

CARC
Membership Meeting

Tuesday 22 June 2021 7:00 PM
NOTE THE TIME CHANGE

The June 2021 MEETING WILL BE
CONDUCTED BY VIDEO CONFERENCE!

"Final Planning for Field Day 2021,"
by CARC Activities Committee

June Meeting Announcement

The June General Membership Meeting of the Collins Amateur Radio Club will be held Tuesday, June 22nd, from 7:00 to 8:30 p.m. via Zoom. The main program for the night will be "Final Planning for Field Day 2021," presented by the CARC Activities Committee.

CARC will hold its first outdoor Field Day in many years on the campus of Collins Aerospace in Richardson. More details are available elsewhere in this newsletter. This program will also discuss several details about operating and reporting for those who plan to operate from their home stations or separately outdoors. We hope to see you on Zoom.



The "Zoom doors" will open at 6:30 pm to allow for socializing and adjustment of audio/video settings. In addition, we'll keep Zoom open for 30 to 45 minutes after the meeting to allow more socializing and mentoring. Zoom login info will be emailed to all members the weekend prior to the meeting. To help with missing emails and accidental deletes, the Zoom credentials are now posted via links in the

Members Only section of the www.n5cxx.us website. Look for the "Business Table" near the top of the Members Only section and click on the "CARC General Meeting Zoom Login" link. This information will be updated monthly. If you need the Members Only login info, please contact the Club's webmaster.

CARC Community Service Activities

Siren Testing Dennis Cobb WA8ZBT, Frank Krizan KR1ZAN, and Jim Skinner WB0UNI participate in the Richardson emergency siren testing. The June test was cancelled because of cloudy 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. The May Garland siren test was also cancelled.

Crime Watch Patrol Jim Skinner WB0UNI participates 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.

Field Day 2021 - Revised

Our original plans to "co-locate" with the Garland ARC at Winters Park in Garland have been dropped because we have been officially invited to hold our Field Day on the campus of Collins Aerospace in Richardson. We will be setting up next to a shaded area west of Building 462.

We are planning one HF station, so we'll be running Class 1A, and will have a 6M station. It's a "B.Y.O.F." operation (Bring Your Own Food). The club will be using its newly-acquired pair of Honda generators and hopes to have its new ICOM IC-7300 XCVR or an Elecraft K-3 as the main station. We'll be using computer logging (probably N1MM Plus). As more details get ironed out, the Activities Committee will be communicating more info about our setup to those persons who have signed up to operate.

We have several members who have volunteered to operate, but we need more, especially during the night-time hours. We'll be on the air from 1 p.m. Saturday, June 26th to 1 p.m. Sunday, June 27th (24 hours).

(Continued on page 5)

CARC OFFICERS	
PRESIDENT Frank Krizan KR5N 214-563-6679 kr5n@arrl.net	VICE-PRESIDENT Bill Swan K5MWC 972-529-3906 bill@swanshome.net
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MEMBERSHIP Bill Swan K5MWC 972-529-3906 bill@swanshome.net	N5CXX CLUB STATION Phone Number/Mail Station Unavailable until further notice

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. **CANCELLED UNTIL FURTHER NOTICE**

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 rwxhamtest@gmail.com.

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The Prez Sez

with KR5N



As you will read in other articles in this month's SIGNALS, the Collins ARC is going to hold its Field Day on the campus of Collins Aerospace. We had been looking at alternatives, and last month announced we were going to "co-locate" at Winters Park in Garland with the Garland ARC. Part of this was caused by not having permission to operate at Collins or a nearby City of Richardson park. Various issues concerning interference between stations, park agreements and organization led us to continue looking elsewhere.

To our glee came the word that our request to operate at Collins Aerospace was approved. We plan to operate in the shade west of Building 462. This will be a minimal operation as previously announced. We've got a handful of operators for Saturday into the evening and Sunday morning, but, we desperately need some operators from 9 p.m. Saturday to 8 a.m. Sunday. If you can help, even for a few hours, let me know (kr5n@arrl.net).

We're operating Class 1A along with a 6M/2M/70cm station. We may be using our new ICOM IC-7300 HF XCVR or possibly an Elecraft K-3. Our logging software will be N1MM Plus. Antennas will include an EFHW for 80-6 meters and possibly another multi-band dipole.

Robert Geraldon, N5REG, is bringing out his personal EMCOMM trailer which is equipped for HF/VHF/UHF voice and digital modes. Robert is going to help us with FD traffic on Winlink. His station will also be available for demonstrations to the public - which can include your family and friends.

We have been told that our in-person use of conference rooms at Richardson Methodist Medical Center may not come about until the end of the summer. We'll keep you informed. Look for a survey soon asking about meeting times once we return to in-person gatherings. Traditionally, we would start our business meeting at 5:30 p.m., but many may like the later times we've been using with Zoom. The 5:30 p.m. time has been used for decades to allow employee members to come to a meeting straight from work without going home first.

Jim Brown, AF5MA, has documented the new Club Radio Room for dimensions, windows, doors, outlets, etc. We have additional surveys to conduct to determine if we want to setup a minimal antenna configuration initially, and later run coax and control lines to the existing antennas.

Kerry Weeks, K5WKS, has lined up a fun event in July for our Annual Ice Cream Social. It will be held at the Richardson Radio Control Club's field at Bratonia Park in Princeton. The RRCC folks have offered some RC demonstrations and (hopefully) allow us to fly one of their 'trainers' - which is hailed as "crash proof." The RRCC has asked us to give their members in attendance a demonstration of ham radio. So, if you have some particularly interesting gear to show off - especially something that works and can make contacts - we have an eager audience to show off to.

Don't hesitate to speak up about YOUR CLUB. Send your comments, opinions, criticisms, suggestions, etc., to any of the Board members listed on the website (www.n5cxx.us) or to me at kr5n@arrl.net. We'd especially be interested in knowing what interests you and how the Club can satisfy your needs.

73 de Frank KR5N

Vice President/Membership Chairman Report

Membership Chairman Report - The CARC added a new member during this reporting period. Say Hello to Jonathon (Jon) Moon, KA5HND. Jon is a current employee of Collins Aerospace. He holds a General Class License.

Welcome Bill!

Current Membership - 54

Full Members – 41 (Includes Life and Retiree Members)

Associate Members - 13

The most current roster is posted on the Members Only portion of our web site. If you need a Member ID and Password for the Members Only portion you can contact Mike Hollingsworth at (C) 972-571-6060.

73s,

Bill K5MWC

Secretary's Report

25 May 2021

President Frank Krizan KR5N called the meeting to order on-line via Zoom at 1900.

The following logged into the meeting:

Brian Belcher	WA5M
Jim Brown	AF5MA
Mark Bushnell	AE5FG
Martk Dempsey	N5MD
Gene Duprey	K1GD
Bill Fell	KK5PB
John Galvin	N5TIM
Bill Hepting	KF5FFV
Bob Jones	W5BJ
Frank Krizan	KR5N
John McFadden	K5TIP
Dick Sander	K5QY
John Schroeder	K5ZMJ
Clarence Sebesta	K5YO
Jim Skinner	WB0UNI
Jim Stafford	W5DTG
Bill Swan	K5MWC
Kerry Weeks	K5WKS

Officer and Committee Reports

The President's Report, Vice President's Report, Secretary's Report and Activity Manager's Report as included in the May 2021 CARC Newsletter were accepted as published. There was no Treasurer's Report since Treasurer Rohan Thomas KG5RCN was unable to attend.

Frank summarized the actions of the Board of Directors at their May meeting:

1. Discussion of next steps for implementing the CARC radio room in its new location at Collins Aerospace
2. Discussion of plans for the upcoming Field Day in June
3. Discussion of approach to standardizing CARC membership time frames. The resulting recommendation by the Board was presented to the membership as shown under New Business below.

A more-detailed description of Board actions will appear in the June newsletter.

Old Business

There was no old business.

New Business

A motion formulated by the CARC Board of Directors was read to the membership. The motion was as follows:

On recommendation of the Board of Directors of the Collins Amateur Radio Club, be it moved to create a Standing Order defining the terms of membership. The membership approves that:

- 1) The terms of membership for all regular full and associate members shall coincide with the fiscal year,
- 2) All new members shall have a membership expiration date that is the end of the fiscal year beyond the current fiscal year (except that this is extended for those who have paid for multiple years), and
- 3) All current members whose expiration dates occur during a fiscal year shall have their expiration dates extended to the end of the current fiscal year.
- 4) This Order supersedes all previous definitions of membership terms or special membership agreements relating to regular full or associate membership.

Secretary Jim Brown AF5MA moved for approval, with a second by Vice President Bill Swan K5MWC. The motion was approved unanimously.

Introductions and Announcements

President Frank Krizan recognized the following guests:

John Schroeder K5ZNJ, a recurring guest normally participating from his home in west Texas

Mark Bushnell AE5FG, a member of the Garland ARC and a RACES participant

Frank also introduced new CARC member Bill Hepting KF5FFV, who is a reliability engineer within Collins Aerospace Mission Systems.

Other announcements:

The Garland Hella HamsTailgate HamFest will be held on May 29

An ARRL NTX Section town hall meeting will be held via Zoom on June 1

EVS Supply in Richardson has moved. Their new address is 630 International Parkway, Suite 150, in Richardson.

Adjournment

The meeting was adjourned at 1947, followed by a presentation on "Status of ARES / RACES in Collin and Dallas Counties" by John Galvin N5TIM.

ACTIVITY MANAGER'S REPORT

by Kerry Weeks, K5WKS

John Galvin, N5TIM, gave us a very informative presentation in May on the status of ARES and RACES in Collin and Dallas Counties, along with an introduction to public service opportunities in the North Texas area. Thank you, John.

Our program for June 22nd will be a look at the final preparations for Field Day 2021. CARC has been approved to hold our Field Day just west of Building 462 at Collins Aerospace. We plan to operate the full 24 hours. More details are available elsewhere in this newsletter. Join us on the 22nd to learn more about Field Day and how you can operate from home to contribute to the overall Club score.

Our Ice Cream Social in July will be held at the Richardson Radio Control Club's flying field at Bratonia Park in Princeton, TX. Many thanks to John McFadden, K5TIP, for getting us in contact with these folks. We've been told that they will offer some flying demonstrations and, hopefully, allow us to "get behind the stick" and fly a training model (which is purported to be "crash proof"). And in return, they've asked us to offer some demonstrations of ham radio. So, if you have a special kind of radio to show off, bring it along. Festivities will get underway at 5:30 p.m. and end by 8 p.m. You can check out their info at www.rrcc.org

Upcoming meetings:

July 27 - Annual Ice Cream Social at RRCC Field, Bratonia Park, Princeton, TX (See picture on next page)

August 24 - De-mystifying the RF Exposure Evaluation for Ham Stations - Frank Krizan, KR5N

September 28 - SteppIR antennas, everything you ever wanted to know - John Walker, W1JCW

October 26 - TBD

November 23 - Annual Meeting / Election of Officers

December - Christmas Dinner Party (Date and venue TBD)

If you'd like to do a program in 2022 or have a suggestion for a program (either a topic or the name of a speaker), let me know. How about Operating Events - which ones do you think the Club should take part in? And don't be shy about stepping up to organize our Club's involvement in a contest or Special Event. Send your ideas to weeks.kerry@gmail.com.



Field Day 2021 - Revised (Continued from pg 1)

Interested in operating? Send your name, call, cell phone number and preferred hours of operation to kr5n@arri.net.

This will be our first outdoor Field Day in sometime. It should be fun. Even if you're not operating, we hope you'll come out, bring your family and some prospective ham friends, and cheer on the team. Talk in will be on the CARC repeater (441.875 MHz, +5 MHz, PL=131.8 Hz). And ... in case you were wondering we'll have a Porta-Potty on site!

For those of you who aren't into the "field thing," there's good news from the ARRL for 2021 - they're continuing the exemption for operation from home and allowing participants to report their score as a composite on behalf of the Club. Details on this are available at <http://www.arri.org/news/arri-to-extend-field-day-rule-waivers-from-2020-add-class-d-and-e-power-limit>. In order for your points (which are officially yours) to be credited to a combined Club Field Day score, please use the full club name "Collins Amateur Radio Club" when you file your FD Report. (FYI: There's an abbreviated name of Collins ARC which IS NOT the same). At the June 22nd CARC meeting (via Zoom), we'll finalize details on the Club's operation at Collins Aerospace and provide some suggestions for those operating from home - i.e., what the QSO exchange is, how to log, how to report, etc. J. Mitch Hopper, K9ZXO, has provided an excellent YouTube video (it's only eight minutes) which gives a great overview of Field Day and a few thoughts on getting ready. Check it out [here](#).

— The CARC Activities Committee

W7CXX Field Day Plans

W7CXX, the Collins Aerospace employee radio group will be operating ARRL Field Day together for their first time.

Operation will take place from the Hurricane Mesa Test Facility, a supersonic sled track located in southwestern Utah near Zion National Park. Check out W7CXX on QRZ.com for additional details.

EVS Supply New Location

EVS Supply has moved to their new location at 630 International Pkwy, STE 150 in Richardson. Their web site is evssupply.com

HAM EXAM 101 - JUNE 2021

It may have been a while since you took your ham exams, or it may have been just a few weeks ago. Each month, we'll review one question from each of the pools (Tech, General and Extra) to test your ham knowledge. The correct answers are shown (upside down) elsewhere in this issue of SIGNALS.



1. In which direction does a half-wave dipole antenna radiate the strongest signal?
 - A. In the direction of the feed line
 - B. Equally in all directions
 - C. Off the ends of the antenna
 - D. Broadside to the antenna
2. What does MUF stand for?
 - A. The Maximum Usable Frequency during a 24-hour period
 - B. The Maximum Usable Frequency for communications between two points
 - C. The Minimum Usable Frequency for communications between two points

- D. The Minimum Usable Frequency during a 24-hour period
3. Which of the following types of communications may be transmitted to amateur stations in foreign countries?
- A. Messages intended for users of the maritime satellite service
 - B. Business-related messages for non-profit organizations
 - C. All these choices are correct
 - D. Communications incidental to the purpose of the amateur service and remarks of a personal nature

here, a dB there, the next thing you know it adds up to something big!

Definitions

First, let's make sure we have a few definitions right. The decibel (dB) is defined as the ratio of two power levels:

$$dB = 10 \log (P2/P1)$$

One decibel corresponds to a 26% increase in power level. A well-known rule of thumb is that doubling the power corresponds to a 3 dB increase. Similarly, chopping the power in half drops the signal level by 3 dB. A 10 times increase in power is 10 dB. (Voltage can also be used to [calculate decibel relationships](#) but to keep it simple, I'll just use power.)

The [S Unit](#) is normally defined as a 6-dB change in signal level, which is a factor of 4 in power. (Your S meter may or may not actually follow this rule but that is a topic for another day.)

Power Level

Let's compare a few different power levels to get a feel for how decibels and S units behave. Let's use a 5 watt QRP level as our reference power. If we crank up the power to 100 watts, we have $10 \log (100/5) = 13$ dB increase in power level. This is slightly more than two S units (2×6 dB), so we would expect the S meter on the other end to read 2 units higher.

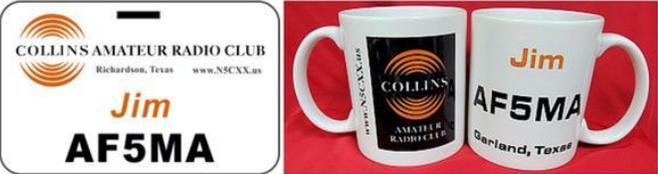
Now suppose we kick in our linear amplifier to produce a 1 kilowatt RF signal. This power level is $10 \log (1000/5) = 23$ dB higher than the 5 watt signal, or roughly four S units.

Now if our QRP signal was a solid S9 to start with, adding another 23 dB on top of it may not be that significant. The station can be heard at S9 or can be heard even louder at S9 + 23 dB. Except when there's a pile of stations all calling that rare DX...then the loudest station tends to be heard. Crafty operating skill and good luck may overcome the power difference.

But consider the other extreme. Our QRP station is being heard right at the noise floor on the receive end. The two stations are struggling to complete the contact and the propagation path degrades by 2 dB. Now the QRP station is below the noise and uncopiable. We increase our power to 100 watts and gain 2 S units...still not very strong but the ability to receive the signal improves dramatically. Crank it up to 1000 watts and you gain another couple of S units and the copy is quite good. The key point is that changes in signal level matter most at the margin, when you can just barely copy the signal. (By the way, there is nothing wrong with running QRP...many ops enjoy the challenge of making contacts with low power.)

At the receiver, our ability to recover the signal is determined by the [signal-to-noise ratio \(SNR\)](#). A higher noise floor at the receiver means it will be more difficult to hear

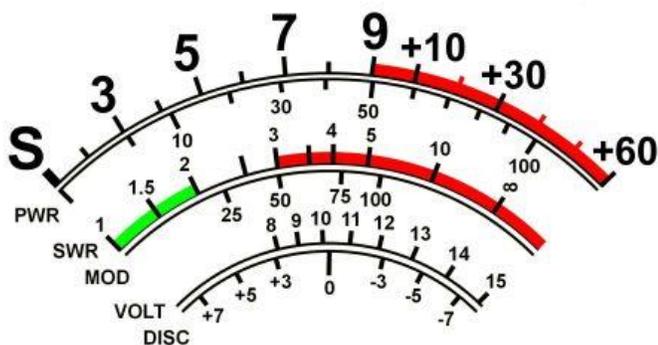
Need another Badge or Coffee Mug?



Order from The Sign Man of Baton Rouge at:
<https://www.thesignman.com/clubs/collinsarcart.html>

A Decibel Is Still A Decibel

5 June 2021 Bob K0NR



When discussing signal levels and power output, hams like to say things like:

Using higher power isn't important because it only gives you one additional S unit

And You'll lose some power in the coax but you won't even notice a few dB

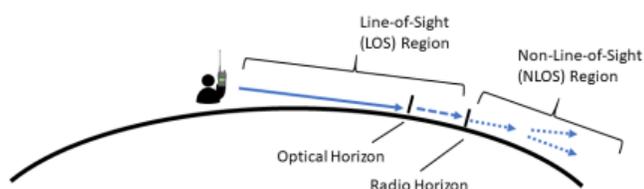
These statements are often true and at the same time may be completely wrong. I've noticed that radio amateurs pushing the limits of their station pay close attention to every decibel they gain or lose. This is especially true at VHF/UHF frequencies where signals may be weak. A dB

the signal coming in. The type of modulation being used may also make a big difference. Good old CW and the WSJT modes use a narrower bandwidth and will get through when wider-band modulation (SSB, FM) fails. In all cases, a stronger signal works better.

Antennas

Antenna systems also increase our signal level...and they do it for both transmit and receive. I recently did some [comparisons of VHF antennas from a SOTA summit](#). My 2m Yagi antenna has 6 dB of gain (referenced to a dipole) and my comparisons showed that the performance of this antenna was good enough to pull some signals out of the noise to be solid copy. This occurred when the other station's signal was right at the noise floor (using my lower gain antennas) such that the 6 dB improvement had a significant impact.

Line-of-Sight Model



Sometimes hams will say that VHF is just line-of-sight propagation and that the signal level doesn't matter much. This is partially true but often we are stretching for contacts beyond line-of-sight. Take a look at this article: [The Myth of VHF Line-Of-Sight](#). This is another case where we are operating on the margin and every dB matters.

Feedline loss can cause us to lose decibels, which impacts both transmit and receive performance. If your coaxial cable is short, then the losses may be negligible. Increasing cable length *and* increasing frequency produce more loss. For example, 100 feet of RG-8X has only 1.1 dB of loss at 10 MHz. Increase the frequency to 146 MHz and the loss jumps to 4.5 dB, using the [Times Microwave cable calculator](#). That means 50 watts of power at the transmitter turns into 17.7 watts at the other end of the cable. Using LMR-400 coax reduces the attenuation to 1.5 dB.

Summary

You can choose to ignore small changes in your signal level. A dB here or there may not make a big difference with casual ham radio operating. But these losses tend to add up and may become significant. Most importantly, just a few dB may be the critical difference between making a radio contact or not, *when operating at the margin*.

(Used by permission of the Author, Bob Witte, KØNR. The post [A Decibel Is Still A Decibel](#) appeared first on [The KØNR Radio Site](#).)

Drive Home Net Report - JUNE 2021

The Collins ARC Drive Home Net continues on Tuesdays from 5:30 to 6:00 pm on the N5CXX Repeater 441.875

MHz, +5 MHz, PL=131.8 Hz. The Net is not held on the 4th Tuesday due to the monthly membership meeting (the exception is December when net schedules work around the Christmas Dinner and Christmas Eve/Day).

All stations are invited to check in, whether a member of CARC or not. The Net is informal, operating as a roundtable. Here's the log since last month:

MAY 25 - NO NET; GENERAL MEETING

JUN 1 - [7] KR5N Frank (NCS); WB0UNI Jim; K5MWC Bill; KC5MVE Paul; K1GD Gene; N5WSV George; W5BJ Bob.

JUN 8 - [6] KR5N Frank (NCS); WB0UNI Jim; K5WKS Kerry; K5MWC Bill; W5BJ Bob; K5TIP John.

JUN 15 - [8] KR5N Frank (NCS); WB0UNI Jim; K1GD Gene; K5WKS Kerry; K5MWC Bill; K15QGD Pat; W5BJ Bob; AC5BC Bill.

Average participation for this period: 7

Average participation for the previous period: 6

The Drive Home Net is intended for comments on amateur radio topics, listing items for buy/trade/sell, asking questions or contacting others on frequency. We hope you'll give it a try soon. We've had some great conversations of late.

CARC June 2021 Board Meeting

The Collins Amateur Radio Club Board of Directors held their monthly Board meeting on Tuesday, June 8, 2021 via Zoom. In attendance were:

President - Frank Krizan, KR5N

Vice-President - Bill Swan, K5MWC

Secretary - Jim Brown, AF5MA

Treasurer - Rohan Thomas, KG5RCN

Activities Manager - Kerry Weeks, K5WKS

Also attending as a guest was Bill Fell, KK5PB.

The Board has been following its new format of conducting an informal workshop initially before handling business matters. The Workshop focused on 4 topics: 1) Field Day; 2) The July Activity Ice Cream Social; 3) New Club radio room status; and 4) Starting the process of deciding on major projects for which to seek funding for 2022. The workshop began at 7 p.m. and ended at 8:21 p.m.

At the conclusion of the informal discussion, the formal Board Meeting was called to order by President Krizan at 8:21 p.m.

A motion to accept the agenda was made by Kerry Weeks and seconded by Bill Swan; the motion was approved.

A motion was made by Kerry Weeks to amend a Board motion approved at the May 2021 Board meeting to purchase a new Club banner at a cost not to exceed \$100; the motion amended the approved amount to read not to exceed \$110.

The motion was seconded by Rohan Thomas and approved.

There being no other business, a motion to adjourn was made by Kerry Weeks and seconded by Bill Swan.

With no objections, the meeting was declared adjourned at 8:27 p.m.

Minutes recorded by Frank Krizan, KR5N.

Excerpt from Jack, W5TFB's Book

Foreword

Those of you who have been around a few years and also those in the Western Area will remember **Jack, W5TFB**. He had the distinction of being the first one in his county (Brazos) to die from Covid-19 last year. At that time, Jack was in a nursing home and had dementia. He was very active at one time (Pfeiffer Pfist award recipient 2004), and for several years he checked into the Pacific Area Net many days each week to take traffic destined for Central Area.

As promised last newsletter, I am starting to publish excerpts from the book that Jack wrote that I helped him with as a proofreader. The first part is from the Foreword and tells about his early start with math, school and electronics. (*Foreword by Steve Phillips K6JT*)

I should not talk so much about myself if there were anyone else I knew as well.

—Walden Henry David Thoreau,

I was 13, had just passed the second-class FCC phone test (which let me work on two-way radios), and had a job working for Frank Rose and Cecil Schroder. My bench was in the back where customers could not see a child repairing their radio or TV. They paid me 25/c an hour. In today's money that would be \$6.50. I think they hired me because I was so small and limber I could install and service two-way radios in cars and airplanes. Frank, a good-sized man and not at all limber, could not do that. Cecil was, well, pretty. He spent most of his time in the field. His wife was pretty, now I would say sexy. Frank's wife was plain but sweet, named Rose, making her Mrs. Rose Rose. She answered the phone in the afternoon and did the books.

I liked the work, partly physical and all mental. In addition, it got over; that is, you could know roughly how much time a job would take. I kept a journal and a log of the jobs I had done. When there was no work, I studied electronics and built test equipment. I built most of the test equipment in large WWII surplus olive drab steel index card boxes. Frank, a pack rat, had scores of them.

I turned 14 that summer. I would be in the ninth grade, but I didn't want to be. The eighth grade was a disaster. The only good grade was the first. Miss Simon was a pretty young blonde who liked everyone and knew what we could do. She let me help teach the others to read. My old man

taught me to read. Before first grade I was reading Hardy Boys and Oz books at night.

The second grade was bad. The art teacher put on a fake demonstration of our drawing 'talent.' She sketched in light chalk on the rough paper and we were supposed to color it on stage as if we were doing the invention. She had drawn me a horse's head and shoulder, which didn't look all that good to me, so I drew a mom and pop giraffe with a baby. They weren't so good either, but at least they were mine. I don't think she even noticed. Third grade was terrible. I joined the class in January. I knew more than the teacher about everything. I am not making this up. By then I had a multiplication table of two digit numbers stored and accessible. Using that I could easily multiply two four digit numbers without making the full Wallace tree. I could also use it in reverse to do division without the regular algorithm. That was tricky and hard to explain but it was fast and worked. This ticked her off, to put it mildly. I got to know the folks who worked in the office well.

The only other memorable years were sixth and eighth, both with sadistic 'teachers,' both old battleaxes and both hated boys. Some girls were disliked as well. The eighth grade teacher taught math but didn't know any. She was a show-all-work freak. I made an F and they wanted me to repeat it but I convinced Mr. Roberts, the boss, that I could do it, just not her way. He put me in his algebra class, although his specialty was history. I learned he is a marvelous math teacher, the best I had until E. R. Keown.

I have recently written this story but at the time I didn't have a computer, so it is fairly fresh in my head. In Wichita Falls, ninth grade was in middle school (7-9). They called it Junior High back then. Swanee Roberts was the school principal and my algebra teacher, and Konnie Jo Kubaca was my English teacher. I always tried to sit on the front row (I didn't yet have glasses and was, if not correctable, legally blind; it was correctable, only 20/400).

Konnie Jo was from Europe by way of Cuba, and only taught that one year. By chance, there was a smart kid in the class who was also nearsighted and without glasses, sat on the front row of both classes next to me. She was sexually mature and I was over a year from that so that isn't what this is about. Her name is Sue Barber. She knew more math than I did, and I had read a lot more than she had. I was reading Mark Twain, O'Henry, and Henry James, having got over my Joseph Conrad phase. I also read Darwin and William James. So I knew how good writing sounds, and was better at that than anything else except electronics, a useless obsession.

The algebra class had all the school losers, the bottom tenth of the set of people who were allowed in algebra. I don't think that is right, but Mr. Roberts was a master at rescuing lost causes. Sue was in a military family; she had been in six schools in three countries in four years. Her daddy was a master sergeant in the Army Air Force. The

composition of the English class was just random. The plan for the English class was unique. Here's how it went, except for weeks with exams (two—the mid-term and the final).

Monday She wrote a quotation on the board. They were from all over. We copied it down and were supposed to think about it, what it meant, what it had to say to us, and write a short essay. After the first week the person who wrote the best essay the preceding week read it in class. (One only got to read once every six week period, so that was only three times a semester.) Then she would go over the stuff in the textbook.

Tuesday Free discussion of the quote. If no discussion there would be a quiz about Monday's textbook lesson. After two weeks discussion flourished.

Wednesday At the start of the class everyone had to turn in the completed essay on the quotation or an outline of it. Then more textbook stuff.

Thursday Textbook stuff. By the end of the second week, the class was active, with almost everyone participating.

Friday If not before, submit the essays. Discussion of difficulties. Textbook stuff.

How different was the algebra class! There was little structure but much control. Students with a question had to stand. Questions were allowed at all times, on any subject, except during exams. Students had to stand when the teacher arrived and not be seated until he either sat himself or said "Ladies and gentlemen, please be seated." No joke, he did that. Every day after the first.

Each day, after the class started, Mr. Roberts wrote a problem on the board. It wasn't about what we were doing in class, but it was a math problem. I have no idea where he got them: he may have cooked them up himself. I remember a few of those. At any time except during an exam one could stand and say that they had a solution to problem n , and go to the board to present their solution. There was no restriction on the number of times one could do this other than once a problem had been correctly solved it was off the list.

I tried that at A&M my first year to teach and the entire class marched to the Department Head and complained.

You got a point if your solution was correct and lost a point if it was incorrect. You got 0 if it was correct as far as it went but not complete. I stood up when he said this, and asked, "What if you present an extension of the problem, and solve that as well." I gave an example. He said, no, just the problem itself, although that is something to consider later. I was still standing, and asked, "What are the points for?" He explained that the final exam is 100 points and the accumulated points, positive or negative, are added to the final exam grade each semester. He also told me to sit down, only one question at a time.

Then he turned around and wrote the first problem on the board.

You have a drawer with four pairs of green socks and five pairs of red socks. How many socks do you need to take out of the drawer, in the dark, to make certain you have a matching pair? What if you needed to be sure you had a pair of red socks? A red sock and a green sock?

He turned around and saw Sue and me standing. We didn't look around, but it seems no one else was. I think he didn't expect this, so he told me to leave the room and let Sue give her solution, and then I could give mine. That was fine. When I was recalled, I gave mine. Three for a pair, ten for a guaranteed red pair, eleven for a red and green, and the simple proof that it works. We each got a point. I could drag this out and give more examples, but by the end of the first six weeks, Sue had 17 points, I had 16, and several others had negative points. The first week of problems were all simple applications of the pigeon-hole principle, attributed to Dirichlet, but surely Euler and even Euclid must have known it. Later there were counting problems.

After the first six weeks Mr. Roberts asked Sue and me to come to his office after school. The Friday before he gave the first algebra exam. It had six routine problems and four problems like the daily problems. I didn't know how I did, but Sue told me she got all ten. That afternoon (it was Monday) Mr. Roberts handed us the exams. I made 125 and Sue made 130. I missed part of the first problem because I didn't read it right. Each routine problem was worth 15 points and the rest were 10. Mr. Roberts said, "You were the only ones in the class who got any of the last four questions. You are the only ones with positive bonus points. If you keep it up you probably won't even have to take the final. I think you are out of my league, and I have a proposal for you.

"I would like for you to work with each other independently. There is a room connected to the library with a table and copious blackboards. It is now used for meetings, but none is scheduled at the time of my class because I attend all meetings. You each possess insight with devastating perspicacity, beyond any I have encountered at any level. Starting tomorrow I propose that you go to the conference room instead of my class. On Thursday leave an outline with the secretary of what you have done and on Friday turn in a detailed report of what you have discovered, and after school present those results to me and possibly others."

I stood up. (We were sitting in nice chairs in front of his desk.) He said, "You don't have to stand to ask a question in here."

I sat and said, "Will you still give us the daily questions? Those attract and hold our attention. Miss Kubaca does something similar, except only once a week."

Sue said, "I agree with Jack, at least about your class. I have always loved math but never a math class before this

one. And Jack is the first I met who can keep up with me.” He said, “Yes. You have English across from the library, and the room is on the way back to the office. I can drop the daily question off after the math class. If I do that, though, you have to give me your independent solutions the next day in exchange for the next question.”

We agreed to his proposal, and left.

To Be Continued

(Contributed by Steve Phillips K6JT)

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
Tuesdays	Collins ARC Drive Home Net. 441.875 (+5) MHz, PL=131.8 Hz, 5:30-6:00pm (no net 4 th Tuesday.)
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

JUNE

26-27 Field Day Objective: To contact as many stations as possible on the 160, 80, 40, 20, 15 and 10 Meter HF bands, as well as all bands 50 MHz and above, and to learn to operate in abnormal situations in less than optimal conditions. Details at <http://www.arri.org/field-day>.

JULY

10-11 IARU HF World Championship. Objective: to contact as many other amateurs, especially IARU member society HQ stations, around the world as possible using the 160, 80, 40, 20, 15 and 10 meter bands. Begins 1200 UTC Saturday and ends 1159 UTC Sunday.

AUGUST

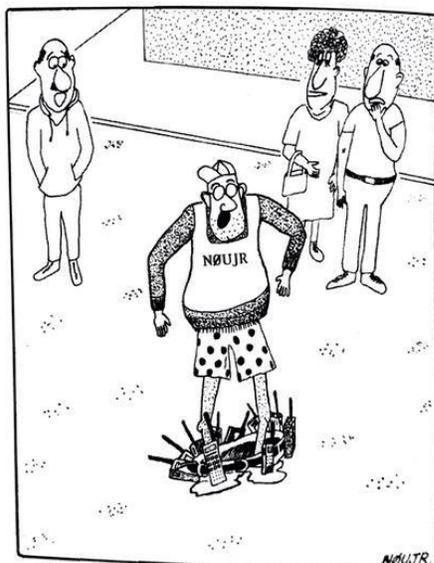
7-8 222 MHz and Up Distance Contest. Work as many stations as possible on the 222 MHz through 241 GHz bands using any allowable mode. Begins at 1800 UTC Saturday and ends at 1759 UTC Sunday. Details at <http://www.arri.org/222-mhz-and-up-distance-contest>

21-22 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.arri.org/10-ghz-up>.

New Collins Building Access Restrictions

Per Security, all "non-essential" access to Collins Aerospace facilities (including employee recreation activities) is shut-down until the Covid-19 pandemic is resolved. Anyone needing access to the Club Station must submit an email request to Security with an explanation of who, when and why access is needed, and the Security team will review, and if approved, the person will only be allowed access via the North Gate. For contact information, send an email to kr5n@arri.net asking for Security contact information.

FYI—Until further notice, masks are now required inside all Collins buildings. Also, a temperature check is required before entering the property. During busy hours there is a manned tent near the north gate where the temperature check is performed. During off hours, there is a place at the north gate for a self-check.



Greg finds his obsession with hand-held radios finally brings about the downfall of his pants.

"NØUJR and His Friends" Cartoons used by Permission from Greg Trook, NØUJR

The Amateur's Code

by Paul M. Segal, W9EEA (1928)

The Radio Amateur is:

CONSIDERATE - never knowingly operating in such a way as to lessen the pleasure of others.

LOYAL - offering loyalty, encouragement and support to other amateurs, local clubs and the American Radio Relay League, through which Amateur Radio in the United States is represented nationally and internationally.

PROGRESSIVE - with knowledge abreast of science, a well built and efficient station, and operation beyond reproach.

FRIENDLY - with slow and patient operation when requested, friendly advice and counsel to the beginner, kindly assistance, co-operation and consideration for the interests of others. These are the hallmarks of the amateur spirit.

BALANCED - Radio is an avocation, never interfering with duties owed to family, job, school or community.

PATRIOTIC - with station and skill always ready for service to country and community

People are usually shocked when they find out I'm not a good electrician.

QUIZ ANSWERS
 1. D (T9A10)
 2. B (G3B08)
 3. D (E1C02)

PERIODIC TABLE OF MAJOR AMATEUR RADIO CONTESTS



2021

Multimode	CW	Digital
off-the-air	SSB	VHF/UHF

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2 ARRL RTTY Roundup	3 NA Sprint CW	7 ARRL DX SSB	3 SP Polish DX	4 TQP/IN/DE New England QSO Parties	1 SEANET Contest	2 Marconi Memorial HF	5 NAQP CW	6 CWops CW Open	3 California QSO Party	8 ARRL SS CW	5 ARRL 160
9 NAQP CW	10 WPX RTTY	14 NA Sprint RTTY	10 JIDX CW	8 CQ-M DX	12 ARRL June VHF	10 IARU HF	14 WAE CW	11 WAE SSB	9 Oceania CW	13 WAE RTTY	11 ARRL 10
16 NAQP SSB	17 ARRL DX CW	20 Russian DX	17 CQMM DX	15 King of Spain	19 All Asian CW	17 CQ VHF	21 NAQP SSB	18 WA/NJ/NH QSO Parties	16 Worked All Germany	22 ARRL SS SSB	18 RAC Winter
16 ARRL January VHF	18 CQ 160 SSB	26 WPX SSB	24 Florida QSO Party	20 Contest University Dayton Hamvention	23 ARRL Field Day	24 RSGB IOTA	25 WW Digi	28 CQWW RTTY	23 CQWW CW	27 HAPPY HOLIDAYS	25
29 CQ 160 CW	31			29 WPX CW	30				30 CQWW SSB	31	

A contribution from EA3O.



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www.N5CXX.us

**PO Box 830766
Richardson, TX 75083-0766**

TO:



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CLUB STATION (972) 705-1349
N5CXX REPEATER 441.875 MHz +5 MHz Input 131.8 Hz PL - RX and TX
N5CXX-1 PACKET BBS COL Node 145.05 MHz
N5CXX-N1, NRCXX-N2 & N5CXX-N3 HSMM-MESHNET Nodes 2.4 GHz

Membership Meeting Tuesday 22 June 2021 7:00 PM NOTE THE TIME CHANGE THE June 2021 MEETING WILL BE CONDUCTED BY VIDEO CONFERENCE!
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NEXT SIGNALS INPUTS DEADLINE: →→→ 16 July 2021 ←←←
