

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
-For June 2010-
Club Meetings are held on the 3rd Saturday of each month

***NEW LOCATION for JUNE ***

And for July

Widow McCoys Restaurant
1011 E. Eisenhower Blvd.
Loveland, Co 80537 970-667-0426

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	Willis Whatley	WA5VRL	970-407-6599	whatley@frii.com
Vice President	Mike Bates	N7DQ	970-219-3325	n7dq@comcast.net
Secretary	Jerry Williams	KE5INP	970-454-3821	jcwillie@mywdo.com
Treasurer	Paul Rulon	KDØBER	970-495-0181	paulrrulon@comcast.net
Newsletter Editor	Maurice Mines	KDØIKO	970-378-7065	minesm@me.com
Control Op	Tom Jungmeyer	K1TJ	970-484-8329	tom@completetowing.com
Technical Committee Chair	Eric Slutz	NØEAS	970-282-3752	eric@redginger.com
Hamfest Chair	Mike Bates	N7DQ	970-219-3225	n7dq@comcast.net
Interference Coordinator	Chris McNair	KDØEGE	970-225-9626	kd0ege@gmx.com
Webmaster	Ed Gage	NØTVQ	970-302-3455 970-356-5005	edward_gage@hotmail.com

NCARC Repeaters

WØUPS: 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
WØUPS: 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
WØUPS: 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
WØUPS: 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
WØUPS: 146.850 MHz – (146.250 MHz Input) 100 Hz CTCSS Subtone (1* on, 0* off) (40-25.341N, 104-44.182 W) Greeley, CO
WØUPS-5: 144.390 MHz – APRS Digital Repeater (40-32.926N, 105-11.898W, about 7229 ft) Horsetooth Mountain, west of Fort Collins, CO
WØUPS: 448.025 MHz – (443.025 MHz Input) 100 Hz CTCSS Subtone ARES Repeater (40-26.650N, 104-59.370W, about 5192 ft) Budweiser Event Center on I-25 at MM259
NEW* WØUPS: 145.205 MHz – (144.605 MHz Input) 100 Hz CTCSS Located on Buckhorn Mountain. Link to 224.840 by touch tone 10* - unlink with 11*
NEW* WØUPS: 224.840 MHz – (223.240 MHz Input) 100 Hz CTCSS Located on Buckhorn Mountain. Link to 145.205 by touch tone 10* - unlink with 11*

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	Tuesday	7:00 pm	224.520 MHz
Tech Net	Wednesday	7:00 pm	145.115 MHz

Web Page

<http://www.ncarc.net>

NCARC
Meeting Minutes for May 15, 2010
Submitted by Jerry Williams, Secretary

The meeting was called to order at 9:00 AM by acting president Willis Whatley WA5VRL.

Introductions and call signs were made around the room. There were 25 members attending, plus 4 guests.

Treasurer's Report: Paul Rulon was not present, but his information was given by Willis. Our bank balance was \$6,137.38.

Secretary's Report: A printed report of the April minutes was passed out; a motion was made and seconded that the April minutes be accepted as read, and the motion carried.

Interference Committee: no report

Repeaters: Tom said all repeaters are up and running at this time. (New batteries were installed in the 145.025/625 repeater site at Rawhide. ed)

Hamfest: Mike said they are working on a new location (unspecified at this time) for the hamfest and swap meet since the Ft. Collins Lincoln Center is undergoing renovation. Mike also mentioned that Skywarn training needs Net Control operators every day in this training session. There will be three days of tornado spotting. If you are interested, let him know when you could be available.

Technical: No report.

Old Business:

A letter of thanks and a receipt from the WARS group was received thanking NCARC for the repeater which NCARC had donated to them.

New Business: The next 2 meetings will be held in Loveland at the Widow McCoy Restaurant. We will meet at 8:00 AM and the meeting will be at 9:00 AM. This is only for June and July.

Coming Events:

June 5: Cast for Kids – fishing for kids, will be at the Horsetooth picnic area, 6:00 AM to 12:00 Noon, then lunch.

June 7: Teacher (? ed) get-together 5:30PM, Buffet 6:00 PM

June 13: Colorado Sprint, 12:00Noon to 4:00 PM 2-meter, VHF contest, also FM Simplex; Call will be K0YB, QSL.net

June 26, Sunday June 27: Field Day with 3 sites to ham it up:

1. LRA Club EOC
2. John W0DMJ, and Brian, with Valley Ham Shack location
3. NCARC at Home Depot in Ft. Collins (Mulberry and Lemay). Willie will set up there, starting at noon on Saturday, and go to noon on Sunday.

August 21: Rist Canyon 10K run, they need some help

Memorial Day weekend: ARRL 2-day event, state meeting.

Meeting was adjourned at 9:17 AM.

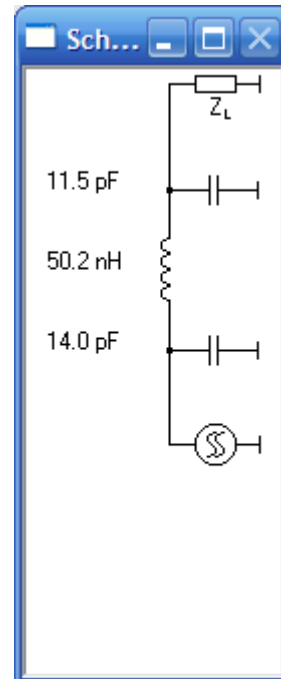
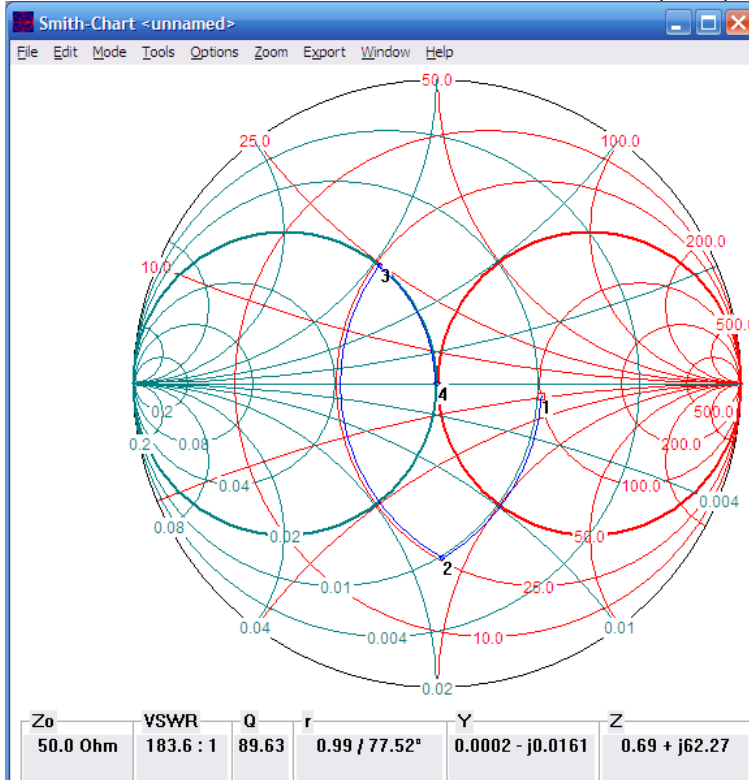
For our May club meeting, Ed Lawrence gave an excellent presentation of a computer program using the Smith Chart, taking away many of the mysteries and complexities this formidable looking graph represents.

The use of this program and Smith chart helps solves many problems encountered in matching complex loads or sources to a 50 ohm load on the opposite end. This can aid greatly with setting up antennas that don't want to directly match a 50 ohm transmitter or conversely, matching that complex source home brew amp to a 50 ohm load.

This program can be downloaded from <http://www.fritz.dellsperger.net/> . The download page has 2 versions, V3.01 and V2.03. Ed demonstrated V2.03. I downloaded both and actually prefer the older version (V2.03) to the new one as it is less buggy for me. Both programs run in demo mode with limitations as to the number of elements used and not being able to save data... but then again its easy enough to take screen shots of interesting results....

The demo version works fine for a PI filter network or any network not requiring a more complicated solution.

Smith chart for 220 mhz Vacuum tube PA to 50 ohm low pass pi filter (Plate load and Plate tune on older rigs):



In this case ZL is the complex impedance source.

DP-Nr.	Impedance	Q	Frequency
DP-Nr. 1	[101.310 - j9.825]Ohm	Q = 0.097	220.000 MHz
DP-Nr. 2	[25.849 - j44.444]Ohm	Q = 1.719	220.000 MHz
DP-Nr. 3	[25.849 + j24.886]Ohm	Q = 0.963	220.000 MHz
DP-Nr. 4	[49.809 + j0.000]Ohm	Q = 0.000	220.000 MHz

Viola! Funky Vacuum tube plate impedance transforms to 49.8 ohms... good enough for me. This works for very low impedance MOS FETs too.

Remember, The fish has a **SHORT** tail on the left and is facing **OPEN** sea on the right. The fish also has Curly hair on top (**INDUCTANCE**) and his **CAP** fell off and sank to the bottom.

In other words, pure resistance is plotted across the middle of the chart, 0 ohms on the left and infinity ohms on the right. Also, putting a capacitor in series or shunting a 50 ohm load will cause the Smith chart to plot below the middle. A similar situation is true for inductors except that they plot above the middle.

It is very interesting, and we appreciate Ed putting together this information.

As inspired by Jerry, KE5INP; embellished by John, KB0NE,

PIZZA BASH

THE ANNUAL NCARC PIZZA BASH WILL AGAIN BE AT WOODY'S WOODFIRED PIZZA 518 LAUREL FT COLLINS JUST NORTH OF THE CSU CAMPUS AT 5:30 MONDAY EVENING JUNE 7 IN THE MAFIA ROOM. PRICE IS \$5.99 ALL YOU CAN EAT BUT YOU HAVE TO BUY A DRINK WHICH IS EXTRA. HOPE TO SEE YOU ALL THERE.

OJ KOOJ



June 26 - 27, 2010
10am Sat. - 12pm Sun.

FIELD DAY

Location
HOME DEPOT
Mulberry & Lemay
Fort Collins, CO

Come by and have some fun.



NCARC TOWERS



Jim Wilson (KCØRBT) took this shot on 2/9/10 from his house where the 447.450 and the 1283.550 repeaters are located, on the ice covered towers on Horsetooth.

Buckhorn Mountain Repeaters Are Now Operational

The 145.205 and 224.840 Repeaters are now operational on Buckhorn Mountain. Both machines are negative offset and require 100.0 Hz pl. They may be linked to each other by dialing 10* and unlinked by dialing 11*.

