



ROUNDTABLE

PRESIDENT'S MESSAGE

By Bryan Steinberg – KB0A

The summer is already half over, have you gotten all your outside projects done? I know the club still has a backlog of work that needs to be done while the weather is warm. We did manage to get some of our projects done which included painting the Station 4 communications shed and installing the new antenna for the MotoTRBO repeater there. We are in the process of switching the MotoTRBO repeater over to a DSL Internet connection. This also means, for the time being the 147.33 phone patch is temporarily out of service. Once we get the MotoTRBO up and working on DSL we will move to a VOIP service for the autopatch. Hopes are to have this work done in the next few weeks.

As I mentioned on the Sunday night club net this past week I want to give a big thanks to Bill, W6OAV. Not only does Bill head up the Technical Committee and provide a lot of articles for the newsletter, but he is also key in arranging all those monthly technical presentations that we enjoy at our meetings. Bill seeks out topics of interest, contacts the presenter, gets biography and presentation info for the newsletter write-up and makes sure that the presentation comes off without a hitch. Please take a minute and give your thanks to Bill at the next meeting, or whenever you hear him on the repeater.

Have you checked out the club's Trading Post page on the website? It's a great place to look for ham items of interest offered by club members. Take a look now >> <http://w0tx.org/trade.htm>

And lastly, but my no means least, don't forget our annual Hamfest coming up on Sunday, August, the 18th at the Jeffco Fairgrounds in Golden. The reservations have been coming in and about 1/3 of the tables have been sold. The reservations really start ramping up from now until the event. So, if you want a table with a great location, or require power or have special requests, don't wait too much longer. All tables are assigned in the order the reservation was received. So check out the club hamfest web page, print out the reservation form and send it in with your check. Reservations, with payment, must be received by August 11th to receive the discounted table fee of \$12. The price for tables goes up to \$16 after the 11th.

Till next time...
Bryan, KBØA



INSIDE THE ROUND TABLE

July Meeting - What'd I Miss	Pg 2		Pg 6
Tech Committee Report	Pg 3	Propagation Charts	Pg 6
Feature Article	Pg 4	Up Coming Events & Calendar	Pg 7
	Pg 5	DRC Information	Pg 8

JULY MEETING - WHAT'D I MISS

By Bill – W6OAV

There were 40 attendees this month. W0GV began the meeting by reading a moving letter from Lucile, K0H-VA's widow, thanking the Denver Radio Club for all the members did for Bud. After attendee introductions, the meeting was turned over to our guest speaker, Lance, N1ETV. Lance's presentation covered the TV and SDR (FunCube) USB dongles. Lance began by discussing the following:



- Definition and functions of dongles.
- Overview of the TV dongle:
 - Over the air digital TV reception.
 - Composite output for an analog TV if desired.
 - Block diagram.
 - Initial configuration process.
- Overview of the SDR (FunCube) dongle:
 - 100 kHz to 2 GHz coverage.
 - AM, narrowband FM, wideband FM, USB, LSB and CW.
 - Auto adaption of IF filters to the bandwidth of received signal.
 - Block diagram.
 - Initial configuration process.
- Where to order the dongles and associated software.

Lance ended his presentation by "firing up" each dongle and illustrating their setup and operational procedures.

AUGUST MEETING ANNOUNCEMENT



They are vital to amateur radio. They determine the success or failure of every QSO. They are largely unseen and they are often ignored.

They are transmission lines. Will Cowan, AC0FV, author of "*Easy Solutions of Transmission Line Problems*", will discuss this subject at our August meeting.

Transmission lines are one of the most mathematically complicated circuit elements that amateurs use. You say, "How can that be? It's just a wire." Well, actually it is two wires. But most important, failing to understand what transmission lines are or how to use them can indeed mean that only a paltry few watts from your 500 watt rig actually get to your antenna!

The presentation will begin with the fundamentals. A simple transmission line model and how to calculate circuit values by using it will be presented. This process will be repeated two more times as a more complex model and finally the definitive mathematically correct model are introduced and discussed. The methods for performing calculations for each case will be presented along with clear criteria for when each model applies.

Having thus finally presented what is known in the literature as the Transmission Line Equation; several examples of various uses of that equation will be introduced and discussed. These include how to:

- Calculate accurate values for your system including SWRs, reflection coefficients, voltages, currents, line loss, transmission line input power, antenna power and the input impedance & admittance seen when looking into the transmitter end of the transmission line.
- Calculate the impedance of an antenna for any frequency.
- Determine the characteristics of an unknown transmission line.
- Match an antenna to a transmission line using a length of transmission line.
- And more.

TECHNICAL COMMITTEE REPORT

By Bill – W6OAV

This report provides an overview of items discussed during the July Technical Committee meeting.

Reconfigure the Station 4 MotoTRBO Internet link

Goal: Relocate the Internet access end of the microwave link to the station 4 MotoTRBO repeater.

The club has ordered a Century Link personal DSL 12 Mb/s service to replace the existing microwave link. Need to buy a VOIP service to replace the existing phone line serving the phone patch.

Convert one of the DRC repeaters to narrow band FM.

Goal: Investigate the feasibility of converting the St Anthony repeater to narrow band FM.

WWOLF will setup access to the site and advise the tech committee of the date. Volunteers will be sought to assist with testing. WWOLF will use a programming cable to reprogram the repeater. After conversion, the repeater will remain on the existing frequency.

Provide the TSA with a cell/laptop charging station for the canteens.

Goal: Design and implement a TSA emergency cell/laptop charging station.

KA0BBQ and N1ETV oversaw the design, construction and successful testing of four units.

TS-940 Repair

Goal: Determine if re-soldering and cleaning connectors will fix radio.

K0TOR repairing as time permits. Several components must be replaced.

Voter System Redesign

Goal: Find a site east of Denver which will provide good coverage into the Denver Metro area and which will support the voter system

Investigation is still in progress.

Existing Voter System Tune Up

Goal: "Tune up" the existing test voter configuration consisting of the Station 4 central voter site and the N1ETV remote receiver site:

- Items to be completed:
 - o Rewire link receiver to voter controller interface. KB0A to obtain configuration from WA2 YZT.

- o Adjust UHF link transmit antenna position - KB0A will use analyzer to check the receive antenna system.
- o Sync the hang times of Station 4 and the remote.
- o Calibrate the local and remote audio levels and responses - KB0A will use IFR to set levels.

KB0A to schedule and call for volunteers to test the changes.

147.33 Auto Patch

Goal: Program the auto patch controller to allow calls to the 720 exchange. WWOLF will use a programming cable to reinstall the program

Remove antenna and cabinet from North Table Mountain.

Goal: Reclaim DRC equipment.

WA2YZT and K0HTX will pick a day to climb the tower. The tech committee will call for volunteers. Group first must determine where to store the cabinet.

Who's New In The DRC

The DRC is a very active club in the Denver metro area and we'd like to have all of our members listen for these new calls and personally to make them feel welcome.

James Brown KC0OLW

Welcome to our newest members. We have a number of activities throughout the year and we'd like very much for you to participate in serving your community. If you have questions please feel free to ask on any of the repeaters or see the contact information on the last page of this publication. Also please join us once a month at the regular club meeting on the 3rd Wednesday at 7pm. For new hams we have the Elmer session which starts at 6:30pm before the regular meeting.

More information can be found on the Denver Radio Club website at <http://www.w0tx.org>.

Don't forget to join in Wednesday nights at 7:30pm for the DRC Learning Net ! 145.49/448.625 machines

SUPPORT DRC'S EMCOMM PROGRAM

By Jack – WOJMC

The DRC supports several local organizations with our emergency communications abilities. These include Lakewood Police Department, West Metro Fire Department, Saint Anthony's Hospital, The Salvation Army and Colorado ARES Districts 13 & 23. It is important that our club membership be active in its support of these organizations. We learn through courses offered by FEMA, ARRL as well as many websites offering excellent information. But most importantly we learn by participating in drills and exercises.

In order that I may present you with every opportunity to participate, learn and have some fun along the way I am establishing a database of those members who would like to participate and to be sure NO EXPERIENCE REQUIRED. This is where you come to learn. If you could please email me (Jack McComb – WOJMC, EmComm Coordinator) at WOJMC@ARRL.NET or prairiestone@q.com or if you are not into this new-fangled internet stuff just give me a call at 303-885-9098. I would like to know your name, call sign, email address, and phone number. Please also include what equipment you have available such as HT's, mobile HF, power supplies, etc. If you already have some EmComm experience you might include a brief bio of that activity. With this information I will be able to contact you regarding any drills, exercises and/or real situations requiring our assistance.

Thanks for your assistance in making DRC's EmComm support of our services organizations top notch.

FIELD DAY 2013

By Jason – AC0UA

Hello, Denver Radio Club.

Field Day was a great success, the report we sent to the ARRL had total score of 1092 points. We had 60 visitors one of which was Deputy Don Pierce making sure we were having a safe Field Day. Thanks to Paul, KD0CXX, who was a great asset, he set up our information booth and put in



a lot of work cooking and feeding our group. A special thanks to his wife for starting off Friday night with a spaghetti dinner. I'd also like to thank Zach Smallwood for being our "IT" guy, setting up our logging software and configuring the laptops at each station. Jim, KOTOR played an important roll coordinating, getting the Salvation Army Comm van and the crank up tower to site. His Kenwood TS940 worked great on 20 meters even with all the QRM on the a crowded band!! Alex, AF0B worked CW, the conditions were difficult but came around as time went by. Alex's son Daniel took on the job of greeter for information booth he did a great job greeting people and keeping log sheets up to date.

In total, we ran 5 station 2 generators, hung up 2 long wire/dipoles, 1 beam, 1 vertical and 1 wire beam on HF. We also had a portable repeater on 146.865. We had a great group of people great food and got some new operators on the air. Thank for all the help and the wonderful memories!

THE ROUNDTABLE ARCHIVE

Have you been looking for back issues of the RoundTable? Many are available on the DRC web site.

Scan the QR code or go to

<http://www.w0tx.org/RoundtableAccessPage.htm>





**The Denver Radio Club
 Is an ARRL
 Special Service Club
 Support your hobby
 Join the ARRL TODAY**



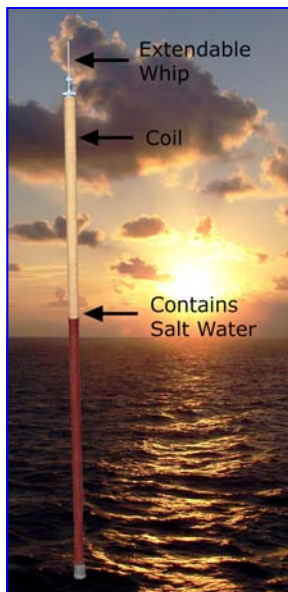


An Unpaid Advertisement

A FAKE Industries Announcement

After years of intensive research and development, FAKE Industries is about to announce a new super gain mobile HF antenna! The theory behind the antenna is very interesting. Some time ago a FAKE Industries ham/engineer noticed that when he operated mobile HF next to salt water the signal reports he received were always much better. The engineer did some research and found that the ground conductivity in the U.S. ranges between 0.5 and 30 millimhos per meter. In contrast, the conductivity of seawater is an amazing 5,000 millimhos per meter! The engineer realized that the high conductivity of saltwater causes much less RF signal loss than that caused by low ground conductivity.

After thinking about this for a while, the engineer reasoned that if saltwater conductivity near an antenna causes less RF signal loss then why not design this feature into an antenna. So, he designed an antenna containing saltwater! Thus the AQUATENNA was born!



Another FAKE engineer, upon seeing the antenna, suggested a modification. Why not add a spiket at the base of the antenna and fill the antenna with salty Margarita? That way, if the mobile operator is sitting somewhere and the bands are dead, he can grab a glass and enjoy a few drinks.

FAKE Industries, a Division of WACK Inc.
"If it's a fantastic product, it's out of WACK!"
 By Bill – W6OAV

Check out the HamFest Seminar list on page 9. You will find the one of great interest to you. Don't Forget the HamFest is on Sunday the 18th. Make plans to attend!!

HRO 12 STORE BUYING POWER WORKS FOR YOU!

www.hamradio.com

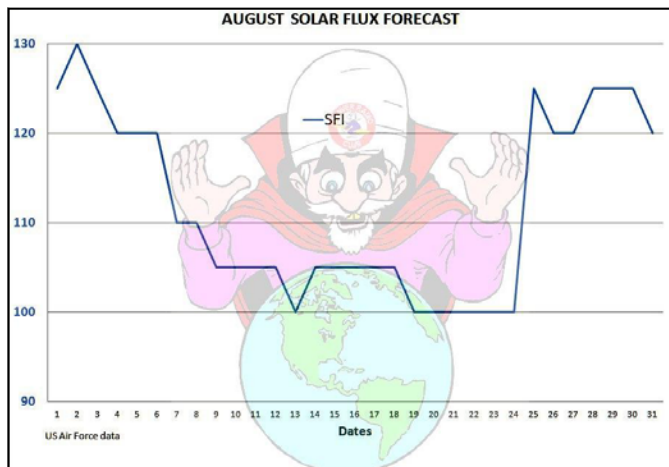
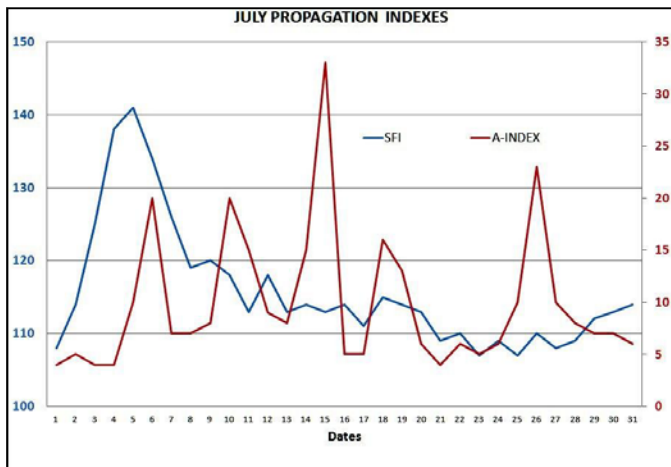
8400 E. Iliff Ave #9, Denver, CO 80231
303-745-7373 800-444-9476
24 HOUR FAX 303-745-7394
 e-mail: denver@hamradio.com

PAST & FUTURE PROPAGATION CONDITIONS

By Bill – W6OAV

The charts below show the Solar Flux and "A" indexes for last month and the forecast for this month's Solar Flux index.

Refer to the September 2010 *Roundtable* for more complete information on interpreting these charts. Issues of the *Roundtable* are available at <http://www.w0tx.org/RoundtableAccessPage.htm>.



© 2007 - 2013 Denver Radio Club; All Rights Reserved; See Editor's Note for Additional Information

The BIG ONE is HERE!



The Denver Radio Club Hamfest

Jefferson County Fair Grounds

When: Sunday August 18

8:30am to 1pm

Food + Fun

Seminars ~ Great subjects and lots to learn





Lots of vendors with everything you need

Computers ~ Radios ~ Antennas

Parts + pieces

You name it and you'll see it here!!!

*For more information!
contact Bryan-KBOA
drcfest@w0tx.org
Or visit www.w0tx.org
Volunteers Needed*

AUGUST 2012						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3 ARRL UHF Contest Begins 1800U
4 ARRL UHF Contest Ends 1800U	5	6 	7 Learning Net 7:30pm	8	9	10
11	12 International Left-Handers Day	13	14 Learning Net 7:30pm 	15	16	17 10GHz & Up Contest (Round 1) 6am to Midnight Sunday, August 18
18 Our Very Own! DRC Hamfest 8:30am - 1pm	19 Rookie Roundup >>August 18<< 1800U to 2359U	20 	21 DRC Meeting Elmer 6:30pm General 7:00pm	22	23	24
25	26	27	28 Learning Net 7:30pm 	29	30	31

DRC Net Sunday's at 8:30pm Local on 145.490 & 448.625 (No PL)

DRC BOARD OF DIRECTORS

President	KB0A	Bryan Steinberg	303-987-9596	kb0a@arrl.net
Vice-President	W0GV	Gerry Villhauer	303-467-0223	w0gv@arrl.net
Secretary	WW0LF	Orlen Wolf	303-279-6264	owolf@mines.edu
Treasurer	K0TOR	Jim Beall	303-798-2351	k0tor@arrl.net
Board Member	N4ATA	Doug Parker	303-922-3305	n4ata@arrl.net
Board Member	K0HTX	Dave Gillespie	303-880-1938	k0htx@comcast.net
Board Member	KD0CXX	Paul Meenach	720-746-1488	TBD
Board Member	N3PQ	Frank Ortega	303-452-0283	n3pq@hotmail.com

DRC STAFF AND VOLUNTEERS

Trustee	WW0LF	Orlen Wolf	303-279-6264	owolf@mines.edu
Net Control	K0TOR	Jim Beall	303-798-2351	k0tor@arrl.net
EmComm Coordinator	W0JMC	Jack McComb	303-885-9098	W0JMC@arrl.net
TSA Coordinator	KA0BBQ	Barry Wilson	Check Roster	ka0bbq@arrl.net
Membership	KC0CZ	Bob Willson	303-659-0517	kc0cz@comcast.net
Club Librarian	WG0N	Dave Baysinger	303-987-0246	wg0n@arrl.net
VE Team	KC2CAG	Tom Kocalski	720-493-1426	kc2cag@arrl.net
Swapfest Manager	KB0A	Bryan Steinberg	303-987-9596	drcfest@w0tx.org
Field Day	AC0UA	Jason Smallwood	Check Roster	sjason67@msn.com
Tech. Committee Chair	W6OAV	Bill Rinker	Check Roster	
Benevolent		Carolyn Wolf	303-330-0721	
RT Editor	AG0S	George McCray	303-751-7246	ag0s@arrl.net
RT Assoc. Editor	W6OAV	Bill Rinker	Check Roster	
Education	K0HVA	Bud Chick	720-394-6006	elmer@w0tx.org
Web Master	N0LAJ	Bill Hester	Check Roster	

DRC REPEATERS

BAND	Freq / Shift / PL Tone	Additional Information
6m	53.090MHz (-1MHz) 107.2Hz PL	
Packet	145.05MHz<>14.105MHz	
2m	145.490MHz (-) 100Hz PL	Linked to the 70cm - 448.625MHz machine.
2m	147.330MHz (+) 100Hz PL	Local Area, Members Auto-Patch Does Not TX a PL!
2m	147.330MHz (+) 131.8Hz PL	Not in service at this time!
1.25m	224.380MHz (-) 100Hz PL	
70cm	447.825MHz (-) 100Hz PL	Saint Anthony's
70cm	448.625MHz (-) 100Hz PL	Linked to the 2m - 145.490MHz machine.
70cm	449.350MHz (-) 100Hz PL	Wide area coverage with Echolink Node # 4140.
70cm	446.7875MHz (-)	MotoTRBO Repeater Slot 1 – DMR-MARC WW, Slot 2 – Local

EDITOR'S NOTE

© 2007 - 2013 Denver Radio Club; All Rights Reserved; Articles in the RT may be reprinted with permission for non-commercial or educational use.

DRC members - this is your newsletter. If there is something which is club or amateur radio related that you'd like to see as a regular feature, email suggestions to the editor. Members are the heart of The Denver Radio Club, if you have an expertise or an interest in a particular segment of ham radio that you'd like to write about, you may email your submissions to AG0S@arrl.net. Submission deadline is the 25th of the Month. **Editor**

HamFest

SEMINARS

9 AM – SWR myths & visual demo of SWR in action.
Presenter: Bill, W6OAV

10 AM – SDR dongle, description and demo.
Presenter: Lance, N1ETV

10 AM – VE Testing.
DRC VE Team

11 AM – MotoTRBO, a digital voice and data system.
Presenter: Steve, KFORW

12 PM – Q & A session for newer hams.
Presenter: Gary, KD0SQA

The seminars and VE testing will be held in the conference rooms on the north lower level. Access is via the stairs at the north east corner of the building. Follow the arrows.