



The Signal Report

A Publication of the Greenwood Amateur Radio Society

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APRIL

[HTTP://WWW.W4GWD.ORG](http://www.w4gwd.org)

W4GWD@ARRL.NET

2010 CLUB

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W4DEW

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WJ4X

The W4GWD Repeater Network

147.165+ t107.2

443.900+ t107.2

W4DEW/R

146.910- t123.0

April Meeting

The Greenwood Amateur Radio Society will meet Monday, April 19, 2010, at the Turner House on Bailey Circle in Greenwood at 7pm for light refreshments and business meeting at 7:30pm. Our Meetings are now listed in the Index-Journal on page 2A each month under "Community Calendar" and meetings are also listed in Greenwood's Town Planner which is circulated to most area homes.

Field Day 2010

The Greenwood Amateur Radio Society is holding Field Day 2010 at the same location as last year, at the park in Ninety Six, June 26-27. We will operate the entire Field Day period on various bands using all modes of operation. If you'd like to schedule a specific time to operate, let Tedd A14WN or Adam, WJ4X know. Let's all get together and make this Field Day the best ever!

Ladies Net

The GARS Weekly 2 Meter Female Amateur Radio Net began on Tuesday, January 8, 2008 at 8 PM on the GARS 2 Meter Repeater. This net is held every Tuesday night and gathers ladies together all over the upstate and midlands. All interested female amateurs are invited and encouraged to check in. Subjects of discussion will be anything of interest to women.

If you have any questions, please contact Jean (W4KKA) at 864-953-0004 or Jo (KC4UU) at 864-446-7187.

Society Events:

Chat ‘N’ Chew

Every Friday at 11:30am the members of the Greenwood Amateur Radio society meet at Ryan’s Steak House, Bypass 25 NE, Greenwood.

Everyone is welcome to have lunch or sip your favorite beverage and chat for a while.
(Dutch treat).

June 01, 2010 VE Exam Session 7:00pm Greenwood Red Cross

GARS ARRL Volunteer Examiners (VE) Team will have an exam session 7:00pm Tuesday, June 1st at The American Red Cross Building 520 Epting Avenue, Greenwood, SC 29646.

Weekly Net

Every Thursday night at 9pm on 147.165+, The Greenwood Amateur Radio Society holds the weekly 2 meter net. Help spread the word for everyone to check-in to our net. If you would like to fill in or be a backup net control please let Buddy Willis, W4DEW know.

What’s Happening?

The “Rolling Roundtable” meets most mornings and evenings around 7 o’clock and attracts many fine folks around the area (and even some from way out of the area!) We’d love for you to jump in!

Please remember our nets every Thursday night at 9pm. And stay in touch with the La-

dies who meet on Tuesday at 8pm. Come on in, sit back, stay a while and join us “On the Stump”

Until Next Time,

You’re always 5 and 9 with The Signal Report

-Ed.

Congratulations

Happy Birthday!

Jewell Mimms	KI4WJO	Apr 24
Tedd Davison	AI4WN	Apr 26
Alice Taylor	KC4JWM	May 9

Happy Anniversary!

David AJ4PU and Margaret KJ4HDK Haynes	May 14
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A Simple Half-square

from our own Tedd Davison, AI4WN

Now that the International Short Wave Broadcasters have, for the most part, abandoned the 7.000Mhz to 7.200Mhz portion of the 40 meter band, DX is really a pleasure. I did a lot of research in deciding which 40 meter antenna design would be best for me. I wanted a resonant antenna at 7.150Mhz. Avoiding a lot of ground radials needed for a true vertical antenna was certainly in the plus column for my choices, too. The commercial vertical manufacturers sell mono-band and multiband verticals in various self supporting 'masts'. Yes, you can spend a couple of hundred dollars and get a really 'nice' performing antenna for 40 meters. This immediately went into the 'negative' column. Also, each and every vertical manufacturer is proud to include, or sell as an option, a ground wire plate for you to attach anywhere from 40 or more ground radials. Could I run my 80 meter wire dipole on 40 meters? Well yes, but I would need to use an antenna tuner to correct for the $R=112$ ohms, $j=217$, SWR 12.7 measured at 7.150Mhz. No need to waste the RF in the tuner. This also went into the 'negative' column. By this time I reviewed my columns, in the 'plus' column; inexpensive, resonant at 7.150Mhz, no radials. In the negative column; store bought vertical cost, 40 or more ground radials, and tuner needed.

So what was out there to meet my design requirements? Enter the 'Half Square' antenna first published in 1948 by Woodrow 'Woody' Smith, W6BCX. A very simple wire design that most of the cost would be the coax feed line. Little if any ground radials needed. And resonant at your desired frequency by wire trimming. This was the antenna for me and thus I began the construction.

A 'Half Square' antenna consists of two $\frac{1}{4}$ wave length vertical wires and a $\frac{1}{2}$ wavelength horizontal wire. One end of the horizontal wire has the vertical wire attached to it. The other end of the horizontal wire is the feed point (current feed) with the coaxial shield connected and the center coaxial conductor connected to the second vertical wire. Picture an upside down football goal post stretching $\frac{1}{2}$ wavelength with two end verticals hanging down.

For a frequency of 7.150Mhz the $\frac{1}{2}$ wavelength horizontal wire is $(468/7.150) = 65.5$ feet. For the vertical wires $(234/7.150) = 32.7$ feet. To make the construction easier cut one wire $(65.5 + 32.7) = 98.2$ feet and cut another wire 32.7 feet. After some wire trimming, of the coaxial center conductor vertical, I achieved at 7.150Mhz, $R=54$ ohms, $j=12$, SWR 1.20. Best of all--- NO GROUND RADIALS. I used # 14 AWG stranded black insulated wire from Lowe's. A 500 foot roll is now about \$ 45.00.

An important consideration is to get the horizontal wire as high as to have the ends of the verticals off the ground above someone trying to grab them. A six inch piece of $\frac{3}{4}$ PVC pipe with a hole drilled through the end attached to each vertical end is enough weight to keep the wire in a vertical position. But don't worry if you need some extra safety room you can stretch the bottom of the vertical ends, at a 90 degree angle, horizontally towards each other to gain the safety height. I was able to get both ends of the horizontal wire about 48 feet off the ground; leaving vertical ends about 15 feet off the ground. Another consideration is to align the horizontal wire broadside of your desired DX region. This antenna acts like a vertical but it does favor some broadside propagation. My antenna horizontal wire runs North West to South East.

This antenna is fed with RG-8X with a coaxial wound choke, about 20 turns of coax wound on a 4 inch diameter PVC pipe. You can also use a store bought choke balun, about \$ 40.00.

The results: In my log book---40 meters-- 35 DXCC SSB entries, including New Zealand, Iceland, and Saudi Arabia

Check this internet site for more information: www.cebik.com (free registration).

73 and good DX -AI4WN

HAMFESTS and EVENTS:

3 Apr 2010

North Carolina State Convention (38th Annual RARSFest)
Raleigh Amateur Radio Society

<http://www.rars.org/hamfest>
Talk-In: 146.04 - .64 (no tone)
Contact: Chuck Littlewood,
K4HF

2005 Quail Ridge Road

Raleigh, NC 27609

Phone: 919-872-6555

Fax: 919-872-6555

Email: k4hf@arrl.net

Raleigh, NC

Exposition Center Building

1025 Blue Ridge Road

1 May 2010

South Carolina Section Convention (Upstate Hamfest)
Blue Ridge Amateur Radio Society

<http://www.upstatehamfest.org>
Talk-In: 146.610

Contact: Rusty Kirkpatrick,
AJ4RK

351 Old Georgia Road
Moore, SC 29369

Phone: 864-398-1989

Email:

jrustyref@bellsouth.net

Spartanburg, SC

Piedmont Interstate Fair-

grounds

575 Fairgrounds Road

5 Jun 2010

Georgia Section Convention (Atlanta Hamfest)
Atlanta Radio Club (W4DOC)

<http://www.atlantahamfest.com>
Talk-In: 146.820(-) (PL
146.2)

Contact: John Talipsky,
N3ACK

385 Madison Chase Drive
Lawrenceville, GA 30045

Phone: 678-618-2190

Fax: 678-985-2906

Email:

n3ack@atlaradioclub.org

Marietta, GA

Jim Miller Park

2245 Callaway Road

17 Jul 2010

Mid-Summer SWAPFEST
Cary ARC
<http://www.qsl.net/n4nc/>

Talk-In: 146.88 -0.6 (no tone)
Contact: Herb Lacey, W3HL

1022 Medlin Drive
Cary, NC 27511

Phone: 919-467-9608

Email: w3hl@arrl.net

Cary, NC

Ritter Park

301 West Lochmere Drive

Packet Cluster:

- ◆ Learn Morse Code! <http://www.fists.org>
- ◆ Spread The Word! 147.165 Net Thurs. 9pm
- ◆ Ladies Net 147.165 8pm Tuesday
- ◆ <http://www.amsat.org> for all your satellite needs
- ◆ Support for SERA supports proper coordination!
<http://www.sera.org>
- ◆ The American Radio Relay League protects our rights as Amateur Radio Operators
<http://www.arrl.org>

Classifieds:

Yaesu 757GX and mike

Yaesu 757AT automatic antenna tuner

Astron RS-35M power supply

All for \$700 OMO - KJ4LLY Al "Jazz" Jaszcar 229-3345

If anyone has any Ham radio stuff to sell or trade... list it in this column by calling Buddy, w4dew@arrl.net, 864-445-7574

If you want to see your article or wish to advertise in The Signal Report, please send an email to the newsletter staff via WJ4X@amsat.org