

N.E.W.S. LETTER

The Official Publication of the North East Weak Signal Group – <http://www.newsvhf.com/>

July 2017

Volume 26

Issue 4

NEWS Group Annual Picnic! **Saturday July 8, 2017**

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MEMBERSHIP in the N.E.W.S Group is \$15 per year.
Apply to John Crawford, N2OY. E-mail: n2oy.vhf@gmail.com.
You may download an application from our web page: <http://www.newsvhf.com>

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Send articles by e-mail to George Collins, KC1V at news.kc1v@gmail.com

N.E.W.S. Group PICNIC-Rain or Shine

July 8, 2017 at the Knights of Columbus, Pavilion and Picnic Area,
371 Washington Rd., (aka George Washington Road) Enfield, CT 06082
(20 mi North of Hartford, 8 miles South of Springfield)

Social Gathering! Food! Swap-Sell-Tailgate

Everyone is Welcome!

MDS Testing for 10, 24, 47 and 78 GHz!

See Page 2 for Directions and More Details

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(See Page 3)

BARBECUE - Noon to 1:00pm

The club will be providing the burgers, hot dogs, chips, and cold drinks.
If anyone would like to bring a side dish, like a salad or dessert, please do!
(Please e-mail [Mark](#) what you are bringing - if possible)

Bring any items of VHF+ interest that you would like to sell, swap, or just show off.
Your stories and experiences - True or Not - are all welcome.

Show-Off Items with No VHF+ interest, but with Entertainment Value,
may also be appreciated or ridiculed - take your chances!

All members, spouses, guests and anyone interested in VHF+ operation,
are welcome to attend.

Here are the Directions

Knights of Columbus, Picnic Area
371 Washington Rd, Enfield, CT 06082
42.016N, 72.559W

From the South or North:

I-91 Exit 48 onto Rt 220 East (Elm St), then 9 lights.
Keep Left at light before Walgreens.
Left at 9th traffic light from Exit 48, on to Washington Rd.
K of C is 1 mile on left.

Lost going that way? Try this:

I-91 Exit 49, go south on Enfield St Rt.5
Drive 1/2 mile, take left on Brainard Rd.
(at North Thompsonville Fire Station)
Drive 2 miles, take right on Washington Rd.
K of C will be less than 1/2 mile on the right.

N.E.W.S. Picnic MDS / ERP Testing

Minimum Discernable Signal (MDS) and ERP testing on 10 GHz, 24 GHz, 47 GHz and 78 GHz.

To test for MDS, we set up a distant signal source. After everyone has a chance to peak up on the signal, the signal level is reduced one dB at a time until you can no longer hear it, then you have found the MDS for your system. You decide how well it works, and whether you can hear as well as Dale. As a double check, the frequency is moved a few KHz, then the signal level is increased



one dB at a time (this is the "backup" number). If you weren't kidding yourself, you should be able to find it at the same level as before. Usually, it takes a few more dB to find a signal.

Finally, we also check relative ERP, transmitting one at a time and recording the relative power received at the distant point.

This isn't a competition, just a chance to check out the gear with friends around to help. Most folks had 10 GHz stations that worked pretty well, while a few will find problems and fix before the 10 GHz & Up contest in August. Not only do we know our equipment works, but also that there will be some other good stations to work.

This year we would like to do 47 GHz and 78 GHz before the meeting, fewer stations and should not take long.

We need help again this year, a couple people at the source end and another person to keep track of the results. Let me know if you can assist.

Don W1FKF

Donw1kfk-news@yahoo.com

Silent Key WA1DMV

On May 6th, Bill Polewarczyk lost his two year battle with cancer. His life's passion was for ham radio and, like many of you, he was active for over 50 years. He was frequently at his test bench performing arduous electronic experiments, and he filled volumes of notebooks with his findings. For the picnic, Lanette, KA1NKD, will bring an assortment of dishes, test equipment and pieces and parts that you might find useful for your microwave projects. Bill asked that the club members get first dibs, so bring your checkbook and offer a fair value for these treasures! My most sincere thanks to all of you for your support and friendship to Bill all these years. He valued your input and guidance. 73 & 88, Lanette, KA1NKD

Secretary's Report

- NEWS Meeting 22 April 2017:
At the 43rd Eastern VHF/UHF
Conference, Baymont Hotel,
Manchester, CT
- Called to Order by President,
WA2AAU, at 1801

TREASURERS REPORT – N2OY

- Balance \$4374
- 127 paid up members

OLD BUSINESS

- Mt Wachusett permit for 10 GHz
Contest is in progress

Meeting adjourned 1805

Treasurer's Report

Membership numbers and treasury numbers continue to be strong. Even with the dues moratorium in place for 2017, I'm still getting some paid renewals trickling in. For those who do send payment for renewals, I'm continuing to apply the dues to 2018. As a reminder, membership renewals aren't due again until the end of the calendar year, as the club's membership year coincides with the calendar year.

Looking forward to seeing everyone at the picnic!

73, John – N2OY

NEWS Group K1FO 10-GHz Beacon Back on the Air

The NEWS Group/K1FO 10 GHz Beacon is located on Mt Washington in NH in the Autoroad building on top. Fig. 1 shows the building when we first installed the beacon several years ago. Yes, those are chains over the top of the building to hold it down. After all, this is Mt Washington!

Along the peak of the roof are eight fiberglass “radomes”. The K1FO beacon slot and GPS antennas were located in the tube marked with the yellow arrow shown in Fig.1.

Around about March of this year, Don, W1FKF noticed a drop in signal level of the beacon followed by total silence. Since access to the Mountain is very restricted during the winter, we decided to wait until we could drive up the Mountain to see what had happened.

Because the slot antenna is fed with waveguide, we suspected that water might have gotten in, causing the issue. We also suspected the GPSDO. This provides 10 MHz to the beacon transmitter (built by Tom, W1EX). If the 10 MHz fails, the beacon will shut down. Also, this building is unheated in the winter, so it's subject to the extremes in temperature on the mountain.

On 5/24/17, Paul, W1IMD, Don, W1FKF, and I ascended the mountain to check out the system. What we found surprised us!

Fig. 2 is a picture of the building as we found it - you may notice that there are a few less radomes on the roof!

In March, there was an ice storm followed by winds of 138 mph. It is believed that this event tore the radomes off the top the building, damaging our antenna system. Several other systems on the mountain also sustained damage during the event. When we arrived to inspect the system here's what we found: The waveguide survived, but was severely bent (Fig.3). The slot itself was physically ripped out of its waveguide flange. The GPS antenna survived but we didn't trust it after the beating it took.



Fig. 1 – Mt Washington Autoroad building – Before



Fig. 2 – Mt Washington Autoroad building – After



Fig. 3 – Waveguide and Slot Antenna after Storm

After the event, the Autoroad crew had actually pulled the antennas down and disconnect power from the beacon amplifier. We found the parts in a neat pile in the attic of the building.

For repair, Don had a spare 8x8 slot with SMA transition, plus a short run of coax. I had a spare GPS antenna plus some short 0.141 SMA cables.

Fortunately one of the fiberglass radomes was still intact and conveniently located just above the equipment rack where the beacon electronics are located. We were able to mount the slot antenna up inside the radome and remount the remote power amp right below the radome.

We wanted to be in a fiberglass radome as the other ones are PVC and we were unsure of the attenuation at 10 GHz due to that material.

The GPS antenna went up in one the spare PVC tubes. Signal levels were great. You can see the system tracking eight satellites with good levels (Fig. 5). Timing outputs are nominal.

The original install had the GPS antenna positioned above the slot, but we didn't have the parts/pieces needed to make that work.

Once everything was mounted and wired, we threw the switch on the system and it came up perfectly! All the electronics survived even with no antenna attached.

Don brought a small portable 10-GHz system with him and we checked the beacon operation out in the parking lot. It was working perfectly.

When Don arrived home, he checked the beacon and it looks good (Fig. 6).

There is still snow on Mt Washington and surrounding peaks, but it's going away fast.



Fig. 4 – Original waveguide system with the 12x12 slot antenna at the top.

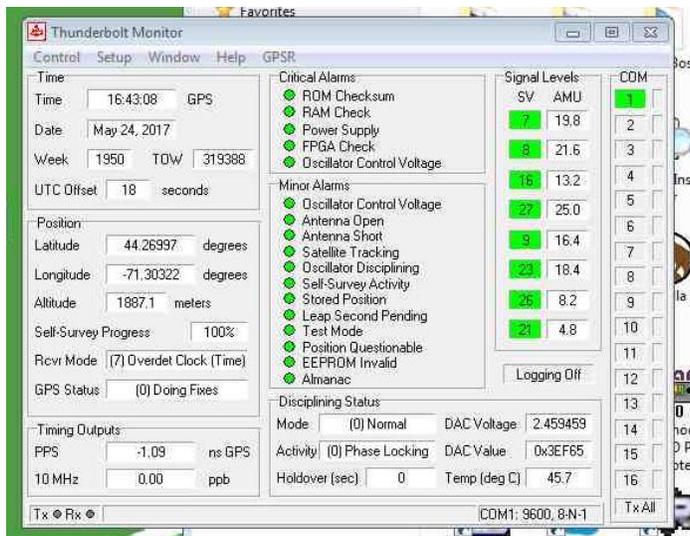


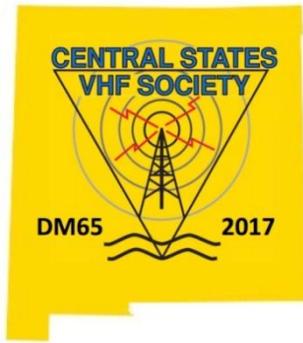
Fig. 5 – GSP Tracking Eight Satellites



Fig. 6 – SDR Display of Beacon at Don's Home QTH



Fig. 7 – View from Autoroad



2017 Central States VHF Society Conference

Albuquerque, New Mexico

July 27-30, 2017

The organizing team of the 2017 Central States VHF Society Conference is proud to announce this year's technical program, an exciting lineup of semi-technical and technical presentations covering a variety of VHF/UHF/microwave topic areas including DXpeditioning, antennas, moon bounce, DSP tools, propagation, meteor scatter, digital modes and more.

Check out this year's presentation lineup, along with abstracts and speaker biographies at:

<http://2017.csvhfs.org/index.php/conference-info/techprogram>.

We hope you'll be amongst the many VHF/UHF/microwave from across the United States, Canada and other countries in sunny Albuquerque, New Mexico (DM65) on July 27-30 at the Sheraton Albuquerque Airport hotel. Registration is open, underway, and ready for you to sign up. Visit: <http://2017.csvhfs.org> and click on "Registration" to get started.

For lodging information go to: <http://2017.csvhfs.org/index.php/lodging-and-travel/lodging>.

IMPORTANT: The deadline to secure your hotel room at the special Conference rate is Wednesday, June 28, after which room prices will increase.

Many more details about this year's CSVHFS Conference await you at <http://2017.csvhfs.org>, including the schedule of events, guest speaker information, VHF101 and VHF102 program designed especially for new and beginning VHF+ operators, prizes, and tours including an exclusive tour of the iconic NRAO Very Large Array (VLA).

Mark your calendars for July 27-30, rally the VHF/UHF/microwave hams you know in your area and across the country, and register today to join us in Albuquerque!

73, Brian N5ZGT

2017 Central States VHF Society President

<http://2017.csvhfs.org>

MID-ATLANTIC STATES VHF CONFERENCE Oct 6-7-8, 2017

Hosted by the Mt Airy VHF Radio Club

Holiday Inn-Bensalem-Philadelphia, 3327 Street Rd, Bensalem, PA (215) 639-9100

Early Bird rooms \$99+tax

Conference Early Bird Registration only \$40**

Saturday Evening Early Bird Banquet \$40

Register on-line at www.packratvhf.com

Additional Speakers & Proceedings papers sought

Contact: Rick1ds@hotmail.com or www.packratvhf.com

Buy Sell and Trade

Free VHF Newsletters and Proceedings

Conference Proceedings, 1984-2004:

(a few missing years)

Eastern VHF/UHF	(1984-2004)
Central States VHF	(1992-2001)
Microwave Update	(1988-2002)
South Eastern VHF	(1997-2002)

Newsletters, 1987-2012:

(mostly complete runs)

N.E.W.S. Letter	(1997-2003)
50 MHz DX Bulletin	(1990-2012)
VHF/UHF & Above Exch	(1984-1986)

Club & VHF Society Newsletters from Outside New England, 1992-2002:

Of interest from England	(1987-2002)
Microwave Newsletter	(1992-2002)
Six Meter and Up DXer	(1987-1990)
VHF-UHF DXer	(1992-1993)

Older VHF Magazines, 1960-1965:

(70 issues, no complete runs)

6 Up: The VHF Magazine	(1963-1965)
VHF Horizons	(1962-1963)
VHF Amateur	(1960-62)

This is the collection previously offered by Emil, W3EP. Wayne would like to pass it on to another interested ham.

All free, pick up in Mystic, CT. Make arrangements with Wayne, KC1AUM at: KC1AUM@gmail.com

Mountaintop Contest Site:

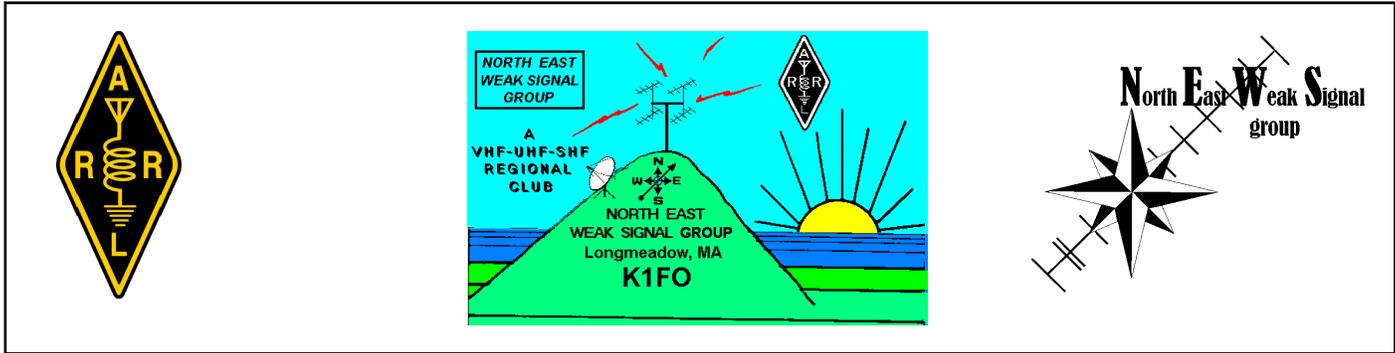
Former K3MQH / K3EAR mountaintop contest site is for sale as part of Walt WA1HHN's estate.

It's in Biglerville, PA near Shippensburg.

Approximately 2400 ft. ASL, highest point on the mountain ridge. Excellent VHF-UHF-SHF location, includes trailer with electrical service, out buildings, towers and antennas.

Serious inquiries only please contact

Divey Nero, (413) 567-5766



MEMBERSHIP APPLICATION

Name: _____

Call sign: _____ Grid: _____

Street: _____

City: _____ State: _____ Zip: _____

Phone (home) _____ Optional (work) _____

Email _____

ARRL member: Y N

Electronic Newsletter Delivery: Y N

Operational Bands (circle)	50 MHz	144 MHz	222 MHz	432 MHz	903 MHz	1.2 GHz
	2.3 GHz	3.4 GHz	5.6 GHz	10 GHz	24 GHz	47 GHz
	76 GHz	Light	Other (list)			

The North East Weak Signal [N.E.W.S.] Group is being established to form a camaraderie among fellow VHF-UHF-SHF enthusiasts and support a convenient means to exchange technical information. We currently have six meetings per year, held at a centrally located facility and provide a "NEWSLETTER" that is distributed two weeks prior to each meeting. Any contributions to this publication are appreciated and can be sent to: George Collins, KC1V by e-mail to kc1v@arrl.net. Dues are \$15/year. Remember, this group is formed by VHF'ers for VHF'ers.

Mail to:

North East Weak Signal Group
 c/o N2OY, John Crawford
 PO Box 1112
 Latham, NY 12110

North East Weak Signal Group

c/o N2OY John Crawford, PO Box 1112, Latham, NY 12110

Check your membership
Expiration date on your mailing label!