



RADIO AMATEUR NEWS & VIEWS

The Official Journal of the Radio Amateurs of Northern Vermont

December • 2011

An ARRL Special Service Club

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NEXT MEETING:

“HOLIDAY PARTY”

TUESDAY, DECEMBER 13TH AT THE QTH of W1SJ in Essex. Arrive at any time, AFTER 5:30, but no food guarantees are made if you show up very late! If you need directions, contact W1SJ at w1sj@arrl.net BEFORE Tuesday night.

The first priority of the night is eating and we will have a whole assortment of stuff planned. The staples include a cold cut platter, cocktail franks, meatballs, egg rolls, fries, drinks, munchies and dessert. We'll also have an assortment of other tasty items, depending on what everyone brings. See below for more information on this.

To celebrate the tremendous result we had in Field Day 2011, the celebratory chocolate cake will make its return, so be sure to save room for dessert!

The key ingredient for any party is being there! So clear your calendar and blow off all those other boring parties on the same night. And make sure you bring family and friends—this is a family event after all. It's boring just to talk about ham radio. It would be nice to see many of our members who rarely make it to meetings—we hope you all can join us!

If you haven't already let Mitch know how many folks will be with you, please let him know the number of attendees who are likely “definite” and the number who are likely “maybe.” This information is needed right away so that the proper amount of food can be ordered. If you would like to bring a food dish, you should come around 5:30. If you plan to arrive later, bring a dessert item. **Please use the RANV Holiday Party Survey form at: www.ranv.org/partys.html.** Don't send e-mails or leave phone messages as these often get lost.

We look forward to seeing all of you!



TEN METER CONTEST IS COMING

Mitch W1SJ

LAST MONTH, I REPORTED ON THE 10 METER FIREWORKS WE ALL HAVE BEEN experiencing. The band is still red hot! During the Sweepstakes last month I spent several hours on 10 Meters Sunday afternoon and was rewarded with nice rates.

This weekend is the 10 Meter Contest. The band will be open and loaded with all sorts of stateside and DX stations looking for contacts. If you have been inactive for some time, now is the time to get some wire into the air and go at it. When Ten is hot, it doesn't take much to make contacts – a simple dipole 30 feet in the air will perform nicely. Of course, if you have a small beam in the air, you will do even better! And Technicians can join in on the fun on 28.3-28.5 MHz (where most of the action is).

The contest starts 7PM Friday December 9th. Ten meters is on the way out here in the East, but well equipped stations should have no trouble working a mess of West Coast stations before things die out. This is also a good time to find many of the local guys cruising the bands.

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TRANSCIVER DESIGN LEARNING DESIGN TOOLS

Rich W1ELL

SOMETHING TO LOOK FORWARD TO FOR THE NEW YEAR... I will be discussing my HF transceiver design project, and demonstrate the (free) design tools that I am using. Before turning to the “dark side” and becoming a manager, I had done both digital and analog design, but RF design is totally new to me. Living in an efficiency apartment means that there are some unique constraints that I wanted to address in the transceiver design.

I decided to start out with some goals for the transceiver. After all, “if you don't know where you are going, it's hard to know when you get there.”

Accompanying this short intro are a couple of diagrams and a short list of the goals.

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JANUARY

1/10, Meeting—Rich Lang W1ELL on: *Designing and Building an HF Transceiver*. Part One will be in January and Part Two in March.

1/28, Ham Breakfast—0900–1200, JP's in Essex Junction. Same as last year.

FEBRUARY

2/25, HAMCON—Holiday Inn, I-89, Exit 14; 0800–1400; workshops, vendors, RANV Flea-Table; VE Session



RANV: SECRETARY'S REPORT

JEFF NIYD, SECRETARY

NOVEMBER MEETING

Business:

- Welcome to the newly licensed Betty Kimball *KBIWDN*, Kay Trudell *KBIWDS*, Dick Trudell *KBIWDT*, and soon-to-be -licensed Martin Maitner.
- For some reason, this meeting (just like last month) began with elections. That was probably because the August newsletter did not contain ballots, and people might want to vote or something in order to feel like they are part of the electoral process.

However, this time something special happened... we got our election results from the media! Semi-retired Channel 3 anchorman Marselis Parsons visited our meeting, and we asked him to count the ballots. As expected, Bob Allen *KB1FRW* was reelected as President, Carl Dow *AB1DD* was reelected as Treasurer, and I was reelected as Secretary.

- We voted to pay \$100 every 6 months for use of the O'Brien Civic Center, and we voted to spend up to \$130 for the holiday party.
- Several members reported that 10 Meters is really good, even after sunset, and that the other bands are open too. What are you waiting for?
- Mitch and Bob reported that they had just spent a hard day on Mount Mansfield working on a repeater problem. The RANV repeater on 145.15 had 17 db of desense, and after their best efforts it is now down to about 11 db. Other equipment at the site could be involved. This is not a simple problem, but they will not give up.
- Paul *AA1SU* showed us a postcard that he recently received from an official observer. W8SS in Hell, Michigan wrote to Paul because during a recent contest, Paul's transmissions could be heard outside of the 40 meter amateur band. By the way, Paul will provide the snacks at our January meeting.

Marselis Parsons told us about his career in television. Long ago he was a morse code operator in the navy. He then worked at WRLH in Michigan, and was hired by a station in West Lebanon, NH because he was able to drive D8 bulldozer. They needed that skill because the station was on top of a mountain up a very difficult road. In 1966, the station (heated by a wood stove) caught fire. Having no phone or teletype, they called for help by broadcasting live coverage of the burning building. The station closed in 1967.

Marselis was then hired by Channel 3 in Burlington. He showed us the 16mm camera that was commonly used for on the scene news coverage. It used reels of film, had no sound, and was powered by winding its clockwork mechanism. He also showed us today's news camera, a nifty camcorder that writes the video directly to an SD card. The reporter can then send in the video through his phone.

WCAX had a one hour news format, and needed lots of material every day. Marselis ran into quite a few colorful people in his work. For instance, in 1978 he interviewed a woman who had played a piano performance for emperor Franz Joseph in 1901.

In 1984, Marselis became the news director and the main anchorman after the sudden death of Mickey Gallagher.

10-Meters cont.

Saturday morning, make sure to get up early to catch the European opening. Usually sunrise, at 7AM is a good time to start looking. The DX will peak at around 9-10 and by noon, the band is loaded with signals from both Europe and North America. And the beauty is that if you are busy on Saturday, there is always Sunday to pick up many new stations. But you need to get the station ready to go, and then get on the air!

The contest is quite simple. Just give signal report (59) and Vermont. DX stations will give signal report and a number. And at the end, if you have been busy, you will spend some time counting up all those neat multipliers!

By all means, make sure you set aside some time to get on the 10 Meter Contest. You'll have a ball!

VEC Exams

Every 2nd Friday
6:30-8:00PM

29 Mansfield Ave. • Burlington

Tech, General, Extra class licenses.
Bring 2 forms of identification, copies of existing license and CSCE (if applicable), pens and pencils, and the exam fee (\$15—exact amount only please).

??s Email Ralph *KDIR@arrl.net*
or the GBA ARRL VE Team
website at *BARCVT.net*

What
are you going to sell
at the Flea-Table?

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Web: *www.RANV.org*

Reflector:
groups.yahoo.com/group/RANV

Meetings: 2ND Tuesdays • 7:00PM
113 Patchen Road
South Burlington
The O'Brien Civic Center

Repeater: 145.150, PL100; *WB1GQR*

New Hams, Mentoring:
RANVMentor@gmail.com

Presentation: Marselis Parson

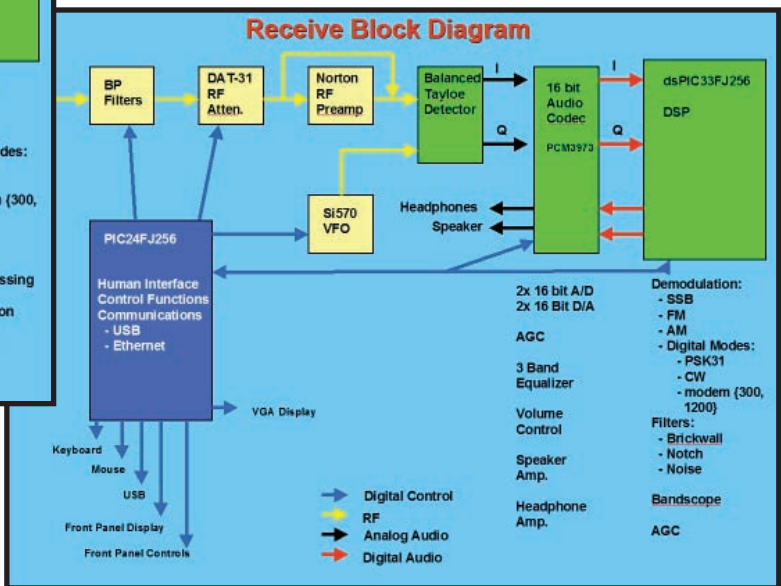
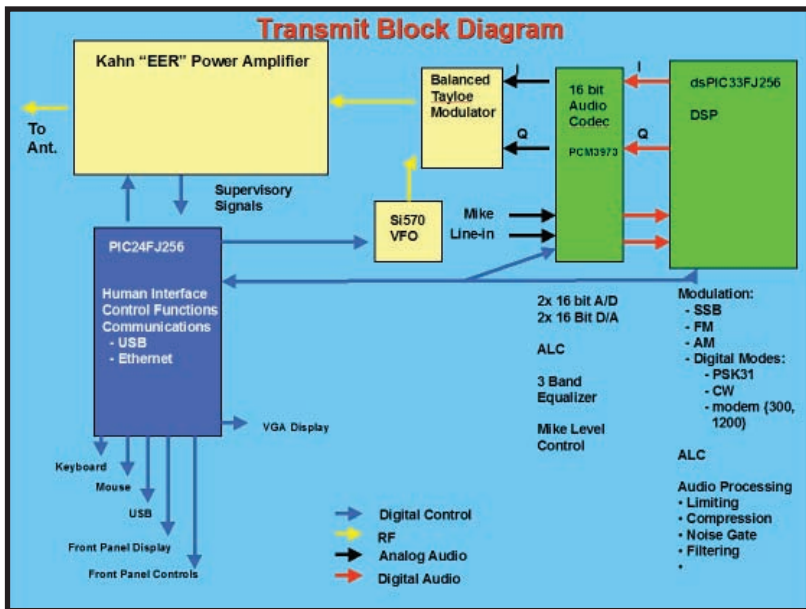
The Goals/“Must-haves”

- ✦ **Modular**—I wanted the option to re-design or change the design of whole sections. Some of the modules may become stand-alone projects.
- ✦ **Software Defined Radio**—Without a doubt, the greatest complexity will be in the software, not the hardware. I wanted the ability to operate without a PC and will use PIC micro-controllers and digital signal processors for the data processing.
- ✦ **Excellent User Interface**—I’m not a Luddite, but modal interfaces and menu items 3 and 4 button pushes deep, bother me—give me knobs, even if they are rotary encoders. Menus are OK for set-up. I also want keyboard and mouse supported with QVGA graphics for display.
- ✦ **Fully instrumented**—this transceiver will be experimental, I want enough instrumentation built-in so that I can ensure that it is operating safely within FCC regulations.
- ✦ **Internet connected**—the PIC micro-controllers have (free) Internet software modules. I want the transceiver to allow remote operation through an HTTP server.
- ✦ **Logging to SD memory cards**—there are PIC software modules for FAT32 file access (the file system on most memory cards). I want to be able to use the keyboard to log contacts directly to a memory card... the transceiver already “knows” the frequency and time.
- ✦ **Modulation**—the transceiver should be multi-mode, enabling transmission and reception of:
 - ✦ AM, SSB, FM, CW
 - ✦ Digital Modes: PSK31, MFSK8/16
- ✦ **Kahn Amplifier**—this type of amplifier is unique in that it can use highly non-linear and efficient output stages (Class E) and still have the distortion products be -30dB before low-pass filtering.
- ✦ **Voice Processing**—I found an interesting research paper on voice processing that was funded by the Office of Naval Research. The researchers stated that most of the frequency ranges that contribute to comprehension are from consonants. Vowels largely don’t contribute to comprehension. They implemented a variable bandwidth tracking filter that eliminated the vowels and achieved 92% comprehension on 2% to 4% of the voice energy. Sounds like something that would be nice for SSB.

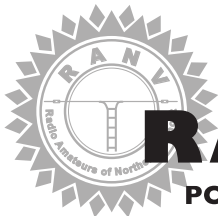
Below are some diagrams for the TX and RX Blocks.

Please join me for the January and March meetings to share your wisdom on this project.

73, Rich WIELL



What do you want to find at the Flea-Table?



RANV

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NEWS & VIEWS

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- Secretary: November
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- D-Y-I Transceiver Design

Upcoming, Notices, & Other Misc

- RANV: January Meeting—1/10
- HAM BREAKFAST—1/28, JP's Essex Junction
- HAMCON—Sat., 2/26, Holiday Inn, S. Burlington
- Steering Wheel: 3rd Tues, 6:30-8:30
Ninety-Nine Restaurant, Taft Corners
- Dues due? Pay online at www.ranv.org/ranvpay.html
- VT Ham Radio Calendar www.vthrc.net
www.RANV.org

NEXT MEETING

TUESDAY • DECEMBER 13 • 5:30^{PM}

W1SJ's QTH

Essex Junction

Holiday Party