

# TERAC NEWSLETTER

(TEchnology Radio Amateur Club)

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**Charlie Rhodes will be giving a presentation titled  
“Interference to DTV Reception and other Technical  
Problems with Implementing the DTV Changeover on 6/12”  
(non-members welcome)**

**TERAC Meeting:**

- **Time:** April 9th, 2009, 7:30PM
- **Place:** TVF&R Training Building  
20665 SW Blanton St.  
Aloha, OR
- **Talk-In:** 443.65 MHz Simplex

**What Hams and broadcasters can do  
to help out in this Impending  
scheduled Emergency.**

Charlie’s presentation will focus on the following items;

1. The large proportion of viewers in this market who do still rely upon over-the-air signals for their television service.
2. The so-called Cliff Effect of DTV transmission
3. New Antennas for reliable DTV reception in Portland area
4. The need for viewers to activate their DTV Down-Convertor or

DTV receiver’s auto scan feature on 6/13

5. Interference problems that may be discovered on 6/13 and how to diagnose them
6. Questions from the floor

Charlie Rhodes has worked in the television industry for over 50 years. At Tektronix he designed and managed the development of the early television products that were the foundation for the company’s dominant position in video test equipment. Charlie is a Life Fellow of SMPTE receiving their prestigious David Sarnoff award in 1992. He is also a Life Fellow of the IEEE. Charlie was Chief Scientist at the ATSC during the development of the Digital Television system. Currently Charlie is a consulting engineer and writer for TV Technology magazine.

Chuck Barrows, K7BVT

## FROM THE DESK OF THE PRESIDENT

Greg Kiemel's presentation on EMC authorization for wireless devices last month was very informative. Thanks much to Greg and also Dean Ghizzone of Northwest EMC. I am looking forward to this month's presentation by Charlie Rhodes on DTV. Those of us that worked at Tek in the good old days knew Charlie as Mr. Television. Since then Charlie has been working on the DTV transition. This will be another great presentation so don't miss it.

Roger McCoy, W7ADV

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Oregon 97006-0761**

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The TERAC Newsletter is emailed monthly to members and friends of TERAC. Meetings are normally held on the second Thursday of the month at 7:30 PM.

## Successful First EVE-Echoes (Earth-Venus-Earth) in Germany and Europe

On March 25th, 2009 a team from the German space organization AMSAT-DL reached another milestone on its way to an own interplanetary probe towards planet Mars. The ground station at the Bochum observatory transmitted radio signals to Venus. After traveling almost 100 million kilometers and a round trip delay of about 5 minutes, they were clearly received as echoes from the surface of Venus. Receiving planetary echoes is a première in Germany and Europe. In addition, this is the farthest distance crossed by radio amateurs, over 100 times further than echoes from the moon (EME reflexions).

For receiving the EVE (Earth-Venus-Earth) reflections, an FFT analysis with an integration time of 5 minutes was used. After integrating for 2 minutes only, the reflected signals were clearly visible in the display.

Despite the bad weather, signals from Venus could be detected from 1038UT on until the planet reached the local horizon.

The high power amplifier which is described in the current AMSAT-DL journal has therefore passed this crucial test as a final key component for the planned P5-A Mars mission. By receiving generated echoes from Venus, the ground and command station for the Mars probe has been cleared for operational use and the AMSAT-Team is now gearing up for building the P5-A space probe.

For financing the actual construction and launch, AMSAT-DL is currently in negotiation with the DLR (Deutsches

Zentrum für Luft- und Raumfahrt)  
among others, to obtain financial support  
for the remaining budget of 20 Mill EUR.

AMSAT-DL wants to show that low-  
budget interplanetary exploration is  
possible with its approach.

More information and the link to the  
official press release:

[http://www.amsat-  
dl.org//index.php?option=com\\_content&task=vi  
ew&id=166&Itemid=97](http://www.amsat-dl.org//index.php?option=com_content&task=view&id=166&Itemid=97)

The EVE experiment was repeated on  
Thursday, March 26th for several hours with  
good echoes from Venus. Morse code was used  
to transmit the well known „HI" signature  
known from the AMSAT OSCAR satellites.

73s de DB2OS, Peter Guelzow

President AMSAT-DL

### **EMC at Aerocibo**

Sorry I couldn't attend last month's  
meeting, it looked interesting but a bit far  
to travel. As you might guess, we're  
"down" on wireless devices here. The  
only items permitted are the carefully  
vetted walkie-talkies used by the  
maintenance folks. We have signs up all  
over the place, starting  
just outside the gate; reminding people to  
turn off their cellular phones  
etc, but people still forget (or choose to  
ignore the signs). So we've  
recently been placing commercial cell  
phone detectors here and there,  
but we had to mount them in shielded  
enclosures and add isolation  
amplifiers in their RF inputs so that they  
would not cause problems  
themselves. Nothing's ever simple!

Dana Whitlow, K8YUM

## **Ham Radio in the Movies**

Thought some of you might enjoy these  
old videos about ham radio forwarded to  
me by my sister, W6PJF.

\*[http://www.youtube.com/watch?v=x  
YQ1f5o\\_XCY&feature=related\\*](http://www.youtube.com/watch?v=xYQ1f5o_XCY&feature=related)

\*[http://www.youtube.com/watch?v=C  
JclDxOTtYE&feature=related\\*](http://www.youtube.com/watch?v=CJclDxOTtYE&feature=related)

You'll notice that You Tube has many  
others on ham radio... most are modern  
and interesting.

Neil Robin, WA7NBF

## **Where to get it Fixed**

Norway Labs in SW Portland provides  
repair of professional test equipment,  
Tek, Agilent/HP, etc.

<http://www.norwaylabs.com/>

## **Hamfairs**

April 11, 2009

### **Yakima Hamfest**

Yakima, WA

[http://bearcreekguns.us/w7aq/hamfest.ht  
m](http://bearcreekguns.us/w7aq/hamfest.htm)

April 17 – 19, 2009

### **2009 International DX Convention**

Visalia, CA

<http://dxconvention.org/>

May 1 – 3, 2009

### **EMCOMMWEST<sup>®</sup> /Pacificon'09**

Reno, NV

<http://emcommwest.org/>

5 - 7 June 2009

### **SEA-PAC Hamfair**

NW DIV. ARRL CONVENTION


Seaside Convention Center

Seaside Oregon [www.seapac.org](http://www.seapac.org)

## MEMBERS AS OF MARCH 27, 2009

Richard Ballard W7AND	Chuck Barrows K7BVT	Dick Bass W7SMR
Dennis Berkheiser K9HSX	Margaret Byrd W7FVF	Bill DeVey WB7VCM
Ron Forman-Kinder K7VMN	Stan Griffiths W7NI	John Horn AC7WS
Lynn Hurd WB7UNU	Bob Jenkins W7BKN	Deane Kidd W7TYR
Roger McCoy W7ADV	Stu McNaughton K7VGQ	Bernie Miller WA7MCR
Gordon Moyle	Glenn Pelikan K7GWP	Dick Pooley W7HUY *
Ken Rosenzweig W7BFG	Tom Rousseau K7PJT	Bob Rullman W1SNR
Gene Single K7IUN *	Blaine Smith W7JHJ	Richard Stack K7TKK
Don Tucker W7WLL	Ralph Ulrich K7UVK *	* = Life Membership

### APPLICATION

<p><b>TERAC, Inc.</b></p>  <p>Please complete and return with payment to: TERAC, Inc., PO Box 5761, Aloha, Or 97006-0761</p>		
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License Class:	ARRL Member:	Emergency Service:
	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Membership Class:		
<input type="checkbox"/> Full	(currently licensed)	\$14
<input type="checkbox"/> Associate	(not licensed)	\$14