

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	Steve Henry	N7GN	(970)226-2817	n7gn@arrl.net
Vice President	Bill Beach	K0UT	(970)224-1958	k0ut@earthlink.net
Secretary	Dave Langenberg	KC9FOO	(773)612-8435	dave@thelangenbergs.com
Treasurer Membership Chair	Willis Whatley	WA5VRL	(970)407-6599	whatley@frii.com
Interference Coordinator	Mike Bates	N7DQ	(970)219-3225	n7dq@comcast.net
Newsletter	Willis Whatley	WA5VRL	(970)407-6599	whatley@frii.com
Technical Chair	Dan Magro	W7RF	(970)295-4200	w7rf@radiodan.com
Hamfest Chair	Matt Kassawara	KG0W	(307)220-3110	battery@write.me

NCARC Repeaters

W0UPS: 145.115 MHz – (144.515 MHz Input) 100 Hz CTCSS Subtone (1* on, 0* off) Autopatch (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 IRLP 3902 (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) (40-25.341N, 104-44.182 W) Greeley, CO
W0UPS-5: 144.390 MHz – APRS Digital Repeater (40-32.926N, 105-11.898W, about 7229 ft) Horsetooth Mountain, west of Fort Collins, CO

Nets

ARES District 10 Information Net	Wednesday	9:00 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
Tech Net	Wednesday	7:00 pm	145.115 MHz

Web Page

<http://www.ncarc.net>

New and renewing members for the current month: ACOCH – Tom W0DWI – Dwight KB0PJM – Gerry N0LZR – Richard WA0YJM – John N0MFW – Alan W0XYZ – Dennis W0JIM – Jim W0LEF – Gary N0MCR – Roger WB0TSX – Ted N7MR – Michael AB0SF – George
 Another good month... **The NCARC thanks you for your support.**

TECH NET

This is a reminder that the 145.115 TECH NET is held on **Wednesday evening at 07:00 PM.**
 It is hosted by **N0W1Q, Kerry.** All amateur radio operators (with 2M privileges) are welcome to check in.
 It is an open forum net with Questions, Answers and Topics of interest.
 If the 145.115 repeater is not available, the net will be held on the 447.275 repeater

220 MHz Net

There is an informal net that is being held every Thursday evening at 7:00 pm on the 224.520 Repeater.
 This is the newest **W0UPS** machine
 located at the Horsetooth Mountain site along with the 145.115 and 447.275 NCARC Repeaters.
 This repeater uses the standard offset for the 220 MHz band (input on 222.920) and a 100 Hz CTCSS.
 Hosted by **KG6TDB**, the topics will change each week and all licensed operators are invited to check in.
 For those who are interested, it also features IRLP capability (it is node 3902).

Local Area Swaplists:

For those who can not wait or can not attend the area swapmeets, below are the websites for some of the regional swaplists found on the internet. These are updated weekly.

Aurora Repeater Assn. Swaplist: <http://www.qsl.net/n0ara/swaplist.html>

Colorado Repeater Assn. Swaplist: <http://www.w0cra.org/swap/craswaplist.htm>

Wyoming Swap Shop: <http://www.qsl.net/n0ara/wss.htm>

New Mexico Swaplist: <http://bc-ares.org/swapnet/listings.html>

Aurora Repeater Association - SWAPFEST

02/10/2008

Adams County Fairgrounds in Brighton At 9 AM

Table Cost: \$10.00 Admission: \$4.00

Contact: For more information contact: Wayne Heinen N0POH at 303-699-6335 (metro) or email to n0poh@arrl.net

Mail reservations to Aurora Repeater Association, P.O. Box 471802, Aurora, CO 80047-1802

Charitable Contribution Received by NCARC

Thanks are hereby given to **James K. Blazier, W0JIM, and the Anheuser-Busch Company** for a charitable contribution of \$240.00 to the NCARC. This contribution was made in conjunction with the company's matching grant program for employees (AB-PAC). A formal letter of thanks has been sent to Jim at his company's address.

Some NCARC 2008 Winter Swapmeet Notes

The Swapmeet was held on 12 January 2008 in the Canyon West Room at the Lincoln Center in Fort Collins.

Sixty-eight of the seventy-five available tables were reserved by the Friday evening before the event.

An estimated 500 people came through between 8am and noon.

The Salvation Army brought their Communications Van and Portable Tower trailer up for display just outside the west door of the main room.

The VE team reported that the testing yielded eight Techs, seven Generals and eight Extra class new or upgraded licenses.

All of the remaining equipment from the donated estate of Jim Starkey (W0KJY) was disbursed during the event.

The NCARC is already on the calendar for the Lincoln Center for the third Saturday in January 2009.

Table reservations have already been received for that event.

Location: Golden Corral

The meeting was called to order by Steve Henry (N7GN) at 9:00 am.

There were 28 members and 5 guests present

REPORTS:

Secretary: minutes were approved as read.

Treasurer:

Hamfest: Expenses were \$3014.24. Income was \$4816.00. Profit to checking: \$1801.76. Our current checking balance is \$13059.27. Willis expressed some concern about the lack of volunteers for the fest and the trouble that Matt had to go through to get enough volunteers to cover. Willis ran some numbers, and if the volunteer situation does not improve and we are forced to stop having the fest the club will probably be required to raise annual dues by \$10 to \$15 to make up for the lost income.

Hamfest Report: Matt was unable to attend the club meeting, however, comments were solicited from the floor.

Mike (N7DQ) mentioned that we had folks from as far away as Nebraska who came to attend the fest. He also mentioned that the connector vendor in front of the booth told him this was the most successful fest, from their point of view (in terms of sales), that they've been to yet. Mike (N7MR) mentioned that folks told him they would like to see some talks/forums added and they really appreciated that the vendors focused their products on radio rather than computers. It was mentioned that KORM and the Connector vendor need to receive thank you notes for the door prizes they donated.

The following ham fest comments were submitted in writing and asked to be included here by Steve (N7GN):

There were some hand-held radios used by event-staff. What was the frequency they were on?

We need to have the club members who are working an event to stand out in the crowd – like maybe a colored vest (all the same color), maybe all the same color cap, or a sash. It would also be nice to have coordinating name badges, even little pin-on printed ones, giving the club name and their job for the event. Whoever is in charge should have something on to let you know who he or she is.

In the case of this particular event, the layout of the tables in the room was nice – it gave space for a lot of people to come and present their wares. Individual location was another things. Perhaps the tables could be numbered and the vendor assigned a number when they arrived. It would be much easier to find the tables that way. Names and numbers could be kept on a master list for reference.

We needed signs designating the front door and the back door. Also, there were no signs in the front of the building pointing the way to the room where the event was.

The stamp, which was used for the mark on the hands, was a very good one. It was individually special, and much better than a circle, or a dot from a marker, etc.

We need to discuss the possibility of getting a few small items from local business for a ditty bag to be handed out at the door. This is for two reasons: one – local advertising (some of them have emery boards with their advertising on them, pens, small mirrors, calendars, etc.), and two – this will provide a bag for small purchases at the hamfest. If the small items are not available or satisfactory, perhaps we could have some bags printed with the word “Hamfest” and the date, then hand them out at the door. They could be reusable for another time.

Did kids day happen this year?

...End of comments.

Control Op: Minor Cross (K7YJ) is moving out of the area so we need a new control op. Mike Bates (N7DQ) volunteered to fill the position. Nominations are open until the February meeting at which time an election will be held for this position.

Interference: Mike (N7DQ) is currently running for the now vacant Control Op position. If elected we will need to elect somebody to fill the interference position. Nominations are open but nobody was nominated at the meeting.

TO NOMINATE SOMEONE OR YOURSELF FOR A POSITION PLEASE SEND AN E-MAIL TO THE CLUB SECRETARY (Dave, KC9FOO dave@uchicago.edu) BEFORE THE FEBRUARY CLUB MEETING. IF YOU DO NOT HAVE E-MAIL YOU MAY SUBMIT A NOMINATION VIA REGULAR MAIL TO:

NCARC
P.O. Box 272956
Fort Collins, CO 80527-2956

OLD BUSINESS:

Budweiser Events Center Repeater: The AC power has been installed at The Ranch, unfortunately when they powered up the repeater it started smoking. Virgil is diagnosing the problem now (seems the output audio stage is drawing excessive current). We will get the repeater up as soon as it is repaired. Listen for it on 448.025 with standard offset and 100 Hz ctcss.

Training Classes: There has been some interest in the training classes. Steve will send out e-mail via the reflectors asking for class sign-ups.

Rawhide Repeater: Ed Lawrence will be selling his property and we will have to move the 146.625 repeater. The Boy Scout camp up in Red Feather uses our repeater for emergency communication with our area, and so we would like to try and keep the repeater up near the power plant for that purpose. This repeater pair is closely coordinated with a repeater in Boulder, so we will have to be careful that we don't unintentionally increase our range to the south at a new site. People who have suggestions for a new home for the .625 repeater are requested to submit them.

New Club Structure: In December Radio Dan floated an idea to change our operating structure from a membership-led club to a board-led club. Essentially the monthly meetings will contain much less business, and a new meeting will be held monthly just for board members. The board members will conduct all the club business and just report back to the membership on what's happening. The idea is this would greatly increase the efficiency in operation of the club thus allowing us to increase our activities and club-sponsored events. There was some discussion on this topic and the opinions expressed are summarized here:

Operating in this manner has a tendency to make the general membership feel that the board is not open to input from them.

Operating in this manner will increase the amount of time that a person will have to spend being a board member thus making it harder to fill the positions.

Communication from the board on what they are up too will have to greatly increase. Some suggestions for the kinds of increases necessary included:

Sending the board meeting agendas out to the entire membership far enough before a board meeting so they can be aware of what's going on and attend meetings they are concerned about

Suggestion made that any business brought up in a board meeting that wasn't on the agenda would be tabled till the next board meeting so the membership could weigh in on the subject. This suggestion was countered by reminding the room of why you elect representatives (officers) to the board. If you don't trust them to make the right decisions then you should elect representatives (officers) whom you do trust.

Suggestion was made that instead of moving to board-led club we move to a committee-led club where every issue that needs to be handled would be delegated to a specially formed ad-hoc committee who would then present a recommendation to the membership on the issue at the monthly club meeting.

Steve mentioned that there may need to be a slight by-law change to accommodate this, but if the club wanted to move into this direction we could certainly do so.

NEW BUSINESS:

The LRA Reports that Echolink is now up on 147.195. They are currently W0FT-R and will become W0LRA when the echolink unit moves to their site on Namaqua Hill.

The CCARC in partnership with HRO is proposing to give a D-STAR repeater system to an Amateur Radio Club. The conditions are: The club receiving the system must maintain it for 5 years. After that the club is free to keep the hardware and do what it wants with it. The selected club must have three frequency pairs dedicated to the D-STAR system.

Radio Dan mentioned that the D-STAR system does not have as good a range as traditional analog repeaters.

Steve asked for somebody to volunteer to write up a proposal for the HRO D-STAR system. Nobody volunteered so the issue was tabled.

On April 26 there will be a March of Dimes event in Fort Collins. We will be looking for volunteers to assist with communication at that event.

Tom Jungmeyer (KB0GAE) expressed interest in putting echolink on our horsetooth repeaters. Comments from the membership are that any internet-based system on those repeaters must be reliable.

MOTION: Michael Robinson (N7MR) made a motion to spend \$350 to purchase a new 7330 repeater controller from S-COM so that doing things like echolink would be much easier with our repeaters. Seconded by Willis (WA5VRL). Motion carried.

Steve adjourned the meeting at 9:45 am.

IARU Band Plan Changes

As of January 1 this year, the IARU Band Plan for Region 2, which includes the U.S., has changed. The following pages are that plan as well as a summary in a more readable form that can be printed and posted in your shack for reference.

IARU REGION 2 MF/HF BAND PLAN
Effective January 1st 2008

The IARU Region 2 has established this band plan as the way to better organize the use of our bands efficiently. To the extent possible, this band plan is harmonized with those of the other regions. It is suggested that Member Societies, in coordination with the authorities, incorporate it in their regulations and promote it widely with their radio amateur communities.

FREQUENCY (kHz)	MAX BANDWIDTH (Hz)	PREFERRED MODE
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160 m Band	1800 – 1810	500	Digimodes
	1810 – 1830	200	CW CW QRP Centre of activity 1812 kHz
	1830 – 1840	200	CW Priority for intercontinental operation (DX window)
	1840 – 1850	2700	SSB Priority for intercontinental operation (DX window)
	1850 – 1999	2700	All modes SSB QRP Centre of activity 1910
	1999 – 2000	200	Beacons

80 m Band	3500 – 3510	200	CW Priority for intercontinental operation (DX window)
	3510 – 3560	200	CW CW Contest preferred CW QRS Centre of activity 3555 kHz
	3560 – 3580	200	CW CW QRP Centre of activity 3560 kHz
	3580 – 3590	500	All narrow band modes, digimodes
	3590 – 3600	500	All narrow band modes, digimodes, automatically controlled data stations (unattended)
	3600 – 3625	2700*	All modes, digimodes, automatically controlled data station (unattended)
	3600 – 3650	2700	All modes SSB Contest preferred Digital voice (DV) Centre of activity 3630 kHz
	3650 – 3700	2700	All modes SSB QRP Centre of activity 3690 kHz
	3700 – 3775	2700	All modes SSB Contest preferred Image Centre of activity 3735 kHz Emergency Centre of activity 3750 kHz
	3775 – 3800	2700	All modes SSB Priority for intercontinental operation (DX window)
	3800 – 3875	2700	All modes
	3875 – 3900	2700*	All modes Image Centre of activity 3845 kHz Emergency Centre of activity 3985 kHz
	3900 – 4000	2700	All modes

40 m Band	7000 – 7025	200	CW Priority for intercontinental operation (DX window)
	7025 – 7035	200	CW CW QRP Centre of activity 7030 kHz
	7035 – 7038	500	All narrow band modes, digimodes
	7038 – 7040	500	All narrow band modes, digimodes, automatically controlled data stations (unattended)
	7040 – 7043	2700	All modes, digimodes, automatically controlled data stations (unattended)
	7043 – 7100	2700	All modes Image Centre of activity 1: 7043 kHz Region 2 Emergency Centre of activity 1: 7060 kHz Digital voice (DV) Centre of activity 7070 kHz SSB QRP Centre of activity 1: 7090 kHz.
	7100 – 7300	2700*	All modes Region 2 Emergency Centre of activity 2: 7240 kHz SSB QRP Centre of activity 2: 7285 kHz Image Centre of activity 2: 7165 kHz AM Calling frequency 7275 kHz Region 2 Emergency Centre of activity 3: 7290 kHz

30 m Band	10100 – 10130	200	CW CW QRP Centre of activity 10116 kHz
	10130 – 10140	500	All narrow band digimodes
	10140 – 10150	2700	All modes digimodes, no phone (SSB, AM or DV)

20 m Band	14000 – 14025	200	CW Priority for intercontinental operation (DX window)
	14025 – 14060	200	CW CW Contest preferred CW QRS Centre of activity 14055 kHz
	14060 – 14070	200	CW CW QRP Centre of activity 14060 kHz
	14070 – 14089	500	All narrow band modes, digimodes
	14089 – 14099	500	All narrow band modes, digimodes, automatically controlled data stations (unattended)
	14099 – 14101	200	IBP, Exclusively for beacons
	14101 – 14112	2700	All modes, digimodes, automatically controlled data stations (unattended)
	14112 – 14285	2700	All modes SSB contest preferred Digital voice (DV) Centre of activity 14130 kHz Image Centre of activity 14230 kHz SSB Priority for intercontinental operation (DX window) 14190 – 14200 kHz SSB QRP Centre of activity 14285 kHz
	14285 – 14300	2700*	All modes AM Calling frequency 14286 kHz
14300 – 14350	2700	All modes, Global emergency centre of activity 14300 kHz.	

17 m Band	18068 – 18095	200	CW CW QRP Centre of activity 18086 kHz
	18095 – 18105	500	All narrow band modes, digimodes
	18105 – 18109	500	All narrow band modes, digimodes, automatically controlled data stations (unattended)
	18109 – 18111	200	IBP, Exclusively for beacons
	18111 – 18120	2700	All modes, digimodes, automatically controlled data stations (unattended)
	18120 – 18168	2700	All modes SSB QRP Centre of activity 18130 kHz Global Emergency Centre of activity 18160 kHz

15 m Band	21000 – 21070	200	CW CW QRS Centre of activity 21055 kHz CW QRP Centre of activity 21060 kHz
	21070 – 21090	500	All narrow band modes, digimodes
	21090 – 21110	500	All narrow band modes, digimodes, automatically controlled data stations (unattended)
	21110 – 21120	2700	All modes (excluding SSB), digimodes, automatically controlled data stations (unattended)
	21120 – 21149	500	All narrow band modes
	21149 – 21151	200	IBP, Exclusively for beacons
	21151 – 21450	2700	All modes Digital voice (DV) Centre of activity 21180 kHz SSB QRP Centre of activity 21285 kHz Image Centre of activity 21340 kHz Global Emergency Centre of activity 21360 kHz

12 m Band	24890 – 24915	200	CW CW QRP Centre of activity 24906 kHz
	24915 – 24925	500	All narrow band modes, digimodes
	24925 – 24929	500	All narrow band modes, digimodes, automatically controlled data stations (unattended)
	24929 – 24931	200	IBP, Exclusively for beacons
	24931 – 24940	2700	All modes, digimodes, automatically controlled data stations (unattended)
	24940 – 24990	2700	All modes QRP SSB Centre of activity 24950 kHz

10 m Band	28000 – 28070	200	CW CW QRS Centre of activity 28055 kHz CW QRP Centre of activity 28060 kHz
	28070 – 28120	500	All narrow band modes, digimodes
	28120 – 28150	500	All narrow band modes, digimodes, automatically controlled data stations (unattended)
	28150 – 28190	500	All narrow band modes
	28190 – 28199	200	Regional time shared beacons
	28199 – 28201	200	IBP, Exclusively beacons
	28201 – 28225	200	Continuous duty beacons
	28225 – 28300	2700	All modes, beacons
	28300 – 28320	2700	All modes, digimodes, automatically controlled data stations (unattended)
	28320 – 29000	2700	All modes Digital voice (DV) Centre of activity 28330 kHz SSB QRP Centre of activity 28360 kHz Image Centre of activity 28680 kHz
	29000 – 29200	6000	All modes AM Preferred
	29200 – 29300	6000	All modes including FM simplex, digimodes, automatically controlled data stations (unattended)
	29300 – 29510	6000	Satellite downlink
	29510 – 29520		Guard band, no transmission allowed
29520 – 29700	6000	FM – 10 kHz channels FM Repeater input only. 10 kHz channels 29520 – 29590 kHz FM Calling frequency 29600 kHz FM Repeater outputs only. 10 kHz channels 29620 – 29690 kHz	

*) DSB AM phone allowed in this segment with a maximum bandwidth of 6 kHz.

Explanations

Bandwidths

The number in the bandwidth column always refers to the maximum allowed.

Preferred Modes

<i>All modes</i>	Do not exceed the specified bandwidth.
<i>Image</i>	The Image modes include FAX and SSTV.
<i>Narrow band modes</i>	All modes up to 500 Hz bandwidth including CW, RTTY, PSK and others.
<i>Digimodes</i>	Includes, but not limited to PSK31, PSK63, RTTY, MT63 and others within bandwidth limits.
<i>Sideband usage</i>	Below 10 MHz use Lower Side Band (LSB) Above 10 MHz use Upper Side Band (USB).

Notes

1. CW QSOs are accepted across all bands, except within beacon segments.
2. Contest activity shall not take place on the 10, 18 and 24 MHz bands.
3. The term "*automatically controlled data stations*" includes Store and Forward stations.
4. Transmitting frequencies:

The announced frequencies in the bandplan are understood as "*transmitted frequencies*", and not those of the suppressed carrier!
5. Unattended transmitting stations:

IARU member societies are requested to limit this activity on the HF bands. It is recommended that any unattended transmitting stations on HF shall be activated only under operator control, except for beacons agreed with the IARU beacon coordinator, or specially licensed experimental stations.

The Considerate Operator's Frequency Guide

A guide to where on the HF bands various modes and activities are generally found. All frequencies are in MHz.

The following frequencies are generally recognized for certain modes or activities (all frequencies are in MHz).

Nothing in the rules recognizes a net's, group's or any individual's special privilege to any specific frequency. Section 97.101(b) of the Rules states that "Each station licensee and each control operator must cooperate in selecting transmitting channels and in making the most effective use of the amateur service frequencies. No frequency will be assigned for the exclusive use of any station." No one "owns" a frequency.

It's good practice — and plain old common sense — for any operator, regardless of mode, to check to see if the frequency is in use prior to engaging operating. If you are there first, other operators should make an effort to protect you from interference to the extent possible, given that 100% interference-free operation is an unrealistic expectation in today's congested bands.

Frequencies	Modes/Activities
1.800-2.000	CW
1.800-1.810	Digital
1.810	QRP CW calling frequency
1.843-2.000	SSB, SSTV and other wideband modes
1.910	SSB QRP
1.995-2.000	Experimental
1.999-2.000	Beacons
3.500-3.510	CW DX window
3.560	QRP CW calling frequency
3.570-3.600	RTTY/Data
3.585-3.600	Automatically controlled data stations
3.590	RTTY/Data DX
3.790-3.800	DX window
3.845	SSTV
3.885	AM calling frequency
3.985	QRP SSB calling frequency
7.030	QRP CW calling frequency
7.040	RTTY/Data DX
7.080-7.125	RTTY/Data
7.100-7.105	Automatically controlled data stations
7.171	SSTV
7.285	QRP SSB calling frequency
7.290	AM calling frequency
10.106	QRP CW calling frequency
10.130-10.140	RTTY/Data
10.140-10.150	Automatically controlled data stations
14.060	QRP CW calling frequency
14.070-14.095	RTTY/Data
14.095-14.0995	Automatically controlled data stations

Frequencies	Modes/Activities
14.100	IBP/NCDXF beacons
14.1005-14.112	Automatically controlled data stations
14.230	SSTV
14.285	QRP SSB calling frequency
14.286	AM calling frequency
18.100-18.105	RTTY /Data
18.105-18.110	Automatically controlled data stations
18.110	IBP/NCDXF beacons
21.060	QRP CW calling frequency
21.070-21.110	RTTY/Data
21.090-21.100	Automatically controlled data stations
21.150	IBP/NCDXF beacons
21.340	SSTV
21.385	QRP SSB calling frequency
24.920-24.925	RTTY/Data
24.925-24.930	Automatically controlled data stations
24.930	IBP/NCDXF beacons
28.060	QRP CW calling frequency
28.070-28.120	RTTY/Data
28.120-28.189	Automatically controlled data stations
28.190-28.225	Beacons
28.200	IBP/NCDXF beacons
28.385	QRP SSB calling frequency
28.680	SSTV
29.000-29.200	AM
29.300-29.510	Satellite downlinks
29.520-29.580	Repeater inputs
29.600	FM simplex
29.620-29.680	Repeater outputs

