IRVING AMATEUR RADIO CLUB

Serving Amateur Radio Since 1955

WA5CKF REPEATERS: 146.720 - PL 110.9 TSQL 110.9 224.400 - PL110.9 442.675 + PL 110.9 442.375 + PL110.9

March 2024



Our next meeting will be Thursday, 28 March 2024, Senter Park East, 1100 Senter Rd, Irving, TX 75060. We will start the business meeting at 7:00 pm, and club meeting at 7:30 pm. Everyone is invited to all parts of the meeting. Program will be Tom Schuessler N5HYP presenting on VarAC.

President's Corner

Ken Hansen N2VIP

WHEW! What a month - not only did we have a successful hamfest (more on that below and elsewhere in this newsletter), but we just replaced both HF dipoles on top of the Bingo Hall with the B & W Folded Dipole (80 – 10 Meters) and the donated MFJ Cobweb antenna (40 - 6 Meters).



The Hamfest attracted about 400 Attendees. We had 364 admission ticket stubs in the tumbler, but not everyone bothers to put a ticket in the tumbler, they may not be staying long, they may feel they "never win anything" or whatever. We had about 1,400 Raffle ticket stubs in the tumbler as well, and about 50 people shared their club affiliation with us by cutting the coupon off our website or from their club newsletter and getting one additional raffle ticket, so we sold around 425 three-packs of raffle tickets. As for tables, we had a total of 72 tables, with 4 being comp'd (2 for club sales, one for ARRL, one for Radio Testing). The sellers were all very positive, and we had a lot of return sellers - I saw attendees carry a lot of "stuff" out of the event, which is always a good sign. Elsewhere in this newsletter is a more extensive report on the Hamfest, but without any money numbers (the newsletter is public, our finances aren't) – I'll send out a private club-wide report on the hamfest with financial details via email, once I get a chance to double-check my numbers with the invoices and deposit slips..

Inside the club, we are winding down the annual election process, and as you will find elsewhere in this newsletter there is a proposal put forward by a member to amend the club By-Laws – I'll share my thoughts on this only because I won't be able to attend the March Meeting (My mother's 90th Birthday has me driving back to New Jersey yet again.). I have become frustrated with the IARC election process because, as others have noticed, we've seldom had a contested election with almost every position having just one candidate, yet the process spreads over several months. While it is personally frustrating to be discussing club elections for 1/3rd of each year, as a club member pointed out to me recently, "it isn't really that big an effort each of those four months – just a few minutes each meeting." While I won't be able to participate in the conversation at the General meeting, I want to express my desire to keep the club officer election process untouched. While there are areas for improvement in the process, I don't see a pressing need to change the underlying process. The area of improvement I'd like to see – someday - would be around the actual voting process. Going forward, I'd like to offer voters the chance to vote for or against each candidate when a candidate is running unopposed. For example, Let's say I'm the only candidate for Club President in an election. The ballot should allow each member to either vote for me OR vote against me. Of course, then the question becomes what happens if the vote comes out and "Not Ken Hansen" gets more votes than "Ken Hansen"?



President

Ken Hansen N2VIP

Vice-President

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Treasurer

Ron Tabb KC5HPO

Secretary

John Cheyney KF5PFP

Directors

Venzula Mathews KF5PJH Ron Ford KF50MH Billy Geer KA5OZC

Andrew Harmon KD5RKO Newsletter Editor

John Cheyney KF5PFP

General/Business Meeting: 28 March 2024 @ 7:00pm

Weekly Meeting Nets:

7:00 pm each Thursday on the WA5CKF 2m repeater.

Monthly VE Testing:

2nd Saturday of the month, Business Jet Center at Dallas Love Field. Check the IARC Calendar here for more details.

Contact Us

Irvingarc.org P.O. Box 153333 Irving, Texas 75015-3333

Facebook:

https://www.facebook.com/

irvingarc.org

Do I still become President, or do we hold the position open and try to find someone else? A process like this quickly becomes problematic, so the change I might suggest would be to allow club members to either vote for or against an unopposed candidate, but the "against" votes act only as a method for the members to express their support (or lack of support) for a particular candidate... But, as I type this, I think that might not work out as nicely in practice as I imagine it could/should in my head. My opinion is that the election process remain unchanged, but in this matter my opinion carries no more weight than any other member's.

The work party at the Bingo Hall this past weekend went well – John Cheyney and Shane Outlaw did a great job up on the roof taking down the two fan dipoles and putting up the B & W Folded Dipole and MFJ Cobweb antennas. Ron Ford & I (mostly) stayed on the ground supporting John & Shane's efforts "up top". The Cobweb will require more work, but the remote tuner we installed can clean up the SWR. SWR alone is not the metric of success for an antenna, we need to get the folded dipoles that make up the Cobweb closer to resonance on each band.

Speaking of the shack, the clean-out effort continues – we didn't get a chance/didn't remember to remove the items identified as "surplus to our needs" and put them on the club sales table at the Hamfest, so look forward to some sort of club-wide private offer of these items – details are still being discussed among the Club Officers.

Wrapping up, as I write this column, I understand Tom Schuessler will be presenting on a technical topic at this month's meeting (details elsewhere in this newsletter) – we as a club need to really step up our game with regard to Technical Presentations at our meetings. I would encourage anyone with any technical topics they would like to share with their fellow club members to let their desire be known my the club officers, we need one (or more) topics each month. Please, share your knowledge and interests with your fellow club members, we want to know what you're up to!

I'm sorry I wont be at this month's meeting, but I hope you can attend – Tom's presentation should be very interesting.

Hamfest Report

Ken Hansen N2VIP

Overview:

This year's Hamfest was very successful – there were a couple behind-the-scenes issues, but in the eyes of the vendors and the visitors, it was a great success. I measure this success by a very personal metric – my low stress level before, during, and after the event.

Timeline:

We shared our intention to put on the Hamfest with ARRL and CQ Magazine sometime in November, and we hoped to get the club website up by the end of December, 2023. We missed that target, but I think the website was up the first week in January. Within 48 hours, without and publicity, we had our first table reservation.

This year I had two active helpers, Ron Ford, K5HMO and Randy Patterson, KE5JIT. Ron assisted with advertising and promotion on local nets and created an advertisement which we shared with area clubs to include in their newsletter. Randy took on the task of soliciting and organizing the many volunteers needed to put on our event. Their efforts went a long way towards reducing my stress in the months leading up to the Hamfest.



As we neared the date of the event, my workload picked up. Once we hit the online sales deadline on midnight, Thursday March 1st, it was my responsibility to prepare those little envelopes for every online buyer, an exercise that always takes longer than I think. Once the online sales envelopes were done, I headed to the bingo hall where I was joined by about 6 volunteers and after a quick discussion of what needed to happen, we got down to it and less than one hour later the room was ready! That's the fastest we've ever set up, an accomplishment I credit the decision to not drag every unused chair into the old "non-smoking" room (we just stacked them around the room along the wall). Once the room was setup, I could assign tables to vendors. Then I set about assembling the volunteer envelopes, and waited for the vendors to arrive. A couple vendors showed up just after 2:00 AM, but we didn't really see many vendors until 5:30 AM, and pretty much everyone arrived by 7:00 AM. (This has been the norm for years, I am thinking we may move the midnight setup to 4:00 AM, I'm not sure what that would do with the volunteers that help with the "midnight setup"...)

Once the Hamfest started at 8:00 AM, there was a rush of attendees – very few attendees arrived between 7:00 and 8:00 AM to take advantage of early on- site ticket sales...

The hourly door prizes went well, but the novelty of giving away two radios the first three hours didn't seem to have an impact on raffle ticket sales (more on that later), so that experiment will likely not be repeated.

For some reason, every year we need to explain to people how to fill out their raffle tickets – I don't understand it, but there are some that drop the entire ticket in the tumbler, others that separate the two pieces and drop both in the tumbler, and some folks just drop the stub in the bucket with no info on them... We may need to make signage that explains this confusing process to attendees...

Going forward, I think I'll try and assign a "door prize chairman" that will stand with the tumbler and assist people with the ticketing process.

After the final door prize was drawn at 1:00 PM, the effort to restore the room to it's original configuration went amazingly fast. If you've never been part of this process, what we do is before a single table is moved at midnight we mark one corner of every table with red gaffer tape, then when we need to restore the room after the Hamfest, I just instruct the volunteers that we need to slide tables back to their original spots, and then place 2 chairs on each side of every table – the volunteers can then just start moving tables at their own pace without any need for oversight by me, which had the effect of really reducing my stress at the end of the Hamfest.

Before the room was restored, and after the last door prize was awarded, we drew the five names for the special volunteer-only drawing for five (5) \$50 Gift Certificates, either for Ham Radio Outlet or Amazon – the winner chose which.

After the Hamfest, I took the volunteers that helped restore the room to The Wonderful World of Cooking where we had a group meal and discussed the Hamfest, celebrating its success.

Numbers

Ticket Sales 350 Paid Attendees (Est.)

Raffle 3 pack Ticket Sales 450 (est.)

Table Sales 72 (including Comp'd Tables)

Money

Our Event was financially successful, once all expenses are accounted for, an accounting of the money raised will be provided to club members privately in the near future.



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Andrew Harmon KD5RKO
Newsletter Editor

John Cheyney KF5PFP

Proposed By-Laws Change

The following change to the club by-laws is going to be proposed at the next meeting.

To the IARC Board and all members,

The length of time it takes this club to elect officers has been a concern. If there is no more than one candidate nominated for each office (after the nominating committee and nominations from the floor are completed), in the February Club meeting, those individuals shall be declared elected, because no one else was in competition, and will be installed in their office during the March meeting. If there is competition, then the existing process will be followed.

A concern was raised about starting and ending time periods of elected positions if winners are declared earlier than March. Like our government, a person can be elected on one date, and then installed at a later date. The official date for any office is the installed date, not elected date.

Logic says that anyone that volunteered to be a candidate for an office in the club, would consider themselves the best person of those competing for the position, and has their own vote, and if no others are competing for that office, his one vote wins.

I hope that makes sense. I hate to see the delay, effort, resources and time wasted when there is no one else to vote for. There is no doubt as to that outcome.

Regards,

Billy Geer KA5OZC IARC Director (until 3/28/24 meeting)

VarAC, a better way to error free keyboard to keyboard (And more) HF communications.

Tom Schuessler N5HYP

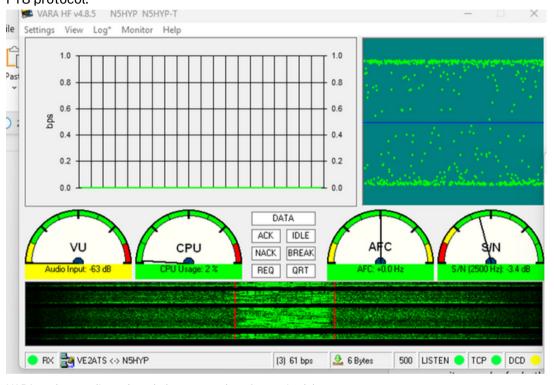
Back in the day, RTTY was the most common way to conduct real time keyboard to keyboard communications over amateur radio, HF frequencies. Physical teletype keyboards and printers were used until the early eighties. Stations might employ frequency shift keying at 170 Hz bandwidth to transmit the 7-bit ASCII code at sometimes full legal limit power levels to get reasonably reliable communications over challenging band conditions. The physical ASCII TTY devices were then replaced by multi-mode controllers that could talk to a computer and generate the FSK or audio inputs to a SSB transmitter to accomplish much more than just RTTY. AMTOR, PACTOR, and Packet over HF grew in popularity. These modes did have some error detection capabilities that caused the receiving station to report the successful receipt of the current data packet before the next one was transmitted. In the case of AMTOR, only a few bits of a word would be sent at a time with the other station sending back a ACK or retry signal. Reliable but slow on even good quality links.

The development of computer soundcards and the availability of either home brew, or commercial audio to rig interfaces spawned the dawn of many new modes. Highly popular by the early 2000's was PSK31 which was, in its simplest form, a two-tone phase shift keying format to transmit keyboard to keyboard communications. If the transmitting station was presenting clean audio out on HF, the bandwidth was quite narrow. Many conversations could take place in a very narrow swath of any HF band. The mode was fast enough that an average typist could keep up with the transmission 31 baud rate. Like RTTY, there was however no error correction and so as signal to noise got poorer, false character decoding could make understanding a conversation quite a challenge. Faster computers and software that began using digital signal processing routines helped, but still it was not reliable for truly accurate communications.



As non-real time communications over HF like Winlink became popular, several digital HF modems were developed and gained popularity to handle more robust error correction providing robust connections even with very low Signal to Noise ratios.

One of these software modems, VARA, developed by Jose Alberto Nieto Ros, 0EA5HVK, has become quite popular for both commercial and Amateur Radio systems. For Amateur Radio, bandwidth limits are in place and encryption is removed). Built on Orthogonal Frequency Division Multiplexing, OFDM, with up to 52 carriers with 42 bps symbol rates and can fit into the 2400 Hz bandwidth that now is inside of the FCCs new bandwidth restrictions for Amateur Radio that just recently replaced the "Symbol Rate" limitations in the rules. The modem can be downloaded and used for free, with the only limitation is that it has a 500 Hz bandwidth limitation. A \$65 license allows the use a full 2300 Hz bandwidth. It uses full error correction and adaptive data bandwidth to provide reliable, but slower data rates, even down to -21 Db, which is equivalent to Joe Taylor's FT8 protocol.

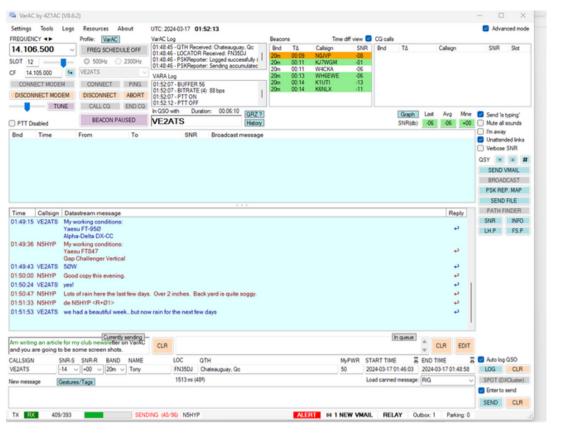


VARA modem sending acknowledgement packets for received data

All this to get to what I really wanted to talk about, which is aanother piece of software called VarAC, HF Chat, written by Irad Deutsch, 4Z1A. The program's subtitle is "HF Chat Reinvented". I agree heartily with that assertion. It has revitalized my enjoyment of sitting down at a keyboard and having a rag chew with someone, like I used to love during the PSK31 heydays, but not having to try and decipher what the other party said when the band faded out. VarAC is not perfect. You can still lose the connection if the band fades, and data rates may slow do a crawl, but you can still make it work.

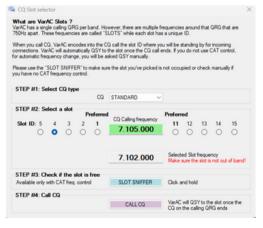
VarAC only works with the VARA modem. You tell VarAC where to look for and launch the modem. Both programs natively install in distinct folders in the root of a Windows C: drive. Launching VarAC will thus launch the modem.





VarAC main chat windows

So how does the chat program work? First a bit of basic theory. You start on a calling frequency, say 14.105 or 7.105. You can send beacons every 10 minutes or so or send out a CQ. When doing a CQ, you are presented first with a dialog that has you pick a CQ type, (Standard, POTA, SOTA, etc.). You then have to pick a "slot" which is one of 10 frequencies, 750 Hz apart, above or below the calling frequency that VarAC will move you to after the CQ call. That dialog has an option to have you listen to or "SNIFF" the potential slot you chose to hear if it is clear.

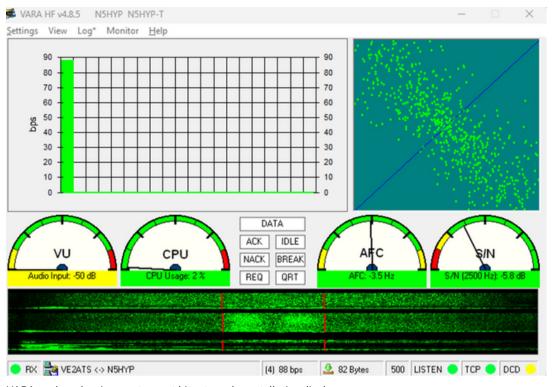


CQ dialog

You cannot hold a chat on the calling frequency. If you do, you will get disconnected after 5 minutes. The slot selection is built into the CQ message. Stations hearing the beacon or CQ messages can click on your call and VarAC will move them to the slot you are waiting for. The modems then negotiate the contact and off you go. VarAC will periodically during a connection broadcast signal reports. If no one responds to your CQ after 5 minutes, you are moved back to the calling frequency.

The VARA modems on each end adaptively adjust the bit rate and the constellation of the 52 carriers in response to Bit Error Rate detection by the other side. It is very interesting to see how at times you might get 12 bps, and at other times even up to 500 bps, or even up to 2000bps as I observed the other day with a good link and in the wide 2300 Hz mode. You cannot CQ or beacon in the wide mode nor should you use wide mode in the standard slots.





VARA modem showing most recent bit rate and constellation display.

Normal connections are one-to-one, peer-to-peer with other stations only able to view the conversation in a "Monitor" window on VARA. There is a mode, "Broadcast", more akin to APRS messages, that allows multiple to participate in a roundtable type of discussion. I have yet to do one of these yet, but it is something that can be done.

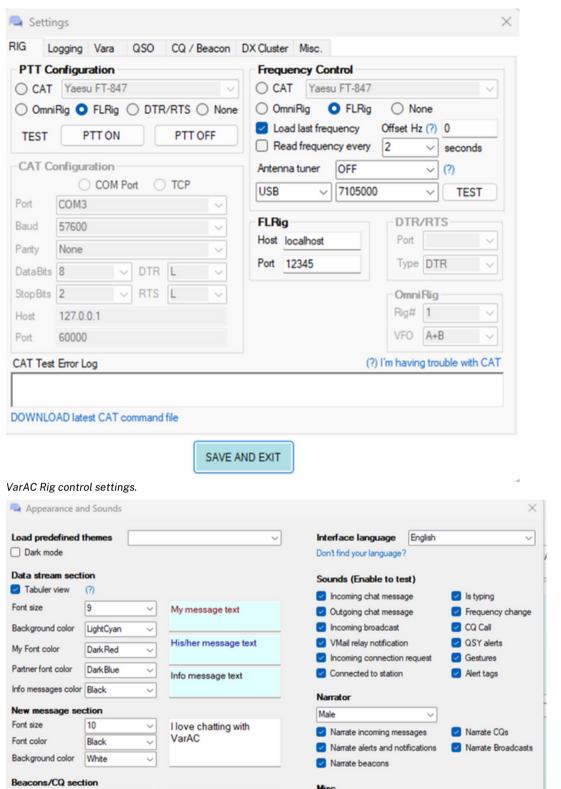
VarAC allows you to send unattended beacons. A connecting station cannot chat with you if you are not physically at the keyboard, but you can leave a short "VMAIL" message that will show up in an inbox in VarAC. If you connect to a station that has VMAIL for you, VarAC retrieves that message and displays it for you. There is also a mechanism for sending a VMAIL to a station that you cannot hear or has not directly answered a direct call. It is called "pathfinder". When you enter a callsign and VarAC sends out a message to see if other stations hear your call, have recently heard that station. That station can then relay the VMAIL when next they hear that distant station.

You can set up alerts for callsigns and the program will notify you with a sound when that call is heard. Those alerts show up in red.

When in conversation, you can also send files and even images. Recommendation is to keep th file size as small as possible. I have a couple of shrunk images less than 7KB in size. Only send files when conditions are good else you might be delivering that 7KB file for an hour. With good conditions, and a high throughput, that 7KIB image will take less than a minute.

The VarAC app has robust options for PTT and CAT rig control that it passes along to the VARA modem. The VARA modem uses these connections and the audio from/to your soundcard interface to communicate through the radio.By doing it this way, VarAC is free to use your regular speaker outputs, as long as they are not the source of the audio to your radio, to make announcements or even read aloud the contents of received messages and text. I have heard a few stations that do not seem to have figured this out and I have heard the VarAC voice or even Windows sounds getting on the air.





VarAC display and sound configuration screen.

White

Black

White

I love chatting with VarAC

I got a new Vmail!

Loot a new Vmail!

(?) Check spelling as you type a message (English only)

SAVE AND CLOSE

Reset to default

Replace "0" with "Ø" in the data stream

Font size

VMails Font size

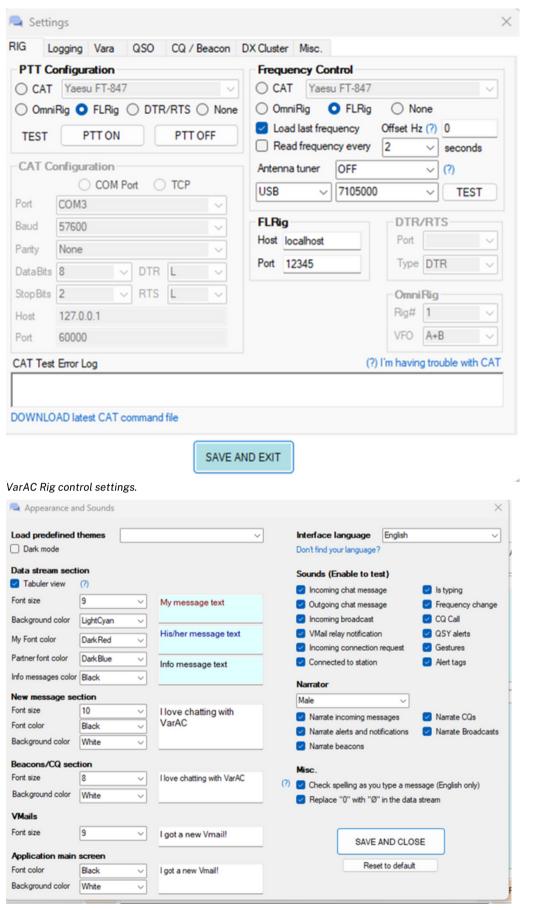
Font color

Background color

Background color

Application main screen





VarAC display and sound configuration screen.

Like other digital modes, you can create some basic "Canned" messages that can be sent at will.

There is also a button that opens a PSK reporter map that looks athe current calling frequency and shows other stations that have heard your beacons or CQs. A handy resource for finding out where your signal is being heard. The image here shows all the stations that heard me using VarAC over the two hour span that I was active on 20 than 40 meters.





PSK Reporter looking at my call

Both the VARA modem and the VarAC application are in constant development and updates are happening on a regular basis. I encourage you to try this mode. The WSJT-X modes are fun, and a great way to score tons of contacts and DX entities, but if you actually like to communicate more than signal strength ad grid square, and have decent keyboard skills, VarAC might just be for you.

I am hoping to be able to show off this mode at the next club meeting. Please plan on coming to find out what it is all about.

73 and hope to meet you on VarAC.

Upcoming Solar Eclipse Events

John Cheyney KF5PFP

On Moday, 8 April 2024, the North Texas area will see a total solar eclipse. This is the last time the Dallas area will be in the path of totality for about 300 years. Totality in our area will be slightly after 1200 Noon (local)

HamSci, an organization that uses amateur radio for citizen-science projects, has a couple of opportunities for amateurs to participate. One of those events is the Solar Eclipse QSO Party (SEQP). This events runs from 1400-2400 UTC (0900 to 1900 local). I am going to open the club shack for operating for part of this, at least across the local totality. I will put out more exact times as we get close. For more information: https://hamsci.org/seqp-rules

Shack Antenna Work

John Cheyney KF5PFP

As Ken mentioned in his notes, we went up on the roof of the shack yesterday (Saturday 23 March) to do some antenna work.

We replaced the two fan dipoles with a single folded dipole. The center of the antenna is on the same mount as the fans and the antenna runs northwest to southeast. Initial reports are very good, with the internal tuner on the IC-7300 adequately tuning the antenna on all the bands we tested.

We also built and installed the MFJ Cobweb. This antenna has an MFJ remote tuner at the base. This antenna needs to be tuned before we use it.

Please thank the team that made this happen:

James Shugart N5BKL Ron Ford KF5OMH Shane Outlaw KI5GBU Ken Hanse N2VIP John Cheyney KF5PFP



February 2024 RACES/ARES Report

Billy Geer KA50ZC

Total number of ARES members: 12

Change since last month: (-) ____ or (+) ____ or same: >__X ____

Local Net Name: Irving RACES/ARES

Total sessions: 5

NTS liaison is maintained with the: DFW Net

Number of ARES drills, tests and training sessions this month: 3

2 Dallas Training 20.0 hrs
1 Irving Training 7.0 hrs
NCTTRAC* Communications Drill at MCLC** 0.5 hrs
Prep time for Drill 5.0 hrs
Monthly Outdoor Warning System Check 3.0 hrs
Admin work (travel time, reports, documenting) 5.0 hrs
*North Central Texas Trauma Regional Advisory Council

** Medical City Las Colinas

Person hours: 40.5

Number of ARES public service events this month: 0

Person hours: 0

Number of ARES emergency operations this month: 0

Person hours: 0

Total number of ARES operations/activations this month: 4

Total Person hours: 40.5

Comments:>

Upcoming Face to Face meeting on March 30

I will be retiring from my positions on March 31, 2024

WA5CKF QSL Cards

John Cheyney KF5PFP

We now have official WA5CKF QSL cards. These can be used for club events like Field Day where the club call is used. They are one the bookshelf along with a couple of rolls of postcard stamps.

If you use them, please put your callsign in the box labeled 'Operator'.





Newsletter Editor

John Cheyney KF5PFP

I would like to turn over the newsletter to a new editor. If you are interested in taking over please contact me at jjcheyn@gmail.com.



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Billy Geer KA5OZC
Andrew Harmon KD5RKO
Newsletter Editor

John Cheyney KF5PFP

February 2024 Meeting Minutes

John Cheyney KF5PFP, Club Secretary IARC February 2024 Meeting Senter East Park, Irving, Texas 22 February 2024

Officers Present:

President Ken Hansen N2VIP
Secretary John Cheyney KF5PFP
Treasurer Ron Tabb KC5HPO
Director Billy Geer KA5OZC
Director Andrew Harmon KD5RKO
Director Ron Ford KF5OMH

Business Meeting:

Call to Order 1909 by Ken Hansen N2VIP There were 15 members and 1 guest

Concerns

Bill Byrom N5BB headed back to California to see his brother.

Tom and Holly Schuessler are both at home sick

Pledge: Ken Hansen N2VIP Prayer: John Moss KI5WRQ

New Member Vote Rod Mauro K2RDM Heath Muller KI5MRC Joseph Rodgers N5WY Motion to accept: Billy

Motion to accept: Billy Geer KA5OZC Second: Jerry Aberdeen KB3RWT

Unanimous

Minutes from previous meeting were posted in the Newsletter

Motion to accept: Ron Ford KF5OMH Second: Shane Outlaw KI5GBU Unanimous

Treasurer report from Ron Tabb KC5HPO Motion to approve: Billy Geer KA5OZC

Second: John Moss KI5WRQ

Unanimous

Microgrant Update: We have had multiple applicants. A couple have been approved but some were asked for more information.

Repeater Update: A D-STAR repeater was put up on the second 440 MHz pair just before the holiday. Ken is looking to get the D-STAR functionality working. The repeater is on the air for voice.

Scholarship: We are waiting for Irving Schools foundation to send us more students who better meet our requirements.



Hamfest:

Currently sold 50 of 70 tables. Sold a small number of admission presales. Also sold a lot of raffle tickets. Still need volunteers for the midnight set-up.

There will be a drawing for volunteers only. There will be 5 HRO or Amazon gift certificates for volunteers.

Siren test: Six people participated, all the sirens work except one.

VE testing: Three people tested. All passed.

RACES/ARES: No one set to take over when Billy Geer KA5OZC leaves at the end of March.

Request for expenditures

- 1. Bandpass filters. After WFD members felt like they would have been useful. Ken Hanse N2VIP has found filters for 40/20/15/10 to be used for contests only. \$120 each for the filters rated at 200w. Ken has requested \$600 dollars to include the cost of jumpers.
 - a. Motion: Billy Geer KA5OZC
 - b. Second: Ron Ford KF50MH
- 2. Remote tuner for the cobweb. Plan is to put that up at the March Open Shack day. This would sit up on the mast and tune whatever radio that hooks up to it. Approve up to \$600 for remote tuner
 - a. Jerry Aberdeen KB3RWT
 - b. Lyle Baker AI5NO

Shack update: John Cheyney KF5PFP Will look at QSL cards for the club.

Foxhunting: We have four tubs of equipment at the shack full of foxhunting. Also have two boxes of antennas. The way most clubs do it now is they put the fox out for the weekend and people can hunt it over that time period. Someone needs to take this on as an event. Shane Outlaw KI5GBU will take a look at it.

Future meeting ideas:

March 2024: VaraC by Tom Schuessler N5HYP

Elections:

Nominating Committee Slate Two candidates for Director Jobs Barry MacGregor N5SMW Shane Outlaw KI5GBU

John Cheyney KF5PFP will run for Secretary

Kim Bacak N5VUJ for Treasurer

Nominations from floor. None

Elections Ron Ford KF50MH will manage the online voting. Voting is online only.

Billy Geer KA5OZC will work on a proposal to change the bylaws so that if there is only one nomination they can be elected by acclamation. He will put together a proposal and provide it to the club Secretary for review.

Motion to Adjourn: KA5OZC

Second: KB3RWT Unanimous @ 2104

Submitted by IARC Secretary John Cheyney KF5PFP.



President

Ken Hansen N2VIP
Vice-President
Bill Byrom N5BB
-

Treasurer

Ron Tabb KC5HPO

Secretary

John Cheyney KF5PFP

Directors

Venzula Mathews KF5PJH Ron Ford KF5OMH Billy Geer KA5OZC Andrew Harmon KD5RKO

Newsletter Editor
John Cheyney KF5PFP