CARC
Membership Meeting

Tuesday 28 January 2020
1700 Social   1730 Meeting
1800 Program

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

Subject:
"Show & Tell Night"

Local Club News

Meeting Notice

The next meeting of the Collins Amateur Radio Club will be held on Tuesday, January 28, 2020, at 5:30 p.m., in Conference Room A in the Methodist Richardson Medical Center, 2831 E President George Bush Hwy, Richardson, TX. Doors will open around 5 o'clock for social time.
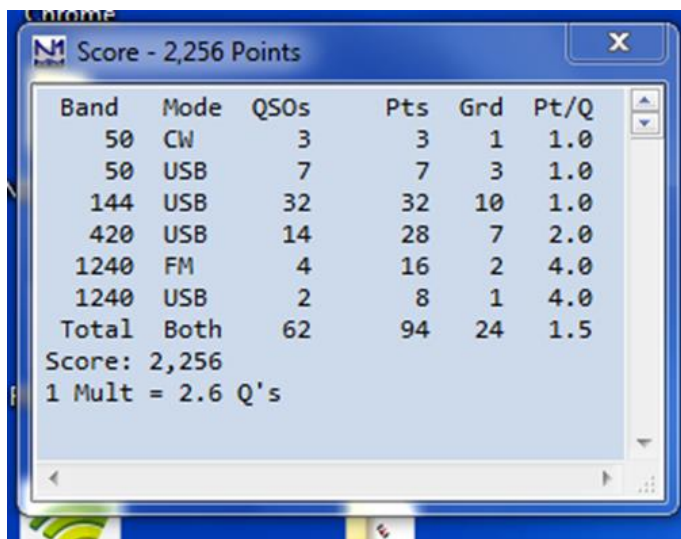
The primary order of business at the January meeting will be the discussion of the proposed Club Constitution revision which was emailed to all voting members at the end of December. Another item will be soliciting nominations for Club officers for 2020 for elections to be held in February.

The program for the evening will be "Show and Tell". We have 4 people lined up to show and demonstrate an item which is useful for amateur radio. If you would like to be included, please contact Frank Krizan, KR1ZAN, at kr1zan@arrl.net immediately. A formal presentation is not required. A brief verbal presentation and exhibit of the device, software, or skill of 2 to 5 minutes is all that's required. Once all items have been shown, the presenters will be available around the room to answer questions and give further demonstrations.

We look forward to seeing you as we kick off a new year of Club activities. And … bring a friend. An ARRL VE test session is also held immediately following the Club meeting.

CARC Community Service Activities

Siren Testing Dennis Cobb WA8ZBT, John McFadden K5TIP and Jim Skinner WB0UNI participated in the Richardson emergency siren testing. The January test was conducted on 8 January. In general, the sirens perform better, but at least three were nonfunctioning. 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.

N5CXX in January VHF Contest

N5CXX operated in the ARRL VHF Contest. Bob (K3NT) and Ross (K5SRT) were in a mobile setup usually identified in the contest as a Rover. N5CXX worked them in several different grids as they toured in and out of different grid squares. By the way this was the first contest that we used the N5CXX call. Here are the totals:

Band	Mode	QSOs	Pts	Grd	Pt/Q
50	CW	3	3	1	1.0
50	USB	7	7	3	1.0
144	USB	32	32	10	1.0
420	USB	14	28	7	2.0
1240	FM	4	16	2	4.0
1240	USB	2	8	1	4.0
Total	Both	62	94	24	1.5

Score: 2,256
1 Mult = 2.6 Q's

(Contributed by Dennis Cobb WA8ZBT)

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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

Hi everyone! I hope all is well, and you have been burning up the bands. I'm currently out of state, at Imaging USA, in Nashville TN. I did take my iPad and can access my FlexRadio with it, but I have been very busy and haven't had much chance to get on the air. This is my last letter to you as President, and I wish my replacement a great time. Unfortunately, I will not be back for the January meeting, but I should be there next month.

That is all for now.

73's,
Gene, K1GD
CARC President

Secretary's Report

There is no Secretary's Report since last month's meeting consisted of the annual Christmas dinner, which was reported on in the December Signals newsletter.

Sporadic SIGNALS

captured by Frank KR1ZAN

RTTY over Internet http://www.rtty.com Just before Christmas, Milton Withers, AD5XD, posted on the K5RWK reflector "For those that would like to verify that their digital SW (FLDGI, MMTTY, etc) is sent up to decode RTTY correctly, Jordan Spencer Cunningham <js@teletype.net> is doing a 2019 Christmas Eve teletype broadcast that will track Santa on his journey around the world. Which will be fun for all kids from one to 92." Not having as much time as I'd like to dedicate to this activity, but curious, I gave it a try. On Christmas Eve, about every 10 to 20 minutes, Jordan transmitted the location of Santa's sleigh and a few notes about the area he was over. Lots of fun. I simply used fldigi software set up for RTTY at 45 baud and connected my browser to Jordan's streaming web site. The built-in microphone picked up the sound from the laptop speaker and decoding was excellent. Now that Santa is back at the North Pole (or vacationing in the Bahamas!), I wondered if another such tool was available. I discovered that a site at http://rtty.com offers a service called RTTY over the Internet. Almost continuous news of all sorts. And it works great with fldigi (http://www.w1hkj.com). I want to try my other RTTY software as well. Give it a try. No radios or antennas required -- but be cautious, the continuous RTTY tones can drive family members nuts. I mention fldigi because it's available FREE for all computing platforms and installs easily.

It is with a sad heart that I report that Bill Hilton, N5TGW, became SK on January 2, 2020. Bill lived in Richardson and was a member of CARC. We also lost another Richardson ham - Beau Williamson, N5PY, on January 20, 2020. Beau was very active in the Richardson Wireless Klub.

From Austin ARC SwapNet Newsletter: David WB5HJV, who is the ARRL STX District 14 DEC reports the following -- Still hearing many hams on the FM voice repeater with the old Yaesu WIRES mode unintentionally enabled. (Causes a 2-3 second muting of the voice at the beginning of the transmission with a DTMF burst)

Here is an article from Martin, N6VI, on how to disable WIRES on a Yaesu FT type radio, so that it will NOT work (or interfere) even if turned on.

http://www.lafdacs.org/pdf_files/-WIRES%20Disable%20on%20FT%20Radios.pdf. [I mention this, too, because I periodically hear the beep.]

Good News for DXers from Space Weather News. "A new solar cycle is coming. [On December 24th], two sunspots emerged on the solar disk. Their reversed magnetic polarity marks them as members of new Solar Cycle 25. This quickening of new-cycle solar activity suggests that the sun is not entering a new Maunder Minimum despite the recent scarcity of sunspots." More details at spaceweather.com - select Archives for Dec. 24, 2019.

The Packet Status Register, which is the journal of TAPR (Tucson Amateur Packet Radio), is available to anyone to read at https://www.tapr.org/psr TAPR has been on the leading edge of digital communications and technology for amateur radio. Their online archives go back to 1982. Much of their published material is timeless and relevant in today's world. Digging through their archives, you can read about the early days of Packet Radio, APRS and software defined radios (and more). Membership in TAPR is only $25 per year and helps support a lot of important development. [And, after reading Steve, K6JT's, two articles in the Dec. & Jan SIGNALS, I hope you'll give Packet a try on the CARC PBBS.]

Got word from Dallas KD4HNX via the Austin ARC Swap-Net newsletter that Coastal ChipWorks, developer of the TNC-X and TNC-Pi is closing business, https://tnc-x.com/#Pi.

This is one of those "maybe we should save for the April issue" sort of things, but, it has to do with the various "List Awards" that are popular nowadays. I'm sure you've heard of Islands On The Air (IOTA), Summits On The Air (SOTA), Parks On The Air (POTA) and more. Now, with tongue in cheek, a club in Colorado has announced Things On The Air (TOTA) as a way to gather all these lists into one. Bob, K0NR, pens the story on his blog at: https://www.k0nr.com/wordpress/2018/05/things-on-the-air/.

Glen, WB4KTF, writes in the Jan. 5, 2020, Austin ARC SwapNet Newsletter: Here is a link to the USMC Antenna Handbook, a great resource to understand antennas.

www.marines.mil/Portals/1/Publications/MCRP%208-10B.11.pdf?ver=2017-03-15-092827-423.

And, while we're at it, here's a few other manuals that may be of interest:

A Field Guide to Simple HF Dipoles (US Army) https://apps.dtic.mil/dtic/tr/fulltext/u2/684938.pdf.

US Army Fundamentals-Wave Propagation, Transmission Lines and Antennas https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/tc9_64.pdf.

More old and new US Army manuals about antennas than you want to know: https://armypubs.army.mil/Product-Maps/PubForm/ActiveInactiveRescSearch.aspx. [enter Antenna in Pub/Form Title block]

And, there's the Navy Electricity and Electronics Training Series, which includes a section on antennas and propagation: https://www.fcctests.com/neets/neets.htm.

The following is on the Tanner Facebook page:

"In case you have not heard, we will be moving from our current location by the end of May. We are currently looking for the perfect new location. We would like to stay in the Carrollton/Farmers Branch area, but are considering Coppell, Addison, and Irving (but not the city of Dallas). We need a space around six to eight thousand square feet. We would love your help in our search for our new home, if you or someone you know, have a location we should check out, please let us know." https://www.facebook.com/OddballElectronics/.

We're in the "season of Hamfests". **The Irving Hamfest**, sponsored by the Irving Amateur Radio Club, will be held March 7th, at Betcha Bingo Hall at 2420 W Irving Blvd, Irving, TX 75061. Info at: http://irvingarc.org/

Get ready for Belton. It's March 14th this year to avoid Easter in early April. Bell County Expo Center 301 W Loop 121, Belton, TX 76513 www.tarc.org/hamexpo You can order tickets at www.eventbrite.com/e/hamexpo-spring-2020-the-belton-hamfest-march-14-2020-tickets-87517149149.

The Midland Amateur Radio Club (W5QGG) will hold their 65th St. Patrick's Day Hamfest on Saturday, March 21, 2020. Lots of great prizes including an Elecraft KX-2, L-100 Autotuner, Aursinc V.N.A. and Astron RM-30. Their pre-registration prize is a Heil PR77 microphone. PLUS, they're running a raffle for an Elecraft K4 (the latest & greatest). Hamfest info and prize tickets available at https://hamfest.w5qgg.org

And in case you missed this one, the 2019 South Texas Hamfest was spectacularly successful. From their press release, "We had a steady stream of Electronics Enthusiasts coming in throughout the day. The parking lot remained quite full throughout the day. Lots of merchandise changed hands, we had some good forums, many friends were made or met up, gobs of prizes were given away and some people scored some really nice stuff in the Silent Auction. For those that made it to the event, we thank you for being part of it! If you missed 2019, you are in luck ! Here is your "Advanced Notice" that we are on again for 2020 !!

We are starting early and are already preparing to make STH 2020 bigger and better than ever before. The date is set for Saturday October 17th, 2020. Mark your calendars and plan to be there. For more info: southtexashamfest@gmail.com or call 361-947-5665 <http://southtexashamfest.org/> "

73 de KR1ZAN

Are You Ready?

Our ARRL North Texas Section Emergency Coordinator, Greg Evans, K5GTX, sent the following message on New Year's Day. His thoughts are challenging and should encourage all of us to take account of our skills and resources as amateur radio operators. de KR1ZAN

Happy New Decade!

"New Year's Day provides us an opportunity to reassess our lives. But New Decade's Day is a special day that reminds us to not just evaluate where we want to be after a year, but where we need to be in ten years.

So… in that vein, where will Amateur Radio be in ten years? I ask because it is important to remind ourselves what it will be like when the power goes out and communications systems are dark. We, as a society, have continued to rapidly adopt technology in such a way that we are entirely dependent on it. Take the smartphone; it is everywhere. We can answer our front door, turn on the lights, start our vehicle and talk to our friends at the touch of a few virtual buttons. It's so easy that we have forgotten how to fend for ourselves without technology.

Remember paper maps? How many of us can remember walking into a gas station and seeing a rack of a myriad of maps just inside the door? Do we even remember how to use; how to navigate; fold them? (Truth be told, folding a map is an engineering feat!)

Communications is the bedrock of society. We must have multiple ways to talk and convey news and information. Smart Phones and the Internet cannot be allowed to become our only way to exchange ideas and stay informed. Amateur Radio is a global resource for communicating, providing help and hope to all in need. Let's strive to continue to improve our hobby; get better at communicating on the radio; work together more closely to develop strong teamwork skills; be more professional when we are working with our served agencies, partners and communities; and most importantly, enjoy and participate more in this hobby that is the very bedrock of civilization. There will be a day when Amateur Radio is the only way to communicate – let's be ready!"

73 and Best Wishes to You and your Family and Friends for a Prosperous New Decade!

Greg Evans, K5GTX

ARRL North Texas Section Emergency Coordinator

ARRL North Texas Assistant Section Manager

The Army Air Corps, Part 2

By Vic, W7VSE

I was going to have to learn CW (code) at 25 to 30 words per minute or more…

In that era, there was a huge quantity of information being handled on the air in Morse code. Press Wireless and others were all over the dial sending the news of the day, stock market reports, and many other stations broadcasting some kind of message "traffic" 24 hours a day. Even the newspapers across the USA had a code man who would copy the national news from the radio for the local newspaper. Many other things were handled by code. It was one of the major ways to communicate back then. I would go back to the station in my off time and tune around over the airwaves on a spare receiver. I tried to find a station that was just a bit faster than I could write down on the typewriter. I kept this up for a couple of months and I could see that I was getting a little faster, but still had a ways to go. I liked it, and that made it a lot easier.

But then orders came that I was to be trained as a Control Tower operator. I didn't want to do this, but when you're in the military, you do as you are told. There were five of us selected, and we went to a mock-up Tower every day where there was no radio gear, but we had a Staff Sergeant, named Howell, who was very knowledgeable about control tower operating. He was our instructor. Every day, for several weeks, we had several hours of training and practicing verbally, in that mock up tower. We learned a lot of the verbiage used in controlling aircraft. "Cleared to land" "Cleared for takeoff" "Hold short of the runway" "Taxi into position, and hold" "Extend you downwind leg" and many, many more. He gave us written tests frequently, and, after a few weeks, reported to Sgt Guthrie that we were all qualified tower operators. I still didn't like it, I wanted to operate using code. Then we learned we were to be transferred to Tucson Army Air Base (which later became Davis-Monthan Airport) in Arizona to establish the first control tower there. The Commanding Officer of Tucson Army Air Base, Captain Moore, flew a Martin B-18 bomber to Kelly Field to transport us to Tucson. This was my first airplane ride. I got to ride up in the Plexiglas nose of that 2-engine bomber in the bombardiers' seat most of the way. That was quite a thrill for a 19-year-old kid.

When we got in our landing pattern at Tucson Army Air Base, it was raining. I thought, this is going to be a great place. But that must have been a rare thundershower, because it didn't rain again the nine months or so that I was stationed there at Tucson.

While the regular control tower was being constructed, our temporary tower was a tent, alongside the main runway. The military shared the airport with American Airlines civilian airport terminal.

In the tent, our radio transmitter and receiver were the kind that were used in an aircraft. The transmitter had a very short, curled microphone cord, and when a plane called in for landing instructions, we would have to pick up the "mic" and tell the aircraft to stand by while we went outside the tent to see if it was all clear for it to land. It was very hot in that tent and we sweated a whole lot. This made me dislike being a control tower operator even more, so I talked to the Station Chief.

The Station Chief, and NCOIC, of the AACS detachment at Tucson was another Tech Sergeant named Everett Wogstadt. He was an all-around electronics and communications man and was well qualified to do anything that was needed. Also, he was another old-timer that knew how to handle men and was promoted to a high-ranking Officer during WW2. I let him know that I didn't like being a tower operator and wanted to come into the AACS station as a CW operator. He told me I would have to wait a while.

I was promoted to Private First Class, Specialist 4th Class, and my paycheck went to about 50 dollars a month. I was still the last man in the line to get a paycheck each month. A few months later, they abolished the Specialist classifications and I got the nearest paying grade which was Corporal and then I made 54 dollars a month and boasted two stripes on my uniform. This was in the latter part of 1941.

I liked the Peacetime Air Corps and was feeling like I would make it a lifetime career. Five of us tower operators lived in a house just off the Air Base. We had a Class "A" pass, which let us go to town whenever we pleased. We still ate in the mess hall, but lived off the base and would wear civilian clothes now and then. (I'm not sure it was legal, but we did it anyway.) I was going over to the AACS radio station regularly and practicing the code, as described earlier, and was getting a little faster. I kept reminding the NCOIC that I wanted to get out of the tower and get into the station.

We started getting some new trainees from Scott Field Radio School in Illinois, and there were a couple of them that wanted to get in the station and use CW, like I did. Finally, one day, Sgt. Wogstadt called us into his office and told us that the three of us were to become student operators at the AACS radio station, WYT, and we were paired with three of the regular qualified operators. He told us that he would give a three-day pass to the first one of us that qualified as a regular operator. The guy I got paired with was named Smith, (Smitty), and he was a T/Sgt and was in his late 30s, I think. He was really good at Code. He showed

me how to select frequencies on the transmitter and the receivers and many other things that I needed to know. I sat in the training position with headphones and listened to him handle message traffic, same as I had done back at WYG at Kelly Field. He was way too fast for me to copy, and during the times we were not busy, I'd tune in a press wireless station and practice copying code. I was thinking that this was great and I will have plenty of time to learn how to operate the station and also get my code speed up to par.

But after only 2 or 3 days of this, I came to work one day and Sgt Smith was sitting in a chair away from the operating positions and had his head buried in the newspaper. I went to my training position and put on the headphones. After a while I thought I heard a station calling us. So, I said, "Sgt Smith, I think someone is trying to contact us." He had the newspaper up over his face, reading it, and he lowered it slightly and looked directly at me and said., "It's all yours." Then he lifted the newspaper up and started reading it again, ignoring me. I soon realized that I was going to have to operate that station all by myself. It scared the hell out of me! I felt like I was on "Death Row," But I got in the operator's seat and dialed up the frequency and very slowly, and shaking like a leaf, I told that station to slow down, as I was a student operator. I really sweated bullets the rest of that shift, and I'm sure the operators didn't enjoy working a "Lid" like me. ("Lid" is what code people call a very poor operator.) But I succeeded in handling the few messages that I had to relay to WZB, Biggs Field, El Paso, Texas, and others back to March Field, WYM, and McClellan Field, WZS, in California.

After that shift, I went to the mess hall for dinner and then I went back to the radio station and the evening operator allowed me to spend several hours practicing copying code. I realized, again, that I would have to get my code speed up if I wanted to remain in this profession. For the next few weeks, I sweated through my daily shift, and then came back later and copied code another few hours every day. And when I was practicing on another operator's shift, he would give me some good pointers and advice.

One day I showed up for my shift, as usual, and "Smitty" (Sgt Smith) told me that he thought I was qualified to hold down a shift. He had already told the NCOIC, who called me in and congratulated me and gave me a 3-day pass. Me and another operator went down to Nogales, Sonora, Mexico and celebrated over a weekend. We had a blast, drinking Tecate beer, tasting (and not liking) Tequila, dancing and flirting with the Mexican Senoritas, and just enjoying ourselves. Yes, the pre-war service was great. Five of us Tower Ops had our own house just off the base. But December 7, 1941 was just around the corner and changed all that for us, and for most of the world.

I was still working many hours to improve my code speed, and was handling my shift a lot better. One Sunday morning, I had worked the Graveyard shift, (Midnight to 8AM),

December 7, 1941, that infamous Sunday morning, had breakfast and went to sleep in my bunk at our house. Soon I was awakened by a radio blaring very loudly from an adjacent bedroom. That wasn't supposed to happen at our military house. I listened for just a few minutes and the program sounded like an H. G. Wells movie about invasion from outer space, or something. I got up and went in there to raise hell about the noise and found out it was the report of the Japanese bombing Pearl Harbor. So I sat down and listened to that radio program for a long time. I did not get much sleep that day and had trouble staying awake that night on the Graveyard shift. The next day they moved the Air Base boundary to encompass our living quarters, cancelled our Class "A" passes, and we no longer were free to come and go as we pleased. It was wartime.

Things started happening in a hurry. A few of the old timers were transferred to duties at other locations, and we started getting replacements from the Radio School at Scott Field, Illinois. I had been doing a good job for a few months and my code practice had paid off. I was beginning to read at about 25 to 30 words a minute. With the older guys moving out and the new ones coming in, I moved up to the number two spot, behind Sgt Wogstadt, in the pay line. I became the Chief Operator and was promoted to "buck" sergeant (3 stripes). Sgt. Wogstadt started training me to do his job in case he was transferred before me. He taught me how to do all the required paper work of a Station Chief. This was in early 1942. I was 20 years old, and didn't feel much like one of the "old-timers."

But my orders came in before Wogstadt got his. In May, I was selected as a member of the newly formed Tenth Communications Squadron of the AACS and ordered to report to Bolling Field, Washington, D.C (WashDC). to be briefed and trained for "Foreign Tropical Duty." We did not know where we were going.

For the train trip back to WashDC, I was the Sergeant in charge of one of the newer operators, Corporal Rolf Cramer, who was also selected. He and I turned in all our government things, said our good byes, and boarded a train headed for WashDC. Our train trip was uneventful, and took a day and a night or so to get there. When we arrived at the train station in D.C. I was supposed to call out to Bolling Field for transportation.

(I am glad the Statute of Limitations has run out after these 70-odd years so I won't get into trouble telling this story.) I was in charge of Corporal Cramer, and I knew what I was supposed to do. But we had a long talk there in the train station. I reminded him that we were scheduled to go to "Foreign Tropical Duty" somewhere---we didn't know where—and there was a war going on. We didn't know how long we were going to be alive. So, I put it up to a vote, we could call now for transportation, or we could get a hotel room, have a night out on the town, and then call for transportation, like we had just arrived. We could get in trouble

by doing this. The vote was 2 in favor and none against this idea. So we got on a city bus and rode until it looked like we were in the main part of D.C. We got off near 9th Street NW, Washington, DC, found a hotel, and then went out on the town. We found "Haddon's Oyster Bar" with a "Pabst Blue Ribbon on Tap" sign in the window, and Nick the Greek's restaurant right next door. (All the necessities of life!) The bartender was a pretty girl, named Margaret Haddon. Her mother owned the joint. So. Rolf and I spent the entire evening there and had, what we considered, our "last supper" at the Greek restaurant, with plenty of beer to wash it down.

Next morning, we were only slightly hung over. We found some breakfast and talked it over. We both decided we wanted one more day. So, that next evening was a rerun of the first night and we really enjoyed ourselves. Then, the 3rd morning, we caught the bus back to the railroad terminal and called the Air Base for transportation. We both felt guilty. An army vehicle showed up and took us to Bolling Field. We ask where the 10th Communications Squadron barracks were located and they told us. When we walked into that area, a Tech Sgt approached us and we both thought we were going to get thrown in the brig or hung from the gallows, or something. But when the T/Sgt got closer I recognized him. It was Travis Camp, from Louisiana, one of the regular operators at WYT, Tucson, who had helped me learn to work a shift at the station. He was grinning from ear to ear and shook hands and welcomed us. He was glad to see us. After a while, he reached in his hip pocket and pulled out a stack of Class A passes, found our names, and gave us each our card. In his Louisiana drawl he said, "Y'all can go on back to town if you wont to."

We had come out smelling like a rose, and then, we wished we had stayed another day at the hotel. But during the four months we were there, we frequented Haddon's Oyster Bar and Nick the Greek's restaurant quite a bit. We also visited most of the government buildings, memorials, etc. in Washington D.C.

(To be Continued)

Using the N5CXX Packet System Part 2

By Steve Phillips, K6JT

This is the second installment of information about packet radio and using the club's packet node on 145.05. The first part of this series dealt with how to get on packet and how to use the N5CXX-1 bulletin board system. This part assumes you are familiar with the information in part 1. A third installment is planned to discuss how to use the Winlink system, which is not connected to N5CXX, but which will be of interest to many of you who manage to set up a packet station.

A couple items of interest are first in order. Part 1 concentrated on hardware packet terminal node controllers and their use. It is also possible to use a Windows computer with soundcard to get on packet directly. One software package is called "AGW Packet Engine", and was created by SV2AGW. To get more information on this as well as other packet radio related software, follow some of the links resulting from a Google search for AGW Packet Engine. Note, however, that this sort of setup will only allow you to do manual keyboard type entries. It will not work with automated software such as is used with the Winlink system. There may be others now, since this was first written in 2008.

Packet radio can be used to chit-chat "in real time" with another station, much like a Radioteletype (RTTY) link could be used. Instead of connecting to a computer-controlled (or smart TNC) station, just enter the connect (c) command followed by the callsign of the station you wish to contact. However, very few of us leave our packet stations on all the

time any more. I used to do that, but burnt up a radio so now I only turn it on when I am going to access the BBS or Winlink stations. In listening around, I have heard very few ham-to-ham contacts going on, at least on 145.01, 145.03, 145.05, 145.07, and 145.09. In some areas, 145.36 is also used for packet radio operation.

Regarding frequencies, here in the Dallas area, 145.01 is used primarily for nodes and some BBS stations such as N5CXX, but we moved to 145.05 some time ago due to quirks in the Kantronics KPC-3 TNC. 145.03 and 145.05 used to have automated networking systems on them but they are pretty much silent now. 145.07 was used by the Dallas County area RACES for Winlink access. There are also several other stations using 145.07 for chit-chat. 145.09 is used by the Collin County ARES for Winlink operations thanks to the Plano Amateur Radio Klub. I'll describe more about that in part 3 of this series.

Many of us use the packet system like we do Internet E-Mail. Winlink is almost the same as using the Internet, and we'll get to that in part 3. But what if a station you want to communicate with (i.e., leave a message for) is not reachable directly and does not have Winlink?

The answer is to use the N5CXX BBS or the COL "node" or "digipeater" functions to extend your "reach". Our packet station antenna is currently pretty low and not of high quality. It is sufficient for most uses, but if more club members get interested in using the packet mode, then a better (and higher) antenna is the first thing we should add. Nodes are sometimes reachable far away depending on propagation on 2 meters. The J command will show any that have been heard recently.

You may be asking "what is a digipeater and what is a node?" They are similar in function but work a bit differently. Early packet radio TNCs only had the capability to repeat (termed "digipeating") what they heard, when so commanded, in order to forward a user's packets onward to a distant station that is not reachable directly. Multiple "hops" may be performed using digipeaters. Of course, you have to know what digipeaters are available along the path. Furthermore, digipeating tends to use lots of "bandwidth" on a busy channel, since every packet sent is repeated again all along the chain, and acknowledgments from the distant station are similarly repeated back up the chain to your TNC. This ties up the channel, making it unavailable for very many other users. Furthermore, with all the QRM, your packets are likely to get "busted" somewhere along the way, making it necessary to resend them, sometimes over and over again (recall this is an "error free" mode with acknowledgments required for everything and automatic resend).

Enter the "node" function. Like digipeating, it allows you to get your packets to a distant station. However, it saves

channel resources because any "lost" or erroneously received packets are only re-sent to the closest node, not all the way back to your station.

An example may help, taken from actual operation in 2008. Let's say I want to talk with Si, K5JRN, a friend of mine who lived in Denton. He is also active on the Texas CW traffic net, but with the low sunspot cycle, we sometimes would "skip over" each other on 80 meters at night. So we set up a schedule to meet on packet to exchange traffic (messages). Both of us have poor antennas (mine is in the attic), so there is no way to directly contact each other. However, by using N5CXX and W5NGU (the Denton ARC packet node), we could easily make station-to-station contact. (Note, W5NGU is no longer available, this is just an example).

On my end, to use digipeating, I would enter:

C K5JRN v col denton (connect with K5JRN via COL and DENTON) in order to use N5CXX and W5NGU as digipeaters (pseudonyms are allowed for node names as long as the station is identified in the packets sent). The connect would go to COL (N5CXX), which would send it to DENTON (W5NGU), which would then send it to K5JRN. His TNC would respond with an acknowledgment, which would go to W5NGU, which would send it to N5CXX, which would send it to me.   If anything went wrong, the entire process would need to be repeated. Once connected, all of our packets traverse the digipeater chain as noted. Pretty neat.

Now, let's use the two stations as "nodes" rather than digipeaters. Instead of directly connecting with K5JRN, I first connect with the COL node: C COL

It responds with a normal connection message. I then enter C DENTON. The W5NGU node then responds to COL and COL tells me it is connected. I then enter C K5JRN. The DENTON node calls Si and makes the connection for me. It then tells me it is connected to K5JRN, so I start sending to him in the normal manner. Each packet I send goes to COL, which acknowledges it to me. COL then sends the packet to DENTON, which acknowledges it back only to COL. Finally, DENTON sends it to K5JRN, which acknowledges it back only to DENTON.

So how did that save any channel resources? Well, it didn't, assuming the channel was clear and all packets made it through. Let's see…

Digipeater: Connect goes to COL, COL repeats to DENTON, DENTON repeats to K5JRN. K5JRN acknowledgment goes to DENTON, DENTON repeats it to COL, and COL repeats it to me. That's 6 transmissions on the channel.

Node: Connect goes to COL, COL acknowledges to me; Connect goes to DENTON, DENTON Acknowledges to COL, DENTON goes to K5JRN, K5JRN acknowledges to

DENTON. That's also 6 transmissions, no advantage there.

Right, but what if the acknowledgment from K5JRN did not make it back? It would take another 6 transmissions to re-try the connect using digipeaters, but it only takes 2 transmissions (another C from DENTON to K5JRN and another acknowledgment back to DENTON) to retry using nodes. The retry operation (which happens a lot on a crowded channel) is what saves channel resources. I always use the node system rather than digipeating wherever it is available, even for only a single hop. Note also, that because the repeat occurs at a far distant node, which is not otherwise accessible directly, it does not interfere with operations on the closer stations.

How do you find out what nodes are available? That's the purpose of the "Node" (or "N") command. Here's a sample dialog, captured from on-air operation recently.

cmd:c col

cmd:*** CONNECTED to COL

###CONNECTED TO NODE COL(N5CXX) CHANNEL A

ENTER COMMAND: B,C,J,N, or Help ?

N

DECATR*   (WD5IWW)   09/15/2012 23:47:07

KC5KZT-7* (KC5KZT)   10/03/2012 15:51:49

N0RQ-7   (N0RQ-10)   11/07/2012 11:24:00

KN6KB-7   (N5DCC-10) 12/02/2013 10:25:21

ANNAKA   (N5VKM)   07/18/2014 16:29:45

GCNODE   (N5VEV)   08/22/2014 08:46:47

Network   (KC5KCT-6) 04/24/2015 10:46:05

Network   (DISABL)   07/17/2015 00:46:18

KN6KB-7   (WA5EC-10) 07/27/2015 03:33:19

KN6KB-7   (KK5XQ-10) 11/15/2015 19:52:37

GCNODE   (KC5LAA)   04/29/2017 20:03:33

W1CFI-7   (W1CFI)   06/22/2017 04:51:43

GCNODE   (WR5GC)   02/23/2018 15:26:40

AD5QR-7   (AD5QR)   08/05/2018 16:28:40

W5IRP-7   (W5IRP-10) 06/17/2019 19:19:35

TARNOD   (K5BS)   07/03/2019 05:18:12

KN6KB-7   (KA5QDG-11) 10/24/2019 10:44:45

ENTER COMMAND: B,C,J,N, or Help ?

Here, we did a Node command to determine what nodes might be in range of N5CXX. As you can see, there are

only 3 that have been heard in 2019. Many others were heard long in the past and may not be active now. Lufkin, Texas City, and Houston are the last 3, all quite a distance away. Possibly conditions were very good those days on 144 MHz. In general, try nodes that have been recently heard for best results. The KN6KB node (KA5QDG in Houston) is interesting because that is the callsign of one of the creators of Winlink. That node is likely connected with Winlink and could be used via manual keyboard commands when propagation conditions are exceptional. W5IRP-10 (located in Lufkin) is also a Winlink node and one night I was able to use it thru the COL node to check for my Winlink mail using manual commands. There will be more about that in the next document.

You may have noticed that the commands available at a node are somewhat like those available on a BBS (but with different functions, of course). Here is what a "help" command gives on COL:

h

ABORT   STOP A CONNECTION IN PROGRESS

B(ye)   NODE WILL DISCONNECT

C(onnect) call CONNECT TO callsign

C call S(tay) STAY CONNECTED TO NODE WHEN END DISCONNECTS

J(heard)   CALLSIGNS WITH DAYSTAMP

J S(hort)   HEARD CALLSIGNS ONLY

J L(ong)   CALLSIGNS WITH DAYSTAMP AND VIAS

N(odes)   HEARD NODE CALLSIGNS WITH DAYSTAMP

N S(hort)   NODE CALLSIGNS ONLY

N L(ong)   NODE CALLSIGNS WITH DAYSTAMP AND VIAS

ENTER COMMAND: B,C,J,N, or Help ?

You can experiment with the various commands to see how they work, once you are connected to the COL node.

There is a lot more that could be written about using your TNC to monitor the channel, view the actual packet header information (great for finding problems), and monitoring packets even while you are connected. But that would fill another entire newsletter, so it will remain a possible future article once more club members are on packet and would like a little more tutorials.

The next installment will deal with the Winlink system, primarily from a user standpoint.

73,
Steve, K6JT

WF5E DX Cluster Now in Plano

[The following was posted on January 6, 2020 on several local email reflectors. Ed]

"We have successfully moved the WF5E Dx Cluster from Midland, TX to my QTH in Plano."

Thank you Joe (W5UA) for [your] continued support and hosting of the cluster for the past several years, and also to Dave Zeph W9PA (ex W9ZRX), who is the backbone system op who maintains the cluster remotely.

Here is what you need to telnet into the cluster:

WF5E DX Cluster:
Node: WF5E
Address: wf5e.no-ip.com.
Port: 23

What software do you need?

- One option is to just use Windows Telnet

- Another great option for your PC is: CC User by VE7CC http://www.bcdxc.org/ve7cc/.

- iPhone App: DXSpot

- Android App: NKCCluster

Here is an informative article with an introduction to DX Clusters and their History.

https://www.hamradiodeluxe.com/blog/Ham-Radio-Deluxe-Newsletter-April-19-2018--Understanding-DX-Clusters.html.

Here is a list of commands to use once you are connected to the cluster.

https://www.mm0zif.org.uk/training-zone/dx-cluster-commands/.

Feel free to email me if you have any questions. This will be a very helpful tool as the Sun spot cycle starts to pull up from the bottom.

73, and Gud DX!
Reid - N5ZT
n5zt@yahoo.com".

First Element of ARISS Next Generation Radio System Readied for Launch on SpaceX CRS-20

During this Holiday Season, when the spirit of giving and receiving gifts reigns high, ARISS received a special gift and delivered a phenomenal gift to the international community. This occurred on Thursday December 19, 2019.

Our international gift to all—students, STEM education, the public and the amateur radio community—was the historic transfer of the first Interoperable Radio System (IORS) flight unit, serial number 1001, to NASA Johnson Space Center for launch on SpaceX CRS-20. The special gift received by ARISS was the approval from NASA Safety to launch the IORS on SpaceX CRS-20 and stow the radio system on the International Space Station. December 19, 2019 was truly a banner day for ARISS!

The IORS is a foundational element of the ARISS next generation radio system and is an incredible engineering achievement by the ARISS hardware team. This first element delivery will support easier radio mode transitions and enable new, exciting capabilities for hams, students and the general public. The IORS will include a higher power radio, an enhanced voice repeater, updated digital packet radio (APRS) capabilities and slow scan television (SSTV) capabilities for both the US and Russian segments. The IORS consists of a special, modified JVCKenwood TM-D710GA transceiver, an AMSAT-developed multi voltage power supply and interconnecting cables.

This first flight IORS will be installed in the ISS Columbus module. A second flight unit is expected to be launched sometime in 2020 for installation in the Russian Service module. A total of 4 flight units and 10 total units will be built by the ARISS hardware team to support on-board flight operations, training, operations planning and hardware testing. Future upgrades and enhancements to the next generation system are in various stages of design & development. These include a repaired Ham Video system (currently planned for launch in mid-to-late 2020), L-band (uplink) repeater, ground command operations capability, LimeSDR signal reception, a microwave "Ham Communicator" and Lunar Gateway prototype experiment.

While the December 19th delivery was truly an historic milestone, it should be noted that there is still much "heavy lifting" work to be done to prepare the IORS for Operations on ISS. ARISS has 92 engineering requirements and our operations Phase III safety review to complete. The space agencies take a position of "Trust but Verify." Thus, these engineering and safety "verifications" all need to be closed out before the IORS can be unstowed and turned on. This

will be the ARISS hardware team's focus over the next few months.

Also, please remember that ARISS is almost entirely run by volunteers. So donations to the ARISS program for next generation hardware developments, operations, education and administrative functions are always welcome. Please go to https://www.ariss.org/donate.html if you want to contribute to our efforts!

In closing, ARISS would like to thank the outstanding contributions of the IORS hardware development team on an incredible radio system. ARISS would like to thank our sponsors and donors for helping us realize the IORS hardware systems. On behalf of the ARISS team, we would like to wish you all a joyful and prosperous Holiday Season — Merry Christmas, Happy Hanukkah, and Happy New Year!!

Ad Astra! To the Stars!

73,
Frank Bauer, KA3HDO
ARISS International Chair
AMSAT V.P. for Human Spaceflight Programs

[ANS thanks Frank Bauer, KA3HDO, AMSAT Vice President - Human Spaceflight and ARISS International Chair for the above information]

Digitally Preview Your Letter-sized Mail

The U. S. Post Office offers a very useful "free" service called "Informed Delivery". The service provides eligible residential consumers with a digital preview of their household's incoming mail scheduled to arrive soon (for letter-sized mail pieces that are processed through USPS automated equipment). Users can view greyscale images of the exterior, address side of incoming mail (not the inside contents) via email or an online dashboard. This is a handy tool to help insure you're getting expected mail such as checks or bills. The service also provides advance notification of Priority Mail packages coming to your home. Check it out at https://informeddelivery.usps.com.

For a great discussion, take a look at
https://www.amateurradio.com/best-regardses-and-73/

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

FEBRUARY

10-14 **School Club Roundup** Objective: To exchange QSO information with club stations that are part of an elementary, middle, high school or college. Sponsored by the ARRL, its Hudson Division Education Task Force and the Long Island Mobile Amateur Radio Club (LIMARC). The event runs from 1300 UTC Monday through 2359 UTC Friday. A station may operate no more than 6 hours in a 24-hour period, and a maximum of 24 hours of the 107 hour event. Details at http://www.arrl.org/school-club-roundup.

15-16 **International DX—CW** Objective: To encourage W/VE stations to expand knowledge of DX propagation on the HF and MF bands, improve operating skills, and improve station capability by creating a competition in which DX stations may only contact W/VE stations. W/VE amateurs: Work as many DX stations in as many DXCC entities as possible on the 160, 80, 40, 20, 15, and 10 meter bands. DX stations: Work as many W/VE stations in as many of the 48 contiguous states and provinces as possible. The event runs 48 hours, from 0000 UTC Saturday through 2359 UTC. Details at http://www.arrl.org/arrl-dx.

MARCH

7-8 **International DX—Phone** Objective: To encourage W/VE stations to expand knowledge of DX propagation on the HF and MF bands, improve operating skills, and improve station capability by creating a competition in which DX stations may only contact W/VE stations.

W/VE amateurs: Work as many DX stations in as many DXCC entities as possible on the 160, 80, 40, 20, 15, and 10 meter bands.

The event runs 48 hours, from 0000 UTC Saturday through 2359 UTC Sunday. Details at http://www.arrl.org/arrl-dx

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
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

Tuesday 28 January 2020
1700 Social   1730 Meeting
Methodist Richardson Medical Ctr At Bush/Renner/Shiloh Intersection
Conference Room A in Hospital Building

NEXT SIGNALS INPUTS DEADLINE:
➔➔➔ 15 February 2020 ⬅⬅⬅