

Northern Colorado Amateur Radio Club

P.O. Box 272956

Fort Collins, CO 80527-2956

The Tribander

The monthly Newsletter of the Northern Colorado Amateur Radio Club

**Club Meetings are held on the 3rd Saturday of each month
At the Golden Corral, 901 E. Harmony Rd, Fort Collins, CO.**

All are welcome and encouraged to attend.

**Bring yourself and your appetite at 8:00 am.
The Meeting begins at 9:00 am.**

NCARC Club Information

Club Officers

President	Dan Magro	W7RF	(970)295-4200	w7rf@radiodan.com
Vice President	Tom Jungmeyer	K1TJ	(970)484-8329	tom@completetowing.com
Secretary	Dave Langenberg	KC9FOO	(773)612-8435	dave@thelangenbergs.com
Treasurer Membership Chair	Willis Whatley	WA5VRL	(970)407-6599	whatley@frii.com
Interference Coordinator	Larry Arave	W7LRY	(970)206-1281	larv@outdrs.net
Newsletter	Chris Howard	W0EP	(970)493-2309	chris@yipyap.com
Technical Chair	Eric Slutz	N0EAS	(970)282-3752	eric@redginger.com
Hamfest Chair	Matt Kassawara	KG0W	(970)433-2123	battery@writeme.com

NCARC Repeaters

W0UPS: 145.115 MHz – (144.515 MHz Input) 100 Hz CTCSS Subtone (1* on, 0* off) Autopatch Echolink Node 4236 (40-32.926N, 105-11.898W, 7229 ft) Horsetooth Mountain, west of Fort Collins, CO
W0UPS: 447.275 MHz – (442.275 MHz input) 100 Hz CTCSS Subtone Autopatch (40-32.926N, 105-11.898W, 7229 ft) Horsetooth Mountain, west of Fort Collins, CO
W0UPS: 224.520 MHz – (222.920 MHz input) 100 Hz CTCSS Subtone (40-32.926N, 105-11.898W, 7229 ft) Horsetooth Mountain, west of Fort Collins, CO
W0UPS: 146.625 MHz – (146.025 MHz Input) 100 Hz CTCSS Subtone (40-50.266N, 105-3.017W, 5600 ft) SW of the Rawhide Power Plant, 17.5 miles north of Fort Collins, CO
W0UPS: 146.850 MHz – (146.250 MHz Input) 100 Hz CTCSS Subtone (1* on, 0* off) (40-18.310N, 104-35.884 W, about 4985 ft) SE of Greeley, CO New location
W0UPS-5: 144.390 MHz – APRS Digital Repeater (40-32.926N, 105-11.898W, about 7229 ft) Horsetooth Mountain, west of Fort Collins, CO
W0UPS: 448.025 MHz – (443.025 MHz Input) 100 Hz CTCSS Subtone ARES Rptr (40-26.650N, 104-59.370W, about 5192 ft) Budweiser Event Center on I-25 at MM259

Nets

ARES District 10 Information Net	Thursday	7:00 pm	145.115 MHz
ARES Statewide Net	Sunday	8:30 pm	145.310 MHz
Central Colorado Traffic Net	Daily	7:30 pm	145.310 MHz
220 MHz Informal Net	Monday	7:00 pm	224.520 MHz
Tech Net	Wednesday	7:00 pm	145.115 MHz

Web Page

<http://www.ncarc.net>

Notice: NCARC Name Badges are available for only \$10 each.

Just send your name; as you want it on your badge to **W5WIW** Willie Williams, 434 Magnolia Ct, Eaton, CO 80615, W.I.Williams@msn.com. It can be your full name, your first name, or your nickname and your call sign. Mail your payment for the Name Badge(s) to the NCARC P.O. Box (or bring it to the club meeting) and allow 3 to 4 weeks for processing. To view a sample of the name badges, just come to the club meeting. Willie also has shirts, patches, mugs, caps, jackets and other NCARC goodies available.

Minutes: NCARC Meeting**May 16, 2009**

Location: Golden Corral Harmony Rd, Ft. Collins

Called to order by Dan w7rf at 9:04 AM 19 in attendance

Our regular secretary was out of town so your newsletter editor took notes.

Tech Report : Eric – working on repeaters, rolling out new kenwood repeater.
Ft. Collins Marathon – used CSU repeater and NCARC Rawhide repeater

Field Day: Chris – two choices for site. #1 choice is Home Depot on Lemay north of Mulberry in Fort Collins. #2 choice is Colorado Welcome Center at Prospect and I-25. We will start at 8am on Saturday the 27th for setup.

Hamcon upcoming, Boyd Lake Picnic in September upcoming
2mtr Yagi Project: Dan – he is working on the materials list

Field Day

I've been working on solidifying our location at Home Depot. Willie is lined up to bring his radio-active RV. We had some good comments and ideas at the meeting in May and hope to hear more at the June meeting. I will have a sign-up sheet at the June meeting to fill time slots: setup, on the air, and take down. Bring your ideas to the meeting or send them to me via email: chris@yipyp.com or w0ep@arrl.net

Summer Pizza Bash

Monday June 15th at 5:30 pm at Woody's Wood Fired Pizza, 518 W. Laurel, Fort Collins. All NCARC members, spouses, families and guests invited. For further information contact OJ (k0oj). Woody's is a pizza buffet, and Monday is their weekly all-you-can-eat deal if you buy a soft drink also.

K0OJ Testing Session for June Canceled

Due to other radio operations on the scheduled day, the every-other-monthly Greeley VE testing session for June has been canceled. Next Greeley VE testing session will be in August – k0oj via email

Cast For Kids

Event date: Saturday, June 6, 2009. Contact Rick, w0rcy if you would like to help.

Hams are needed for coordination, getting things and volunteers where they are needed, and a few on boats. We do no lifting, and as little work as possible. (If we are working, we aren't communicating.)

Editors Notes

Last weekend, May 29-31 was the Hamcon Colorado / ARRL Rocky Mountain Division convention at the convention center (Holiday Inn) up in Estes Park. This event last happened in 2006, but 2003 was the only time I had gone before. I went up on Friday and stayed through Saturday. They also had some activities on Sunday, on which I missed out.

Friday I went to a very interesting presentation on VHF/UHF operating moderated by Ken Anderson (w0ett). Later in the evening there were addresses from ARRL Director Brian Milesosky (n5zgt) and ARRL COO Harold Kramer (wj1b). I also operated a little bit at the special event station W1AW/0.

On Saturday I attended presentations on "Remote Control of your Amateur Radio Station via the Internet" by Bill McCaa (k0rz); "QRP Forum" by Al Dawkins (k0frp) and Dick Schneider (ab0cd); "Software Defined Radios: An Architectural Viewpoint" by Gerald Youngblood (k5sdr) President of FlexRadio Systems; "ARRL Open Forum"; "The Doctor is In – Power Line Noise" by Mike Gruber (w1mg) ARRL EMC Engineer; "Test Equipment for Amateur Radio" by Bob Witte (k0nr); and "Using Homebrew and Simple Test Equipment To Measure Receiver Specifications" by Steve Finch (ai0w).

It was a full day! And, I learned a lot of interesting stuff. It will be four years (2013) before this event comes back around and I encourage you to attend if you can.

Station System Design Parameters – Dan Magro w7rf

Define your objective

DX, Ragchew, contest, experiment?

Antennas

Vertical – low angle of radiation for DX, ground mount MUST use 30+ radials, elevated mount use 2-4 radials tuned per band

Beam – gain, directivity

Dipole – highly efficient and simple, try for at least ½ wave high for lowest band of operation

Loop (horizontal) – great all around performer

Feedline

RG213 – great for HF and 6M antennas

LMR400 – great for very long HF or up to 100 feet for VHF/UHF

Ladder Line – great for HF low loss, multiband operation with long runs

Tuner/Antenna Switch

For ladder lines, use TRUE BALANCED TUNER! Send output to coax tuner or antenna switch

Grounding/lightning protection

Use ground rods and braid or copper strap to ground all equipment

Use ICE lightning arrestors

Have coaxial cables touch ground before coming back up to enter station

Where to use a balun

Whenever you do not want common mode feedline radiation and to preserve radiation pattern

Whatever you decide, put some effort into your station antennas.

The more effort you put into the antenna system, the more you will get from it.

Don't just shoot for a "signal", shoot for a great signal!

Experiment and try different things for you location. Ask those who have done what you want to do for help. Have more than one antenna for the same band(s).

For some

DXWIN – general logging(\$90)

N3FJP – contest logging software (\$35 for an entire suite of programs)

DX MONITOR – great program for watching DX packet cluster (\$30)

MINIPROP – W6EL's propagation prediction program (free)

GET ON THE AIR!

Kid's Day – Saturday June 20 – Eaton, CO

Again this year Willie and Jerry will be doing Kid's Day in Eaton using their RV setup. If you would like to help out contact Willie (his email address is above). Given the report from last year, I'd say you should expect to have some fun.

It Seems to Us: Coexistence

David Sumner, K1ZZ ARRL Chief Executive Officer , June 01, 2009 (From www.arrl.org)

As one of the oldest incumbent radio services, Amateur Radio is constantly on the defensive. We are hardly alone. Consider broadcasting, for example. After the 1947 Atlantic City Radio Conferences the bands 470-585 and 610-940 MHz were allocated exclusively to broadcasting, worldwide -- and with additional regional allocations (585-610 MHz in Region 2) to boot. With the completion of the transition to digital television this month, the frequencies in this range that remain available to US broadcasters have been whittled down to 470-608 and 614-698 MHz, with one or two 6-MHz channels in the 470-512 MHz band also used by land mobile in a number of metropolitan areas. Broadcasting has lost about half of its allocations in this valuable part of the spectrum. In addition, wireless microphones and similar low-power devices have had the use of vacant TV channels for years, and these channels -- so-called "white spaces" -- soon will be used for broadband data services as well.

The amateur service arguably has fared a bit better, although we are secondary in our three allocated bands between 420 and 1300 MHz. We lost 1215-1240 MHz in 1979 but picked up a whole new band at 902-928 MHz. These bands have other occupants, and some of them are primary. We are obliged to not interfere with the primary services and we must accept whatever interference their operations may cause to us, but we still get a lot of use out of them.

Of the three, the 420-450 MHz (70 cm) band is by far the most popular among amateurs. In a 2003 survey, half of the respondents who were active said they used the band. There are more than 8,000 FM, digital and television repeaters operating on 70 cm, along with simplex FM, satellite, and weak signal operators using CW, SSB and a variety of digital modes.

Historically we have managed to coexist with military radars, although recent upgrades to the Pave Paws installation at Beale AFB have created some issues for repeater operators in northern California. Wind profiler radars, which beam straight up to measure wind speed and direction as a function of time and altitude, were engineered into the upper 2 MHz of the band several years ago and will be coming on line as NOAA funding permits. The federal government also operates a secure spread spectrum network, the Enhanced Position Location Reporting System (EPLRS), in the band.

The 420-450 MHz band has been a popular target for a variety of unlicensed, low-power devices. As a licensed service we enjoy priority over them, so while they can be a nuisance (particularly when the devices are designed for use in Europe or elsewhere and do not conform to the FCC regulations) they have not posed too much of a regulatory threat. When a regulatory threat does arise, normally we can count on being joined in opposition by the federal agencies that also use the band.

Not every proposed use of the 420-450 MHz poses an equal threat. We already share the band, and some potential sharing partners are more compatible than others. A compatible sharing partner may actually strengthen our position against subsequent proposals.

We should consider a current FCC rulemaking proceeding, ET Docket No. 09-36, in that light. In response to a petition filed by the Alfred Mann Foundation, a leading medical research organization, the FCC is seeking comment on the feasibility of allowing up to 24 MHz of spectrum between 413 and 457 MHz to be used on a secondary basis as part of the Medical Data Radiocommunication Service in Part 95 of the FCC rules.

The desirability of the Mann Foundation's objective is beyond dispute. Their researchers have developed a wireless medical micro-power network to tie together tiny devices implanted in victims of paralysis, creating an artificial nervous system to restore sensation, mobility, and function to paralyzed limbs and organs. The Mann Foundation argues that the frequency range just above 400 MHz is optimum for their application, which requires no more than 1 milliwatt of RF spread across about 5 MHz of bandwidth. However, recognizing the presence of a variety of incumbent radio services in that range, specifically including the amateur service, they have proposed four channels for flexibility in avoiding localized interference. Two of the four channels are 426-432 and 438-444 MHz; the other two are above and below the 420-450 MHz band.

The FCC's proposed rules raise two concerns. First and foremost, the devices would be required to accept interference only from stations authorized to operate on a primary basis. The Mann Foundation has assured us that amateur stations will not cause its system to malfunction, so we see no reason why this cannot be reflected in the rules even though our allocation is on a secondary basis. Second, while the Mann Foundation researchers appear to have done their homework, others who try to take advantage of the new rules may not be as rigorous.

The FCC is allowing 90 days for public comment after publication of the Notice of Proposed Rulemaking (NPRM) in the Federal Register. Of course, the ARRL will be filing comments; members are welcome to share their thoughts with us for possible inclusion in the League's submission. You also may file comments directly with the FCC as individuals or clubs -- but if you do, please read the NPRM first and respond to the questions that the Commission has posed. Form letters and expressions of opposition without anything to back them up will serve no useful purpose when weighed against the hopes and dreams of paralyzed veterans.

AMSAT NEWS SERVICE

ANS-151

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor@amsat.org

SB SAT @ AMSAT \$ANS-151.2

Satellite info

AMSAT News Service Bulletin 151.2

From AMSAT HQ SILVER SPRING, MD.

May 31, 2009

To All RADIO AMATEURS

BID: \$ANS-151.2

AO-51 will be configured for Field Day with dual repeaters, 1268.700/435.150 and 145.920/435.300. No PL tone is required. Please note that the 435.150 downlink is left hand circular polarized, and the 435.300 transmitter is right hand circular polarized. This configuration will be available for the week preceding Field Day, through the Field Day weekend (June 22nd-28th, 2009).

...

Commemorating the 40th year anniversary of the Apollo 11 landing on the moon July 20th, 1969, many large commercial dishes worldwide will be active "on the air" on 23 CM on the weekend of June 26th (Field Day weekend). At present there are many very large commercial dishes as well as many Amateur radio dishes that will be activated on SSB and CW.

Some of the larger dishes will make a two way QSO between small Mode "L" satellite stations possible. The Stanford 150' dish will be participating using various calls, including W6TE. A list of participating dishes will follow.

W6TE will be on the air and testing the Big Stanford dish at various times... call for possible schedule (559) 260-5511 cell) 73,

[ANS thanks Dave Smith, W6TE and the Echoes of Apollo Event Team for the above information]

(items from AMSAT Newsletter courtesy of www.qrz.com)



Northern Colorado Amateur Radio Club Information/Application Form



- I would like more information on Amateur Radio.
- I want to join the NCARC. My payment is enclosed.
- I want to renew my membership. My payment is enclosed.

Annual Dues:
Family Membership: \$25.00
Full Time Students: \$5.00

BEFORE FILLING THIS OUT, READ THIS MESSAGE -----
↓

Name: _____

Callsign: _____

Street: _____

City: _____

State: _____

Zip: _____

Telephone: _____

License Class: _____

E-mail Address: _____

You only need to fill in your name or callsign and anything that has changed. Any items left blank will be assumed to be correct in the NCARC database.

If you would like to receive the newsletter by E-mail, please indicate so here.
←

Receive Newsletter by E-mail? YES NO

Student? YES NO

ARRL Member? YES NO

Please mail this form to: NCARC
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