



## From the NCARC President

*Joe Hawley KDØTYU*  
[president@ncarc.net](mailto:president@ncarc.net)

Welcome the Northern Colorado amateur radio club to summer. Don't you think it's been a little hot? I'm certainly glad we waited on some of these things until September and I'm proud to announce our schedule for the next couple of months here. On August 23<sup>rd</sup>, 6:00 PM, we're having a test session for all categories from technician through amateur extra. If you're interested, please go to our website and sign up. The testing session is a no-cost event. I hope to see you there.

Our next special event will be on September 10<sup>th</sup>, 10:00 AM at the Dwayne Webster Veterans Park Shelter 2. The event should be a fantastic one for people interested in HF. I am particularly interested in this presentation because I had to go into it with little help, so I'm using this as a platform to help everyone out so they don't have to go through what I did. We start with a short presentation on etiquette, courtesy, and spotter networks. Then you will have the opportunity to see and use various HF stations we will have set up around the pavilion. I think this is a great opportunity for anyone interested in HF.

Last but not least is September 17<sup>th</sup>, our annual NCARC picnic. The picnic will be at Fossil Creek Park at the Lake Pavilion, the same one we had last year. More information on how to get there will be on the website shortly.

I thank everybody for participating in the seminars, classes, and club events. If there's anything we can do to help you set up equipment, maybe pick the right equipment, please let us know. We're here to help you, and thanks for supporting NCARC.

## Public Affairs Office

*Dave Winnett WØDDZ*  
[pao@ncarc.net](mailto:pao@ncarc.net)

Numbers as of July 12, 2022

### YouTube

Views (last 28 days): 1,246  
Watch time (hours, last 28 days): 167.3  
Subscribers: 2,308  
New Subscribers (last 28 days): 12

### Facebook

Members: 508  
New Members: 0



## Club Meeting and Speakers

Saturday, August 20, 2022

**9:00 am** socialize, **9:30 am** club meeting

**LIVE and IN PERSON** at  
The Golden Corral  
1360 Sculptor Dr, Loveland CO 80537

*PLUS*

Zoom streaming  
All members will receive a link to the online broadcast

If you don't receive a link by Friday before the meeting, please email [treasurer@ncarc.net](mailto:treasurer@ncarc.net)

You choose what you feel comfortable doing: attend in person or online.

**Topics:**

**More Stealth Antennas**  
**Glenn Elmore N6GN**

and

**Stealth Antennas in a Townhouse**  
**Mark Buchanan AEØDJ**

**Next meeting:**

**September 17, 2022**

**Club Picnic at Fossil Creek Park, Fort Collins, 12:00 pm to 3:00 pm**

# Treasurer's Report

Darren Kalmbach KCØZIE

[treasurer@ncarc.net](mailto:treasurer@ncarc.net)

July 2022

Account	Checking	Raffle	Savings	PayPal	Total
Beginning Balance	\$2,898	\$2,329	\$1,109	\$9,175	\$15,511
Deposits	\$0	\$0	\$0	\$82	\$82
Transfers	\$0	\$0	\$0	\$0	\$0
Withdrawals	\$591	\$0	\$0	\$1,533	\$2,123
Ending Balance	\$2,307	\$2,329	\$1,109	\$7,724	\$13,469
Outstanding Items	-\$413	\$0	\$0	\$0	-\$413
Net Balance	\$1,894	\$2,329	\$1,109	\$7,724	\$13,056
Net Change	-\$591	\$0	\$0	-\$1,451	-\$2,041

Project	August	Previous	Total	Budget
RTCM Purchase	-\$1,529.75	\$0.00	\$1,529.75	\$1,650.00

**Expenses:** Storage, Field Day, Picnic, cable, bricks, BMS, RTCM

**Revenue:** Memberships

## Membership Activity:

July 2022: 226 (3 new)

July 2021: 252

## Get the Goods!

The [NCARC Store](http://www.ncarc.net/?q=node/424) is open for business! We have stickers, t-shirts, patches, water bottles and keychains. We still have monogrammed clothing too.

<http://www.ncarc.net/?q=node/424>

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## Tech Report

**James Cizek, KIØKN**

[techchair@ncarc.net](mailto:techchair@ncarc.net)

**August 2022**

### Horsetooth

The new 447.275 repeater was installed a few weeks ago and seems to be doing much better. It's now set at about 65 watts, and I've received reports that the signal is much better. As soon as the new 60 GHz link radios come in, we'll be scheduling a little work party up there to replace those and help us free up a few 5 GHz frequencies.

### Buckhorn

By the time you read this note, Buckhorn West should have both of its microwave radios converted to fiber optic cable which will eliminate the blips we get on the Ethernet cable from the high-power FM broadcasters. This will be most noticeable to our repeater users when using any linked repeaters (like Grover, or during SkyWarn activations). It will also eliminate dropouts anytime Buckhorn is linked to any other repeater in our system or our partner clubs' systems.

### UNC

We've had quite a ride with the UNC setup. We had just installed the microwave link between UNC and the Weld EOC facility and were in process of moving our dishes to a new Rohn "Gravity mount" that was donated to us. The existing mount has an obstructed path to Buckhorn and our signal isn't very strong. UNC was in the process of re-roofing the building when we got there. We made arrangements with their crew to hold off on our work until they were done. In the process, the roofing crew threw our new antenna mount in the trash. We are still working through negotiations about how to resolve that but hope to have a path forward soon to improve the microwave links at that site. More to come!

### Sterling and Red Feather

Negotiations continue and we'll keep you updated as news develops!

### CSU

Ironically, CSU put a new roof on the building that all the CSU repeaters (and a large HUB site of NCARC microwave gear) live at. During the re-roof, they did about \$3000 in damage to the equipment. Fortunately for NCARC, the only damage to club owned gear was a single Ethernet cable that was easily re-run and replaced. The CSU Club gear was not as lucky. I've gotten most everything glued back together there with donations from myself and other generous hams.

### On a side note

Thank you all for supporting the decision to replace a few of our shorter microwave links with 60 GHz gear. For those that wrote in with questions or concerns, here are a couple answers.

#### 1) *Why 60 GHz unlicensed and not a Ham Band?*

This one is simple. The only commercially available microwave gear in the ham bands is in the 3 GHz, and 5 GHz bands. We just recently lost the 3 GHz band so it only leaves 5 GHz and we've saturated it. I don't place homebrew gear at repeater sites that are either a) shared with commercial users or b) hard to get to at ANY time of the year. That pretty much means commercial gear. The 60 GHz was chosen over other bands (like 24 GHz) for its cost. It's far cheaper than other unlicensed band gear.

#### 2) *What about rain/snow fade?*

You are right to question this one as 60 GHz is very susceptible to falling moisture. What's the way around this? We build a HUGE overhead into the link budget that can withstand it. The links we proposed, and you funded, have a 32 db and 21 db headroom beyond the calculated signal strength in the worst-case modeled moisture situation. These are designed to go much farther than we are using them, so they will excel in this shorter hop. RMHAM has these links in place at other sites (and has for more than a year) and they have proven extremely reliable.

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## Membership Renewal/Encourage a New Member to Join

Please renew your membership by going [here](#) on our website and either:

- Fill out and complete the on-line PayPal form
- or
- Download, print, fill out and mail in the [registration form](#) along with your check

### Tips from Mike Hickerson

Is it a good idea to make a file for preserving the serial numbers for all RT Systems programming software? You bet it is. Here is what happened to me when I was going through all the programs I have.

I came up missing one CD for one of my radios. I have the program installed on a computer but wanted to have a backup. I couldn't find the CD. It had disappeared. I have the serial number recorded in a special file just for RT Systems software. I highlighted and copied that serial number. I called tech support and was given the following instructions.

Use the highlight and copy function for the appropriate software. Go to the RT Systems web page. On the function bar, click on "DOWNLOAD" button. Enter the email address associated with your registration that you used when you registered your version. Then in the next box, paste the serial number, then click on "Download". Observe the extreme lower left corner on your screen for download progress. The application file will then be in the "Download" folder for your computer. Save that file where it will be safe along with the serial number. You can now use that file to re-install that version of the software for your radio.

### From *CQ Magazine*: "Thinking of Buying an EV? Watch out for QRM"

*Radio World Magazine* reported that AM radio interference is so bad in some electric vehicles that vehicle manufacturers are simply not including AM radios in their cars. The takeaway from the article is for Hams, especially those who do HF mobile, to check out vehicle EMI when considering an EV purchase. For more information, see Page 27 in the July 2022 issue.

### Obituary

Steve Jackson, KDØUJK, President of the Weld Amateur Radio Society (WARS), died on Aug 16, 2022. No further details are available at this time.

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## Upcoming Ham Radio Events

**NCARC FCC Amateur radio testing session:** Aug 23, 2022, 6:00 pm. Sign up [here](#).

**Denver Radio Club Hamfest:** Aug 28, 2022, 9:00 am to 1:00 pm. For more info click [here](#).

**Colorado QSO Party:** Sep 3 7:00 am to Sep 4 10:00 pm, 2022. For more info click [here](#).

**NCARC Hamlet Class:** Sep 10, 2022, 10:00 am. Dwayne Webster Veterans Park, Loveland. Sign up [here](#).

**NCARC Picnic:** Sep 17, 2022, 12:00 pm to 3:00 pm. Fossil Creek Park, Lake Pavilion, Fort Collins. The club will supply the burgers, hot dogs, chips and drinks, and if you'd like, you can bring a dish to share with everyone.

**Equinox Marathon:** Sep 18, 2022. Contact Marty KC0QOK 970-219-6768

**QSO Today Virtual Ham Expo:** Sep 17 – 18, 2022. [See here for information](#).

**BARCfest Ham Radio and Electronics Garage Sale:** Oct 2, 2022, 8:00 am. Boulder County Fairgrounds. For more info click [here](#).

**ARRL Rocky Mountain Division Convention:** Oct 7 to 9, 2022. For more info click [here](#).

**Blue Sky Marathon:** Oct 15, 2022. Contact Darren, KC0ZIE

**NCARC HamFest:** Jan 21, 2023. Loveland, CO

### From the Editor

*Ann Donoghue KØARD*  
[newsletter@ncarc.net](mailto:newsletter@ncarc.net)

I hope your summer is going well. The Ham Radio events calendar is really filling up for this fall – lots of things to do.

I'm very excited about the HF Hamlet class, really looking forward to getting into HF! Hope to see you there!