The VHF Journal
"Scientia sine art nihil est"
Published by The Rochester VHF Group
http://www.geocities.com/ve3iey/RVHFG.html
Club Memorial Call: W2UTH

"The Passing of a Great One"

Chuck Oneske, K2YCO

"Somehow it was missed. How, I don't really know. Yet, his callsign should be held in reverence and his name should invoke fondness and hearth. Chuck Oneske (K2YCO) is listed among the Silent Keys in the March 2002 QST.

I am not the one to write his remembrance. Others knew him better. I can tell you only what he meant to me and the fact that the impact of his Amateur operation echos still in the voices of those who he touched so many years ago. I saw him as the epitome of the kind, warm, gentlemanly motivator. He was one of the original good guys. He encouraged and motivated in a way that is unique to the Founders of his generation. Chuck was a year-after-year top performer in the January VHF Sweepstakes, in the years when 20,000 points would bring home the laurels.

The world is a little colder today. Rest in Peace, old friend.
Ev Tupis W2EV"

———-

"Please pass on my condolences to Chuck's family. I was saddened to hear of his passing. Back in 1972 when I was fisrt made 220 Mhz "band captain" at what was to become the VE3ONT contest group, one could always count on Chuck for a signal test on 220 mhz. We were using some pretty flaky stuff that needed a LOT of testing. We knew if we couldn't work Chuck the darn thing was acting up .....AGAIN! He was a beacon on the band!

Rest in Peace my friend! 73 all. Peter Shilton VE3AX"

Carribean grid square maps

for most of North America and the northern Caribbean,
http://www.qsl.net/on4ant/gridmaps/na1.gif
for the southern Caribbean
http://www.qsl.net/on4ant/gridmaps/na2.gif
for northern South America
http://www.qsl.net/on4ant/gridmaps/sa1.gif

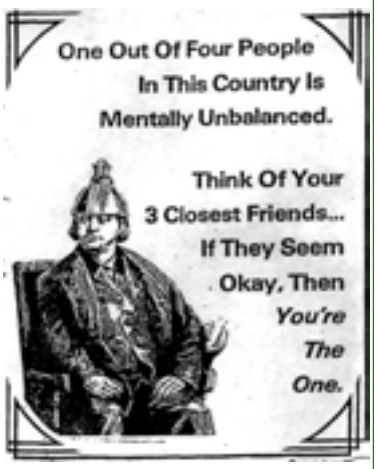
...tnx VE2ZP

RDXA and RVHFG ANNUAL BANQUET

April 20, 2002 6:30 pm
Burgundy Basin Inn
$20.00 (same as last year)
includes dinner buffet, snack table, service charge, tax, and gratuity.
Cash Bar
Tickets available at the club meeting, see N2OPW.

Come join the celebrations and awards ceremony.

VHF Opening Pager



Scott E. Olitsky AC3A <solitsky@acsu.buffalo.edu>

Another reminder for those of you with a cellphone or pager that can receive e-mails...

We have a listserv setup that is only used for VHF opening alerts. A short email about an AU opening, E skip opening, etc will go to anyone on the list, to their email account, pager or Phone. It is a great way to catch that opening when you are not near the rig.

If you do not have a pager or cellphone but have internet access in the shack, please consider signing up as well...an email to the group if you hear an opening would be greatly appreciated.

Aurora alert services & websites

R A Jalokinos , Finland <jalokino@bigfoot.com>

http://spaceweb.oulu.fi/~jussila/aurora/
http://www.northern_lights.no/english/pages/experience/intro.shtml
http://www.ips.gov.au/papers/
http://www.sci.fi/~fmbb/astro/
http://www.ursa.fi/ursa/jaostot/revontulet/english.html
http://www.oulu.fi/~spaceweb/textbook/indices.html
http://gedds.pfrr.alaska.edu/actp/
http://members.tripod.com/~Aapeli/auroraborealis.html

VHFBILL

Well, March- beware those Ides, eh!

The Editor's rant certainly struck a chord- not a word of dissent heard. Seems like people are finally catching on to what's going on in Newington. One writer even called it "crisp"!

14 weeks `til June Contest- what are your plans? Maybe putting pen to paper would be a good start- the annual April Gala issue is due out next month and my In-box anxiously awaits your articles. Have an idea? Have a bone to pick? Need inspiration? Well, the Deadline is a mere TWO WEEKS after you get this issue- 16 MAR 02, so get with it. Don't forget- the annual prize for the best Journal article hangs in the balance, to be awarded at the April Banquet.

73 es CU on the bands!

Tom
VE3IEY FN14pd
Amherst Island, Ont.
(aka: abciey)

To Subscribe: Send your address, call, e-mail address and $15 US funds for mailed copies(or $10 US for Web downloaded copies) to: The Rochester VHF Group, PO Box 92122, Rochester, NY, 14692. You may elect WEB or MAIL delivery for the same price. You will be notified **the very day** it is available for download. If you elect delivery by mail, copies are in Black and White- sorry!

-Commentary and articles: via e-mail to editor VE3IEY: tantonr@kingston.net. Use standard ASCII text, Corel's Word Perfect or send as regular e-mail.

-Photos and drawings: via e-mail, and can be sent in any format that is available (JPG, GIF and TIFF are most common). **EXCEPTION:** We don't like MS PowerPoint (*.PPT) files!

-Assistant Editor, Printer, Membership & Data-Magician: Judy, N2KXS

-Production Czar and Supreme Downloader of the Word: Fred, WO2P

-Advertising space is now available in the Journal. Contact the editor for One thru Twelve month rates. **Layout services are free of charge.**

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The Rochester VHF Group

*** Club memorial call: W2UTH ***

Club website @ http://www.geocities.com/ve3iey/RVHFG.html

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Director (Odd year): K2DH Dave Hallidy (585) 728-9517 k2dh@frontiernet.net
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Internet Webmaster: Yahoo.Groups
Mailing list Majordomo in charge:
Advertizing: VE3IEY (above)

"There is only *one* mailing list [you'll ever need...]"
RVHFG_general@yahoogroups.com
It is set up to broadcast to all RVHFG members

MEETING NOTICE

Friday 08 MAR 2002
7:30 PM
111 Westfall Road
Rochester, NY

Chairman's Rant – March 2002

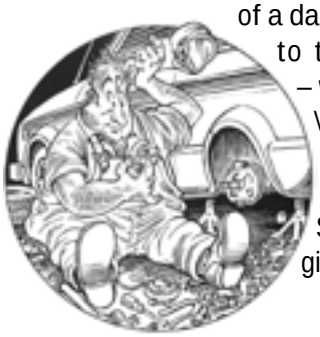
Time certainly has flown by since the January VHF SS, and it's STILL being talked about 'round these parts! I'm still impressed by the amount of activity and discussion still floating out there! This MAY have been our year! Having seen NOTHING from the Packrats whatsoever, and the scores for N.E.W.S being around 1.3 Million points (as reported on the web – will certainly be higher) we stand a reasonable shot of making the gavel! No, I don't know the final score! Only N2JMH can give that up – and I don't think he's going to be NEARLY as secretive about OUR results – bad OR good!

The Banquet is coming upon us quickly once again! April 20th, 6:30pm, Burgundy Basin Inn – shared with our friends from the RDXA once again! It was almost unanimous – last year was indeed a hit! The award ceremonies, the camaraderie – it should prove to be yet another hit. Make SURE you clear the date – I'd love to see EVERY club member there! Tickets will be available shortly – please watch your email for notices. I will have some, N2OPW will, AF2K will – don't be afraid to call & ask, either! They will remain at $20, and the buffet / cash bar / etc will be there!

W2UTH award nominations – another thing that should be considered! If you DO have a nomination – send an email to w2ev@arrl.net - Evhen will be collecting any nominations made for the award. Please make sure to include a justification for the nomination – this IS indeed our highest honor for the Rochester VHF Group. Outstanding service to the club, technical achievement, elmering spirit – these are all elements of what the award represents.

Now – on to more pressing info! The BIG hullabaloo last month about removing contest scores & section notes from QST is STILL big news. However, it seems the ARRL Board has heard the yelling and is holding off from any decision until later this spring! If you've got an opinion about this, you really should let your District Director know about it! N3efn@arrl.org - Bernie Fuller – is quite a nice guy. He's responsive AND I believe has his finger on the pulse of his division. If you have comments, send them to him.

SAVI – the latest threat to the 430MHz band! This one is credible, and (sadly) more than likely a foregone conclusion. I've sent around an email to the club membership regarding this, and have filed an objection with the FCC. If you received that email message – PLEASE take time to file an on-line comment with the FCC. It MAY make a point in Washington. Enough resistance to show "hot potato" status might make a difference. Think of it this way: All that stuff you use on 432MHz or 440MHz – imagine if all of a sudden it becomes useless. Or worse, it becomes intermittently useless. Right in the middle of a damn contest. These are the threats to the VHF/UHF/Microwave spectrum – we're the occupants of some VERY VALUABLE real estate. If we don't use it, SAY we use it, and write about it frequently where it can be SEEN that we use it – we are just giving it away. -AXX



This will be my last term as Chairman of the Rochester VHF Group. Those who don't know, Renee and I are expecting our first child this June (NO, not the contest weekend! We PLANNED it that way!) And quite frankly I don't believe I'll be able to give the club the time it deserves. Believe it or not, there's quite a bit behind this job – but the time invested is WELL WORTH the effort. I've really enjoyed the past few years. The club has actually GROWN in membership! We've seen some really neat events come back to life – the Picnic returned. Club Projects have become a "fall classic" – and has helped MANY of us get on some pretty cool bands! 10GHz Fever has hit the Rochester area again! There are at least 3 of us with permanent stations on 10GHz (W2FU, K2DH, K2AXX) and others capable of going portable with very short notice! We've seen an increase in participation for the Rochester Cup competition in January. We've done extremely well in the contests we've entered. The RVHFG has gone "on the road" to other local clubs, talking about VHF+ operation, contesting, roving – to try to bolster interest and activity in the region!

I guess writing this is kind of bittersweet. The RVHFG has been a big part of my daily life for the past few years, and it's kind of tough to think about letting it go! However, I've got more pressing needs to attend to in the fairly short term – and need to let someone else take the reins and keep the club moving ahead!

To the Board of Directors – thank you for putting up with my whims, rants, whining and insanity! There's NO way this job is doable as an one person show. Thank you for supporting the direction this club has taken.

Finally, to each of the members during the past couple years; I thank you. Thank you for your support and efforts! A club is only what the members put in – that's why we've been SO successful. YOU. No club can survive, let alone thrive, without interest. Hopefully the RVHFG is doing what you need it to in order to keep your interest. Best 73, see you at the Banquet – or on the bands! Mark, K2AXX

VY0AAA: really cold 6m DX

Thu, 14 Feb 2002 Ray Perrin VE3FN

Well, I finally made it to Iqaluit yesterday afternoon. Here is part of my adventure.

I took off about 20 minutes late Monday (depart 11:00 pm) and all as well. Clear all the way over Quebec -- not a cloud! Then when we reached Baffin Island, it was cloudy and stormy. We descended thru pea soup and, at about 2:00 pm got down to about 1000 feet. I could see the ground a bit. But the pilot said "no way"! Flaps restored to flying position and he gunned it.

The closest alternate airports that can handle a large jet are all over an hour's flying time. So he continued south west for an hour and 40 minutes to Rankin Inlet on the west side of Hudson Bay as that was his next destination. About 5 minutes west of Iqaluit, all was clear and I could see the ground from 20,000 feet.

When we landed in Rankin, they said the airport in Iqaluit was closed. The First Air flight from Ottawa arrived in Iqaluit about 30 minutes before we did and it got in ok. But it didn't get out as things became so bad – usually they can tolerate much poorer conditions for taking off than for landing.

In Rankin, we met the plane coming from the west (Edmonton, Yellowknife) and were given the choice of staying in Rankin or returning to Ottawa. Of course, some wanted to continue their journey west as Iqaluit was not their destination. There aren't many hotel rooms in Rankin and there is no flight from Rankin to Iqaluit on Tuesday. So after sitting in the Rankin airport (MINUS 33 deg Coutside with a 50 km/h wind) for almost 4 hours, we took off for Ottawa. Landed in Ottawa about 11 pm and got home around midnight. Nice circle of the arctic!

So I tried again Tuesday. First thing Tuesday morning, the Canadian North web site was down. Environment Canada web site said blizzards in Iqaluit. The only phone number for Canadian North was for cargo and there was no answer about 7 am when I called. I tried First Air and they said their flight to Iqaluit would be delayed until 2:30 this afternoon. I guess they were counting on the weather clearing around 5:30 pm when they should arrive.

When someone finally answered Canadian North's cargo line after 7:30, he gave me the 800 number for arrivals and departures. They said they were leaving at 10:40 per schedule. So I hoofed it out to the airport with all my luggage (4 checked plus 2 carry on). But when I got there, the gate agent said sorry--- the flight is cancelled. There was a Canadian North manager with a cell phone at the agent's position. He spoke to his colleague in Iqaluit while I stood beside him. Cold with 50 knot winds. The airport was closed. In fact, the town was closed -- no work or school. Try again tomorrow!

Fortunately, everything cleared up by Wednesday and we made it in OK. But I am not in the same spot as before and far tougher to erect an antenna. I have an apartment on the third floor of an apartment building (apartments over an office) in a unit on the north-west corner. I built up a small 2-el beam for 6 and it is mounted on an 8 foot mast at the front of the building -- and very close to it. The mast is tied to a metal railing. But I have 100 feet of coax to the beam and VE8BY/B is stronger on my indoor wire dipole than on the ground-mounted beam. Could just be because I have a cleaner shot at VE8BY/B from the apartment. But one length of my fine Radio Shack RG-58 cracked in the cold (minus 35 degrees C) -- I have 2 runs each 50 feet long. I replaced the cracked run of RG-58 with 50 feet of Radio Shack RG-8 (yes, they have a Radio Shack here), but the indoor wire dipole still wins.

The MFJ ant bridge says the beam is resonant. I may try to mount the beam behind the building (north side) and farther away from it. The building is mostly timber. But the building still will give blockage in prime direction to south. And will have to find some way of guying it-- the ground is rather frozen! I

ran a trap dipole for HF out the window to the north side of the building.

So that's the scoop. Other than VE8BY, nothing heard on 6. Will try to monitor the OH2 cluster while in the office (but internet access is down now) and 28.885 when in the apartment. Will likely return Monday or Tuesday.

.....

VY0AAA... The saga continues! : F Layer

Mon, 18 Feb 2002
Ray Perrin VE3FN

I did quite a bit of work on antennas this weekend. I gave up on the beam as it was quite low (up 8 feet) and close to the building. While I had a clear shot south, I was blocked to the east by a hill about 100 yards to the east. I also had about 100 feet of coax to the beam.

First, I erected a sloping wire dipole. It runs out the bedroom window on the north side of the house and is fastened to the ground. Only need about 20 feet of coax to feed it. Sigs from VE8BY/ B(less than 1 km away) were better on the dipole than on the beam -- probably because I had a clear shot to VE8BY/B from the wire dipole while the beam was partially blocked by a school across the street. I don't expect too much attenuation by the building I am in because it is constructed primarily of timber. But I was still looking for a way to get an antenna with a clear shot south.

I had a few pieces of aluminum tubing that I could telescope together to make a mast about 10 feet long. As my apartment is on the top floor (floor 3) of the building, the roof isn't up very far and it does not extend out very much. The window sill in my bedroom is fairly high. So I put the dipole made from telescopic antennas on the end of the mast and managed to get it about 3 feet above the flat roof of the building. The mast runs at a bit of an angle as one end sits on the runner for the sliding window and it has to get past the overhang of the roof. I used a rope to hold the mast in place.
The dipole seems to work well. When broadside to VE8BY /B (as the wire antenna is) sigs are the same on both dipoles. Turning the dipole 90 degrees so it is broadside to the south dropped the sig from VE8BY by about 10 db. So I left it south so I could cover all directions using the 2 antennas.

Over the weekend, I did a lot of listening and even tried a few CQs on 6. But nothing heard.

Played around in the CW DX contest, but got fed up explaining that my call really is VY0 (not VO1, not VY2) and that, yes, the Nunavut Territory (NU) is a valid "state" for the contest. Normally the DX op would say "I am copying NU but what is your state for the contest" I had to keep repeating that NU was my "state" for the contest. Sheesh -- read the rules guys! So most were just too dumb to realize they had a valuable (rare!) multiplier. Of course, all this was being sent at 35 WPM with typically lousy weighting. As an exception, one op (8P9JA) was very clever. He slowed down to a leisurely 20 WPM. I worked him on 10 and then we moved down through 15 and 20 meters -- just like a VHF contest. Made a sked for later on 40 so we worked on 4 bands.

This morning about 07:15 (1215Z) I got on 28.885 and worked a couple of G stations. But they weren't hearing anything on 6. Then I heard them calling a VK4 on 28.885 CW. I went up to 50.110 and called CQ just for fun. Well, SP2NA came back (JO94) with weak sigs -- 449 to 559. But finally an F-layer QSO on 6! I called a few more CQs on 110 with no luck. I went back to 28.885 and the Gs told me they were working VK4 on 6 with weak sigs. They suggested I move down to 50.095 to get out of the QRM. I called a few more CQs but heard nothing. Then I had to leave for work.

BTW, I have rented a new car (small SUV) and the cold is so intense that the cord attached to the plug on the block heater snapped off yesterday. So I couldn't plug it in and I park outside. This morning it is a balmy minus 41 degrees C. The car started -- but it was tough! Got a new plug on the cord so I can plug it in again.

Ray Perrin VY0AAA, VE3FN

"Babies are the only decent human beings. Until the age of puberty, they are the best things on the face of the earth. At age fifteen or so, they undergo **UJCP**, the **U**niversal **J**erk **C**onversion **P**rocess and become intolerable, often for the duration." (*DB, The Modern Man's Guide to Life*)

The True Adventures of Team Psycho Rover

January 2002

DE: N2JMH

In my true writing style I will let you know how it goes for the rover you have all come to know and love. Don't expect me to change the names to protect the innocent though; if you are foolish enough to be involved in anything I get involved in then you are guilty by association. My warning to you is to take this article for what it is worth, reading enjoyment maybe or a bunch of baloney, but it is 99 percent true with only a few items spiced up for your pleasure.

A month before the contest things are looking great, all the equipment is here and we will be ready without spending excessive amounts of time for preparation. If you think for a second that competition grade roving is something you just decide to do at the last minute you are fooling yourself. This is a full time job almost and there is always something that you can mprove. Todd and myself discuss roving almost weekly year round, changing things as needed and just keeping in touch with the blue whale.

With things looking great so early on I decide to really give a push to everyone for this contest. The stations proposed to be on the air looks promising this year to make a run for a Gavel and I decide to do whatever it takes! So I do the tour with the other clubs to try to get them pumped up, RARA, RDXA and GRAM, not to mention our club. This is another story so I won't go into much detail. I did discover that the modern age of computer presentations has left me behind; I type with 2 fingers and have to look at the keyboard as I type. Notice the little complaining here, time getting used up!

Back to the rover! With a few weeks to go I realize I want to make some station integration changes. I had ordered preamps for 2.3 through 5.7 gig and wanted to use them without smoking them like my luck has gone with the other bands. After picking the brains of w2fu, n2wk, wa2mop and a few others I have a plan for the new and improved microwave master switch box. I am using the basic design from Charlie, wa2mop and with a few changes to meet my requirements I set off to making an order from Mouser. Well, $200 later I have more stuff than I need, extras of this and extras of that. I discover that they sell the Amp brand connectors that you can get from the Rotor Doctor and decide to standardize the control cables in the rover as well.

Two weeks before the contest it sets in, that thing I fear most. Obsessive-Compulsive Disorder. Yeah, believe it or not I get it bad. I have already provoked k2axx into a little head to head challenge with our scores and also just barely beat out Bill and Tom in the k2ter/r last year. They are both trying to get me and I decide to go for some major changes. I will get rid of the dual band dish for 5 and 10 gig and run separate dishes. I send an email off to Jeff Kruth and tell him I want a 24" dish now and don't care what it costs to ship it just get it here. I also over pay for a wr90 to SMA transition for the dish and pay extra to have it shipped from California. Wait a second; if I add another 10-gig station I can leave my old one setup at home for KC2IDT to use. So I call SSB Electronics to see if he can fix me up, sure enough he has what I need and he also suggests a preamp. What the heck, fire it in the box and get it shipped up here now!

Now things are absolutely fantastic, I have a full plate of things to do! Luckily I have help; I put Charlie to work on some preamps while I weld up a tower for his rover. Then Todd and Charlie work on my tower to get Janet setup for the contest and turn all the antennas vertical. As time draws near I am getting to the point of needing to yell at somebody. Don't even think I am going to yell at my wife, I am a little nuts, not stupid! Charlie is late for a work session, so I yell at him just a little; he is new so I don't want to scare him to bad. Where the heck is my best friend Todd, I can give him both barrels and he can handle it! Blow some steam and everything is back on course. I decide to change the vacation schedule from work and opt to take Wednesday off before the contest as well as the rest of the week. Turned out to be the right move, because as usual in the sick-roving world I live in we do not finish up till late Friday night. Another contest of no actual on the air testing before we go out!

We battle through the usual challenges in the rover that you get when you change things. My new uWave switch box does not work right, wa2mop sets me straight on this one and w2ev shows up and fixes the BeaconNet problems without me even knowing he was outside in the rover. We were actually taking a break and having some pizza in the shack.

It is time for the big show, as planned we meet k2ter/r in Leroy to travel together out to Erie PA along with n2opw/r at 9:30 AM. Paul is no where to be found and we hang out as long as possible hoping he shows up. No such luck! Cannot find him on the air so we head out, causing all the looks of confusion that you get with 2 rovers. As we get closer to Erie one of my concerns was the weather and as you know they had been getting lots of lake effect snow out that way for a couple weeks before

the contest. 6 fresh inches of fluffy lake effect was there to greet us and I knew this was going to make it even more interesting. We grab some gas and lunch in Northeast PA and finalize our plans with k2ter/r. The closer we get to the grid line just south of Erie, the worse the conditions are on the roads and as we pull up to one of my spots in en92 we notice it is not even plowed out. To much snow to try to get in the pull off along Rt19 so we decide to just use the GPS and find a safe suitable spot to complete with k2ter. Our plan was to make sure that Bill and I both got all the multipliers on all the bands out there before we even worried about working everyone else. This would allow us to complete with each other in the least amount of time possible and then split up and run our chosen routes. By the time we got to our 3rd exchange we could not work on 2.3 gig. This was going to be a bad sign and I could feel some frustration already setting in. Anyways we stick with the plan and finish up with Bill and go our separate ways. We had to find I suitable location yet for en91 since our spot was buried in snow. As I drive around Todd digs into the 2.3 problems, we need this band on the air bad. After more digging than I would have done Todd discovers that the wire has pulled off the LO board in the transverter and he solders it back into place. It finally paid off for carrying the soldering iron with us! We still have not found a location in en92 so we decide to work as many on the lower 4 while we drive around and then we will head on to en91. We get to a less than optimal site in 91 but it will have to do. It is late and I do not want to fall behind schedule. We work as many stations as possible from there as we can. The bands stink as a mysterious ice fog sets in and I notice that all the aluminum is getting a heavy coating of frost on it. I decide it is time to pull the plug on this grid and suddenly there is a good amount of stations on so I inform Todd to stay in the van and run the bottom 4 on the omni loops and I will get us ready for travel. I hop out and notice it is really cold but continue on with the preparations. I start to let the tower down with the winch and suddenly it stops half way down. This is not good and I start to bring it back up when Todd comes out of the van and asked what all the e noise was. I let the tower down right on top off the FM array. They need to be pointed forward to let the tower past then they can be rotated over the tower. What a mess, antennas twisted all over the place and I feel sick to my stomach because off the error I made.

As I climb on top of the van uttering all my favorite vocabulary I start to twist and bend what is left of my perfectly straight antennas I notice it is not as bad as it looked. They were perpendicular to the tower and most had just rotated on the cross boom. Some careful tweaking and we are back in business going down the road joking about it.

On to fn01cu, just a short drive and a really good location. Yup, Bill has already been here for sure judging by the dry spot in the road. Hopefully he was having better luck than I was. By now the frost on the antennas was almost a ½" thick and we new we were in trouble when we could not get into the microwaves with w2fu, k2axx, n2pa, wa8rjf or any of the usual dependable microwave boys. I cannot tell you how disappointing this was as I had marked this spot as being the bread and butter location. A perfect spot to get the grid multipliers up on all the bands like we have done in the past. We stay as long as we can take the poor results and "carefully" lower the tower. I inform Todd that he either drives or operates the lower 4 bands as we head back towards my house along the thruway. Luckily the temperature was better as we got closer to the lakes and most of the frost evaporated. Todd seemed to have a pretty good rate going as we were mobile and maybe all was not lost. Being the obsessive type all I can do is watch Todd in the mirror as I drive and he operates. As we traveled down the boring thruway I watched Todd slowly slouching down in the chair with the headphones on. Every once in a while he would get one of those falling head jerks as he fell asleep but soon he was just plain asleep sitting in the chair with the headphones on. I thought about giving the wheel a jerk, as I was sure I could have tipped him over in the chair while we were in motion.

Back at my QTH at 2:30 AM tired from driving, a quick trip to the shack to check kc2idt's success as a FM contester, and off to sleep I go. N2im and his dad arrive at 6 AM sharp for some warm food prepared by my wife and out the door we go for the day. Finish up with Charlie and some laser Q's and we are somewhat rested and ready to rock and roll. First stop will be fn03, a decent location with no problems with the local guys. I pick up w2fu and get ready to run the bands, man are they loud, line of sight through Rochester if there are no buildings in the way. I notice that Todd is on cw on 5 gig with them and this makes me concerned. If he is struggling like that we will have a bad day. I don't know if it is equipment problems at either end or what. He finishes up with them and moves on. He decides to get on the FM antennas and asks me to peak outside to get the offset on the FM array. I ask him why he moved the main rotator and he informs me he did not touch the freaking thing. I smile and inform him that he worked w2fu with the back of the antennas. Pretty good with 24" dishes on 5 and 10 gig!

In fn02, Buckman Rd, Todd notices that 2 meters FM is dead, he is hearing more on his HT and rubber duck than we are with a 4-element beam. So he digs in and informs me that the 1p6t SMA relay is really hot, this is not good because this really is the hub of all band switching for Todd's operating spot. We

have a spare but this will take a long time to switch out. Anyways he bypasses it into his HT and continues on. We hook up with Fred and Judy and are on our way to fn12. As I come down the hill into Pavilion on Rt 63 I notice the DOT State Police wagon coming at me, as we pass each other he pulls a u-turn and turns on his lights. I inform Todd we are being pulled over as he is in the back fixing equipment with no seatbelt on. This is going to be expensive. Lets see if the n2jmh charm can get us out of this. As he walks up all I can think about is how much time we are losing and missing q's. Well my charm almost worked, he was leaning on the edge of ticket/no ticket many times. He was very impressed with the rover as I informed him of our great public service capabilities and on and on. 1 meaningless ticket later and we are off with his blessing to finish the contest! He never did say anything about Todd being in the back, he stayed there the whole time but we decided not to operate while he was running my license as we figured that 6 meters might wipe out his radio!

Lessons learned for this outing. 12 volt dc relays will fail with 28 volts applied eventually, but do make it through most of the contest! Patience is a virtue that I will never have! I can no longer BS myself that my rover is road legal! As opposite as Todd and I are we do make a good team. Time is never on my side!

Best score yet! 258,666 and we held off k2ter/r for another year and k2axx owes me diner for beating him!

THE RETURN OF MAX KOK: AU EXPERT TO THE STARS!

Q & A:

Aurora and electrical fluctuation

Max Kok <m.r.kok@hccnet.nl>

Q: I'm thinking of building an aurora detector based on the theory that an electrical current is induced in to wire during a northern lights storm, i.e the effect which causes major power outages from time to time. I was wondering a few things. Does anyone out there have an experience ofthis type of thing?

A: I have a lot of that. There are three main difficulties in general with this type of induction magnetometer:

1. The system needs a lot of "settle down time". It will take at least one or two weeks before the measurement is stable. Therefore it can not be used portable and thus you need that land. You can not take it with you from your light polluted hometown to the dark place where you can observe aurora. It might however signal you to go there in the right time.
2. There are many problems concerning corrosion and resistance which make your measurements vary over time.
3. The measurements vary very heavily with local earth conductance, which changes rapidly with weather. Rain will make your measurements almost useless, it changes the voltage much more quickly then a mag. storm (but when it is raining, you won't see any aurora anyway...) I have once had the experience that 300 m. of wire returned 0,000000 V (or nothing) because the system was set up near a dry ditch in a salty soil near the sea (in fact old sea berth as I am living in the Netherlands). This effect might also account for Jeffrey's problems as "mosquito_infested muskeg" makes me think he was working in rather wet soil.

So, from theory this system sounds awfully simple, in practice it needs a lot of experimentation and frustration to yield useable results.

Q: Would the line run North/South or East/West, or is it best to run two lines in 2 directions?

A: I have always used N_S, which worked fine. It's best to take a practical approach and run a test. The best direction is the one in which you get the highest voltage (local restrictions like ditches or your gardens dimensions are the main determinants). If you can, run a second test during a large mag. storm to see in which direction the voltage_changes are highest.

Q: Would there be any background voltage from the earth when there wasn't an auroral activity going on?

A:Yes, but it varies at least a factor of 2 (see above).

As I am writing this, my 25 meters of cable yield 22,6 mV, a rather low reading as we have had a lot of rain the last weeks. At my 50 N ACGM location, a change of 1% or 0,2 mV indicates a local K=5 to 6, which is just enough to at least photographcally see some aurora in my non light polluted sky.

The longer the wire or the dryer the soil, the higher the voltage, the more precise you can determine the actual local K index.

Q: Mains hum. Would induced signal (60Hz) from underground power to the house, power in the house etc. cause me a big problem with the signal to noise ratio in a 10m piece of wire?

A: I haven't had any problems with the underground power 50 Hz (Europe) but ignition engines (especially mopeds) and possibly statical electrical fields (including a moving herd of sheep in very dry weather !!!) do cause large problems. Large electrical engines might also ruin your measurements. But I live in a rather rural area so it might not work that well in your town or city.

Q: Would lightning register on the detector also? (Obviously direct hits excluded :_)).

A: Sure! You can see a lightning storm coming nearer by increasing voltage peaks. For those whom it is not obvious: DIRECT OR NEAR DIRECT HITS COULD BE LETHAL !!!!!!!!!
for you but at least for all connected equipment, possibly even not connected equipment close to the wires. Disconnect the system before the storm is to closeby to disconnect safely. Remember to disconnect before you leave home. Thunderstorms DO occur in winter as well...

Q: Could the wire be "electrically lengthened" without making it longer. I.E. Two wires 10m long, but say 10 meters apart. Or even 5 wires. Buttogether they're seen as one big wire? How would I do this?

A: I have thought about this too and my theoretical conclusion was no. Think of it as a car battery without insulation between the cells. It wouldn't yield 12 V but still 1.5 V.

Q: Would I be able to use constructive interference between 2 wires spaced apart by a suitable distance to increase signal and reduce noise by using the effect that the same voltage from the aurora would be induced in the wires, but a different voltage would be induced by nearby power lines?

A: Unneccesary complicated. In a reasonably dry soil the voltage generated is high enough for modern digital multimeters.

Q: Is this just a crazy idea and won't work?

A: Not at all. The idea is great by its simplicity, it sure works, but it will take a lot of time and effort to get usable measurements from it.

The instability of the "base voltage", the corrosion/conductivity problems and the non-portability are the only main drawbacks of this system: imagine a normal compass needle that turns from E to W in a few hours because it is raining. My last idea to overcome this problem, is to use dry sand in a sealed plastic pipe (building shops) and place this in the "kruipruimte" (crawlspace) (= the 1 meter closed space between the floor of my home and the soil beneath it)

On the other hand: with this system one can measure aspects of the earth's magnetic field that a magnetic magnetometer can't, like micropulsations and Fourier analysis because one can achive very high time resolutions. It might take some additional study like Campbell's "Introduction to Geomagnetic Fields" which describes this and other types of magnetometers. Good luck in trying ! Max Kok

RVHFG February 2002 Meeting Minutes

DE: N2JMH

The meeting started at 7:35 pm with Mark k2axx asking all to give a brief rundown on their January Sweepstakes report and scores. He also excused himself for the remainder of the meeting and left the rest of the business portion up to Jim n2jmh.

Old Business: The Financial and Secretaries reports were accepted as printed in the journal by Paul, n2opw and seconded by Barry, n2ezs.

Jim, n2jmh discussed the need for award sponsors for the local competition and Paul, n2opw asked if we would hold a joint banquet with RDXA. Most in attendance appeared to be in favor of this.

New Business:

Duncan, k2oeq discussed some 144 Mhz intruders he had discovered on 144.400 and advised all to listen for them and see if we could convince them they were unlicenced to be operating their equipment on this frequency.

A card was also passed around for all to sign for Russ, w2dyy after his surgery.

Jim, n2jmh discussed a letter between Jan, k5ma and Jeff, w2fu forwarded to him by Mark, k2axx about if there was interest in writing up the QST contest article for the January Sweepstakes by someone in the club or doing it as a group effort. For more info on this you should contact Jeff, w2fu or Mark, k2axx.

Also discussed was the pending need for officers for the club, the upcoming elections will bring a few vacancies in the BOD and volunteers will be sought out.

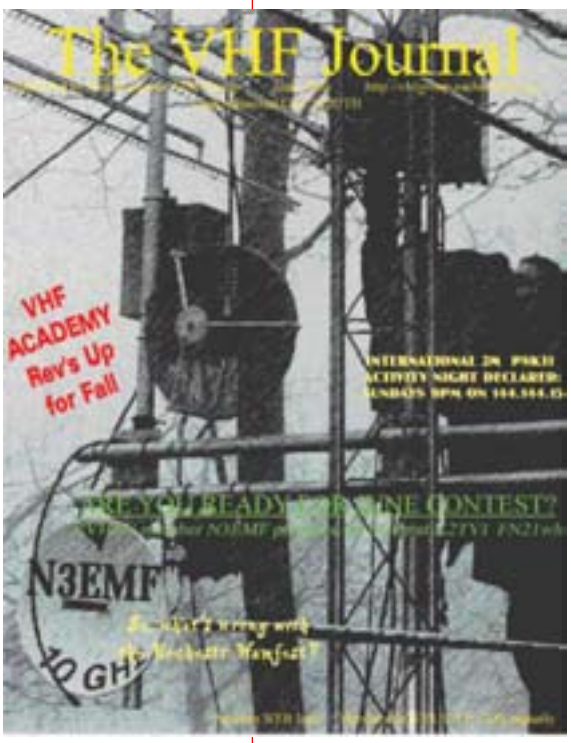
Jim, n2jmh motioned to adjourn the regular meeting at 8:40 with Charlie, n2im accepting and Mark, kc2gmg seconding. The meeting adjourned and we went on to the presentation by Ev, w2ev about the success of Beaconet during the contest.

Wiring your VHF Shack: An Electrician's view

... de abciey

If you are building a new shack, fixing up the old one or just getting a new PA, electrical usage is probably on you mind. I have some practical advice here for folks out there that might save you some money.

1) a) A sub-panel is nice if you are building from a new ham shack from scratch. Do this by running a 60 amp line (a 6/3 conductor plus ground) from your main panel to the shack. This costs only a few cents a foot more than three smaller lines, and you'll have more capacity in the end. Then you can get that 220V line for your AM-6155 or your 8877, a separate line for your computer, and a couple lines for all the 120v stuff.



1) b) If you are considering a sub-panel, for about $20 or so more you can get a generator sub-panel for the shack alone. The easiest to put in for this use are by Square D. They include spaces that can be divided up into one 220V and two 120V loads, or, if you use "twin" breakers, into two 220V and four 120v loads. All this stuff is available at Chase Pitkin, Home Depot, etc., right off the shelf.

2) You don't NEED a lot of dedicated lines for your hamshack until you have at least 3 PA's in there. Really. How many of the things do you have keyed up at once anyway ? This falls under the "one-man-workshop" interpretation of the Electrical Code. Think of it this way- Code allows you up to twelve outlets per circuit... Each outlet has two "plug-ins", so you have the capacity to energize 24 things at a time... BUT WHO WOULD USE IT ALL AT ONCE?? After all, that would overload the wire, which, chances are, is only good for 15 amps anyway (#14/2 conductor plus ground). That's where your circuit breakers come in.

If all your PA's are 120v, then maybe you should be re-strapping the transformers and changing to 220... the voltage regulation is better and the power output will increase- more power is better, right? With the AM-6155, it is a ten-minute operation. There really is no reason to run it on 120V when you can get another 40 watts out of it at 220V.

EXCEPTION: If all you do is multi-op with 2KW on each band, OK, you need more circuits. It is no longer a "one-man-shop".

3) Don't do silly things with your outlets. If you have 220v gear, put 220v make plugs on the cords, and get 220v outlets in the wall. Using 120v outlets at 220v is: a) against every electrical code in Christendom; b) is a sure way to smoke something expensive in the future;
c) and could get someone killed (not multiple choice...all three). There are three types of straight-blade 220v outlets you will run into: simply put they are 15Amp, 20Amp and 30 Amp. Each has its own application, and none will allow a 120v appliance to be inserted in error. Putting a contrasting color cover (red, brown, whatever) will make it obvious from afar that this outlet is something special.

4) Ground is ground and Neutral is neutral, and never the twain shall meet (except in the MAIN panel, not in your sub-panels or outlets). DO NOT strap your grounds to neutral at the outlets to make a piece of gear or 3-light tester work the way you want it to. If you do, and there is a fault somewhere else in your house, the current will (at best) be divided by half in its flow to ground through THAT piece of gear plugged into THAT outlet. At worst, if you have a poor ground or a loose or missing neutral bond in your main box, the whole current of the fault will travel back down the ground to YOUR piece of gear where it is erroneously bonded and then seek ground by going though your neutral out to the pole on the street. Big flash. Explosive potential with shrapnel. 10,000 Amperes dissipated in one-half cycle (1-120th of a second) at the point where the erroneous bond is. Not a Good Thing.

Make sure the Neutral (white buss) is NOT tied to ground (bonded) in **ANY** SUB-panel you install (if it is, you can take out the removable green or brass colored bonding screw in the neutral buss to fix that). There are some highly technical exceptions to this, but if you are wiring within your house, those exceptions will never apply.

Repeat after me: Never tie white to green, or neutral to ground. Never. Leave this procedure in the main panel ONLY.

5) You can run 14/3 (plus ground) wire and have split

outlets in you shack, the same way you have above your kitchen counter-top. This is a slick method as long as you do it correctly, but dangerous if you don't. Just make SURE the red and black lines are on opposite phases (easy in a typical Square D, GE, or Siemens panel, a little more thought is required in a Federal Pioneer Panel). Opposite phases means when you read from the two breakers you are using for the red and black, you will read 220v across them, but only 120v to the white (neutral) wire fro either one. If you don't read anything across them (and the breakers are both ON), then they are not on opposite sides of the line. That means you will be dissipating up to 15 amps on the red line, 15 amps on the black line, and UP TO THIRTY AMPS on the white line. That's a no-no.

By properly having red and black on opposite sides of the line, the sine wave of the 60 Cycle AC cancels out equal usage on opposite sides of the line. That means if you had 10 amps usage on the red line, and 8 amps usage on the black line, the white (neutral) would have a current of only 2 amps: it carries only the unbalanced current. By having black and red on the same side of the line in error, you risk a fire by exceeding the 90 degree C temperature rating of the wire, the outlets in the line, and the wire nut connectors in the above example by putting 18 amps on a 15 amp line. The circuit breaker will NOT protect you because the circuit breakers are still seeing levels less than 15 amps per side. Now plug in a little 120 volt 1200 watt heater and watch the fireworks as that white wire turns black over time. Add one over driven staple, or one over-tightened box connector or clamp... and you've got a great recipe for an insurance claim that might not be covered.

6) Don't run #12 size copper wire unless you are running a circuit drawing more than 15 amps or are more than 75 ft from your panel. It's not "insurance- it's WASTEFUL and DANGEROUS . This larger dimension wire is very tough on the screws of the outlets you are putting in because of its inflexibility relative to #14. The tolerance between the optimum tightening torque and the force needed to strip the brass screws is minimal, at best. Add to that the side-pressure put on by pressing the outlet into the box, and you've got a wiring device that will snap in two...a recipe for disaster (again!)... remember, it only costs 40-50 cents for an outlet: how well do you think they are made for 40 cents retail cost? By using the larger dimension wire, you are also reducing the number of wires allowed in each electrical box by the code. Plus- if the outlet doesn't fail today because of the stresses imposed by smashing that oversized wire into your boxes, don't think for a minute that it won't fail eventually on its own time.

More next month. ... de abciey

Little Known Illnesses

AFROPHOBIA
Fear of the return of the 70s hair styles (or the Jackson Five).

DEJA FLU
The feeling that one has had this cold before.

HYPOCOINDRIA
Fear of not having correct change.

HAIRPIECE SWIMPLEX
Rash caused by wearing a toupee in a pool.

HERPES CINEPLEX
Rash caused by movie tickets priced at $9.50.

CELESTIAL SEASONINGS AFFECTIVE DISORDER
Herbal-tea addiction.

VISACARDITIS
The heart-stopping sensation brought on by exceeding your credit limit.

ALPOPLEXY
Canine feeding disorder.

STREISAND-BROLIN SYNDROME
Excessive displays of affection.

SONSTROKE
An attack during the reading of a will

ROSWELL-BABY SYNDROME
Irrational fear that one's infant might be an alien.

OREOPOROSIS
Disorder caused by too many cookies, not enough milk.

Wisdom is the greatest attribute.
The more you have,
the smaller the chance is that
you will get into a situation that
will require you to use it.

THE W2UTH MEMORIAL AWARD

The W2UTH Memorial Award, which is the RVHFG's highest honor, "Recognizes the VHF Enthusiast who has been the most active in RVHFG Club Affairs, contributions to the Club Newsletter, station activities and participating in VHF Contests, while promoting Amateur Radio on the VHF/UHF/SHF Bands". This award is given in memory of our founder, Hank Blodgett, W2UTH.

Important Criteria:
1) This award is presented based on nominations from the RVHFG membership.
2) These nominations must include supporting evidence for the selection, and must NOT be anonymous.
3) The award is NOT a once-in-a-lifetime award. Previous awardees are eligible for future honor.
4) The award is presented at the Annual RVHFG Awards Banquet

A committee of previous award recipients who are still active in club affairs determine the winner based on your nominations. This committee reviews all nominations, and can request more detail from the persons submitting the nomination if further clarification is necessary.

If you feel inclined to submit a nomination, feel free to do so. However, the award is to be presented at the Annual Awards Banquet, April 20th, 2002. In light of this, all nominations must be received no later than April 6, 2002. (THIS DATE MAY CHANGE) The committee chairperson is Ev Tupis, W2EV. You can email your nominations to w2ev@rochester.rr.com, or via mail (Ev's address is listed in the RVHFG Membership Roster).

Meeting Notice: FRIDAY 08 March 2002, 7:30 PM 111 Westfall Road, Rochester, NY

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