

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

*** LOCATION for February 16 ***

Golden Corral

1360 Sculptor Drive

Loveland, Colorado

**Across the parking lot from Kohl's on East
Eisenhower**

All (Friends, family & kids) are welcome and encouraged to attend.

Bring yourself and your appetite at 8:00 am.

The Meeting begins at 9:00 am.

NCARC Club Officers and Membership Information can be found on the club web site.

<http://www.ncarc.net>

NCARC Repeaters

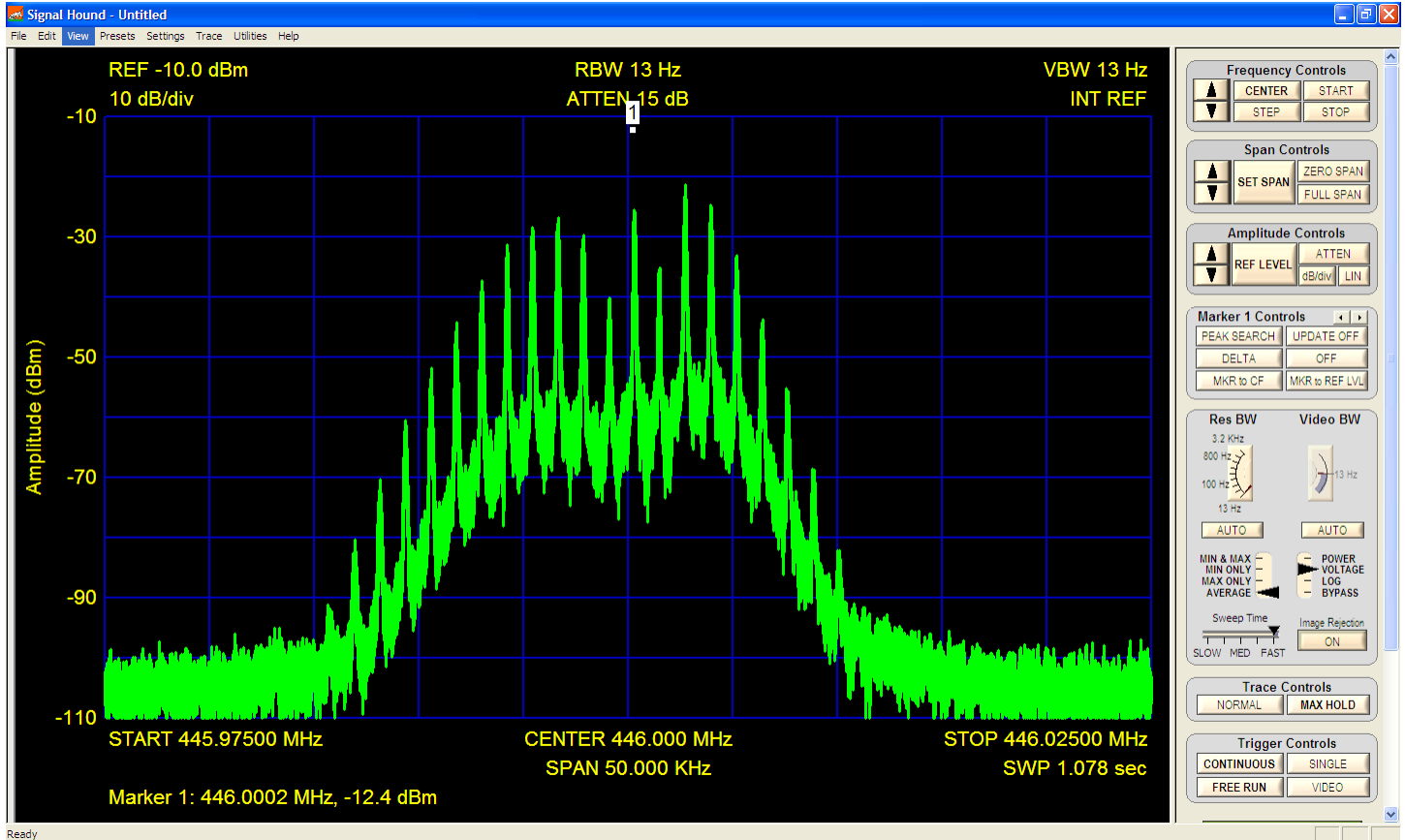
WOUPS: 145.115 MHz – (144.515 MHz Input) 100 Hz CTCSS (1* CTCSS on, 0* CTCSS off) Autopatch Echolink Node 4236 (40-32.926N, 105-11.898W, 7229 ft) Horsetooth Mountain, west of Fort Collins, CO ARES & Skywarn nets.
WOUPS: 224.520 MHz – (222.920 MHz input) 100 Hz CTCSS Subtone (40-32.926N, 105-11.898W, 7229 ft) Horsetooth Mountain, west of Fort Collins, CO
WOUPS: 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
WOUPS: 146.625 MHz – (146.025 MHz Input) 100 Hz CTCSS Located on Buckhorn Mountain. (40.6169, -105.3274) Link to 224.840 by touch tone 10* - unlink with 11*
WOUPS: 224.840 MHz – (223.240 MHz Input) 100 Hz CTCSS Located on Buckhorn Mountain. (40.6169, -105.3274) Link to 145.205 by touch tone 10* - unlink with 11*
WOUPS: 447.700 MHz – (442.700 MHz input) 100 Hz CTCSS Subtone Located on Buckhorn Mountain. (40.6169, -105.3274) , west of Fort Collins, CO
WOUPS: 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
WOUPS: 146.850 MHz – (146.250 MHz Input) 100 Hz CTCSS Subtone (1* on, 0* off) (40-25.341N, 104-44.182 W) Greeley, CO
WOUPS: 144.390 MHz – APRS Digital Repeater (40-32.926N, 105-11.898W, about 7229 ft) Horsetooth Mountain, west of Fort Collins, CO
WOUPS: Rawhide location is being held in reserve at this time; no repeater. (40-50.266N, 105-3.017W, 5600 ft) SW of the Rawhide Power Plant, 17.5 miles north of Fort Collins, CO

NCARC Meeting Minutes

There was no regular club meeting in January. The annual NCARC winter fest was held at the Budweiser Event Center.

Can you name what spikes in this spectrum picture represent? Here's a hint: It was generated using a Software Defined Radio RF source.

WHAT IS IT?



Speaking of Software Defined Radio....

The presentation at this month's meeting will be about SDR and what it means to folks who like to use crystal filters and IF cans....

NO MATH - PAPER ON RFI, BALUNS, and MUCH MORE

Excellent paper!!! [For] the NCARC newsletter: in an attempt to infuse a little more technical understanding of our hobby into the group. No math so no excuses based on the "scary math".

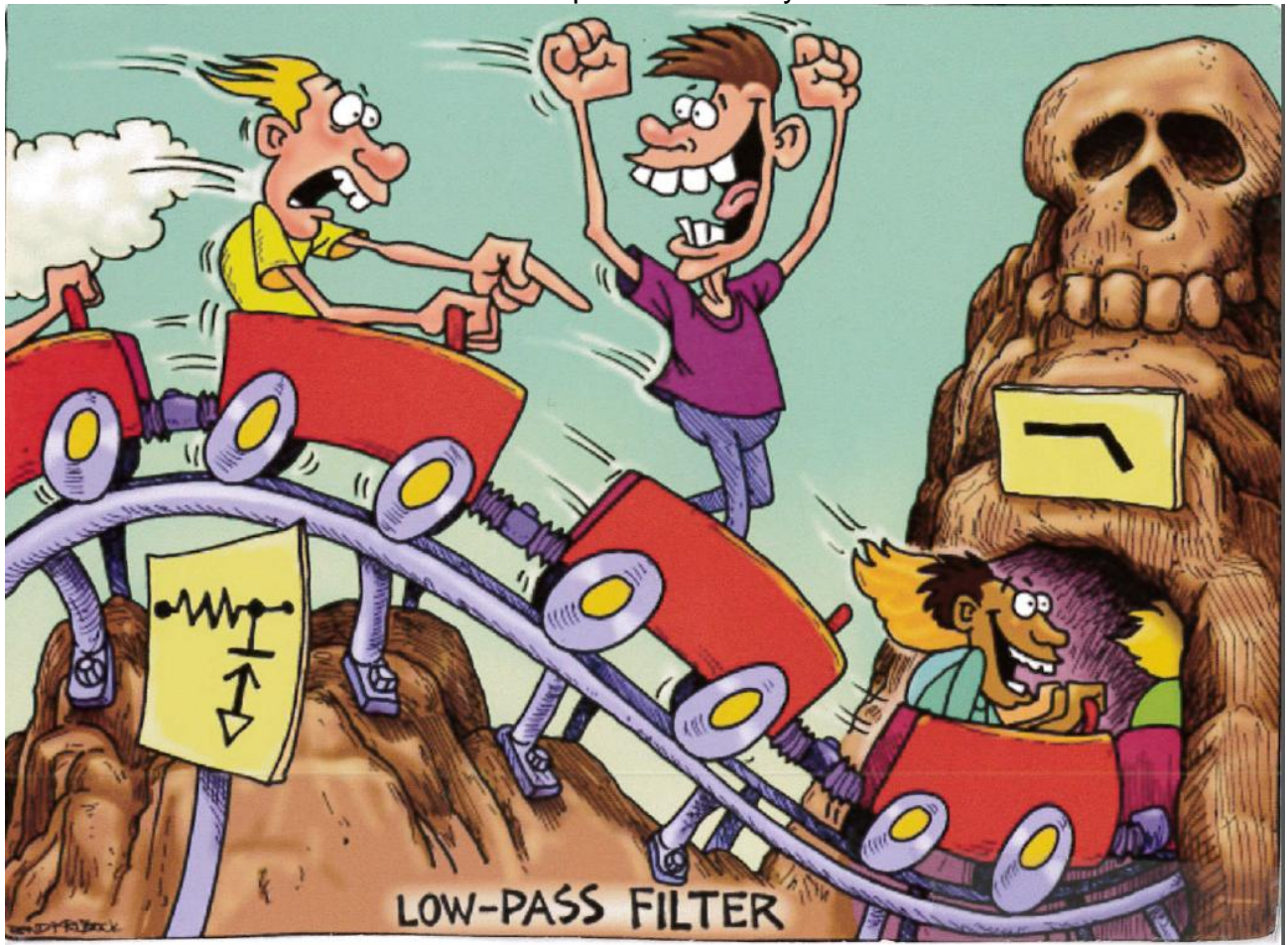
<http://audiosystemsgroup.com/RFI-Ham.pdf>

Dave - W0LEV

$$Z_0 = \frac{1}{2\pi} \sqrt{\frac{\mu}{\epsilon}} \ln \frac{D}{d} \approx \frac{138\Omega}{\sqrt{\epsilon_r}} \log_{10} \frac{D}{d}$$

This should be intuitively obvious to the user.

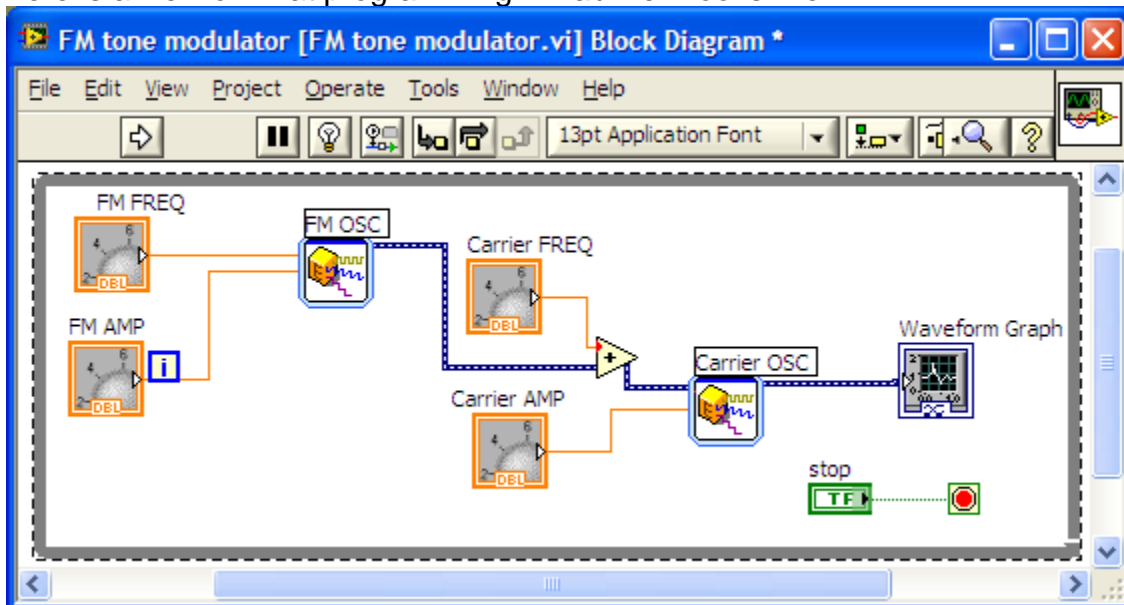
Or put another way:



From WA5VRL Willis

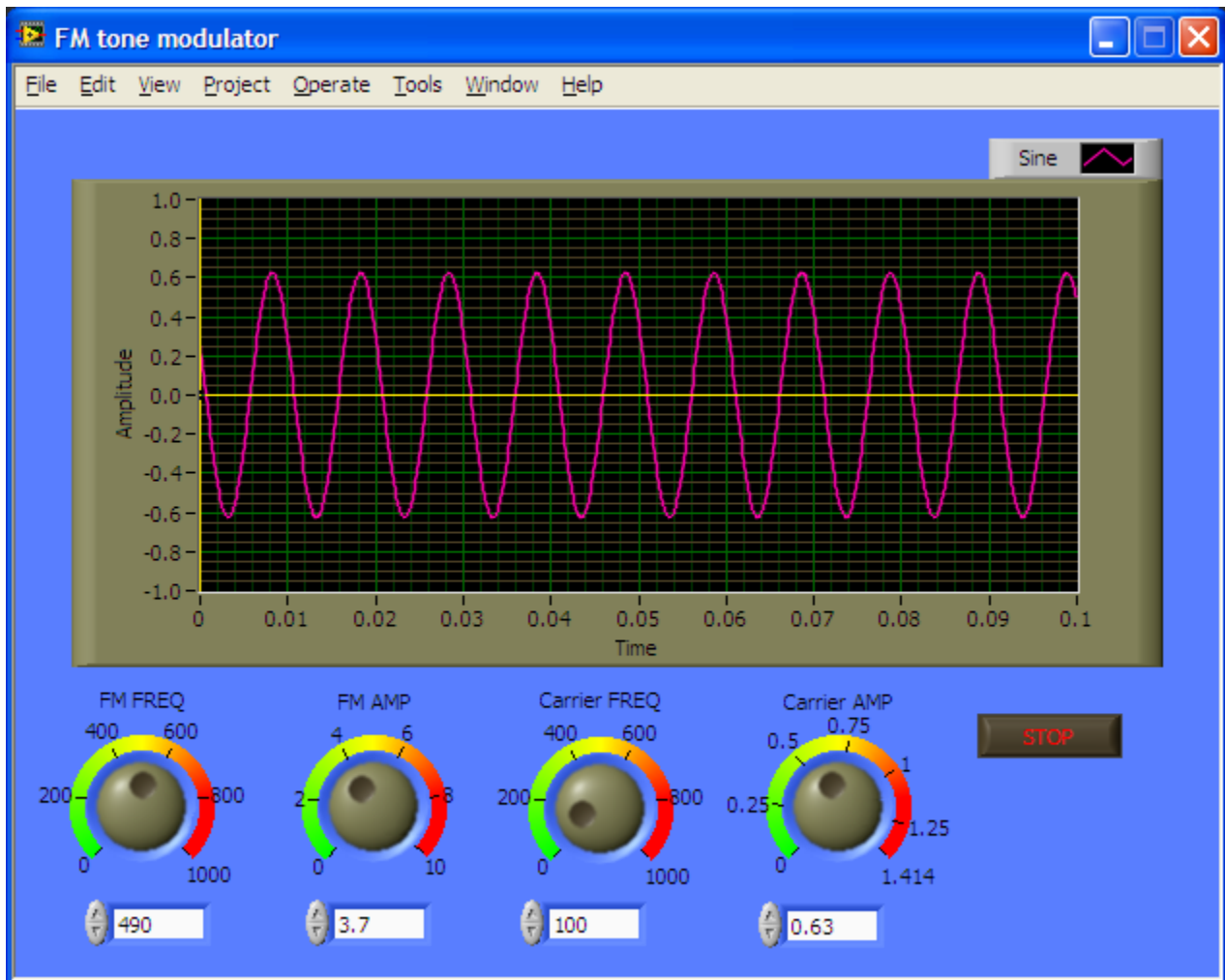
Some of you that get up- early in the morning as I commute from Livermore down to Boulder may have heard me going on about writing Lab View test programs

Here is a view of what programming in Lab view looks like.



And here is what it looks like while it's running.... Minus the animation.

PS this also related to the "what is it" spectrum picture at the beginning of this news letter.



Yep, this is a Software Defined Signal Generator that uses only the internal CPU of my laptop to create FM signals.....

For those of you who are interested, here is a link that you might enjoy:

<http://www.youtube.com/watch?v=4BppvSzsNk>

Kind of nerdy but worth watching all the way through.

From the appearance of the wave form and information in the "What is it?" picture: This is a 446 MHz carrier that is FM modulated by a 1 kHz tone. The spikes are Bessel Function Sidebands. Yes, Virginia, FM radio has lots of sidebands
PS: the SDR source is a UV5R cheapie handytalky.

John KB0NE

The term "SDR radio" came from the US Department of Redundancy Department



Northern Colorado Amateur Radio Club Membership Application



Join the NCARC. **Renew** my membership **New** License

Date: _____ Apply dues for calendar year 2012 2013

Annual Dues -- All memberships expire December 31st

Individual or Family Membership: \$25.00 per year **Full Time Students:** \$ 5.00 per year

Newly Licensed Operators FREE for year first licensed plus next full year!

License Issue Date: _____

Name: _____

Callsign: _____

Street: _____

City: _____

State: _____ Zip: _____

Telephone: _____

License Class: _____

E-mail Address: _____

Newsletter by Email? YES NO

Student? School: _____ YES NO

ARRL Member? YES NO

Family Members	
Name: _____	
E-mail: _____	
Callsign: _____	ARRL? YES NO
License Class: _____	
Name: _____	
E-mail: _____	
Callsign: _____	ARRL? YES NO
License Class: _____	
Name: _____	
E-mail: _____	
Callsign: _____	ARRL? YES NO
License Class: _____	
<i>Note additional family members on reverse</i>	

We do not sell, trade, or rent personal identification information to others.

See full Privacy Policy at <http://www.ncarc.net>

Please mail this form and payment to:

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

Club Use:	
Received: _____	Amt: _____
Recorded: _____	Version 20121108.2

Or Sign-up Online at **www.ncarc.net**