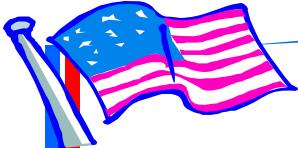




ROUNDTABLE



PRESIDENT'S MESSAGE

By Bryan Steinberg – KB0A

Well there is no doubt that summer has arrived along with the heat and the fires. There was a great article in the Denver Post a few weeks back on the work hams are doing on the High Park fire in Larimer County. You will find a link to the article on our website. I know there are a lot more hams working on all the fires currently active in Colorado so, once again, we get to show off our skills, professionalism and the capabilities we bring to assist our served agencies and neighbors.

As we are all aware those capabilities are not possible without the ability to practice our techniques. Field Day provided an opportunity to experiment and "play" with our equipment and skills in a non-life threatening environment. Our club's annual Field Day event was a great success with a large turnout of club members, visiting ham and non-hams. As you are aware we lost our Hudson location and was able to secure one of Denver Parks' locations up in Genesee. And believe me the extra 2000' elevation provided some relief from the heat. This year's event featured new challenges without a 150' steel tower as an anchor point for our antennas. But we made due and got pretty good at using the 50' plus trees for support. It was a great place to be and operate and we will try to make this a regular venue moving forward. A special thanks to Steven Reiley, KDOCP, for stepping up to lead this year's field day activities. Also, thanks again to the

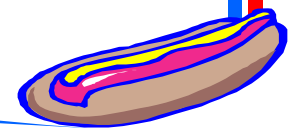
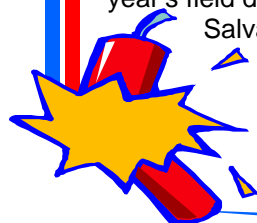
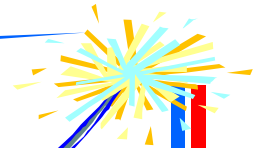
Salvation Army for providing the Comm Van, Tower Trailer and the Canteen truck to keep us fed.

This month's meeting will be very interesting with Jerry Taylor, KDØBIK, discussing the "Summits On The Air" (SOTA) program. Jerry is the central Colorado regional manager for the WØ SOTA Association and will provide an overview of how the SOTA program operates, and discuss how to get involved both as a "chaser" and as an "activator". The timing of this presentation will be a good preview to the upcoming Colorado 14ers event on August 5th. You can find more info about that event on their web site <http://www.14er.org/>.

One last note, our annual Hamfest is coming up on August 19th. Reservations are already ahead of last year, while we do have more tables it's not a lot more. So, if you are thinking of getting a table to sell some surplus gear now is the time. You will find the advance reservation form on the club website at <http://www.w0tx.org/hamfest.htm> This year we are using the local Lions Club to run our kitchen, their prices should be similar to ours.

See you on July 18th and I hope everyone has a fun, and safe Independence Day holiday. Please remember to use the club's calendar (<http://w0tx.org/calendar.htm>) to keep track of upcoming events (e.g. Hamfests, Field Day, Meetings, etc.) of interest to the Denver ham community.

Until next month...
Bryan – KBØA
President



INSIDE THE ROUNDTABLE

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JUNE MEETING - WHAT'D I MISS

By Bryan – KB0A

Our June meeting was a preparation for our Field Day event taking place on the next weekend. We had approximately 30 members in attendance. Steve, KD0CPE, put together a short presentation outlining the location, directions, operating procedures and other details. Steve also included a chart showing the current Fire Ban and restrictions in place at the Field Day site. He then opened the meeting for questions from the membership on the Field Day event.

After the presentation Bryan, KB0A, showed the attendees his pneumatic tennis ball launcher which would be used at the Field Day site to setting lines for using the trees for antenna supports. After a brief demonstration, at much reduced power, Bryan took questions on where he got the idea and plans for building the launcher.

Gerry, W0GV, made an announcement at the meeting that there was a Motorola rebate program currently in process on some MotoTRBO™ radios. Please contact Gerry for additional info.

Jerry may not be a stranger to some of you. He was an active member in the Denver Radio Club between the years of 2007 and 2010. Jerry was licensed in 2007 and when he's not active on a SOTA Summit, he enjoys helping others learn more about our wonderful hobby through his amateur radio podcast. Jerry started his Practical Amateur Radio Podcast in 2008 and this year celebrated his 4th year of podcasting about amateur radio. The Practical Amateur Radio podcast can be found on Jerry's website <http://myamateurradio.com> or via iTunes.

JUNE TECH COMMITTEE REPORT

By Bryan – KB0A

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

Field Day

Goal: Finalize plans:

We are locked in for the Chief Hosa North site; KD0CXX has picked up the beam antenna and other items from K0HTX.

North Table Mountain Repeater

Goal: Install a 147.33 MHz repeater on NTM:

Decision was made to install a standalone receive antenna for our repeater and not to link into the existing, commercial, receive antenna system. W0GV and WW0LF will set up a plan to perform work.

Voter System

Goal: Design, build and test a 147.33 MHz voter system consisting of a central voter site and one remote site (Phase 1):

The voter controller is up and running. The link receiver to voter controller interface must be re-wired. KB0A will obtain the configuration from WA2YZT.

Packet Gateway

Goal: Intermittent HF transmit issue:

KB0A worked with W6OAV and after some significant troubleshooting determined that the issue is with the HF radio mic gain control. We will replace this radio with another HF transceiver that belongs to the club.

JULY MEETING ANNOUNCEMENT

By Bill – W6OAV

Jerry Taylor, KD0BIK, will discuss the "Summits On The Air" (SOTA) program during the July meeting. Jerry is the central Colorado regional manager for the WØ SOTA Association and will provide an overview of how the SOTA program operates and discuss how to get involved both as a chaser and an activator.

Summits On The Air (SOTA) is an award program for radio amateurs and shortwave listeners that encourages portable operation in mountainous areas. SOTA has been carefully designed to make participation possible for everyone. It's not just for mountaineers! There are awards for activators (those who like to hike and climb to the summits) and chasers (who either operate from the comfort of their home, a local hilltop or are even activators on other summits).



(Continued on page 3)

(Continued from page 2)

Centennial Repeaters

Goal: Ground the hard lines:

Several tech committee members will go to the site to determine hardware and activities required. The tech committee agreed to ground the system belonging to the Intermountain Repeater Association.

New MotoTRBO Repeater

Goal: A new MotoTRBO repeater:

The repeater was received and is on the air. It is linked to the DMR-MARC worldwide network. Currently operating from KB0A's QTH; need to obtain Internet access at Station 4 so the system can be relocated there.

6 Meter Repeater Dropouts

Goal: Determine cause of dropouts:

KB0A tried to reset the controller not to mute DTMF tones, a likely cause of the dropouts. Users said it did not fix the problem. KB0A will verify that the fix is in place and redo if not done or try other options.

449.35 Interference

Goal: Identify intermittent interference:

Several members of the Rocky Mountain Ham group transferred our repeater to their Antenna system to but it did not resolve the interference issue. No further actions at this time.

between them?

On the afternoon of March 27, 1964 Alaska experienced one of the largest earthquakes ever recorded in North America. The earthquake measured 9.2, caused MAJOR damage, killed approximately 142 people and caused the second largest tsunamis ever recorded. The earth quake lasted for approximately four minutes.

Almost immediately after the earthquake, hams stepped in to provide critical communications. (Remember, there were no cell phones in those days). They did a magnificent job. I remember spending hours glued to my receiver, as did many other hams, listening to these emergency communications from Alaska. So, what does the 5 cent ham stamp have to do with all this?

I also remember the excitement caused by this stamp. The stamp was created to honor the ARRL's 50th anniversary and to honor the nation's approximately 250,000 hams. Over 100 million copies of the stamp were printed. The Anchorage post office, because of the incredible job done by the Alaskan hams during the earthquake, honored those hams on December 15, 1964, by selling first day of issue envelopes containing the stamp. The first day of issue envelopes from Anchorage are a valued possession, especially if the first day of issue is a special ARRL souvenir envelope. (See graphic below.) An amateur could order the envelope with the first day issue cancelled stamp from the ARRL.



REMEMBER WHEN?

By Bill – W6OAV

The purpose of this article is to bring back memories to old time hams like me and to let newer hams know what ham radio was like in the 50s and 60s.

Recently I open an old ARRL antenna manual and found a mint 5 cent ham radio stamp (at right) I'd placed there years ago. Finding the stamp brought back lots of memories about the stamp and the hours many of us spent monitoring ham emergency communications after a major Alaskan earthquake. So, what are the stories on both and the connection



Later, the stamp was sold at over 40,000 post offices providing good publicity for the amateur radio hobby.



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



INTRO TO MOTOTRBO™

By Bryan – KB0A

As I mentioned on the weekly net over the past few weeks the Denver Radio Club has purchased and placed on the air a Motorola® Mo-toTRBO™ digital repeater. Within the last year we've had a number of presentations which talked about the new digital systems which were migrating onto the ham bands. A number of folks are familiar with D-Star which was developed by hams for hams, but the newer Mo-toTRBO digital system was originally designed for commercial users. Now that we have our own digital system running I would like to discuss some of the technology involved and how some of the new terminology relates back to what we already know and use in ham radio systems.

Unlike other digital radio technologies used in ham radio MotoTRBO utilizes a TDMA (Time Division Multiple Access) technique used by some cellular phone services. The TDMA technology allows the repeater to send two signals at the same time. Each audio input is digitized and then the audio, in the digital form, is sent using one of the two time slots. See Figure below.

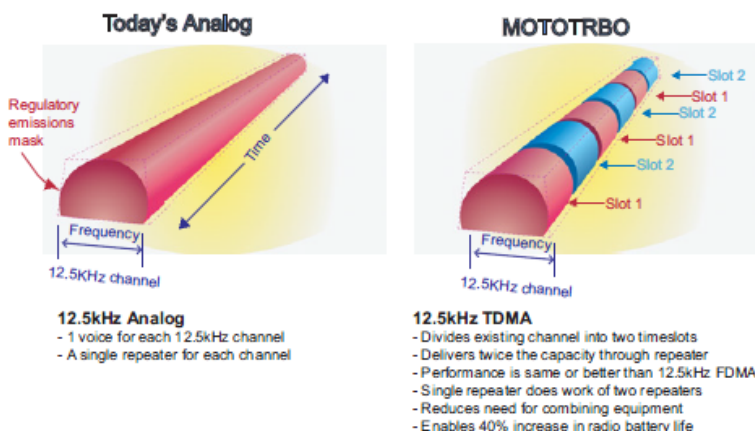


Figure 2 - Comparison between Today's Analog and MOTOTRBO™
(Image Courtesy Motorola)

MotoTRBO radios use different terminology than we are used to in order to perform some of the same functions. For example, we are all familiar with CTCSS or PL tones, MotoTRBO has the same feature but names it "Group Call." However, "Group Call" works to not only limit the ability for the radio to open the squelch to specific groups, it also won't let you hear anything even if you turn your squelch off manually. So you can have

many groups using the repeater without being aware of the others. Granted, you can't all talk at the same time but the radios take care of that because you are locked out of transmitting when someone else is talking.

I'll leave it here for now. Look for additional info in future RoundTables. In the meantime please feel free to ask me, or other members with MotoTRBO radios, any of your questions on the technology.

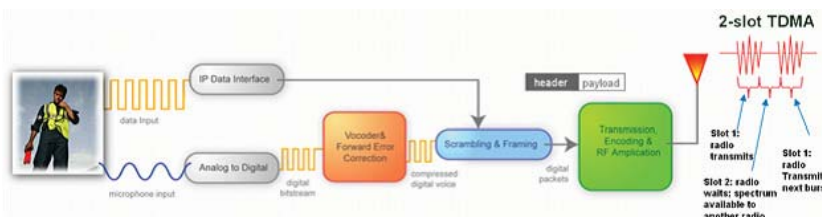


Figure 1 - MOTOTRBO™ Digital Radio Technology
(Image Courtesy Motorola)

As an added benefit the MotoTRBO runs on only a 12.5 KHz wide channel (unlike our current 25 KHz for analog repeaters) but it manages to squeeze two separate transmissions into the same space. See Figure 2. This figure compares commercial channel use of 12.5 KHz channel width with the use of TDMA to double the capacity. Channel optimization is even greater for hams. Since a MotoTRBO provides two channels in the space of 12.5 KHz, and these repeaters can be placed on the band right next to each other, they provide a better than 4 times advantage over current analog ham repeater usage.

Photos and Field Day Report will be here in the August Issue!

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



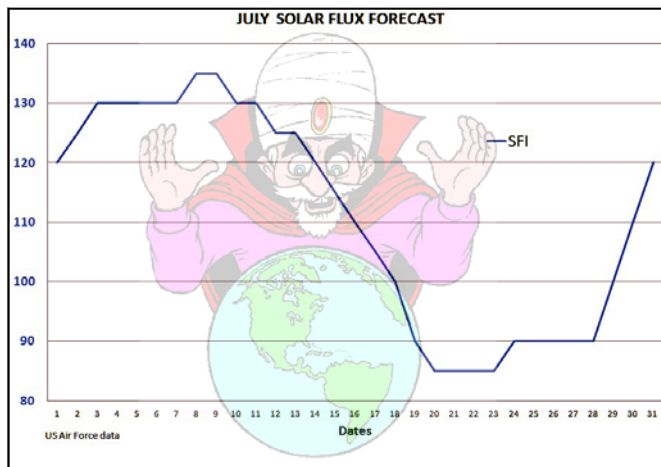
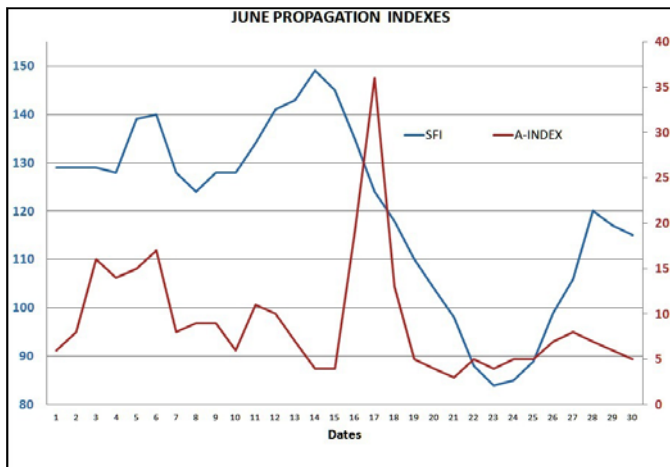
PAST & FUTURE PROPAGATION CONDITIONS

By Bill – W6OAV

This article provides two charts: the propagation conditions for last month and a forecast of next month's propagation conditions.

USING THE PROPAGATION INDEX CHART

Note two things on the chart: the trend of the SFI and A indexes and the date of largest SFI peak. The trend of the SFI shows the progress of the solar cycle during the past month. The SFI peak allows the rough forecasting of the reoccurrence of SFI peak in the next month. In order to "forecast" the next SFI peak, note the date when the SFI peak occurred and project out to about 28 days. Due to the sun's 28 day rotation, the SFI peak will often reoccur in about 28 days. The reason is because the sun spots causing the SFI peak move with the sun's rotation and face the earth every 28 days. This 28 day repetition will become more pronounced as the solar cycle improves. Refer to the September 2010 *Roundtable* for more complete information on the "SFI" and "A" indexes.



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The BIG one is coming!







The Denver Radio Club Hamfest
Jefferson County Fair Grounds

When: Sunday August 19 - 8:30am to 1pm

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

Food Fun

Lots of vendors with everything you need
Computers ~ Radios ~ Antennas
Parts + pieces
You name it and you'll see it here!!!

JULY 2012						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4  Full Moon 	5	6	7
8	9	10  Last Quarter	11 Learning Net 7:30pm	12	13	14 IARU HF Championship Starts 1200U PPRAA HAMfest
15 IARU HF Championship Ends 1200U	16	17	18 DRC Meeting Elmer 6:30pm General 7:30pm  New Moon	19	20	21
22  Parent's Day	23	24	25 Learning Net 7:30pm	26  First Quarter	27	28
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
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Trustee	WWOLF	Orlen Wolf	303-279-6264	owolf@mines.edu
Net Control	K0TOR	Jim Beall	303-798-2351	k0tor@arrl.net
TSA/EmComm Coordinator	OPEN			
Membership	KC0CZ	Bob Wilson	303-659-0517	kc0cz@comcast.net
Club Librarian	WG0N	Dave Baysinger	303-987-0246	wg0n@arrl.net
VE Team Liaison	KC2CAG	Tom Kocalski	720-493-1426	kc2cag@arrl.net
Swapfest Mgr	KB0A	Bryan Steinberg	303-987-9596	drcfest@comcast.net
Field Day	K0HTX	Dave Gillespie	303-880-1938	k0htx@comcast.net
Tech. Committee Chair	W6OAV	Bill Rinker	<i>Check Roster</i>	
Benevolent		Carolyn Wolf	303-330-0721	
RT Editor	AG0S	George McCray	303-751-7246	AG0S@arrl.net
RT Assoc. Editor	W6OAV	Bill Rinker	<i>Check Roster</i>	
Education	KD0CXX	Paul Meenach	720-746-1488	elmer@w0tx.org
Web Master	N0LAJ	Bill Hester	<i>Check Roster</i>	

DRC REPEATERS

BAND	Freq / Shift / PL Tone	Additional Information
6m	53.090mHz (-1mHz)	
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	Temporarily Off The Air!
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 (-)	Slot 1 – DMR-MARC WW, Slot 2 – Local MotoTRBO Repeater

EDITOR'S NOTE

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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 and sole 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**