

The Antenna

Brandon Amateur Radio Society



A New Meeting Place?



Plans are in the works to hold our first face to face meeting in a new facility since the Covid virus banished us to "Zoom" way back in April 2020. Conflicts in scheduling a meeting room with the Arise Church necessitated the move. Thanks to the efforts of Ron (K4FZU), the Bloomingdale Regional Library in Valrico was to become our new meeting site.

The August meeting, planned initially as an in person event, was postponed by the club officers due to the recent spike in Covid hospitalizations. Our first "in person" meeting date was shifted downstream to September 16.

Then came the latest updates from the Hillsborough County Library. Beginning now and for the foreseeable future, the Library will be closing at 6:30 pm due to personnel shortages and budget issues.

So we are back at square one, looking for a meeting place for the Brandon Amateur Radio Society. If anyone has any idea of a possible meeting place for the club please contact one of the club officers. There is always light at the end of the tunnel. Sometime you just have to go around the last bend to see it.

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NS4M

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K4FZU

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Presidential Chatter

by Steve Maslin NS4M

Hello everyone

I hope everyone is staying safe. As a follow-up to my last Chatter, the plans to start in-person meetings have been paused. First issue, the ARISE Church is no longer available. However, Ron (K4FZU) was able to secure the Bloomingdale Library McLean meeting room for the August, September, and October meetings. The second issue is, unfortunately, the COVID-19 Delta Variant is still out of control, so it was decided to not hold the August meeting in-person. We will communicate any further in-person meeting decisions as soon as possible.

If you are eligible and able to get the vaccine, please consider obtaining it so we can all help curb the spread and stop the cancellations of events that we all would enjoy. Breakthrough cases will happen. The vaccine is not a 100% guarantee you wouldn't get the virus, but the chances of being hospitalized or even getting really sick is extremely low. Lets do our part in getting this under control.

In better news, I'd like to publicly recognize my oldest son, Hunter (K4HMM), on being awarded The Homer V. Thompson, W4CWV, and Annette P. Thompson, W4LKM, Memorial Scholarship from the ARRL Foundation for the 2021-2022 academic year. You will even see his picture in the latest QST. Congratulations Hunter!

73's,
Steve, NS4M

Club Activities

Two meter net – every Monday at 8 pm
on 147.165 MHz FM

Six meter roundtable– every Tuesday
at 7 pm on 50.200 MHz USB

Virtual Coffee Hour – every Wednesday
at 7:30 pm on Zoom

BARS Business Meeting – third
Thursday of each month at 7:30 pm on
Zoom

Eighty meter roundtable– every Friday
at 7 pm on or near 3.830 MHz LSB

September / October DX

Rwanda

Sep 13-28

Tanzania

Sep 20-30

Mellish Reef

Oct 1-30

Svalbard

Oct 12- Nov 1

For the full DX story check out this
web site:

<https://www.ng3k.com/misc/adxo.html>

Upcoming Monthly Club

Meetings

Sep 16, 2021 7:30 PM

Oct 21, 2021 7:30 PM

My Introduction to Slow Scan Television

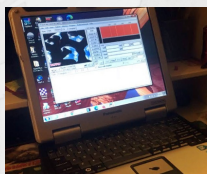
by Jim Stocks KK4CWO

Slow Scan Television (SSTV) is a method of transmitting pictures or photographs by Ham radio signals on HF or VHF/UHF narrow band frequencies which can be picked up and transformed into images. SSTV is a form of analog broadcast TV that uses 3kHz of a 6kHz wide channel.

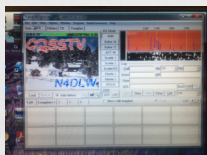
Modern SSTV systems use a personal computer and special software in place of the custom equipment used in the past. The sound card of a personal computer when coupled with special processing software, acts as a modem and the computer monitor provides the output while a small digital camera or digital photos provide the input.

In preparation to copy SSTV transmissions from the ISS, I download a software program called MMSSTV which I install on my old laptop. There are other apps that you can use on your smart phone which will also translate the signal into an image.

My old Laptop with MMSSTV installed and a picture copied from K4PPK

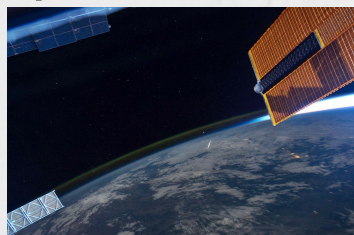


MMSSTV closeup of a picture sent by N4DLW. (My radio was acoustically coupled to the computer.)



SSTV is an interesting way to use your radio that allows you to send images out to other Hams. It is also a great tool to use in case of emergency where one picture speaks a thousand words.

Pictures from the International Space Station



Ham radio operators have been sending pictures to each other over radio for many years. The mode of transmitting those pictures, called Slow Scan Television (SSTV), is a fun mode to operate. Ten or fifteen years ago the BARS club ran a SSTV net every week for about a year exchanging pictures on the repeater.

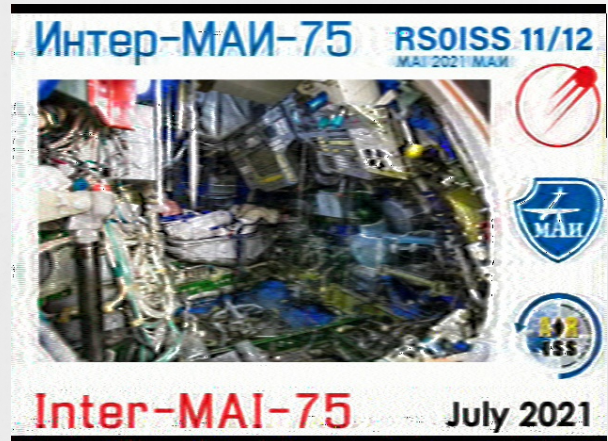
But receiving pictures from the International Space Station (ISS) traveling around 17,200 miles an hour (5 miles a second), 250 miles above your head is an entirely other thing. And that's just what a few of us did on the 6th and 7th of August. Travelling at that speed and elevation above the earth, it only took about ten minutes for the ISS to travel from one horizon to the other.

The transmissions on 145.800 MHz FM were part of the Moscow Aviation Institute's SSTV experiment (MAI-75) and were sent from the ISS Russian Service Module using a Kenwood TM-D710 transceiver.

The really neat thing about these pictures, I think, is that they came directly from Astronauts on the ISS. There was no internet involved. No wires. Only a little radio magic traveling through 350 to 2,400 miles of "Outer Space" (and a little Inner Space).
Pictures on page 4)



ISS Satellite Pass August 6 1613 UTC
 Picture was copied while ISS was 65 to 79 to
 70 degrees above the horizon and at a distance
 of 350-800 miles.



ISS Satellite Pass August 6 1618 UTC
 Picture was copied while ISS was 7 to 0.5
 degrees above the horizon and at a distance of
 1,700-2,400 miles.



ISS Satellite Pass August 7 1703 UTC
 Picture was copied while ISS was 14 to 18
 degrees above the horizon and at a distance of
 1,200-1,400 miles.
 (The lines across the picture are static lines
 caused by degradation in signal reception.)



ISS Satellite Pass August 7 1707 UTC
 Picture was copied while ISS was 9 to 5
 degrees above the horizon and at a distance of
 1,600-1,950 miles.

BARS Van Update

The flooring portion of the van has been completed thanks to a lot of sweat equity put in by several good members from the club and one son-in-law. The floor of the van required almost a complete rebuild.

Desks, chairs and cabinetry are next on the agenda of the team and then come to the radios and antennas.



New carpet installed in the BARS van.

Lightning!!!

by JR Calvert W4MIG

Lightning can be a strange, awesome and frightening thing, and as a ham, it's probably not IF, but WHEN, you'll experience a lightning strike. Given the high number of thunder storms that occur in the Tampa Bay area during the summer months, it's something that should concern us all. Last year, in August of 2020, my station suffered a lightning strike that took down a 72-foot end fed antenna, and damaged several computer network switches.

The strike was a direct hit on my avocado "antenna" tree that was being used to support the far end of the antenna at about 30 feet.



The feed point was mounted to a 4x4 wood post at about 7 feet. The lightning melted the antenna wire at the tree end, causing it to drop to the ground, but not before it ran the length of the wire and blew the cover off the plastic junction box that housed the antenna's matching unit. Pieces of the cover were found up to forty feet away from the junction box.



Surprisingly, there was no apparent damage to the coax cable feeding the antenna, and after testing to verify it was undamaged, it was put back into service feeding the replacement antenna.

Inside the house, the only damage was to several computer network switches. In each case, the switches would still power on, but had certain ports that would not work. The ports in question had been connected to longer network cables that run through the attic of the house. These longer cables probably acted as antennas and fed the electromagnetic pulse from the lightning strike directly into the port, causing the damage. None of the equipment attached to the switches with shorter cables was damaged.

The avocado tree isn't doing too well. Only the bottom third of the tree had leaves this year, and no avocados. It may die within a year or two, but for now, it continues to be a pretty good antenna tree.

Want to become a Volunteer?

The club always has ongoing projects. If you would like to offer your help in any of these areas give us a call.

Elmer Projects - Jim Moorehead 468-5570
Ships Crew Project - Ron Perrett 380-6873
Van Project - Dick Hoff 972-672-5110
License Testing - Bill Johnson 928-8697

Fox Hunts Remembered

by Bob Haynes WB4AKA

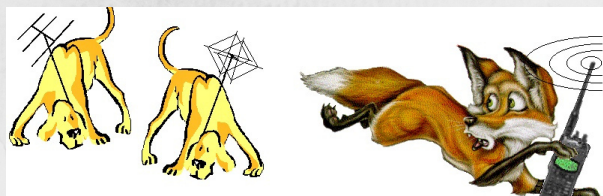
Back in the '70s, fox hunts consisted of someone hiding with a transmitter, talking on the air with people who drove around until they found the fox. When someone spotted the fox, he was to quietly leave, so others could continue the hunt. The only rule was that the fox had to be mobile.

A decade before I started doing this, one of my friends put a car battery in a baby carriage along with his vacuum-tube G. E. mobile radio.

He wore a long dress, a wig, and a big floppy ladies' hat, and strolled around in the parking lot of a shopping center, enjoying the view.

Once we home-brewed a repeater from two solid-state mobile units and ran it from a car parked on the top floor of the highest parking garage downtown. A signal coming from that height was extremely hard to pinpoint.

Sometimes we changed power levels to throw people off.



MY TURN AS THE FOX:

In order to meet the mobile radio requirement, I took a car battery and crystal mobile radio in my son's little Radio Flyer red wagon and had my wife let me out and drive away so I could walk into the woods. She and my son watched from a hill. I wore camouflage and took my longest run of RG-8, and stuck my VHF Ringo Ranger way up high up in a tree, quite a long way from where I crouched next to the wagon under a dark tarp. I scooped leaves on top of the tarp and coax as it ran along on the ground.



After quite some time, it was getting dark, and I watched the cars slowly circling my neck of the woods. One of my friends, a duck hunter, searched the treetops with a powerful spotlight while I teased him with remarks like, "No, Gary. I'm up in the fourth oak tree to your right."

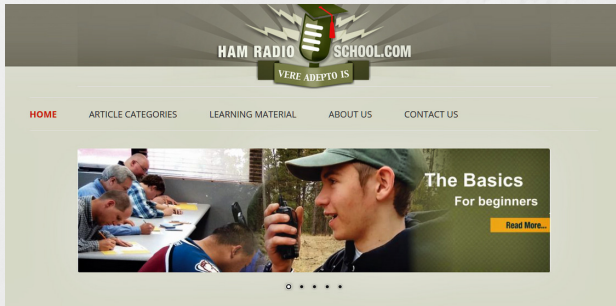
It all came to an end when a new voice was heard on the simplex frequency. It was Lt. Henderson with the Hillsborough County Sheriff's Office who grabbed one of the searcher's microphones to order me to stop what I was doing and leave because there were so many complaints from the neighbors because of a large bunch of cars circling the area with lights and strange antennas. The deputy was not amused.

Following the hunt, we always got together at a restaurant for a snack, tall stories, and a lot of good fellowship.

Upcoming Hamfest

ARRL Florida State Convention
October 8-9
(Friday 1-7 pm: Saturday 9am-3pm)
Melbourne Auditorium
625 E. Hibiscus Blvd.
Melbourne, Florida

Ham Radio School



Another source of knowledge for perspective hams or ones with their sights set on advancing is the Ham Radio School website.

<https://hamradioschool.com/advanced-topics/>

They claim to be an amateur radio license preparation and education service. And while they are that, they are also a good site for any of us when it comes time to put on our "Elmer" hat.

The site is broken down to offer help to those just entering our hobby and to those studying for their General class license.

To be sure, the site promotes its own integrated learning system. It may be the "Cats Meow" of all ham training systems, I really do not know.

But it does contain a lot of information that could be of benefit. Give it a look.

Ham Radio Websites Worth Exploring

ARRL - Useful educational, technical and operational links

<http://www.arrl.org/>

West Central Florida Section of the ARRL

<http://arrlwcf.org/>

QRZ.com - Call sign lookup service and a general-interest ham radio portal

<https://www.qrz.com/>

eHam.net/Reviews - Reviews and ratings of Ham Radio Equipment by Hams

<https://www.eham.net/reviews/>

Ham Radio School - License preparation and education service

<http://www.hamradioschool.com>

Zoom Zoom!

Don't forget about our Wednesday night Virtual Coffee Hours held on Zoom at 7:30 pm:

<https://tinyurl.com/BARSCoffee>

Amazon "Smiles" on BARS

Do you shop at Amazon? Many of us do. Did you know your shopping can provide the club cash benefits? Now that BARS is incorporated as a non-profit charitable organization, Amazon will donate 0.5 percent of your purchases on selected items directly to us at no cost to you. Take a look at the website below for additional information and consider signing up for the program.



<https://smile.amazon.com/gp/chpf/homepage?orig=%2F>

Do you know what this is?



Have a try at these from the FCC question pool.

Technician Class License:

What can happen if the antennas at opposite ends of a VHF or UHF line of sight radio link are not using the same polarization?

- A. The modulation sidebands might become inverted
- B. Signals could be significantly weaker
- C. Signals have an echo effect on voices
- D. Nothing significant will happen

General Class License:

Which sideband is most commonly used for voice communications on frequencies of 14 MHz or higher?

- A. Upper sideband
- B. Lower sideband
- C. Vestigial sideband
- D. Double sideband

Extra Class License:

Which of the following types of modulation is common for data emissions below 30 MHz?

- A. DTMF tones modulating an FM signal
- B. FSK
- C. Pulse modulation
- D. Spread spectrum

Quiz Answers

This is my Heathkit Model HD-15 Hybrid Phone Patch. In "days of old" when making a phone call to another city cost money, hams would connect their telephone lines to their radio through some hardware such as this kit from Heathkit and run "phone patches" to hams in another city, state or country thereby permitting free or reduced cost communication between individuals on each end. I built this one while I was the custodian of the Army MARS station in Baumholder Germany. We ran approximately ten thousand phone patches between soldiers overseas and their families back in the "States" during the three years I was there. Another common use for the phone patch was connecting missionaries overseas with their family members at home. Believe me when I say that facilitating a phone connection between two individuals separated by great distances for long periods of time was often as satisfying to the radio operator as it was to the two individuals conducting the phone call.

License Test Answers

Question 1 - B

Question 2 - A

Question 3 - B

A Word From The Editor

Where has the year gone? This is the September/October issue of the Antenna. It is also my last issue to serve as the lead editor for the publication. The November/December issue will be ably edited by Dr. Dana who we are so glad to have back from his hospital stay following open heart surgery.

I started this iteration of the Antenna because no one else would do it and because I felt it needed to be done. Looking back, it really wasn't bad. However it is not my calling. I am not a writer and if it were not for "spel chek" you probably wouldn't even want to read the newsletter. Thank you for putting up with my effort to publish this "rag" and also a great big thank you goes to Dana for joining me pulling in double harness and to Nancy (KM4WMD) for proofreading every issue saving me much embarrassment. That said, I won't be doing it again. Now it's someone else's turn. Give "serving your club" serious consideration over the next couple of months. And when a club officer slot or a position of leadership on one of the club sponsored activities opens up, consider saying "yes" to those charged with finding the best volunteer for the position. BARS will be a better club because you did.

Thank you to the Arise Church for allowing us the use of their facility.

BARS Website

<http://www.brandonhamradio.org/>

BARS Facebook

<https://fb.me/brandonhamradio>

BARS Twitter

<https://twitter.com/brandonhamradio>