



Capers

May - 2017

Candlewood Amateur Radio Association

P.O. Box 741 – Hawleyville, CT 06440-0741

Visit us on the Web at <http://www.CaraRadioClub.org>

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**CAPERS is the MONTHLY NEWSLETTER of the
Candlewood Amateur Radio Association**

Editor: Dan Fegley, W1QK

Next CARA Meeting: Friday, May 12, Stony Hill Fire Station

Doors open at 7:30 for socializing and conversation Meeting begins at 8:00 p.m.

Agenda topics:

- ***N1NRP - 501(c)3 tax filing status – Update***
- ***AB1WV - CARA Constitution, Policies & Procedures – Discussion & vote***
- ***W1QH – Annual election of officers at June meeting***
- ***KB1YHW – Repeater update***
- ***W1JGM - CARA Hamfest update***
- ***KD1YV - Webmaster update***
- ***NG1R - New England QSO Party report – CARA operation from W1AW***
- ***W1QK - Show & Tell: Newly purchased RadioOasis dipole antennas & rope***
- ***NG1R - Field Day – Update & discussion***
- ***Short coffee break***
- ***NV1P - Presentation on the RTL-SDR USB dongle***

BREAKING NEWS: CARA received 501(c)3 IRS Status

President's Message - de AB1WV



Photo Credit: KB1YHW

Hello all,

With the summer coming, things are also heating up at CARA.

We've achieved our goal of 501 C 3 IRS status. This will hopefully open up some additional funding opportunities for the future.

Huge thanks to Jay, N1NRP, and all who had a hand in getting this done.

We've been able to isolate an issue with the antenna system on the Motorola repeater at NFFD, and it's back on line and testing continues. Thanks especially to Gregory, KB1YHW, and John, W1JGM, for their work.

This week, we'll have our May meeting, which always includes officer nominations.

Of special note, is that we'll be voting on the new constitution and policy documents for our club.

Following our business, we will have a presentation on "Alternative uses for the RTL-SDR dongle" by Sam NV1P. Exciting times indeed.

Hope to see you all at the meeting, so that you can make your voices heard.

Remember it's your club.

73
Marcus
AB1WV

Vice-President's Message de N1NRP



Photo Credit: KB1YHW

Hello fellow club members and friends of CARA:

Well, May has arrived - so I've officially I hung up my Long Johns 'till November. I'm looking forward to a long toasty-hot Summer with lots of beach time and cookouts. I planted nineteen tomato plants this year, and some cucumbers too. There's nothing like garden-fresh tomatoes with your salad.

We should all get together for a picnic sometime.

Speaking of that - Field Day is right around the corner, and I'm quite excited and hope you are too.

I'd like to encourage all club members and their families to attend. Let's hope the weather is on our side. I'm looking forward to the delicious meals that Gary N1GSA is planning to prepare for all of us.

There will be an operating schedule sign-up circulating soon - so please fill out when you'd like some on-the-air time during FD.

Last year, Marlon, KC1EHW, and I operated the Graveyard shift and was pleasantly surprised to work so many stations at 3:00 am.

I want to extend my thanks to Harlan, W1QH, for helping me this past weekend to configure my Signalink USB with my Yaesu FT-450D radio. I'm using the FLDIGI program, but I couldn't get it to transmit. However, after a short time, Harlan got it working, and I was making contacts all over the place.

It's a fun mode, which I highly recommend you try out.

73 - Jay, N1NRP

April 7- CARA Meeting Minutes de WA1JGA

The meeting was called to order at 8:00 pm by President Marcus Swearingen, at the Stony Hill Fire House

Pledge of Allegiance to the American flag was held.

Reports of Officers & Committees

Treasurer Tom Coury gave the Treasurers report. We have \$5,943.22 in the treasury.

Greg Davis reported on the Repeater Committee. He spoke about some recent problems at the New Fairfield site with the antenna. The Danbury Spruce Mountain Road site is back on the air!

The 6 meter system is a work in progress.

John Morelli spoke about our CARA hamfest. The flyer has been updated. The admission has been lowered to \$7.00. We expect to have an ARES program and an antenna analyzer session, as part of the hamfest. John is working on getting more vendors to the event.

Old Business - none

New Business

Roger Mitchell spoke about our involvement in the upcoming New England QSO PARTY @ W1AW in Newington, On May 7th, 9am

till 4 pm. Roger had a signup sheet for members to work the event, right at the Maxim Memorial Station, W1AW. For more details, contact Roger at roger.mitchell.SNET.NET

Our club's Field Day operating event will be held at Tarrywile Park, at the farm site, located at Southern Boulevard, Danbury, CT. CIRCLE YOUR CALENDARS FOR JUNE 24 & 25 for this great event.

There was a Motion Made & Seconded (MM/S) to spend \$200.00 to reserve Tarrywile for this club sanctioned event. M/S. There was a MM/S to have the NE QSO PARTY as a Club sanctioned event.

V.P. Jay Albano stated that everything has been paid for our 501 3C status, and we are waiting to hear on the progress of our request.

Jim Ritterbusch spoke about the club website. Our domain name has been restored. Jay Albano is the primary contact. CAPERS is available to non-members, but only issues that are 4 to 6 months old.

Dan Fegley spoke on the need to organize our Field Day antenna bins.

Meeting adjourned at 8:45 pm.

Respectfully submitted,
David M. Coelho - WA1JGA
Acting Recording Secretary



May meeting presentation: TRL-SDR USB dongle by Sam, NV1P

The 'RTL-SDR' USB dongle is regarded as one of the cheapest, easiest ways to get into the world of software defined radio. For \$20 and a bit of time, you have a wideband receiver capable of tuning from 24MHz to 2.2GHz (depending on model), but this wonderful accessory is capable of so much more. The presentation will cover one of the more popular uses, where it's used to determine antenna SWR in that range, as well as how it can be used to generate a [signal strength map](#).

More details can be found at <http://www.rtl-sdr.com/about-rtl-sdr/>."

73,
Sam - NV1P

N1VTK – SK



It is with deep regret to announce the passing of Joe Garcia, N1VTK, on May 1, 2017. Joe was very active in the CT Phone Net, and a CARA member.

It's Election Time!

Once again, it's time to hold our yearly Elections for Club Officers and Directors. At the May meeting, nominations will be taken for our Executive Committee, consisting of; President, Vice President, Treasurer, and Secretary. We will also take nominations for the 3 Directors.

Nominations can also be sent to me, W1QH, (hford01@snet.net) for recording.

Please give careful thought to nominations as your candidates will be your leaders for next year.

Nominations will also be accepted at the June Meeting, PRIOR to voting for the nominated candidates by the Membership in good standing.

73 de Harlan, W1QH

CARA REPEATER COMMITTEE

CARA Linked 2m Meter / Motorola Project Report:

28 April 2017

VHF 2m Repeater 27 April 2017 12-2pm
Yaesu DR-1x on Spruce was powered OFF;
New Fairfield MSF5k Was powered up. The UHF Link Radio at New Fairfield is not powered.

Site Visits: Spruce Mtn: KB1YHW & AB1WV
New Fairfield Site Visit W1JGM
Project List for the VHF Linked repeater system: Sort out the reason for the SWR error code on the MSF5k revealed with the donated MSF System diagnostics panel. The antenna system is 1:1.2 or better. Note that the SSCB which was removed from the system in Nov 2016 during initial commissioning, is currently installed and apparently functioning – but could be implicated if it is the cause of generating a false error code. The Arcom Link control programming is in need of an update.

The system needs an overall test report generated. The system needs to be brought up to full power and tested for stability. There is still much to learn about the care & feeding of the MSF5k's.

SPRUCE MOUNTAIN PROJECT LIST:

Plan the equipment re-organization for Moto Linked VHF repeater system.

Plan for the recommissioning of the 6m system including addition of 2nd 6m antenna.

Plan the phases of equipment movements with Danbury FD assist.

Gregory G. Davis KB1YHW
CARA 2015-17 Repeater Chair



Photo Credits: W1JGM & W1QH

Antenna Work party held at New Fairfield repeater site on April 23.



Connecticut ARES Region 5 conducts a weekly net each Wednesday at 7:30 p.m.

New Milford: 146.730 MHz -600 kHz PL 192.8 Hz
NARA analog repeaters for this net:

Washington: 441.850 MHz +5 MHz PL 77 Hz
Woodbury: 444.800 +5 MHz PL 192.8 Hz
Warren: 53.970 MHz -1 MHz PL 110.9 Hz
Please check in – All are welcome.



Connecticut Phone Net – CPN

Meets daily: M-F 6:00 p.m. 3.973 MHz.
Sunday: 10:00 a.m. 3.965 MHz.
CARA Contributions:
Wednesday Net control: Harlan, W1QH
Net Manager: Tom, WX1T



Weekly Sunday CARA NETS:

CARA 10M “Rag Chew Net”:
28.490 MHz. 7:00 p.m.
CARA 2M NET:
W1QI Repeater – 7:30 pm



The ARRL Centennial QSO Party Celebration - A short three years ago...

QSL card from the ARRL Centennial Station – April 30-May 6, 2014; Connecticut Week 1:

ARRL Centennial Station – April 30 – May 6, 2014

W1AW/1

Ops: K1BV, K1CC, K1EBY, K1EV, K1IED, K1KI, K1MAA, K1NYK, K1RM, K1SD, K1TEO, K1TO, K1ZZ, K2GAV, K3IU, KA1RWY, KA1ZD, KB1H, KB1RFJ, KB1ZDZ, KC2WQO, K1IG, KS1J, KX9X, N1XF, N1MD, N1ND, N2GZ, N8RA, NB1U, NG1G, NJ1Q, NN1N, NQ1G, W1EQ, W1NG, W1PN, W1QK, W1RM, W1RPG, W1TJL, W1UJ, W1UK, W1WEF, W1XX, W2JU, W3EP, W3IZ, WB1GCM, WB8IMY, WJ1B, WJ1X, WR1B, WZ1V

Connecticut Week 1 – W1AN, Organizer – 34,927 QSOs

W1AW/1 CT

To Radio W1AW/1 confirms QSO(s)

Date	Time	Band	Mode	RST
2014-04-30	1608	10m	SSB	59
2014-05-01	1701	15m	CW	599
2014-05-02	2022	20m	CW	599
2014-05-04	0037	40m	CW	599

W1QK

The American Radio Relay League (ARRL) is the national membership association for Amateur Radio operators in the United States. ARRL was founded in 1914 by Hiram Percy Maxim (1869-1936). Maxim's personal call sign, W1AW, is used at the Headquarters station in Newington, Connecticut as a permanent memorial. During ARRL's Centennial year of 2014, the FCC authorized the use of W1AW as an additional call sign. As part of the Centennial celebration, ARRL enjoyed a highly successful convention in Hartford and a year-long on-air QSO Party. Part of the on-air activity included the activation of W1AW for two weeks from each of the 50 states and additional operations from six territories and the District of Columbia. Nearly 3.5 million QSOs were completed by the W1AW portable stations during 2014! Many millions of additional QSOs were made by ARRL members, volunteers, staff, and officers as part of the Centennial QSO Party. This QSL represents the culmination of possibly the best year of on-air activity ever. Thank you for being a part of it. Help us do more by making a small donation to the ARRL operating program. Go to www.arrl.org/arrl-donation-form and check ARRL Operating Programs.

Connecticut

TNX for the QSOs

W1QK was W1AW/1 CT commemorative plaque.



Worked All Connecticut Counties Award, WACC – Sponsored by CARA:

<http://www.cararadioclub.org/activities>

Upcoming Contests and Hamfests:

May 5-6 : Nearfest – New Hampshire
May 6-7: New England QSO Party
May 7: CARA NEQP operation from W1AW
May 6-7: Indiana QSO Party, Delaware QSO Party, 7-Land QSO Party
May 20: Goshen, CT hamfest
May 20-21: King of Spain contest – CW
May 26-28: CQWW WPX CW contest
May 10, 17, 24, 31: CWOps CWT

New England and other local hamfests:

<http://web.mit.edu/w1gsl/Public/ne-fleas>

The Central States VHF Society is sponsoring these 2017 VHF and up Spring Sprints:

Microwave, 902 MHz and up: Saturday, 5/6/17
from 8 AM - 2 PM local,
Exchange: 6 char grid

50 MHz: Saturday, 5/13/17 from 2300Z until
0300Z Sunday, 5/14/17, Exchange: 4 char grid
More information and rules are posted at:

<https://sites.google.com/site/springvhfupsprints/home>

Complete Contest calendar at:

<http://www.hornucopia.com/contestcal/contestcal.html>

Upcoming CARA Calendar:

May 7: CARA NEQP operation from W1AW
May 12: May CARA meeting - doors open at 7:30
May 26: Monthly CARA planning meeting – SHFD – Begins at 8:00 pm
June 1: June CARA Capers input deadline
June 24-25: ARRL Field Day



BULLETINS

Same-band Alternating CQs Now Prohibited for HF and VHF ARRL Contests

With updates to the ARRL web now in place, the ARRL's Contest Rules for HF and VHF have been updated (as a rules clarification) to clearly **prohibit Alternating CQs** on two or more frequencies in the same band. This is a clarification only to existing rules where "one transmitted signal per band" is discussed. Example is from the "General Rules for ARRL Contests Below 30 MHz", where rule 2.1.2 has now been clarified to read as follows:

2.1.2. Single-Operator stations are allowed only one transmitted signal per band at any given time, regardless of mode; alternating CQs on two or more frequencies in the same band is prohibited.

Where "one transmitted signal per band" appears in HF or VHF rules, similar clarifications are now in place in the ARRL web rules (if you or anyone sees that I missed any, please advise). I noted the IARU International HF Championship already contained this verbiage.

As a paragraph describing this action:

"These rule clarifications now add clarity to the intent of prohibiting the use of more than one frequency at a time on one band for soliciting contacts (calling CQ) as well as simultaneous transmissions of any kind. The intent of the rules has always been that a participant would use/occupy only a single channel in a given band,

changing frequency in-band from time to time leaving a CQ frequency to work a multiplier or to change the CQing frequency as band occupancy or changing propagation dictated, and this rules clarification will now give the needed added clarity to that intent."

OPERATING TIP

Try the wrong antenna

If you can't hear the station you need well enough on your transmit antenna, try any antenna you do have. Especially at grayline, a "wrong" antenna used for listening may yield a contact. For example, if you have an inverted L on 160 meters but fade and receive noise is too great to copy the exchange, you can try listening on an 80-meter dipole, or a 40-meter vertical. The received noise may be diminished enough to make the contact. Don't forget to switch back to the correct antenna before transmitting.

NEW HF OPERATORS - THINGS TO DO

How's that microphone working out for you? Different audio qualities are needed for different tasks, and you may find that by adjusting your audio chain for the characteristics required for contesting will result in more contacts. Jim, K9YC, published an article last year in *NCJ* entitled "Clean, Punchy, Competitive Contest Audio Without Splatter" that is also [available on his website](#) (PDF)

The Internet is My Elmer

We're at the highest number of licensed Amateurs in the U.S., ever. But, if you're on HF on a weekday, the bands seem pretty quiet, and not just because of conditions. According to the licensing statistics, the major growth has been in the Technician license class. So, it's easy to rationalize that's the reason we're not

seeing people on HF. Yet, most UHF and VHF repeaters don't seem that busy, either, with the exception of some of the [DMR talk groups](#). The UHF/VHF contest participation numbers are not showing growth reflective of those thirty thousand new hams last year. Some recent [evidence](#) suggests the growth is coming from those that are using their privileges as part of their interest in emergency preparedness. Whew! Conventional wisdom is that EMCOMM is a "gateway into Amateur Radio" and that a reasonable number of those new hams will eventually discover the fun of other aspects of Amateur Radio, and we'll see them on HF, or in contests, or DX pileups, eventually. But is that really true?

I posit that it's likely that now, people entering Amateur Radio for a particular purpose never will discover all our hobby has to offer - because they don't have to leave the comfort zone of their own special interest, and don't perceive a need for Amateur Radio for anything else.

Back in the old days, AKA pre-Internet, someone entering the hobby likely did so with the assistance of an Elmer, someone with whom they had personal contact. It could have been a schoolteacher, neighbor, relative, someone from a local radio club. That person would have had their own interests, and being a ham, their own opinions, on the kind of Amateur their protégé should become. Sometimes that would help, and sometimes that would hinder someone's journey to getting their ticket... but they'd get exposed to things that their Elmer thought they should know about.

Today, one can realize they need a license to further their goal to say, fly a high-altitude balloon around the globe and track it via the Internet. But, with thousands of information sources

available via their web browser on how to quickly get their license, they don't get exposed to anything other than the minimum. They don't even need to talk to anyone except the Volunteer Examiner.

For all of these new specific-use-focused licensees, how are they going to learn about the breadth and depth of opportunity that their license represents?

[ARRL Field Day](#) is coming soon. This "operating event" is not really deemed a contest, but Field Day *is* what you make of it. How about getting some newbies involved? Here's an [ARRL Field Day promotional video](#) that may help you "sell" it to some non-Amateurs.

OPERATING TIP

Use Public Logs to Your Advantage

Some contests, like the CQWW, make all submitted logs "public" as a condition of entry to their contest. That's an opportunity to learn from the stations that bested you in the last contest. You can just read the logs to understand when band changes occurred, when the other guys got that multiplier that eluded you, or even find unusual band openings or paths. You can also take advantage of log analysis tools to help you compare your log versus logs of your peer group to get additional insights.

Skywarn Spotter Training Class Announced:

PEARL Amateur Radio Club is hosting a SKYWARN Spotter Training class this May 23 at 7:00 PM at the Putnam County EOC in Carmel, New York.

This is info from club page:

<http://www.pearlk2put.org/calendar/skywarn-spotter-training-may-23rd-2017>

I believe one should update their skywarn training

every two years I think is recommended if I remember correctly. Use this link to learn more about Skywarn:

<http://www.nws.noaa.gov/skywarn/>

73 - WA8UNS, Thomas Kimball, Ridgefield, CT

CARA operates the New England QSO Party at W1AW – Sunday, May 7

de NG1R



It's been a long-standing tradition for CARA to operate W1AW during the Sunday of the New England QSO Party (NEQP). We had the station reserved from 9:00 to 4:00 for Sunday, May 7. We operated as a multi single – that's a multi-operator, single transmitter station for the NEQP. A 17 Meter station was available for operation during the time we weren't on the QSO Party station.

CARA members participating: NG1R, W1QK, W1QH, AB1WV. To find out more about the NEQP, visit this web site: [New England QSO Party - Rules](#) We'll have the final results to share at the May CARA meeting.



May 6-7 is a big QSO Party weekend. With the New England QSO Party, 7th Call Area QSO Party, Indiana QSO Party, and Delaware QSO Party on the same weekend, even with poor conditions there

will be stations to work. Some logging programs will help you use one log to enter more than one contest - [N1MM+ logger, for example, has a special "IN7QPNE" state QSO party type](#), for simultaneous logging of Indiana, 7QP, and New England QSO Parties. The same Cabrillo log can be entered for all three QSO parties. Don't forget to visit the web pages for the contests to make sure you're aware of any rule changes, and to have up-to-date abbreviations for county names.

CT Section Manager's Message:

May, 2017

No CT SM message available.

CT Section Alert:

The Connecticut Chapter of QCWA's May meeting and lunch will feature Mike Panicello, KB1ZHB as the speaker, presenting "UFO's IN CT", a Narrative and Slide Show.

Contact gary@qcwa149.org for reservations, info, and the menu. below is Al Cohen's note concerning the invitation.

It'll be an interesting presentation, and you might get to meet some of your friends. 73, Chuck Motes, Section Manager

Connecticut's QCWA Chapter Invites You to a Luncheon on May 13. Come join us at a QUARTER CENTURY WIRELESS ASSOCIATION luncheon on Saturday, May 13, 11:30 AM to 2:30 PM, at the Yantic River Inn, 270 W. Town Street, Norwich.

We'd love to have you join us, and you'll

probably meet guys you've worked on the air. The lunch is not expensive, and us guys would be happy to meet you.

<http://www.yanticriverinnct.com/> To make a reservation, send an E-mail to Gary K1MQ (gary@qcwa149.org) or to me or call me if a question. 73, W1FXQ Al Cohen (860-207-3333).

You'll find out what we (Quarter Century guys) are all about, and you might even want to come back for our next program.

The May 13th luncheon's program should be interesting! "UFOs in Connecticut" -- A narrative and slide show presented by Mutual UFO Network's State Director and UFO investigator Michael Panicello, KB1ZHB.



SB SPCL @ ARL \$ARLX004
ARLX004 **Armed Forces Day Crossband
Military/Amateur Radio
Communications Test is May 13**

ZCZC AX04
QST de W1AW
Special Bulletin 4 ARLX004
From ARRL Headquarters
Newington CT April 27, 2017
To all radio amateurs

SB SPCL ARL ARLX004
ARLX004 Armed Forces Day Crossband
Military/Amateur Radio
Communications Test is May 13

The US Army, Air Force, Navy, and Coast Guard will sponsor the traditional military/amateur radio

communication tests on Saturday, May 13 to mark the 66th annual Armed Forces Day (AFD). Armed Forces Day is May 20, but the AFD Crossband Military-Amateur Radio event will take place a week earlier in order to avoid schedule conflicts with those attending Hamvention.

Complete information, including military stations, modes, and frequencies, is available on the US Army MARS website at, <http://www.usarmymars.org/home/announcements>.

The annual celebration is a unique opportunity to test two-way communication between radio amateurs and military stations (authorized under Part 97.111 of the Amateur Service rules). It features traditional military-to-amateur crossband SSB voice, CW, practice using legacy interoperability waveforms, and the opportunity for participating hams to utilize more modern military modes, such as MIL-STD Serial PSK and Automatic Link Establishment (ALE). Military stations and Amateur Radio stations are authorized to communicate directly on certain 60-meter interoperability channels - 5,330.5, 5346.5, and 5,371.5 kHz.

These tests give Amateur Radio operators and shortwave listeners a chance and a challenge to demonstrate individual technical skills and to receive recognition from the appropriate military radio station. QSL cards will be available for stations successfully contacting participating military stations.

The Armed Forces Day message will be transmitted via Military Standard radioteletype modes (MIL-STD 188-110A/B). Software is available to demodulate the military serial PSK waveform, and detailed instructions can be downloaded from, http://www.n2ckh.com/MARS_ALE_FORUM/MSDM_T.html

. Utilizing this mode with soundcard equipment can be challenging; review the instructions carefully.

A short practice transmission will be sent at 1930 and 2330 on May 6, 7, 10, and 12 on 13.506.5 MHz USB and 17.443.0 MHz USB.

Military FSK is Baudot at 850 Hz, 75 baud, low mark, and 2000 Hz center. Most RTTY programs can be set to decode this mode. To achieve low mark while receiving in USB, select reverse shift.

QSL cards are available for individuals that receive the Armed Forces Day test message. To receive a card, copy the printed text of the test message as received from the military station, and include it in your report. No attempt should be made to correct possible errors.

Stations copying Armed Forces Day messages transmitted from US Army and US Navy stations and requesting a QSL card, can complete the QSL report form online at, <http://www.usarmymars.org/>. Stations copying the Armed Forces Day message transmitted from US Air Force stations and seeking a QSL card should send a request to Armed Forces Day Celebration, Chief, Air Force MARS, 203 W. Losey St, Scott AFB, IL 62225.

Include a transcript of the received text, time observed, frequency observed, military station call sign, your full name and Amateur Radio call sign (if applicable), full mailing address (including ZIP code).

Stations with Automatic Link Establishment (ALE) capability can contact a military station on specific half duplex crossband channels established for this purpose. ALE is a selective calling and linking method utilized by government, military, and amateur radio communications. Military stations will scan and receive certain amateur HFLINK ALE frequencies and transmit on the corresponding military ALE frequency. Military stations will also transmit ALE station identification (soundings) on each military frequency at 30- to 90-minute intervals. Amateur stations may scan military frequencies and monitor the soundings to build the LQA database or select the channel manually. Amateur stations will call military stations using

ALE selective calling on one of the paired cross band channels.

NNNN

CARA Western CT Hamfest:

de W1JGM

To: All Amateur Radio Enthusiasts,
Commercial, and Related Vendors

The Candlewood Amateur Radio Association, Inc., is scheduling our annual Western Connecticut Hamfest on Sunday **August 27, 2017** this year. Please note this new date!

The venue and time will be the same; set up 6 to 8AM, with doors opening at 8AM till 1:00PM at the Edmond Town Hall, Newtown, CT.

There is a large indoor display area with tables and chairs available, electricity can be available. A large outdoor area for displays and tailgating is available for those with outdoor displays requirements. Refreshments will be available, inside with seating available to join your friends.

The Western Connecticut Hamfest is an approved ARRL Hamfest. If you or your company can sponsor a door prize or a prize for our raffle, please let us know. We will also have space available for advertisement and handouts.

To insure your spot, register early. For further information or to make reservations, contact John Morelli (W1JGM) at (203) 417-0160 or W1JGM@aol.com

Please forward this correspondence to anyone interested.

See you there!

John Morelli, W1JGM
Chairman – 2017 Western CT Hamfest

Member and Station News:

Your story could go here in the next Issue of CARA Capers! Contact W1QK, Capers editor

2017 CARA Ham Exam Schedule:



2017 Amateur radio exams sponsored by CARA at the Stony Hill FD:
June 10, September 9, December 2
Saturdays - starting at 11:30 a.m.

Walk-ins are welcome, but it's helpful if candidates call or e-mail Frank Sileo, N1PE, at 203-438-0218, or send a message to [frsileo @ att.net](mailto:frsileo@att.net)

Other upcoming VE exam sessions:

Washington CT firehouse on Bee Brook Road at 9 AM Saturday morning on the following dates:
July 8, Oct. 14

Please feel free to direct questions to w8zy@hotmail.com
Walk-ins are welcome and we will be testing for all classes.

Sponsor: Northwest Amt
Location: Litchfield Firehouse, Litchfield, CT
Time: 7:00 PM (Walk-ins allowed)

May 9, June 13, Aug. 8, Sept. 12, Oct. 10, Nov. 14, Dec. 12.



**CW Ops CW Academy:
Interested in learning CW or improving
your skills?**

Check out www.cwops.org

“CW is an art of incremental improvements over a lifetime, getting ever closer to an ideal of perfection which is always moving and always presents a new horizon to strive for.” Carlo Consoli

**March of Dimes WECA Ham Radio
Public Service Event
de N1NRP**

On April 30th, Jay, N1NRP, and Marlon, KC1EHW, participated with the Westchester Emergency Communications Association - WECA, during the annual March of Dimes Walkathon, held at the Saxon Woods Park in White Plains, NY. It was a great turn out with over 1000 walkers.

Jay and Marlon were each in a bus equipped with Kenwood Dual-band radios and APRS. This year marks the third year of their participation.

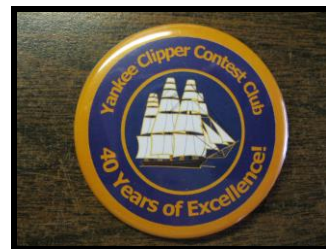


(L-R): Tony-KD2HYA, Stan-WA2NRV Director at Large, Kathleen KC2VCT Public Service Director, (Kneeling): Marlon-KC1EHW.



Photo Credit: N1NRP

(L-R): Tony-KD2HYA, Stan-WA2NRV, Jay-N1NRP, Joe- KC2ESU, and Kathleen-KC2VCT



From the YCCC Reflector:

Date: Thu, 13 Apr 2017 14:50:03 -0400

From: N2GC

RE: Surge suppressors

I have a 40-20-10 meter fan dipole that had so much static buildup during a blizzard last year that the un-grounded SO-239 bulkhead was arcing over.

Here is the link to the video I shot of it. Read the description for more info.

<https://youtu.be/IPnI1S2KPag>

Mike N2GC

Message: 2

Date: Thu, 13 Apr 2017 16:02:32 -0400

From: K1IR

To: N2GC

Subject: Re: [YCCC] PolyPhaser surge suppressors

Nice video, Mike! I recall, many years ago, entering the WPI radio room and hearing that exact sound coming from somewhere in the station. W1YK is located on top of a building on top of a nice hill in Worcester. It was well after dark and an arctic wind was howling and the snow was flying perfectly horizontally. That snapping sound was coming from the back of the Kenwood R599A. I disconnected the cable (getting hit a couple of times by the discharge) and let the cable hang free. It continued to arc across the open PL-259 until the storm settled down. My foggy recollection is that it might have been the 15m quad that was capturing all that charge . . . Unfortunately, it was around 1978 and I had no video-equipped smartphone to capture that experience.

73 Jim K1IR

Message: 4
Date: Thu, 13 Apr 2017 22:08:32 -0400
From: N2GC

I have a simple setup with only 5 coax cables entering the house and no control or rotator cables. I keep them disconnected when not in use and now put shorted PL-259's in to eliminate the arcing over during severe weather.

One thing that I am curious about with wire antennas. Does using insulated wire make a difference when it comes to static buildup? I have a 160 double L and an 80 meter dipole that are made with insulated THNN and did not see any arcing during that storm. I can only assume there may have been static buildup on them but maybe not a high enough voltage to arc over a connector but possibly enough to damage a radio.

Mike N2GC

OVERVIEW:

RF engineers and installers have seen many types of radio installations over the years, and they know there are certain details that must not be overlooked at any installation. Most radio installations contain some form of lightning protection. However, the wrong

combination of antenna and lightning arrestor can create high voltage transients on the radio's antenna port having devastating impacts on the life and reliability of modern day radio equipment.

LIGHTNING ARRESTOR OVERVIEW:

Lightning arrestors can take many forms. But some of the most common lightning arrestors use gas discharge tubes that turn on when the voltage across their terminals exceeds the specified threshold. Under normal conditions, these devices have a very high impedance and no current flows through the device. When the turn on voltage threshold is exceeded, the gas discharge tube turns on instantaneously and becomes a short. This functionality works well to limit the magnitude of a transient from a nearby lightning discharge. However, it can have very negative consequences if a gas discharge lightning arrestor is used with the wrong antenna.

ANTENNA OVERVIEW:

Antennas can come in just about any shape or size. However, there is one parameter, in particular, that the system designer should not overlook, especially if the radio installation uses gas discharge tube lightning arrestors. The parameter is the DC grounding of the active element in the antenna. A DC grounded antenna will measure 0 ohms from the active element to ground when tested with an ohm-meter. One way to test this is to connect the ohm-meter from the center conductor to ground of the RF cable that is attached directly to the antenna. This will read as a short for a DC grounded antenna, and as an open for a non- DC grounded antenna.

Note: Some antenna datasheets are misleading and will indicate the antenna is DC grounded. However, the datasheet may be referring to the body of the antenna and not necessarily the active element. For this reason, it is best to

measure the antenna you plan to use to verify the active element is DC grounded.

THE WRONG COMBINATION:

The combination of a DC open antenna and a DC blocked gas discharge tube lightning arrester creates a situation where static charge can build up slowly on the active element of the antenna. Static charge can be created by wind blowing across the antenna, precipitation hitting the active element, or other environmental causes. As static charge builds up on the antenna's active element, over a period of minutes or even hours, the DC blocking capacitor inside the lightning arrester is charged.

LIGHTNING ARRESTOR APPLICATION:

When the voltage exceeds 600V (the breakdown voltage for PolyPhaser's IS-B50LN series), the gas discharge tube turns on and the antenna side of the DC blocking capacitor is immediately pulled from 600V to 0V. Since the lightning arrester's capacitor was charged to 600V, that charge must dissipate through the radio. As the capacitor discharges, a large negative transient is created on the antenna port of the radio. Positive transients can also be created if the static charge buildup on the antenna has a negative polarity. Figure 2 Voltage transient immediately after the gas tube turns on. During testing, transients were measured on the antenna port of CalAmp's Viper at voltage levels up to +/-280V. These voltage transients often have high frequency content that can easily pass through any filtering in the radio and damage components in the transmitter and receiver circuitry.

GOOD DESIGN PRACTICES:

There are two relatively easy ways to avoid creating large transients due to static buildup on an antenna and the subsequent firing of the gas discharge tube in the lightning arrester. Following either or both of the

recommendations below will eliminate this potential problem.

1. Use antennas with a DC grounded active element. Antennas can easily be tested, by using an ohm meter, to measure the resistance from the center conductor to the ground of the RF cable that is directly attached to the antenna. The ohm-meter should indicate a short. (Some antenna designs, such as folded dipole or folded dipole Yagi antennas, inherently have a DC ground on the active element due to the nature of the antenna design.)
2. Use a lightning arrester that does not have a gas discharge tube. PolyPhaser makes several DC blocked lightning arrestors that have an inductor to ground instead of a gas tube. These lightning arrestors will not allow the static to build up on the antenna, and there is no gas tube that can trigger causing a transient into the antenna port of the radio.

The following lightning arrestors, manufactured by PolyPhaser, have inductors to ground instead of gas tubes: a. PolyPhaser Part Number: VHF50HN Frequency Range: 100MHz - 512MHz, 750W b. PolyPhaser Part Number: DSXL Frequency Range: 700MHz - 2.7GHz, 750W Tip: Lightning arrestors that use gas tubes will normally specify a "Turn On Voltage" in the data sheet. If you see this specification in the datasheet, it is very likely that the lightning arrester has a gas discharge tube. If you are still unsure, contact the manufacturer.

Additional information:

[Forums](#) → [Industry Forums](#) → [Wireless Service Providers](#) → [Lightning surge arrester gas tube replacement ?](#)

From the DXEngineering website:



Testing RF Lightning Protectors without indicators

This white paper from PolyPhaser includes an overview of how lightning protectors work and how to test for and assess possible damage from lightning.

Testing RF Lightning Protectors without indicators

RF lightning protectors are designed to protect RF equipment by equalizing the potential difference between the center pin of the coax cable and its shield. The majority of RF protectors do not feature indicator lights to show whether or not they are still functioning. Since power is not readily available at some installation points, an indicator light is not practical and would add So how do we know if the protector is still functional?

Since the IS-50 and IS-B50 are the most widely used PolyPhaser RF protector series, application in Land Mobile Radio, SCADA systems, amateur radio and many others, this paper focuses on their specific testing condition.

See the PDF from PolyPhaser [Testing RF Lightning Protectors without Indicators \(pdf 476k\)](#)

NOTICE TO CAPERS READERS

CAPERS is an important aspect of our club. It's time for **more participation** with this publication.

CAPERS is looking for ANY and ALL input.

Don't be shy, just send a few words, a picture, link, or short message to Dan Fegley, your Editor:

w1qk@snet.net

CAPERS deadline for input:
LAST Friday of the Month preceding the meeting.

CAPERS will be released:
Monday before the scheduled Friday monthly meeting – or earlier if possible.

73- Dan, W1QK