



# RADIO AMATEUR NEWS & VIEWS

The Official Journal of the Radio Amateurs of Northern Vermont

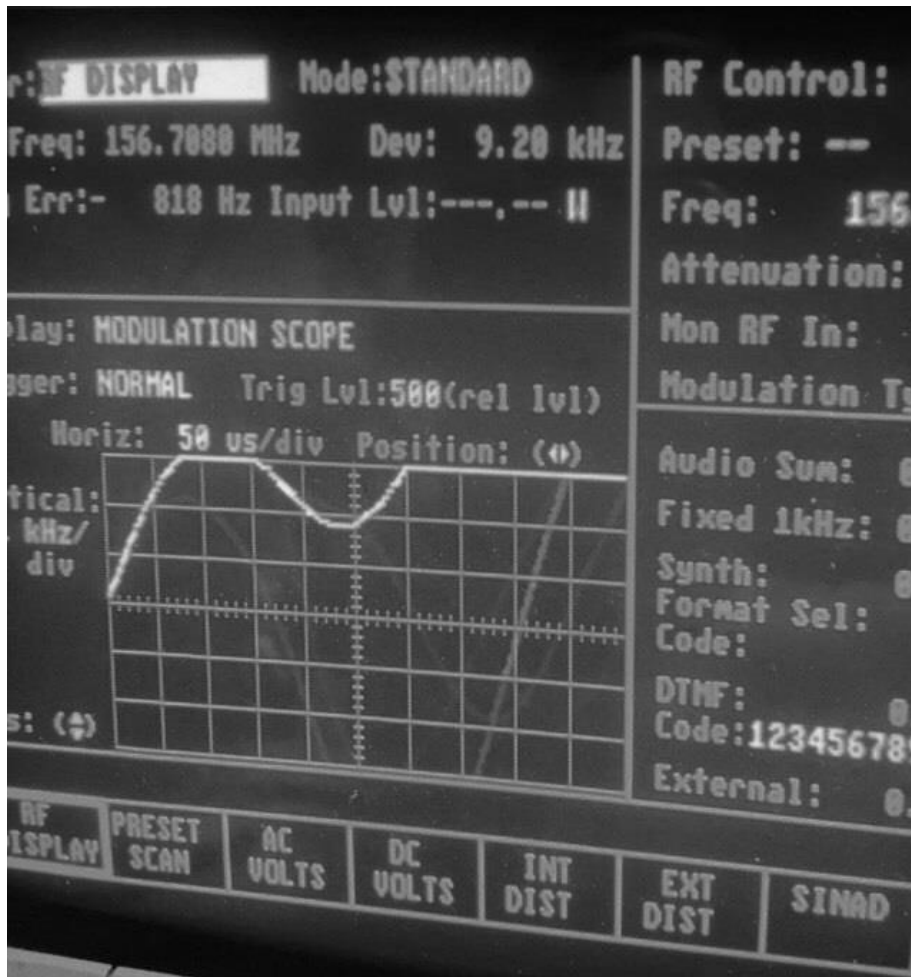
April • 2015

An ARRL Special Service Club

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## Next Meeting: Mike Gladu, N1FBZ

We will be discussing and demonstrating his service monitor and possible other instruments. People are invited to bring their HTs. There might be time to compare a couple of them and see who's HT has the cleanest output.



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Meetings: 2<sup>nd</sup> Tuesday • 7:00 PM  
113 Patchen Road, South  
Burlington

The O'Brien Civic Center

Repeater: 145.150, PL 100; WB1QR

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**Washington, D.C. April 1, 2015**

Today, the Federal Communications Commission (Commission or FCC) approved Report and Order 14-987af which reinstates the Morse Code test for General Class and Amateur Extra Class licensees. "It was a big mistake eliminating the Morse Code test," admits Dotty Dasher, the FCC's director of examinations. "We now realize that being able to send and receive Morse Code is an essential skill for radio amateurs. As they say, it really does get through when other modes can't."

Not only will new applicants have to take the test, but General Class licensees who have never passed a code test will have one year to pass a 5-wpm code test. Similarly, Amateur Extra class licensees that never passed a code test will have one year to pass a 13-wpm test. Those amateurs that fail to pass the test will face revocation of their operating privileges. Materials for administering the examinations will be distributed to Volunteer Examiner Coordinators by the end of April, so that they can begin the testing on May 1, 2015.

"This isn't going to be one of those silly multiple-choice type tests," noted Dasher. "We're going to be sending five-character random code groups, just like we did in the old days. And, applicants will have to prove that they can send, too, using a poorly adjusted straight key."

Technician Class licensees will not be required to take a Morse Code test, nor will a test be required for new applicants. "We discussed it," said Dasher, "but decided that since most Techs can't even figure out how to program their HTs, requiring them to learn Morse Code seemed like cruel and unusual punishment."

When asked what other actions we might see from the FCC, Dasher hinted that in the future applicants taking the written exam may be required to draw circuit diagrams, such as Colpitts oscillators and diode ring mixers, once again. "We're beginning to think that if an applicant passes an amateur radio license exam

it should mean that he or she actually knows something," she said.

For further information, contact James X. Shorts, Assistant Liaison to the Deputy Chief of Public Relations for the FCC.

### **Bob W1ICW**

So in the Mike Gladu N1FBZ book, "Things I Hate" (now in it's third printing by the way; available from all your favorite booksellers and for your Nook and Kindle too!), item number three, right after antennas and power supplies is PACKAGING. No, I don't mean those accursed plastic instruments of torture that everything comes in from Costco that seem hell-bent on frustrating you to the point of tears. There is an especially cozy corner of hell reserved for the engineers who design those things.

What I am (and Mike is) referring to is the art and science of making a 5-pound project fit into a 6 pound package. One would think that it's a simple matter to just poke a couple holes in a box, mount some switches and controls, and you're done, right? WRONG !

It all started with a N3ZI DDS VFO kit I built several months back. The more I used my CIA spy radios, the more I realized that being "rockbound", i.e. tied to a couple crystal-controlled frequencies, sucks even more in 2015 than it did when I was a novice back in 1980. So I thought that this VFO would be a good complement to my GRC-109 and RS-6 radios for in the field operation. With FT-243 holder crystals costing 16 bucks from AF4K in his stocked frequencies, it didn't take long to cover the cost of the kit. The kit took me one evening to build, and worked right out of the box. But there it sat, on my bench for the past several months while I gathered up a nice cast aluminum box to put it in, and a nice "center-off" momentary toggle switch to combine the functions of the up and down MHZ buttons.

I finally started work on Friday evening, making a full-size template on graph paper, so I could judge how things would fit. The box I chose is a

clone of an aluminum Bud box made of cast aluminum from Marlin P. Jones, and nicely rugged compared to the plastic cr@p from a well known local retailer of plastic cr@p. I carefully and painstakingly measured the mounting holes and spacing, as well as the rectangular opening I would need for the two line LCD display. Anyone who has done this well knows what an a\$\$ache it is to make square or rectangular holes in anything, and this was to be no exception.

Saturday morning, I got out the digital calipers and started scribing lines, punching hole centers, and commenced to let fly with the Dremel tool and a cutting wheel.

As an aside, have you ever noticed that power tools in general, and Dremel tools in particular, just make it easier (and faster) to ruin a project, and the faster the tool, the faster you can accomplish the ruin? You say your new cordless drill does 3,000 RPM?? Well, that's about 200 times faster than my hand crank hand drill (looks like an eggbeater, they are seen in Medieval tool museums sometimes) and you can keep your new drill.. it was against my better judgement to use the Dremel on this project, and sure enough, there's a spot on the front panel where I slipped and went over the line, which, to me, stands out like a blemish on a Supermodel's forehead you just can't "unsee" after having spotted it the first time.

Anyhow, back to my story. After about 1/2 hour of sounding like a dentist's office on a bad day, I had the rectangular hole roughed out, and then it was a simple if noisy matter to finish off the hole to the final dimensions with a couple of hand files. That done, I drilled the holes on the front panel for the rotary encoder and momentary toggle switch. It all looked like it was going to fit nicely. I laid out and drilled holes in the side for the coaxial power jack and BNC jack for the output, and started wiring things up.

Fast forward about 2 hours, and I was powering things up when I discovered, to my HORROR, that the LCD display was upside-down ! Since the display is

attached to the main board by 16 wires all painstakingly cut to the same length, I really didn't want to have to redo that, so now I had to figure out how to make the board fit inside turned around. After another half hour of fiddling, I got everything so it fit inside with no shorts, and was powering it up and trying it again. This time I noticed that the encoder which was supposed to have a function operation by pressing it in, didn't. Sure enough, when I remoted it to the front panel with 4 wires (I might add that I chose some four-conductor wire ribbon cable that worked perfectly for this) , I should have used 5 conductors, so I had to add a fifth wire to get the function switch on the encoder working. I cut the wire, tinned the lead on the rotary encoder, and soldered it in place. Back over to the test bench to power it up, display works fine, I now have a working functions switch, all is good, right?? WRONG !

I tried listening for the VFO with a handheld receiver and NOTHING. Hooked up the spectrum analyzer, and STILL NOTHING. NO OUTPUT AT ALL> grrrrrrrrrr

Now I'm getting a bit frazzled. I must have kinked the small coax going from the board to the BNC jack or something.. WRONG ! After unscrewing the top and peering in, I looked at the main circuit board, and right smack dab in the middle of the board, right on top of the most expensive part, the surface mount DDS chip, was a huge solder blob that had fallen off the tip of my iron when I was tinning the lead on the encoder. I tried to pry it off with a pick, but it was in fact stuck, so I heated up the iron and wicked it up with some solder wick.

At this point I'm thinking I'm sunk, the chip is fried, and I'm wishing I'd spent the day baking muffins or bread instead of doing this. I trudge back over to the bench, cautiously power it up, and I'll be darned, the silly thing WORKS ! Yay !!!!

SO why am I telling you all this?? I guess so that the next time you're working on a project, really a simple thing like poking a couple holes in a

box , sticking some switches and controls in them, and plopping a board in the box, you can remember back to this story and have a good laugh. My simple project that took the better part of two days to accomplish.

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### **Mitch W1SJ**

We will once again provide communications for the Parade on May 23 and are seeking volunteers.

As we do each year, we participate in the Parade, with my van and go-kart in the line-up. We could do more - like a float or something like that - to showcase amateur radio. The parade is a great PR opportunity.

Should we do this?  
If yes, Who will organize it? (not me, and I'm pretty sure, not Bob either).

We don't have to do anything different - the van with the amplified CW blazing away works. But it is always good to look at other opportunities.

### **Secretary's Minutes**

#### **Kathi K1WAL**

Our March meeting started on time with 15 in attendance.

Business: We discussed HAM-CON where the numbers were higher than last year. Kudos to Carl AB1DD for scoring a bucket truck to hold up the antenna and a big Thank You to everyone who made this another great event!

Melanie N7BX graciously offered to bring snacks for the April meeting.

Rob N7QT offered to give a presentation for our May meeting of his experiences being a part of

DXpeditions.

Presentation: Since our scheduled speaker had a computer malfunction which ate his files we enjoyed a very well done video on the WRTC held last year in the Boston area. We had several RANV members volunteer for the WRTC so it was fun picking out

familiar faces in the video. Bob KB1WXM provided snacks, including chips for during the movie.



## NEWS & VIEWS

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- Morse Code Reinstated
- Packaging Your Projects
- Volunteers needed for Parade on May 23rd

### Upcoming, Notices, & Misc

- Steering Wheel: 3<sup>rd</sup> Tues 6:30; Ninety-Nine Restaurant, Taft Corners, Williston
- VE Exams every 2<sup>nd</sup> Friday; Red Cross Building 29 Mansfield Ave, Burlington
- Dues due? Pay online at [www.ranv.org/ranvpay.html](http://www.ranv.org/ranvpay.html)

### NEXT MEETING

Tuesday • April 14th • 7:00pm  
O'Brien Civic Center • Patchen Rd  
South Burlington, VT

## Service Monitor