

The Printed Circuit

The Monthly Publication of the
Tallahassee Amateur Radio Society

Sep/Oct 2022



TALLAHASSEE
AMATEUR
RADIO
SOCIETY



K4TLH
.NET
Facebook.com/
K4TLH

P.O. Box 37127
Tallahassee, FL 32315



TARS Officers

- President Alan Terrell N4KGT
- Vice President Phil Ashler N4IPH
- Secretary Todd Clark KN4FCC
- Treasurer Doug Ferrell KD4MOJ
- Member at Large Don Pace KK4SIH

Committees

Repeater Trustee #1	Randy Pierce	AG4UU
Repeater Trustee #2	Doug Ferrell	KD4MOJ
Education & Training	Phil Ashler	N4IPH
Equipment Manager	Vacant	
Newsletter Editor	Paul Eugenio	K00KE
Testing	Norm Scholer	K4GFD
Public Information Officer	Jason Ford	W4JMF
Webmaster, Web Content, and Social Media		GD4U
Server Administrator	Don Pace	KK4SIH

MINUTES of the September 2022 TARS Meeting

7PM on September 1, 2022

American Red Cross Building, Tallahassee, FL

Attending the Meeting:

Doug, KN4MOJ

Norm, K4GFD

Chief, KA5USN

Paul, KE4IQY

Sarah, KD4ESM

Phil, N4IPH

Adrienne, KO4UMY

Randy, AG4UU

Theo, K4MVL

Jerry, N4JL

Paul, KO4GQZ

Alan, N4KGY

Don, KK4SIH

Bill, AE4S

Todd, KN4FCC

Bill, KF4KHJ

Hughston, KQ4BSK

Mike, KO4QEC

Richard, KM4BRR

Sal, K4YFW

Bob, NT4B

Paul, KOOKE

Chris, KO4DN

Garret , KO4KKX



Alan, N4KGT called the meeting to order at 7pm and led the club in the Pledge of Allegiance.

Approval of the Minutes -- no objections to the meeting minutes. The meeting minutes were approved with no objections.

Visitors: Paul, with the American Red Cross, KO4GQZ; Mike, KO4QEC, and Sarah, KD4ESM

Program

Introduction to Amateur Radio Satellites by Tom Brooks, K4TB

This is a presentation Tom put together in 2011. He will provide updates to the presentation where they apply. After the presentation, he will share a website used by hams who work with satellites.

First satellites included Sputnik, OSCAR 1, AMSAT. OSCAR 1 was launched in 1971. AMSAT is the organization that works with amateur radios. Types of satellites include analog (FM, SSB, and CW) and digital modes (PSK, PSK31, FSK, and others), repeaters and transmitters. Orbits are either lower Earth orbit (100 to 1200 miles up) or Medium Earth orbit (1200 to 22,000 miles up) or High Earth orbit (more than 22,000 miles up). Also Geosynchronous and Molniya (high elliptical earth orbit).

Working satellites includes tracking programs, mainly internet based today. Shows where the satellite is and where it's going to be. Input is the Keplerian Elements to Calculate Satellite Orbits. It's important to update these elements each time you get ready to transmit to a satellite. You also need to check operational updates to get information about how the satellite is operating. Charts also provide the uplink and downlink frequencies. The Doppler Effect is also an important factor and you are communicating with a moving target. Propagation also matters – polarization, path losses and gains, antenna squint, propagation delay, and the Faraday effect.

Earth stations:

Basic – two radios or a dual band HT can work; omni-directional antennas, laptop

Advanced – includes computer tracking and control with antenna rotators and computer controls

Antennas can be omnidirectional or focused, linear or circularly polarized; phased Yagis

Tom demonstrated the AMSAT website (<https://www.amsat.org/>). The satellite information tab has a list of active HAM satellites (including the ISS). You can track a selected satellite and enter your latitude and longitude, and the elevation at your location. Site is free and you can track which ever satellites you would like to. The site also provides a list of communications satellites and their current operating conditions.

Tom also showed the AMSAT store which has some software packages available for download, such as SATPC32. Tom demonstrated this software which shows live tracks and the next time the satellite will pass your location within some time frame. This works even if all you are trying to do is listen to a satellite as it passes over your location.

Tom showed some of the smaller, hand-held antennas that he uses for satellite communications. He also showed some photos of satellite antennas he has at home.

Business Meeting:

Treasures report – 2 renewals, 50/50 drawing income and \$3k into savings. About \$3k in checking and \$6k in savings.

Phil – nothing has really changed. No inquires, McClay has been busy, so we will just have to see what happens. No class is currently scheduled for the fall.

Testing – on September 10 at 10AM at ARC. We are doing walk-ins. We will have 3 to 5 estimated, but we will take who ever shows up. Also working to get more ham radio station in Gadsden County EOC, also adding antennas. Looking to see if someone at the EOC will get an FCC amateur radio license. They want to get something set up in September 2022.

Repeaters – Randy, all is working well. New Polk County SARNET station. Local repeaters are looking good. Randy moved that in lieu of flowers, make a donation to Big Bend hospice for Doug's mom. Randy recommended \$100. Seconded by Phil. MOTION PASSED.

Holiday Party, Saturday November 5. Need payments at the next club meeting. The party will be at the ARC and catered by Mission BBQ.

New Business

Don noted that there will be a hamfest (tailgate) in Mariana (Enterprise Road) at the old Dozier home for boys.

Don posted to TARS website with information about the club repeaters. He provided some basic information for “getting started” and gives new user information on “essential” frequencies for the most common repeaters used in our area. Don will provide a copy of this to Norm so that he can give the information out to newly qualified technicians. Don also gave information on how to program HT radios to program HTs with the local repeater frequencies.

Adriane stated that grant money will be given out soon. We may want to think about what the TARS club could use to apply for this grant funding. Chief (KA5USN) said we could use the money for training new hams and maybe some initial equipment (HTs). Don says that having a loaner HT so the operator can figure out what features they want and what works best in our area. Adriane is taking ideas to complete the grant application for the club.

Chuck is the nominations committee and we need nominees for the November club officers election.

Meeting was adjourned at 2034 hours local time.

UPDATE: The 444.8 Repeater is back on the air and available for use.

Ham Radio Youtube Channels

by Don Pace

Tired of watching reruns of Christmas in July Hallmark movies on TV. Need a break from losing brain cells to Beavis and Butt Head shorts on streaming. Well there are plenty of amateur radio videos on Youtube. You can watch when you want and skip those that you are not interested in. Best of all they are free.

A big question on the Web is always who can you trust? Who is an expert and the same holds true with Youtube videos. The good thing is there are a number of very familiar/famous contributors to our hobby who have created channels with their videos. Here are some of the channels that I find to be full of information and trustworthy.

David Casler (<https://www.youtube.com/c/DavidCasler>) Dave (KE0OG) writes the "Ask Dave" column for the ARRL QST Magazine. He extends his byline answering even more questions on this video channel and does so several times a week.

DXCommander (<https://www.youtube.com/channel/UC6wLPPAzu7iPDMaUeHoVvJw>) - Callum (M0MCX) makes a popular multi element vertical antenna called the DX commander. His videos cover topics ranging from beginner topics to advanced concepts and on Fridays he livestreams operating his station.

Watersstanton (<https://www.youtube.com/user/watersstanton>) - This is the video channel for hamradiostore.co.uk, the HRO for the United Kingdom. Sometimes it turns into a commercial for the store but 90% of the time the videos are covering technical topics of interest to most operators including a recent series of videos on antennas for limited space deployments.

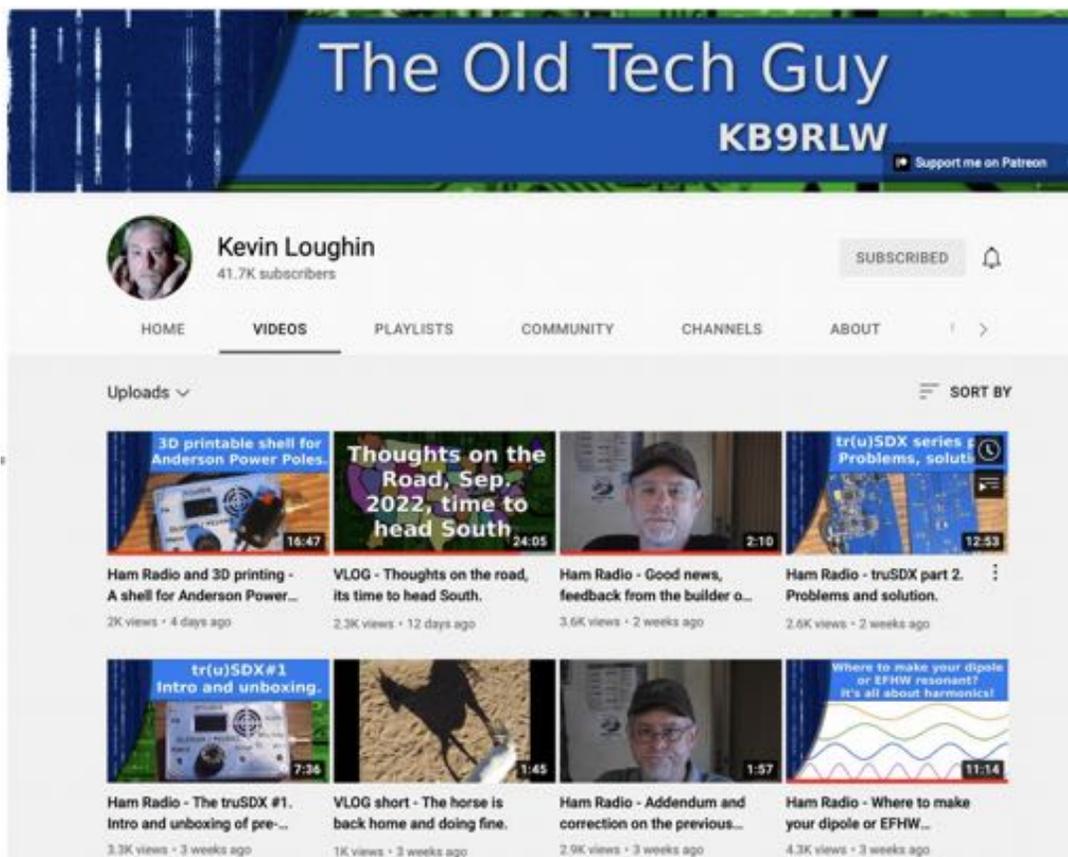
Ham Radio Crash Course (<https://www.youtube.com/c/HamRadioCrashCourse>) - Josh (KI6NAZ) and his team have over 250K subscribers on their channel. He also is the current producer of

the long running “Ham Nation” series which is now showing on this channel. He talks about all sorts of topics and reviews many different items and answers many questions on livestreams. Even one of our members was featured on on this channel. Bill Jordan, AE4S was featured the at the Huntsville Hamfest on this Ham Radio Crash Course

video: <https://www.youtube.com/watch?v=4XV7kBQwAyl&t=1014s>

Ham Radio 2.0 (<https://www.youtube.com/c/HamRadio20/featured>)- Jason, callsign KC5HWB is another blogger with a large following totaling over 100K viewers.

This list gives a pretty good starting point for what is out there. Once you watch some of these videos, Youtube will recommend other videos that are similar. There are hundreds of fellow hams that have created videos on the hobby. Some are good and some are bad, but there is just a ton of information out there.



<https://www.youtube.com/user/loughkb>

Save the Date

TARS Holiday Party

Saturday, November 5th

12:30 - ??

American Red Cross

1115 Easterwood Dr

Rear Patio

Price

\$18 per person

(Member +)

Cash/Check payable to TARS

Must be received by Oct 27th

Mission BBQ

Meats - Pulled Chicken, Chopped Brisket

Sides - Mac-N-Cheese, Bakes Beans, Cold Slaw

Misc Items - Sliders/Cornbread, Unsweetened Tea

Sweet Tea, Lemonade, Desert

TARS Treasurer's Report

Submitted by Doug Ferrell, KD4MOJ, Treasurer

	<u>for period</u>	<u>year-to-date</u>
	30-Sep-22	1-Jan-22
<u>Beginning Balances:</u>		
Cash on hand	\$ 104.00	\$ 33.00
Checking Account:	\$ 3,310.83	\$ 5,224.09
Savings Account:	\$ 6,105.39	\$ 3,104.62
Total:	\$ 9,520.22	\$ 8,361.71
<u>Summary of Month's Activity:</u>		
Total Receipts:	\$ 82.89	\$ 1,643.54
Total Expenditures:	\$ 176.85	\$ 649.99
<u>Receipts Derived From:</u>		
Members Dues:	\$ 20.00	\$ 785.00
Fifty/Fifty*	\$ 26.00	\$ 216.00
Donation*	\$ 5.00	\$ 525.00
Red Cross Donation	\$ -	\$ -
2022 Holiday Picnic	\$ -	\$ -
Veteran's Radio Fund	\$ -	\$ -
Field Day Radio Fund	\$ -	\$ -
Interest (Savings)	\$ -	\$ 0.77
smile.amazon.com	\$ 31.89	\$ 96.77
Equipment sales	\$ -	\$ 20.00
Total	\$ 82.89	\$ 1,643.54
<u>Expenditures:</u>		
American Red Cross:	\$ -	\$ -
Fifty-Fifty	\$ -	\$ -
ARRL Insurance	\$ -	\$ -
Spagetti 100 - TARC	\$ -	\$ -
TARS & Feathers Plaque	\$ -	\$ -
Storage & Supplies	\$ -	\$ -
Field Day	\$ 176.85	\$ 351.85
VE Expenses	\$ -	\$ 32.89
Tower/Repeater Maintenance AG4UU	\$ -	\$ -
Florida Dept of State	\$ -	\$ 61.25
Post Office Box:	\$ -	\$ 204.00
Misc. 2022 Holiday Lunch	\$ -	\$ -
Total:	\$ 176.85	\$ 649.99
Transfer Checking -> Savings:		\$ 3,000.00
<u>Ending Balances - Sept 30 2022:</u>		
Cash on hand	\$ 104.00	\$ 104.00
Checking Account	\$ 3,216.87	\$ 3,216.87
Savings Account	\$ 6,105.39	\$ 6,105.39
Total	\$ 9,426.26	\$ 9,426.26
*Veteran's Radio Fund		\$ 500.00
*Field Day Radio Fund		\$ 697.00

* Thanks Bill KF4KHJ & Adrienne for the donations!

LOCAL AMATEUR RADIO NET

NET	TIME	QSY
North Florida Amateur Radio Emergency Communications Net	Daily @ 9:00 AM EST except Sunday's	3950 kHz
Capital District EmComm Training Net	Sunday @ 7:30 PM EST	147.030 MHz, K4TLH
Capital District ARES Net	Sunday @ 8:00 PM EST	147.030 MHz, K4TLH
Leon County ARES net	Tuesday @ 8:15 ET	147.030 MHz, K4TLH
Florida Phone Traffic Net	Daily @ 6:55 AM EST	3940 kHz
Florida Midday Traffic Net	Daily @ Noon EST	7242 kHz
North Florida Phone Net	Daily @ 7:30 PM EST	3950 kHz
TARS News and Info Net	Thursday @ 8:00 PM EST	146.910 MHz, K4TLH
Kid's Net	Tuesday @ 8:00 PM EST	145.170 MHz, KE4URL - 600, 141.3
Jefferson County Net	Monday @ 8:00 PM EST	145.430 MHz, WX4JEF, 94.8
The Morning Drive-Time and Welfare Net (Informal Check-In / Rag Chew)	Mon-Fri @ 7:30 - 9:00 AM EST	147.030 MHz, K4TLH + 600, 94.8
Southwest Georgia HF Weather Net	Third Thursday @ 7:30 PM EST(or following GA SSB Net)	WX4TAE, 3975 kHz (+/-)
SKYWARN Net	First Sunday @ 7:30 PM EST	WX4TAE, 3810 kHz (+/-)
Navy Amateur Radio Net	Daily, 0700-0900 Eastern	7245 kHz
Worldwide DMR-MARC Net	Saturdays @ 1600 UTC in Summer, 1700 UTC in Winter months	Worldwide Talkgroup (1)
Florida D-STAR Net	Thursday @ 9:00PM Eastern	D-Star REF046C
North Florida Digital Net	Sunday @ 7:00 PM ET	3590 KHz PSK-31
Madison ARES Net	Sunday @ 2100 Eastern	145.190 PL 123
Taylor County Amateur Radio Club Net	Sunday @ 1900 Eastern	145.350 PL 123.0
Wakulla County Weekly Monday night net.	Monday @ 1930 Eastern	145.450 MHz K4WAK

SKYWARN

The first Sunday of every month, we have a special ARES/SKYWARN net. At 1930 hours EST, the net starts on 75 meters, on or near 3810 KHz (+/- for QRM). After check-in on this initial frequency, operators attempt to trade RST reports with WX4TAE. After check-ins on 75 m the net moves to 40 m around 7245 KHz (+/- for QRM), and picks up the roundtable there. At 2000 hours EST, the regular weekly Capital District ARES net meets on 147.030 MHz, and we are joined by station WX4TAE, at the National Weather Service Office in Tallahassee. During the first portion of this net, one of the staff meteorologists joins us on the air and provides a retrospective of the previous month's weather patterns, a brief forecast of what we might expect for the coming month and season, and also takes specific questions from stations whom have checked in to the net. Please join us for these very informative ARES/SKYWARN nets – the first Sunday of every month.

The most current repeater list is available on the TARS website: www.k4tlh.net/repeaters

For SARnet information see: www.sarnetfl.com

Location	County	Call Sign	Backup Power	Digital Mode	Output Freq	PL	Special Configuration	Height ft.
Crawfordville	Wakulla	K4WAK	No		147.450 -	94.2		300
Crawfordville	Wakulla	K850KR	Yes	Fusion	444.450 +	94.2	Yaesu System Fusion-C4FM WREX-Connected (Auto)	400
Crawfordville	Wakulla			Fusion	442.100 +	94.2	Yaesu System Fusion (Auto)	
Greensboro	Gadsden	KX4DN		Fusion	147.290 +	94.2	Yaesu System Fusion-DCS-300 WREX-Connected (Auto)	300
Greensboro	Gadsden	KX4DN		NXDN	444.125 +	94.2	NXDN World Wide Network	300
Monticello	Jefferson	W4LJEF	No		147.430 -	94.2		270
Quincy	Gadsden	W4EAF	Yes		147.165+	94.2		250
Tallahassee	Leon	AZ4S	Yes	P-25	146.855 -	94.2		550
Tallahassee	Leon	N4PG	Yes		146.810 -	205.5		200
Tallahassee	Leon	K4TLH	Yes	P-25	146.910 -	94.2	Temp TARS Talk-in	375
Tallahassee	Leon	K4TLH	Yes		147.830 +	94.2		750
Tallahassee	Leon	K4EDC	Yes		147.285 +	94.2		350
Tallahassee	Leon	K4TLH	Yes		442.100 +	94.2	Standalone Amateur Radio Net (Allnet) - See Next Page	500
Tallahassee	Leon	K4TLH	No		442.800 +	94.2		275
Tallahassee	Leon	KJ4G	Yes		443.400 +	121.8	Host of Echolink Node: K9950	575
Tallahassee	Leon			Fusion	444.300 +	94.2	Yaesu System Fusion (Auto)	
Tallahassee	Leon	AZ4S	Yes	P-25	443.950 +	94.2		550
Tallahassee	Leon	N4NKV	Yes		444.400 +	121.8	NXDN World Wide Network	CRWC (200)
Tallahassee	Leon	K04MQU	Yes		444.200 +	94.2		1500 (200)
Tallahassee	Leon	N4EDN		NXDN	444.275 +	94.2	NXDN World Wide Network	175
Tallahassee	Leon	NF4DC	Yes	D-Star	146.875 -	94.2		180
Tallahassee	Leon	NF4DC	Yes	D-Star	443.490 +	94.2		180
Tallahassee	Leon	NF4DC	Yes	D-Star	1381 -	94.2		180
Tallahassee	Leon	NF4DC	Yes	D-Star	1357	94.2		180
Madison	Jefferson	K4TLH	No		147.890	94.2		180
Madison	Jefferson			Fusion	444.970 -	94.2	Yaesu System Fusion (Auto)	
Thomasville	Thomas				147.370 -	140.3		
Thomasville	Thomas				442.690 +	140.3		
True	Grady	K4H3D	Yes		146.170 -	140.3		400



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Tallahassee Amateur Radio Society

New Membership / Renewal Form

Updated 09/16/20/21

This form can be used for new members or for renewals.

Membership Status:

- **Individual**; Single member; full voting privileges.
- **Family**; Single member, plus participating family members residing at the same address; all members have full voting privileges. Complete a form for each member.
- **Student**; Free for students (elementary school through college) with ID; all rights and privileges except voting.
- **Introductory**; Free until the end of year (next year for November) for anyone who passed Amateur Licensing Exam facilitated by TARS; all rights and privileges except voting.

For renewals, if **no** personal information has changed, merely complete the form with your name, call, indicate your member type and ARRL membership status and make payment to TARS.

You must be a licensed Amateur Radio operator to *join the Society*; however, any non-licensed radio enthusiast may attend the TARS business meetings and functions. Membership dues for the Tallahassee Amateur Radio Society are only **\$20 per individual or family** (complete a form for each family member.) **Students** (with valid ID) **can join for free!**

TARS is a “not-for-profit” organization and dues are used to help defray the cost of repeater maintenance and TARS events. Most of TARS’s revenue is derived from donations, which are gladly accepted.

Please make your dues check payable to the **Tallahassee Amateur Radio Society** (or **TARS**). Bring your check (or cash) along with the completed form provided below (including e-mail address please) to the next monthly TARS business meeting and give it to the Treasurer - or mail your check and completed form to:

Tallahassee Amateur Radio Society, C/O Treasurer, P. O. Box 37127, Tallahassee, FL, 32315

Name:		Call Sign:	
Address:			
			Date: / / 20__
City:		State:	Zip: -
Member Type: <input type="checkbox"/> Individual <input type="checkbox"/> Family <input type="checkbox"/> Student <input type="checkbox"/> Introductory (Check One)			
Home Phone: () -		Work Phone: () -	
Cell Phone: () -			
E-Mail Address:			
ARRL Member: <input type="checkbox"/> Yes <input type="checkbox"/> No		“Elmer”: <input type="checkbox"/> I would like a ham mentor <input type="checkbox"/> I can be a ham mentor	
Interests: <input type="checkbox"/> EmComm <input type="checkbox"/> Contest <input type="checkbox"/> Phone <input type="checkbox"/> Digital <input type="checkbox"/> CW Other: _____			