

# TERAC NEWSLETTER

(TEchnology Radio Amateur Club)

---

## TERAC Meeting:

- **Time:** April 8, 2010, 7:30PM
- **Talk-In:** 443.65 MHz Simplex  
(Non-members welcome)
- **Place:** TVF&R Training Building  
20665 SW Blanton St., Aloha, OR

(From Tualatin Valley Hwy (OR Hwy 8) turn South on SW 209<sup>th</sup>, then left on SW Blanton for approx one block)

## The Future of Broadcasting

Charlie Rhodes

{Seating is limited to about 30 at this venue; we may have to location due to the anticipated high level of interest in this subject so watch for confirming email next week}

The FCC has been mandated to produce a National Broadband Initiative. This Initiative proposes that the FCC re-allocate 500 MHz for BROADBAND.

Of this, the FCC intends to reduce the broadcast TV spectrum UHF Band by 20 as yet unspecified UHF channels.

The Consumer Electronics Association (CEA) and the CTIA (The Wireless Consortium) proposed to the FCC that broadcasters should convert their operations from the single transmitter with its high power and tall tower, to a system of low power, multiple transmitters distributed throughout the station's coverage area and all radiating the same DTV bit stream on the same channel.

This scheme was referred to specifically in the FCC BROADBAND

INIATITIVE as Single Frequency Networks. Such networks are widely used in Europe and Asia for DTV; however the DTV Transmission Standard in those countries was designed expressly to permit SFN operation. It employs COFDM a modulation scheme involving almost 8000 carriers spaced at 1000 Hz intervals across an 8 MHz channel. Each symbol is transmitted for 1 millisecond. By this clever scheme, the receivers are immune to multipath interference which lasts for up to 50 microseconds of a 1000 microsecond symbol period.

Our ATSC System involves a single carrier and is known to be highly susceptible to multipath interference. Therefore our receivers have an Adaptive Channel Filter (Ghost Killers) which are designed to Filter out these

echoes. Early ATSC receivers had crude "Ghost Killers" but since 2005 their performance with respect to static echoes has been greatly improved,

Some, perhaps most of this improvement in filtering out static echoes came at the expense of poorer performance in removing Dynamic echoes; as from: Tree sway, Tower Sway, aircraft landing or taking off, and trucks & automobiles.

No one has tested the performance of ATSC receivers when receiving DTV from a SFN. Not until now.

*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, K7BVT**

## FROM THE DESK (KEYBOARD) OF THE PRES

Thanks to Barrie Gilbert for an extremely lively discussion last month. I am looking forward to Charlie Rhodes presentation which deals with an issue that may affect amateur radio and our entertainment television. Come early to this one because we only have seating for about 30 people.

**Roger, W7ADV**

## Field Day

Bob W7BKN and I are planning on operating K7AUO from Ocean Park again this year. We could use some help with antenna erection and operating. Contact either one of us if you are interested. **Chuck, K7BVT**

## Ham Club / RACES / ARES Members Get 20% OFF On All Pryme Accessories.

Pryme has announced a new discount program just for Ham Clubs, RACES and ARES Groups. Simply sign up your club on our web site, [www.pryme.com](http://www.pryme.com) and everyone in your group will get a 20% discount off the listed prices on the web on our complete line of products. Your members can either order online, or by calling 800-666-2654.

###

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

		(503)
<b>OFFICERS</b>		
President	Roger McCoy W7ADV <a href="mailto:roger.mccov@veris.com">roger.mccov@veris.com</a>	799-0584
Vice Pres.	Gene Single K7IUN <a href="mailto:epsingle1@verizon.net">epsingle1@verizon.net</a>	644-0807
Secretary	Ken Rosenzweig WA7BGF <a href="mailto:kirent@easystreet.net">kirent@easystreet.net</a>	649-7221
Treasurer	Richard Stack K7TTK <a href="mailto:rwstack@att.net">rwstack@att.net</a>	503-639-4537
Emer. Svcs	Roger McCoy W7ADV <a href="mailto:roger.mccov@veris.com">roger.mccov@veris.com</a>	799-0584
Communication	Lynn Hurd WB7UNU <a href="mailto:lhurd@pacifier.com">lhurd@pacifier.com</a>	624-1999
Trustee	Tom Hill WA3RMX <a href="mailto:TomHill@EasyStreet.net">TomHill@EasyStreet.net</a>	645-3671
Board Member	Bob Jenkins W7BKN <a href="mailto:w7bkn@verizon.net">w7bkn@verizon.net</a>	649-3671
Board Member	Chuck Barrows K7BVT <a href="mailto:barrows4967@msn.com">barrows4967@msn.com</a>	244-4967

## . Upcoming Hamfairs & Events

**April 11, 2010, Yakima Hamfest**  
Yakima, WA <http://w7aq.org>

**April 30 – May 2, 2010**  
**EMCOMMWEST**, Reno, NV  
<http://www.emcommwest.org/>

**June 4-6, 2010**  
**SeaPac Hamfest**, Seaside, OR  
[www.seapac.org](http://www.seapac.org)

**June 11-13, 2010. 41st Wenatchee Hamfest**

<http://www.qsl.net/w7td/>

**June 26 – 27, 2010. Field Day**  
<http://www.arri.org/contests/announcements/fd/>

**July 16-18, 2010. Glacier Waterton International Peace Park Hamfest**  
[www.gwhamfest.org](http://www.gwhamfest.org)

**August 14, 2010. Tacoma Hamfest**  
<http://www.w7dk.org/>

**September 11, 2010. Clark County ARC Tail-Gate Swapmeet**  
<http://www.w7aia.org/>

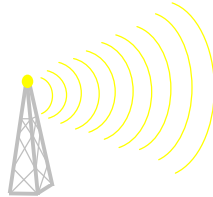
## MEMBERS as of April 1, 2010

Richard Ballard W7AND	Chuck Barrows K7BVT	Doug Barton
Dick Bass W7SMR	Dennis Berkheiser K9HSX	Mike Boer KD7EFL
Phil Crosby	Randy Dawson KF7CJW	Bill DeVey W7MMW
Stan Griffiths W7NI	John Horn AC7WS	Lynn Hurd WB7UNU
Ronald Kinder K7VMN	Bob Jenkins W7BKN	Ben Johnson N7OGM
Deane Kidd W7TYR	Roger McCoy W7ADV	Bernie Miller WA7MCR
Donny Miller KD7MLF	Gordon Moyle	Glenn Pelikan K7GWP
Dick Pooley W7HUY *	Ken Rosenzweig WA7BGF	Thomas Rousseau K7PJT
Robert Rullman W1SNR	Gene Single K7IUN *	Blaine Smith W7JHJ
Richard Stack K7TKK	Ralph Ulrich K7UVK*	* = Life Member

Month	Board Mtg.	Club Mtg.	Club Meeting Notes
APR	29-Mar-10	8-Apr-10	
MAY	3-May-10	13-May-10	
			Summer Break
SEP	30-Aug-10	9-Sep-10	
OCT	4-Oct-10	14-Oct-10	
NOV	1-Nov-10	11-Nov-10	
DEC			Christmas dinner TBD

# 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	