	-	-	-	-	-	-	-
AK3E	FM19	N	H	55968	141/36	199/39	-	94/31	-	-	-	-	-	-	-	-	-	-	-	-	-
K2UOP	FM09	N	H	52658	54/21	70/26	42/21	49/21	12/6	20/11	10/5	-	3/1	3/1	-	-	-	-	-	-	-
KE8FD	EM84	N	H	46529	68/24	94/35	37/22	50/23	6/5	11/9	1/1	-	-	-	-	-	-	-	-	-	-
NG4C	FM16	N	H	23901	51/22	77/28	22/16	32/20	3/3	4/4	-	-	-	-	-	-	-	-	-	-	-
KN4SM	FM16	N	H	23408	77/31	83/31	-	53/26	-	-	-	-	-	-	-	-	-	-	-	-	-
W6KBX	CM98	N	H	23324	54/14	81/24	25/9	55/14	-	16/7	-	-	-	-	-	-	-	-	-	-	-
N2DY	FN30	Y	H	23312	69/15	93/15	43/13	52/15	-	8/4	-	-	-	-	-	-	-	-	-	-	-
W4EUH	EM74	N	H	21580	62/24	80/31	24/16	35/12	-	-	-	-	-	-	-	-	-	-	-	-	-
K5LLL	EM10	N	H	21500	196/12	68/26	19/14	30/18	7/6	4/3	5/4	3/3	-	-	-	-	-	-	-	-	-
W1ZC	FN42	Y	H	17450	-	149/28	-	100/22	-	-	-	-	-	-	-	-	-	-	-	-	-
AF6O	DM14	N	H	13600	8/4	118/21	18/9	46/13	-	6/3	-	-	-	-	-	-	-	-	-	-	-
K7BV	FN31	N	H	13240	331/40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WF4R	FM16	N	H	9536	38/21	47/23	-	32/20	-	-	-	-	-	-	-	-	-	-	-	-	-
KC2IDT	FN13	N	H	9185	36/15	41/17	23/12	22/11	-	-	-	-	-	-	-	-	-	-	-	-	-
NJ2F	EL96	N	H	4092	42/7	60/8	17/3	25/4	-	-	-	-	-	-	-	-	-	-	-	-	-
N8GLS	EN91	N	H	1769	-	61/29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KA6AMD	DM15	N	Q	12737	49/10	78/13	12/7	45/11	3/2	7/4	-	-	-	-	-	-	-	-	-	-	-
N7IR	DM44	N	Q	1420	22/7	13/6	4/2	8/3	-	4/2	-	-	-	-	-	-	-	-	-	-	-
N3AWS	EM90	N	Q	30	6/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NN5DX	EM10	N	Q	27	-	-	-	1/1	1/1	-	1/1	-	-	-	-	-	-	-	-	-	-

ROVER

Call	Grid	N	C	Points	6m	2m	222	432	903	1.2G	2.3G	3.4G	5.7G	10G	24G	47G	75G	120G	145G	240G	LAS
W3IY	ROVE	N	R	179867	116/13	224/26	126/17	136/15	62/6	73/7	38/3	24/3	18/2	23/3	-	-	-	-	-	-	-
N2JMH	ROVE	N	R	108790	95/16	138/27	90/16	83/15	17/6	24/8	20/6	15/6	14/4	12/3	-	-	-	-	-	-	-
N6DN	ROVE	N	R	50052	78/15	103/16	42/12	91/15	10/3	19/10	12/3	-	-	-	-	-	-	-	-	-	-
N2MH	ROVE	N	R	45766	95/21	118/23	58/18	69/21	-	-	-	-	-	-	-	-	-	-	-	-	-
KB1EKZ	ROVE	N	R	32266	50/11	93/20	29/7	43/9	13/5	12/4	10/4	-	10/3	-	-	-	-	-	-	-	-
K1DS	ROVE	N	R	28296	58/14	51/13	33/10	35/12	10/3	14/7	9/2	5/2	1/1	1/1	-	-	-	-	-	-	3/3
N1MU	ROVE	N	R	27880	12/5	77/23	25/10	30/10	13/2	12/2	12/2	11/2	8/2	3/2	-	-	-	-	-	-	-
N1FGY	ROVE	N	R	24522	51/12	47/9	35/9	42/9	10/4	8/3	9/4	8/3	7/3	-	-	-	-	-	-	-	-
KE3HT	ROVE	N	R	19389	27/12	36/15	24/11	23/12	8/3	8/3	8/2	5/2	6/2	-	-	-	-	-	-	-	-
KB1EAA	ROVE	Y	R	18144	108/15	78/13	22/9	29/11	-	-	-	-	-	-	-	-	-	-	-	-	-
N3LJK	ROVE	N	R	16830	72/13	56/12	30/8	36/9	2/2	8/3	4/2	-	-	-	-	-	-	-	-	-	-
N2GKM	ROVE	N	R	4104	6/1	42/7	9/2	7/1	8/1	9/1	4/1	5/1	-	1/1	-	-	-	-	-	-	-
N6ZE	ROVE	N	R	2790	19/7	38/11	-	18/9	-	-	-	-	-	-	-	-	-	-	-	-	-
K2LDT	ROVE	N	R	1936	5/1	5/1	5/1	5/1	4/1	5/1	4/1	4/1	4/1	3/1	1/1	-	-	-	-	-	-

SINGLE OP LOW POWER

Call	Grid	N	C	Points	6m	2m	222	432	903	1.2G	2.3G	3.4G	5.7G	10G	24G	47G	75G	120G	145G	240G	LAS
K1JT	FN20	N	S	125481	143/36	175/40	78/27	102/29	23/10	28/9	-	-	-	-	-	-	-	-	-	-	-
K4TO	EM77	N	S	53250	45/26	80/42	32/24	48/28	8/6	14/10	3/3	3/3	-	-	-	-	-	-	-	-	-
WB2SIH	FN31	N	S	45982	76/15	124/21	61/17	74/18	13/6	15/6	-	-	-	-	-	-	-	-	-	-	-
AI3Z	FM19	N	S	44160	101/23	104/28	54/23	54/18	-	13/4	-	-	-	-	-	-	-	-	-	-	-
KB8U	EN71	N	S	43848	71/33	84/35	35/23	45/26	3/3	4/3	3/3	-	-	-	-	-	-	-	-	-	-
K1TR	FN42	N	S	41664	86/20	76/16	42/14	52/15	12/4	14/5	7/4	4/3	-	6/3	-	-	-	-	-	-	-
K8MR	EN91	N	S	30740	63/29	89/32	33/23	36/22	-	-	-	-	-	-	-	-	-	-	-	-	-
K8WW	EM75	N	S	30030	75/28	71/28	28/21	39/26	-	2/2	-	-	-	-	-	-	-	-	-	-	-

SINGLE OP LOW POWER, CONTINUED

Call	Grid	N	C	Points	6m	2m	222	432	903	1.2G	2.3G	3.4G	5.7G	10G	24G	47G	75G	120G	145G	240G	LAS
KC6ZWT	CM98	N	S	23826	43/10	104/26	40/13	67/17	-	-	-	-	-	-	-	-	-	-	-	-	-
K9YR	EN52	N	S	22484	44/15	71/22	30/12	47/15	8/6	5/3	-	-	-	-	-	-	-	-	-	-	-
WA3EOQ	FM09	N	S	19000	17/8	49/22	35/19	33/16	-	16/11	-	-	-	-	-	-	-	-	-	-	-
VE2ZP	FN25	N	S	18954	50/20	63/26	21/15	38/19	-	1/1	-	-	-	-	-	-	-	-	-	-	-
N2FKF	FN30	N	S	18792	47/12	91/18	38/12	55/16	-	-	-	-	-	-	-	-	-	-	-	-	-
KU4R	EM86	N	S	18750	44/15	59/22	25/17	35/16	-	9/5	-	-	-	-	-	-	-	-	-	-	-
KE8RO	EN81	N	S	18542	59/22	89/28	-	53/23	-	-	-	-	-	-	-	-	-	-	-	-	-
VA3KA	FN15	N	S	15756	61/27	53/26	15/11	29/14	-	-	-	-	-	-	-	-	-	-	-	-	-
AA1YN	FN43	Y	S	14300	49/16	57/13	18/7	28/10	8/3	6/3	-	-	-	5/3	-	-	-	-	-	-	-
N6MU	DM05	N	S	13230	153/21	162/21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N0LL	EM09	N	S	12480	24/19	38/23	14/13	21/18	-	8/7	-	-	-	-	-	-	-	-	-	-	-
VE3KZ	FN03	N	S	11505	63/26	56/23	-	29/16	-	-	-	-	-	-	-	-	-	-	-	-	-
KA1EKR	FN42	Y	S	6952	12/7	41/12	21/11	24/10	-	5/4	-	-	-	-	-	-	-	-	-	-	-
VE3CVG	FN25	N	S	6936	18/6	40/18	9/8	27/17	-	2/2	-	-	-	-	-	-	-	-	-	-	-
K0VXM	EL98	N	S	6755	29/7	39/11	12/5	24/6	3/1	8/3	4/1	-	-	1/1	-	-	-	-	-	-	-
K1LPS	FN34	Y	S	6090	20/9	28/11	18/8	17/7	5/4	4/3	-	-	-	-	-	-	-	-	-	-	-
KV2X	FN13	N	S	5670	27/11	31/14	17/11	17/9	-	-	-	-	-	-	-	-	-	-	-	-	-
W1ATT	FN31	Y	S	4256	29/9	52/13	-	26/10	-	-	-	-	-	-	-	-	-	-	-	-	-
NE0P	EM04	N	S	4248	17/6	44/20	6/1	18/8	-	3/1	-	-	-	-	-	-	-	-	-	-	-
W1RS	FN42	N	S	3200	41/14	26/10	-	15/7	-	1/1	-	-	-	-	-	-	-	-	-	-	-
NL7CO	EM04	N	S	3024	-	108/28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N2MCY	FN30	N	S	2938	36/10	57/14	-	10/2	-	-	-	-	-	-	-	-	-	-	-	-	-
KG6GIQ	DM04	N	S	2507	19/7	32/8	-	29/8	-	-	-	-	-	-	-	-	-	-	-	-	-
K1WTK	FN42	N	S	2254	21/6	27/7	13/5	12/5	-	-	-	-	-	-	-	-	-	-	-	-	-
N1OFZ	FN31	N	S	2250	26/11	37/16	-	6/3	-	-	-	-	-	-	-	-	-	-	-	-	-
W4WA	EM84	N	S	1752	73/24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AG2A	FN30	N	S	1539	-	81/19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N7CZ	DN47	N	S	803	13/4	13/3	4/1	9/2	-	7/1	-	-	-	-	-	-	-	-	-	-	-
KA2FIR	FN20	N	S	442	3/2	5/3	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	-	-	-	-	-	-	-
W8PAT	EN81	N	S	322	6/6	5/4	3/2	3/2	-	-	-	-	-	-	-	-	-	-	-	-	-
N3RA	EN90	N	S	220	17/10	3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WA2CLV	FN30	N	S	200	-	1/1	-	1/1	1/1	1/1	1/1	1/1	1/1	1/1	-	-	-	-	-	-	-
W4ZY	FM18	N	S	104	8/4	5/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
K8JWT	FM09	N	S	30	6/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Club Total Score: 1375783

BUILDING BOUNCE, 10 GHZ IS ALWAYS FUN

I didn't get to operate the ARRL 10 GHz contest much more than about 6 hours out of the two weekends, but I had a great time. Saturday on the 2nd weekend Zack, W1VT and Matt, KB1VC were operating a few miles away in Westport, CT so I went down to join them with my portable station and made a couple of contacts, I operated from home for the rest of the time with about 35 QSO's total. Best DX was over 250 miles N1JEQ and W3IY.

I had heard on the 2 meter liaison frequency that Roger, K2SMN was out portable with a newly built 10 gig station. I always like adding new stations to my log so I was looking for him. Late Sunday afternoon, near the end of the contest, I found Roger on the liaison and we set up to try a contact. He was only 49 miles away in Eagle Rock Park in West Orange, NJ.....should be an easy one. We aimed the dishes and I transmitted first. I had much higher power with 1 Watt, Roger only had 18 mW. Roger found me quickly and said I was Q5 but near the noise. He transmitted but no copy, I was not surprised. He told me that he had trees in my direction but said he had a beautiful view of the NYC skyline to his East.

I am line of sight with NYC so I said, "Roger, tell you what, point your antenna at NY and I will too, I'll transmit and see if you hear me.". Sure enough he found me right away. He transmitted my 10 gig signal back to me on 2 meters and I found that I could peak up the reflection but it was very very very narrow. He and I went back and forth several times and he found a second peak that was much stronger. I sent calls and he came back Q5 for a successful contact.

This was a very interesting contact, probably the most interesting and unusual QSO I have ever had. God only knows which building it was. 10 GHz is always fun!

73, Del
K1UHF

Everything below 50MHz is D.C. !!!

DON'T FORGET

THE NORTH EAST WEAK SIGNAL GROUP
2 METER VHF AND ABOVE NET
EVERY THURSDAY NIGHT AT 8:30 p.m. LOCAL
144.250
W1COT, WZ1V, K1UHF OR K1PXE NET CONTROL

MICROWAVEUPDATE 2002
JOINT CONFERENCE ANNOUNCEMENT

MICROWAVE UPDATE 2002 SPONSORED BY N.E.W.S.

28TH EASTERN VHF/UHF CONFERENCE OF THE EASTERN VHF/UHF SOCIETY

OCTOBER 24 - 27, 2002 RADISSON HOTEL, ENFIELD, CONNECTICUT

MICROWAVE UPDATE SCHEDULE	CONFERENCE SCHEDULE
Thursday Afternoon 24 Oct Tour of ARRL Headquarters **Thursday Evening Hospitality Session hosted by DEMI**	**Thursday nothing scheduled**
Friday 25 Oct Technical Sessions **Friday evening 7 PM - Swap session for registered attendees only (of either conference)**	**Friday no sessions scheduled** **Friday evening Registration** **Friday evening Hospitality Session hosted by N.E.W.S.**
Tentative presentation schedule for Saturday:	
8 AM - Registration **8:45 AM - Welcome & Introduction** **9 AM - K1TEO "50 MHz & UP"** **10 AM - W3EP "All About Grid Squares"** **11 AM W1GHZ "Helical Feed Antennas"** **12 AM Lunch** **1 PM WA5VJB "Intro to Microwaves"** **2 PM W1JT " WSJT & JT44"** **3 PM N2CEI Updated 1296 Transverter Design**	**Saturday Lab Session w/ NF Measurements** **Saturday Band sessions-1-2PM**

Saturday Evening BANQUET Awards & Prize Drawing (First 10 prizes to Banquet ticket holders)

Sunday 26 Oct 8 AM FLEA MARKET - in parking lot Open to all
Sunday ANTENNA MEASURING

All programs from Friday night through Sunday are open to registered attendees of both conferences.

SPOUSE'S PROGRAM: Friday and Saturday, including New England foliage tour, Old Sturbridge Village, Quadrangle Museums, and, of course, shopping.

* LOCATION: Enfield, Connecticut is on Interstate Highway 91 at the border of Connecticut and Massachusetts, 5 minutes south of Springfield, MA, and 20 minutes north of Hartford, CT. The closest airport is Hartford, with a shuttle van to the hotel. Other convenient airports are Boston (about 1.5 hours), Worcester, MA, Providence, RI and Manchester, NH. Domestic fares to Providence and Manchester are often much cheaper than Boston, so comparison shop. International flights generally go to Boston or Hartford, but the New York airports are within reasonable distance if you find a bargain fare.

Reservations for the Hotel You can reach the Radisson Hotel in Enfield at 860-741-2211. When you make your reservation, make sure you mention our group code: NEWS to get the conference rate. If you'd like to share a room, but don't have a roommate, send a note to n1ekv at ratio$110.net (change the $ to an @ in the email address.) Make your hotel reservations by October 2! Send in your conference registration by October 15 to get the pre-registration discount.

** SURPLUS TOUR: The surplus dealers in New England are scattered, so an inordinate amount of driving would be required. Instead of the traditional surplus tour, we are inviting the best surplus dealers in the Northeast to setup at both the Friday evening swap session and the Sunday morning flea market. In addition, the dealers who have setup at previous Microwave Updates have promised to bring even more delectable goodies. If there is sufficient interest, it may be possible to arrange a tour of a very large dish on Thursday morning.

MICROWAVE UPDATE 2002

AND THE

28TH EASTERN VHF/UHF CONFERENCE OF THE EASTERN VHF/UHF SOCIETY
OCTOBER 24 - 27, 2002 RADISSON HOTEL, ENFIELD, CONNECTICUT

NOTICE: NEXT MEETING CHANGED!

OUR NEXT MEETING WILL BE ON SATURDAY, NOVEMBER 16TH, AT THE RADISSON HOTEL IN ENFIELD

YOUR ATTENDANCE IS NEEDED FOR THE CLUB'S ARRL COMPETITION!!

DON'T FORGET

THE NORTH EAST WEAK SIGNAL GROUP
2 METER VHF AND ABOVE NET

North East Weak Signal Group

c/o N1DPM
Fred Stefanik
50 Witheridge St.
Feeding Hills, MA 01030

Check your membership expiration date on the mailing label!!