
TERAC NEWSLETTER

(TEchnology Radio Amateur Club)

TERAC, Inc.

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Physics from Seattle Pacific University in 1975 after two years of as active duty as a US Navy Radioman. He received his MSEE in 1981 and PhD in electrical engineering from the University of Washington. He has worked for Bell Labs, Michigan Technological University, TriQuint Semiconductor, Cascade Microtech and is currently on the faculty of Portland State University. Rick's article on Transistor Linear Power Amplifiers is featured on the cover of the February issue of QST.

Gene Single, K7IUN

TERAC Meeting:

- **Time:** Feb 12th, 2008, 7:30PM
- **Place:** TVF&R Training Building
20665 SW Blanton St.
Aloha, OR
- **Talk-In:** 443.65 MHz Simplex

TERAC Meeting (non members welcome)

Rick Campbell KK7B Title will be giving a presentation titled: "Experiments with Analog Modulation".

The presentation will include hardware demonstrations. Rick received his BS in

Charlie needs help

Charlie Rhodes is doing some research to determine how much the field strength of TV band signals is attenuated when passing through external and internal walls of typical US residences and is looking for volunteers. This is an opportunity to have some fun and help with the DTV transition. If you are interested contact Charlie at cwr@bootit.com or me at k7bvt@msn.com/

Chuck K7BVT

FROM THE PRESIDENT'S LAZY BOY CHAIR

Roger's heal continues to heal, he expects to be back in the saddle on April 1. He looks forward to seeing everyone at this months meeting and can be reached him on his cell or temporary email listed in the Officers box above. While it doesn't look like he will be able to help with Charlie's project Roger has been conducting studies on the interaction of DTV signals with stacks of empty beer cans.

Chuck, K7BVT for Roger, W7ADV

Field Day Trailer Tower

Last September the news letter carried the results of the 2008 FD operation done by three of us operating as K7AUO. For those who save the newsletters, review the September, 2008 issue. An excerpt from that story was:

This was a year of over extending ourselves on the setup. We had a 30' tower with a two element tri band beam, a 135' dipole fed with "window line" up about 60' and a 14AVQ vertical. We are looking for an easy-to-erect tower."

Chuck and I decided that a trailer mounted tower may be the answer. For a look at the right idea, check:

<http://www.k7oji.org/documents/towertailer.shtml>

We have been looking for tower and trailer combinations that might work. We just "won" an MA-40 tower, with a Hy-Gain EX-14 beam and a rotor on eBay. This makes for a long trailer, around 27', but gets us up about 45'. We are searching for a trailer, and exploring designs. Depending on what we find, we may have to scale back the tower size. Perhaps the MA-40 will have to find a different home! This will be an

ongoing saga. Stay tuned! Only four months until FD 2009!

Bob, W7BKN

Arecibo calling

We recently transmitted a low power CW test signal to the Chandrayaan-1 spacecraft in orbit around the moon. We had fun making the kluge setup to route the signal into one of our feeds, involving in part a large C-clamp to hold the output stage amplifier nearby (a "clamp amp" of sorts) to permit a very short cable run. After our transmit time was complete, we switched to an appropriate receiver and tracked one of the telemetry beacons for a while, but it was (to me) a surprisingly weak signal. Still well above the noise for us, but I don't see how they could get much out of it with their much smaller receive antennas.

The signal did not appear to be of a spread spectrum nature. I captured a bit of the IF signal on a DSO with the intent of studying its modulation format, but foolishly chose an unnecessarily high sampling rate and got too short of a record, apparently less than one symbol, so trying to make sense of the modulation didn't work out. If there's a next time, I'll do better.

We've been running a lot of 430-MHz radar studies of the ionosphere in recent times, and its fun to watch the oscilloscope display of the raw IQ receive signals. If one watches for a few minutes, one is often rewarded by a few meteor returns, and rarely by some chance satellite passing through the beam. Also we often see ships going by, via scattering sideways out of the transmit beam by the platform, then to the ship, then

back to the platform and thence back into the beam. Quite a nebulous path, but with over 1MW peak power and a great low noise receiver, it works. Our sea horizon is a little over 40 miles out, and is visible to the north from the platform on clear days.

As far as I know, we've made no major new discoveries in the last few weeks. But for the really inquiring mind, I suggest viewing our newsletter at:

http://www.naic.edu/~ehowell/newslet/ec2008/NAIC_Newsletter44.pdf

The cover photo is rather pretty if nothing else (it's not by me).

Dana Whitlow, K8YUM

Where to find it

For those homebrew projects that require metal, Pacific Metal in Tualatin (503) 454-1051 www.pacificmetal.com sells small quantities of odds and ends. Metal Supermarket (503) 258-1151 portlandsales@mscWASHINGTON.com in northwest Portland specializes in selling small quantity extrusion sales.

Where to get it Fixed

Joe Borsch W7PNS (remember Portland Radio?) is partially retired but still does some radio service, tending to specialize in Kenwood repair. Joe can be reached at 503-684-5201 jlBorsch@gmail.com. Scott Malcom KA7MEF runs an authorized ICOM Service Center in Toledo, WA and can be reached at mts@trip.net Scott's has an impressive web site at www.angelfire.com/biz2/mts/

Upcoming Hamfairs and Events

14 February 2009

Rickreall Hamfair

Salem Repeater Association
Polk County Fairgrounds
Rickreall, Oregon
Talk-In: 146.86(-) (PL 186.2)
Don Bruschi, K7UN
PO Box 5130
Salem, OR 97304-0130
Phone: 503-371-8070
k7un@arrl.net
<http://www.w7sra.com>

7 March 2009

Mike & Key Electronics Show

Mike and Key ARC
Western Washington Fairgrounds
Pavilion Exhibition Hall
Puyallup, Washington
Michael Dinkelman N7WA
22222 148th Avenue SE
Kent, WA 98042
253-631-3756
mwdink@eskimo.com
www.mikeandkey.org/flea.htm

April 11, 2009

Yakima Hamfest

Yakima, WA
<http://bearcreekguns.us/w7aq/hamfest.htm>

5 - 7 June 2009

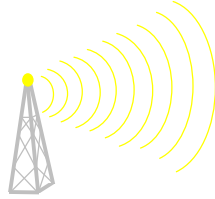
SEA-PAC Hamfair

NW DIV. ARRL CONVENTION
Seaside Convention Center
Seaside Oregon www.seapac.org

For a complete listing of Pacific Northwest Hamfests see:
<http://www.n7cfo.com/amradio/hf/hf.htm>

Application

TERAC, Inc.



Please complete and return with payment to:
TERAC, Inc., PO Box 5761, Aloha, Or 97006-0761

Name:		Call:	
Address:			
City:		State:	Zip:
Home Phone:		Work Phone:	
Unlisted: <input type="radio"/>	E-mail Address:		
License Class:	ARRL Member:	Emergency Service:	
	Yes <input type="radio"/> No <input type="radio"/>	Yes <input type="radio"/>	No <input type="radio"/>
Membership Class:			
<input type="radio"/> Full	(currently licensed)	\$14	
<input type="radio"/> Associate	(not licensed)	\$14	