

N.E.W.S. LETTER



The Publication of the North East Weak Signal Group

MAY 1999 VOLUME SEVEN ISSUE THREE

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 MAY 22ND, 1:00 PM AT THE HARLEY INN ALL ARE WELCOME TO THE DIRECTORS MEETING AT 11:00 AM

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

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

Well, the 2m, 220, and 432 sprints are over, the 6m sprint is ahead of us. The VHF/UHF/Microwave contests will be here before most of us can get that last transverter together.

Hamfest season has begun. By the time you read this, you'll be getting over the (check one SUNBURN __ COLD __ HANG-OVER __) that you got at Rochester along with the stuff that you just couldn't live without. Or maybe you've just returned from Dayton, mecca to hams and lovers of fine food.

Spring is in the air. That's when a young (or even an old) ham's fancy might turn to mountain-topping. Ah, the breezes. The vistas. The rocks. The fog. The crowds.

It never fails, you get set up on top of a mountain after untangling a ton of gear. Find out that you're missing a cable or two. Cobble up a cable or two from a twist-tie and a hunk of bootlace. Get the rigs warmed up. Get involved in an "almost two way" via the ESP band. Clamp on the headphones. And a kid with a dripping popsicle and a randy dog walks up and says "Hey you!" (kids never say "hey mister" anymore) "What are you doing?"

That's when some of us give the child an annoyed look, mutter something about cooking birds and small children with microwaves, and return to the almost-qso-in-progress.

I'm not sure that's the best way to represent the hobby. The kid with the drippy popsicle may be on the cusp of deciding between a hobby in computing (with all its inherent dangers and pitfalls -- obsessive behavior, excessive concentration on esoteric details, associating with a small segment of the population that actually embraces technology and speaks its own specialized jargon) and a hobby in radio (with all its inherent attractions - focused goal oriented behavior, careful attention to "the little things", the camaraderie of a small but select group of savvy folks just like us). It doesn't take much to see that our grumpy response to the child's natural curiosity isn't very constructive.

For that matter, all of us have been approached by grownups who ask the same question. That grownup may well be some other ham's (say KZ1YY's) neighbor. We may not be helping KZ1YY in his effort to put up a tower by yelling at his neighbor to "get out of the way, don't you know this stuff could cook your eyeballs out?"

So, I think it's time the mountain-topping community got its PR act together. Clip the next page out and make a bunch of copies. It is a summary sheet describing what you are doing on the mountain top. You may want to tailor the sheet to your own operation. I've used a generic "mountain-topping" scenario here. When you get a question, you can refer some folks to the handout. Most won't read it.

That's where plan B comes in. Chances are that you didn't go

up the mountain on your own. Typically there are a few ops sharing one peak. In some of the contests (most notably the microwave contests) at least one operator is sitting around waiting at any given moment. Let's make use of these moments and do a little public relations work during the downtime. Be prepared with a little patter or short explanation. Don't get too involved. Talk about how you built the equipment, or found it at a flea market, or bought it by skimping on tuition and braces for the kids or by selling that 'extra' kidney. Talk about how, no we can't talk to Rangoon from here, but that hearing a signal from a guy in Philadelphia with this stuff is like watching a TV station from Dallas. (or something like that...)

In short, let's be friendly. We don't own the mountains. (Well, we don't own many of them...) And, as anybody who's been chased off a peak by a ranger can tell you, a little PR can go a long way.

Matt, KB1VC NEWS President

See page 4 Frequenly asked questions. K1UHF Ed.

LUBES FOR YOUR ROTOR

Mobil Oil manufactures a grease usually red in color and I mean RED this stuff will last on your skin for two-three days like it has die in it. It is used in all types of applications. It can withstand extreme temperatures and does not change it's viscosity. It is called Mobil Grease 24. Even better is a product called LOK-CEASE by Certified Laboratories, they were located in Kenda Park, NJ Mountain View, CA and Ft Worth Texas when I acquired the 1 pound plastic container. This compound which looks like aluminum paste can withstand temperatures in the following range. 1204C and-60 below. It does not harden and fuse to metals even in extreme cold. I put it on a thrust bearing and it lasted 9 years when I took the tower down the bearing was still nice a coated with it and it only had drawn some dirt and grime because the bearing did not have a cover on it. In addition when used with dissimilar metals it prevents corrosion and prevents them from sticking. Only one caution on the container. " Do not use with materials where it can contact fluorinated compounds such as Teflon or telmors of Teflon"

By the way you can use it on all nuts bolts, flanges and metal joining surfaces, pulleys cables, etc., to prevent them from locking up or galling.

>It has worked for me for over 20 years and the 1 pound container is still 7/8 full. It doesn't take much to do the job.

Regards, Don W6PJJ

Taken from a "DeIce your rotor" thread on the VHF Reflector from internet, K1UHF Ed.

NEWS GROUP BOARD MEETING 3-13-99

President Matt Reilly opened the meeting at 11:32 AM.

Old Business:

From WA1MBA: WZ1V has obtained software for our newsletter

From W1GHZ: Incorporation may cost as much as \$1000 for legal fees. We need to see if the benefits would justify this. Paul will check with the ARRL on this.

From WZ1V: No luck on obtaining the W1RJA license plate. From W1TDS: We should present the Hotel with a plaque for their cooperation in providing us with a meeting & conference site.

From W1GHZ: Paul will donate a gunnplexer for mounting on the plaque.

From WA1MBA: Logo should be discussed at the general meeting.

New Business:

The Board voted to endorse the new rules for the Annual Cumulative Microwave Contest.

Times Microwave Engineer and Sales Rep., Al Kushner be our main speaker at today's general meeting.

The Board Meeting was adjourned at 12:02 for lunch.

Respectfully submitted Mark Casey, Secretary

NEWS GROUP GENERAL MEETING 3-13-99

President, Matt Reilly, KB1VC, opened the meeting at 1:10 pm

Old Business:

Anyone who has a proposed logo must bring it to the May meeting for consideration. The logo will be voted upon at that time.

NEWS will coordinate the weak signal spectrum above 50 Mhz in the northeast US as outlined in our plan.

Please submit information and comments on the proposal for a ham bands in 72-76 Mhz to Mark Casey, K1MAP at map@map.com

From Bruce, N2LIV: The Eastern VHF Conference will be held Aug 27-28-29. Lectures and Band Sessions will run concurrently. The lab will start around 2:30PM Sat. Bruce needs donations of prizes and papers for the proceedings (Due June 1).

New Business:

The Timonium, MD Hamfest is a great place to find microwave building blocks. It is March 27-28.

MIT Fleas start April 18 and are held the third Sun of each month from April to Oct.

From Fred, N1DPM, Treasurer: We have approx \$2100 and 180

members.

CY9SS, St Paul Is will be activated on 2 meters from June 6-14 Please e-mail your scores for this years Cumulative Microwave Contest to Matt, KB1VC.

From Ron, WZ1V: NEWS will sponsor the 432 sprint. Send your entries to Ron

Since the duct tape auction was so well received, NEWS will have this again in the future.

We took a break at 2:05PM

Matt reconvened the meeting at 2:19PM.

Mr Alan Kushner, and Engineer and Sales Representative from Times Microwave gave a well received presentation on coaxial cable and connectors. Mr Kushner stayed on to answer many questions after his talk.

Thank-you, Mr Alan Kushener for making this NEWS meeting another great success.

36 Member and Guest were in attendance.

Respectfully submitted, Mark Casey, K1MAP, Secretary

RESOURCES FOR METALBASHING W1GHZ 1/2/99

* Online

1. Introduction to Machine Tools (mpeg videos): http://me.mit.edu/2.70/machine/outline.html 2. Advice on buying a used lathe: http://www.mermac.com/advice.html 3. Auction advice (BEWARE!) http://www.mermac.com/auction.html 4. Newsgroups: http://www.phoaks.com/phoaks2/newsgroups/rec/crafts/metalworking/

* Books & Videos 5. How To Run A Lathe by Southbend (1942) Lindsay Publications, PO Box 538, Bradley, IL, 60915. 815-935-5353 http://www.lindsaybks.com/prod/index.html 6. Care & Operation of a Lathe Lindsay Publications 7. Basic Lathe Operation Video Lindsay Publications 8. Milling Machine Operation Video Lindsay Publications 9. Tabletop Machining by Joe Martin Sherline (see below) http://www.sherline.com/~sherline/bookplug.htm 10. Machinery's Handbook http://www.industrialpress.com/handbook/index.html

* Magazines 11. The Home Shop Machinist : http:// www.villagepress.com/homeshop/ * Suppliers 12. Sherline (small lathe and milling machine) http://www.sherline.com/~sherline/ index.html 13. MSC, 151 Sunnyside Blvd, Plainview, NY, 11803. 800-645-7270 (BIG catalog) http://www.mscdirect.com/ 14. ENCO, 800-873-3626 (imported machinery & tooling, reasonable quality) http://www.use-enco.com/15. Grizzly, 2406 Reach Road, Williamsport, PA 17701. 800-523-4777 (imported machinery) http:// www.grizzlyimports.com/ 16. Harbor Freight, 3491 Mission Oaks Blvd., Camarillo, CA 93011. 800-423-2567 (cheap imported stuff) http://www.harborfreight.com/ 17. Blue Ridge Machinery & Tools, Box 536, Hurricane, WV 25526-0536, 304-562-3538 (Unimat, tooling) http://www.blueridgemachinery.com/index.htm 18. Eastern Tool & Supply, 149 Grand St, New York, NY, 10013, 800-221-2679 (Sherline at discount) * Dealers 19. Meridian Machinery, 85 Allen Blvd. Farmingdale, NY 11735 (used machinery & accessories, used and new tooling) http://www.mermac.com/index.html 20. EDR, 8C Tinkham Ave, Derry, NH, 03037. 603-437-2993 (Surplus stuff)

MILLENNIAL CUMULATIVE MICROWAVE CONTEST PROPOSAL

Purpose - to encourage microwave activity year round.

Goal - to work as many stations in as many grids as possible, and to encourage new microwave operators.

Period - January 1, 2000 to December 31, 2000

Rules:

- 1. A station may be worked once in each 4-digit grid square on each band above 2300 MHz from any 4-digit grid square.
- 2. Either station may move to another 4-digit grid square for additional contacts.
- 3. Exchange is 6-digit grid square, or 4-digit grid square with penalty. If an operator doesn't know what planet he is on, it doesn't count.
- 4. All contacts must be at least one kilometer and between different 6-digit grid squares, with the exception of a station's initial contact on a band, which may be any distance. All modes are permissible.
- 5. Grid circling and other manufactured contacts are prohibited. If it feels like a manufactured contact, don't do it.
- 6. There is no rule 6.
- 7. Any form of liason is acceptable: lower frequencies, internet, telephone, cell phone, semaphore, or whatever.
- 8. Equipment may only be used for one callsign per calendar month, except for members of immediate family. Thus a spare rig may be loaned out to different operators, but only one operator per month. (A new vanity or upgraded callsign is the same operator.)
- 9. Cooperation and amateur spirit are encouraged. This ain't a DX contest.
- 10. Any mode that allow exchange of information is permitted, within rules of FCC or other licensing authority.
- 11. Have fun!

Scoring:

- 1. Each contact scores one distance point for each kilometer distance between the 6-digit grid squares, as calculated by the BD program. 2. If only 4-digit grid square is exchanged, then distance is calculated to the corner 6-digit square which produce the smallest distance.
- 3. EME contacts use terrestrial distance if grid squares are exchanged, as above. If only TMO reports are exchanged, then the contact is scored as 500 distance points.
- 4. Multiplier: Each unique combination of 4-digit grid squares between which a contact is made is a multiplier of one for each band below 24 GHz, and a multiplier of two for bands at 24 GHz and up. All colors of light count as one band.
- 5. Bonus points: Each new callsign worked scores 100 bonus points. If a station changes callsign during the year, each may be counted. (This relieves other stations of keeping track of all the vanity changes.)
- 6. New band bonus: Any contact made on a band where the operator has never ever made a contact before scores an additional 1000 bonus points. This means once in a lifetime for each band.

7. TOTAL SCORE = distance points X multipliers + bonus points.

LOGS: should be submitted by 31 January 2001 to N.E.W.S. Summaries will be posted on the internet as received so you know the logs aren't lost. The internet site will allow interim results to be posted during the year to encourage activity.

AWARDS: The highest total score in North America will receive a gaudy trophy. If there is a higher score in the rest of the world, a second trophy will be awarded. Second and third place entries will receive a plaque, and fourth thru tenth places will receive a certificate. All entrants will be listed on the internet.

Comments on this proposal are welcome, in written form, please. They should be addressed to the N.E.W.S. president, KB1VC, at reilly@tiac.net or the callbook address.

FREQUENTLY ASKED QUESTIONS

WHAT ARE YOU DOING UP HERE? We are amateur radio operators. We are hobbyists who build and operate radio equipment for the fun of it.

CAN YOU TALK TO FRANCE WITH THAT THING?

Nope. These radios use very high frequency radio waves, just like your television at home. But our receivers and antennas are sensitive enough so that we can hear stations hundreds or even thousands of miles away. Today we'll probably talk to some folks who are set up on other mountains in the north east. Some of them will be three hundred miles away or more.

WHAT IS THAT DISH THING FOR? ARE YOU WATCH-ING SATELLITE TV TOO? That is the antenna for a portable microwave radio station. We can't watch satellite TV, but we can hear stations that are pretty far away. Almost all of the equipment connected to that dish is home built.

IS ANY OF THIS DANGEROUS? Not unless you trip over it or stand really close to it. Staying at least three feet away is a good idea: the wind blows all sorts of stuff over on this mountain.

SO, WHY DO YOU DO THIS? Well, today a bunch of the hams (amateur radio operators) in this area are having a contest. The object is to contact as many different stations in as many different places over the next two days. Contests are fun, and they give us all a chance to try out new equipment and techniques and mountain-tops.

THAT SOUNDS NEAT. WHERE CAN I GET MORE INFORMATION? There is a national club that has all kinds of information on Amateur Radio. How to get into the hobby. How to get a license. Where to find other hams who can help you get started. They're on the web at http://www.arrl.org That's probably a pretty good place to start.

BRENDAN TROPHY NOTICE

Brendan Trophy Bulletin Number 3 dated 19990412 by Pedro M.J. Wyns ON7WP-AA9HX

For those who missed the rest:

Purpose: to cross the atlantic ocean on 144 Mhz using tropoducting or other propagation means.

We got some response to our bulletins calling for participants in this trans-atlantic effort, but mainly from the US-side. We would like to see this being the first multi-station effort in order to maximalise the chances of succeeding in this trans atlantic VHF-experiment.

Being until now the only european participant, we would like to inform all interested parties about our timing schedule. We would start transmitting on 5 juli 1999 until 13 juli, the first two dates for testing and setting up the equipment as this is also a major european contest weekend. 24 hours a day operation is provided.

We would like to operate from the west coast of portugal near to the city of Porto. The gentle Irish offer we had to refuse because of huge transportation expenses for crossing the channel with two cars and trailers. The canary islands issue is out of the question because of the impossibility to use airplanes for carrying huge antenna systems.

We are now waiting for clearance to use a private property with 230 Volts supply.

The mode of operation will be PSK or CW. PSK looks nice but requests a perfect transmitting/receiving frequency knowledge, not so obvious for todays VHF transceivers. We have access to reference frequencies but not everybody does. We would like to put our signal close (+/- 5 kHz) to the european calling frequency 144.300.

We would like to use 4 pieces of F9FT 16 element yagis on a 20 meter telescopic tower on the coast line and a kilowatt. We think about transmit/receive in a 30 second rythm as used in EME-practise.

As long as we are alone at the European side of the scene, this operation is in doubt. We would appreciate help from Irish and EA-8 collegues if possible, so let us hear of you please.

All info and feedback appreciated ...

pedro.wyns@emmaus.be or packet radio ON7WP@ON0RTB.#BR.BEL.EU

We would like to organise a 20 meter round table QSO to meet the other parties saturday 24/4/1999 at 18:00 UTC on 14.180 MHz. Be there...

Joost Luyten, ON2BBP

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:
- 2.5. 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).

50 Mhz SPRINT -

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

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

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

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/

THE NOR	TH EAST WEAK SIGNAL GROUP'S	Call	Grid QSOs Grids Total
· · · · · · · · · · · · · · · · · · ·	SPRINT REPORT TOTALS	WZ1V	FN31 36 17 612
3	SPRINT REPORT TOTALS	K1TR	FN42 27 13 351
		KB0VUK	EN34 29 12 348
	144	W3EKT	FM19 27 12 324
G 11		W1PM	FN41 27 10 270
Call	Grid QSOs Grids Total	WA2ZFH	FN30 27 9 243
K3MM	FM19 226 48 10848	NY1E	FN43 24 10 240
K1TEO	FN31 186 32 5952	W3SE	DM04 23 8 184
K1UHF	FN31 172 32 5504	KB0NES	EN34 21 8 168
K2TXB	FM29 151 34 5134	K3GNC	FN20 20 8 160
K1RZ	FM19 120 33 3960	W4EUH	FM18 19 8 152
W2KV	FN20 124 27 3348 FN12 88 33 2904	W1COT	FN31 18 8 144
KA2RDO		AA3GN	FN20 20 4 80
VE3AX		K7XW	CN96 9 5 45
K3GNC		K0GU	DN70 9 5 45
WA2BPE WZ1V	FN12 63 27 1701 FN31 86 19 1634	K5TR	EM00 6 5 30
	FM19 68 22 1496	KD4K	EM74 6 5 30
W3EKT WA3DRC	FN20 78 18 1404	N7AU	DN07 9 3 27
WASDRC W3SE	DM04 89 15 1335	N0KE	DM69 6 4 24
	EN52 61 22 1342	N0YNP	DN81 4 3 12
K9YR	EN32 01 22 1342 EN34 50 19 950	WD0BQM	DN81 4 3 12
W0OHU N6OPR	ROVER 69 14 966	N2MH	FN20 4 3 12
WA2ZFH	FN30 63 13 819	VE2PIJ	FN35 2 1 2
N2MH	FN20 58 11 638		
KB0VUK	EN34 42 15 630		432
W1COT	FN31 46 13 598	K1TEO	FN31 104 26 2704
KC8LGL	EM89 35 17 595	W0RSJ	FN20 62 21 1302
N1RWY	FN54 45 13 585	WZ1V	FN31 63 16 1008
W1PM	FN41 44 12 528	K1UHF	FN31 61 16 976
N6DN	DM14 40 11 440	AA3GN	FN20 52 16 832
KF6LT	DM06 34 12 408	WA3DRC	FN20 45 17 765
KI4M	EM95 40 10 400	W3EKT	FM19 40 17 680
KD4K	EM74 29 11 319	K3GNC	FN20 44 13 572
KC2EBH	FN03 22 12 264	K1TR	FN42 42 13 546
N0KE	DM69 24 8 192	K8BKM	EN82 27 18 486
KQ6BS	DM03 34 5 170	W1COT	FN31 44 11 484
N1MU	FN13 20 8 160	K2YAZ	EN74 19 17 323 FN20 35 6 210
N1MJD	FN34 16 8 128	N2MH WA2ZFH	FN30 24 8 192
K7XW	CN96 19 7 133	WAZZITI W1PM	FN41 21 8 168
N8VEA	EN91 13 9 117	KB0NES	EN34 23 6 138
KF6MXK	CM87 20 4 80	W1ATT	FN31 21 5 105
N2GKM	EM83 12 6 72	N6DN	DM14 21 4 84
KB0NES	EN34 13 4 52	K7XW	CN96 14 6 84
WV2C	FN30 10 5 50	N3XJX	FN10 11 7 77
VE2PIJ	FN35 3 1 3	K9RQ	EN 61 8 8 64
		KB1VC	FN42 12 5 60
	222	KC2BMA	FM29 13 4 52
VE3AX	FN02 58 31 1798	N0KE	DM69 8 5 40
N2CEI	FN20 70 23 1610	N1RWY	FN54 8 5 40
K1TEO	FN31 62 22 1364	N9TZL	EN52 7 5 35
K1UHF	FN31 54 20 1080	N8VEA	EN91 8 3 24
KA2RDO	FN12 37 21 777	K9YR	EN52 4 4 16
K8GP	FM18 52 13 676	KF6MXK	CM87 6 2 12
WA2BPE	FN12 33 19 627	K3IXD	FM19 5 2 10

NEWS MEMBER LIST

JACK NYIRI	AB4CR	Lavington	KY	EM77	ABCD9EFIJ	Dwight P. Smith	N2FMC	Channagua	NY	FN31cd	ABCDE
Tom Perkins	AC1J	Lexington Bedford	NH	FN42	ABCD	MIKE DJIRDJIRIAN	N2HPA	Chappaqua Wappingers Falls	NY	FN31cu	BCD9FI
John Balboni	AC1T	Agawam	MA	FN32	ABCD	BRUCE WOOD	N2LIV	NESCONSET	NY	FN30ku	ABCD9EF
DALE P. CLEMENT	AF1T	HENNIKER	NH	FN43cd	ABCD9EFGHI	HANK LOPEZ	N2MSS	TAPPAN	NY	FN31aa	ABCD9Ei
JOHN SZELKA JR.	AI1K	JOHNSTON	RI	FN41gt	ABD	LILI LOPEZ	N2RDN	TAPPAN	NY	FN31aa	ABCD9EI
MARK TOUSSAINT JOHN ALLEN	AJ1X K1AE	MIDDLETOWN Bolton	CT MA	FN31 FN42ei	ABD ABCD	Rupert Lubkemeier RICK METZ	N2OTO N2PLQ	FLUSHING TOMKINS COVE	NY NY	FN30	BD AB
Al Torres	K1AE K1AST	Warwick	RI	FN42ej FN41	ABD	Richard Byrne	N2UKB	Denville	NJ	FN31ag FN20	ABD
Dave McManus	K1DAM	West Greenwich	RI	FN41	ADD	SCOTT KRONE	N2YCA	Watervliet	NY	FN32	ABCDE
Bill Olson	K1DY	Troy	ME	FN54		Burt Hart	N2YYU	Red Hook	NY	FN31	
BETSY DOANE	K1EIC	SHELTON	CT	FN31	BDI	Russ Blitz	N3EMF	White Plains	NY	FN31	
STEVE POWLISHEN	K1FO	MADISON	CT	FN31qj	CDE	ABCD9EFGHI				TD 54.0	
Tom Nelson ALAN KOEPKE	K1IM K1JCL	Arlington COVENTRY	TX CT	FN33 FN31	ABD ABD9E	Dave Meier ABCD9EFGHIJ	N4MW	New Kent	VA	FM17	
LARRY FILBY	KILPS	Danville	VT	FN34wl	ABCD9EI	DAVE MEIER	N4MW	NEW KENT	VA	FM17kn	
RAE BRISTOL	K1LXD	COVENTRY	CT	FN31	AB	ABCD9EFGHI		1121111111		111111111	
MARK CASEY	K1MAP	HAMPDEN	MA	FN32	ABC	JOE LYNCH	N6CL	OKLAHOMA CITY	OK	EM15	
Joe Sefcik	K1NCO	Milford	CT	FN31	ABCDE	Alan A. Carpin	NA1W	Springfield	MA	FN32	ABCD9EFG
John Swiniarski	K1OR	Pelham	NH	ENIO	A D CDE	LOU MARCHESE Jr.	NB2T	COLLEGE POINT	NY	FN30	В
Peter Motyl Robert Knott	K1PXE K1RWK	Milford West Kingston	CT RI	FN31 FN41	ABCDE AB	Shawn McCORMICK FRANCIS M POTTS	NC1B NC1I	Wilbraham SOUTHWICK	MA MA	FN32 FN32	D
STEPHEN GILBERT	K1KWK K1SG	HOPKINTON	MA	FN42	AB	Bob Morton	VE3BFM	Everett, Ontario,		FN04ae	ABCD9EFI
Jeff Klein	K1TEO	Trumbull	CT	FN31	ABCD9EFG	Chip Taylor	W1AIM	Cabot	VT	FN34uj	ABCD9EI
EDWARD PARSONS	K1TR	WINDHAM	NH	FN42	ABCD9E	Bob E. Leiper	W1COT	Vernon	CT	FN31	ABD
DEL SCHIER	K1UHF	RIDGEFIELD	CT	FN31fh	ABCD9EFI	John Bilodeau	W1GAN	Ringe	NH		BD9EF
RONALD W. SIZER	K1VYU	WESTBROOK	CT	FN31	ABD	PAUL WADE	W1GHZ	SHIRLEY	MA	FN42en	ABCD9EHI
DAVID OLEAN	K1WHS	WEST LEBANON	ME	FN43	ABCD9EFGHIL	Joseph Pollard JR	W1GRW	Uncasville	CT	FN31	
W. PAUL WING	K1WVX	SUFFIELD	CT VT	FN31px	ABD	LEWIS D COLLINS	WIGXT	WAYLAND Foot Croomwich	MA	FN42	
PETER E. HAYES JUDSON SNYDER	K2AEP K2CBA	WEST DOVER PETERSBURGH	NY	FN32	ABCDE	John McManus Theodore Simmington Jr.	W1JJM W1JOT	East Greenwich Needham	RI MA	FN41 FN42	
ROCHESTER VHF	K2IV	ROCHESTER	NY	11132	ABCDL	JOSEPH REISERT	W1JR	Amherst	NH	FN42ev	ABCD9EFI
Bill Sheets	K2MQJ	Hartford	NY	FN33	ABD9E	ERNIE GRAY	W1MRQ	EPPING	NH	FN43	ABCFI
LEITH MANGELS	K2SBI	MAHWAH	NJ	FN21	BD	Thomas Leiper	W1NWE	Enfield	CT	FN31rx	BD
Stephen Harold	K2SH	Lewiston	NY	FN03	BDIL	Stratford ARC	W1ORS	Stratford	CT	FN31	
DAVE RIPTON	K2SIX	MORRIS PLAINS	NY	FN20	AB	STRATFORD ARC INC		Huntington	CT	FN31	ABC
GERRY RODSKI	K3MKZ	MOUNTAINTOP	PA	FN20	. n an anna	Anthony Medeiros Jr.	W1PM	Seekonk	MA	FN42it	ABCDE
STEVE ADAMS	K4RF KA1CXD	CORNELIA	GA VT	EM84dj FN32	ABCD9EFGH	BOB McCORMICK DAN FEGLEY	W1QA W1QK	FEEDING HILLS BROOKFIELD	MA CT	FN32 FN31	BD ABCD
Wayne Hilliard MICHAEL DEMAREE		Shaftsbury FRAMINGHAM	MA	FN42	ABCD	Richard Stevens	W1QK W1QWJ	Winchester	NH	FN32	ABD
Bryan King	KA1FQT	Merrimack	NH	FN42gv	ABD	KEN SCHOFIELD	WIRIL	PAXTON	MA	FN42	ADD
Mark Foster	KA10J	Northboro	MA	FN42eh	ABCD9EF	ABCD9EFGHI					
Eric Mazur	KA1SUN	Savoy	MA	FN32ln	AB9EI	Arthur R. Needham	W1TDS	Windsor	MA	FN32	ABD
STAN HILINSKI	KA1ZE	TOLLAND	CT	FN31	ABCD9EFGH	Tom Olsson	W1TKO	West Greenwich	RI	FN41	
Bill Fernandez	KB1CIE	Chelmsford	MA	FN42	ABD	JAY RUSSGROVE	W1VD	BURLINGTON	CT	FN31	
Peter Budnik	KB1HY	Burlington	CT	FN31	ABD	Zack Lau	W1VT	NEWINGTON	CT	FN31	
Paul Cianciolo	KB1RP KB1VC	Harwinton Stow	CT MA	FN31 FN42	BDL	ABCD9EFGHIL James Frier JR.	W1XF	Easton	CT	FN31	ABD
Mathew Reilly PHIL BRADWAY	KB2HQ	NISKAYUNA	NY	FN32		Jim Welch	W1XF W1XR	Dover - Foxcroft	ME	FN55	ABD
David Kolat	KB2TGR	Elizabeth	NJ	FN20	В	John Lindholm	WIXX	West Hartford	CT	FN31	ABCD9E
Randy Christman	KB2ZVP	Amsterdam	NY	FN22	ABD	Richard Bardin	W2CCP	Schenectady	NY	FN32	В
Nick Magliano	KC1MA	Medford	MA	FN42	BCD	DON KLEIN	W2GKR	POUGHKEEPSIE	NY	FN31	AB
BRUCE PIGOTT	KC1US	BEDFORD	MA	FN42il	BD	Bob Fisher	W2SJ	PENNSAUKEN	NJ	FM29lm	ABCD9EFG
JIM PIERSON	KC1ZN	Denver	CO		BD9E	Emil Pocock	W3EP	Lebanon	CT	FN31	ABD
Harold Abbott	KC2BTS	New York	NY	CNOS	ADCD	CHEESE BITS	W3IIT	NORRISTOWN	PA	ENIO	DDEE
P. George Yazzolino Richard Cosma	KC7HKP KD1BF	Vancouver Framingham	WA MA	CN85 FN42	ABCD B	Roger Rehr MIKE VALENTINE	W3SZ W8MM	Reading Cincinnati	PA OH	FN20 EM79sd	BDEF ABCD
Maarten Broess	KD1DZ	Lincoln	RI	FN41	ABD	Paul Chisinski	WAIGMN	New Ipswich	NH	FN42	BD9
Jeffrey Reopell	KDISE	Pittsfield	MA	FN32	ABCD	Dennis Hennigan	WAIHOG	Rindge	NH	FN32	BCDE
Frank J. Carr	KE1GB	Riverside	CT	FN31	BD	THOMAS WILLIAMS	WA1MBA	SHUTESBURY	MA	FN32sl	BD9EFG
Philip Hejtmanek	KF9US	Rochester Hills	MI	EN82	ABCDEI	ROBERT JOHNSON	WA10FR	W. BRIDGEWATER	MA	FN42ma	ABDHI
Sigurd Kimpel	KJ1K	Pittsfield	MA	FN32		Everett Paluska	WA10HR	Windham	CT	FN31	
Jerry Scheimberg	KN4SM	Suffolk	VA	FM16qt	ABD	Paul Koplow	WAIVED	Shutesbury	MA	FN32	AB
Steve Harrison Nick Ferro	KO0U/1 KU2A	Northboro New Boston	MA NH	FN42dg FN42	ABD	SHAUN CURRY Robert S. Feltmate	WA1YLP WA1ZJE	PEACE DALE Norton	RI MA	FN41 FN42	В
WALTER YATZOOK	N1CJB	MERIDEN	CT	FN31	BD	Richard Frey	WA2AAU	Delanson	NY	FN22	
FRED STEFANIK	N1DPM	Feeding Hills	MA	FN32	ABCD9EFGH	ABCD9EFGHIJ					
Byron Blanchard	N1EKV	Lexington	MA	FN42	BD	WALT HAGEN	WA2ALV	QUEENSBURY	NY	FN33dh	ABCDE
Stephen Flood	N1FZH	Pittsfield	MA	FN32	AB	Doug Moser	WA2LTM	Cranbury	NJ	FN20	
George Jones	N1GJ	Stow	MA	FN42	ABCDE	John Monaghan	WA2TLF	Highland Lakes	NJ	FN21se	ABDEI
JAMES HOOVER Jim Evans	NIHOV	TORSHAM	ME	FN53	ABD	Joseph S. Cipko	WA2ZFH	Whitestone	NY	FN30cs	ABC
BARRY DUTCHER	N1HTS N1IA	Tewksbury MAYNARD	MA MA	FN42 FN42	BD ABD	Ladimer Nagurney Byron Tatum	WA3EEC WA5TMJ	AMHERST Alvin	MA TX	FN32 EL29	ABCD9EI ABCD9E
Steven Jones	NIJHJ	Concord	NH	FN43de	ABD	KENT BRITAIN	WA5VJB	GRAND PRAIRIE	TX	EM12	ABCD3E
Doug Metheny	NIJNW	Manchester	CT	FN31	ABCD	Brad Noblet	WA8WDQ	Londonderry	NH	FN42	ABD
Bill Woodhead	N1KAT	Auburn	ME	FN44vc	ABCD	TOM WHITTED	WA8WZG	PORT CLINTON	OH	EN81ol	
PAUL LIAPIS	N1LZK	HAMPDEN	MA	FN32	В	ABCD9EFGHI					
John DeNardo Jr.	N1MUW	WESTFIELD	MA	FN32	ABCDE	Roger Arnold	WB1BXJ	Uncasville	CT	FN31	A
Dave Hungerford	NIOLX	BETHANY	CT	FN31	ADD	David Upton	WB1CMG	MOUNT VERNON	NH	FN42	ABCD9E
Tom Beach Norm Forest	N1OPO N1PF	West Hartford	CT MA	FN31 FN32	ABD ABD	DON TWOMBLY ABCD9EFGHI	WB1FKF	WOBURN	MA	FN42jk	
Harry White	N1PF N1QVE	Springfield Litchfield	MA CT	FN32 FN31jr	ABCD9EI	DAVID BOURQUE	WB1FLD	DERRY	NH	FN42iw	BD
Jason Baack	NIQVE	Frankfort	ME	FN51Jr FN54no	ABD	Thomas Qualtieni	WB1GMA	Westwood	MA	FN42iW FN42	ABDE
Nick Nicholson	N1RXM	New Hartford	CT	FN31ls	ABD	RICK ANDERSON	WB2QOQ	NEW PROVIDENCE	NJ	FN20	B
David Hamm	N1SAG	New Hartford	CT	FN31	ABD	CHRIS FAGAS	WB2VVV	PARK RIDGE	NJ	FN21xa	ABCD9EI
Alex Stockmal	N1TIV	Bethel	CT	FN31	ABCD	DAN WHELAN	WB2WHD	DELANSON	NY	FN22	ABCDEFI
Vincet Coppola	N1VC	Terryville	CT	FN31	BDI	Paul Swedberg	WB8TSL			FN31	
Philip LuPresto Jr.	N1VWX	Stonington	CT	FN31	B	SCOTT SMINKEY	WO1G	Chelmsford	MA	FN42	ABC
John Goodwin Roger May	N1XYB N1YAF	Framingham Waterbury	MA CT	FN42 FN31	ABD ABD	John T. Rose DAVID J ROBINSON	WW1Z WW2R	Amherst SAN ANTONIO	NH TX	FN42et EL09	ABCD9EI ABCDEFHIJ
STEPHEN KOSTRO	N1YAF N2CEI	FRENCHTOWN	NJ	FN20ml	ABCD	Ron Klimas	WZ1V	Bristol	CT	FN31mp	ABCD9EFG
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LIGHTNING PROTECTION BY "GEO" KOFF

Lightning takes the form of a pulse which has a rise time of about 2microseconds and a decay time of between 10 and 45 microseconds. The IEEE "standard" strike is 8x20 us with a current average of 18,000 amps for the first impulse and about 1/2 that for the second and third. An average strike will have 3 stroke. Lightning protection systems are designed to deal with a direct strike. Their primary function is to ward off a direct strike by providing a protection zone of about 150 feet in a ball around them Most damage is not caused by a direct strike, but by huge voltages induced in conductors due to the EMP from a NEARBY strike. Ringing voltages are also set up in antennas at their resonant frequencies and this on-frequency pulse can cause damage to equipment.

The electrical resistance of the tower, feedline and ground cable is not nearly as important as its' INDUCTANCE. Since lightning is not DC but a complex waveform, the inductance must be kept low so as to shunt the current to ground. Thin copper strapping works better that thick round wire. Several ground rods work better than one huge rod. The green wire in the A.C. "safety cord' is useless as a ground for lightning since it has a high inductance (especially if coiled!)

Coax should come all the way down to the bottom of the tower before entering your house. Any point above the bottom will be at some potential, just like a voltage divider. If the top of the tower is at say 240 KV, and the bottom is zero, then a point halfway up must be at 120KV! Ideally the outer shield would be grounded at the point where it enters you house through a conductive plate which has a good ground attatched. This plate should then become the point at which ALL grounds in the system terminate. It must also be bonded to the electrical box ground rod and the telephone ground rod (if serarate). This is what is known as SINGLE POINT GROUND SYSTEM. It is the zero voltage reference for the whole system. Your TVI filters and lightning supressors should also be located here. "Grounding" everything to a different "ground" is counterproductive, as ground-loop currents can be set up and actually be the cause of damage during a strike, as well as promoting TVI.

At K0FF, all the coax cables, telephone lines, rotor and Beverage box lines, and remote coax relay lines, terminate at a 7 foot relay rack in the basement just under the first floor ham shack. On thick aluminum panels, I have mounted all the Polyphaser lightning supressors for coax , telco, and control lines. On another panel is mounted the HF-VHF-UHF TVI filters and the first set of remote coax relays. At the bottom of the rack is mounted a 150 Amp 12VDC power supply, and another 50 Amp backup power supply. Each panel is bonded to the relay rack at a single point, which then goes to an extensive ground system. In the shack, the room is ringed by a 1/4 inch thick by 2 inch wide copper ground buss with 1/4 inch holes drilled every 6 inches.

Each piece of equipment in the shack is bonded to that buss with a multistrand cable with crimped (not soldered) terminals. The A.C. power is bypassed first with a shunt protector (M.O.V.) and then with a commercialseries protector which is also bonded to the buss with 2" copper strap. The buss in turn is attached to the single point grounding system with copper strap. A main switch at the desk activates all the power and also turns on the power supplies in the basement. When the switch is OFF, all the coax relays drop and ground the center conductors of the coax. A few turn coil in the coax, laid on the concrete floor, between the lightning supressor and the rig acts like a choke, further protecting the rig.

At the towers (5 so far) each leg is grounded with 2" copper strap each going to 1 to 3 buried ground rods. Sharp bends in the starp are avaoided, as they raise the inductance.. My towers are self-supporting, but if they had metal guy wires, I would have grounded the bottom end of the guy wire BEFORE the turnbuckle to prevent strike current from passing through the turnbuckle, possibly exploding them and causing them to fail.

Basic Rules:

There is but ONE grounding system. ALL ground rods shall be interconnected. Ground the coax shield AT THE SINGLE POINT GROUND. Provide a series type coax lightning supressor. Treat ALL methods of ingress: i.e. Telco, rotor control, coax, coax relay control, A.C., etc. Run coax all the way to the bottom of the tower. Ground guy wires before the turnbuckles. Protect the connections with joint grease, then bury the ground rods this is also a safety factor.

Lightning can't always be avoided. Damage to HAM equipment can be minimized in a direct hit, and nearly eliminated in nearby hits (the most common). You can take precautions that should save your life and your house.

DE George "GEO" K0FF

25TH ANNUAL EASTERN VHF/UHF CONFERENCE

25th Annual Eastern VHF/UHF Conference will be held on August 27-28 once again at the Harley Hotel in Enfield, Ct. We will have it all this year - Guest speakers, Band Sessions, Lab Sessions with live demonstrations, Antenna measurements, flea market and more. Articles for the Conference Proceedings should be submitted by June 1, 1999 in camera ready format to Bruce Wood - N2LIV, 3 Maple Glen Lane, Nesconset, NY. Let's all set this weekend aside and make it a gala 25th. Any questions please call Bruce at (516) 265-1015 (h) or 225-9400 (w) or e-mail at bdwood@erols.com

We still need help with regestration at the door and mailing announcement/flyers, if interested please contact Bruce N2LIV.

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DO IT YOURSELF 10 GHZ KIT, I had started a second rig and no longer need it since I acquired several others. DEM 28-432 converter, Frequency West Brick LO w/crystal, 12-24 DC-DC Converter, mixer and splitter, 1 watt Qualcomm PA, Qualcomm LNA, Qualcomm power sup ply, chassis and case all predrilled. Needs antenna and control relays, which I may be able to help with. All documentation included. I have used a similar rig for several years now. \$550.00

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LOOKING FOR: Heavy duty 19" rack shelves and 8" rack handles. Need 3 of each.

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MARCONI TT2300B FM/AM MODULATION METER / RECEIVER 90							

ALL OF THE ABOVE IS TESTED IN GOOD WORKING CONDITION BUT NO CABLES, MANUALS OR ACCESSORIES. Del Schier, K1UHF, 126 Old West Mountain Road, Ridgefield, CT 06877 day: 203 299 0233, eve: 203 431 4233

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NEXT N.E.W.S. GROUP MEETING SATURDAY MAY 22ND 1:00 PM AT THE HARLEY HOTEL

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).

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