

N.E.W.S. LETTER

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

November, 2013

Volume 22

Issue 6

☺ **40th Eastern VHF/UHF/Microwave Conference** ☺

↑ April 11th – 13th, 2014 ↑

Next Meeting: November 23rd

NESMC New 2-Meter Band Plan Proposal

By Bob DeMattia – K1IW

**BOARD MEETING - 11:00 AM at Lulu's, 151 Hazard Ave. Enfield, CT
phone: (860) 763-2377**

I-91 exit 47 Rt.190E. 1 mile on left.

<http://www.luluspizzeria.com/>



GENERAL MEETING - STORRS LIBRARY - from 1 PM to approximately 3:45 PM.

693 Longmeadow St, Longmeadow, MA 01106

<http://longmeadowlibrary.wordpress.com/>

DON'T FORGET

The North East Weak Signal Group

2 Meter VHF and Above Net

Every Thursday at 8:30 PM local 144.250 MHz.

W1COT, WZ1V or K1PXE Net Control

MEMBERSHIP in the N.E.W.S Group is \$15 per year. Apply to Tom Williams, WA1MBA. Email tomw(at)wa1mba.org You may download an application from our web page:

<http://www.newsvhf.com/>

The N.E.W.S. LETTER is the publication of the North East Weak Signal Group. Articles may be reprinted with proper credit given to the author and the N.E.W.S. LETTER. Send articles to Tom Filecco W1WSO, via email to w1wso@comcast.net.

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2013-2014 NEWS CALENDAR:

Nov. 17 Leonids meteor shower

Nov. 23, 11am Lunch & Board of Directors Meeting at Lulu's Restaurant-Rt
190, Enfield, CT

Nov. 23, 1-4pm NEWS Group Meeting, Storrs Library, 693 Longmeadow St.
Longmeadow, MA

Nov. 28 Thanksgiving

Jan. 4, 11am Lunch & Board of Directors Meeting at Lulu's Restaurant-Rt 190,
Enfield, CT

Jan. 4, 1-4pm NEWS Group Meeting Storrs Library, 693 Longmeadow St.
Longmeadow, MA

Jan. 17-19 ARRL VHF Contest, 2pm Sat to 11pm Sun.

Feb. 7-9 Orlando (Florida) Hamcation (FLWSS Meeting on Sat.) Central FL
Fairgrounds

March 15, 11am Lunch & Board of Directors Meeting at Lulu's Restaurant-Rt
190, Enfield, CT

March 15, 1-4pm NEWS Group Meeting Storrs Library, 693 Longmeadow St.
Longmeadow, MA

April 7, 7-11pm 144 Mhz Spring Sprint

April 11, 6pm Eastern VHF-UHF-MW Conference, Hospitality--Baymont Inn,
Manchester, CT

April 12, 8am-10pm Eastern VHF-UHF-MW Conference, Presentations, Banquet,
Indoor Swap

April 12, 4pm NEWS Group Meeting at the Conference

April 13, 8-11am Eastern VHF-UHF-MW Conference, Outdoor tailgate swap

April 15, 7-11pm 222 Mhz Spring Sprint

April 20 Easter

April 23, 7-11pm 432 Mhz Spring Sprint

April 25-27 South East VHF Conference, Atlanta, GA

May 2-3 Nearfest, Deerfield, NH

May 3 902-Microwave Spring Sprint, 6am-1pm & Microwave Activity Day (MAD)

May 3-4 SBMS 2 Ghz & Up Contest 6am Sat. - 8pm Sun.

May 10 50 Mhz Spring Sprint

May 11 Mother's Day

May 16-18 Dayton Hamvention, Dayton, Ohio

June 14-16 ARRL VHF Contest, 2pm Sat to 11pm Sun.

June 28-29 ARRL Field Day

July 12, 11am-4pm NEWS Group Annual Picnic, K of C, Washington Rd, Enfield, CT

July 17-20 ARRL 100th Anniversary National Convention, Hartford, CT

Aug. 2-3 ARRL UHF Contest, 2pm Sat. to 2pm Sun.

Aug. 16-17 ARRL 10GHz Contest, First Weekend, 6am Sat. to 11:59pm Sun.

Sept. 1 Labor Day

Sept. 6 1-4pm NEWS Group Meeting Storrs Library, 693 Longmeadow St.
Longmeadow, MA

Sept. 13-15 ARRL VHF Contest, 2pm Sat. to 11pm Sun.

Sept. 20-21 ARRL 10GHz Contest, Second Weekend, 6am Sat. to 11:59pm Sun.

Sept. 26-28 Mid-Atlantic VHF Conference, InnPlace Hotel, Bensalem,
(Philadelphia) PA.

Oct. 4 Yom Kippur

Oct. 10-11 NearFest, Deerfield, NH

Oct. 17-18 Microwave Update, Rochester, NY

Nov. 22 11am Lunch & Board of Directors Meeting at Lulu's Restaurant-Rt 190,
Enfield, CT

Nov. 22 1-4pm NEWS Group Meeting Storrs Library, 693 Longmeadow St.
Longmeadow, MA

Nov. 27 Thanksgiving

Note: NEWS Meeting dates for 2014 are tentative

President's Report – November 2013 NEWSletter

R. L. Frey – WA2AAU

November 23 Meeting Program

NESMC New 2-Meter Band Plan Proposal

By Bob DeMattia – K1IW

The cold winds of November are blowing! Get your last minute antenna work done on the last few warm days, guys, and BE CAREFUL out there. Don't push it and stay safe as you work in the cold on your towers.

This last month has been a whirlwind of activity. NEARfest at the Deerfield, NH fairgrounds was fun as it usually is. Found some very nice high frequency microwave dishes for sale there at very reasonable prices. He also had some surplus RF hardware for sale. If anyone is interested, I have the contact information for the seller. Then the next weekend was Microwave Update, held in Morehead, Kentucky this year. It was great to see several NEWS members presenting at the conference. Several of the attendees at the conference were also given permission to try making a 78 GHz moon-bounce contact with the 21 meter dish on the Morehead campus. Wow, what a nice piece of hardware! And, hams have an open invitation to use the antenna for any worthwhile experiment... all we have to do is ASK. This is really a great opportunity. Perhaps Tom Williams – WA1MBA can give us a summary on the 78 GHz experiments conducted at Morehead.

Also, remember Microwave Update will be held in Rochester, NY next year. Plan now!

As you may remember, Bob DeMattia – K1IW came to the last NEWS meeting to announce a new 2-meter band plan proposed by the New England Spectrum Management Council. Bob briefly presented the plan but we didn't have time to discuss it in detail as we already our regular program scheduled. Bob has since E-Mailed me asking if we could hold a more detailed discussion of the new proposal since he thought a "discussion with a group of mostly non-repeater operators would be very valuable." As I understand it,

this proposal will be up for a vote at ARRL very soon, so this would be a very valuable opportunity to give our input. So I suggest we welcome Bob to tell us all about the proposal at our November 23 meeting. The proposal can be viewed on the NESMC web page at <http://www.nesmc.org/bandplan.html> where there is also a link to a PDF at the address: <http://www.nesmc.org/docs/2013-2m.pdf>. You may also want to dig through the NESMC for additional background on the issue.

It appears the proposal may have the most impact on weak signal work by reassigning current simplex frequencies from 146.410 to 146.490 MHz to be used as repeater outputs when no other repeater pairs are available in an area. If my memory serves, there are already several 1 MHz spaced repeaters in this section of the 2-meter band elsewhere in the northeast (coordinated or uncoordinated). Please come prepared to give your well-reasoned opinions.

Finally, I would appreciate any ideas for future program speakers. Who would you like to hear?

Secretary's Report

NEWS Meeting 5 October 2013, Storrs Library, Longmeadow, MA

Preceded by a Board of Directors meeting at Lulu's Restaurant

President WA2AAU called meeting to order at 1320

no TREASURERS REPORT

OLD BUSINESS

- Letter freceived re K2DLL beacon thanking us for donation

NEW BUSINESS

- Possibility of changing club call from W1RJA to K1FO.

Motion K1BXC to approach K1FO's widow to see if she is willing. UNANIMOUS.

- Suggested changes to contest rules to allow internet assist during contest

No club consensus

KJ1K suggests listing some options in NEWSletter

UNANIMOUS vote to table.

- K1IW from New England Spectrum Management looking for feedback on 2M repeaters on FM simplex frequencies

ANNOUNCEMENTS

- MUD doorprizes are needed
- VHF Conference in April

PRESENTATIONS

- KT1J on WE1P contest group from FN23xq Gore Mt to bus in FN22
- N1JEZ on RefloLeo controller for toaster oven reflow soldering
- N1JEZ on airplane scatter program by W3SZ
- N1DPM Tropo antenna rebuild
 - 2 Meter LFA 11 elements
- WA2AAU on MGEF 47GHz VUCC in a weekend for W2SZ
 - Video by KA1SUN
 - using frequency-shifted CW with Gunnplexer

Meeting adjourned 1545

- Paul, W1GHZ

Treasurer Report

I had a great time at Microwave Update, held this October at Morehead State University, Kentucky. I was the surprised and fortunate recipient of the Hilliard award. The meeting was a lot of fun, great presentations, good NEWS Group representation, and an (unsuccessful) attempt at 77 GHz EME using the 69 foot dish.

With the July dues renewal date receding from us, we remain behind our normal membership numbers. At the moment we have 66 paid members and expect about 95 by the first of January - less than two months away. As of this writing, there are 45 who have not renewed, and (statistically) I expect 29 of those to do so by January. Before the meeting, I will be sending out an email to all those who have not renewed. If you receive the NEWSLetter by US Post, please look at the dues date just after your callsign. If your dues date is in the past (like 07/13) your membership has expired. Send a check to me (my address is on the last

page of the NEWSLetter) made out to N.E.W.S. Group, for \$15 (each year). There are life memberships available.

Thanks!

Tom WA1MBA

40th Eastern VHF/UHF/Microwave Conference

Hey NEWS Members!

Here is the Preliminary Announcement for our 40th Eastern VHF-UHF-MW Conference. This will be held the weekend before Easter.

Our 2014 event will be held at the same hotel as it was in 2013.

We are looking for Volunteers to help with the conference.

We need a Volunteer for "Door Prizes Chairperson."

If You can volunteer, please contact any one of the conference co-chair's. Thank-You!!

40th ANNUAL EASTERN VHF/UHF/MW CONFERENCE

Fri./Sat./Sun. April 11-12-13 2014

BAYMONT INN & SUITES
20 Taylor St., Manchester, CT 06042
(10 miles northeast of Hartford, CT, I-84, at Exit 63)

FRIDAY--

6pm to ?--SUPER HOSPITALITY ROOM & INDOOR SWAP

SATURDAY--

8am to 5pm--Presentations & Indoor Vendors
7pm-- BANQUET BUFFET, Tom Kirby Award, Banquet Speaker, Trivia Quiz, Door Prizes

SUNDAY--

8am to 11am -SWAP/TAILGATE in Parking Lot
The Baymont Room rates will be the same as last year: Double \$69.00, Suites \$99.00

Sponsored by: North East Weak Signal Group

(NEWS).

Questions? Email Mark, K1MAP:
map1@mapinternet.com or Contact one of the
Conference Co-Chairs:

Mark K1MAP, (hospitality, hotel & general)

Ron, WZ1V, (registration, available after Jan 1, 2014)

Paul, W1GHZ, (presentations, proceedings)

Check: www.newsvhf.com for updates--

-----MORE TO COME!

- Mark, K1MAP

REFLOLEO Update

Mike, N1JEZ

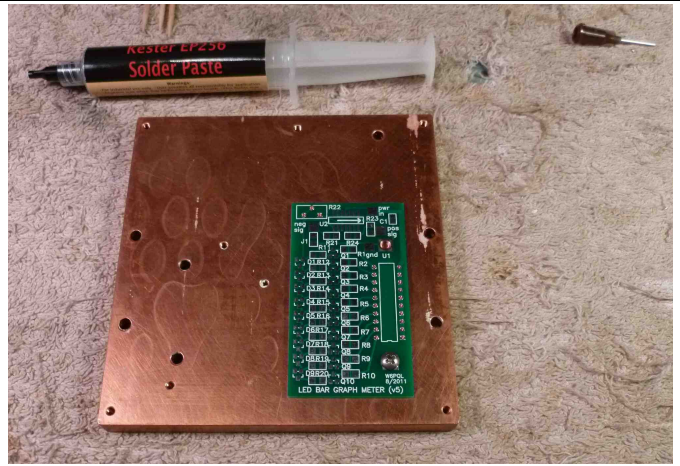
At the last NEWS meeting, I showed a toaster oven controller called RefloLeo used for reflow soldering of SMD circuit boards.



I had the chance to use it for the first time this weekend on a W6PQL LED Bar graph display. I can say that I never want to go back to hand soldering boards like this again!

The W6PQL board has 40+ SMD parts. Over half are small 3 legged diodes and transistors. If you've ever hand soldered these, you know what a pain it is.

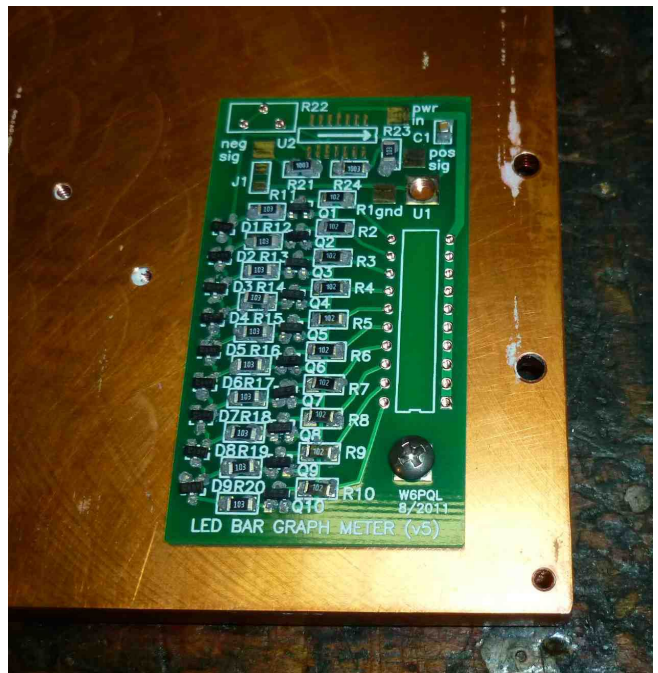
Step one was to secure the board so it wouldn't move around as I was working on it. I prefer to use something like the chunk of copper pictured here. This keeps the work flat on the bench rather than elevated in a circuit board vise. I tend to get a bit shaky working on elevated boards.



I used Kester EP256 Solder Paste in a syringe. It comes with several small tips for easy dispensing. I store it in my refrigerator until I need it. It wants to be stored between 32-50 degrees. You bring it up to room temperature before you apply it. I got it here:

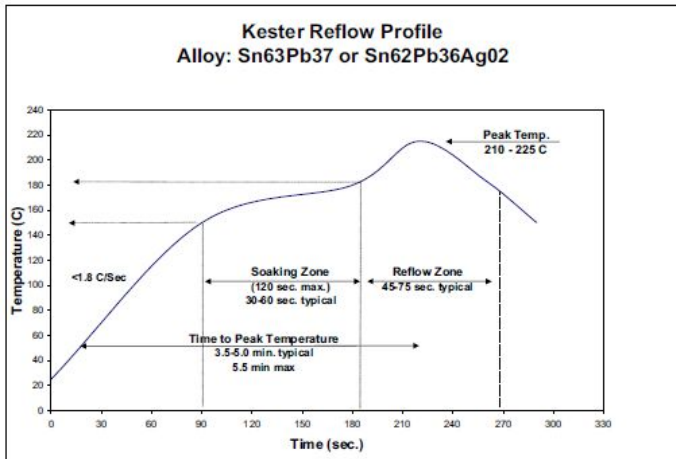
<http://www.cmlsupply.com/electronics-materials/solder-paste/kester-ep-256-syringe.html>

I applied the solder paste to all the pads and placed the parts with a pair of tweezers. The paste was sticky enough that it held the parts quite nicely. This took only about 15 minutes. Here is the board with all the parts fitted.

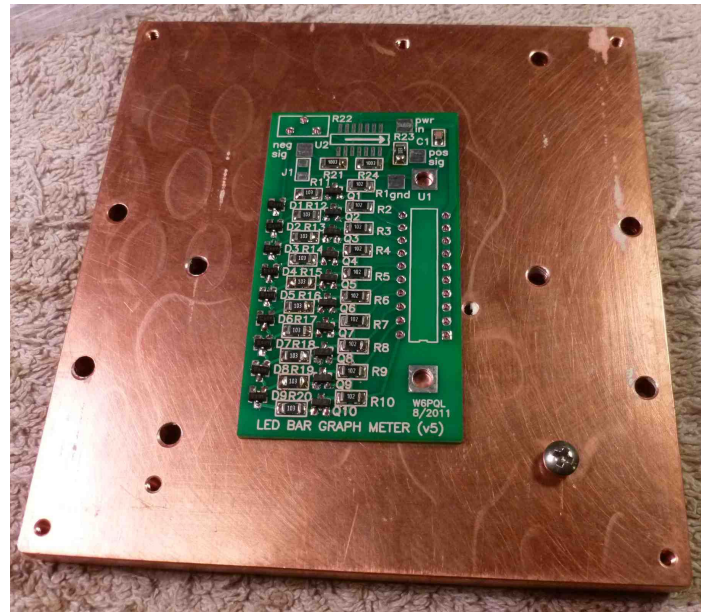


You might notice that all the parts are not perfectly straight. I wanted to see if the reflow process would straighten them out.

The next step was to bake the board. The Kester solder has the following Reflow Profile. This curve shows the temperature vs time needed to reflow the solder paste.



About 5 minutes later, I have a complete board. You will notice that the parts tended to center themselves on the pads.



The RefloLeo controller has several user temperature profiles stored on its SD card. I used the standard profile as it looked to be a good match for the Kester Profile. The profiles stored on the RefloLeo SD card are simple text files that are easy to edit.

Into the Oven goes the board.



One thing I did notice is that my temperature profile was a bit too aggressive. Some of the resistors show signs of excessive heating. Testing them shows they are electrically fine, but it means my temperature sensor in the oven is not really close enough to reflect actual board temperature. I have edited the temperature profile on the RefloLeo SD card to lower the overall curve. We'll see how the next boards come out.



See link <http://www.heywhatsthat.com/?view=LT6BSAOM>

I'd like to thank Peter K1NLX from ECARA for all his support with this project.

-73, Ron WZ1V



The New W1RJA/B 144.175 MHz Beacon

October 1 our 2M beacon was installed at Madison, CT FN31QG.

I've attached a few photos of the installation.

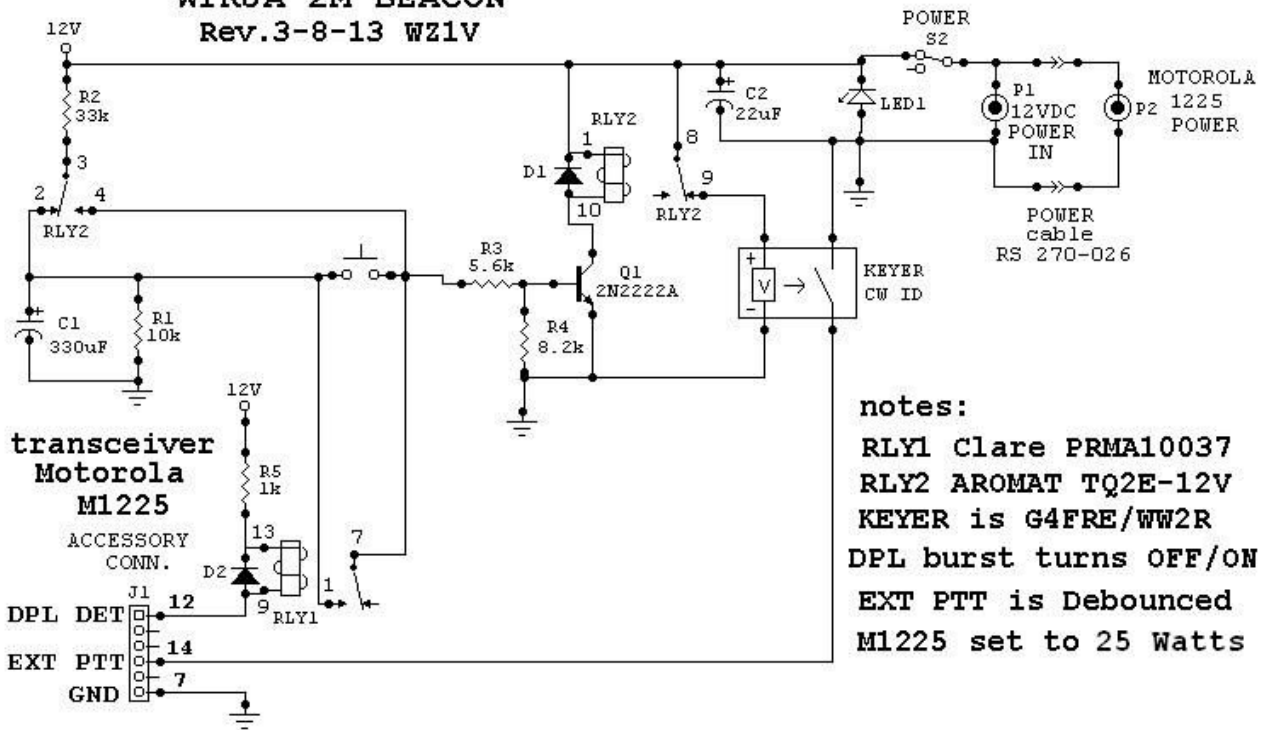
It's running 25W to a vertical dipole at 50 feet.

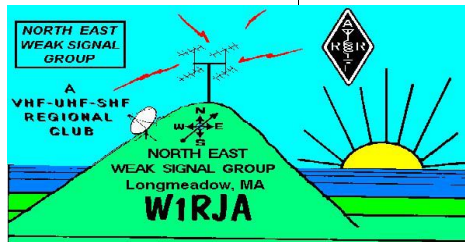
Reports have been received throughout New England,

And far as FM19 to the SW and FN12 to the NW.

It has a good shot to the SW over Long Island Sound.

**W1RJA 2M BEACON
Rev.3-8-13 WZ1V**





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 6 meetings per year, held at a centrally located facility, and provide a "NEWSLETTER" that is distributed 2 weeks prior to each meeting. Any contributions to this publication are appreciated and can be sent to: Tom Filecco, W1WSO via email – w1wso@comcast.net. Dues are \$15/year. Remember, this group is formed by VHF'ers for VHF'ers.

Mail to:

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North East Weak Signal Group

c/o WA1MBA Tom Williams, PO Box 28, Shutesbury, MA 01072

Check your membership
expiration date on your mailing label!