The Printed Circuit

The Monthly Publication of thf the Tallahassee Amateur Radio Society July 2017



MINUTES OF THE JULY 6, 2017 TARS MEETING

Compiled and Submitted by: Tom Brooks (K4TB) – TARS Secretary

Call to Order: President David Miner (W4SKG) at 7:00 PM (July 6, 2017)

Guests/Visitors: Noel Davis (KJ4HEB), Sawyer Rosenstein (KC2VRX), Bruce Heaven (KE4TZE), Jim Bussey, Todd Clark and Sam Schuler.

Presentation/Program: Doug Ferrell (KD4MOJ) gave a talk and slide presentation on the Automatic Dependent Surveillance Broadcast system used by commercial and private aviation across the United States. He discussed its two primary components - radio communications links at 978 MHz, called UAT, and 1090 MHz, called ADS-B - which together enable aircraft and ground controllers to see the aircraft in an airspace and prevent collisions. He showed equipment and demonstrated aircraft tracking on website *LiveATC.net*.

Business Committees:

Treasury Report: Bob Clark (K9HVW): Accepted as published in the June 2017 *Printed Circuit*. He said the current balance is \$1,692.32 in checking and \$4,096.17 in savings, for a net total of \$5,788.49.

Minutes: Tom Brooks (K4TB): Approved as published in the June 2017 *Printed Circuit*. **Repeaters:** Norm Scholer (K4GFD) reported that trustee Randy Pierce (AA4UU) has been working on the 147.03 repeater to improve its operation. He has new parts for it and has fabricated some cables for a new duplexer. He has temporarily put the repeater's transmitter and receiver on separate antennas to reduce problems until he can install the new parts and equipment.

Education: President Miner said that Phil Ashler (N4IPH) will be resuming the education program soon.

Testing: Alan Terrell (N4KGT) said the next testing session would be August 1st at 7pm.

Old Business:

Field Day: Vice President John Pantoja (KM4FAM) reported on the Field Day results, as follows: Contacts: CW-757, Phone - 211, Digital – 53, Satellite – 3. Bonus Points: 1100 for various things like emergency power, messages, media coverage, satellite, internet, safety officer briefing, site visitors, etc. We worked most all the U. S. states and Canadian provinces and worked a few other countries. Discussion included possibly sending letters of appreciation to our sponsors.

Announcements:

22 to Zero Walk: Vice President Pantoja reminded club members he is looking for TARS volunteers to support the walk.

New Member: President Miner proposed Sawyer Rosenstein (KC2VRX) for membership, which was approved.

AERS: Dave Davis (WA4WES) reminded those present to be prepared for the rest of hurricane season by checking generators, etc.

Newsletter: Dave also mentioned he wants articles for the newsletter such as radio reviews, shortwave listening reports, contest reports, 6-meter operation, satellites operation, etc.

Spaghetti 100: VP Pantoja said it will be October 7th. President Miner said we need to support it and more information will follow.

Halloween: Chief Fusilier (KA5USN) proposed an on-the-air special event be sponsored by the club for Halloween. He named it the "Halloween Howl". He requested approval to use the club callsign. The request was approved by the members and the President.

STEM Event: President Miner said an event is happening at the Kleman Plaza in October which the club could support. More later.

Tallahassee Marathon: President Miner announced that the marathon would be February 4th. Vice President Pantoja said the marathon will have a new director or directing committee, and a somewhat different route. More information will follow.

Computer Logging Software Class: Member-at-Large Gerry Gross (WA6POZ) will present a class on September 16, 9 am -12 noon, at the ARC. He will demonstrate several different logging programs.

Holiday Party: Gerry said next month we need to select a location for the party.

Elections: President Miner reminded the members that elections are coming in November.

Chief volunteered to run for president.

Club QSL Card: Motion was made by Gerry, seconded by Chief, and approved to create a club QSL card. PIO Jason Ford (W4JMF) will work with Mike Maynard (K4ICY) regarding a design.

Upcoming Programs: VP Pantoja said upcoming programs are: August – none yet; September – Guest speaker Wayne Cornish, G7OKI; October – Echo Link, by Jason; November – Lightning Protection, by Tom.

Farewell: Chuck Mathis (W5TTP) announced he was moving away and bid farewell to the group.

In Memoriam: President Miner announced that the wife of Junior Lolley, KG4ITD, had passed away.

Adjournment – The meeting was adjourned at 8:30 PM (Chief so moved, Bob seconded – approved).

TARS Treasurer's Report for June - July, 2017

Submitted by Bob Clark, K9HVW – TARS Treasurer

Beginning Balances – June 17, 2017	Fo	or Month	<u>Y</u> 6	Year-to-Date	
Checking Account:	\$	1692.32			
Savings Account	<u>\$</u> \$	4096.17			
Total:	\$	5788.49			
Summary of Month's Activity:					
Total Receipts:	\$	90.00	\$	2003.88	
Total Expenditures:	\$	122.53	\$	198.53	
Receipts Derived From:					
Member Dues:	\$	60.00	\$	1280.00	
50/50 Raffle:		27.00	\$	312.00	
Member Donations:	\$ \$ \$ <u>\$</u>	3.00	\$	765.88	
Spaghetti 100:	\$	0.00	\$	0.00	
Miscellaneous:	<u>\$</u>	0.00	\$ <u>\$</u> \$	1063.07	
Total:	\$	90.00	\$	3420.95	
Expenditures:					
Banking – TV-40 check cashed	\$	0.00	\$	10.00	
Field Day:		122.53	\$	197.53	
American Red Cross	\$	0.00	\$	0.00	
Plaque for Tars and Feathers Award	\$	0.00	\$	0.00	
Repeaters:	<u>\$</u>	0.00	\$	4281.70	
Post Office Box Rent	\$ \$ \$ \$ \$ \$	0.00	\$	130.00	
ARRL Club Insurance	\$	0.00	\$	200.00	
FL Department of State		0.00	\$	61.25	
Donation to the Great Southern Hamfes §	0.00	<u>\$</u>	100.00		
Total:	\$	122.53	\$	4980.48	

Ending Balances – July 17, 2017 <u>For Month</u>

 Checking Account:
 \$ 1659.79

 Savings Account
 \$ 4096.17

 Total:
 \$ 7555.96

New Ham Bands.

About the lowest frequency band most hams go is the 3.5 MHz or 80 meter band. We are aware of the 160 meters, but the antenna for it is soooo long, and the band is split into segments, and it tends to be noisy that well, 80 meters is just fine. If anyone uses 160 meters let me know. I would like to write an article for a future newsletter about it. But for now, the FCC has recently opened a very low frequency bands for amateur use: 472-479 kHz (630 meters) and to 135.7-137.8 kHz (2,200 meters), with minor conditions..

Historically, The LORAN or radio location service used those low frequencies, and the Navy used frequencies in that range to talk with its submarines. In the early days of radio, most communications was in the 200 meter band with amateurs relegated to the frequencies "below 200." The FCC has now invited us back.

Now, it is something of a mystery what we can do with this new frequency allocation, since not only is the antenna long but few hams have radios that can transmit that low, although they may be able to receive signals in this part of the spectrum. Too pique your interest, here are the highlights from in QST:

Amateurs operating on 472-479 kHz will be permitted a maximum equivalent isotropically radiated power (EIRP) of 5 W, except in parts of Alaska within 800 kilometers (approximately 496 miles) of Russia, where the maximum would be 1 W EIRP.

Amateurs operating in the 135.7-137.8 kHz band will be permitted to run up to 1 W EIRP.

The bands would be available to General class and higher licensees, and permissible modes would include CW, RTTY, data, phone, and image.

OST went on to describe results amatuers around the world have had with these new bands:

A radio amateur and medium-frequency (MF) experimenter in Australia has received a 630 meter (475.62 kHz) transmission from a radio amateur in Texas. While the approximately 8710 miles covered is not a distance record nor a "first" for that part of the spectrum, it does represent the sorts of accomplishments that the Amateur Radio community in the US might come to enjoy if a band at 472-479 kHz ever becomes a reality.

"Band activity has been very high, and there are often more WSPR stations — more than 110 stations — on 472 kHz than on 80 or 160 meters!" Raab said. WSPR, which stands for "Weak Signal Propagation Reporter," is software designed for transmitting and receiving low-power transmissions to test propagation paths on MF and HF.

"In a sense, 630 meters has become a mainstream ham band, in spite of not being authorized in the US."

Countries now permitting Amateur Radio access to the 630-meter band include Germany, Greece, Malta, Monaco, Norway, Philippines, Czech Republic, Ireland, Switzerland, New Zealand, Finland, Spain, France, Poland, Bulgaria, Canada, Vietnam, Japan, Cayman Islands, Reunion Island, and Hungary. "It appears that more than 100 DXCC entities have permission to operate on 630 meters," Raab said in his report.

Ham Spotlight

This month we put the TARS spotlight on Robert Clark, K9HVW, the TARS Treasurer. Bob has been licenced continuously since 1957, an amazing feat. He enjoys building antennas, and working on station configuration, and station control. When time permits he also enjoys contesting. His station consists of a Yaesu FTdx1200, Yaesu FTM400 (2), Yaesu FT1D, Signal Link USB, MFJ-998 Antenna Tuner, Amertron AL80a amplifier, antennas, test equipment, Heil headset, speakers, and as he put it, "parts-parts"

Bob holds Bachelor, Masters, and doctorate degrees in Mathematics, with his doctorate also in mathematics education. With that background, he has taught at the high school and college levels since 1964, which includes a 30 year stint in the Education Department at Florida State University. While there, he was the Dean of the College of Education from 1999-2001. Retiring in 2009, he continues to do substitute teaching in the Leon County Schools, and as an adjunct professor at Flagler College. During his long teaching career, he published 53 articles in professional journals, been awarded 10 grants, and has been recognized with the University Teaching Award/President's Council for Excellence in Teaching in 1982, 1990, 2003.

Bob was also involved with Navy MARS, and as he put it, he "worked with a team of MARS members to create electronic equipment for RTTY. I prepared five articles for Ham Radio Magazine on our work. Two of them were the "Cover Articles"

TARS is indeed fortunate to have a ham familiar with numbers, as Bob obviously is, as the club Treasurer.

Odds and Ends.

I received an email from Frank, WB8ENS, the other day and I pass it along to Society members to use in case the world ends and their radio goes ga-flooey (a technical term)

I'm Frank, WB8ENS, out on the east edge of Leon County, and a TARC club member. . . Recently, I had my favorite Icom 735 pop a component, which caused that ominous smoke to leak out. Not knowing where to begin to go for repair, I surfed the net and found Mike Alexander, of "Affordable Radio Repair". His website is www.affordableradiorepair.com . I sent Mike an e-mail, and his response was an almost instant reply. After a couple of exchanges, he told me how to pack it, gave shipping instructions, and off it went to Colorado. Well, it turned out great, and she runs like new! Reasonable rates, fast turnaround (even though he had 16 repairs ahead of me). Great to deal with, quick to respond to questions. Overall great experience, so much so that Mike will be doing ALL of my repair work from now on. He is very qualified to work on both antique and the newest, "too tight for my fat fingers to fit into" radio repairs.

I highly recommend Mike and his bench!

http://www.affordableradiorepair.com

Lightning Alert.

Tom, K4TB, had a lightning strike take out his rig recently. In the next couple of months, he will give a presentation at the TARS club meeting about how to prevent something similar happening to you. As it turns out, Bob, WA1TCC, in Madison County also was hit by this force of nature. Here is what he said:

I have again been the subject of a lightning strike - again coming in from the Century link connection. Everything has been fried. My whole house surge protector prevented issues electrically but anything touching the Century link connection is gone. What makes this worse is that their box is on the side of my shack and all my Ham Equipment is fried to – induction through the wall and into the Antenna wires on the other side. So for a long time I expect to be off the air. I have filed a claim with the Insurance but I don't expect them to come back with any money and it will be a while before I can replace all that equipment. Keep in mind that there are two sides of the wiring when putting in prevention. I got burnt on the inside. The outside did its job.

That said I won't be on any nets for a while. I am scheduled for the next VHF net and to cover Pat on the 30. If somebody can pick those up I would appreciate it. I don't know about next month yet.

In another email, Bob added:

I have done much work to protect against strikes including a number of interconnected ground rods with a continuous feed of water to maintain the ground connection and all of that was to waste since I overlooked the connection of Century link which uses a simple wire to ground their box. It needs a significant ground connection to take the power of a strike to ground. I am enclosing a picture of the ground effects on my Dish system when I first got here. An isolated ground – not connected to the house rod and only two foot into the ground. A close strike and the field effect burnt out the coax and cooked the Dish system in the house. This is strike 6 in 3 + years. I have a loop for my HF antenna 1060 feet around roughly and have no issues since I grounded it correctly. One last thing to cover with the Century link connection if I keep them. Last time it was a smaller strike but blew there box off the wall and turn it into shrapnel. Cooked their router and my speaker system on the other side of the wall. My bad for not taking more action. Since I cannot do anything with their connections in the box I will take 3/8 copper water pipe wrapping in around there feed and porting to my ground field. We learn but we need to act quicker!



no caption needed

Field Day 2017

Field Day was the weekend of June 25-26, and TARS joined in the fun by setting up a multiple station operation at Tom Brown Park. Under the able leadership of John, KM4FAM, the club operated 3A, which meant we had CW, Phone, and digital stations operating the 24 hour contest period.

Jeff, N4TML works the phone station

The CW station earned 757 points, the Phone station 211, and the digital station 53 points, and the satellite station 3 points. K4TLH also earned bonus points for operating on emergency power, having someone from the media at the site, a site visit from a public official, Andy, K4DUI, and it was on WCTV Channel 6 TV, which when aired prompted one ham to come out to the site and for about 6 hours. We worked all states except Hawaii and Alaska. Camper World of Tallahasseeloaned the club two very nice Rvs, which were gratefully air conditioned. Pizza was provided for by Uncle Maddios. Pepsi provided beverages. Tents and Tables by Gulf Wind Track Club (organizers of the Tallahassee Marathon.)

ARES.

July and the first part of August historically are quiet for hurricanes. This year has been a bit different. After Tropical Storm Cindy blew through Texas and Louisiana in June two other "areas of interest" have kept the National Hurricane Center occupied. The first looked serious for a while as it moved west from the Cape Verde Islands in the latter part of June. It fizzled, however, by the time it crossed the Atlantic. The second has also developed off the African coast, and as I write this third and fourth storms are moving along the same track, almost due west. If they continue the way earlier storm have gone they will coast it will hit Venezuela, which is unfortunate because that country has enough problems of its own creation without having mother nature contribute to them. Fortunately or not, these storms tend to curve northward, and how soon will determine whether it hits the US(and Florida!) and where. Perhaps, however, like its earlier brother, it will fade away, and that is the current prediction from the National Hurricane Center. Thus, although this is the quiet part of the hurricane season, it nonetheless has had and continues to have activity that bears watching. So, while we keep our eyes on the weather, we should keep our other eyes on our antennas, generators, and equipment to make sure that if "the big one" comes, we are ready.

Back to the Ham Radio Future

Gerry, WA6POZ, tells the TARS newsletter of the one that got away but came back. He has been a long time ham and has logs from the 1960s to 1995. Recently he entered the key parts of those records into the Logbook of the World, not really hoping for anything. In particular, in the days before he began to actively chase DX, he had contacted an FT8FX in August 1985, which is the Kerguelen Islands (see note below). Having not gotten a QSL card and thinking little would happen he nonetheless entered the contact in LOTW. Wonder of wonder, a few days later, he got a message that confirmed the contact.

As it turns out Kerguelen Islands is the Number 11 most wanted location, which is understandable since 2005 was the last time anyone had worked the island. For Gerry, this was number 323 of confirmed contacts with DX stations, which is only 16 away from the 339 he needs for DXCC. Congratulations Gerry. Persistence pays off.

So where, you ask, are the Kerguelen Islands? Wikipedia says that the Kerguelen islands are in the southern Indian Ocean and are a French possession, having been discovered by France in 1772. There are no indigenous inhabitants, but it has a population of 45 research scientists, engineers, biologists, and the stray Dxpedition. There are no native animals, but cats, sheep, and the ever present rats have been introduced and share the land with the humans. For obvious reasons after looking at the maps, the islands are also known as the Desolation Islands. They are among the most isolated places on Earth, located more than 2,051 mi from Madagascar, the



nearest populated location. There are no airports on the islands, so all travel from the outside world is by ship.

The climate is raw and chilly with frequent high winds throughout the year. Kerguelen's climate is oceanic, cold and extremely windswept. The average annual temperature is 40.8° with an annual range of around 11 °. The warmest months of the year include January and February, with average temperatures between 46.0 and 46.8°. The coldest month of the year is August with an average temperature of 35.8° . The surrounding seas are generally rough and they remain ice-free year-round.

The islands inspired the 2008 song "The Loneliest Place on the Map" by singer/songwriter Al Stewart (You remember it, of course.)

So, the next time you want to get away from it all, keep the Kerguelen Islands in mind.



AUGUST TARS MEETING.

The presentation for the August meeting will focus on the upcoming special events the club participates in. Specifically, we will discuss the Spaghetti 100, the Tallahassee Marathon, and the new special event, the "Halloween Howl" that Chief, KA5USN, suggested at the last meeting.

SPARC TO CONTRIBUTE TO THE PRINTED CIRCUIT.

Starting in August, the Printed Circuit will be sent to members of The Sportsman's Paradise Amateur Radio Club. Doug Bennight, K4GKJ, the club president and Dave, WA4WES, the editor of the newsletter thought it would be a good idea for the two ham clubs to become more familiar with the other, and the newsletter was a good way to do that. SPARC members will be added to our mailing list, and they are also welcome to submit articles for publication.

Contest and QSO Parties

- 05 Aug 0001Z 2359Z Aug 6 10-10 Int. Summer Contest, SSB http://www.ten-ten.org
- 05 Aug 1800Z 0559Z Aug 6 North American QSO Party, CW http://www.ncjweb.com/NAQP-Rules.pdf
- 05 Aug 1800Z 1800Z Aug 6 ARRL August UHF Contest http://www.arrl.org/august-uhf
- 12 Aug 1600Z 2400Z Aug 13 Maryland-DC QSO Party http://mdcqsoparty.w3vpr.org
- 19 Aug 0600Z 2359ZL Aug 20 ARRL 10 GHz and Up Contest http://www.arrl.org/10-ghz-up
- 19 Aug 1800Z 0559Z Aug 20 North American QSO Party, SSB http://www.ncjweb.com/NAQP-Rules.pdf
- 20 Aug 1800Z 2359Z ARRL Rookie Roundup, RTTY http://www.arrl.org/rookie-roundup
- 26 Aug 0400Z 0400Z Aug 28 Hawaii QSO Party http://www.hiqsoparty.org/Rules/HQP/HQPRules.html
- 26 Aug 1600Z 0400Z Aug 27 Ohio QSO Party http://www.ohqp.org/adminRules.htm
- 26 Aug 1200Z 0259Z Aug 27 W/VE Islands QSO Party (Ph, CW, Dg) http://www.usislands.org
- 26 Aug 1400Z 2000Z Aug 27 Kansas QSO Party http://www.ksgsoparty.org
- Z= UTC; L-local Contests and QSO Parties Source" QST & WA7BMW

DX

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From To
           Prefix Call, () is the IOTA designation
01-Aug
            ???
                  8O
                        8Q7VB (AS-013)
            ???
01-Aug
                  D2
                        D2FJZ
01-Aug ??? J8
                  J8/AK4T
01-Aug ??? TZ
                  TZ5XR
01-Aug ??? VP8/H
                        RI1ANB (AN-010)
01-Aug ??? VQ9 VQ917JC (AF-006)
01-Aug ??? Z8
                  Z81D
01-Aug
           01-Sep
                       OH
                             OH1TD (EU-096)
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01-Aug
                        UA0
                              AS-070
           03-Aug
01-Aug
           05-Aug
                        V4
                              V47JA
01-Aug
            10-Aug
                        HL
                              HL5/K5MDK
01-Aug
            14-Aug
                        CP
                              CP1XRM
01-Aug
            15-Dec
                        CE9
                              VU3LBP/P (AN-016)
01-Aug
            16-Aug
                        DU
                              DU1/PG5V
01-Aug
           20-Aug
                        IS0
                              IM0/I0PNM (EU-165)
01-Aug
           20-Jan CE9
                        8J60JARE (AN-015)
01-Aug
           24-Nov
                        3D2
                              3D2JS (OC-016)
01-Aug
           25-Aug
                        8Q
                              8Q7QV (AS-013)
01-Aug
           29-Sep
                        SV9
                              SV9/WB2GAI/P
01-Aug
            30-Aug
                        LA
                              LA/DG1RUG (EU-036)
01-Aug
           30-Sep
                        FO
                              FO/F6CTF (OC-046)
           31-Dec
                        9X
                              By KE4TA
01-Aug
01-Aug
           31-Dec
                        CE9
                              FT3YL (AN-017)
01-Aug
           31-Dec
                        TR
                              TR8CA
01-Aug
           31-Dec
                        TZ
                              TZ8TM
                        ZL7
                              ZL7DX (OC-038)
01-Aug
           31-Dec
01-Aug
           31-Dec
                        ZS8
                              ZS8Z (AF-021)
                                    RI1ANO (AN-010)
01-Aug
           31-Mar
                        VP8/H
                        HC8
01-Aug
           31-Oct
                              by G8OFQ (SA-004)
01-Aug
           31-Oct
                        TZ
                              TZ4PR
                        Z6
01-Aug
           31-Oct
                              Z68BB
18-Aug
           22-Aug
                       DU
                              DU1/KE0BRZ (OC-128)
19-Aug
           20-Aug
                        K
                              N6AU (NA-065)
26-Aug
           26-Aug
                        JA
                              JA4GXS/4 (AS-117)
28-Aug
           03-Sep
                        V6
                              V63KS (OC-011)
            19-Sep
31-Aug
                        SV
                              SV8/GM0LVI/P (EU-052)
DX source s - The Daily DX, 425 DX News, or DX Zone
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Regional Nets

TARS News & Information Net	Thursday • 8 PM EST (not 1st Thrs.)	147.030 MHz, K4TLH + <i>600, 94.8</i>	
North Florida Amateur Radio	Daily • 9:00 AM ET	2050 kH=	
EmComm Net	except Sunday	3950 kHz	
Capital District	Sunday a 7:20 DM ET	447 020 MU- KATI U + 600 04 9	
EmComm Training Net	Sunday • 7:30 PM ET	147.030 MHz, K4TLH + <i>600</i> , <i>94.8</i>	
Capital District ARES Net	Sunday • 8 PM ET	147.030 MHz, K4TLH + 600, 94.8	
Leon County ARES Net	Tuesday • 8:15 PM ET	147.030 MHz, K4TLH + 600, 94.8	
Florida Phone Traffic Net	Daily • 6:55 AM ET	3940 kHz	
Florida Midday Traffic Net	Daily • Noon ET	7242 kHz	
North Florida Phone Net	Daily • 7:30 PM ET	3950 kHz	
North Florida Digital Net	Sunday • 7 PM ET	3590 kHz PSK-31 Mode	
TARC Thursday Night Net	Thursday • 8 PM ET	147.060 MHz, + 600, 141.3	
Thomas County ARES Net	Thursday • 7:30 PM ET	147.060 MHz, + 600, 141.3	
Grady County ARES Net	Tuesday • 7:30 PM ET	145.170 MHz, - 600, 141.3	
North Florida 6M SSB Net	Sunday • 8:30 PM ET	50.150 MHz	
North Florida Digital Net	Sunday	3.590 MHz	
	7:00 – 7:30 PM ET	PSK 31	
Morning Drive-Time Net (Informal)	Mon-Fri • 7:30 – 9:00 AM ET	147.030 MHz, K4TLH	
Southwest Georgia HF	Third Thursday	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
Weather Net	7:30 PM ET (or after GA SSB Net)	WX4TAE, 3975 kHz (+/-)	
Southwest Georgia ARES Net	Thursday • 9 PM ET	145.170 MHz, + 600, 141.3	
SKYWARN Net	First Sunday • 7:30 PM ET	WX4TAE, 3810 kHz (+/-)	

TARS Officers

David Miner,	John Pantoja,	Tom Brooks,	Bob Clark,	Gerry Gross,
W4SKG	KM4FAM	K4TB	K9HVW	WA6POZ
President	Vice President	Secretary	Treasurer	Board Member-at-Large
W4SKG@arrl.net	Hajji.himself@gmail.com	k4tb@earthlink.net	k9hvw@arrl.net	WA6POZ@arrl.net

Location	County	Call Sign	Backup Power	Digital Mode	Output Freq	PL	Special Configuration	Height ft.
Crawfordville	Wakulla	K4WAK	No		145.450 -	94.8		300
Crawfordville	Wakulla	KB5IKR	Yes	Fusion	444.450 +	94.8	Yaesu System Fusion C4FM WIREX Connected (Auto)	400
Crawfordville	Wakulla			Fusion	442.850 +	94.8	Yaesu System Fusion (Auto)	
Greensboro	Gadsden	NX4DN		Fusion	147.390 +	94.8	Yaesu System Fusion DCS 023 WIREX Connected (Auto)	300
Greensboro	Gadsden	NX4DN		NXDN	444.125 +	94.8	NXDN World Wide Network	300
Monticello	Jefferson	WX4JEF	No		145.430 -	94.8		270
Quincy	Gadsden	W4EAF	Yes		147.165+	94.8		250
Tallahassee	Leon	AE4S	Yes	P-25	146.655 -	94.8		550
Tallahassee	Leon	N4PG	Yes		146.610 -	203.5		200
Tallahassee	Leon	K4TLH	Yes	P-25	146.910 -	94.8	Temp TARS Talk-In	375
Tallahassee	Leon	K4TLH	Yes		147.030 +	94.8		750
Tallahassee	Leon	KA4EOC	Yes		147.285 +	94.8		350
Tallahassee	Leon	K4TLH	Yes		442.100 +	94.8	Statewide Amateur Radio Net (SARnet) See Next Page	600
Tallahassee	Leon	K4TLH	No		442.850 +	94.8		275
Tallahassee	Leon	KJ4G	Yes		443.400 +	131.8	Host of Echolink Node #3950	575
Tallahassee	Leon			Fusion	444.800 +	94.8	Yaesu System Fusion (Auto)	
Tallahassee	Leon	AE4S	Yes	P-25	443.950 +	94.8		550
Tallahassee	Leon	N4NKV	Yes		444.400 +	131.8	NXDN World Wide Network	CRMC (200)
Tallahassee	Leon	KD4MOJ	Yes		444.000 +	94.8		TMH (200)
Tallahassee	Leon	NX4DN		NXDN	444.175 +	94.8	NXDN World Wide Network	175
Tallahassee	Leon	NF4DG	Yes	D-Star	146.835 -	DV		180
Tallahassee	Leon	NF4DG	Yes	D-Star	443.450 +	DV		180
Tallahassee	Leon	NF4DG	Yes	D-Star	1293 -	DV		180
Tallahassee	Leon	NF4DG	Yes	D-Star	1253	DD		180
Wacissa	Jefferson	K4TLH	No		147.000	94.8		300
Wacissa	Jefferson			Fusion	444.050 +	94.8	Yaesu System Fusion (Auto)	
Thomasville	Thomas				145.370 -	141.3		
Thomasville	Thomas				442.600 +	141.3		
Reno	Grady	KE4URL	Yes		145.170 -	141.3		600

The most current repeater list is available on the TARS website:

www.k4tlh.net/repeaters

For *SARnet* information (Locations, Repeaters and operational status) visit: http://www.sarnetfl.com/

Visit K4TLH.net – *Like U*s At Facebook.com/K4TLF



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For more information or inquiries - contact TARS PIO or any club officer.

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ARRL Member: Yes No "Elmer": I would like a ham mer	ntor 🔲 I ca	an be a	ham m	entor			
Interests: EmComm Contest PhoApril 2016/125 CW Other:							
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