COLLINS AMATEUR RADIO CLUB
Richardson, Texas

SIGNALS
MONTHLY NEWSLETTER

Volume 40 Issue 10 **Web Site** http://www.w5rok.us **July 2019**

CARC
Membership Meeting

Tuesday 23 July 2019
1700 Social 1730 Meeting
1800 Program

Methodist Richardson Medical Center
At Bush/Renner/Shiloh Intersection
Conference Room A in Hospital Building

Subject:
FT-8 Operation Presentation
By Bob Kirby K3NT

Local Club News

Meeting Notice

At the next general membership meeting Bob Kirby will give a presentation demonstrating FT-8 operation. Please see the article on this page for more details.

CARC Community Service Activities

Siren Testing Dennis Cobb WA8ZBT, John McFadden K5TIP and Jim Skinner WB0UNI participate in the Richardson emergency siren testing. The July test was cancelled due to inclement weather. The sirens are monitored by amateur radio operators and reports made using the Richardson Wireless Klub (RWK) repeater at 147.120 MHz. Siren testing occasionally uses the University of Texas at Dallas (UTD) repeater at 145.430 MHz, which is designated as the backup repeater.

Crime Watch Patrol Jim Skinner WB0UNI participated in Richardson Duck Creek Crime Watch Patrol (CWP). CWP members, after successful completion of Richardson Police Department Training, patrol their neighborhoods and report all suspicious activities to the Police Department.

Member Interest Survey for Remainder of 2019 *by Frank Krizan, KR1ZAN*

I conducted a simple survey at the June CARC meeting to determine member interests in amateur radio. We had a good turn-out for the Ice Cream Social and gathered a fair amount of ideas for future programs.

For those who weren't there, we'd like to find out what interests you the most. Please take a moment and create an email to kr1zan@arrl.net with the subject of CARC Member Interest. Include in the email the following:

1) Your name and call (both are optional if you wish to be anonymous) - of course if you want to be completely anonymous, send a postcard or piece of paper to my QRZ mailing address (KR1ZAN)

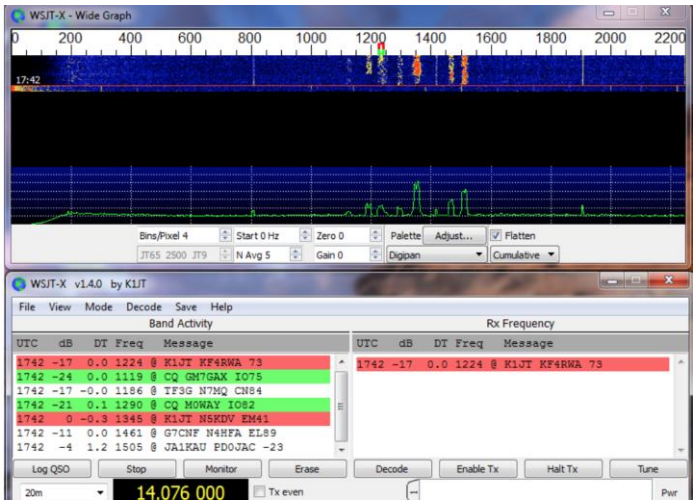
2) Jot down 3 to 5 things that currently interest you in amateur radio. This may be something you're curious about, something you really enjoy doing on the air or something you're learning more about.

3) Rate your knowledge of each subject using a grading scheme of A to F, with F meaning "I know nothing about this topic but want to learn about it", to A meaning "I'm an expert".

If you were at last month's meeting and want to add some other topics to what you input in June, go ahead and send in another list. We'll be using these inputs to help develop programs that interest our members the most.

FT-8 Operating Presentation at July Meeting

July's CARC WSJT-X Presentation will focus on live FT-8 operating along with FT-8 tips and tricks.



This will be a fast-moving intermediate-to-advanced presentation. Sorry, no death by power point.

(Continued on page 3)

CARC OFFICERS

PRESIDENT
Gene Duprey K1GD
319.270.8159
geneduprey2015@gmail.com

VICE-PRESIDENT
AVAILABLE

SECRETARY
Jim Brown AF5MA
972.495.2209
jhksbrown@verizon.net

TREASURER
Rohan Thomas KG5RCN
972.697.3512
Rohan7066@yahoo.com

ACTIVITIES
Frank Krizan Kr1zan
214-563-6679
kr1zan@arrl.net

WEBSITE MANAGER
Mike Hollingsworth W5QH
972.571.6060
w5qh@arrl.net

STATION TRUSTEE
Bob Kirby K3NT
319.360.0500
k3nt@arrl.net

NEWSLETTER EDITOR
Jim Skinner WB0UNI
214.535.5264
wb0uni@arrl.net

MEMBERSHIP
AVAILABLE

W5ROK CLUB STATION
972.705.1349
461-290

VE SESSIONS

Collins Amateur Radio Club (CARC) Test sessions take place on fourth Tuesdays, immediately following the regular CARC monthly membership meeting (about 7:30 p.m.). The test sessions are held in Conference Room A of the Methodist Richardson Medical Center, at the Bush/Renner/Shiloh intersection in Richardson. Walk-ins are welcome, but it's best to register with the lead examiner, Kerry Weeks, at weeks.kerry@gmail.com or by phone at (214) 478-3230.

Dallas tests are held on the fourth Saturday of each month at 1000 hrs. 13350 Floyd Rd. (Old Credit Union) Contact Bob West, WA8YCD 972.917.6362

Irving tests are held on the third Saturday of each month at 0900. Fifth and Main St. Contact Bill Revis, KF5BL 252-8015

McKinney VE test sessions are held at the Heard Museum the first Sunday of the month. The address is 1 Nature Place, McKinney TX. The time of the testing is 1430, ending no later than 1645. ***Note: no tests given on holiday weekends.***

Garland testing is held on the fourth Thursday of each month, excluding November, and begins at 1930 sharp. Location is Freeman Heights Baptist. Church, 1120 N Garland Ave, Garland (between W Walnut and Buckingham Rd). Enter via the north driveway. A HUGE parking lot is located behind the church. Both the parking lot and the Fellowship Hall are located on the east side of the church building, with big signs by the entrance door. Contact Janet Crenshaw, WB9ZPH at 972.302.9992.

Plano testing is on the third Saturday of each month, 1300 hrs at Williams High School, 1717 17th St. East Plano. Check Repeater 147.180+ for announcements.

Richardson The Richardson Wireless Klub (RWK) VE team hold license testing on the third Thursday of each month at St. Barnabas Presbyterian Church, 1220 West Beltline Rd. Testing begins at 1900 hrs in room 12. Enter through the Northern most door on the east side of the church building. For further information contact Don Klick KG5CK. 972.464.2889 or E-mail rwkhamtest@gmail.com.

President and VP Messages

Not much happening this month with me; still trying to handle our Grandson's medical issues.

The badges for retirees are in, and you need to let Connie know when you want to pick your badge up. We could go in at the same time to pick them up or go individually.

I did get a new iPad and have loaded the Smart SDR for iOS set up so I can use my Flex radio from my iPad now.

I did get an email from Charlie Beis' daughter. He is wanting to rejoin the club, so I gave her the info and he should be back with us soon. He has hearing problems and is not sure about coming to the meetings, but I told her to tell him not to let that hold him back.

Well that is all for now, I hope to see everyone at the meeting this month.

73's,
Gene, K1GD
CARC President

Secretary's Report

25 Jun 2019

President Gene Duprey K1GD called the meeting to order at 1734.

The following were present at the meeting:

Jim Brown	AF5MA
Dennis Cobb	WA8ZBT
Gene Duprey	K1GD
Bob Jones	W5BJ
Bob Kirby	K3NT
Frank Krizan	KR1ZAN
John McFadden	K5TIP
Daryl Morgeson	AF5QJ
Paul Nix	WB5AGF
Mike Schmit	WA9WCC
Jim Skinner	WB0UNI
Bill Swan	K5MWC
Rohan Thomas	KG5RCN
Kerry Weeks	K5WKS
Joe Wolf	N5UIC

Officers and Committee Reports:

There were no formal reports other than the Secretary's Report, which is contained in this newsletter.

Old Business:

Gene Duprey K1GD summarized club efforts to coordinate with Collins Aerospace management to resolve issues with possible relocation/removal of the club radio shack and access to the shack by retirees. Discussions to date indicate that the club will retain corporate sponsorship into the future. The club radio shack will remain on the Richardson campus, although relocation within the campus may be required based on corporate space needs. Retirees have been notified that badges may be obtained for access to the ham shack; a total of eight retirees have requested badges, and these are in process.

Gene also reported that CARC participation in the Collins Aerospace Fun Day was a success. The club staffed a booth with licensed operators and demonstrated on-air communications. The effort gained visibility by a large number of Collins employees and signed up several new members.

New Business:

Frank Krizan KR1ZAN, newly-elected Activities Chairman, presented a proposed month-by-month structure for club programs:

July:	Digital topics, with Bob Kirby K3NT offering the first program on FT8 Mode
August:	Roundtable discussions with subject-specific facilitators
September:	HF topics, with Bill Swan K5MWC offering the first program on the Military Auxiliary Radio System (MARS)
October:	Contesting
November:	The Annual Meeting, focused on year-end reports and elections
December:	The CARC Christmas dinner
January:	QST / DIY, along with installation of new officers
February:	DXing
March:	VHF / UHF topics
April:	Antennas
May:	Field Day planning
June:	Field Day recap, ice cream social

Based on written inputs collected from attendees, Frank may modify and/or expand the suggested schedule.

Adjournment:

The meeting was adjourned at 1815, followed by an ice cream social, courtesy of Frank Krizan KR1ZAN and Kerry Weeks K5WKS. This was followed (at 1930) by a club-hosted ham license test session as organized by Kerry Weeks.

FT-8 Operating Presentation at July Meeting

(Continued from page 1)

It assumes the audience has already downloaded WSJT-X and has read the basic setup / operating document. Even if you haven't installed or read much about FT-8, you'll gain an appreciation for what it is and can do.

WSJT-X Program and documentation is located here:

https://physics.princeton.edu/pulsar/k1jt/wsjtx.html

CARC VE Test Session Results for May & June 2019

by Frank Krizan, KR1ZAN

The Collins Amateur Radio Club's VE testing session on Tuesday, May 28, 2019, had 3 candidates testing.

A total of 7 exam elements were taken with 4 credits given. Nathan of Allen became KI5FBD as a General Class, and, James of Rowlett became KI5FBE, also as a General

Class.

The CARC VE session on Tuesday, June 25, 2019, had two candidates testing.

A total of two exam elements were taken with two credits given. Anthony, K5DMZ, of Rowlett advanced to General Class, and John of Prosper became KI5FJL as a Technician Class.

Congratulations to everyone.

VEs assisting with both sessions were: Kerry Weeks, K5WKS, Daryl Morgeson, AF5QJ, and, Frank Krizan, KR1ZAN.

The next CARC VE Test Session will take place on Tuesday, July 23, 2019, immediately following the regular CARC monthly membership meeting (about 7:30 p.m.). The test sessions are held in Conference Room A of the Methodist Richardson Medical Center, at the Bush/Renner/Shiloh intersection in Richardson. Walk-ins are welcome but it's best to register with the lead examiner, Kerry Weeks, at weeks.kerry@gmail.com or by phone at (214) 478-3230.

Bob's AL-811H Repair Project

By Bob Kirby K3NT

One of the many June-July radio projects at K3NT was to repair this AL-811H for a local Ham. It is now back at his shack working within factory specifications.

My advice is to always first tune your exciter and then your amplifier into a known good, rated 50 ohm load on the band you intend to operate.

Make sure your antenna is resonant at the lower power before placing the amplifier on line. And please, do not place a carrier on top of other operators.

Final tubes have become rather expensive and hard to find. Some are only found off-shore or as questionable NOS (New-Old-Stock). It makes sense to follow the manufacturer's specifications for Ip (plate current) and Ig (grid current) along with operating into the proper antenna load.

Rose, Chapter 5

Here is the next chapter of a new original work by Scott, N7NET. Enjoy, and once again, thanks to Scott.

Charlie walked Rose and her parents as far as his booth. He wanted to ask Rose for a date, but with him being older by five years, he wasn't sure how her father would react. Something in their conversation hinted that they were farmers. So, she would probably not get into town except during the weekends. Any chance of seeing her often was remote. However, she called the shop the following day.

"I'd like to see your QSL collection," Rose said.

"Sure, anytime you like, Rose,"

"My father wants to know if you can work on his pickup tomorrow?" she asked.

"What kind of work?"

"He thinks it needs clutch work – disc, pressure plate, and turn the flywheel. And then he'd like you to tune the engine, too."

The following morning, shortly after eight, Virgil brought his pickup to the shop. Rose was with him, so Charlie took Rose into his radio shack and retrieved several boxes of cards from a closet. After setting up a folding table and chair he left Rose to sort through them at her leisure.

"If you have any questions I'll be in the shop. I remember some of the QSOs."

"QSOs?"

"Conversations. Radio people call them QSOs. It's another Q-signal. You may find some of the cards stating: FB QSO. FB means Fine Business, it was a good conversation. Others refer to fists. We call the hand that works the key a fist. Each fist has its own distinctive rhythm, or signature, each as distinctive as ones voice," Charlie explained. Then, almost as an afterthought, he unrolled a world map, so that she could locate the countries from which the cards had been sent.

Then he returned to the shop and started on Virgil's Chevrolet pickup. Anne waited in the Ford sedan she'd driven to the shop.

"How long do you think it will take?" Virgil asked.

"We should have it finished by noon."

After Charlie started working Virgil and Anne drove to May's for breakfast.

"Hello Virgil. Hello Anne," said May as she placed menus before them. "Where is Rose?"

"Rose is down at Henry's Automotive. We're having Charlie work on the pickup," Anne explained.

"Do you know Charlie well?" Virgil asked.

"Yes, he's lived here all his life. His mother died when he was a youngster, so it's been he and his dad. He's a fine young man."

"That's good to hear," Virgil said

"He's a fine young man," she repeated, sensing there was more to the question than was stated. "What can I get for you?"

"Ham and eggs over medium, wheat toast, and coffee," said Virgil.

"I'll have the same," said Anne.

"What are we going to do with our time? The pickup won't be ready for nearly four hours," said Virgil, sipping his coffee nervously.

"We can go home. I'm sure there are things needing attention. You mentioned a flat tire on the wheat drill, and the west fence on the north forty needs mending. I know I can use this time to prepare some apple jelly and pear butter," Anne suggested.

"What about Rose? Are you suggesting we leave her here in town, at the shop?"

"Of course," said Anne, touching the back of his hand. "She will be fine. She is getting an education that might be useful when she goes off to college. She can drive the truck home when it's ready."

"I'm not so sure that's a good idea," objected Virgil, tugging at his handlebar.

May pushed through the kitchen door and started for their table with their orders.

"Can I get you anything else – salsa, catsup?"

"I think we're good," said Anne, smiling.

"Do you really think she will be alright?" Virgil asked, after May was out of earshot.

"Tell me your worst fear, Virgil," she urged.

"I suppose you're right," mumbled Virgil, digging into his breakfast.

Anne could see that he was uneasy, but she let the matter drop and they ate in silence.

(To be continued) *(Contributed by Steve Phillips K6JT)*

Centenarian Radio Amateur's Efforts Helped Pave the Way to the Moon.

The Nashville Tennessean newspaper recently featured the story of a 104-year-old ARRL member who contributed to NASA's effort to put the first humans on the moon 50 years ago this month. Cary Nettles, W5SRR, of Columbia, Tennessee -- who calls himself the nation's oldest rocket scientist still alive -- was a NASA project manager and research engineer on rocket propulsion systems in the 1950s and 1960s.

While working on the Centaur second-stage rocket program, Nettles determined that the rocket engine failures NASA was experiencing were a result of misdirected exhaust destroying the vehicles' engines. Nettles told the Tennessean he came up with an "exhaust pipe" that solved the problem. In May 1966, an Atlas-Centaur launcher propelled the first Surveyor lander toward the moon. That year, NASA awarded Nettles and colleague Ed Jonash with its Distinguished Service Medal for "their superhuman effort in turning the troubled rocket into a reliable upper stage," according to a 2004 NASA publication, "Taming Liquid Hydrogen -- The Centaur Upper Stage Rocket 1958 - 2002."

On July 16, 1969, a Saturn V rocket with a liquid hydrogen-fueled second stage carried astronauts Neil Armstrong,

Buzz Aldrin, and Michael Collins to their rendezvous with the moon. Nettles retired from NASA the following year.

Nettles got his Amateur Radio license in 1945 and remains active on 40 meters as well as on VHF and UHF repeaters. He is a member of the Maury Amateur Radio Club. In addition to sustaining his interest in ham radio over the decades, Nettles is an enthusiast of "large-scale" steam trains, which he works on in his basement. Look for him Tuesdays at 1400 UTC on 7.215 MHz on the Steam Railroad Net.

In 2015, the year he turned 100, the ARRL Tennessee Section presented Nettles with its Elder Statesman Award.

Via ARRL Newsletter

Getting loaded (antenna-wise, anyway)

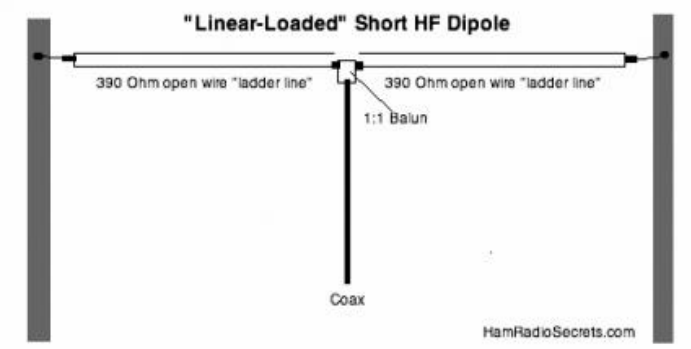
By Dan Romanchik, KB6NU

A couple of years ago, I homebrewed a "Cobra" antenna (https://www.kb6nu.com/yet-another-new-antenna-the-cobra/). It's a doublet antenna, meaning that it consists of two elements connected to a center insulator, where it connects to a feedline. The unique thing about the Cobra antenna is that each element consists of three parallel conductors connected in series.

My antenna uses a lightweight, three-conductor rotor cable that used to be available from Radio Shack. The feedline is 450 Ω ladder line that connects to an antenna tuner to give me multi-band operation.

Connecting the conductors in this way is is supposed to provide "linear loading." Somehow, running the conductors in parallel is supposed to increase the antenna's effective length. My antenna is only 73-ft. long, but it easily tunes up on 80m.

The *ARRL Antenna Book* has a short section on linear loading. It says that linear loading is a "little understood" alternative to inductive loading that can be applied to almost any type of antenna. Furthermore, "...it introduces very little loos, does not degrade directivity patterns, and has low enough Q to allow reasonably good bandwidths."



As I mentioned, I've been using this antenna with good results for a little more than two years now. When I first put it up, someone mentioned the concept of linear loading to me, but not being an antenna guru, I didn't 'give it much thought. About a week ago, though, I ran across a link to the page Short Ham Antennas for HF (https://www.hamradiosecrets.com/short-ham-antennas.html). That got me thinking about the topic again.

This page describes a way to build a linearly-loaded dipole antenna with a feedpoint impedance of approximately 35 Ω. This allows you to feed it with coax instead of the ladder line that I use. The author uses 390 Ω ladder line for the elements. He says it's commonly available, but I don't think I've ever seen 390 Ω ladder line. You could probably use 450 Ω ladder line by adjusting the element lengths a little.

At that point, I started Googling. The next linear-loaded antenna design that I ran across is a design from M0PZT (http://www.m0pzt.com/40m-linear-loaded-dipole/). He built his elements from some sturdy wire and homebrewed spacers made from PVC pipe. He's used this design for the 40m elements of a fan dipole covering the 40m, 20m, 15m, and 12m bands. Only the 40m elements are linear-loaded.

I also found a design for a linear loaded vertical antenna for 40m and 80m (https://www.qsl.net/pa3hbb/ll.htm). This antenna is only 7.736m, or 25.4 ft. tall. Of course, it requires a good radial system to work well, but it will work a lot better for DX than a low doublet or dipole.

Finally, there's an eHam discussion on linear loading (https://www.eham.net/ehamforum/smf/index.php?topic=84418.0). Unlike a lot of eHam discussions, this one is quite civil. It's worth reading if you're interested in the topic.

So, if you're thinking of getting loaded, errrrr, I mean loading your antennas, here's a method for you to consider. It works!

Major WSJT-X Upgrade Boosts FT4 into "a Finished Protocol for HF Contesting"

The WSJT Development Group has announced the "general availability" release of WSJT-X version 2.1.0. This major upgrade formally introduces FT4 as "a finished protocol for HF contesting." Users have been advised to discontinue using any "release candidate" (beta) versions of the software that WSJT-X version 2.1.0 supplants. The latest edition of the popular digital software suite also includes improvements and bug fixes in several areas, including FT8. The list includes:

- FT8 waveform generated with GMSK and fully backward compatible
- User options for waterfall and spectrum display
- Contest logging
- Rig control
- User interface

The WSJT-X Development Group is providing a separate WSJT-X version 2.1.0 installation package for 64-bit Windows that offers significant improvements in decoding speed.

A detailed list of program changes since WSJT-X version 2.0.1 is included in the cumulative release notes. Upgrading from earlier versions of WSJT-X should be seamless, with no need to uninstall a previous version or to move any files.

Installation packages for Windows, Linux, and Macintosh are available.

Visit the FT8/FT4/JT9: WSJT 2-Way Narrow Modes for Amateur Radio Facebook page for additional information.

Via ARRL Newsletter

ARRL Announces "Happy 150!" Hiram Percy Maxim Birthday Celebration

07/02/2019

This year marks the 150th anniversary of the birth of ARRL's first president and cofounder Hiram Percy Maxim (HPM), W1AW, born on September 2, 1869. ARRL will hold an operating event this summer to celebrate HPM's legacy, getting under way at 0000 UTC on August 31 and continuing until 2359 UTC on September 8. It is open to all radio amateurs.

The event goal is straightforward: Contact as many participating stations as possible. W1AW and all ARRL members will append "/150" to their call signs during this event (DX operators who are ARRL members may operate as <call sign>/150, if permitted by their country of license.) Participating stations will exchange a signal report and their ARRL/RAC Section. DX stations will send a signal report and "DX." Those taking part may use all Amateur Radio bands, excluding 60, 30, 17, and 12 meters.

The event will recognize three mode groups: CW, phone (any voice modes), and digital. Submit Cabrillo log files. ARRL will calculate all final scores based on participant uploads to the ARRL event web app (link not yet active).

There are 84 multipliers, which only count once. These include the 83 ARRL/RAC Sections (RAC sections include the Canadian Northern Territories, encompassing VE8, VY1, and VY0), and DX. The W1AW operating schedule during this period may be adjusted as necessary to accommodate on-air celebration operating activities. Contacts with W1AW/150 will earn 3 points apiece. Contacts with any ARRL member will earn 2 points each. These stations will also identify as <call sign>/150. Contacts with nonmembers will earn 1 point each.

Complete details are available at http://www.arrl.org/news/arrl-announces-happy-150-hiram-percy-maxim-birthday-celebration.

Upcoming Events

Daily	DFW Early Traffic Net (NTS) at 6:30pm 146.88 – PL 110.9Hz
Daily	DFW Late Traffic Net (NTS) at 10:30pm 146.72 – PL 110.9Hz
Daily	Texas CW Traffic Net at 7:00pm on 3541 KHz and at 10pm on 3541 KHz www.k6jt.com
1st Wednesday	Richardson Emergency Siren Test. At noon using the Richardson Wireless Klub (RWK) repeater at 147.120 MHz.
2nd Wednesday	ARES North Texas HF Net Every month—3860 KHz at 8:30 pm—9:30pm

AUGUST

3-4	**222 MHz and Up Distance Contest.** Work as many stations as possible on the 222 MHz through 241 GHz bands using any allowable mode. A station in a specific grid locator may be contacted from the same location only once on each band, regardless of mode. The contest begins at 1800 UTC Saturday and ends at 1759 UTC Sunday. Details at http://www.arrl.org/222-mhz-and-up-distance-contest.
17-18	**10 GHz & Up – Round 1.** The objective of 10 GHz and Up is for North American amateurs work as many amateur stations in as many different locations as possible in North America on bands from 10-GHz through Light. Amateurs are encouraged to operate from more than one location during this event. See the detailed rules for restrictions. Operations may take place for 24 hours total beginning at 6:00 AM local Saturday though 12:00 midnight local Sunday. Details at http://www.arrl.org/10-ghz-up.
18	**Rookie Roundup – RTTY—**To encourage newly-licensed operators in North America (including territories and possessions) to operate on the HF bands and experience competitive operating. on the 80, 40, 20, 15, and 10 meter HF bands. From 1800 UTC through 2359 UTC. Details at http://www.arrl.org/rookie-roundup.

SEPTEMBER

14-16	**September VHF.** Objective: For amateurs in the US and Canada (and their possessions) to work as many amateur stations in as many different 2 degrees x 1 degree Maidenhead grid squares as possible using authorized frequencies above 50 MHz. Stations outside the US & Canada (and their possessions) may only work stations in the US (and its possessions) and Canada. Begins 1800 UTC Saturday and runs through 0259 UTC Monday. Details at http://www.arrl.org/september-vhf.

COLLINS AMATEUR RADIO CLUB
Richardson, Texas

Mail Station 461-290
P.O. Box 833807
Richardson, TX 75083-3807

TO:

COLLINS AMATEUR RADIO CLUB
Richardson, Texas

CLUB STATIONS
(972) 705-1349

W5ROK REPEATER
441.875 MHz +5 MHz Input
131.8 Hz PL - RX and TX

W5ROK-1 PACKET BBS ROK Node
145.05 MHz

W5ROK-N1, W5ROK-N2 & W5ROK-N3 HSMM-MESHNET Nodes 2.4 GHz

Tuesday 23 July 2019

1700 Social 1730 Meeting

Methodist Richardson Medical Ctr
At Bush/Renner/Shiloh Intersection

Conference Room A in Hospital Building

NEXT SIGNALS INPUTS DEADLINE:
→→→ 16 August 2019 ←←←