July 2024

Editor: Kevan Nason, N4XL

Thank you to our group leadership:
President – Ed, K3DNE
Vice President - Dave, WN4AFP
Treasurer – Scott, KG9V
Secretary – Kevan, N4XL
Web Master – Frank, KG4IGC
SFCG Webpage: swampfoxcontestgroup.com

Welcome KQ4OTE

Please welcome Ben KQ4OTE to the Swamp Fox Contest Group. Ben was introduced to SFCG from Ron N4VZ. Ron gave a "plug" for SFCG at the first ever Loris Ham Radio Club meeting a couple of weeks ago and Ben submitted his application on Friday (I was away in KP4 and unable to process Ben's application till Monday).

Ben is a new General Class licensee and just received his call in March and already has an interest in contesting/radiosport! Ben's station consists of a Yaesu FT991A. Ben will have to fill us in on his antennas and any other equipment in his hamshack. I see from HRDlog.net that he's been active on HF working DX via USB, FT8 and FT4. Ben states on his membership application that he is "looking to learn and have not started to contest as he just received his license". Ben, you've come to an excellent place to start your ham radio contesting journey!

Professionally, he has a 25 year career as a Fire/Police Dispatcher. He is also a Freemason /G\ and very active in Blue Lodge and York Rite work.

Ben: Welcome to the Swamp Fox Contest Group!

73 Ed K3DNE

Contest Tips:

This month we'll look at some blurbs from Frank Donovan W3LPL's presentation titled HF Propagation Knowledge to Improve Your Competitiveness in Contests. The full presentation file is available at https://www.contestuniversity.com/wp-content/uploads/2024/05/Pg-29.-Frank-W3LPL-HF-Propagation-CTU-Compressed.pdf . These items can help you interpret those strange numbers on space weather websites, better understand what propagation forecasts are telling you, decide when to return to the chair when a blackout destroys propagation, and help you better develop your contest band plan.

- Enhanced HF propagation can repeat about every 27 days as large sunspots rise on the east solar limb and set on the west limb. Geomagnetic disturbances can repeat about every 27 days when large active regions are +/- 30º latitude from the central meridian.
- Seasonal Variability: Earth's 23.5º tilted axis increases ionizing EUV radiation intensity at mid and high latitudes during summer and decreases it during winter. Earth's tilted axis also reduces the intensity and frequency of disturbed HF propagation during summer and winter
- An excellent free technical reference for scientifically inclined amateurs nvlpubs.nist.gov/nistpubs/Legacy/MONO/nbsmonograph80.pdf
- Highly energetic x-rays from solar flares can suddenly black out daytime HF propagation for up to two hours with no warning.
- Geomagnetic Disturbances. HF Propagation is often degraded by the enhanced hypersonic flow of magnetized plasma in the solar wind
- Seasonal Variability: Earth's 23.5º tilted axis increases ionizing EUV radiation intensity at mid and high latitudes during summer and decreases it during winter. Earth's tilted axis also reduces the intensity and frequency of disturbed HF propagation during summer and winter
- Solar cycle duration varies from 8 to more than 14 years Propagation models use the 13 month smoothed SSN
- Coronal hole high speed streams are the most frequent source of minor geomagnetic storms throughout the solar cycle but most frequently during the declining four years of each solar cycle

  Coronal hole high speed streams interact with the slow ambient solar wind often causing minor geomagnetic storms that develop gradually over several hours most frequently during the declining four years of each solar cycle

  Conversely, fast CMEs originating in active regions sometimes cause strong and rare extreme geomagnetic storms that develop suddenly mostly during the four years near solar maximum

- Short duration minor geomagnetic storms are caused by coronal hole high speed stream interactions with the ambient slow solar wind
  - do not significantly degrade HF propagation during the four years near solar maximum
  - the most frequent cause of degraded HF propagation during the four years near solar minimum
- Long duration minor geomagnetic storms are caused by geoeffective interplanetary coronal mass ejections
  - do not significantly degrade HF propagation during the four years near solar maximum
  - occur about twice as frequently during the declining years of each solar cycle
- % of solar flares occur when the solar flux index is 90 or greater during the four years of greatest solar activity near solar maximum. In just a few minutes coronal mass ejections often associated with solar flares can release as much as ten billion tons of magnetized plasma travelling to the planets from 700 to more than 1000 km/second.
- Extreme X10-Class produce long duration hemisphere-wide radio blackouts. Major X-Class produce hemisphere-wide radio blackouts and severe geomagnetic storms especially during the four years near solar maximum. Strong M-Class – medium flares produce less severely degrade HF ionospheric propagation mostly at high latitudes during the seven years near solar maximum.
- X-rays propagating at the speed of light arrive on Earth in 8 minutes
  - - causing radio blackouts due to extreme D region absorption
  - - radio blackouts begin suddenly and with no warning
- Radio blackouts affect only propagation crossing daylight regions. Disrupts HF propagation at lower frequencies for a longer duration and with significantly more D region absorption than higher frequencies. HF ionospheric propagation gradually returns to near pre-blackout conditions about an hour or two after the onset of radio blackouts. Propagation on the higher frequency HF bands returns to near pre-blackout conditions more quickly than the lower frequencies.
- S2-Class strong Polar Cap Absorption events Typically about 25 S2-Class strong PCAs per solar cycle. PCAs usually last for a few days, sometimes longer, mostly during the four years near solar maximum. PCA's absorb (but usually do not black out) HF propagation crossing the polar regions. They are much less severe when the Earth's winter polar region is tilted away from the sun and during nighttime hours.
- Fast CME impacts are greatly magnified when the interplanetary magnetic field (IMF) persists in a southward orientation -- opposite to Earth's magnetic field -- for more than a few hours.

Highlights From The Reflector:

- Several SFCG members think it better to use a harness when climbing a tower than a belt.
- Herschel KA2G received a plaque from the Sterling Park Amateur Radio Club for High Single Operator in the Novice/Tech/Rookie category of the 2024 Virginia QSO Party. Way to go Herschel!
- Folks were not happy with the low participation from the West Virginia ops during their state QSO party. It might be good to keep expectations in line with how many stations you hear on from a state during other contests. States like WV, DE, WY and such simply don't have many contesting ops. Fortunately, some states combine for regional QSO parties, but even then you need to know those rarer states so you prioritize working them when you run across them.
- Steve K4CU is looking for a good headset/mic combo. The typical options were mentioned, Heil, Radiosport, CM500, or just any old headset that you can then optimize with equalizer settings. Matt NU4E put forward a rarer choice by recommending the Inrad W1. This author thinks it mostly depends on how much Butt In Chair (BIC) time you spend. If you spend many hours at the radio, then comfort is your friend. If in a noisier environment, then put sound isolation and/or active noise canceling high on your priority list too.
- Dennis K2SX recommended using Velcro tape or Velcro garden ties for taming coils of wire or coax. Good idea, Dennis.
- Ron N4VZ gave a summary of his experience with WSJT-X Improved during the ARRL VHF contest. His critique is printed below.
- Herschel KA2G seems to be spending a a bit more time improving his station than he would have liked. He asked advice for what mobile antenna to put on the new truck he had to buy when his died when he went to North Carolina to pick up a tower.
- There was a lot of discussion around purchasing V31XX which is being sold for a ridiculously low price. Consensus was that like most things with unexpectedly low prices, you should do your homework before buying.
- Dave AA4VT has been working with John W7WZ and some SFCG members to iron out issues with remotely operating John's station. It is being done, but there are still a few hiccups to work out. I have great faith Dave will make it a smooth operation.
- Dave WN4AFP announced he has been heating the airwaves for 49 years now.
- Several SFCG folk were part of the K2L team during the 13 Colonies event. Jim N2ZZ said he enjoys setting goals during past outings. He once used his vintage KWM-380 to work all stations. Or he suggests doing QRP, or work all the 13 Colony stations on battery.

- Ed K3DNE is encouraging members to participate in the NAQP's. There are Team standings for this event so we would like everyone who can to sign up for a team. Bill N4IQ and Kevan N4XL are coordinating the RTTY and CW teams respectively. Contact them to join in the fun. Kevan N4XL put out 4 weeks in advance of the CW event that it isn't too early to start preparing. Shack work, CW practice, arranging your schedule, etc. should all be done well in advance of any contest in which you intend to put forth a serious effort. We still need someone to drive the SSB event. Jump in there. If you're not sure what to do ask and we'll be happy to help you through it.
- Dennis K2SX recommended putting the Mult screen on your desktop during NAQP's to let you know when to spend a bit more time getting a rare mult you still don't have.
- Ed K3DNE mentioned the PVRC NAQP Online Club Challenge. Besides there being Team standings for the NAQP's the PVRC is also running a club competition. We would like everyone to use the Contest Online Scoreboard so we can place well in the PVRC's challenge. From the PVRC's website (at pvrc.org/NOCC.html) "How do you contribute your NAQP scores to your club? You must report your score in real-time to the Contest Online Scoreboard. Sign up for the Contest Online Scoreboard by creating a scoreboard profile and following the instructions for your logger at https://contestonlinescore.com/blog/documents/. Make sure your logger is configured with your full club name (for example, in N1MM+, under Config- >Change Your Station Data in the "Club" field)."
- Several had fun in the IARU contest, but many did complain daylight propagation was weak. Ford KK4MRG wrote, "I can barely get anyone." I couldn't play this year but remember exchanging places with Fred AA3R several times in last years event. Apparently Fred was still giving us in the SFCG stiff competition because during the contest Dave WN4AFP wrote "I am trying to catchup with AA3R". Fred is in Delaware giving him a geographic advantage. Dave has a station disadvantage too since Fred's antenna farm sprouts a KIO hex beam, full wave delta loop (40m), and an inverted L (80m/160m). I particularly liked Scott N2OG's comment about the IARU, "I am convinced that no matter where you operate from, propagation is still king." By Jove! I think he's got it!
- *Editor's Note: This wasn't in the reflector, but it is a good place to reiterate this point. You folks who think if you only had a better radio or had 1500 watts then you too would be at the front of the pack should reread N2OG's comment immediately above five or ten times. Yeah, those things you want do help, but propagation is king. All you really need is a <u>decent</u> antenna(s), a <u>decent</u> radio, and to improve your contesting skills. Then when propagation between areas is similar you will place well. EU is the primary source of Q's and mults for us during contests. New England has about a 7 dB advantage to EU over us due to their geographic location. That's like them running 800 watts compared to our 100. We MUST be better operators than them or have better propagation to be on a level playing field. Since we can't control propagation, we must sharpen our skills and put up the best antennas we*

can. A new amplifier or radio isn't anywhere near as important as propagation, skill, local terrain effects on Take Off Angles, and antennas. By the way… them running 800 watts and us only 100 isn't anywhere near as significant an advantage as many hams think it is. It is only a bit over 1 S unit on the other person's meter. It's not even the difference between S9 and S9+10 dB. We CAN be competitive from SC if we're good enough. We just normally won't beat the superstations or the very topmost operators – but we will every now and then when propagation is better for us or when we spend more BIC time than they do.

A Visit from the FCC

Excerpt from the CWOPS reflector, post #65182. *(Note: Grammatical and spelling errors have been corrected.)*

As I said I got my Novice License in the Fall of 1953 and then got my General in the Spring of 1954. (I was 15 years old). I came home from school one day about a month after I got my General License. My mother met me at the front door and said, Mr. Peterson from the FCC is waiting to talk to you in the living room. As I entered the living room, I saw Mr. Peterson's coat and hat draped on the edge of the coach on which he was sitting. He then got up and looked 6'6" tall. Mr. Peterson introduced himself as an FCC inspector, showed me his badge and then asked me to show him my station which was located in the basement. We went down there, and he looked at my S-38 receiver and Powerful 75 watt Eldeco TR-75TV transmitter and newly acquired Globe Scout 40A transmitter. He said they looked very nice and then asked to see my logbooks. (Back then you needed to log EVERYTHING.) I trembled as I gave them to him wondering if I ever turned the plate switch on for a second or two without logging it in. He looked at them and subsequently gave me a receipt for them and confiscated them. He never told me why he wanted them. Needless to say, I felt like I was being set up to go to jail for LIFE. As it turned out those were the AM vs SSB WAR days. W9PYM who lived a couple miles away running 500 watts of AM was jamming SSB stations on a regular basis. The FCC charged him with the crime and Joe insisted on a real trial. The FCC figured a new kid like me probably logged in everything and figured they would find W9PYM in my log and most likely not me logged into his log. They figured right and they used my logbooks as evidence. When all this happened, I was licensed for around 6 months and my parents wondered what I was getting into by becoming a ham. Sure got me shaking in my boots.

Lee, w0vt, ex-WN9DRC

To Knob, or Not to Knob…

By Kevan N4XL

(The following is an updated reprint from the December 2021 issue of Tales from the Swamp)

I love the feel of a VFO knob in the morning. There is something satisfying about tuning in a station while anticipating the discovery of what might be an ATNO or new multiplier. But I also love competitive contesting. For me, having two loves forces a choice. Merriam-Webster says "Contest: a struggle for superiority or victory: competition…" A key principle in Radiosport is that maximizing rate leads to a higher score. To maximize rate, you must minimize the time needed to find your next workable station. Enjoying the feel of turning the big knob is nice, but it takes longer to tune in the next station than it does to simply jump to the next spotted signal using computer aids. Rate naturally suffers when using the Big Knob. For me, love of contesting beats the pleasure of knob turning during contests. I get my knob "fix" between contests or when turning it after exhausting workable spots.

Over the years I've tweaked my operating technique to maximize use of a full sized programmable gaming keyboard. Moving your hand from the keyboard is essentially wasted time. It takes a second or two to adjust something on the rig or move the mouse and return your hands to type in a call. Quickly moving your hands off the keyboard while trying to type in a hard to hear call means you might hit the wrong rig button, accidently brush the VFO inadvertently changing frequency, or place your hands wrong on the keyboard when they move back to it from the rig. It doesn't seem like a big deal to reach over to the rig, but when you add up how many times you do that over a 48 hour contest (or however many hours you spend BIC) it adds up to a significant amount of wasted time and many opportunities to make a mistake. Moving your hands back and forth reduces the time you can spend snagging new Q's. Using N1MM's tools to automate jumping to new stations has been a true game changer for my scores.

My current S&P operating technique works very well because not only do my hands stay on the keyboard, but I can also stretch out and lean so far back in the operating chair I can't easily reach the rig. The ability to change my body position and still maintain efficiency means reduced physical stress and more operating hours. It probably lowers the risk of forming blood clots in my legs too.

Spots and Signals

As a Little Pistol, Search & Pounce is my friend. I maximize use of N1MM's Mult & Q and Spectrum Display windows. ALT+A and Shift+Alt+A jumps up or down the M&Q window to the next spot. Shift+↑ and Shift+↓ jump to the next workable signal shown on the Spectrum Display. All four of those shortcuts are programmed into my gaming keyboard so a single flick of my left thumb jumps to a new station to work. Even without a gaming keyboard having programmable keys use of the key combination shortcuts speeds things up. Besides the M&Q and Spectrum windows I also sometimes use the Band Map but find the other two tools more useful. No knob turning time is required to get to the next workable station.

Fine Tuning

Jumping to a spot may or may not take you to a frequency ready to work a station. They might have stopped CQing or they might have slid up or down the band a bit to avoid QRM. Or maybe the spotting station was off frequency when they sent the spot. Sometimes the pileup is so big you can't hear the

rare mult through the QRM. Reach for the VFO? Nope. The Up and Down arrows on the keyboard can be used to change your frequency. The frequency change step size is selectable. I use 300 Hz for SSB and 150 Hz for CW. That works well for me in almost every situation. I can rapidly pop the arrow once with my right hand to make a small correction or a few times to quickly move up or down the band. If I didn't move far enough pop the arrow a second time.

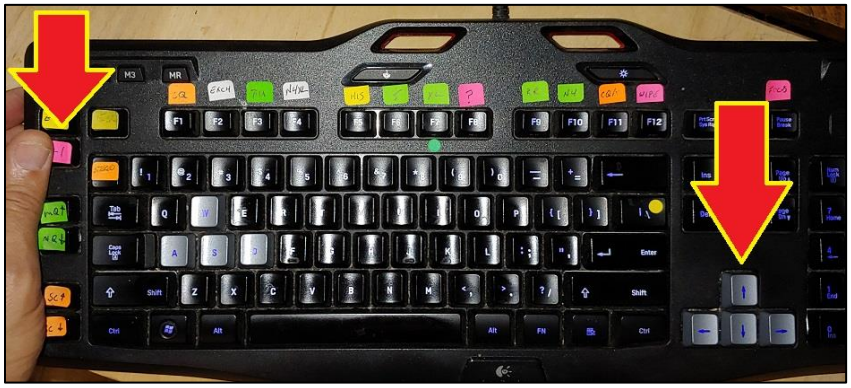

Fig. 1 Gaming Keyboard showing access to programmed macro buttons on left and up/down arrows for changing frequency on right

Filters

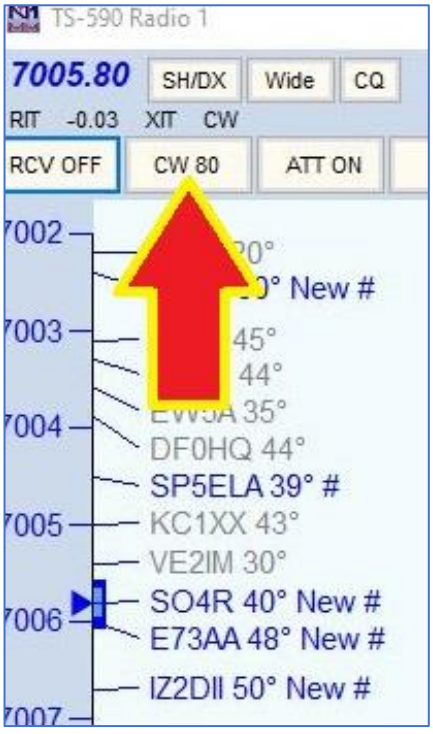

Fig. 2 N1MM's Band Map Window

You don't have to reach for the rig to change your filters either. At the top of the Band Map are both preprogrammed and user programmable buttons. The "Wide" button in Figure 2 uses default filter selections set by the N1MM team. The programmable ones are initially blank, but you can assign radio control commands to them. I use two buttons to turn my receive antenna and RF attenuator on or off. A third is programmed while in CW to cycle the filter between 80 or 200 and 300 Hz settings. Besides the mouse these buttons can be activated from a key on my gaming keyboard too. The filter is usually at 200 Hz, but if there is a crowded pileup and the runner is hard to pick out a flick of my left thumb can change back and forth between filter widths. Narrowing to 80 Hz usually makes it much easier to copy the running station in a pileup or when many stations are answering my CQ. On quieter bands 200 Hz might be too narrow so I reach over to the radio and widen it out even more to not miss off frequency callers. I can still reach over to the rig for 400 Hz. You can do the same with your SSB or Digital filters. Up to 32 of those programmable buttons are allowed at the top of the Band Map.

Putting It All Together

Using the tools to complement each other during the CQWW CW worked beautifully. The CC User program called up spots from the VE7CC cluster. Normally I set the CC User filters to only show CW spots

from our region which meant most of the spots making it to N1MM would be workable stations, but those can be changed on the fly to show whatever spots I want to see. N1MM's telnet window is then connected to CC User which puts the spots into three different N1MM windows -- the Band Map, Mult & Q, and Spectrum Display windows. VE7CC has excellent tools to remove many busted spots but you should never trust a spot and verify the call sign when using spots.

Looking at the top of the M&Q window I take note of how many stations and mults are on each band. With that as a guide I chose a band and started my S&P "Run". I tap the macro key which jumps to the next call in the M&Q window. BAM! Station worked and in the log. Tap for next call. BAM! Tap, BAM! Tap, oops. Nothing heard – wait… He's slightly off frequency. Tap, tap on the arrow key and there he is. BAM! Next M&Q, BAM! Tap, Wow! What a pileup. Where's 3B8M in this mess? Tap on the 80 Hz filter key. Up/Dn arrow a bit or tweak the VFO. There he is. No bam this time, but I snag him after three tries and move on. The next one is a bit hard to copy. Oh yeah… Tap the filter key on my keyboard because I left the 80 Hz filter on. After working the M&Q window for a while I switch to using another programmed keyboard macro key to jump from signal to signal on the Spectrum Display. Only after doing those two methods for a bit do I finally make a band pass by spinning the VFO. I watch the Spectrum Display for traces of weak signals and the band map to see if the weak one is a dupe while doing so. I'm looking for weaker stations hiding in the mud or close to loud signals. Surprisingly, even though dozens of skimmers are scanning the bands I often find a few unspotted stations. They are usually Little Pistols like me but since I can hear them, they often hear me.
I use the Up/Dn arrow keys when running too. Turning RIT on when in Run mode leaves your transmitter on the Run frequency but lets the arrow keys move the receive frequency to bring an off frequency caller into my filter passband. Just remember to put the {CLEARRIT} macro in your F-key messages (CQ, TU, and Wipe) or the receiver remains shifted from the transmit frequency and you may not hear the next person call the Run frequency.

Some do not like operating the way I do. Fine. I get it. However, it really does improve your score and by putting more Q's in the log you have more fun too. A gaming keyboard (or game pad like Dave, NJ4F, uses) also helps prevent the finger pain you can get after 30 plus hours of using weird keyboard shortcut combinations like Shift+Alt+A to grab the next available call from the M&Q window. Instead of a gaming keyboard some use the AutoHotKeys program to remap seldom used buttons on their standard keyboard. If you don't want to use a big gaming keyboard/game pad or reprogram your keyboard using AutoHotKeys you could use a program called Touch Portal. It allows using programmable buttons on the touch screen of a smart phone or tablet. Or use an outboard device like Stream Deck. Whatever method you choose, automating your shack to take advantage of spot jumping will improve rate and scores. Some may think this applies only to the S&P operator but automating spot jumping also helps those of you who primarily Run. That's because to be competitive you must also sometimes shift to S&P (or use a second radio/VFO) to seek those mults that are also mostly running and aren't likely to call you on your Run frequency.

N4VZ Comments on WSJT-X Improved

I used the modified version of WSJT-X called WSJT-X Improved in the ARRL VHF contest and a little this morning in the Field Day contest. I promised a while ago to give some feedback. Short answer is this is my new standard for contest ops.

I'm using WSJT-X v2.7.0-rc3 Improved widescreen PLUS. You can find it, and a description of the improved version features at https://sourceforge.net/projects/wsjt-x-improved/ Under the files tab are versions optimized for different screen types.

There are many features and improvements over the standard WSJT-X but there are a few specific to contest use. The first is it automatically includes the contest name in your CQ without having to manually set this (CQ FD for example). The second, and best feature IMHO is automatic transmit when a reply is received. For example you respond to a CQ for 2 or 3 cycles getting no reply so you press HALT TX. If you haven't started another QSO and the station responds, you are automatically placed into transmit and the proper reply is sent. How cool is that? I had several FT4 QSO's this morning (where 7 seconds is impossible to select a message and hit transmit) complete with only 1 cycle after I gave up on getting a reply. What a time saver.

Another good contest feature is the QSO is automatically logged when you send RR73 or receive a RR73. Even better, is the combination of the auto logging and auto TX feature. Say you answer a CQ, receive a report and send your RR73 and the QSO is automatically logged and your TX is turned off automatically after sending the RR73.. The receiving station didn't receive your RR73 and resends their report. The software automatically places you back into TX mode, sends RR73 again but does NOT log the contact (making a dupe). A great time and nerve saver.

A final feature is the ability to switch between contest and standard exchanges. Right clicking on the H (Hound) key toggles between the contest exchanges and standard exchanges. Sometimes stations not in the contest answer your CQ. They wont go away unless they receive the standard signal report and grid square in the standard format. A quick right click on the H key allows you to complete the exchange. If you are in a contest that doesn't require specific information (ARRL digi for example), then stations working in the standard format can be counted thus increasing your score.

So far, N1MM+ with WSJT-X Improved has been easy and flawless for the last 2 contests. I'd recommend giving it a try. You can install it into it's own location and just point N1MM to it without disturbing your current setup.

Ron
N4VZ

Observations by the Editor:

- Many of us use VE7CC for our cluster. Gary K7EK wrote on the CC-User groups.io website he was having trouble connecting. Here are excerpts from the thread, including a reply from Lee VE7CC.

  I have the same problem here too. It started about last week of May. I can not connect to ve7cc cluster. I am using the ve7cc for many years and never had a problem. After updating, reinstalling and lots of testing it looks to me that the VE7CC server, since end of May, filters/blocks my IP address. I just wonder why.
  73 Jan VA7VJ

  From the Editor, VE7CC replied with a listing of over a dozen log in/out's by VA7VJ.

  Hello Lee,

  thank you for your response.

  I just tried to connect several times, but no connection. I can connect via VPN without problem, as your log shows.

  I tried now to use simple Telnet program to connect to your address again without VPN and no connection.

  If I go via VPN, Telnet connects to your address without problem.

  Thank you Lee for your help.

  Jan

  Hi Jan

  Thanks for the info.

  My cluster is under continuous attack by bad actors. Many per minute is normal.

  I would be interested in what IP addresses do not work to connect to me. You can send me this list privately if you want.

  Yes, I am blocking lots of different IP addresses. I have a big list of TOR addresses and known bad actor's addresses that are specifically blocked. Also my cluster software automatically adds IP addresses which are then also blocked.

Some hams seem to think that they can use HTTP GET / commands to my cluster to get WWV info etc. Any HTTP GET command sent to my cluster will end up being blocked. Anyone trying to log into my cluster as "admin" or "root" will also be blocked.

Some calls are also specifically blocked.

There are other blocking mechanisms in place which I am not willing to discuss. The reason being that some of the troublemakers are hams that are deliberately trying to take down my cluster.

73 Lee VE7CC
(Editor's Note: On his website Lee says, "My own cluster peaked at 2139 simultaneous telnet connections during the 2019 CQWW CW Contest. There was no problem handling this number of connections). That was 5 years ago and I'm reasonably certain there are more simultaneous users now in 2024. Wow. Amazing.)

From the Editor: Many clusters besides VE7CC use CC-Cluster. They all receive the same data as VE7CC, so there isn't any need to always go to that particular one. It's always good to have a backup for things when contesting. Look around for another and put it in your list of favorite clusters. Some you might check out are K3LR, W3LPL, NC7J, or many others. I don't know for certain those receive the same data as VE7CC, but I've had good results from all of those.

- Steve K1RF gave a presentation to the RATPAC about End Fed Half Wave antennas. I've only sampled it, but Steve seemed to have done a good job describing this antenna. I plan to set aside some time to watch the whole thing. https://www.youtube.com/watch?v=BX_DPoZBzV4
- microHAM users: Reportedly sent from microHAM Customer Support to Rien PA7RA. It describes how to install Router under Windows 11. Rien has been receiving the dreaded Blue Screen of Death (BSOD) crash.

  On W11 you have to go to OS Settings | Core Isolation and disable Memory Integrity feature. Then install Router as administrator (with right click, not double click). If Router won't show tab of device, go to Device Manager | Other Devices, right click on microHAM device and select Update driver.

  Blue screen is not related to above. If you are getting blue screen, you have corrupted USB stack on your computer. BSOD code should tell you more details.
- Dennis K2SX is moving and passed along this excellent suggestion.

  As I dismantle everything, I find I have to tie things up to prevent them from unraveling, e.g. antennas, coax, etc. I used to use masking tape and/or electrical tape. While both can work they also coat everything with adhesive which, after some duration, gets even worse in terms of leaving adhesive behind. I finally opted to tie wires, antennas, coax, etc. with Velcro tape – no mess, no fuss. You can buy a coil of Velcro tape which is 164' long, ¼' wide from Amazon for $16, or about $0.10 per foot. Another alternative is to

pick up a couple of roles of green Velcro garden ties from either Amazon or from your local gardening store. You can usually find this tape in 65' lengths, ¼" wide for about $6, or about $0.09 per foot. There is no adhesive on the back side but that doesn't matter for coiling antennas, etc. And tying up those wires is sure to make mother/wife happy. And as they say, a happy mother/wife makes a happy life… Happy coiling.

73, SX

N1MM+ Tips:

NOTE: Unless otherwise specified references to problems people are having, solutions, and tips come from the N1MMLoggerPlus Group.io reflector. A search there for items described should turn up the original posts and replies.

- Selected changes made since last newsletter. (NOTE: These often come from a user requesting a change or fix to a problem.)
    - Added {SwapContests}, {SwapContests3} and {SwapContests4} macros to facilitate switching contests with QSOs already in progress (many) (Coded by N1MM) (Editor's Note: See below)
    - Moved QSO Party Bonus Station NIMB from EW to the Log window to improve visibility when switching contests (Coded by N1MM)
    - Disabled {SentRSTCut} and {SentRST} when no RST fields in EW (Coded by N1MM)
    - (Editor's Note: An example is Field Day where the exchange is Section and Class. Such as 2A SC)

- Tom N1MM wrote about a new macro, "**{SwapContests} Wipes the current contact, changes to the next-to-last contest log and (un)wipes the contact.** {SwapContests} should be placed in a function key or bandmap button. When pressed it will switch to the next-to-last contest preserving the QSO data partially entered. {SwapContests3} will switch among the last three contests. {SwapContests4} will cycle through the last four contest logs."
- By default, N1MM's Entry Window shows the common HF contest bands of 160 through 10 meters. Those can be changed by right clicking in the Entry window and selecting "Change Band Panel Display…" You can then choose to add WARC or UHF and higher bands to your contest, or you can remove bands you won't be using. Right clicking also allows other Entry Window information to be displayed such as current GMT time or showing what CW is being sent by N1MM.
- If you missed it, see the article above about using the Knob.
- Putting the > and < keys in your CW Fkey files respectively slows down and speeds up transmitted CW speed. Not having the same number of them before and after the text I

wanted to slow down has caused me problems in the past so I always double check them. Somewhere along the line an update has made putting the > and < keys after the text you want to change the speed of unnecessary. Just put whichever you want before the text you want to slow down. When it is done the speed automatically returns to that shown in the CW speed box of the Entry Window. However, if you want the CW speed to temporarily change within a single Fkey message and then transmit some more text at the set CW speed you will still need to add the speed change symbol afterwards. Here's some examples with explanations. It assumes default CW speed is 30 WPM and the CW speed changes 2 WPM each time a > or < is used.

  - F2 EXCH, 5NN SC
    Pushing F2 sends 5NN SC at 30 WPM
  - F2 EXCH,>>>5NN SC
    Sends 5NN SC at 24 WPM, then resets CW speed to 30 WPM
  - F2 EXCH,<<<5NN>>> SC
    Sends 5NN at 36 WPM then slows and sends SC at 30 WPM

- Coming soon to a N1MM+ installation near you… Tom N1MM wrote "N1RM and I are working on a key remapper that can change one key combination into one or more keys to be executed." He notes some AutoHotKey users are already doing this. He has enlisted AHK users in the N1MM community to help and as of this writing is on version 15. Nothing announced yet as to when it will be rolled out into a normal N1MM+ update. This is an ongoing project and no guarantee the things discussed below will make the final cut, but it sounds very interesting.

  Tom writes:

  > The main success criteria for this function are:
  > 1. Allow utilization of extra keys for single-key mapping of functions. e.g. use number pad to execute bandmap button Ctl+Alt+Shift+ keystrokes. (Look at bottom of the combo box "to key" list.)
  > 2. Subsume the Ins Key for F5F2 and ' for TU/Log in the Configurer.
  > 3. Allow different mappings for different users based on OPON.
  > 4. Permit more than one N1MM+ hotkey to be executed with a single keystroke.
  > 5. Help out users with non-US standard and/or small keyboards to effectively use the keys they have to perform needed functions.
  > 6. Support 2 keyboards if possible.
  > 7. Allow the sending of function key messages with the number pad keys or other unused keys.
  >
  > Not promising all of them, but those are my goals.

  Some additional comments from the thread…

- N2IC tested mapping a Numpad key to Ctl+K while using two keyboards. The keystroke was directed to the correct EW/Radio.
- I added a {Wait nnn} macro where nnn is the number of milliseconds to wait. Note that this macro blocks, so all keystrokes entered by the user are stacked behind the keys to be sent by the mapper. e.g. {SentRST}|{wait 1000}|CT would send 599 CT with a one second wait between 599 and CT.

- (From a previous newsletter)

  Setting up a User Defined Contest (UDC)
  Many less popular contests or events are not directly supported in N1MM. However, users can create their own overlay file for the N1MM database. The 13 Colonies special event is an example.

  Setup instructions and many already created UDC's are available on the N1MM website at https://n1mmwp.hamdocs.com/manual-supported/contests-setup/setup-udc-contests/

  UDC's can either be used directly or come as Zip files. If zipped, extract to the \Documents\N1MM
  Logger+\UserDefinedContests directory

  The downloaded UDC files also have instructions such as this:
  Files to be used should be copied/extracted to:
  ....Users\username\(My)Documents\N1MM Logger+\
  Sec(tion) files to....\SupportFiles
  UDC files to....\UserDefinedContests Call History files to....\CallHistoryFiles
  If SECTION file required,
  When setting up Click on the 'Import Section List' Button (lower right, if no button, check the Section file is in the correct folder)

  On the Associated Files tab, set Call History File to the desired contest (i.e.: 13 COLONIES_Call_Hist.txt). Don't forget to enter YOUR Sent Exchange info.

  Note that N1MM must be restarted after installation to reload the list of available contests. Otherwise, it does not know you have added a UDC.

Upcoming Contests:

See the WA7BNM webpages https://www.contestcalendar.com/contestcal.html

SFOTA Current Leaderboard:

Jul-15-2024

Current Leaderboard

2024 OVERALL STANDINGS

	CALL	Contests	CW QSO'S	SSB QSO'S	DIGITAL QSO'S	RTTY QSO'S	TOTAL QSO'S
1)	N4IQ	58	8379	2095	549	3336	14359
2)	WB4HRL	210	10414	1006	394	1350	13164
3)	WN4AFP	70	6230	2453	0	0	8683
4)	KE4EA	146	8128	486	8	3	8625
5)	K2SX	26	6819	0	0	0	6819
6)	KZ3P	60	1725	2961	0	1148	5834
7)	K3DNE	32	1133	3686	929	0	5748
8)	N4XL	9	4139	1057	0	0	5196
9)	K4QQG	35	0	3975	513	516	5004
10)	K4FT	58	3872	166	0	0	4038
11)	NU4E	5	1700	2151	44	0	3895
12)	KG4IGC	9	430	863	0	1688	2981
13)	AA5JF	7	1745	806	14	0	2565
14)	KA2G	29	0	2039	316	0	2355
15)	N4QI	39	1548	313	0	222	2083
16)	KD4S	40	1408	202	87	317	2014
17)	N1UZ	9	290	0	688	987	1965
18)	KY4ID	13	1185	62	0	377	1624
19)	N1SUZ	28	0	1615	0	0	1615
20)	NI7R	5	1448	88	0	0	1536
21)	K7OM	12	553	0	0	976	1529
22)	WA4LDU	22	246	513	358	184	1301
23)	N4VZ	12	0	433	595	255	1283
24)	AA4SD	10	1269	0	0	0	1269
25)	W1RPG	17	0	708	102	11	821
26)	KS4YX	5	176	0	13	565	754
27)	N2OG	6	210	172	0	0	382
28)	WA2BCK	1	0	0	375	0	375
29)	WB5NHL	9	0	194	0	102	296
30)	N4VGE	1	0	167	0	0	167
31)	NE4EA	1	50	0	0	0	50

2024 INDIVIDUAL MODE STANDINGS

CALL	CW QSO'S
WB4HRL	10414
N4IQ	8379
KE4EA	8128
K2SX	6819
WN4AFP	6230
N4XL	4139
K4FT	3872
AA5JF	1745
KZ3P	1725
NU4E	1700
N4QI	1548
NI7R	1448
KD4S	1408
AA4SD	1269
KY4ID	1185
K3DNE	1133
K7OM	553
KG4IGC	430
N1UZ	290
WA4LDU	246
N2OG	210
KS4YX	176
NE4EA	50

CALL	SSB QSO'S
K4QQG	3975
K3DNE	3686
KZ3P	2961
WN4AFP	2453
NU4E	2151
N4IQ	2095
KA2G	2039
N1SUZ	1615
N4XL	1057
WB4HRL	1006
KG4IGC	863
AA5JF	806
W1RPG	708
WA4LDU	513
KE4EA	486
N4VZ	433
N4QI	313
KD4S	202
WB5NHL	194
N2OG	172
N4VGE	167
K4FT	166
NI7R	88
KY4ID	62

CALL	DIGITAL QSO'S
K3DNE	929
N1UZ	688
N4VZ	595
N4IQ	549
K4QQG	513
WB4HRL	394
WA2BCK	375
WA4LDU	358
KA2G	316
W1RPG	102
KD4S	87
NU4E	44
AA5JF	14
KS4YX	13
KE4EA	8

CALL	RTTY QSO'S
N4IQ	3336
KG4IGC	1688
WB4HRL	1350
KZ3P	1148
N1UZ	987
K7OM	976
KS4YX	565
K4QQG	516
KY4ID	377
KD4S	317
N4VZ	255
N4QI	222
WA4LDU	184
WB5NHL	102
W1RPG	11
KE4EA	3

3830 Activity:

Contest	Call	Class	Pwr	Score
ARRL FD				
06/23/24	K4QQG	1D	LP	808
06/29/24	KB4FHA	1D	LP	134
06/26/24	KZ3P	1D	LP	458
06/24/24	N1SUZ	1D	LP	404
06/23/24	N1UZ	1D	HP	910
06/26/24	N4IQ	1D	LP	932
07/02/24	N4VZ	1E	LP	282
06/23/24	W4GE	1D	LP	810
06/23/24	W4Y(KQ4NSL,KA2G,KF4RZQ,K1LVA)	1E	LP	538
06/24/24	WB4HRL	1D	LP	1,232
IARU				
07/14/24	AA4SD	SOABCW	QRP	39,750
07/14/24	K4QQG	SOAB(A)SSB	HP	103,104
07/14/24	K4RM	M/S	HP	1,544,158
	(NU4E,N4IQ,W4EEY,K4RPD,@K4RM)			
07/14/24	K7OM	SOABCW	HP	4,050
07/14/24	KA2G	SOAB(A)SSB	HP	31,636
07/14/24	KD4S	SOABCW	HP	27,506
07/15/24	KG4IGC	SOAB(A)Mixed	LP	58,149
07/14/24	N4QI	SOABMixed	LP	42,529
07/15/24	NI7R	SOAB(A)CW	HP	25,088
07/14/24	NN4SS	SOABCW	HP	236,778
07/14/24	WB4HRL	SOAB(A)Mixed	HP	18,297
King of Spain SSB				
06/26/24	KZ3P	SOAB	HP	45
Marconi HF				
07/07/24	N4IQ	Single Op	HP	16,770
RAC Day				
07/02/24	K4QQG	Single Op Phone	HP	24,416
07/02/24	WB4HRL	Single Op Assisted	HP	4,220
07/02/24	WN4AFP	Single Op CW	LP	8,520

Contest	Call	Class	Pwr	Score
TBDC Summer				
06/17/24	K4FT	Single Op	LP	110
WVQP				
06/20/24	K3DNE	Single Op	HP	104
06/17/24	K4FT	Single Op	LP	808
06/17/24	K4QQG	Single Op	HP	12
06/16/24	KA2G	Single Op	HP	408
06/16/24	KD4S	Single Op	HP	43
06/17/24	KE4EA	Single Op	LP	168
06/16/24	KZ3P	Single Op	LP	1,004
06/16/24	N4QI	Single Op	LP	12
06/16/24	W1RPG	Single Op	LP	130
06/16/24	WB4HRL	Single Op	HP	198
06/16/24	WN4AFP	Single Op	LP	1,740

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73 es QRT de N4XL