

**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 3<sup>rd</sup> 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

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

## NCARC Repeaters

<b>W0UPS: 145.115 MHz</b> – (144.515 MHz Input) 100 Hz CTCSS Subtone (1* on, 0* off) Autopatch <b>Echolink Node 4236</b> (40-32.926N, 105-11.898W, 7229 ft) Horsetooth Mountain, west of Fort Collins, CO
<b>W0UPS: 447.275 MHz</b> – (442.275 MHz input) 100 Hz CTCSS Subtone Autopatch (40-32.926N, 105-11.898W, 7229 ft) Horsetooth Mountain, west of Fort Collins, CO
<b>W0UPS: 224.520 MHz</b> – (222.920 MHz input) 100 Hz CTCSS Subtone (40-32.926N, 105-11.898W, 7229 ft) Horsetooth Mountain, west of Fort Collins, CO
<b>W0UPS: 146.625 MHz</b> – (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
<b>W0UPS: 146.850 MHz</b> – (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 <b>New location</b>
<b>W0UPS-5: 144.390 MHz</b> – APRS Digital Repeater (40-32.926N, 105-11.898W, about 7229 ft) Horsetooth Mountain, west of Fort Collins, CO
<b>W0UPS: 448.025 MHz</b> – (443.025 MHz Input) 100 Hz CTCSS Subtone <b>ARES Rptr</b> (40-26.650N, 104-59.370W, about 5192 ft) Budweiser Event Center on I-25 at MM259

## Nets

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

## 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](mailto: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****April 18, 2009**

Location: Golden Corral Harmony Rd, Ft. Collins

Called to order by Tom Jungmeyer K1TJ at 9:00 AM

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

The meeting started with a fine presentation by BARC Juniors. BARC Juniors is a club for kids in amateur radio. Every year they send some of their members to the Dayton Hamvention to give presentations as part of the Youth in Amateur Radio Forum. This year Austin, KD0FAA will be going. Austin gave us his Hamvention presentation on Fractal Antennas. He had an example fractal antenna too. Austin is 14 and holds a General class ticket.

**REPORTS**

Treasurer reported checking balance \$10188.86. Savings unchanged. Willis also reported that our regular room at the Lincoln Center for our January hamfest is not available this year. He is looking for alternative locations.

Control Ops – Working on programming the 7330 controllers for our repeaters, eventually will be put into place to simultaneously controll the 145.115 and 447.275 Horsetooth repeaters.

Field Day – Looking for a site. So far the best potential is at the Colorado Welcome Center at I-25 and Prospect in Ft. Collins.

**BUSINESS**

By Laws changes: Our proposed by laws changes were put up for vote and passed with one “nay” and the rest “aye”. Motion carried.

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**Field Day**

This year we are attempting to put together club participation in Field Day. The dates are June 27<sup>th</sup> and 28<sup>th</sup>. The operating event lasts from noon on Saturday until 3:00pm on Sunday afternoon. But if a group starts preparation beforehand then operations are limited from noon Saturday to noon Sunday. I'm told by more than one person that the bands go pretty dead after noon on Sunday. So our plan of action as of now is to start Saturday morning on the preparation and be on the air from noon Saturday to noon Sunday.

I've made a few phone calls to find a location and have not found a tremendous lot of choices. As of this newsletter, our best location is at the Colorado Welcome Center at I-25 and Prospect Road in Fort Collins. This is basically an open field. During the regular business hours of the Welcome Center we can use their restroom facilities. They have some concern about us adding to their parking crunch during a June weekend in tourist season. If we end up there we will want to be aware of that. The Welcome Center is right next door to an interstate rest area which is open 24x7 and has restroom facilities.

Willie, W5WIW has volunteered his RV as a base of operations. I think we can park the RV near the field and use it as shelter and/or facilities. There is also a roofed bandshell type of structure that we can use.

Besides getting the location nailed down we also need to start thinking about what bands/modes of operation we want to tackle. Then we need to get antennas ready for those bands and get equipment located and tested out. I've got a 20 mtr qrp CW radio and a gel cell battery. Anything else? Someone told me that the club “owns” a generator. Where is it?

If we do end up in the wide open, I'm proposing we put up a couple of those 20' temporary masts using the “A” structure of 2x2 lumber that are described in the ARRL Handbooks going back many years. If someone has a better idea I am open to suggestions. We will need a couple hundred feet of rope to keep things vertical. We also will need some antenna wire and some feedline. When I get the site

finalized I think we should do a walk-around to see what's what. Anybody want to come along? Maybe we can do that after the May club meeting on the 16<sup>th</sup>.

I have to tell you all that I'm a neophyte when it comes to Field Day. I think I've operated from a park using my QRP outfit once or twice. I've never been at a large club event. It's my goal just to put something together this year that will be fun. Then next year we can go at it in a bigger way if we want to. With that in mind I'm focused less on the contesting aspect and more on having a good, clean public event and building a relationship with a site that we can use for the next few years.

**Action Items:**

1. Finalize location, do a walk-around to see where we can put things.
  
2. Get a list of volunteers for specific times before, during and after the event.
  1. Preparation
  2. Radio operators, loggers, public greeters.
  3. Take down
  
3. Put together a list of bands and modes that we want to operate
  
4. From the bands/modes list, make a list of needed equipment for each band/mode
  
5. Locate materials: antennas, feedline, radio equipment
  
6. Work on publicity materials
  
7. Do we need one or more computers for logging?

If you have any last minute ideas about location please get them to me right away. Otherwise, start thinking about what time you can spare during the event and any equipment you want to loan. Even if you can just be there for an hour or two and do a little bit of satellite handi-talkie work or help take down the antennas Sunday afternoon... whatever you can do.

I am leaving space on this page. Put your thoughts down and either send it to me or bring it to the May club meeting.

– Chris w0ep

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### **Colorado Cycling Festival**

We need one or two people to help consult with Charlie of the Fort Collins Cycling Festival. This event is coming up on May 8th (this is a Friday), and Charlie is looking for help about where to station people and equipment (he evidently has his own repeater and radio equipment). Last year radio communications came in handy in handling an emergency and so I know the guidance will be helpful to him.

If you can help, please get in touch directly with Charlie directly. He may also be looking for a few trained volunteers for the event.

'73  
-Steve Henry, N7GN

## Cast For Kids

Event date: Saturday, June 6, 2009. Fishing licenses are free that day.

For anyone who doesn't know, CAST is an event where we take disabled kids fishing with tournament bass fishers at Horsetooth Reservoir. It is done by noon, when a barbecue lunch is served, and you get a shirt or a hat, whichever they decide to have made. This is a very worthwhile event that you will genuinely feel good about being a part of. Let me know 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.)

We need 10-15 hams to help out. This is from about 7am to a little before noon.  
Please let me know if you can work this event.

Thanks,  
Rick, WORCY

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## Short Items

### **ARRL MEMBERSHIP NEWSLETTERS, BULLETINS AND NOTIFICATIONS**

Did you know the ARRL offers more newsletters than just The ARRL Letter? One of the many ARRL membership benefits includes other newsletters, such as the ARRL Contest Update (a bi-weekly contest newsletter), the ARES E-Letter (sent monthly, containing public service and emergency communications news), the ARRL Club News, the ARRL Instructor/Teacher E-Letter and the VE Newsletter, just to name a few.

You can also elect to receive news and information from your Division Director and Section Manager (keep in mind that not all Divisions/Sections send notices), as well as W1AW bulletins that relate to DX, propagation, satellites and Keplerian reports. The ARRL also offers a free notification service that lets them know when their membership and license are due to expire.

Sign up for these newsletters, bulletins and notifications on the Member Data page of the ARRL Web site - from ARRL Letter (email) Friday 28-Apr-2009

(editor's note: our ARRL Rocky Mountain Division leadership sends out an email letter monthly)

### **THE SOLAR CYCLE: NASA CALLS IT A SPOTLESS SUN**

The lack of High Frequency propagation could continue. This, as NASA has announced that the sun has plunged into the deepest solar minimum in nearly a century.

According to the space agency, Sunspots have all but vanished and consequently the sun has become very quiet. It notes that in 2008, the sun had no spots 73% of the time, . That was a 95-year low. Now, in 2009, sunspots are even more scarce, with the "spotless rate" jumping to 87%. How long this downward sunspot spiral will continue is unknown. (Spaceweather) - from Amateur Radio Newsline #1654 28-Apr-2009 via qrz.com

### **Australia says no to Broadband over Powerline**

The Wireless Institute of Australia reports that amateurs down-under appear to be safe from the rollout of a nationwide Broadband over Powerline or BPL system. Australia's government announced that it will be building a system based on fibre optic technology. This decision would appear to remove the possibility of widespread interference to radio communications from any network-wide adoption of BPL technology, but still leaves as a concern the possibility of interference from in-home use of BPL as an internal distribution technology. - from RGSB News via www.rgsb.org

## Editors Notes

I've been tackling a few radio projects recently.

First off, I finally got an old Kenwood TS-820 to spit out some electrons. It has taken me a long time to get it done but it is working. The output is a little low, but not as low as zero... which is what it was doing. There is a great group on the internet dedicated to the Kenwood TS-520/TS-820 and TS-530/TS-830 radios. They were a lot of help. You can find them at groups.yahoo.com, search on "TS-520."

Another radio that has been sitting around my shack for awhile also has come to life. It's a little Icom IC-730. I was told it didn't transmit. But when I recently plugged it in it worked right off. I don't know, maybe it just needed to rest awhile. I've heard that there can be a problem with these guys where you have to reset the memory. Maybe the shelf time was just long enough to help it forget.

But that IC-730 requires a 12 volt 20 amp power supply, of which I have nought. I thought my switching supply would do that much current, but the proof of the pudding is, as they say, in the eating and this eating ain't so good. When I key the IC-730 it heads down to about 11.5 volts. Yuck. I happen to have most of the parts needed to build a 20 amp linear supply. Some of those big capacitors I sold in long-ago hamfests would come in handy now though. I have a good stock of 2n3055 pass transistors. After a trip to Colorado Iron and Metal (the scrap dealer) I now have some dented but usable aluminum heat sink material. And I have a great big transformer that should work marvelously. Now all I have to do is find a box to put it all in and start wiring it up. Then I can get back to operating.

Me being a dedicated scrounger, that trip to the scrap yard was kind of maddening. Oh the piles of interesting stuff that people throw away. There were even some sizable blue electrolytic capacitors in the pile, but they had already been crunched and run-over by the sorting equipment. I have to confess, if I had to live my life over I think I would like to be a junk man. I once bought some army surplus scrap over the internet from Fort Carson. I took a day off, borrowed a trailer, drove down there, hauled it home, took it all apart, sold a few of the parts, took some of the scrap metal to the scrap yard and I still have the screws and nuts in a jar around here somewhere. I doubt if I made any money on the operation, but I did have a lot of fun. There is one good thing you can say about the scrap yard: at least they aren't going to bury it all with dirt like stuff going to the landfill. If any of you gentle readers send a working 250TH power tube to the landfill I will have to disown you. Throwing out a 20 amp 18 volt transformer would also get you a stern look.

If anyone needs some 2n3055 transistors, I think I'll have a few left over. (And they aren't very expensive at Radio Shack anyway.)

If I were really smart I would build a switching supply or modify one of the ones around here (including that big switcher which is letting down the team with it's bad tasting pudding). I read an article once in QST or QEX magazine about reworking a switching supply to put out the right voltages. But it seemed pretty complicated to me. A linear supply is about my speed. Even then I'm surprised when they actually work. The easy ones are just a 3-legged voltage regulator with some attendant parts. Believe it or not, I've actually built a couple of those, complete with shunted surplus meters and on/off switches. One of them even has an enclosure. But that will only get you up to an amp or two of current. Now I'm going to get into the big league with pass transistors, heat sinks, 60,000uF capacitors, big fat wires and everything.

Other projects currently on the list but not at the top:

I still want to finish my 10 Mhz grab-it-out-of-the-air frequency standard. The idea is to build an amplifier and radio front-end that will pull in 10 Mhz from WWV and let me use it as a frequency standard. I've got some bits and pieces here on the bench but nothing really done yet. The modern way to do frequency standards seems to be to get a GPS and a stable oscillator (like a rubidium jobbie) and put it all together with a microcontroller to keep things synchronized to the GPS satellites. That would be cool but more than I want to lay out. I just figured that somehow, with the best oscillator money can buy sitting just a few miles from my shack pumping out 10,000,000.00 hertz all day every day, I ought to be able to get some of that and put it to good use. It seems like that should be easier than going all the way to geosynchronous orbit and back.

I would like to put up a better/different wire antenna for the lower HF bands. My current setup is a doublet fed by 300 ohm TV twinlead and tuned with a balanced antenna tuner. It just happens that my tuner doesn't like my wire's length when working on 75 meters. I think either a trim or a lengthening would help. Life is surprisingly free when you don't have an antenna analyzer, just put up some wire and see if the tuner will tune it up. Maybe after field day.

And I'm looking forward to Dan (W7RF) leading our club in the proposed VHF antenna build. I would like to put up a horizontally polarized antenna for 144 Mhz SSB and CW. I've done just a little bit with 2 meter SSB and I'd like to do more. Here along the Front Range there is a good community of VHF operators. There's a net every week. And they are active during contests and such. If ever there was a good place to get into VHF this is probably it.

I'd love to hear what you are doing. Send it along and we will put it in next time. 73 for now. – Chris w0ep

