

August 2019

Northwest Amateur Radio Society

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Lunch Break - North

Aug 14 Adriatic Cafe
 Aug 21 Woodlands Sweet Tomatoes
 Aug 28 BJ's Rest. & Brewhouse
 Sep 04 Gianna's Restaurant
 Sep 11 Spring Creek BBQ
 Sep 18 Mi Rancho Grill & Bar
 Sep 25 Panera Bread

Saturday Breakfast:

Saturdays at 7 am
 Denny's 6504 FM 2920 @ TC Jester
 (west of Kuykendahl)

Lunch Break - Medical Center

Aug 14 Southwell's Hamburger Grill
 Aug 21 Silver Palace Chinese Buffet
 Aug 28 Niko Niko's (BW-8 & I-10W)
 Sep 04 Pappas Barbecue
 Sep 11 Antonio's Mexican Grill
 Sep 18 Jason's Deli
 Sep 25 Buffalo Grille

Monday Lunch (was Taildraggers lunch):

Mondays at 11 am; Goodson's in Tomball

Next Meeting: Friday, August 16th

Andy MacAllister, W5ACM: 50 Years of AMSAT and HAMSATS

- Friday August 16th, 2019 at 7:30PM
- Klein Fire Department Administration, 16810 Squyres Rd., Klein, TX 77379.

NARS News is published monthly by the Northwest Amateur Radio Society (NARS). Northwest Amateur Radio Society is a Special Services Club affiliated with the American Radio Relay League, ARRL Club No. 2120. Please send all submissions to the newsletter editor before the end of the month prior to publication.

Meeting Location

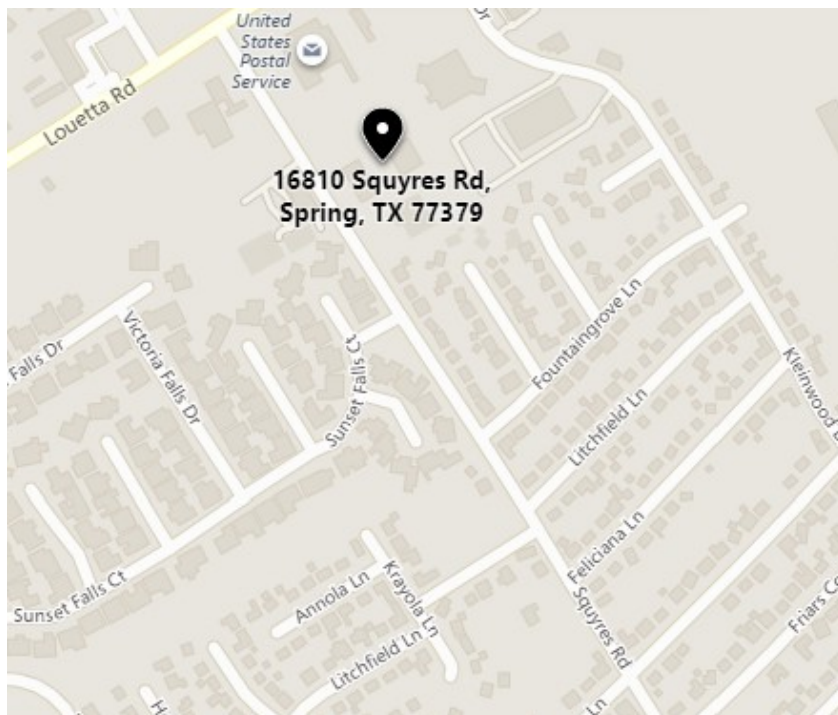
We will meet at Klein Fire Department Administration, 16810 Squyres Rd., Klein, TX 77379. It is located behind Klein Fire Station 4.



Picture from <http://kleinfiredept.com/services/stations/headquarters>

The Board wishes to thank the Klein Fire Department for the generous offer allowing NARS use of their facility.

LOCATION MAP — 16810 Squyres Rd.



President's Corner

Our August General Meeting promises to be a very exciting and will include information on how you can become active using satellites with your HT.

Andy McAlister W5ACM will be presenting a discussion on ham-radio satellites that we can talk through, and most of them are small, fully capable FM or SSB and CW transponders. How can we keep up with and effectively use them? It's daunting, but we will investigate!

Party – July 20, 2019

Welcome to the Wet, Wild, and Wickedest event of the year!

The 27th Annual Drink 'N' Drown party Held at the infamous Homestead of Walter and Teresa. The **FROSTY** Margarita machine was cranking, and some very delicious BBQ was served! Along with live entertainment and swimming what a great time! If you missed this event be sure to put in on your calendar for next year! A great time had by all! Thank you, Walter and Teresa! Pictures of this event can be found at Walters web site: <http://www.k5wh.net/dnd/>

VHF/DMR Repeater Updates

The **NARS repeater 146.66 is alive and well!** Our VHF Wednesday evening net activity has been steadily increasing. Given the membership support we will continue to work on expanding coverage access via remote receiver's to further assist those using HT's from home. If you would like to participate in helping us grow, we do have a repeater fund that could use some help.

On the **DMR** side. We now have a **NARS DMR TG: 3146211**. It is available on both the Klein and Cypress local repeaters and using Brandmeister HotSpot. In the future, the Brandmeister NARS talkgroup (HOTSPOT) will be our primary method of checking into the DMR net (7:00 PM on Tuesday nights) and our secondary method will be on the NARS talkgroup on the Cypress and Klein repeaters (around 7:10 PM). Next week only - we will have check-ins on the Cypress Local talkgroup only for those who have not had time to migrate. We will host this net after the NARS talkgroup on the Cypress and Klein repeaters.

If you need any help updating your codeplugs to send/receive on the NARS talkgroups on the Cypress or Klein repeaters, or on your hotspot, please make contact with Walter K5WH, Marty W5MF, Ron WA6TQH or Sam N6HB and we will help you upgrade your radios.

We look forward to seeing you on the DMR Net next week.

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President's Corner—Continued from Page 3

VE Exam Session

Our next exam session we be at our regular location Tomball Regional Hospital on Saturday August 24th starting at 8:15AM. Walk-ins are welcome. Location will be in the Green Room just inside the main entrance.

Keep reading on through the Newsletter as NARS has a full calendar of exciting activities. Come on out and get involved!

See you at our August meeting!

Ron Matusek, WA6TQH President, NARS

Newly appointed NARS Board Director

I am pleased to announce that after much consideration Cindy Grant, KM4YGG, has been appointed to the NARS board as Interim Director. I want to thank those who applied for this position as you all have lot's to offer. Please remember our elections will be held in November and your names are in the hat for consideration. Others may also apply as there will be openings on the board. More on that in a subsequent email.

Ron Matusek
WA6TQH
Northwest Amateur Radio Society
President

Opportunities to Serve

We need some new help for the Wednesday 2-meter Rag chew Net. It could be staffed by one person or more than one person could split the responsibility. It is a good opportunity to mentor new hams.

AUGUST MEETING

Our August Program will be on 50 Years of AMSAT and HAMSATS. Andy MacAllister , W5ACM , will make the presentation.

Friday, August 16th at Klein Fire Department Administration, 16810 Squyres Rd., Klein, TX 77379.

JULY MEETING RECAP

Marty Fitzgerald, W5MF, discussed the .66 repeater. His presentation had pictures of the repeater site and equipment.

DMR Training

If you are interested in obtaining a copy of the Video of each Session please bring a USB stick (estimate 3GB per session) and we can make a copy available to you to download on your USB stick with a NARS donation of \$6.00 per session. You can sign up at the meeting. Many have requested this as a helpful tool to refer back to when programming radio's and other general information related to DMR. This video is NOT planned for wide public publication so take advantage of this opportunity.

Congratulations

- Richard A McQuaide – New Technician
- Kathleen M. Boccaccio – New Technician
- Kent Walters - New General
- Paul F. Kent KI5FJS - Upgrade to General
- James M. Schultz KI5BFR - Upgrade to General
- Robert E. Ewers K9HOU – Upgrade to Extra

Saturday, July 27th (Tomball Regional Hospital)

We had 7 candidates taking 10 tests.

Element 2 tests given: 3; passed 3

Element 3 tests given: 4; passed 3

Element 4 tests given: 3; passed 1

Thanks to the VE's in attendance:

Martin Rogoff N5GPS; Stephen G. Protz KA5AUD; Cindy Grant KM4YGG; Keith Dutson NM5G; Michael Bowen WE5ET; Sam Labarbera N6HB; Sheree Horton KF5LMJ; Dan Carroll KD5DAN.

And to Ron Matussek WA6TQH , NARS ARRL VE Liaison.

Special points of interest:

- Next VE Session August 24th, 2019; 8:15 at Tomball Regional Hospital - Green Conference Room.

NARS WEBSITE: W5NC.NET
E-Mail Reflector: mailman.qth.net.

NARS now has a new address!

Please update your address list!

Northwest Amateur Radio Society
P.O. Box 11483 Spring, TX 77391



Houston Transtar Building

Conference Center West Entrance

6922 Katy Road

Houston, TX 77024

V.E. Exams every 4th Saturday of the month at 9:30 a.m.

Contact: Mark Landress, WB5ANN@arrl.net for further info.

Welcome, Congratulations, and Condolences

NARS Info

NARS name tag

Any member can request a badge and should contact Cindy, KM4YGG, & Art, KM4YGH.

Board Meetings

The board meetings will be at 6:00 on the same date and at the same location as the general membership meeting, except for January due to the NARS award banquet.

General Membership Meetings

3rd. Friday each month at 7:30 pm. — EXCEPT January Banquet
Located at Klein Fire Station Administration, 16810 Squyres Rd., Klein, TX 77379. Located behind Klein Fire Station 4.

Weekly 2m Net

Wednesdays at 8 pm.
Monitor Reflector for Current Repeater.
Coordinator: Jerry Whiting KB5VGD
g_whiting@sbcglobal.net

Weekly DMR Net

Tuesdays at 7 pm.
Monitor Reflector for Current Repeater.
Coordinator: Ron Matusek WA6TQH
ronm1@att.net

NARS Resource List

Digital Modes (Including DMR)

Walter Holmes – K5WH

Marty Fitzgerald – W5MF

Ron Matusek – WA6TQH

NARS Officers & Other Contacts

President & Board Chairman

Ron Matusek WA6TQH
281 205-3068
officers@w5nc.net

Vice President

Marty Fitzgerald W5MF
281 251-4301
officers@w5nc.net

Treasurer

Sheree Horton KF5LMJ
713 299-6994
officers@w5nc.net

Secretary

Martin Rogoff N5GPS
281 890-4538
officers@w5nc.net

Newsletter Editor

Martin Rogoff N5GPS
832-603-0036
officers@w5nc.net

Directors (term expires 12/31/2019)

Cindy Grant KM4YGG
352-318-7430
officers@w5nc.net

Mike Bowen N8ILU

281 954-0940
officers@w5nc.net

Directors (term expires 12/31/2020)

Richard Nelson KF5WRD
281 257-1279
officers@w5nc.net

Mike Pate K5MAP

281-376-1316
officers@w5nc.net

Texas QSO Party

Co-coordinator: Chuck Sanders NO5W
832 657-4832
no5w.chuck@gmail.com

Administrative & General Info.

Marty Fitzgerald W5MF
281 251-4301
officers@w5nc.net

Web site

URL: <http://www.w5nc.net>
Web Master: Bill Buoy N5BIA
281 370-3510 webmaster@w5nc.net

NARS E-Mail Reflector

NARS@mailman.qth.net
Coordinator: Keith Dutson NM5G
keith1@dutson.net

VE Session (ARRL) Manager

Ronald Matusek – WA6TQH
vec@w5nc.net

Texas QSO Party

Co-coordinator: Keith Dutson NM5G
281 516-1466
keith1@dutson.net

Andy MacAllister W5ACM: 50 Years of AMSAT and HAMSATS

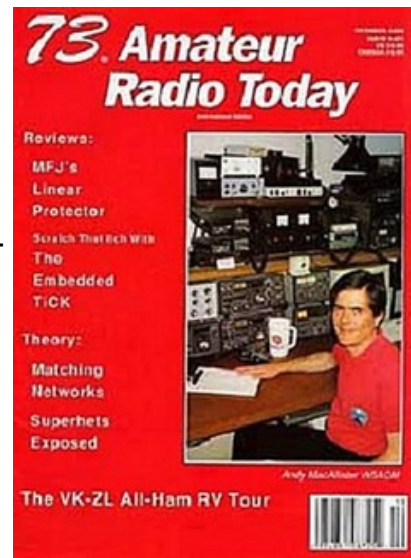
AMSAT - The Radio Amateur Satellite Corporation - Created in 1969

Today we have many active ham-radio satellites that we can talk through, and most of them are small, fully capable FM or SSB and CW transponders.

How can we keep up with and effectively use them? It's daunting, but we will investigate!

The premise of the typical cubesat (10-cm on a side) was developed by AMSAT, but has become popular with universities, research groups, and now industry.

Speaker Andy MacAllister W5ACM has been involved with AMSAT since 1980. He has made numerous presentations, wrote the HAM-SATS column for 73 Amateur Radio for 15 years, has been the AMSAT VP of User Services and a member of the AMSAT Board of Directors. Andy continues to support AMSAT via the Houston AMSAT Net with global internet coverage, and even more articles on satellites and related topics.



Introduction to DX News

This is basic information for people with no prior knowledge of Amateur Radio, DX and Radiosport.

There are millions of people all over the world who, in their leisure time, use the radiowaves as hobby. They are called radio amateurs, in some circles hams, and the hobby is officially specified as Amateur Radio Service, and dubbed as ham radio. It all started more than a century ago when commercial radio users determined those short waves being useless for broadcasting and military purposes. Let them play with these unprofitable frequencies - was the ruling of the day. Things have changed since then. The experimenters and plain fanatics soon discovered that these impractical waves sometimes reached very far. The greater the distance, the more excited they got. Abbreviations were common in the era of railroad telegraph and an appropriate abbreviation was adopted for distant signals on the radio. Undetermined distance became Distance X - viz. DX. A DX in the radio lingo means today a distant station, or its operator. A DX can mean a few miles when microwaves are used, but for the majority of shortwave lovers the term denotes signals from at least another continent.

Today DXing has two meanings - passive and active. A passive DXer is someone who is listening to distant commercial radio stations on both medium and short waves, trying to identify them. The contents of such transmissions is irrelevant for the listener, only the distance and the quality of the reception matter. Medium-wave stations, identified as AM on a car radio, are phased out in many areas. Their transmitting antennas are bulky and the transmitters consume much energy. Sporadically, FM radio stations in the VHF (Very High Frequency - 88 to 108 MHz) band, which run usually less power and have modest aerials, can be received over the distance of hundreds, and even thousands of miles. Identifying such stations can be difficult under irregular circumstances since several transmitters share the same frequency channel, but under normal conditions reach only locally. The English language Wikipedia gives straightforward explanations of basic concepts on the subject of DXing in plain language. Try <https://www.wikipedia.org/wiki/DXing> for a start.

The passive DXer who is listening only to Amateur Radio stations is called a short-wave listener - SWL, even though it is not limited to shortwaves (10 - 100 meters). The term was coined before the WWII. This is virtually an extinct group.



Alex Deligianis lives on a small Greek island Lesbos in The Mediterranean. Fascinated by radio since his teens, he monitors wide range of radio spectrum in his home laboratory. The equipment in front of him allows reception of Very Low Frequency transmissions directed to submarines in The Indian Ocean. Alex is fully licensed and can transmit on many bands, but his passion are advanced technologies.

This website is focused on active DXing. People who also transmit, apart from listening, on selected frequencies of the radio spectrum, need approval from the local government or telecommunication authority. Some countries are liberal and allow almost everybody, who is interested, to transmit on designated radio frequencies. There is however a large number of countries where the local population is not interested in this hobby at all. Most of these countries allow visitors to use their radio stations for shorter or longer periods in their territories, with or without any formalities. A few countries do not allow any Amateur Radio activity, or make it very convoluted. These are often called Most Wanted.

The main problem for DXers is that there are very few permanent Amateur Radio stations in far-off and underdeveloped places. Amateur Radio is very popular in North America and Europe. In Africa, for example, only a couple of countries are well represented on the air. Each year hundreds of radio enthusiasts travel to small islands and poor countries, with their radio hardware and let the Amateur Radio community have the fun of getting a two-way contact with a rare country. These are called DX-peditions. Counting the contacted countries is part of the hobby, competition is tough since even uninhabited territories sometimes count as countries. Actually, the term entity is used now instead of country to avoid confusion.



Twenty-year old Donata Gierczycka from Poland in the sitting room of Sture Henriksson in Mariehamn, Åland Islands between Finland and Sweden, is using his compact transceiver (receiver and transmitter in one) to contact by radiotelegraphy her friends back home. Åland Islands count as a separate country - entity - for radio amateurs.

The active DXer is someone who has both a receiver and a transmitter. All transmitters, used for communication, operating on other frequencies than the free bands, sometimes called Citizens Band or Family Radio Service, need a permit called license. Every licensed transmitter, like every aircraft, has a unique call sign. The call sign indicates the country, and sometimes an area, where the transmitter is located. This is not 100% valid nowadays. A good source of up-to-date information about licensed stations is the database at <http://www.qrz.com>. More than half a million Amateur Radio operators in the USA hold such permits, and over 2 million in the rest of the world. They are mostly interested in shortwave bands which require relatively small antennas, but cover the whole planet. A new trend on the rise is giving Amateur Radio permits and call signs, in some countries, for VHF and UHF bands only. No need to comply with international regulations regarding global coverage on HF bands. Countries like Japan, Indonesia and Thailand can show huge figures for Amateur Radio licensees, but this is fake news. VHF-only handy-talkie is not Amateur Radio. They look for cheap communication locally, not for global coverage, and are not interested in learning how HF radio works. These radio waves, called HF - abbreviated for High Frequency - can be reflected from layers of particles that exist around the Earth, between 50 and 500 miles above the surface. These layers and the deflections is nothing to be taken for granted. It is a dynamic process, influenced by the Sun and the Earth's magnetism. Basically, you never know if the radio waves will disappear in the outer space or will return to the ground, or more likely, to the sea, since there is more water than land on Earth. This is where the thrill of DXing is. The Internet and cell-phones are easy to use, but are predictable and the transfer of information is out of control for the end-user. Amateur Radio is about understanding what goes on, well, to a certain extent. The scientists have made huge progress in explaining the Sun, the magnetism and the ionosphere around the Earth, but we cannot control them. We know more and more how to use these phenomena and predict some effects, but we can only humbly accept what is generated by the Nature.



Louis Beirao has a small radio transceiver (receiver and transmitter combined in one unit) made over 40 years ago, in his living room under the TV-set in his home on Sao Tome island on the Equator in Africa. He used to keep in touch with friends and family in Portugal and other lusophone countries.

Using the right instruments, we can listen to and communicate with people who use similar instruments. There are three basic units necessary for radio communication in general - an antenna, called sometimes a radiator; a transmitter and a receiver. Shortwave amateur installations are today quite compact and sophisticated, with both the transmitter and the receiver in one unit, called the transceiver. The modern radio technology is based on digital processing of voice and image, so even Amateur Radio is affected. Still, many of radio aficionados of the world use the old-fashioned analogue equipment. Vintage receivers and transmitters, more than 50 years old, still perform well, if kept in good shape. The most critical piece of every radio installation is the antenna. The most expensive and modern radio transceiver will not perform well without a decent antenna. An efficient antenna is the best investment in a radio setup. Sometimes separate antennas are used for reception and for transmitting due to different properties of a particular shape and form. One thing is common - the size of an efficient antenna is corresponding to the wavelength, the longer the radio wave, the larger the antenna should be in order to give away the energy. Many radio amateurs devote much time to construct and experiment with these radiators. It is quite common that the same antenna will perform better in one location than in another; many factors determine the outcome.

A small percentage of experienced and ambitious radio amateurs are involved in contesting, or radiosport. Amateur radio contests are today very common, but only several of them attract large numbers of participants. The formula of a contest is to contact as many as possible stations during a limited time span. Short contests last an hour, but the world-wide competitions run on for 48 hours. Every weekend there are at least a few contests, with some local events during the week. A contest is good for improving one's operating skills and for making plenty of contacts while there are many stations simultaneously on the air. However, comparing the final scores is misleading. There are many factors beyond the control of the operator that affect the overall performance. Some committed contest operators travel to certain spots on the globe, where they can fully exploit their individual artistry as operators. These are called contest expeditions. Simply, some places are better for ionospheric propagation of radiowaves, some radio installations are of better design and more reliable, and so on.

Every four years, in the middle of July, the ultimate competition for Amateur Radio contesters is organised in different locations. This is called The World Radiosport Team Championship, when over 100 eligible operators from the whole world are having equal chances of showing their skills and tactics. The WRTC2018 took place in eastern Germany, the next event is planned for year 2022 in Italy.



Phil Goetz from New Mexico, USA at the microphone of his Amateur Radio station temporarily installed in a studio of a defunct commercial radio station in Banjul, The Gambia in Africa. Phil came here with a group of friends to put this small country on the air as there were no local radio amateurs

Radio reception is today affected by a cloud of man-made electrical noise. Trying to listen on a shortwave radio in a concrete office building down-town is doomed for disappointment. The metal structure will absorb any signals, while the office equipment, lights and elevators produce sharp electrical pulses that a sensitive radio receiver will react to. Cities in general are not DX-friendly. Outdoor antenna restrictions are in force in many industrial countries. The most successful DXers build their stations far from towns and power lines. The recent trend is to remotely control such stations over the Internet or microwave link from the regular residence in town.



Jim McCook of California, USA with his rotary directional antennas behind him. The tower is 70 ft high and the antennas are home-made or modified commercial products. He can easily contact radio amateurs in the whole world choosing the right frequency - or wavelength. The wavelengths are traditionally expressed in meters. Maybe because radio was basically an European invention (Marconi, Hertz, Tesla).

The Internet is vital for contemporary DXers. The news about operative stations, propagation and solar activity, background information about the installations and operators, technical advice and other facts are readily posted on many portals and individual websites. A well-working real-time information billboard called The DX Summit gives a total picture of current activity on all frequencies assigned to Amateur Radio. The amount of information is incredible, and the abuse of this portal is its weak point. Too many operators announce insignificant events and the true DX is no longer highlighted. Egocentrics declare their presence on the air without any respect for the current propagation conditions, others advertise friends and neighbours for no reason. This site is recommended for the experienced operator who can quickly filter out irrelevant information. The DX News is dedicated to reliable information about DXing and contesting. Here, one can read about present and planned trips to remote places, reports, often illustrated, about active operators and groups. This information source is free to use and ads-free. A bonus is the forum open to everyone interested in exchanging news and tips, as well as soliciting for help, promoting activities in remote and developing countries. Check <https://dxnews.com/forum/> and try it yourself.

The Internet offers new services to the DXer, never-thought-of before. The digital technology allows setting up receiving posts which can be controlled by anyone. This can be used to monitor how your transmitter sounds in a distant location. This can be also used for comparing the propagation in different places. Finally, what I recommend to every reader whose curiosity has been aroused by this article, to try passive DXing on the web, in front of your computer at home. Do it before you acquire a traditional radio receiver and hang some reasonable antenna. One suggestion is looking for links to the SDR (Software Defined Radio) receivers on line.

Centuries ago people believed in the aether in which the signals spread through. Now we know that radio waves are basically the same kind of radiation as light, X-ray and others. They just behave in a different way and people know how to use them to communicate with others. However, the shortwave radio is still a mysterious adventure, attracting more and more people all over the world.

Henryk Kotowski, SM0JHF

August 2018