



ROUNDTABLE

PRESIDENT'S MESSAGE

By Gerry Villhauer-W0GV

Hello DRC Members,

First off, thanks to Oscar, K0SSE, for all the good information at our May meeting for our field day planning. We had some technical troubles with the computer and projector but Oscar overcame that roadblock and did his usual good job. Also thanks to Bill, W6OAV, for the short presentation on our antenna party at Salvation Army Headquarters. I was only able to attend HamCon Colorado at Estes Park for part of the day Saturday and it was sure worth the trip. I think any member who attended will agree it was a great convention. We had 500 persons in attendance which was about 70 more than three years ago. The convention will not return to Colorado until 2013, four years from now. Next year's convention will be in Wyoming.

I would like to welcome new DRC members: Chris Huston, KD0HMT, Dr. John Montalbano, W3SOF, Alexis Montalbano (no call), Nancy Stitt, K0NNC and Jim Stitt, KA0NZZ. Please come to the meetings and activities and be an active member.

This month's program will be on June 17th and presented by Paul Olson, K0WSU. Paul is a professional engineer with the Federal Highway Administration. He will be telling us all about traffic management systems such as traffic signals, freeway management systems, CCTV systems, telecommunications systems, the use of fiber optics, Traffic Management Centers, intelligent transportation systems standards and more. Paul has many years experience in this field and a very impressive resume of qualifications. This promises to be a very interesting and unusual program. Mark those calendars now so you don't miss this one! And remember Field Day. We will be cleaning up the site that is our

Hudson Repeater Site, on Friday June 26th. The more members that show up the less time it will take and--it is not that hard to do. Then the actual field day operations will be Saturday and Sunday June 27 and 28. We want to see our members that have never experienced FD and our more seasoned ops--show up and join in the fun. There will be more information on the Sunday nets and at the June 17th meeting.

See you all at the meeting June 17th at the St. Joseph's Episcopal Church, 11202 West Jewell Ave., Lakewood, CO. That is about two blocks West of Kipling on West 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 pm. followed by the Regular Meeting and Program at 7:30 pm.

73
Gerry, W0GV
President

DRC ~ ARRL FIELD DAY

2009



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MAY MEETING - WHAT'D I MISS

By Bill – W6OAV

There were 44 attendees at this month's meeting! W0GV began the business meeting with introductions. W0GV, after reminding the attendees about the upcoming Ham-Com Colorado Convention, turned the meeting over to the first guest speaker, Megan Baker. Megan is the coordinator for the Golden Gate Dirty Thirty Race who is looking for ham communicators. Information, and the ability to volunteer, is located at "<http://parks.state.co.us/parks/goldengatecanyon>". Next, W6OAV gave a brief slideshow describing the antennas at the DRC Salvation Army ham station on Pennsylvania Ave and what it took to install these antennas. K0SSE then conducted a discussion covering the procedures and activities for the upcoming DRC Field Day.



A special thanks to N4ATA for manning the DRC Field Day T-Shirt table during the meeting. The T-Shirts were made for the club by AG0S and were well received by many club members. Thanks George. Additional information on obtaining a DRC Field Day T-shirt is located elsewhere in this publication.



TECHNICAL COMMITTEE REPORT

By Bill – W6OAV

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

The meeting centered on the upcoming DRC Field Day event preparations to make it happen. K0SSE presented the Field Day planning document which he had developed earlier. The result of the presentation and subsequent discussions was a "finely tuned" planning document. Thanks Oscar for all your hard work. This one promises to be the best Field Day ever.

2009 CLEANUP AND FIELD DAY EXERCISE

By Oscar – K0SSE

Well the waiting is almost over. Our cleanup time will begin Friday, 26 June. We want to start the process at 1000 hours. If enough of us show up, it should take about two hours to do a good job. Be sure and bring a pair of heavy duty gloves, a weed wacker (if you have one), a shovel, hoe, a heavy duty lawnmower, a rake; you get the idea. And if you happen to have one, a spare fire extinguisher would be nice to have around. Don't forget to wear a dust mask and use insect repellent. Please park outside of the fence until the work is finished.

One of our club members has promised to BBQ for us if we do a good job on the cleanup. So gang, let's make a good effort, and afterwards let's have a good old-fashioned barbecue.

27 June at 0700 hrs, Field Day will begin. We will start the set up for transceivers and antenna work. This year, we're going to set up six transceivers as opposed to our usual five. For the first time we will have a 160 meter operation. Many of our club members are looking forward to giving this medium(?) wave band a try. How about you? Along with 160m will be the usual operations on 80m 40m 20m 15m and 10m. So far, predictions are operations should go very well on 80m 40m and 20m. Not much is expected on 10 and 15 meters. I suggest you keep that in mind.

Robert White, KØRCW, is going to put on a class at 1400 hrs on Saturday, demonstrating the use of Andersen power poles. Andersen power poles are the standard connectors the ARRL and ARES groups use to connect power supplies of various types to different types of amateur equipment. This will be a 20 to 30 minute class and is a great learning opportunity.

(Continued on page 3)

(Continued from page 2)

There will be a chance for our younger visitors, and for those hams who haven't been on the air for quite some time to operate a Get On The Air (GOTA) station. This is a low-power station of five watts. Bring along your young visitors to operate this tiny station. I think they'll have great fun doing it. In addition to the GOTA station we're going to have a display table showing various items of equipment, aids, and charts an amateur might use. Your friends and family members might find them interesting.

Don't forget the presidential challenge. This is where our club president and vice president are going to operate for one hour as a team. We are not going to tell you when. But sometime during this two-day exercise the presidential team is going to see how many contacts it can make. The idea is for you and someone else to form a two-person team see if you can get a higher score. We will tell you at the August meeting if your team scored higher. Each member of the team will receive a certificate signed by the club president giving him or her bragging rights for a whole year.

Mike Gelski, of the Salvation Army, says if the weather holds, and there are no disasters, EDS will provide food for us this year, and if they don't, Bryan, KBØA; will.

The group photograph will be taken at 1400 hours Sunday. Everybody should have on their best smile knowing their team beat the presidential team.

For directions to the Hudson site go to www.w0tx.org.

See you at Field Day. Oscar, KØSSE

A GOOD STEALTH HF ANTENNA

PART 1
By Bill - W6OAV

Need an inexpensive and easy to construct HF antenna that:

- Can be easily configured as a stealth antenna (a common requirement these days with all the covenanted communities).
- Requires relatively little horizontal space, especially on the lower HF bands.
- Performs very well.

If so, the "Inverted L" antenna may be your answer.

What is an Inverted L?

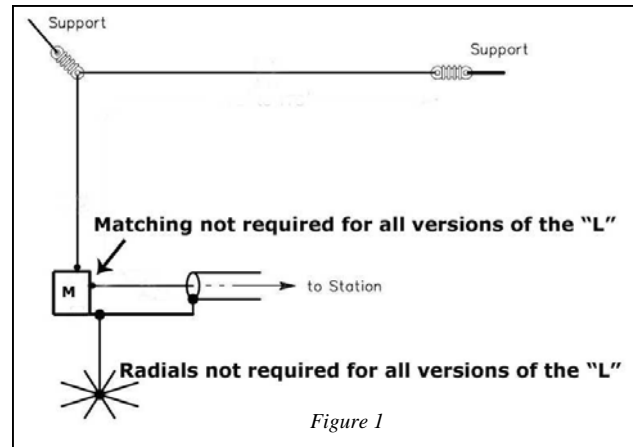


Figure 1

The antenna in Figure 1 is called an "Inverted L" antenna. The antenna consists of a vertical and a horizontal radiator fed against radials (with one exception to be discussed later) and using a matching network (with one exception to be discussed later). The horizontal portion need not be perfectly parallel to the ground. See Figure 2. Just two supports are required which may be masts, trees, nearby buildings or any combination thereof. The lengths of the horizontal and vertical sections are not critical. For example, 30' up and 60' out will work as well as 40' up and 50' out.

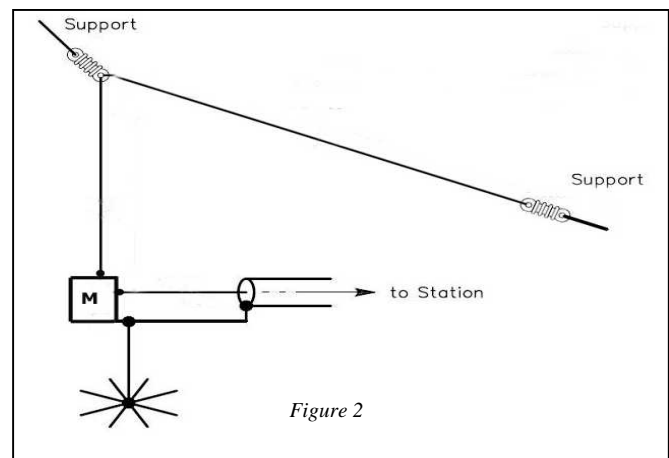


Figure 2

The Inverted L produces both a low angle vertically polarized wave and higher angle horizontally polarized wave. This allows for good communications for both short range and long range distances. Also, the combined horizontal and vertical polarization provides for less fading caused by HF polarization shifts. As mentioned in the above paragraph, this antenna can take various forms which will be discussed later in this article.

(Continued on page 4)

(Continued from page 3)

Why is the Inverted L a Good Stealth Antenna?

The Inverted L makes a good stealth antenna for several reasons:

- Since the antenna is end fed at ground level, no coax is required to hang from the antenna which would put stress on the horizontal wire and would be visible to neighbors.
- With no stress on the wire, thin magnet wire can be used for the antenna.
- Any two supports, such as trees, building, etc can be used.
- The horizontal portion does not need to be perfectly horizontal nor needs to run in a straight line.

KC2CAG's Stealth Inverted L Antenna

Looking at photo below, can you spot the stealth Inverted L? Part 2 of this article will show KC2CAG's stealth Inverted L antenna and describe how he installed it.



THE LEARNING NET

By Becky – KD0AOE

I'm one of the lucky ones. I had Rob Rude (K0RAR) for my Technician Class instructor. Rob is a terrific instructor who conveys his interest and enthusiasm of his topic to his students. Which is what made me and some of my fellow students want to continue learning about ham radio after our formal class ended. I was also interested in trying my hand at net control. Rob suggested that both desires could be met if I started my own net. He agreed to act as our Elmer and the Learning Net was born!

After discussions with Gerry Villhauer (W0GV), Denver Radio Club President, we all agreed on a day, time, and repeaters: every Wednesday (except the third Wednesday of the month when our DRC meetings are held) at 7:00 p.m. on the 145.490 linked with the 448.625.

So that is how I found myself, just six weeks after passing my technician license exam, the net control operator of the Learning Net.

Topics vary widely and there is a different topic every week. Because new hams are often tuning in, we do repeat topics from time to time. Since we cover different aspects of a topic, it's always interesting. If you are sitting in front of your computer at the time of a net, there are often presentations, charts, or web pages to follow along with that will enhance the Learning Net experience. If you are mobile, we try to reference things in a way that everyone can follow along. You can always check the material later by visiting www.HamLearningNet.org and click the "Heard on the Net" button.

Be sure to note the name of the net (the LEARNING net): it's not just for beginners; it's for everyone who wants to learn *and* share their ham radio knowledge. We welcome EVERYONE on our net to join in the discussions. No matter how long you have been licensed, you undoubtedly have some knowledge and experience that will benefit others, as well as something to learn. Please feel free to join in anytime!

If you want to try your hand at net control, the Learning Net is the perfect place to do it. You will find a script on the website that you can download and follow along before you go live as Net Control.

There is something for everyone on the Learning Net so please join us next Wednesday.

FIELD DAY T-SHIRTS

Many of you already have your 2009 Field Day T-shirt and some of you may still want one but time is running out. I need orders by the 10th of June so that I can bring them to the June meeting. Regretfully, I won't be able to stay for the meeting but can drop shirts off to be picked up there.

If you need one mailed to you. I can still do that but the cost of Parcel Post has gone up with the cost of stamps. Just two months ago, a one t-shirt Parcel Post to an address in the metro area cost \$2.50 plus the cost of a large envelope. Today the same package via USPS Parcel Post is \$4.90+. Consequently I must increase the mailing cost of t-shirts to \$6.00. It is a sign of the times. The cost of the t-shirt is still \$10.00.

For more information about the DRC 2009 Field Day T-Shirts please contact me at 303.751.7246 or AG0S@comcast.net.
73, George – AG0S

NEW SOLAR CYCLE PREDICTION

May 29, 2009: An international panel of experts led by NOAA and sponsored by NASA has released a new prediction for the next solar cycle. Solar Cycle 24 will peak, they say, in May 2013 with a below-average number of sunspots.

"If our prediction is correct, Solar Cycle 24 will have a peak sunspot number of 90, the lowest of any cycle since 1928 when Solar Cycle 16 peaked at 78," says panel chairman Doug Biesecker of the NOAA Space Weather Prediction Center.

It is tempting to describe such a cycle as "weak" or "mild," but that could give the wrong impression.

"Even a below-average cycle is capable of producing severe space weather," points out Biesecker. "The great geomagnetic storm of 1859, for instance, occurred during a solar cycle of about the same size we're predicting for 2013."

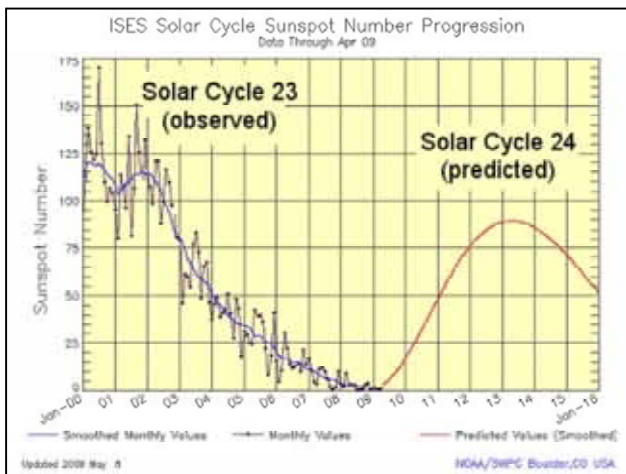
The 1859 storm--known as the "Carrington Event" after astronomer Richard Carrington who witnessed the instigating solar flare--electrified transmission cables, set fires in telegraph offices, and produced Northern Lights so bright that people could read newspapers by their red and green glow. A recent report by the National Academy of Sciences found that if a similar storm occurred today, it could cause \$1 to 2 trillion in damages to society's high-tech infrastructure and require four to ten years for complete recovery. For comparison, Hurricane Katrina caused "only" \$80 to 125 billion in damage.

"It turns out that none of our models were totally correct," says Dean Pesnell of the Goddard Space Flight Center, NASA's lead representative on the panel. "The sun is behaving in an unexpected and very interesting way."

Right now, the solar cycle is in a valley--the deepest of the past century. In 2008 and 2009, the sun set Space Age records for low sunspot counts, weak solar wind, and low solar irradiance. The sun has gone more than two years without a significant solar flare.

"In our professional careers, we've never seen anything quite like it," says Pesnell. "Solar minimum has lasted far beyond the date we predicted in 2007."

Excerpted from Science@NASA, Dr. Tony Phillips



Above: This plot of sunspot numbers shows the measured peak of the last solar cycle in blue and the predicted peak of the next solar cycle in red. Credit: NOAA/Space Weather Prediction Center

The latest forecast revises an earlier prediction issued in 2007. At that time, a sharply divided panel believed solar minimum would come in March 2008 followed by either a strong solar maximum in 2011 or a weak solar maximum in 2012. Competing models gave different answers, and researchers were eager for the sun to reveal which was correct.



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76	S	C	R	E	E	S	N	S	S	I	S	S	L	C	L	76
70	S	K	S	T	S	P	O	L	S	L	E	P	E	P	G	70
62	A	O	A	R	A	U	L	A	M	P	N	P	M	P	N	62
56	P	O	P	D	C	T	B	U	A	S	I	S	A	S	I	56
50	M	O	O	N	A	S	A	V	U	C	L	L	L	L	50	
46	O	T	I	N	D	E	R	B	O	X	S	I	D	S	I	46
40	C	Y	K	O	S	T	A	R	N	E	O	N	O	N	O	40
34	V	S	I	R	S	T	O	L	O	L	I	K	O	L	I	34
28	L	I	N	E	M	O	C	D	O	K	S	P	S	O	K	28
22	Z	F	L	E	H	I	R	N	P	S	S	P	S	O	K	22
16	S	M	O	R	E	S	C	O	S	U	S	U	S	U	S	16
10	A	G	M	K	X	P	O	S	U	R	E	R	R	R	R	10
4	A	G	M	K	X	P	O	S	U	R	E	R	R	R	R	4
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UP COMING EVENTS

20 JUNE – ARRL Kids Day

BEGINS 1800U ~ ENDS 2400U

The idea is to get kids interested in amateur radio . You may work as much or as little as you like! Check the ARRL website for June contests.

18 JULY – PPRAA MEGAFEST

Pikes Peak Amateur Radio Association
<http://www.ppra.org/swapfest09.php>

27-28 JUNE – FIELD DAY

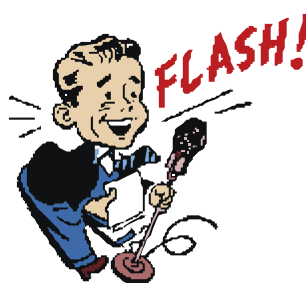
DRC ~ ARRL FIELD DAY

2009











16 AUGUST – DENVER RADIO CLUB SWAPFEST

<http://www.w0tx.org>
 Contact: Bryan Steinberg, KB0A
 1011 South Foothill Drive
 Lakewood, CO 80228-3404
 Phone: 303-987-9596
 Email: drcfest@w0tx.org



This is the big one. Start getting out the stuff your wife wants you to recycle and call Bryan for a table today.

JUNE 2009		DRC Net Sunday 8:30pm Local				
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3 Learning Net 7pm	4	5	6
7  Full Moon	8	9	10 Learning Net 7pm	11	12	13 ARRL VHF QSO Party Starts 1800U
14  Flag Day	15 ARRL VHF QSO Party Ends 0300U  Last Quarter	16	17 DRC Meeting Elmer 6:30pm General 7:30pm	18	19	20
21 Father's Day 	22  New Moon	23	24 Learning Net 7pm	25	26	ARRL FIELD DAY 2009 
ARRL FIELD DAY 2009 	29  First Quarter	30				

Check www.Arrl.org for Contests and Rules!

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DRC REPEATERS

BAND	Freq / Shift / PL Tone	Additional Information
10m	29.620mHz (-100kHz) FM	Not in service at this time.
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.

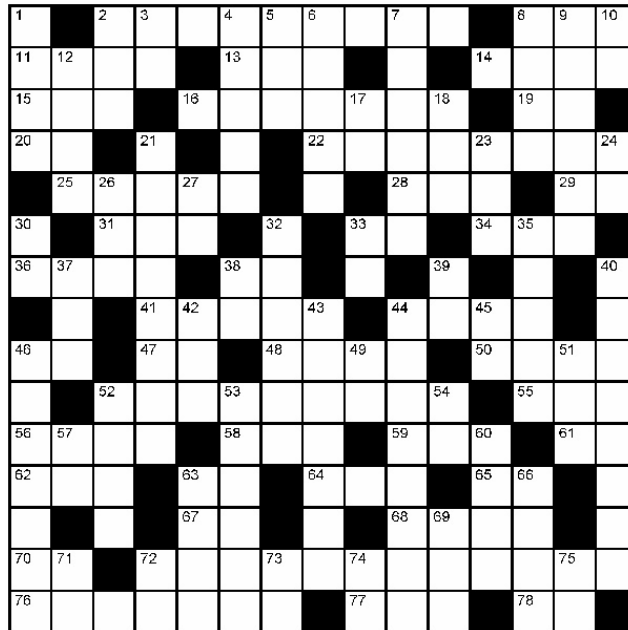
EDITOR'S NOTE

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. Submission deadline is the 25th of the June. **Editor**

Hams Afield

By H. Ward Silver, N0AX

Although not everyone can participate in Field Day this weekend, this puzzle will make you feel as if you had. You'll wind up tired and worn out? No! You'll be invigorated with the excellent job you've done on behalf of ham radio, of course! Even if you can't join the fun in person, take time out to hand out a few QSOs from home (1D category) and listen to the sounds of full bands and happy hams.



NOTE: Puzzle solution is located on page 5.

Across

2. This happens to really cold fingers and toes
8. Keeps the drinks cold
11. You might be willing, but not ...
13. Point at which receiver intermod becomes as strong as the signals (abbr)
14. Either fish or cut this
15. Secures the tower
16. When the D-layer soaks up signals
19. A pair of rogers (CW abbr)
20. Plates connectors (chemical symbol)
22. What you get in the sun
25. Tasty Field Day treat
28. Prefix meaning "of the environment"
29. Largest NA country
31. Below VLF
33. Heat rays (abbr)
34. Agency that operates federal parks
36. Light rope
38. Station with several operators (abbr)
41. Begins to awake
44. Used to fix things
46. Prefix for Sable Island
47. Knockout (abbr)
48. Seen at night
50. Gas in indicator bulbs
52. A very, very dry area
55. Radio blackout
56. Bigger than 48 Across
58. Metric of photographic sensitivity
59. World time (abbr)
61. Telephone (abbr)
62. Consequence of overinflation
63. Battery power
64. Where you go after Field Day
65. Stand by (CW abbr)
67. End of message (CW prosign)
68. Helps you lighten up
70. End of contact (CW prosign)
72. If you want to make contacts, you'll have to do this (two words)
76. These keep 12 Down away
77. Orbiting ham station (abbr)
78. Shutting down the station

Down

1. A lengthy Field Day legend
2. Open covering
3. Regarding (abbr)
4. Anchors tents
5. Plaything
6. What you get from 12 Down
7. Easily lost
8. International ham radio organization (acronym)
9. Wispy clouds
10. To have eaten (slang)
12. Invasive critters
17. One less than X
18. Class F stations operate from here
21. Keeps blisters from getting worse
23. Male progeny
24. And (CW abbr)
26. One of the restrooms
27. What comes out of the transmitter
30. Special wire antenna from this country (prefix)
32. The original four-wheel drive vehicle
33. Collector current (abbr)
35. Hold up the tent
37. Not a purty vine
38. One of the Great Lake states (postal code)
39. Field Day is time to .. not plan
40. Starts the fire
42. Heavy weight
43. Overcast clouds
44. What Murphy brings
45. Supported by something
46. Finds direction
49. Amplifier class
51. Keeps the generator working
52. Map that shows elevation
53. Tough material for rope
54. Early PC model
57. Watches the bands for poor signals (abbr)
60. Live outside
63. The day of the month
66. Add to span to clean up
69. Popular ham radio chain (abbr)
71. Obsolete abbreviation for kHz
72. Web URLs from Sweden end in this
73. After the signature
74. Metal used in clock batteries
75. A station calling from VO1 is from this section