



ROUNDTABLE

PRESIDENT'S MESSAGE

By Robert White – K0RCW

Greetings,

Happy Valentine's Day to everyone. I want to extend special congratulations to Neil– KD0MRY on his recent upgrade. Neil, you will definitely enjoy your new privileges on the HF bands. Also welcome to our new club member Edward, - WA6RZW we know you will find many new friends and valuable resources here.

Speaking of valuable resources, we want to thank Mark – W0QL for donating a computer to replace our Echo-link system that failed at the end of January. Mark donated a replacement computer and also installed Echo-link Server., Mark and Bill – W6OAV installed a new antenna and a replacement UPS battery. The system is working very well now. Thanks Mark for your time and your donation to the club.

In other news, the general membership passed a motion at our last meeting to spend up to \$1,500 to purchase a new 70cm UHF repeater, commercial grade antennas, and mounting accessories to be located at the New St. Anthony's Hospital. We will meet with hospital personnel to work out the details of installation. We want the club membership to actively use this well situated repeater (once it is installed) with line-of-site to Lookout Mountain, Squaw Mountain, Station 4, and Hudson sites. The radio room is well appointed, includes backup power, and is equipped with Internet access. The membership expressed interest in establishing an IRLP node at some point in the future.

We encourage our membership to use this new repeater so that we are "always at the ready" in the event of an emergency. It will also provide far superior coverage into poorly served areas of town such as behind Green Mountain and into the Golden area.

We will be collaborating with other local ham groups in the development of a plan to man the station in the event of an emergency.

Oscar – K0SSE is retiring from his long held position as Field Day Coordinator. There are no words to express the gratitude we feel to Oscar for his years and years of service to our club in this important capacity.

Robert – K0RCW, Dave – K0HTX, and Frank – N3PQ met the other night to begin talking about Field Day preparations and organizations. We quickly decided to reach out to the club and ask for members to please join in our Field Day organization committee to plan the event. If you have an interest, please email me at k0rcw@arrl.net. Committee meeting time and location will be announced via our Sunday night 8:30 pm nets.

Articles such as the excellent "Explore 60 Meters" in this month's Roundtable are contributed by members like you. We're very interested in publishing similar articles about your interesting experiences, homebrew projects, experiments, etc. Bill – W6OAV will help work with you to write an article if you do not wish to do so yourself. These articles are our lifeblood; please share with the rest of us.

We'll see you the March meeting where Frank – W7FES will give a technical presentation on the RTD Light Rail System.

73 and good DX,
Robert – K0RCW
President

INSIDE THE ROUND TABLE

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JANUARY MEETING - WHAT'D I MISS

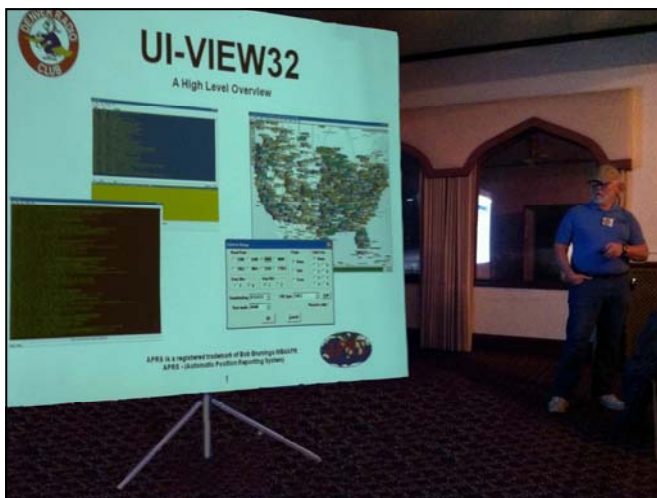
By Robert – K0RCW

Unfortunately, a snow storm in progress prevented a lot of folks from attending the meeting. However, sixteen folks did brave the storm for the meeting.

After introductions, the passing of club member Victor O. Serviss, W0ANP, was announced. Vic was remembered on January 22nd at South Suburban Christian Church, Littleton. Donations may be made to the church or to the Porter Hospice Foundation at <http://porterhospicefoundation.org>.

The general membership then passed a motion for the board to spend up to \$1,500 to purchase a new 70cm repeater system to be located at the New St. Anthony's Hospital. See the president's message for details.

The meeting was then turned over to the guest speaker N4ATA. Doug gave an excellent presentation on the UI-View32 software that combines tracking and messaging with the Automatic Packet Reporting System (APRS) as developed by Bob Bruniga, WB4APR. Bob defines APRS on the information packed <http://www.aprs.org> web page as a two-way tactical real-time digital communications system between all assets in a network sharing information about everything going on in the local area.



With UI-View32 you can exchange simple text messages with mobile or fixed stations or retrieve up to five lines of information about that station. It is also possible to place non-APRS objects on a map, locate repeaters, police, fire stations, hospitals, severe storms, create an IGate, or set a fixed weather station.

Doug's PowerPoint described how to set up the UI-View32 software. This program requires a minimum of a 120 MHz Pentium with as much memory as can be supplied, and a good internet connection. The software can be obtained free-of-charge from <http://www.ui-view.org>. This program and website was established by Roger Barker, G4IDE (SK). Although the program has not been updated since 2003, it is still in widespread use as is his other opus, WinPack. On this page, you can download the 32full302.exe installation package. Registration is required, and you should allow 2-3 days to get your registration back. This process allows only hams with licenses to use the program. On the site you need to select Andy Pritchard's – M0CYP site and then click on the British flag to register. The registration process will require you to enter your call sign followed by your first and last names as it appears in the FCC database. Next, click "Register UI-View32". After a few days, and after you have been verified, a registration code and server authorization code will be emailed to you. The system keeps track of previously registered people.

UI-View32 comes with default mapping capability, but you can download much better maps from Chris Van Gorp's, PA7RHM site in the Netherlands. The URL to this resource is <http://www.pa7rhm.nl>. You may need to set your computer's browser to allow popups to access Chris' site.

UI-View32 can be configured to access APRS Internet Service or APRS-IS via the Internet, RF (VHF) or both. An IGate is a site that creates a gateway between the Internet and RF. There are a few of these in Denver. Doug also gave instructions on how to configure your copy of UI-View32 as a server.

Doug gave a demonstration of UI-View32 and contacted his US Navy and ham friend Carlton Fuller – N4AOL in Portsmouth, VA. Both stations exchanged text message and station locations were displayed on a map using the software.

You Might Be a HAM If:

When your Doorbell rings you immediately shut down your amplifier.

FEBRUARY MEETING PRESENTATION THE TECHNICAL SIDE OF THE RTD LIGHT RAIL

Interested in learning the technical side of the RTD Light Rail system? If so, be sure to attend the DRC February club meeting. Frank, W7FES, will give a technical presentation covering the following:

- Operating cab controls for new and old LRVs (Light Rail Vehicles)
- Light Rail System ABS (Automatic Block System)/ Signals/Switches
- Time permitting – TPSS (Transit Power Sub Station), Radios, etc.
- Q&A

Frank has been with RTD for 5 years and has operated Light Rail trains for 4 ½ of those years. Before that, Frank spent 30 years in Telecommunications and Data Communications, 6 years of which were spent in the Navy as an electronics technician.



CHANNELS vs. VFO SETTINGS

CHANNEL	(kHz)	VFO SETTING
1	5332	5330.5 kHz
2	5348	5346.5 kHz
3	5368	5366.5 kHz
4	5373	5371.5 kHz
5	5405	5403.5 kHz

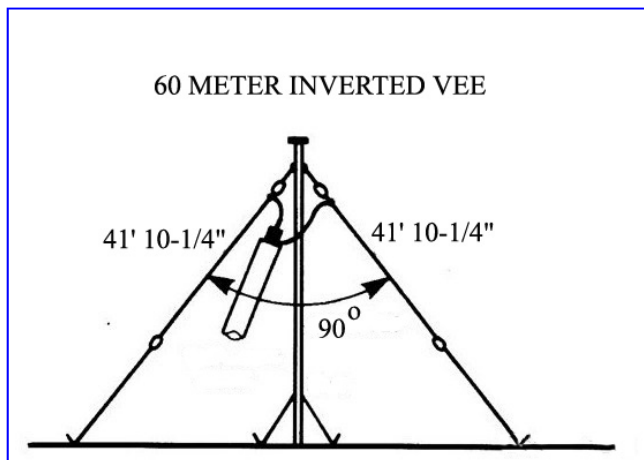
60 meters is available to General Class and above licenses. Amateurs may only operate upper-sideband voice at a maximum of 50 watts effective radiated power (ERP).

Making contacts on 60 meters is very easy. Since only five channels are available, many amateurs rapidly scan these channels listening for a CQ.

Propagation on 60 meters fills in the distance gap between 40 meters and 80 meters, especially during morning and evening hours. 60 meters is the optimum NVIS band. The propagation “rule of thumb” for 60 meters is:

- Daytime: 0 to 300 miles NVIS.
- Before and after sunrise and sunset: up to 1000 miles.
- Nighttime: up to 3000 miles.

Should you wish to try 60 meter mobile, try a 60 meter Hamstick antenna or a High Sierra type of antenna. Or for home operation, “whip up” an Inverted Vee. The graphic below depicts a typical Inverted Vee for 60 meters.



(Continued on page 4)

TECHNICAL COMMITTEE REPORT

By Bill – W6OAV

There was no Tech Committee meeting in January due to the snow storm preventing a majority of the members from attending.

EXPLORE 60 METERS

By Bill – W6OAV & Dwight – WB0HBJ

INTRODUCTION

The purpose of this article is to describe the amateur 60 meter band and to present Dwight’s mobile experiences on this band.

60 meters is an interesting amateur band consisting of five channels. These channels are centered on 5332, 5348, 5368, 5373, and 5405 kHz. The latter channel is the unofficial calling and DX channel. Since the transmitter audio bandwidth cannot exceed 2.8 kHz on 60 meters, the VFOs must be set as noted in the table above right.

(Continued from page 3)

60 meters is available to hams in several other countries; namely, the United Kingdom, Norway, Finland, Denmark, Ireland and Iceland. More countries are scheduled to give their amateurs 60 meter operating privileges.

A vast amount of information about 60 meters can be found at: <http://www.60meters.net/>

WB0HBJ'S EXPERIENCE WITH 60 METERS

The following is an email that Dwight sent me describing his experiences on 60 meters while operating around the country from his 18 wheeler/semi. Dwight is a DRC member and uses on 449.35 MHz when he's in the area. So, if you'd like to find out more, listen for him on the repeater.

Hi Bill,

If you have ever been curious about what it's like to be a rare sought-after contact, you might try 60 meters mobile. It's a great band. I drive a big truck (18 wheeler/semi) across 40 states and western Canada. My transceiver is an Icom IC-7000 and the antenna is a Little Tarheel II screwdriver mounted onto the passenger mirror bracket.



With everyone limited to 50 watts ERP I don't have to compete with 1.5 kW stations. Only five frequencies are used on 60 meters. Informally channel one is primarily for rag chewing, channel two is QRP oriented, channel three is seldom used due to other services data transmission and channel four is rag chewing and channel five is for DX.

Channel two is 5.346.5 on my IC-7000 dial. Quite a few QRP stations are on frequency at sun up and sun down working gray line propagation. Three regulars are K5ZRK (southern Mississippi), KF5BQX (SW Louisiana) and KG4QZV (NW Georgia). Some stations are trying for WAS on 60 and others are collecting grid squares (K5ZRK, Larry has 286). I'm on APRS as WB0HBJ-14 so it's easy to see if I'm in a wanted state or grid.

Less than ten percent of hams legally licensed to transmit on 60 meters have done so according to what I hear on the air. The band is wide open with a lot of weak signal work. There's very little interference. Everyone takes a turn talking. It's a bit of a gentleman's band, like 160 meters. Between channels four and five I hear commercial fishing boats speaking Spanish. There is audio from a U.S. government classroom at 5.399.5 LSB. It's kind of neat to be in the middle of it all.

Every night for a week I copied a station camped in the New Mexico mountains. He had an Icom 817 with a dipole hooked to a tree and was staying in contact with his home near Houston. I've also heard sailboats on the east coast. I have not made contacts outside of the U.S. but have heard England several times.

I'd like to hear more hams on 60 meters. Sometimes I'll pass through a rare grid during the day when propagation is unfavorable. If there is a FM repeater in the area I'll get on and try to drum up some 60 meter activity. That's worked a couple of times.

One question I get asked is When am I going to be in Nevada?'Nevada appears be one of the rarest states on 60 meters.

It feels kind of neat to get posted on DX Summit.



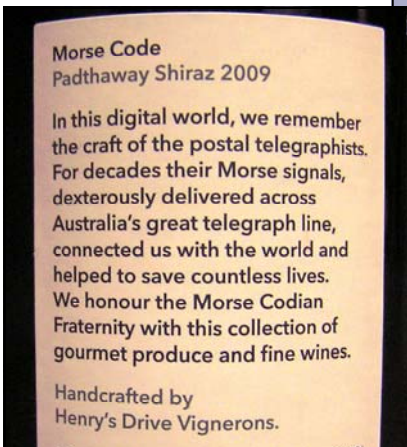
A CW OPERATOR'S KIND OF WINE

By Bill – W6OAV

The other day I was wandering around the local liquor store when an interesting group of wine bottles from Australia caught my attention. They had CW characters on their labels!

Each type of wine was identified by CW characters! Wondering why, I picked up a bottle and read the label on the back of the bottle.

So, if you can't get through the CW pileup on a DX sta-



tion, console yourself with a good bottle of Australian Morse wine!

ONCE THE NANOSAIL-D TEAM RECEIVED CONFIRMATION THAT THE NANOSATELLITE DID INDEED EJECT, NANOSAIL-D PRINCIPAL INVESTIGATOR DEAN ALHORN QUICKLY ENLISTED ALAN SIEG, WB5RMG, AND STAN SIMS, N4PMF, TO TRY TO PICK UP NANOSAIL-D'S RADIO BEACON. BOTH HAMS WORK AT THE MARSHALL SPACE FLIGHT CENTER IN HUNTSVILLE, ALABAMA.

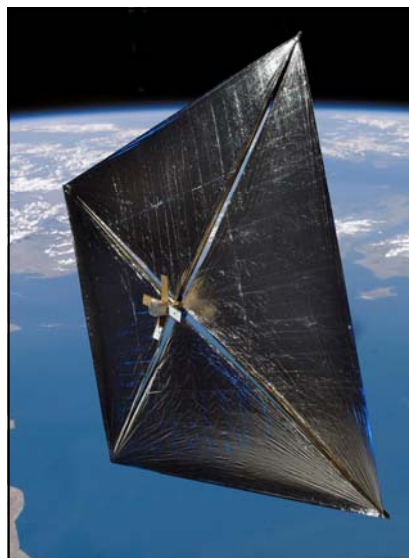
"THE TIMING COULD NOT HAVE BEEN BETTER," SIEG SAID. "NANOSAIL-D WAS GOING TO TRACK RIGHT OVER HUNTSVILLE, AND THE CHANCE TO BE THE FIRST ONES TO HEAR AND DECODE THE SIGNAL WAS IRRESISTIBLE." RIGHT BEFORE 2300 UTC ON JANUARY 17, THEY HEARD A FAINT SIGNAL. AS THE SPACECRAFT SOARED OVERHEAD, THE SIGNAL GREW STRONGER AND THE OPERATORS WERE ABLE TO DECODE THE FIRST PACKET: NANOSAIL-D WAS ALIVE AND WELL. "YOU COULD HAVE SCRAPED DEAN OFF THE CEILING. HE WAS BOUNCING AROUND LIKE A NEW FATHER," SIEG RECALLED.

ACCORDING TO NASA, THE NANOSATELLITE WAS LAST HEARD AT 1354 UTC ON JANUARY 21. TELEMETRY INDICATES THAT THE SAIL DEPLOYED ON SCHEDULE AND THE SATELLITE IS NOW BELIEVED TO BE OUT OF POWER, WHICH NASA SAID WAS TO BE EXPECTED. NASA IS NOW ASKING FOR VISUAL TRACKING AND SIGHTING REPORTS OF NANOSAIL-D, WHICH IS ABOUT 650 KM ABOVE THE EARTH. ACCORDING TO THE AGENCY, WHEN THE NANOSATELLITE'S SAIL REFLECTS OFF THE SUN, IT COULD BE UP TO 10 TIMES AS BRIGHT AS THE PLANET VENUS -- ESPECIALLY LATER IN THE MISSION WHEN THE SAIL DESCENDS TO LOWER ORBITS. YOU CAN TRACK NANOSAIL-D ON THE WEB OR ON YOUR SMART PHONE. NASA ESTIMATES THAT NANOSAIL-D WILL REMAIN IN LOW EARTH ORBIT (LEO) BETWEEN 70 AND 120 DAYS, DEPENDING ON ATMOSPHERIC CONDITIONS.

NASA'S NANOSATELLITE HEARD BY HAMS

WHEN A NASA NANOSATELLITE -- [NANOSAIL-D](#) -- EJECTED UNEXPECTEDLY ON JANUARY 17 FROM THE FAST AFFORDABLE SCIENTIFIC AND TECHNOLOGY SATELLITE ([FASTSAT](#)), THE AGENCY CALLED UPON AMATEUR RADIO OPERATORS TO HELP TRACK IT. [NASA ASKED RADIO AMATEURS TO LISTEN](#) ON 437.270 MHZ FOR THE SIGNAL AND VERIFY THAT NANOSAIL-D WAS OPERATING. NASA RECEIVED ALMOST 470 TELEMETRY PACKETS FROM 11 COUNTRIES.

THE NANOSAIL-D BEACON SENT AN AX.25 PACKET EVERY 10 SECONDS; THE PACKET CONTAINED DATA ABOUT THE SPACECRAFT'S SYSTEMS OPERATION. LISTEN [HERE](#) FOR A RECORDING OF THE NANOSATELLITE'S BEACON, MADE BY HANK HAMOEN, PA3GUO, ON JANUARY 21.



Artist concept of a solar sail in space. (NASA)

WHAT'S IT WORTH?

By Bill – W6OAV

When selling old gear, it helps to know its worth. Pricing too high gets you no buyers. Pricing too low means you're losing money.

“Worth Monkey” is a good site for checking new and used item prices. Just enter the item you want to sell or buy. The site will comb other internet sites to determine the current prices of the item. It then will provide you with a graphic as shown in Figure 1. The site has a drop down window which will show the various prices it found for the desired item. “Worth Monkey” can be accessed at: <http://worthmonkey.com/>



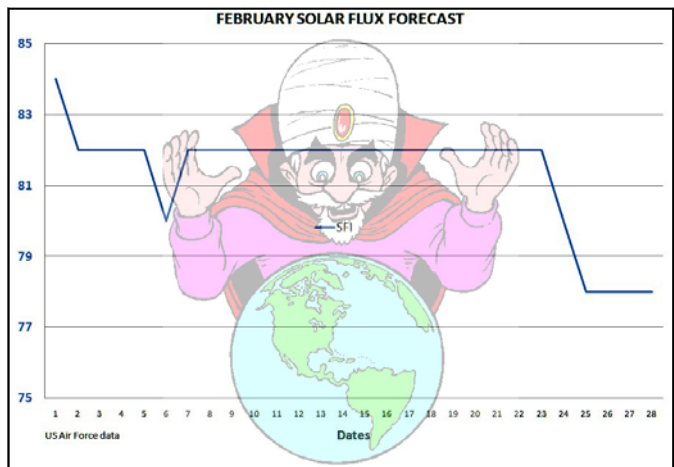
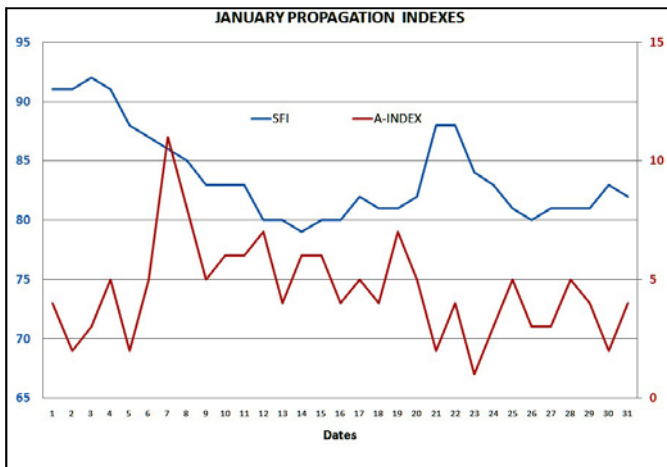
PAST & FUTURE PROPAGATION CONDITIONS

By Bill – W6OAV

This article provides two charts: the propagation conditions for last February and a forecast of next February'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 February. The SFI peak allows the rough forecasting of the reoccurrence of SFI peak in the next February. 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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UP COMING EVENTS

HAMfests

February 13 – ARA Swapfest, Adams County Fairgrounds, Brighton, CO

April 2 – Longmont ARC, LarcFest, Boulder County Fairgrounds Longmont, CO

July 16 – PPRAA Megafest, Lewis Palmer High School, Colorado Springs

June 25-26 – ARRL Field Day More info later

August 21 – DRC HAMfest, Jefferson County Fair Grounds









September 25 – Boulder Amateur Radio Club, BARCfest, Boulder County Fair Grounds, Longmont, CO

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Stay warm and support the DRC with a new DRC Logo Jacket.

The jackets are Black with Grey fleece lining and are embellished with Your Name & Call Sign on the left chest and the DRC logo centered on the back. Still just \$60.00 plus applicable taxes.

Call or email Doug (N4ATA) with your Name, Call Sign and size of jacket size. Phone: (303) 922-3305
 Email: jtbebsvcinc@comcast.net or N4ATA@comcast.net (Please, put DRC Jacket in subject line)

February 2010							<i>DRC Net Sunday 8:30pm Local</i>						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 National Freedom Day 	2 Learning Net 7pm Ground Hog Day 	3  New Moon	4	5							
6	7	8	9 Learning Net 7pm	10	11  First Quarter	12							
13 ARA Swapfest	14 Valentine's Day ARRL School Club Roundup Begins 1300U 	15	16 DRC Meeting Elmer 6:30pm General 7:30pm	17	18 ARRL School Club Roundup Ends 2359U  Full Moon	19 ARRL Int'l CW DX Contest Begins 0000U							
20 ARRL Int'l CW DX Contest Ends 2400U	21 President's Day 	22	23 Learning Net 7pm	24  Last Quarter	25	26							
27	28												

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DRC REPEATERS

BAND	Freq / Shift / PL Tone	Additional Information
10m	29.620mHz (-100kHz) FM	Not In Service
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	NE Area Remote Does Not TX a PL!
1.25m	224.380mHz (-) 100Hz PL	
70cm	448.625mHz (-) 100Hz PL	Linked to the 2m - 145.490mHz machine.
70cm	449.350mHz (-) 100Hz PL	Wide area coverage with Echolink Node # 4140.

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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@comcast.net. Submission deadline is the 25th of the February. **Editor**