



*EmComm Alley*  
by *Tim Seeley KK7EF*

Again, it was a busy month with lots of events and things to be involved in and the War Wagon has had some extensive updates.

Thanks to Lt. Brad Wilcox (KJ7NO) and the Davis county Sherriff's office the war wagon has some new radios !!! Some homeland security money was given to ARES for equipment and programming software. The dual band radios that were purchased and to be installed at a later date were: an Icom ID-800, a Kenwood TM-D700, a Westmountain Radio rigblaster Pro radio/soundcard interface. This is an exciting addition, it will give the War Wagon the new digital mode of D-star and also APRS capability and a devoted TNC to Winlink among other things. We are extremely excited to have most all of the radios in the War Wagon new vintage including a donation of a few months back from Rick and Caroline Scheese (KD7BYU and KD7YVC) of a Kenwood 261. Also, it is worth mentioning that they also donated a Kenwood V-7A to the Woods Cross ECC. What a very generous gift to the Emcomm effort. Thanks all.

Hall Blankenship (KC7RAF) as the AEC of the War Wagon was doing some renovating, when he realized the cabinets where the majority of the gear is mounted had some problems. The weight of radios, wire and coax was pulling the fixture from the ceiling. With the help of Brent Thomas (AC7H) and Daryl Duffin (NU7X) a bracing plan was made and installed so the "gearspace" is now resting from pillars raised from the desk, instead of pulling from the ceiling. Could you imagine unloading the trailer for an event or emergency to find it had found a new home on the floor? That's what we call a good find. Thanks to Daryl, Hall and Brent for the extensive work renovating the War Wagon and installing new gear in it. Some single band radios were replaced and Daryl also fixed some problems with the aircraft radio.

The best things we can do as ARES folks, is to find our failings and weak points and fix them, hopefully before the weak points would cause problems in an emergency. Small issues can be worked through, but training and equipment shakedown are done ahead of time. That is why it is so important to get involved in an event, to see what you and your equipment are capable of and so we can work as a unit.

The events in October were the Davis Cup Band Competition, Jamboree on the Air, and Layton Preparedness Fair. There were a score of people involved in these three events alone, too many to list here. A huge thanks to those that put their time into these events !! A special mention to those that headed up these things in order by prementioned : K.C. Norseth (N7PER), J.R. Westmorland (W7JR) net control, Rick Scheese (KD7BYU) recorder/scribe; John Moyer (KG7DE) who with his crew helped over 150 scouts get their Radio merit badge; and Ed Dolymier (KB7OLE) and the Layton gang putting ARES into the Layton preparedness fair. It has been mentioned from

all of these folks how important and impressive that folks came out of the woodwork and in some cases into down pouring rain to man these events.

CSERG had an activity involving GPS fundamentals and radio work either at the end of September or the start of October. Another activity is scheduled just prior to this publication that will surly be a learning and also a fun activity.

I am so pleased to see ARES grow and get better, as we do different things with our licenses. Several of you have caught on to the desire to serve the public and we do that by the little things we do day by day week by week to be more ready and be more professional. I'm sure hams just like us were doing great things by helping people communicate in conjunction with the San Diego fires recently. They saw the need and *prepared themselves beforehand* to be an asset to those that are displaced out of their homes or have lost everything. If you have the desire to help your fellowman join the net on Thursday night, 7 p.m. on 147.420 simplex. Go to DCARC.net and go to the ARES button to fill out and send an ARES application.

*Volunteers don't necessarily have the time but they have the desire!*

.... until next month, I'll see you in *The Alley*.

Tim \_ \_ \_ \_ \_



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*Dark Tubes?*  
*submitted by Tim Seeley KK7EF*

I always thought the discoloration on the tip of vacuum tubes was from the heater or spoiled vacuum. Here is an interesting piece of trivia I came across. To prevent any remaining gases from remaining in a free state in a vacuum tube, modern tubes are constructed with “**getters**”, which are usually small, circular troughs filled with metals that oxidize quickly, barium being the most common. Once the tube envelope is evacuated and sealed, the getter is heated to a high temperature (usually by means of RF induction heating) causing the material to evaporate, absorbing/reacting with any residual gases and usually leaving a silver-colored metallic deposit on the inside of the envelope of the tube. If a tube develops a crack in the envelope, this deposit turns a white color when it reacts with atmospheric oxygen. Large transmitting and specialized tubes often use more exotic getters.

In addition to barium, aluminum, magnesium, calcium, sodium, strontium, cesium and phosphorus may be used as getters. These getters are also known as “*flashed getters*” since the element is quickly vaporized and deposited on the tube envelope. The metallic getters, aluminum, magnesium, calcium, sodium, and strontium, look much like the common barium getter. The phosphorus getter looks very different. The phosphorus getter produces a yellowish white deposit on the tube envelope. This deposit can give the appearance of a spoiled vacuum when the vacuum is actually intact. One unique clue to discern a phosphorus getter is that this deposit produces a rainbow effect when light shines on it.

High power transmitting and industrial tubes may not employ a flash type getter. In these tubes the

getter material is either the actual tube plate, or the getter material coats the plate structure of the tube. The plate operates at a red heat which serves to activate the getter material to absorb the oxygen and trace gases in the tube. Two common materials are carbon (usually in the form of graphite) and zirconium

**References**

- Stokes, John W. *70 Years of Radio Tubes and Valves: A Guide for Engineers, Historians, and Collectors.* Vestal Press, 1982.
- Reich, Herbert J. *Principles of Electron Tubes. Understanding and Designing Simple Circuits.* Audio Amateur Radio Publication, May 1995. (Reprint of 1941 original).

As found in *Wikipedia.com*

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***DCARC organization***  
***(continued from page 2)***

VE Exam Chairman	Mike Youngs, KK7VZ	
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### October Club Meeting

Please join us at the Davis Co. Sheriff's Office on Oct 13th,  
10 AM for a presentation about VoIP and IRLP. The pre-  
sentation will be given by Bryon Hellewell NJ7J and John  
Gold N7UPI.



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