

W7DTA

Volume 2010, Issue 12 December 2010

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Club Web Page:		http://www.gsl.net/w7dta	

Next Club Meeting
 Thursday, December 2, 2010, 6:00 PM [Note Early time]
 China Hut Restaurant, 450 S. Riverside. NW Corner Riverside and 12 St., Medford, OR
 Program: Christmas Party. Bring a small gift (less than \$10) marked YL or OM.

President's Letter

I hope you all have your calendar marked for December 2 at 6:00 PM for the Radio Club holiday dinner. We will meet at the China Hut at the corner of South Riverside and 12th street. Bring useful gifts costing no more than ten dollars, and marked OM or YL.

As the outgoing president I am grateful to Allan Taylor, K7GT for stepping forward to lead our Club. I trust he will be given the kind of support that I have enjoyed. As I've said before, those listed on the masthead of this newsletter have my grateful thanks for making the Club work. And there are others not listed that likewise deserve a lot of credit.

The job of selling the radio equipment of N7NS and KB7LHM has been completed and within the month our treasurer will have a report on the proceeds. Van K7VS de-

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Secretary's Report

MINUTES OF THE 4 Nov 10 ROGUE VALLEY AMATEUR RADIO CLUB MEETING

The meeting was called to order by President Herb Grey W7MMI at 1905L in the Red Cross building in Medford, OR. Herb said, "since the minutes are in the news-letter they will not be read."

Treasurer Lud Sibley, KB2EVN reported the check book balance as \$3263.24. The balance when Pete Bateman's estate is paid off will be different.

OLD BUSINESS:

Voting on newsletter distribution options, A show of hands had:

"Option 1 – Drop the paper newsletter

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President's Letter, Continued

(Continued from page 1)

serves a great deal of credit for selling several dozen items.

73, Merry Christmas and a happy 2011,

Herb W7MMI

Editor's note: - we all owe a big thank you to Herb for all the work he has done for our club over the last several years.

Newsletter goes paperless starting January 2011

The RVARC Repeater will go paperless starting with the January 2011 issue. This issue (December 2010) is the last one that will be mailed via the postal service.

You can receive a copy one of three ways:

1. Email. Make sure your email address is current with the club newsletter editor, and you will receive each issue via email.
2. Club web site. Each copy of the newsletter is available about a week ahead of the meeting on the club's webpage (see page 1 for the link). Additionally, an archive for all past issues since late 2008 is available (via the club web page).
3. A few paper copies will be brought to the club meeting for those without Internet access.

The electronic versions are in PDF format.

Secretary's Report, Continued

(Continued from page 1)

mailing altogether. Bring a few copies to the meeting for people without Internet access"

winning by a large amount.

NEW BUSINESS:

A motion made by Dale Trautman, N7IXS a second by Bill Wright, KA0CZW that the club dues remain at \$20 regular, \$15 Seniors & 25 family for 2011. The motion passed.

The nominating committee chairman Tom, N5EG reported that Jack, WA7IHU and Lud, KB2EVN agreed to stay on as Secretary and Treasurer respectively. He nominated Allan Taylor, K7GT for President and Scott Cummings, KD7EHB Vice President. Walt KG6MZU, moved the nominations be closed and the nominees duly elected. Dale, N7IXS seconded it. The motion passed unanimously.

After some discussion Bill Wright volunteered to reserve a room at Chadwick's Sports Bar for our Christmas dinner. *[Note: this fell through, and we will instead be at China Hut — editor]*

Dale Trautman announced that the VE's will have an extra class and testing for Karl Hartgrave, KD7EYA at Bud's house.

At 1945L Herb put the meeting on hold for coffee and "eye ball" QSO.
At 2000L Herb called the meeting back into session.

Herb gave a very informative review called "From DC to Day light." Herb adjourned the meeting at 2100.

Submitted by Jacob O. (Jack) Schock, WA7IHU, secretary.

When I became active again in amateur radio (1994 or so), I discovered the nearby Pacificon ham radio convention. It has moved three times in the interim and is about to move again (2011 – Santa Clara). But the conference is a personal high point in the year (after Field Day and CW Sweepstakes!). After this year's Pacificon, I decided to write up some notes and details for my future reference and they may be of interest to others.

The convention always begins on Friday with **the Antenna Forum**. The speakers were in rare form yet again. For further details, see the 2010 Pacificon Antenna Forum notes (203 pages worth!) which I will share.

Rich Holoch KY6R spoke on wire arrays for DXing (although one was aluminum!). First is his receiving 160m antenna. He calls it a K6SE Optimized Loop. The idea with it is to get a null to a specific direction (NE from the Bay area to kill off the East coasters). It is vertically oriented, 14' high, 29' wide, a 950 ohm resistor in the 'null' direction, and fed with a 9:1 toroidal transformer. This design is relatively independent of ground allowing mounting it over the house. A 20 dB preamp is needed, of course. It is basically a 'flag' receiving loop.

Second, he describes a two-element modified Bruce array for 40m. Bruce arrays are vertically-oriented. His fits within 45' and, as built, is only 10' off the ground. Width is 45', two vertical 30' downlegs, each with a 17.5' tail bent horizontal and inward. He feeds it at a current max in one downleg with 450 ohm ladderline, a 4:1 balun/transformer, and coax to the tx. It looks more like a contorted half-square to me. This antenna should fit in most backyards if one has two supports at 40+ feet.

Next, he discussed his modified W8JK

beam. It is specific to 20m but works (!) on all bands above 20. A 26' director and 27' reflector actually fed W8JK-style (almost). The feedpoint is skewed toward the 'director' by a bit, fed with 450 ohm ladderline and a 4:1 balun. His reference is <http://www.bvarc.org/Tech/CompactW8JKBeam-K5LJ.pdf>

To me, it looks somewhat like a ZL special but using doublet elements rather than twinlead folded dipoles. He gets some gain on 20m (although only 12 dB F/B).

Dean Straw K6BV spoke on Sporadic-E Propagation at HF.

Dean is a retired Tech Editor for the ARRL and was responsible for many of the recent Antenna Books. He documents with modeling and anecdotal evidence the important contribution sporadic-E can have in an otherwise skip zone. WRTC 2010, a contest held SW of Moscow this past July, provided the evidence. There is no way F2 propagation could have produced such strong signals close-in. As usual, Dean drowns us with VOACAP charts all based on 1500W stations on both ends with stacked yagis.

Steve Stearns K6OIK spoke on SWR, Reflected Power, and Power Transfer on Real Transmission Lines with Loss.

Steve is an electromagnetic systems guru at Northrop Grumman in San Jose and has spoken at the Antenna Forum several times in the past. He had many charts and equations (love 'em!) but the one most notable was one he cooked up which gives the Additional Coax line loss given transmitter end SWR (rather than feedpoint SWR). He verifies the charts in ARRL Antenna Books and other sources. Another item was pointing out that a familiar formula for the impedance of

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open-wire transmission line is actually an approximation and it fails for close-spaced line. The formula $Z_0 = 276 \log(2s/d)$ fails at close spacing while $Z_0 = 119.917 \cosh^{-1}(s/d)$ is exact. He has many other bloopers exposed! He has also an extensive discussion of the Conjugate Match theorem and Maximum Power Transfer theorem... fascinating reading.

<http://www.fars.k6ya.org/docs/k6oik>

Jim Brown K9YC gave a talk entitled An updated Look at Coaxial Ferrite Chokes, Plus an Interesting 160m Vertical Based on N6LF's Work.

Jim gave an overview on why coaxial ferrite chokes work or ... not! Jim loves mix 31, by the way. He has many articles on chokes, RFI, computer interfacing, etc. at <http://audiosystemsgroup.com/publish.htm>. He had said his presentation would be there but wasn't when I checked (24 Oct). His 160m vertical has been converted into a somewhat directional antenna by judicious placement of guy wires, etc. As I don't have a 150' redwood tree to hold up wires, it didn't seem to apply well to my situation.

Edison Fong WB6IQN gave An All Weather, No Radial UHF Antenna with 5db Gain. He is a professor at UC Santa Cruz, EE, and takes on specialty design projects. This one was to design a CHEAP, indestructible vertical antenna with 5dB gain over a GP for about 470 MHz. No radials! He came up with a redesign of an antenna called a Super J (J as in J-pole) and add a second collinear section on top to up the gain by 2dB. He has a supply of such cut for the 440 MHz band and they were selling like hotcakes. Another thing in his talk: the dual-band magmount 2m/70cm antenna with a coil partway up... it has negative gain of 6dB!! He investigated it

as part of his project and it flunks. One of his designs could be built for 2m but it would be considerably taller than his approximately 45". I didn't get an URL, but his email is: edison_fong@hotmail.com.

Last at the Antenna Forum was Tom Schiller N6BT. He spoke on UAD (Unknown Antenna Disorder).

Basically he spoke on antenna debugging and general antenna issues. It is worth going down to Pacificon just to hear Tom speak. He sold Force-12 to a fellow in Texas a few years back but is back at it designing antennas. See n6bt.com.

As it turns out, I won a copy of his book Array of Light 3rd edition as a door prize. It is a superb book. Ya gotta have it!!

Saturday Oct 16 **Main Convention Forums**

Here is what I attended and learned:

8AM speaker didn't show, stuck in traffic on Hwy 17 from Santa Cruz—an accident. I slipped into the last part of a presentation on 160m. Nothing particularly new.

9AM HFPack Beginners' Forum Glen Thomas WB6W spoke. HFPack is carrying around with you an entire station for (typically) 17m or 20m SSB. They use a trailing counterpoise to get their whip antennas to radiate! The interesting thing here to me was a new type of lithium battery that doesn't explode/burn (or so they say). Lithium Iron Phosphate cells. I found a vendor selling them and their chargers in the exhibit hall. They are called A123 cells. Very light for the high power density, etc. But are they pricey! Maybe they will come down in price so I can operate from Wagner Butte with my K2...

10AM Jim Brown K9YC Interfacing Com-

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PACIFICON 2010 — Continued

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puters. He got through the traffic finally in time to give his 2nd scheduled presentation on interfacing computers. Good stuff here. See his website:

<http://audiosystemsgroup.com/publish.htm>

Jim has vast experience in commercial audio and associated RFI issues.

11AM Dave Witkowski W6DTW Weak signal HF.

This was great and quite an eye-opener. In a 2kHz wide channel, they are having very slow 'contacts' via JT65A-HF at up to -24dB in the noise. Noise, of course, depends on channel width, but the live demo exchanging QSO packets with ZS and KH6 was impressive. 50W and a trap vertical in the parking lot. You turn off the audio—can hear nothing but noise! They use an odd-even minute pattern for exchanges. Exchanges are 48 sec long giving ops 12 secs to get ready for their return exchange! Clocks need to be within a second for this to work. He is co-author of an article in CQ for Oct 2010, page 32. See also Nov 2010 QST for a somewhat re-

lated article on WSPR.

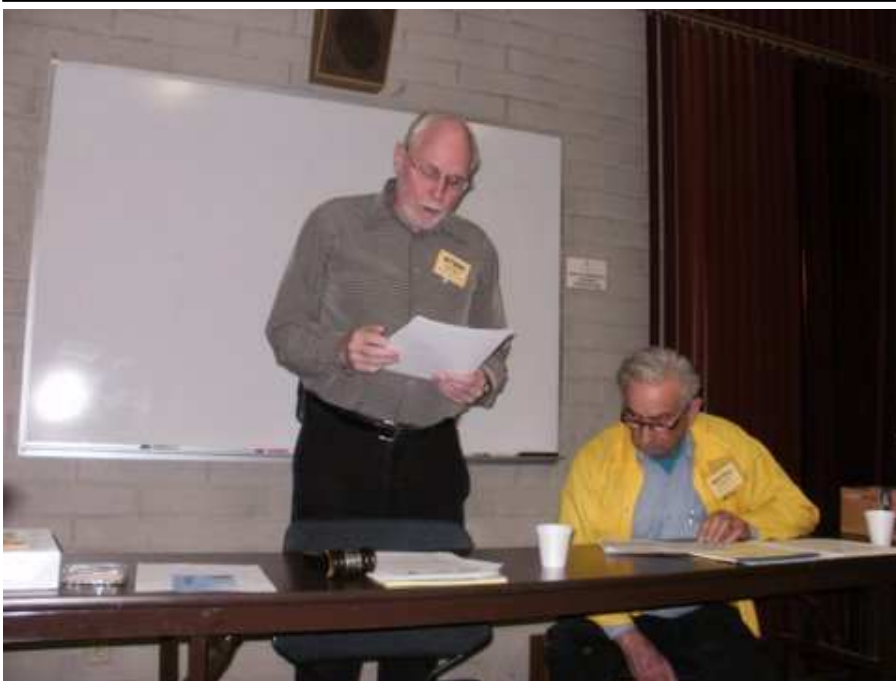
1PM George Zarfilopolous KJ6VU PIC Microcontroller – Designing Ham Radio Projects. Good stuff, but I am way behind the curve here. He describes a project using a PIC1640, a chip that is "in every rice cooker in Asia!". I did recognize his C code, though. See the URL

<http://www.bay-net.org/articles.html>

Had a great chat with Bob K6XX regarding the Elecraft KPA500 amp coming out early next year. It will do QSK at 80 WPM..! Also chatted with Eric WA6HHQ and Wayne N6KR of Elecraft fame. As it happens, I was at the first public announcement / presentation on the K2 at Pacificon 1999. (I have both a K2 and a K3)

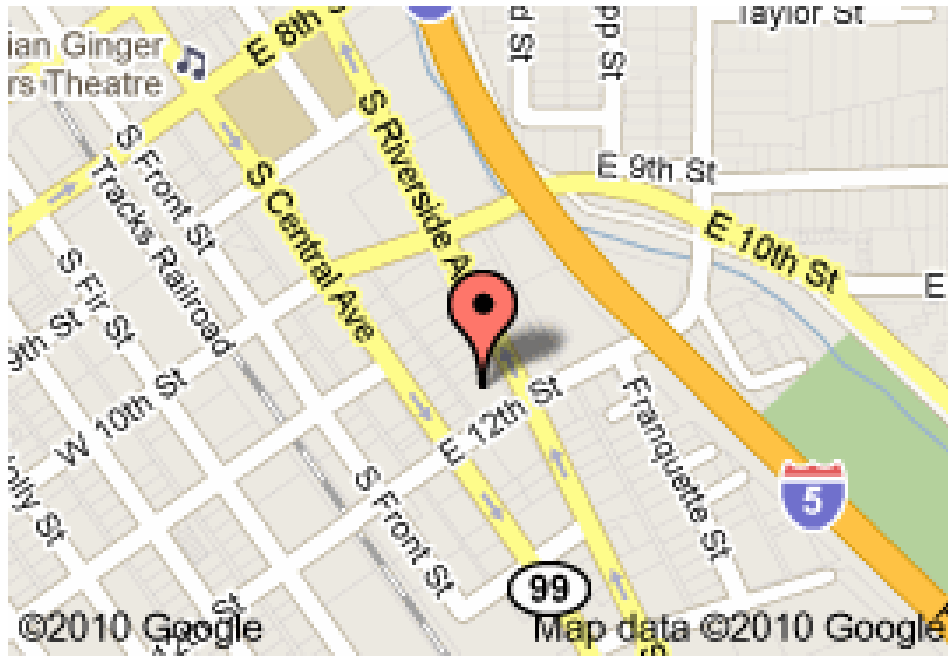
4PM Jack Morgan KF6T Station Automation Jack gives a survey of available commercial station automation/integration gadgets. Much of it is contesting oriented and ssb oriented. His slides are available at <http://www.nccc.cc> (the NCCC website).

Next year at Marriott Great America in Santa Clara. Bring your family!



President Herb Grey, W7MMI, and Secretary Jack Shock, WA7IHU at the November meeting. Herb gave a talk on "Communications DC to Daylight".

Thanks to Walt Deutsch, KG6MZU for the photograph.



Next Club Meeting

Thursday, December 2, 2010, 6:00 PM [Note Early time]

China Hut Restaurant, 450 S. Riverside. NW Corner Riverside and 12 St., Medford, OR

Program: Christmas Party. Bring a small gift (less than \$10) marked YL or OM.

Rogue Valley Amateur Radio Club
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