

*North Fulton
Amateur Radio League
NFARL eNEWS
September 2021*

*Over 40 Years Promoting
Service | Friendship | Education | Fun*

www.nfarl.org



September Club Meeting Presentations/ Repeaters and Resistors

Join us on Tuesday, September 21, 2021 for our monthly North Fulton Amateur Radio League club meeting. We'll have presentations on a couple of topics this month. Mike Roden, K5JR, will provide a review of amateur radio repeaters; what they are, how they work, points on some key physical and operating characteristics, and limitations repeater users sometime face during operation. We'll talk about how the NFARL repeaters are set up, what type of hardware they consist of, and what performance they are capable of. Additionally, we'll ask club members and others how they use the repeaters, how well they believe the repeaters function, and what they'd think future use and capabilities could include. This presentation should be of interest to everyone in the club as the information will help in planning for future operations and investments.

Following Mike K5JR's presentation we'll change direction. Mike Riley KN4OAK, will lead a mini hands-on workshop on resistors. Basic fundamentals like what they are, design and construction types, where they are used in RF applications, measurement, and for those present at the meeting, a chance to put a handy resistor color wheel reference tool together. If you're a new ham, have a young ham interested in electronic and radio circuitry who is in the family, or you like to tinker with componentry and circuits on the bench, this an opportunity to check into some basic technical information.

Join us! The meeting location is at Preston Ridge Community Center, 3655 Preston Ridge Road Suite 100, Alpharetta, GA 30005. The doors open at 7:00PM. Our meeting starts at 7:30PM with a quick business update. We'll get the discussion rolling by 8PM and target a 9PM conclusion. The meeting will also be accessible via Zoom. Here's the link and meeting ID information:

<https://us06web.zoom.us/j/85002956209?pwd=K0VpY0hsMGcyQzN5MTIac3NnWEhEZz09>

Meeting ID: 850 0295 6209

Passcode: 452398

President's Corner / John Norris, N4IHV

Here we are and another month has gone by. I think we have had our share of daily rain and thunderstorms. I have disconnected and reconnected my radios enough to wear out the antenna connections. Don't need any fried devices.

We had lots of interest in constructing new dipoles after our August meeting. If you missed it you can find it in the archives on our web page. If you need help with an antenna don't hesitate to ask. We always have hams that are ready and willing.

Be sure and participate in "The 100 Watts and a Wire" event. It should be a lot of fun and new friends to be made. While you're logging contacts in that event, make sure you keep track of the modes used by band so you can use those same Q's as a basis for the "Put a Local Twist on Your DX" NFARL event that coincides with "100 Watts and a Wire".

It is not going to be long before we have Ham Jam after a year off. Wes, W3WL, is putting together an excellent program. There will be many prizes to win as well. Tickets will be available soon so check your email and the NFARL web page.

If you don't see some of our members at our monthly meetings, please try to stay in contact with them. The only way we continue to be a successful club is through participation and fellowship. Our new meeting place is much larger and more accommodating, more space, nice chairs, good lighting, and more space. It has been such a pleasant change to see everyone in person and get to know our new members better.

Please bring any projects you are working on to share at our meetings. If you have something to sell or give away please bring it and place it on one of the tables at the back.

73,

John, NFARL President
N4IHV

Assistance Needed- / Mike Riley, KN4OAK

It might be something you're not thinking about, but the NFARL Executive Committee is. There are just over three months remaining in 2021. We're already thinking about 2022 and what the club will have an opportunity to do. One thing we'd really be interested in is having more participants in the routine club operations activities. Things like the eNEWS, helping with club meetings, staffing tables and booths at the local hamfests and events, etc. You don't have to commit to any long-term contracts, have any special language skills, or be a professional speaker or writer. Just volunteer to help out by offering some time, skill, or both, at any time during the year. You'll be surprised at the benefit it will bring to you and the club.

Contact John N4IHV or Mike KN4OAK or any other club officer if you think you've got something to offer as assistance. To those who already help out—we thank you!

HamJam 2021 / Wes Lamboley, W3WL

Plans are underway to have HamJam this year, after needing to cancel last year's event due to Covid-19. This year will mark the 12th time for the event that began back in 2009! Please see <http://hamjam.info/about.html> for details about the world-class speakers whom have graced our event over the years. The date, as usual, is the second Saturday in November, the 13th this year. It follows the Stone Mountain Hamfest and is nestled between the ARRL Sweepstakes contests, if you are a contester.

For you that are new to the Event, the three main reasons for having it are 1) Enjoying camaraderie with friends on a Saturday morning and still get home in time for football, 2) Enjoying seeing three great speakers tell us about the latest exciting happenings in our favorite hobby, and 3) Enjoying raising money for Youth related Educational, Scholarship, and Activity opportunities. Money is raised through the selling of raffle tickets for the many prizes donated by our sponsors. Over the years the event has donated well over \$40,000 towards furthering ham-radio related opportunities for youth.

This year our speakers include Jack - KM4ZIA, and Audrey – KM4BUN, McElroy. Both of whom are renown for balloon-launching and many other youth-focused teaching and operating activities they are involved with. They will be telling us about the many interesting facets of high-altitude balloon launching, and will highlight their part of HamJam with an actual balloon launch from the Metropolitan Club parking lot!

Also speaking will be Gregg Marco – K6IZT. Gregg will be addressing the breakthrough technologies that have culminated in a complete kilowatt station that can be easily transported to remote, environmentally-sensitive DX locations and be operated remotely from a ship, thus saving many of the negative aspects of DXpeditioning to places like the Antarctic such as the extreme costs for shelter and food preparation for the expedition team. Gregg expects to have the actual hardware for the Rig-In-a-Box, (the RIB) for inspection. It is indeed a thing of great beauty!

Our third speaker slot is not yet filled, but will be soon and you can stay up to date by following the HamJam website at <http://hamjam.info>. We know we are taking a risk what with Covid still an unknown factor in the early November timeframe, but we will remain positive in hopes of finally getting back to normalcy and face-to-face events like we hams enjoy so much.

Put a Local Twist on Your DX / Mike Riley, KN4OAK

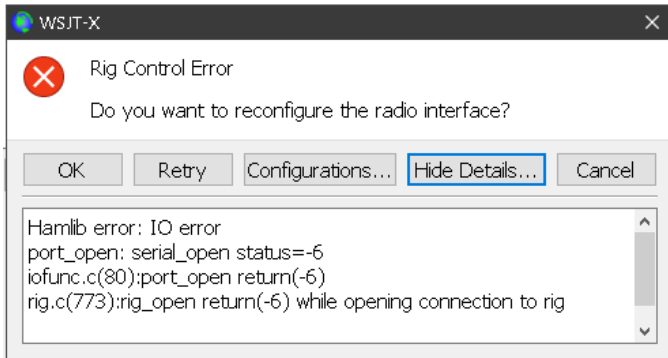
During September 2021 the Southeastern DX Club (SEDXC) is running the "100 Watts and a Wire DX Event". Chuck, AE4CW, explained the event during our August 2021 club meeting and it sounds as if it will be a lot of fun. So, the North Fulton Amateur Radio League Executive Committee decided to tag along. However, we are going to "Put a Local Twist on Your DX!" If you are a North Fulton Amateur Radio League member, and you go the distance by participating in, and submitting an "official" SEDXC entry online, then you can become eligible to participate in NFARL's "Put a Local Twist on Your DX!"

We hope you're making contacts and counting the Qs, entities, and modes! If you haven't started yet or made much progress, you still have plenty of time to try it out! Check out the event details here <https://nfarl.org/events/Put a Local Twist on Your DX.pdf>

Ten-Tech and the WSJT-x Rig Control Error (The final solution) Part 1/ Tony Santoro, W3TRA

I recently experienced some difficulty setting WSJT-x up on my Ten-Tech receiver. I received a lot of input and help on this issue from fellow hams, but I found nothing that simply tells you how to set things up. After getting the set up sorted out, I decided it was worth presenting my findings:

The symptom: WSJT-x Constant pop-up rig control error messages.



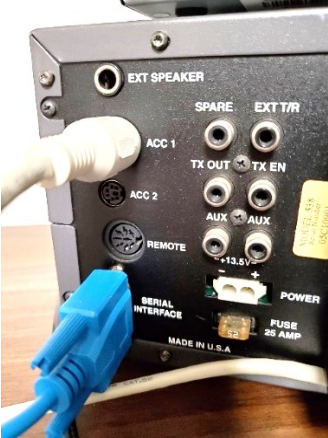
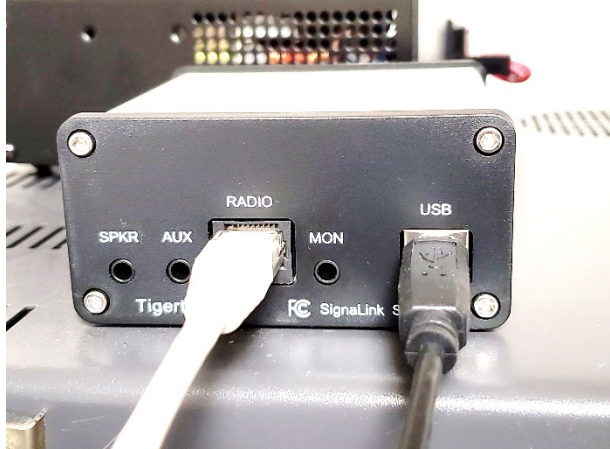


Root cause: A CAT cable is required to operate the radio. If you chose any option besides the VOX without the correct hardware setup up, you will get this error.

Definition: CAT – Computer Aided Transceiver
Scope: this discussion is focused on hardware setup for a TenTech Jupiter 538 transceiver to operate FT-8 using off the shelf components. It is assumed the user is familiar with the radio and WSJT-x. To actually operate the WSJT-x software please visit the developers web site at: [WSJT Home Page \(princeton.edu\)](http://www.princeton.edu/~wsjt/)

Final installation:

1. Laptop PC running Windows 10 home edition.
2. Time synchronization utility: see [WSJT-X User Guide \(princeton.edu\)](http://www.princeton.edu/~wsjt/) I used the WSJT-x recommended *Meinberg NTP Client*: see [Network Time Protocol Setup](http://www.princeton.edu/~wsjt/) for downloading and installation instructions.
3. Two USB adapter cables with hardware as listed below:

<p>A – Signalink™ USB soundcard interface with Ten-Tech adapter cables: Signalink USB Interface (tigertronics.com)</p>	
<p>B - USB to DB-9 male interface cable. I chose the 6' cable length. USB-64 CAT Interface Cable (rtsystemsinc.com)</p>	 <p>Note the rectangle package on the USB end. This contains the circuit to convert the RS-232 interface to USB.</p>
 <p>rear view shot of the Ten-Tech transceiver</p>	 <p>Rear view shot of the Signalink Souncard.</p>

Ten-Tech and the WSJT-x Rig Control Error (The final solution) Part 1/

How it works:

Ham-Library: the discussion would not be complete without a mention of the Ham Radio Control Library (HAMLIB). Many open source applications use this code to interface with hardware including WSJT-x and FLDIGI. The list of supported radios is quite impressive. You can check to see if your radio is supported by going to :

[Supported Radios · Hamlib/Hamlib Wiki · GitHub](#)

To see a listed of supported applications, go to:

[Applications and Screen Shots · Hamlib/Hamlib Wiki · GitHub](#)

For Windows savvy users, you can check your WSJT-x installation to see if your rig is supported with the following DOS command:

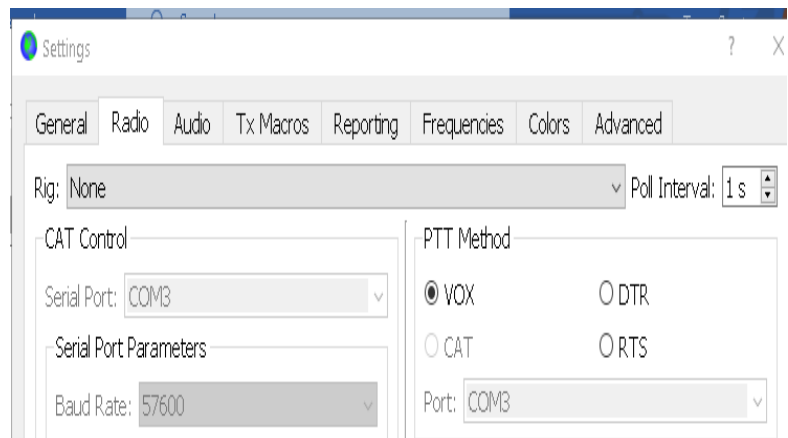
```
Command> C:\WSJT\wsjtx\bin>rigctl-wsjtx -l | find "538"
```

```
Result> 16002 Ten-Tec TT-538 Jupiter 20191209.0 Stable RIG_MODEL_TT538
```

Replace the "538" with your rig's model or brand and it should return the detail.

USB interfaces: (there are two)

1. The **Signalink™** is basically a sound-card device with electronics that interface three features with the laptop and the WSJT-s software: **audio out, transmit audio signal and the PTT** (push to talk feature). I'm fairly new to digital modes so I chose an off the shelf product, the **Signalink™ USB soundcard interface**. Once connected to the laptop, a USB driver is required by the Windows operating system.



screen shot of the settings in WSJT-x with no CAT control cable

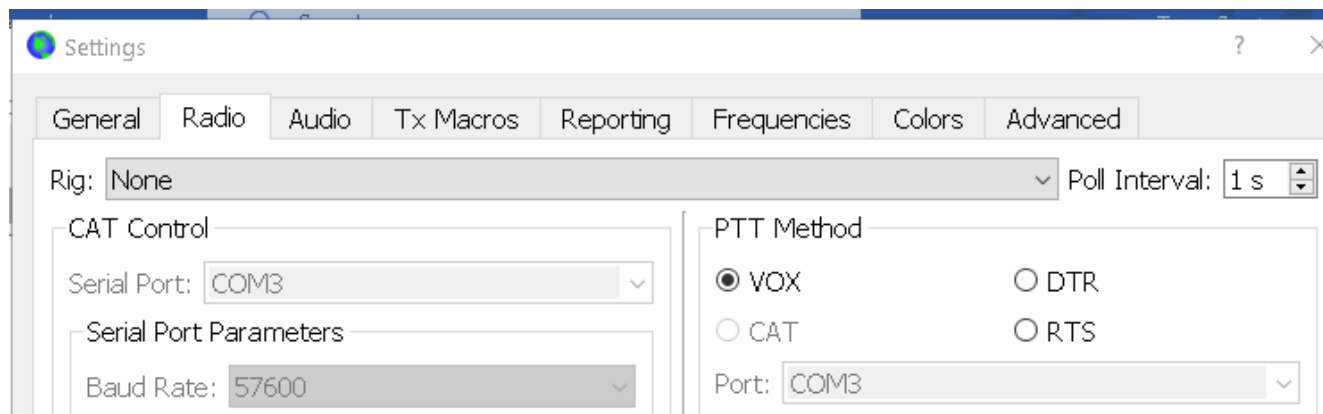
Note: By choosing **none** for the rig, you are telling WSJT-x not to use rig CAT control. **If you select your radio without a second CAT cable, you will mostly likely get the *Ham-Lib error* as show at the beginning of this document.**

2. **RT Systems, Inc. USB-64 interface cable.** If you look closely at the picture of the cable, the USB end has a micro-chip installed that converts the RS-232 signal interface to a USB connection. This also requires a Windows driver to work and is offered for download from RT Systems, Inc.

Using WSJT-x

1. Generic non-cat control:

If you're just interested in seeing things work, an audio interface is all you need. You can create one to make connections between your transceiver and the computer or use an off the shelf component. I chose an off the shelf component: Signalink™ USB soundcard interface. To configure for non-CAT control, use the following settings.



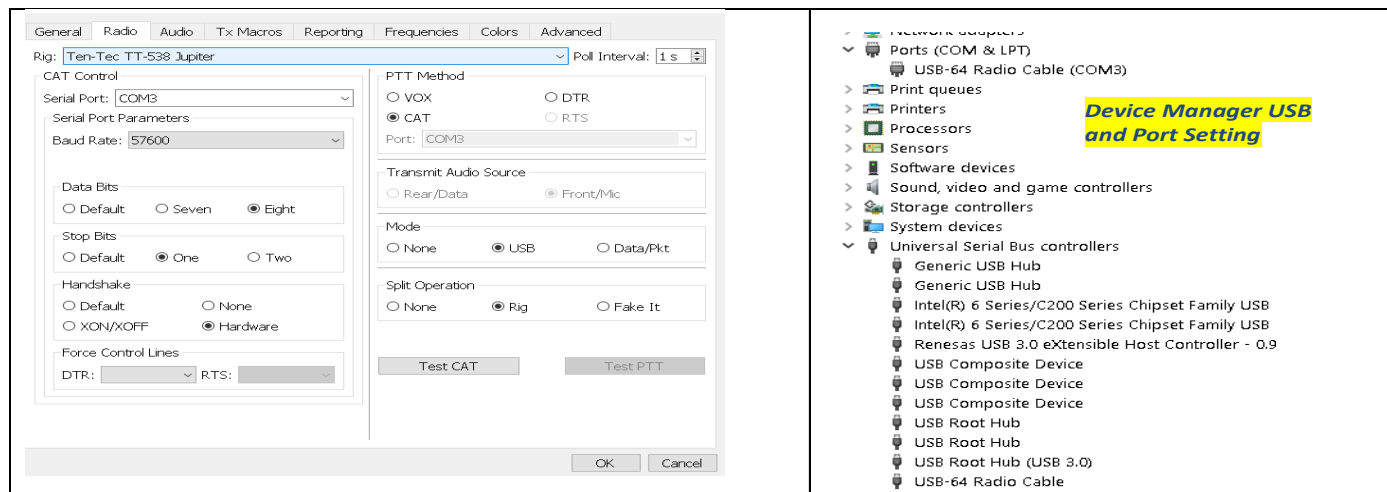
2. Using CAT control (Computer Aided Transceiver)

In order for this to work, a serial (RS-232 to USB) connection is also required for the rig. Also, a serial link baud rate specification is required and is unique for each manufacture. After some research, I found the detail I needed in the Ten-Tech Jupiter Model 538 Programmers Reference Guide on page 3. From the programmer's guide:

Interface Settings

The RS-232 serial interface on the Jupiter is controlled by a 16C550 UART located on the DSP board. The interface parameters are fixed at **57,600 baud, No Parity, 8 Data bits, 1 Stop bit**. The UART uses hardware handshaking to control the data flow between the PC and the radio. The host PC should be set to use RTS/CTS signaling.

Here are the configuration options that worked for me:



Ten-Tech and the WSJT-x Rig Control Error (The final solution) Part 1/

You should see three new listings in the Windows device manager:

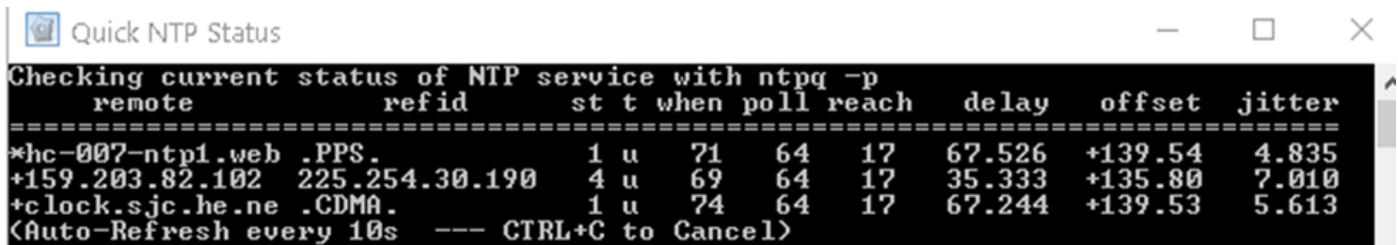
1. Ports (COM & LPT) USB-64 Radio Cable (COM-3) – this is the RT Systems, Inc. serial CAT cable.
2. Renesas USB 3.0 eXtensible Host Controller – this is the SignalLink™ soundcard USB connection.
3. USB-64 Radio Cable – this is the RT Systems, Inc. USB connection.

Laptop sound card settings: this is based on the instructions provided by the WSJT-x software. Here is a screen shot of the settings in the system soundcard properties showing a sample rate of 48000 HZ (DVD Quality)

Time setting: I used the recommended atomic time clock setup: *Meinberg NTP Client*. Please read the directions for this. Also, you may be able to use the Windows time service, but keep in mind this is a weak signal protocol dealing with phase relationships. Also, make sure you disable the standard Windows Time service or there will be a conflict.

Ten-Tech configuration:

You will have to change the audio source option on the rig from MIC to Line so the serial connection



```
Quick NTP Status
Checking current status of NTP service with ntpq -p
=====
remote          refid          st t when poll reach  delay  offset  jitter
=====
*hc-007-ntp1.web .PPS.         1 u  71  64  17  67.526 +139.54  4.835
+159.203.82.102  225.254.30.190 4 u  69  64  17  35.333 +135.80  7.010
+clock.sjc.he.ne .CDMA.        1 u  74  64  17  67.244 +139.53  5.613
<Auto-Refresh every 10s --- CTRL+C to Cancel>
```

is active:

That's all for now, in part 2, I'll show how I set up WSJT-x.
73's

Tony, W3TRA



Tech menu option set to Line

Congratulations to VE Testing Candidates! / Wes Lamboley, W3WL

Once again we observed a successful Volunteer Examiner led Amateur radio license test session at Slope's BBQ in Roswell on Saturday, September 11, 2021. All three of the test candidates passed their examinations. We're looking forward to having them join in our upcoming North Fulton Amateur Radio Club events. Please take a minute and welcome them when you meet them, or send them a congratulatory note via email, or both!

Here are the participants and some brief background on each.

Kevin Brennan, keven.brennan11@yahoo.com — Passed the Technician Exam

Kevin worked in IT for 40 years and is now retired. He has his VFR Pilots license and just got his drone license. He has always wanted to become a ham and is very happy to get this done. He intends to take his general license exam soon.

Stefano Mazzotta, mazzottas@bellsouth.net — Passed the Technician Exam.

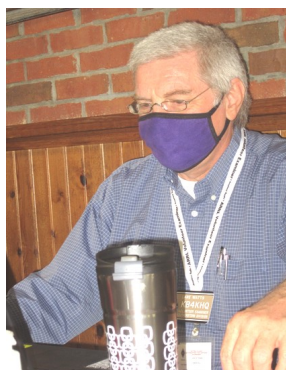
Stefano is a Professor of Finance at Kennesaw State University. He is interested in marine mobile and has had an interest in ham radio for some time. He intends to come back and take his general license exam.

Steve Redekopp, sredekopp@yahoo.com — Passed the Technician Exam.

Steve lives in Suwanee. He moved here from California in 1995. He is a Software Engineer and works for himself. He worked in the utility industry prior to starting his own business. Steve's brother-in-law has his Extra license and has inspired him to get his. Steve intends to come back and take the general license exam.



Two new VE Community members;
Abner Rivera, KA4RIV, and Ben Garrett,
KO4RFU



Lane Watts, KB4KHQ



Ian Kahn, NV4C

Thank you once again to Slope's BBQ for providing the space for us to hold the VE Test session. We greatly appreciate your efforts and support of our club!



John Reynolds, W4TXA



Stefano Mazzotta, Steve Randall
KO4VW, and John Norris, N4IHV

One Way Propagation

Is there one-way propagation? This question comes up a lot and the answer might surprise you. Sticking to a strict definition of the word 'propagation,' one-way propagation does not exist.

Meanwhile, we frequently run into situations where we can hear a distant station but that station can't hear us, or vice versa. Those situations are often the result of differences in station hardware and antennas.

One station may be QRO, the other QRP. Local manmade noise (RFI) may be high at one station (urban QTH) and low at the other (in the country). Station differences account for a lot of what appears to be one-way propagation but isn't.

The ionosphere is bidirectional.

Meanwhile, perfectly equal stations in identical man-made noise environments (a hypothetical) still sometimes experience the phenomena of only one station hearing the other. That must be one-way propagation, right? No, sorry, it isn't. For perfectly matched stations with matched local noise, there is still a major factor to account for – atmospheric noise.

There is a way to reliably experience what seems to be one-way propagation nearly every night of the year. It's on 40 meters an hour or so before sundown on the east coast of the US. At that time it's easy to hear stations in Europe while almost none of them can hear you. Some of them are running approximately the same power and antennas you are, have the same amount of local manmade noise you do, and they can't hear you. I've called European stations on 40 at sundown with 100 watts and they continue CQing as if I wasn't there. Switching on the amp and running 1,500 watts often does not help. They still can't hear me. It must be one-way propagation, yes? Well, no.

The 40-meters-at-sundown case is the perfect example for explaining what's really going on. The cause of what seems to be one-way propagation is the signal-to-noise ratios (SNR) on the opposite ends of the path are very different. The difference is not due to signal strength (propagation) or local noise (RFI), it's due to atmospheric noise.

The cause of the difference in atmospheric noise is due to what is occurring in the D-layer of the ionosphere. Here is a rudimentary explanation of the D-layer for those who may not know of it.

The sun ionizes a layer of the ionosphere called the D-layer. Long range communication on HF (DX) occurs by reflecting signals off the upper reaches of the ionosphere, typically off what's called the E-layer (E-skip), or one or more of several F-layers (particularly on VHF). The D-layer resides below the useful layers and absorbs signals rather than reflecting them. Fortunately, the D-layer dissipates after sundown. Direct sunlight excites the D-layer to the point where it absorbs enough RF to make DXing on 40, 80 and 160 over long distances nearly impossible during the daytime.

At night, the D-layer dissipates to the point where absorption isn't a problem and stations can be worked over great distances on the low bands. A requirement for reliable contacts however is that both stations be in darkness or nearly so.

The D-layer effect is the primary cause of what appears to be one-way propagation on the lower HF bands. Here's what happens on 40 meters at sundown:

Around the Shack / Hal Kennedy, N4GG

The east coast US station has darkness to the east and sunshine to the west. D-layer absorption has eliminated atmospheric noise from the west and depending on the time of year and exact time of day, D-layer absorption may also be reducing atmospheric noise from the north and/or south. The US east coast station has very little atmospheric noise – most of it is being absorbed. The only direction the US station can receive atmospheric noise and signals from is the darkness path; from the east.

Meanwhile, as the sun sets on the east coast of the US, stations in Europe have been in darkness for many hours. They are receiving atmospheric noise from every direction. The signals are making it across the Atlantic equally well in both directions, but the signal-to-noise ratio at the path ends will be different by many dB. The US can hear Europe; Europe can't hear the US. The difference in atmospheric noise accounts for that.



Figure 1.
Sunset on the
US east coast

Figure 1 depicts the scenario on a typical evening. This image is for August 3rd at 0050Z. N4GG is in sunset twilight on the west end of the path and only receiving noise from the east. On the east end of the path, Europe has been in darkness for hours and European stations are receiving noise from all directions.

I'll close with a brief comment about DXing on the grey line. Seasoned DXers know the longest-haul DX on the low bands is possible when the station on one end of the path is experiencing sunrise while the other is experiencing sunset – the "grey line." There are programs on the web which will calculate and display that condition for your QTH. The two figures in this Around the Shack column are from the software program DX Atlas. One of many reasons grey-line DXing is so good is because of the phenomena described above. Both stations are experiencing low atmospheric noise.

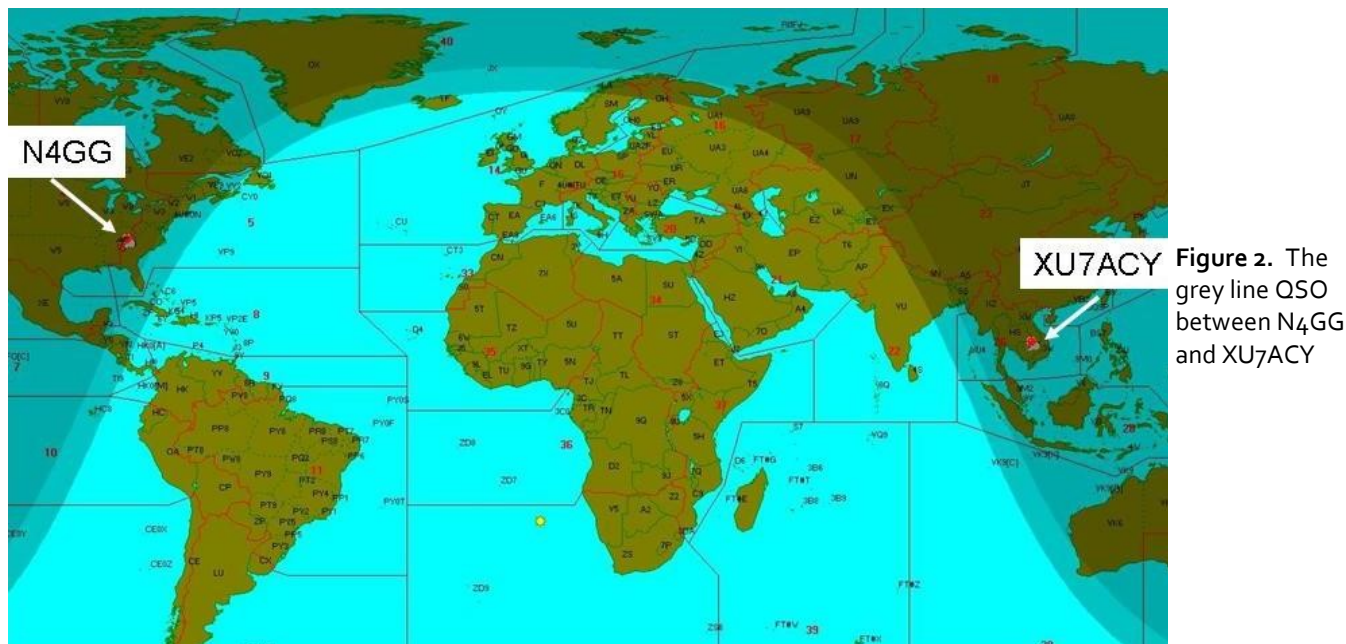


Figure 2. The grey line QSO between N4GG and XU7ACY

There are a few memorable QSOs in one’s ham career. One of mine is working XU7ACY on 80 meters at the grey line. XU is in CQ zone 26. For many, a zone 26 QSO on 80 meters is the last contact needed for 5-band WAZ. The contact was completed at 1414Z on December 17, 2010. The sun location for that QSO is shown in Figure 2. It is 22 minutes before sunrise at N4GG and 44 minutes after sunset at XU7ACY. Both stations are experiencing about a half hemisphere of atmospheric noise. N4GG is about to hear no further signals as D-layer absorption sets in. XU7ACY is about to have problems hearing due to receiving atmospheric noise from all directions. During my QSO with XU7ACY signals came up then faded out in about one minute.

The 80 meter antennas at N4GG are modest at best. A lot of DXing is about knowing when and where to show up. Hint: Show up when atmospheric noise is low! Consider reading or rereading the Around the Shack column “DX is for the Deserving.”

73,
Hal N4GG

Do You Know? / Mike Riley, KN4OAK

You do know that there is a plethora of information on the internet....

Sometimes running a search on questions that seem somewhat “oblique” result in curious information. Like running the search on “What was the annual sales quantity of new amateur radios in the U.S. during last 5 years”?

While I wasn’t able to discover an answer to the question, I did run across this information tidbit...“Total Amateur Radio Station Licenses (by month by class) at <http://ah0a.org/FCC/Licenses.html>

ah0a.org/FCC/Licenses.html

Month	Extra	Advanced	General	Technician	Novice	ARS Total
Jan-19	147,560	39,487	176,089	384,509	8,307	755,952
Dec-18	147,369	39,607	175,949	384,145	8,360	755,430
Nov-18	147,131	39,718	175,750	383,674	8,410	754,681
Oct-18	146,892	39,828	175,550	383,202	8,459	753,931
Sep-18	146,777	40,001	175,396	382,886	8,489	753,549
Aug-18	146,567	40,155	175,210	382,580	8,544	753,054
Jul-18	146,356	40,308	175,024	382,273	8,598	752,559
Jun-18	146,254	40,513	174,990	382,138	8,653	752,548
May-18	146,151	40,716	174,900	381,669	8,706	752,142
Apr-18	145,728	40,905	174,464	380,234	8,766	750,097
Mar-18	145,498	41,153	174,478	379,735	8,847	749,711
Feb-18	145,406	41,470	174,416	379,400	8,949	749,641
Jan-18	145,012	41,621	173,922	377,807	8,987	747,349

Extra Extra! / From the Extra Class Question Pool

New info for Technicians and Generals and a refresher for Extra Class Licensees!



E1A05

What is the maximum power output permitted on the 60 meter band?

- A. 50 watts PEP effective radiated power relative to a dipole
- B. 50 watts PEP effective radiated power relative to an isotropic radiator
- C. 100 watts PEP effective radiated power relative to an isotropic radiator
- D. 100 watts PEP effective radiated power relative to the gain of a half-wave dipole

See answer on the last page!

The Amateur Extra-class license examination question pool, effective from July 1, 2020, through June 30, 2024, has been released and is available at the National Conference of Volunteer Coordinators (NCVEC) [website](#).

Ian NV4C and his team hold license test sessions on the second Saturday of each month. For more information including upcoming test dates, [click here](#).

Contest Corner

These are some contests and events besides the "routine K1USN, CWops, and other organizational events" scheduled to occur the near future

- + [Maine QSO Party](#) 1200Z, Sep 25 to 1200Z, Sep 26
- + [Masonic Lodges on the Air](#) 1400Z-2200Z, Sep 25
- + [222 MHz Fall Sprint](#) 1900 local - 2300 local, Sep 28
- + [Peanut Power QRP Sprint](#) 2200Z-2359Z, Oct 3
- + [432 MHz Fall Sprint](#) 1900 local - 2300 local, Oct 6
- + [YLRL DX/NA YL Anniversary Contest](#) 1400Z, Oct 8 to 0200Z, Oct 9
- + [10-10 Int. 10-10 Day Sprint](#) 0001Z-2359Z, Oct 10
- + [10-10 Int. Fall Contest, CW](#) 0001Z, Oct 16 to 2359Z, Oct 17
- + [New York QSO Party](#) 1400Z, Oct 16 to 0200Z, Oct 17
- + [Illinois QSO Party](#) 1700Z, Oct 17 to 0100Z, Oct 18
- + [ARRL School Club Roundup](#) 1300Z, Oct 18 to 2359Z, Oct 22

DON'T FORGET!!

- **100 Watts and a Wire
September 2021**
- **Put a Local Twist on
Your DX
September 2021**

NFARL Upcoming Events and Dates

- **Every Sunday — NFARES net** - 8:30 PM - 147.06 MHz (+) PL 100
All licensed hams are welcome, you do not need to be an ARES member!
Check NFARES.org for more information.
- **Every Monday — Tech Talk** - 8:30 PM - 145.47 MHz (-) PL 100
NFARL's flagship technical based "non check-in" net. The net is always better when using the web based chat room (Discord) but Internet is not required to join the net. Check [NFARL Nets](#) for more information and "how to". Here's the link to the NFARL server on Discord web app <https://discord.gg/spr2a9D>
- **Every Wednesday — Hungry Hams Lunch Bunch** - 11:15 AM
Location: Slope's BBQ, 34 East Crossville Road, Roswell, GA 30075 (770) 518-7000

Dining Room now OPEN. Get Take Out if you can't stay!
- **Every Thursday — YL Net** — 8:00 PM - 9:30 PM - 145.47 MHz (-) PL 100
Check NFARL Nets [website](#) for "how to." This is a great opportunity for YL's to get on the radio with other YL's! OM's (guys) are welcome to listen in to this YL net.
- **Every Wednesday — CW SIG** — 8:00 PM on ZOOM. Meeting ID is 815 5160 3634; password is CW-CHAT (all CAPS)
- **Every Saturday — Royal Order of the Olde Geezers "Breakfast"** - 8:45AM-10AM
This informal breakfast group on Saturday mornings is NOW ***AGAIN*** meeting IN PERSON. **A notice that Lodge Number 1 of The Royal Order of the Olde Geezers, will convey its weekly soiree at Reveille Cafe, 2960 Shallowford Road, Marietta 30066 in the Kroger shopping center (Shallowford Rd and Sandy Plains). The festivities commence at 8:45 am on Saturday.**
- **Second Tuesday — NFARES Meeting - Aug 10, 2021** ***Presently- Online meetings only*** Check NFARES.org for more information.
- **Second Saturday – VE Testing - NFARL October 9, 2021 session:** ***COVID-19 Restrictions in place. By reservation only.*** See the "[Test Sessions](#)" web page for details & registration process. Contact Ian at nv4c.ian@gmail.com for questions / concerns / reservations.
- **Third Tuesday — NFARL Club Meeting** - September 21, 2021, 7:30 PM
LIVE meeting! Preston Ridge Community Center. Zoom Event Included!
— ***September 2021 Meeting: Repeaters & Resistors*** Door opens at 7PM for Social Networking. Meeting begins promptly at 7:30. ***See Page 1***
- **Fourth Tuesday – NFARL Executive Team Meeting** - September 28, 2021, 7:00 PM ***Online meeting only***
— monitor website and NFARL Groups.io reflector for updates.
- **HamJam! – November 13, 2021**, Saturday 8:30AM, Metropolitan Club, Windward Parkway, Alpharetta.

Contact Us

President	John Norris N4IHV	President@nfarl.org
Vice President	Mike Riley KN4OAK	VicePresident@nfarl.org
Secretary	Martha Muir W4MSA	Secretary@nfarl.org
Treasurer	John Tramontanis N4TOL	Treasurer@nfarl.org
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Past President	Daryl Young K4RGK	PastPresident@nfarl.org
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Web Master	Bill Cobb K4YJJ	Webmaster@nfarl.org
eNEWS Team	Help Wanted!!	enews@nfarl.org

North Fulton Amateur Radio League

P.O. Box 1741
Roswell, GA 30077

nfarl.org

eNEWS can be located online at:
<https://www.nfarl.org/enews/eNewsIndex.html>

Club Repeaters

Frequency—Description	P.L. Tone	Location
145.470 (-) EchoLink Node 560686 NF4GA-R	100 Hz	Morgan Falls
147.060 (+) Primary ARES Repeater	100 Hz	Roswell Water Tower
* 224.620 (-) Joint Venture with MATPARC	100 Hz	TBD
443.150 (+)	100 Hz	Roswell Water Tower
444.475 (+)	100 Hz	Morgan Falls
* 927.0125 (-)	146.2 Hz	TBD

* Currently off the air

Club Call Signs: NF4GA and K4JJ

Extra Extra answer: D (question E1A05)

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