

# RADIO AMATEUR News & Views

The Official Journal of the Radio Amateurs of Northern Vermont

November • 2017

An ARRL Special Service Club

Vol. 27 No. 11

## Movie Night – You pick the movie – November 14<sup>th</sup>

The November meeting will be a "movie night" The crowd will chose one of the following titles:

Video 1. How to build a complete ham radio repeater

Video 2. Navassa DXpedition (hamvention talk)

Video 3. ARRL convention talk by Joe Taylor

Video 4. Old 70s film about Ham radio

## BUSY MONTH FOR THE ACTIVATION TEAM

Dave KC1APK

The team was very busy this past month with three activations! The first activation was at North Hero State Park (KFF-3137) on October 8<sup>th</sup> where Bob **KB1FRW**, Mitch **W1SJ**, and Bob **KB1WXM** made 850 QSO's. You can check out the video:

<https://www.youtube.com/watch?v=-Qb01-SCK3Y>



Photo Courtesy of KB1WXM – W1SJ activating N. Hero SP

## CONTACTS

Bob **KB1FRW**, President  
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Adam **KB1LHB**, VP/Treasurer  
[vtlmore@gmail.com](mailto:vtlmore@gmail.com)

Vacant Secretary  
*Your name here! We're looking for a new Secretary*

Dave **KC1APK**, Editor  
[davidblin@aol.com](mailto:davidblin@aol.com)

Newsletter submissions to [davidblin@aol.com](mailto:davidblin@aol.com)

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US Mail: PO Box 9392  
South Burlington, VT 05407

Web: [www.RANV.org](http://www.RANV.org)

Reflector: [groups.yahoo.com/group/RANV](http://groups.yahoo.com/group/RANV)

Meetings: 2<sup>nd</sup> Tuesday • 7:00 PM  
Wheeler House  
1100 Dorset Street  
South Burlington

Repeater: 145.150, PL 100; WB1GQR

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New Hams, Mentoring:  
[RANVMentor@gmail.com](mailto:RANVMentor@gmail.com)

VT State Parks On The Air:  
<https://www.facebook.com/groups/292829457810746/>

## QUECHEE PARK ACTIVATION (KFF-3138)

Mitch W1SJ

A bunch of us were going to be at Near-Fest in New Hampshire, and I decided to not waste the opportunity and to activate a Vermont State Park on the way home. Quechee State Park was perfect for this, being only a few miles off of I-89 Exit 1.

Bob **KB1WXM** was the advance team as he got there a little after noon. Bob **KB1FRW** and I left Deerfield around noon and pulled up around 1:30. It took a while to find where Bob had started setting up, since he was in the campground and not the day use area.



Photo Courtesy of KB1WXM – KB1FRW activates Quechee

We got a late start, getting 20 meters going just before 1 pm and 40 meters around 3 pm. But we still got in 4 hours of activity and put 447 QSO's in the log from a rare park. And it was a super ending to a great hamfest weekend!

<https://www.youtube.com/watch?v=DAMMH8CBkQU&t=6s>

## BTV FARMER'S MARKET DEMONSTATION

Mitch W1SJ

As part of our Parks activation this year, it was decided to activate Burlington City Hall Park in conjunction with the Farmer's Market. Although this is not a Vermont State Park and not part of the WWFF program, the exposure we would get with hundreds of people around would be huge. I wasn't totally optimistic that we would be permitted to do this. After all, we do not have any homegrown produce to offer up and are a rather foreign concept to a market. But I emphasized how we can reach people from all over the world, regardless of borders. That concept went over well, and we were permitted to go ahead.

We set up on Saturday, October 21<sup>st</sup>, the next to the last outdoor market for the season. It was a perfect choice! The weather was beautiful, with temperatures hitting 69 degrees mid-day, unheard of for late October!



KB1FRW logs, KC1IFK works the pileup, while K1ZK answers questions from visitors

Unlike our previous State Park activations, this one presented a few more unique challenges. Fortunately, I have gained a lot of experience in urban activations from some of the National Parks I put on from New York last year. First, we had to unload the equipment and stash the vehicles in a legal spot (or in my case, a free spot several blocks away). Before the crowds came, we quickly shot the dipole over the trees and had the antenna secured inside of 20 minutes. We placed the station next to a tree and the generator behind another tree so that the power cable ran between the trees, and out of reach of spectators. Bob **KB1WXM** brought his full Elecraft station, along with a professional looking boom mike. It really did look like we were doing a live broadcast. I'm surprised no one came over looking for us to play a request!

I got on and put a few DX stations in the log from Slovenia and Venezuela. Things were working well, and we were all set to go at the time of market opening at 8:30.



Photo Courtesy of KB1WXM – KB1FRW and K1ZK demonstrate Amateur Radio at the Burlington City Farmer's Market

<https://www.youtube.com/watch?v=V9zSmsZ13eQ>

To put a different face on amateur radio, I strove to get younger operators on the air. This was very successful. Stew



**KC1HFK** got us started off. He has only been licensed as a Technician for about a month. His first experience on HF was the day before as I had him come over to my station to get him some quick experience. He did great! Zach **K1ZK** was also on hand and he made contacts on the big station, and even snagged a few on 40 meters with his KX2 and mag loop. I think he might have had a better rate than we did!



*W1SJ and KC1CZA work the bands at BTV Farmer's Market*

The second shift consisted of Chad **KC1CZA** and Debbie **W1DEB**. Chad has had a good deal of experience, being part of Field Day and the Allis State Park activation. Debbie, has been on HF a few times in 16 years and is pretty good at it, but it is not her number one activity (“...why do I have to listen to this NOISE?”). We also had a visit from Mike **KC1ICT** and we put him on the air for his first HF experience.



*KB1FRW and W1DEB operate City Market*

We had several ham visitors on and off the air. Bob **W1DQO**, a long time ham in our area, joined us on the air for a while. By the way, Bob is 94 - pretty impressive that he is still active. I ran into Brian **WB2JIX** over on Church Street and invited him to stop by. He is moving to Florida next week!

We had a number of non-ham visitors as well. I was hoping for a lot of people standing around, but it didn't happen.

Someone said we should have had larger signs. But no, what we really needed was FOOD to entice the masses. The largest crowds were around food vendors! So next time, we'll offer up something like Green Eggs and Ham.

We had a few people who were very interested in getting their ham radio license. One already had the Baofeng on his belt! Another person wanted to know if we can speak to the FBI and CIA! A woman took some picture of us and sent them to her daughter in Minnesota who is also a ham. And then there was the UVM photography class who were all taking pictures of us!



*KB1WXM, KB1FRW, and W1DEB at BTV Farmer's Market*

Propagation wasn't spectacular and a nagging S-5 noise level didn't help things, but we still managed to log just under 200 QSO's from a team of fairly new operators. Of course this wasn't about QSO numbers, but instead showing off what we do. And we did THAT well!

## FEATURED PLATE OF THE MONTH



**Thanks Jonathon!**

*Got a ham plate or Amateur related vanity? Send us a picture, and we'll feature it one of the upcoming newsletters.*

*Paul AAISU (filling in)*

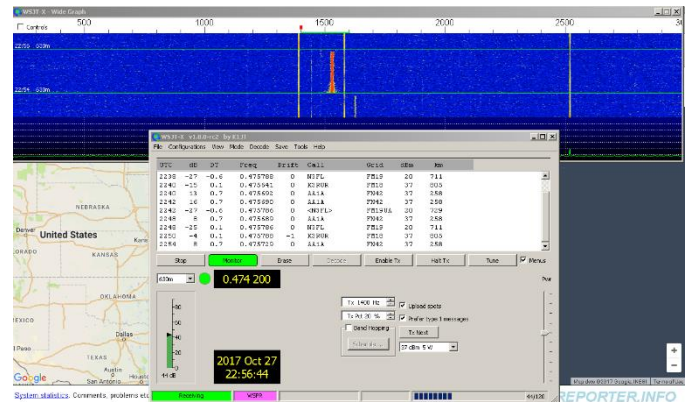
Kathi **K1WAL** announced that she and Aunt Betty **KB1WDN** are moving to North Carolina in early November due to a job change in the family. They have purchased a duplex and RANV visitors are welcome to stay on Betty's side. We all wished them well in their new adventure!!

But wait! There was more. Bob announced another upcoming ham radio activation. RANV members operated from City Hall Park in Burlington, using the Special Event Call Sign **W1V**. This was done on Saturday, October 21 from 8:30 AM to 2:00 PM. Reports are that despite poor propagation, they made 182 contacts and generated a small amount of interest from the crowd.

For the meeting presentation, Dave [K1APK](#) gave a presentation on JT65, JT9, and FT8. These are sound card modes invented by Joe Taylor K1JT. The newest mode, FT8 is taking the world by storm. Dave explained how these modes work well during poor band conditions because they can hear -27 dB below the noise floor. A typical CW operator can decode to about -15 dB. He showed the popular program WSJT-X that is needed for operating these modes. He also showed us how to set up a typical station. I could go on and on, but you really should read the article by Mitch W1SJ in the October News & Views for greater detail. I will also upload the presentation to the RANV Reflector, as Dave sent me a copy of it.

*Mike N1JEZ*

As you can see in the WSJT-X screen shot (below), the waterfall shows very little noise/interference. I was running on battery power.



Now to work on transmit. I did copy N3FL calling CQ 559.



## LINKED REPEATERS – Williamstown, Lincoln, Cabot Cathy N5WVR

I am happy to announcement that the Williamstown (146.625), Lincoln (145.470), and Cabot (146.82) repeaters are now linked together to provide coverage of large sections of north-central Vermont. All are PL 100.0

The repeaters are linked via RF, without any dependency on landlines or the Internet. All three have emergency power backups, and will remain on the air during a power outage. These repeaters are owned by CVARC and the Vermont Interconnect Team (VIT).

The Lincoln repeater is also connected to Echolink (node 655270) and All-Star, so the whole system can be connected to other repeaters that utilize these systems. Please use the links responsibly; connect to other systems only when using them, and disconnect when you are done.

I encourage everyone to spend some time on the linked system, especially during the weekday rush hour. This is an opportunity for the hams of north-central Vermont to have regular QSOs across a very wide area and stay active in ham radio. Please pass the word to other hams in the area!

Thanks to Chris Knox **N1GBB** and Chris Craig **K1MHZ** for all their hard work on this.

## K1ZK'S 2<sup>nd</sup> ARTICLE - ARRL NOVEMBER 2017 QST Dave KCIAPK

### LNR Precision Mountain Topper MTR-5B Multiband QRP Transceiver

Reviewed by Zach Manganello, K1ZK  
k1zk@arrl.net

This review of LNR Precision's Mountain Topper MTR-5B is a natural follow-up to my MTR-3B review in the May 2017 issue of QST.<sup>1</sup> Designed

<sup>1</sup>Z. Manganello, K1ZK, "LNR Precision MTR-3B QRP CW Transceiver," Product Review, QST, May 2017, pp. 51 – 54.

#### Bottom Line

The LNR Precision MTR-5B combines excellent portability, performance, efficiency, and features, making it easy to bring your QRP CW operations into the field.

by Steve Weber, KD1JV, both radios are small and efficient QRP CW transceivers that are well-suited for operations requiring extreme portability. The MTR-5B is slightly bigger and heavier than the MTR-3B, but offers better performance and a total of five bands (40, 30, 20, 17, and 15 meters). LNR Precision also sells an MTR-4B, which covers 80, 40, 30, and 20 meters,

Congratulations to Zach **K1ZK** for another very well written and detailed review featured in the November 2017 QST! In his 4 page article, Zach writes about the new LNR Precision Mountain Topper 5 Band (MTR-5B) QRP Transceiver. This is a follow up to his previous review of the MTR-3B in the May 2017 QST. He notes that "both radios are small and efficient QRP CW transceivers that are well suited for operations requiring extreme portability. The MTR-5B is slightly bigger and heavier than the MTR-3B, but offers better performance and a total of five bands (40, 30, 20, 17, and 15 meters)." In the article he discusses improved controls, antenna jack, and user interfaces. He goes on to describe his experience with the rig using an Alex Loop to do SOTA work in ME and VT with a nice picture of the rig in action during his activation of Champlain Mountain in Bar Harbor Maine (W1/DI-004).

Great article Zach!!! Be sure to check it out!

## WIND DAMAGE IN JEFFERSONVILLE Joe K1VMT

Looks like some extreme wind recently.

I just got my rotor replaced on Friday from last winter's storms. Let's see if the Taitwister brake holds this time.



Photo courtesy of K1VMT – Wind damaged quad

Also last week's wind blew the reflector off my Quad onto garage roof. Years of twisting wore right through the boom and broke off. Hoping for the best this time around.



Photo courtesy of K1VMT – Sustained wind damage

South winds off of Mansfield really cause havoc.

Batten down the hatches!

*Editor's Note: This article was submitted prior to the October 30<sup>th</sup> wind storm that left many folks without power and suffering downed limbs and other damage. At the time of publication, many of our fellow hams are still waiting for power to be restored. We hope that everyone remains safe and we wish for prompt power restoration!*

## 50 FOR 50 – 32 SOTA activations along the way

Dave KCIAPK

Two years ago, I was hit by a car while biking and suffered a serious knee injury. After a long rehab, it was time to try hiking again. Mount Philo seemed like an easy place to start, and I might as well bring an HT. So... at the end of August 2016, I arrived at the top on a beautiful clear day with spectacular views of Charlotte and the Adirondacks and began calling CQ. I made contacts with Zach **K1ZK**, some tourists boarding the LCT Ferry (**WA1WK** and **K1CTJ**), and a summit to summit (S2S) contact with **KC2WLR** on the Poke-O-Moonshine Fire Tower.

After trying some more challenging hikes, I soon found myself on the trails every weekend and my knee gaining strength... That's when I had a crazy idea... 50 hikes before my 50<sup>th</sup> birthday in October 2017... I call it **50 FOR 50 !** Maybe, I could also squeeze in a bunch of SOTA activations!



Summits On The Air (SOTA) is an award program which originated in Europe and is gaining a lot of popularity in the US and Canada. "Activators" ascend a summit and make a minimum of 4 simplex contacts with "chasers".

Both Activators and Chasers accumulate points based on the mountain's topography. Easier summits like Mt. Philo are one pointers, whereas taller and more difficult summits such as Camels Hump are worth 10 points. Bonus points are awarded for winter activations. The final activation must be on foot, and you cannot activate from or near a motorized vehicle. Qualifying mountains are at least 300 meters (984 ft.) with a prominence at least 150 meters. Each summit has a unique designator based on region, mountain range, and sequential number usually based on elevation. There are 253 qualifying summits in the Green Mountains, 28 in the Northeast Kingdom, and many others in the Adirondacks.



W1/GM—127 Madonna Mountain: HT and HF rigs. End-fed is strung between railing & trees. Working the west coast, Finland, and Croatia.

In addition to books from the Green Mountain Club, I found inspiration and information about potential hikes from friends

and other hams who were active in SOTA. In fact, many activators post photos, GPS logs, and trail descriptions on the SOTA website - a great way to find and prepare for awesome new hikes!



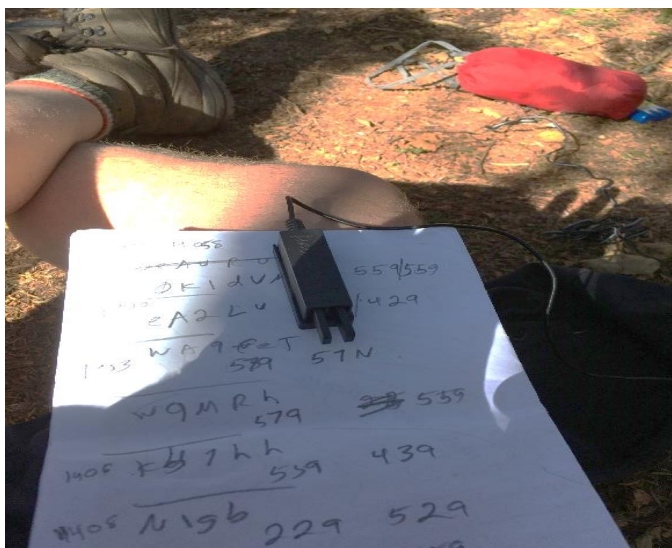
W1/GM-004 Jay Peak: Surprise 4" of November snow! Note the high concentration of antennas making for a high RF floor. K1JAY is up on this roof.

After spectacular fall climbs of Mt. Norris, Madonna Peak, Camels Hump, Mt. Ellen, and Rattlesnake Mountain, winter came quickly at Jay Peak - I arrived on Nov 6<sup>th</sup> to find half the mountain covered in 4 inches of snow! Brrr....Not only did I have to contend with a high RF floor, I discovered that it's hard to do CW in the wind and snow when your hands are cold! From that point forward, I packed crampons, snowshoes, and a good pair of gloves – just in case!



Microspike crampons for icy trails – tire chains for boots!





W1/GM-024 Breadloaf Mountain: Pico Paddle & log

My strategy is simple: attempt VHF contacts...if unsuccessful, switch to HF. It's easier to pull an HT out of the backpack than take the time and effort to set up a long wire and HF rig in the wind!

VHF worked well most of the time – lots of ARO were monitoring 146.520 while mobile or portable. Throughout the year, I was in good company with many fellow hams doing SOTA work in neighboring states and provinces. S2S contacts were common with others in the Adirondacks, NH Presidential Range, peaks of Quebec, and even down into MA. Five watts VHF goes far with elevation and line of sight! I was really surprised to again work Pat [KC2WLR](#) – this time he was 144 miles away in a park south of Albany while I was on Mansfield (one of many contacts with him throughout the year)!



W1/GM-002 Killington Peak: Lots of RF Here!

On occasion, I abandoned attempts at VHF contacts and relied on HF. Sometimes it's just poor timing – nobody is listening to VHF... Other times, the RF floor is horrible – mountains are good places to put towers, but HT's get desensitized when operating next to an array of powerful antennas!



MTR-3B: 40 30 20 meters 5 watts CW – size of deck of cards

For HF, I use a Mountain Topper (MTR-3B) transceiver, a 40/30/20 end-fed wire, pico-paddle, small RC battery, and a 30 foot telescopic pole from SOTABeams. The MTR-3B is a five watt CW only QRP rig that is the size and weight of a deck of cards. The radio, paddle, earbuds, and battery fit in a small camera case. The telescopic pole gets strapped to the outside of my pack.



W1/GM-134 Mount Grant: End Fed and 30' telescopic pole

The trick is to use a smartphone app to self-spot on the SOTA website so that chasers can find you. Cell coverage is generally poor at the trailhead but was never an issue on top of the summit. As a backup, I have my Yaesu FT1XDR HT programmed to send messages to the SOTA network via the APRS. Once the chasers know my frequency, it is easy to make QRP CW contacts. Pileups were common as I worked

chasers throughout the US, Canada, and on several occasions into Europe and the Baltics.

Hiking every weekend seemed like a good idea in August, but I later realized there were some things I didn't consider. First, mud season lasts a long time and I didn't want to be "that guy" wrecking the trails when nobody is supposed to be hiking. This meant that I had to double up on weekend hikes later in the year. Second, we had a lot of icy conditions last winter - this made for some long and treacherous outings - even with Microspike crampons. Third, I had to be smart and completely abandon some hikes due to dangerous conditions or my knee acting up. Finally, outings every weekend didn't always go over well when the family had other plans. Happily they were forgiving and reluctantly put up with my quest.



*Photo Courtesy of David Ripley: W1/GM-013 Mount Ellen  
KC1APK 5 watts QRP CW*

I'm very happy to report that I recently completed the 50<sup>th</sup> hike on my 50<sup>th</sup> birthday - my family even came along for the last two hikes! The majority of outings (32) were SOTA activations; nine of these on snowshoes. Four were the first time a mountain had been activated. The remaining hikes were a combination of non-qualifying summits such as Mt. Hunger and Mt. Abraham as well as a few trails that didn't involve a mountain peak. In total, I hiked 249 miles with 90,157 feet of ascent in NY, VT, ME, and NS. Although I'm a long way off from Scott W1ZU and Cesar K1TNT, I managed to advance to number 14 in New England SOTA rankings.

Getting involved in SOTA is easy. All you need is a radio and a way to reach the summit. I chose to do this while hiking, but there are several peaks in VT where you can drive up or take a tram - you must make the final ascent on your own power and cannot be near a motorized vehicle.



*W1/DI-001 Cadillac Mtn. in Acadia ME - cruise ships  
transiting Bar Harbor*

SOTA is not possible without the support and encouragement of chasers. After a long slog to the top, it's great to hear a familiar call sign!

**THANK YOU to all the local hams who answered my CQ when I reached the summit!!!**

**AA1SU, AB1DD, AB1KW, AD2Z, K1BKK, K1LAX, K1ZK, K2BLS, KB1FRW, KB1MDC, KB1WXM, KC1CZA, KC1DGT, KC1FBT, KC1GQV, KC1USA, KC2WLR, N1ARN, N1CJL, N1DMP, N1FBZ, N1GB, N1JEZ, N1SZO, N2ZGN, W1AD, W1CGT, W1FP, W1OKH, W1RAY, W1ZU, W2EJC, WA2LRE, WB1ELG, WI2B.**

A special thank you to Scott **W1ZU** for his advice and encouragement throughout the year.

- To learn more about SOTA, visit <http://sota.org.uk>
- To learn CW, visit <http://www.cwops.org/cwacademy.html>
- To learn more about hiking in VT, visit [www.greenmountainclub.org](http://www.greenmountainclub.org)
- Make your own topo maps [www.caltopo.com](http://www.caltopo.com)



## SWEEPSTAKES NOVEMBER 19<sup>th</sup> – 20<sup>th</sup>

Mitch W1SJ

Saturday-Sunday November 19-20<sup>th</sup> is Sweepstakes. This is the granddaddy of all stateside ham radio contests, dating back to 1930. Back then, equipment was large and had numerous tubes. And receivers weren't particularly sensitive, especially on the higher HF bands. There was no SSB, AM didn't go all that far, and CW was the name of the game.

Sweepstakes is challenging in that you must exchange a lot of information - CORRECTLY. If you miscopy, you lose the contact. The exchange is made to look like a piece of formal traffic. There are 5 pieces of information in the exchange: Serial Number, Precedence, Call Sign, Check and ARRL Section.

Serial Number, Call sign (yes you must repeat it in the exchange) and Section are self-explanatory. Precedence is the category: A: Low Power, B: High Power, U: Unlimited (assisted), Q: QRP, M: Multi, S: School club. The check is simply the last two digits of the year you were first licensed. So my report might sound something like this, "982 Uniform, W1SJ, 69 VT." And again – accuracy and speed count – which makes this a very challenging contest. Even if you have a modest station, you will work a lot of people – especially on Sunday when the big guns are literally begging for contacts.

The event starts Saturday at 4 PM and ends Sunday at 10 PM and you can operate any 24 hours out of that period. With 10 and 15 mostly dead, 20 meters (day), 40 meters and 80 meters (night) will be the money bands, so focus on those. The November 19<sup>th</sup> event is phone only – no digital.

To operate in this event, make yourself up a sign with the exchange, so you know what to say when you work someone. Start by working some of the stronger stations and then as you start to feel confident, you might try a few CQ's. If you have a small station, Sunday is your best bet, as everyone is scrambling for new people to work. By the way, a new person who gets on late in the contest is called, "Fresh Meat"!

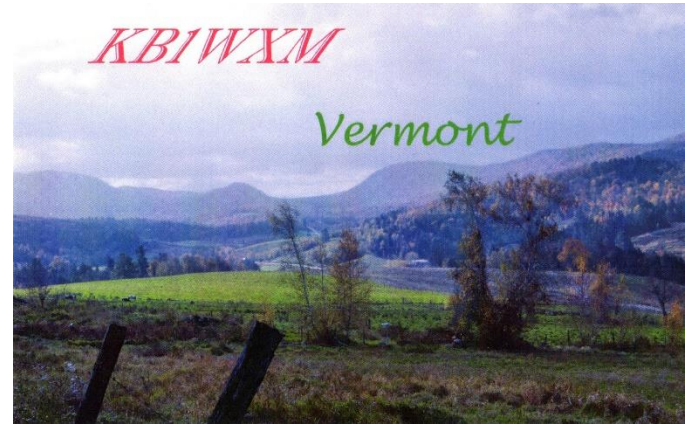
This will be my 47<sup>th</sup> Sweepstakes out of 87 years of this... so, I've been in more than half of 'em! Get on the air for a bit, and have some fun!

## CONGRATULATIONS!

Congratulations to the following new licensees:

- **K1JMJ** – Juan Jimenez (Burlington) - TECHNICIAN
- **KC1IFK** – Stewart Corey (Colchester) – TECHNICIAN

## FEATURED QSL CARD OF THE MONTH



**Thanks Bob!**

*Got a favorite QSL Card? Send us a picture, and we'll feature it one of the upcoming newsletters.*

## NOVEMBER ELECTIONS

Nominations are as follows:

Secretary – Duane **WL7CVD**

Treasurer – Adam **KB1LHB**

President – Bob **KB1FRW**

## TWO WAYS TO CAST BALLOT:

1. Deposit in voting box at start of November 14th meeting
2. E-mail to [ranv@sover.net](mailto:ranv@sover.net) **no later than noon Tuesday 11/14**. You must include serial number in E-mail **Do not mail ballot!**

Write-ins must be: a real living person, a current member of RANV, agreeable to accepting the office

## EDITOR NOTES

Dave **KC1APK**

## WE WANT TO HEAR FROM YOU!

This is your club newsletter. Feel free to submit articles! Items of interest can be short, long, technical, anecdotal, etc. Share your experiences and stories!

## NEWS & VIEWS VIA YOUR INBOX

Did you know that 24 of our members have signed up for electronic delivery of the newsletter?

To enroll, just send me an email at [davidblin@aol.com](mailto:davidblin@aol.com). You'll get fast delivery, the club saves a dollar each month, AND the pictures look GREAT in color!



## NEWS & VIEWS

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### NEXT MEETING Movie Night Officer Elections

Tuesday • November 14<sup>th</sup> • 7:00 pm  
Wheeler House, 1100 Dorset Street  
South Burlington, VT

### Upcoming, Notices, & Misc

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