



ROUND TABLE

The Denver Radio Club Newsletter

January 2008

Since 1917

PRESIDENT'S MESSAGE

By Gerry Villhauer-W0GV

Greetings DRC Members,

I hope you all had a Happy Holiday Season and Santa provided for your ham radio wishes. Our holiday party was fantastic! We had a great meal, fun and fellowship. A Big Thank You to Perry Lundquist, W6AUN, for a wonderful program on the huge tornado that leveled Greenberg, Kansas. Never doubt the power of Mother Nature. And then there is the luckiest member in the DRC, Bob Willson, KC0CZ, who won our grand door prize, a gift certificate from HRO. Does that make him the luckiest DRC member? Maybe not, but if you remember, Bob also won the grand prize at our hamfest in August. If I were you Bob, I would be buying Lotto Tickets.

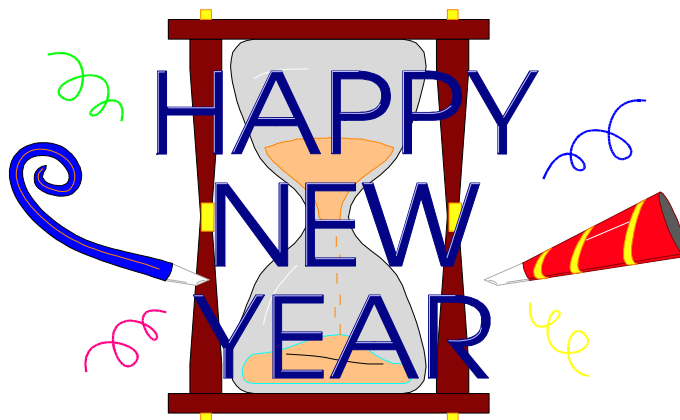
I would like to welcome new DRC members Mike Davey, N0VBY, Ryan Gardner, KB0CTR, Bill Hinkley, KB0ZPI, Ricardo Maestas, KD0CAW and Rick Maestas, KD0CGE. Thank you for choosing the Denver Radio Club as your club. Please come to the meetings and activities and be an active member.

Mark your calendars for the January meeting and program on January 16th. Don't let the weather stop you from this program on Software Defined Radios presented by David Feldman, WB0GAZ. Is this the new direction for ham radio equipment? Many think it is. You will find a full description of the program as you read further in this issue.

If you missed the holiday party and did not get your new membership roster, we will have yours at the meeting.

See you all at the meeting January 16th at the St. Joseph's Episcopal Church, 11202 West Jewell Ave., Lakewood. That is about two blocks West of Kipling on South Jewell. And remember to check our website, w0tx.org, for lots of important information about the DRC. The Elmer Session and Tech Meeting start at 6:30 p.m. followed by the Regular Meeting and Program at 7:30 p.m.

73,
Gerry, W0GV
President



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DRC CHRISTMAS DINNER A HUGE SUCCESS

By Bill - W6OAV

This year's Christmas dinner was a fun and very successful event. There were 65 folks in attendance! The photo shows only part of the group. Most folks arrived early and had plenty of time to visit. Also, the food was great as always.



During the dinner, Bob, KC0OUQ, and Bryan, KC0CUA, passed out the new pre-addressed rosters to the appropriate members in attendance. The roster looks great. THANK YOU Bob for all the time you put into producing and maintaining the roster. For those who were unable to attend and didn't get their new roster, you can pick yours up at the January Meeting.

Before our guest speaker took the floor, Gerry, W0GV, had the attendees introduce themselves. After the introductions were completed, Gerry introduced Perry, W6AUN. Perry is a long time member of D24 ARES. He was involved in providing emergency communications in Greensburg, Kansas after it was completely destroyed by a tornado. Perry gave a very interesting, and moving, Power Point presentation on emergency communications efforts in Greensburg. The pictures showing the extent of the destruction were beyond belief. We learned a lot about what various agencies do after a major disaster and the problems they encounter.



The meeting ended with the door prize drawings. Guess who won the main prize of an HRO \$50 certificate?



The same fellow who won the main prize at our last ham fest...Bob - KC0CZ! He was all smiles when W0GV presented the certificate. We did try to convince Bob to take us to Vegas while he was on his winning streak!!

A special THANK YOU goes to all who coordinated this year's dinner. Gerry, W0GV, arranged the venue, Bryan, KC0CUA, obtained the HRO prizes, Jim, W0TOR, setup the cash prizes and Rob, AJ0C, arranged for our guest speaker.

TECHNICAL COMMITTEE REPORT

The tech committee did not meet this month due to the Christmas dinner occurring in place of the monthly club meeting. However, committee member Bryan, KC0CUA, did perform technical work for the club in December as described below.

The VHF/HF packet gateway KAM controller is an old original model which is prone to randomly defaulting to factory settings. The KAM has defaulted several times this past year. It defaulted twice in December. As in the past, Bryan took the KAM home, reprogrammed it and re-installed it at the gateway site.

Bryan also ordered a new KAM-XL. The board had decided last month to replace the old KAM for the following reasons:

- The club's KAM is an old original model prone to failures and defaulting.
- Twice in its life the KAM died. Each time, W6OAV had to physically replace components to get the KAM back on line.
- The KAM XL uses DSP which is more robust for noisy HF operation.
- The KAM XL provides two simultaneous methods of communications. The first method is the normal Kantronics node mode. The second method is the newer K-Net mode. The K-Net mode allows operating with J NOS packet/Internet systems which are becoming quite common on HF.

W6OAV "Traveler's Dual Band J Pole" – Part 1

By Bill - W6OAV

When I was traveling on business I wanted a VHF/UHF J Pole that was small for easy inclusion in my luggage. It also had to be tunable to each hotel room's environment. The "W6OAV Traveler's J Pole" does all this.

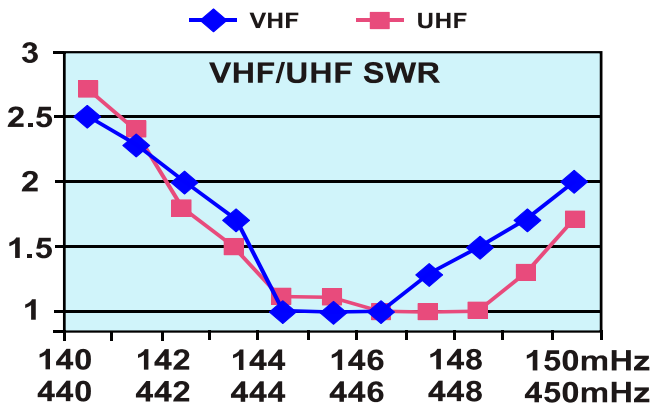
This article consists of two parts. Part 1 describes the Traveler's J Pole and how to setup it up. Part 2 describes how to build the Traveler's J Pole. Part 2 will appear in a subsequent issue of the "Roundtable".

OVERVIEW

Figure 1 shows the J Pole in its dissembled or "travel mode". The J Pole consists of a base and an antenna unit. The antenna unit contains two collapsible whips which are shorted together at their bases. There are also two sets coax feed points. The top set of coax feed points is for UHF operation and the bottom set is for VHF operation.



Figure 1



The J Pole is usable over the complete VHF and UHF bands. The graph shows the SWR bandwidths across each band. The VHF SWR measurements were made with a MFJ-259B analyzer. The UHF measurements were made with a MFJ-219B analyzer. Both measurements were then verified with a Autek RF-5 analyzer.

SETTING UP THE J POLE

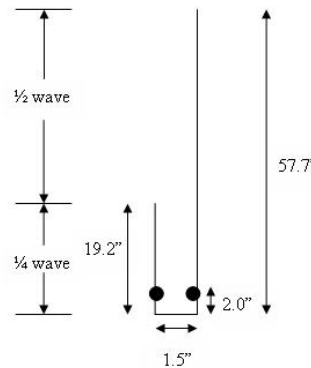
- To setup the J Pole, one only needs to:
1. Place the antenna unit in the base and tighten the supporting nut and bolt.
 2. Connect the coax to the desired feed points. Figure 2 shows antenna unit installed in the base unit and the coax connected to the VHF feed points.
 3. Extend the two whips to the desired band settings as described in the paragraphs below. Figure 3 shows the antenna setup for 2 meter operation.
 4. Using a SWR meter, fine tune the J Pole to the particular room's environment. I use the small Radio Shack VHF/UHF SWR meter.



Figure 2

VHF Operation

For VHF operation, the coax is connected to the lower feed points. The shorter whip is extended to 19.2" and the longer whip is extended to 57.7". See Figure 3. This configuration is the classic 2 meter J Pole configuration. See Figure 4. The short section forms the quarter wave matching section. The top section forms the half wave radiator.



VHF CONFIGURATION

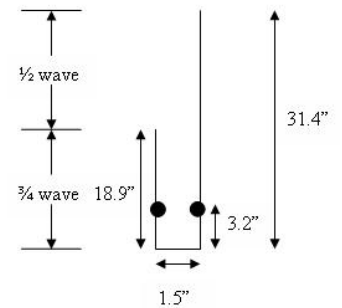
Figure 4



Figure 3

UHF Operation

For UHF operation, the coax is connected to the upper feed points. The shorter whip is extended to 18.9" and the longer whip is extended to 31.4". The short section forms a three quarter wave matching section. The top section forms the half wave radiator. See Figure 5. A three quarter matching section has the same properties as a quarter wave matching section. Since the smaller whip cannot be compressed to 6.3" (a quarter wave), a three quarter wave matching section used.



UHF CONFIGURATION

Figure 5

Comments

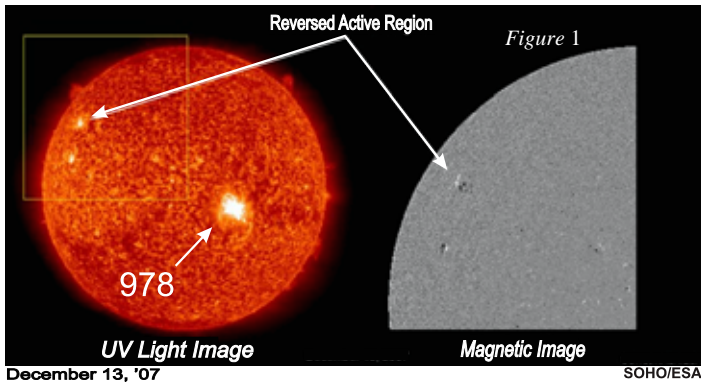
I found that setting up the J Pole whip lengths was simplified by using a cloth measuring tape. These tapes are available in most stores and take up no space in a suitcase. Once the whips were set to the dimensions given above, fine tuning just took a few minutes. Often the initial dimensions were satisfactory depending upon the room's environment. If fine tuning was required, I would leave the short whip at the initial dimension and fine tune the length of the long whip. Tuning is not critical with the J Pole.

SOLAR UPDATE

By George - AG0S

Big NEWS? Maybe I should say Good News and Bad News. Many solar physicist's who study solar activity were at odds in early December with the emergence of a weak zone of reversed magnetism at 24 degrees North Latitude.

A high latitude area with reversed polarity appeared over the eastern limb of the sun on December 11th. (Figure 1) This area of reversed magnetism may be the indicator of the beginning of a new solar cycle. In this case however it didn't last long and faded nearly as quickly as it emerged. However, some are already pre-



dicting the beginning of cycle 24.

"New solar cycles always begin with a high-latitude, reversed polarity sunspot," explains Dr. Hathaway of "NASA/National Space Science & Technology Center". "Reversed polarity " means a sunspot with opposite magnetic polarity compared to sunspots from the previous solar cycle. "High-latitude" refers to the sun's grid of latitude and longitude. Old cycle spots congregate near the sun's equator. New cycle spots appear higher, around 25 or 30 degrees north latitude. The region that appeared on Dec. 11th fits both these criteria. It is high latitude (24 degrees N) and magnetically reversed. Just one problem: *There is no sunspot*. So far the region is just a bright knot of magnetic fields. If, however, these fields coalesce into a dark sunspot, scientists are ready to announce that Solar Cycle 24 has officially begun.

So the "Good News" is, there was an area of reversed magnetism at high latitude on the solar disk but the "Bad News" is there was no associated sunspot. Are we about to see the beginning of Cycle 24? That is the proverbial 24,000 dollar question. We'll just to wait and see.

The 45 Day Forecast indicates we should have Solar Flux around 85 from January 4th through the 11th and in the mid to high 70's until the first week in February.

THUMPERS

Excerpt from and old "Ragchewer", W6OAV Editor

Early Morning Thumpers: The first thing they do each morning is to check the repeater to make sure it is on. They usually get up between 6:15 and 7:15.

Late Night Thumpers: They give the repeater a little thump before going to bed.

73 and 88 Thumpers: After a QSO, they always have to thump the repeater a few times. A friendly way of saying goodbye.

Repeater Checker Thumpers: On a regular basis, all repeaters in the area get a thump to find out who is on the air.

Casual Thumpers: They check to make sure the repeater is still on the air at various times throughout the day.

Rapid Fire Thumpers: Those who like to see how many times they can push their mike button in three seconds.

Guess Who Thumpers: They always return a thump to the casual thumper, but don't like to give their call.

ROUNDTABLE GOES WORLD WIDE

It's not widely known that your newsletter is a big hit in other states in the U.S. as well as other countries in the world. So far it's published only in English but who knows what the future will bring.

So, where is it going? you ask. So far it is in 3 states and 3 countries. At the present time your newsletter is going to 4 amateur radio clubs in 3 states, Colorado, of course, but also Minnesota and Nevada. World wide the RoundTable is also seen by amateurs in Portugal and Germany.

JANUARY MEETING PRESENTATION

This is one you won't want to miss. Software Defined Radio is the next big advance in radio.

Dave Feldman, WB0GAZ, will present a technical session on Software Defined Radio (SDR.). Dave will demonstrate a low-cost "Softrock" SDR board (built from a \$38 kit, and connected to an older laptop using a \$50 USB sound interface device, and running \$0 SDR software) receiving live CW and SSB signals on 40 meters (band conditions permitting, of course). Dave will give a short technical presentation that provides background on SDR technology and the many resources available on the Internet. Take-home discs will be offered to those that want to try SDR software on their own computers - these discs include the evening's presentation material, sample SDR radio signal files recorded during November 2007 sweepstakes contests, and a variety of other related reading material. A PC with at least 600 MHz CPU speed and a sound speaker will let you replay the November 2007 demonstration recordings with SDR software (included on the disc), letting you tune around 40 meters, replaying live signals as they were being received when the recordings were made, without need for an antenna or SDR board. If you choose to build a SDR kit, you can use the same software for your own SDR station.

Street. They learned about and worked with the UHF/VHF, HF radios, and commercial radios and repeaters in the mobile communications vehicle, as well as the 50' tower trailer. The goal of this first meeting was to generate suggestions on how to proceed with the SATERN unit goals and the acquisition of additional equipment. Additional discussion centered on when meet to practice deployment, equipment setup and emergency operations using the communication vehicle and the tower trailer. These communications assets will be used to support the consortium of member agencies.

When The Salvation Army received the new equipment as the result of a Homeland Security grant to support The Salvation Army; The American Red Cross, The 211 Center, a part of Mile High United Way, and Catholic Charities; it was just natural to include Denver Radio Club members who have been a vital part of the Salvation Army communications team for over a decade.



LOCAL SATERN GROUP MEETS

As you know, the Salvation Army is one of the served agencies for the Denver Radio Club. The DRC operates and maintains the EOC Radio Station at The Salvation Army Headquarters in Denver.

In conjunction with the station operation some of the DRC's members have become involved with the field communications group of the Salvation Army. The goal is to develop a SATERN* (Salvation Army Team Emergency Radio Network) group, at the local level, to support The Salvation Army Emergency Disaster Service, with the DRC at the core.



On December 8, 2007, DRC members Dave – WG0N, Jim – K0TOR, Perry – WB5VCC, Doug – N4ATA and Charles – N6LD met with Salvation Army representatives at the SA's emergency services garage on York

The next meeting is scheduled for Saturday, January 26th, 2008 from 10am to 2pm at 4925 York Street. All amateur radio operators, especially DRC members are welcome. If you are interested in assisting the Salvation Army in this effort the primary contact is Bill Hedeem – KB9AKD at 720-635-1999

**SATERN is a world wide group of amateurs who provide health and welfare communications and Salvation Army communications support in large disasters.*



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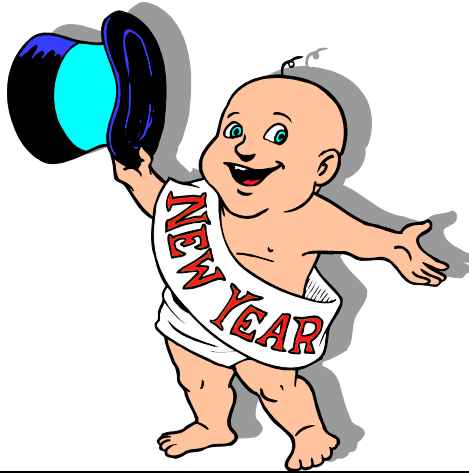
303-745-7373 800-444-9476

24 HOUR FAX 303-745-7394

e-mail: denver@hamradio.com

UP COMING EVENTS

- The **Northern Colorado Amateur Radio Club** is sponsoring their Winter Superfest on January 12th. The doors open at 8am. \$5 to get in the door and \$5 for a 6 foot table. The Grand Door Prize is a new IC-7000.
- ??
- **Do you know of an event that may be of interest to club members or other amateurs? If so send details to the RoundTable Editor at drc_rt@comcast.net. The RoundTable goes out to all the members so everyone will get the word.**



SWAP – SELL – TRADE

AGOS is looking for 2 sections, top section, and base of Rohn 25, contact AGOS@arrl.net. TNX

If you have something you want to swap sell or trade this is the place for you. Send your hearts desire to drc_rt@comcast.net



January 2008

DRC Net Sunday 8:30pm Local

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 ARRL Straight Key Night 0000U to 2400U	2 Learning Net 7pm	3	4	5 ARRL RTTY Round-Up Begins 1800U
6 ARRL RTTY Round-Up Ends 2400U	7	8	9 Learning Net 7pm	10	11	12 NCARC Winter Superfest 0800L - 1400L
13	14	15	16 DRC Meeting Elmer 6:30pm General 7:30pm	17	18	19 ARRL VHF Sweepstakes Begins 1900U
20	21 ARRL VHF Sweepstakes Ends 0400U	22	23 Learning Net 7pm	24	25	26
27	28	29	30 Learning Net 7pm	31		

Check www.Arrl.org for Contest Rules!

DRC BOARD OF DIRECTORS

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Board Member	AC7SX	Joe Delwiche	303-233-6229	lakewoodjoe@aol.com
Board Member	K0RCW	Robert White	303-619-1048	

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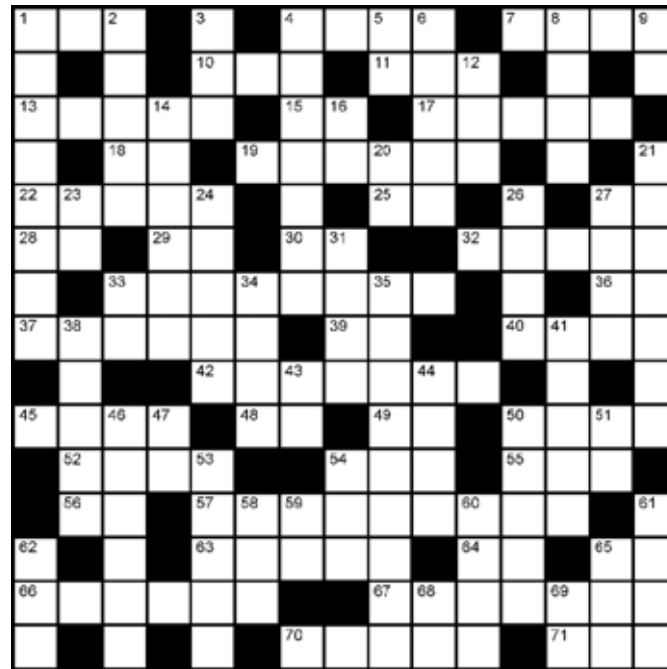
DRC REPEATERS

BAND	Freq / Shift / PL Tone	Additional Information
10m	29.620mHz (-100kHz) FM	Temporarily OFF The Air
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	Members Auto-Patch
1.25m	224.380mHz (-) 100Hz PL	Temporarily OFF The Air -- For Controller Upgrade
70cm	448.625mHz (-) 100Hz PL	Linked to the 2m - 145.490mHz machine.
70cm	449.350mHz (-) 100Hz PL	Wide area coverage with Echolink Node # 4140.

Editor's Note

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 DRC_RT@comcast.net. Editor

KEEPING THE LIGHTS ON



NOTE: Answer key is located on page 6.

Across

1. Voltage control connection on a transformer
4. Too much current through 4 Down
7. Connects equipment to power
10. AC switch that conducts in one direction
11. Performed in the past
13. Famous multi-level sales company
15. Person who edits (abbr)
17. Popular name for home wiring cable
18. Where you go if you touch the wrong wire (abbr)
19. Heavy lines that carry power
22. Remove insulation from
25. Computer operating system (abbr)
27. CW prosign for "from"
28. Center frequency (abbr)
29. Continent of PY, LU, and HK (abbr)
30. CW prosign for "and"
32. AC switch that conducts in both directions
33. Produce power
36. Prefix for Benin
37. Kit maker
39. Makes a new line with LF
40. Trigger device for 32 Across
42. Current path between high-voltage terminals
45. Manages the ISS and STS missions
48. Elected ARRL official that manages a section
49. One thousandth of a micrometer (prefix)
50. Shape of ac power waveform
52. Not dangerous
54. RS232 signal on pin 6 of a DB-9 connector
55. Belonging to a female
56. Bands between MF and VHF
57. Semiconductor switches for ac and dc current
63. Residential building
64. CW prosign for "end of message"
65. Take action
66. Where you connect to ac power
67. Conductor that carries ac return current
70. Group of eight
71. Astronomical reflection mode

Down

1. Switch used to connect to line or generator
2. Measured in watts
3. Occupied (abbr)
4. Resettable protective component
5. External diameter (abbr)
6. Three of these in home ac wiring
8. Interrupted connection
9. Ham abbreviation for distance
12. Came before Windows
14. What the sun does in the morning
16. Logarithmic power ratio
20. Signal input to a mixer
21. Use again
23. Measure of change with temperature (abbr)
24. Distributes ac power
26. The system of ac power distribution
27. Information, usually digital
31. Where the sales clerk puts your items
33. Greeting during 43 Down (CW abbr)
34. These provide sight
35. Short electrical disturbance
38. Covered with water or flooded
41. As more frozen rain falls, the roads get
43. Before noon
44. Licensed service that shares channels with FRS
46. Concerning the well-being of users and operators
47. Receiver output gain control
50. Unintentional connection
51. Number (abbr)
53. What was once considered necessary to carry radio waves
54. These treat you at 18 Across (abbr)
58. Conductor that supplies power
59. Prefix of Balkan country now divided into several new DXCC entities
60. Stretched tight
61. Holds power lines above the ground
62. Component that protects against over-voltage
65. Where hydroelectric power comes from
68. Designs power systems (abbr)
69. Regarding (abbr)