August 2005

THE GRID LEAK

The Official Newsletter of the Tulare County Amateur Radio Club

P.O. Box 723, Visalia, CA 93279

TULARE COUNTY, CALIFORNIA
146.880 (-) TCARC REPEATER
Blue Ridge Mountain
East of Visalia, California
36 17.19' N Latitude, 118 50.23' W Longitude
5,700' above Sea Level

I.R.L.P. Node # 8120
Echolink Node # 152747 (WA6BAI-R)

Web Page: http://www.tcarc.net/
Companion site at: http://groups.yahoo.com/group/wa6bai/

Club Officers

President: Steve Lee-Thomas W6SLT
Vice President: Dave McElroy WB6BEF
Secretary: Ray Quinn KF6KMY
Treasurer: Bill Stenger K6QOG
Past President: Ray Quinn KF6KMY
Repeater Liaison: Chuck Ward WA6SAA
Activities Director: Hal Clover KC5LUB

Next Club Meeting is August 25, 7:30 pm
Red Cross Building, 505 West Main St, Visalia, CA.

Up Coming Events

* Fresno ARC Hamfest 2005, Saturday August 13th, 8am -3pm
at CSU Fresno, Whitfield Hall. Grand Prize: Yaesu FT-897D
Keynote Speaker: Bob Hiel, More Info: www.w6to.com

* San Joaquin Valley Amateur Radio Society Harvest HamConVention,
September 16-18, 2005. More Info: www.sjvars.com

* Pacificon 05, October 14-16, 2005, at San Ramon Marriott
More Info: www.pacificon.org

*Annual Turlock ARC Auction October 22, 2005, more Info: www.w6bxn.org

From the Editors: If there is anything that you would like to add to the newsletter, you may contact us by email at stengerw@sti.net. The deadline to have articles included is the 10th of each month; submissions after the 10th will go in the next newsletter unless otherwise instructed. -- **de Carol & Bill K6QOG**

TCARC Minutes for July 28, 2005

Meeting called at 1933

Introductions

Secretary Ray Quinn KF6KMY read minutes from previous meeting in May.

Treasurer was not present.

Treasurer report given by President Steve Lee Thomas W6SLT

Steve mentioned we had approximately $480 in the treasury.

Old business antenna arrived and has been installed. Controller was purchased for Park Ridge/Blue Ridge at over $300. Motioned by Steve Lee Thomas W6SLT to reimburse WA6SAA for purchases, seconded by Alan Vicenti W6MTR. The vote was unanimous in favor.

Liability insurance was discussed. Steve said it was $325 per year for $1,000,000 coverage.

There was discussion about the assets the Club owns, including donated items. Steve suggested a committee to disperse of these items for sale to generate funds for the Club.

There was discussion about putting an access code on the IRLP/Echolink node. Steve suggested that the IRLP/Echolink access be reserved for dues-paying members in an effort to offer more incentive to join the Club. It was also suggested by Bill Balsley KG6AIR that it be removed during special events, such as the annual DX Convention held in Visalia each year. The annual International Ag Expo was also brought up by Hal Clover KC5LUB.

The San Joaquin Valley Amateur Radio Society presented a flyer with information about their upcoming Harvest HamConVention September 16, 17, and 18, 2005, as well as mentioned some of the activities the group is involved in. Information can be found at www.sjvars.com.

Repeater Committed Chair: Dave McElroy, WA6BEF Repeater is running on Park Ridge. The plan is to take one step at a time to get everything installed. The first goal is to get the link radios installed for the IRLP. This includes getting the controllers installed at both sites. The long term goal is to have a redundancy with a repeater on both hills.

Charles Ward WA6SAA was working on interfacing the UHF link to the controller. The programming has been figured out.

Steve mentioned that the Blue Ridge VHF repeater had been turned off.

Alan mentioned some audio clipping through the repeater. There was some discussion of some of the causes.

Activities Director Hal Clover KC5LUB asked what activities the Club would like. One suggestion was an iced tea festival. Another was a field trip to the snow. Hal suggested a barbecue or a pancake feed. The room went silent and everyone had a blank stare. A meeting at a restaurant was then suggested.

In Emergency Communications, Hal mentioned that some evacuations from some mountain areas due to arson fires. There are also some road closures due to equipment movement to and from the area. TCARES was placed on STANDBY for a short time. Hal also mentioned other things for hams to be on the lookout for. There will be a drill in September with the Red Cross.

Motion to adjourn by Dave McElroy WA6BEF

Seconded by Bill Balsley KG6AIR

Club Websites:

The mailing lists available for TCARC are:

- gridleak@tcarc.net - Grid Leak distribution in Portable Document Format (PDF)
- gridleak-text@tacarc.net - Grid Leak distribution in text format for those who prefer or require it.
- tcarc-announce@tcarc.net - One-way announcements open to all
- members@tcarc - Open to all active members
- repeater@tcarc.net - New repeater committee list (committee members only)
- officers@tcarc.net - For officers

If anyone wishes to start a new list related to amateur radio or the TCARC, you may do so by sending me an e-mail. -- 73 de Ray KF6KMY

SAN JOAQUIN VALLEY SECTION
Report for the month of July

SM Charles McConnell, W6DPD- ASMs K6YK and W6FRH, ACC W6DPD, SEC N6ZFN, OOC N1VM, STM K6RAU, PIC KE6IGJ, TC W6TE.

Greetings from the ARRL San Joaquin Valley Section.

Emergency Coordinators are needed in Kings, Merced and Calaveras Counties. Contact N6ZFN (n6zfn@ares-races.net) or W6DPD (w6dpd@arrl.org) if you can help.

The California QSO Party is October 1-2, 2005. Try to be on the air and activate your county. Check www.cqp.org for information. This is the best of the state QSO parties. This is your chance to be searched out on the air for contacts.

Mark your calendars. The Fresno Hamfest is August 13, 2005. Check www.w6to.com for information. SJVARS presents the Harvest HamConVention is Sept 16-18, 2005 in Fresno. Check www.sjvars.com for information. Pacificon 05 will be October 14-16, 2005 at the San Ramon Marriott. Check www.pacificon.org for information. The Annual Turlock ARC Auction is October 22, 2005. Check www.w6bxn.org for information.

When your affiliated club elects officers for the next year, be sure to update your club's information on the affiliated club area of the ARRL web page.

Need to take an Amateur exam? Check the ARRL web page, www.arrl.org for exam information.

The Northern California Net (NCN), the Section Traffic Net, meets nightly on 3.630 MHZ at 7 PM Pacific Time. The slow speed training session of the net meets nightly on 3.705 MHZ at 9 PM Pacific Time. Handling traffic on CW is a good way to improve your CW skills. The Daytime Region 6 Traffic Net meets daily at 3:30 pacific time on or near 7.275 MHZ.

It is my sad duty to report that W6JBH and KC6TVD are Silent Keys. They will be missed.

Congratulations to AJ6X on 60 years of ARRL membership.

Congratulations to XE1L on winning the Don Wallace, W6AM, Memorial Award sponsored by the Central California DX Club. The plaque commemorates the highest score on 14 MHZ worldwide by a single operator in the ARRL International SSB DX Contest.

Congratulations to KO6QZ, on completing the ARECC Level 1 course and to W6MSU on completing the ARECC Level III course. There is still some grant money for fee reimbursement available but you must register for the courses very soon.

SJV Section stations W6TE, W6GMT, and KF6KDA placed first, second, and third in the in the 2005 ARRL VHF Sweepstakes Contest.

SJV section stations KA6BIM, WK6I, and AA6K placed first, second and third respectively in the 2005 ARRL International SSB Contest.

Congratulations to SJV stations WK6I, K6CSL, W6TE, and W6BAR on making good scores in the 2004 CQ Worldwide SSB Contest.

NN6NN was the top scoring U.S. Multi Single team in the 2005 CQ WPX RTTY Contest.

W7MH made the DXCC Honor Roll. Congratulations on this achievement.

WA6YEE has confirmed 300 DXCC entities.

N2AVR has been working DX on 6 meters.

Congrats to Bill Burns, WA6QYR, on being featured in an article on clubs in the August 2005 CQ Magazine. Bill was representing the San Bernardino Microwave Society.

KG6KYU won a MFJ Antenna Analyzer at the Fresno ARC picnic.

W7POR won a prize at the WPSS Picnic.

Traffic for July: K6RAU 16, and N6SUZ 78; Total 94. PSHR K6RAU 72, N6SUZ 100.

The Continuing Story of the Digital Modes

Amateur Amateur: Creeping up on the Digital Modes

By Gary Hoffman, KB0H, from the ARRL website

Let me take a moment to express my extreme gratitude to all the folks who have developed today's digital mode software *and* made it available as freeware or shareware. I just can't say enough about these fine people. Maybe I would have one day gotten around to building my own adaptor, but I would *never* have taken on the task of trying to write a computer program. So, thanks guys!

There are a number of freeware and shareware programs for digital modes. Some of them are for one specific mode, such as PSK31, while others can run several modes. A couple of them are so user friendly and flexible that it's hard to believe they are free.

Some of these programs contain an eye-catching feature called the *waterfall*. This is a continually changing display which shows the activity on the frequency to which your transceiver is tuned. Now, at first this display had me confused. I finally figured out, however, that what it was showing me was the *audio* spectrum--the same thing I was hearing on my radio's speaker.

The waterfall was fun to watch, even when I wasn't tuned to digital mode frequencies. Actually, it was more than fun. It was instructive. Even watching noise was interesting. It became clear that voices took up a lot of space on the waterfall when compared to some sort of digital signal, which took up relatively little space--or bandwidth to use a more appropriate term.

I already knew that the typical human voice in radiocommunication systems like ham radio spans roughly 300 to 3000 Hz--or a bandwidth of approximately 2700 Hz. Individual tones obviously have a much narrower bandwidth. But it was cool to see this phenomenon displayed visually.

There are a number of digital mode freeware and shareware programs available. I chose HamScope just because I thought it looked pretty (DigiPan is another popular--and free--PSK31 software package). I've found that *HamScope* has *many* more options than I'll ever need, but when I'm bored I try some of them just to see what happens. So far I haven't damaged anything.

Anyway, I spent a lot of time just fiddling around and gazing at the waterfall--the visual display of what I heard on the speaker. One nice thing about typical digital mode software is being able to hear and "see" the signal at the same time.

"Ah, so *that's* what that electric line noise looks like!" I'd say to myself.

I'd never been adept enough to work the ancient oscilloscope that someone had given to me, so this sort of thing was all new territory.

Eventually I got around to looking for actual digital-mode signals. I was most interested in picking up transmissions. FYI: PSK stands for **P**hase **S**hift **K**eying, which is the modulation method used to generate the signal. The 31 is the bit rate, which, not to be too fussy, is actually 31.25 Hz. PSK31 signals are not hard to find. Just as with voice modes, if the bands are open, someone will be transmitting a digital signal.

For those who've never had the experience, let me take a moment to describe operating in PSK31 mode. PSK31 is a keyboard-to-keyboard mode. In really simple terms, you type a message, and it appears on the receiving station's computer screen. When the other op responds, his or her message appears on your computer screen. From a completely non-technical standpoint it's a little like being in an Internet chat room.

What you hear on your transceiver is a sort of chirpy-warbly sound. Its pitch depends on what part of the audio spectrum the sender uses. Since a PSK31 signal occupies very little bandwidth you can pack a *lot* of signals onto one radio frequency. On a good day you can, in fact, tune to the favorite PSK31 hangout on 20 meters, 14.070 MHz (±2 kHz), and "see" several conversations going on at the same time. Regrettably you can't monitor them all at once, although *HamScope* and some other

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popular software packages will let you copy two messages at the same time.

The day finally came when I felt confident enough to try sending my own message. Rather than trying to jump into an existing conversation I started transmitting on an unused part of the audio spectrum. For that matter, it was an unused part of the *radio* spectrum, since there were *no* conversations taking place. In fact, the whole band was dead. I was ready to transmit, all right, but I didn't want anyone to hear me if I messed up.

Well, it was kind of cool. The waterfall display changed dramatically, showing only my transmission. And I quickly figured out that I had to stop transmitting *manually* or my rig would keep on pumping out my lack of keystrokes--an idling signal. Within a few minutes, however, I found the proper way to end my transmissions automatically.

One thing puzzled me, though. Although the waterfall display showed my transmissions blasting away into the ether, I didn't notice any change in what I was hearing from my transceiver's speaker. Okay, you've figured it out already, but I've given you all the clues. At the time I was focused on what I was *seeing* rather than what I was *hearing*. While I hate to admit it, it took me a few minutes to figure out that I wasn't actually transmitting anything. The computer said I was, but the transceiver sat there placidly, not sending a thing. And again, this is embarrassing, but suddenly became clear what it was supposed to do.

Oops! The extra cable does do something after all.

Okay, let me back up for a just a second. On my left side is the computer. On my right side is the transceiver. The transceiver has one cable plugged into its DATA port. This connects to a conversion box that splits into three other wires that connect to the PC. One cable goes into the speaker port and another to the microphone port on my sound card. And that's where my brain stopped working: Hey, I had wires to receive data and to send data, what more did I need? Oh, yeah. What *about* that third cable? Well, as it turns out, that one lets the PC tell the transceiver when to transmit and when to receive. In other words, it acts like the push-to-talk button.

Even though no one saw me, my face was still red as I plugged that "extra" cable, which connects to the PC's serial (COM) port.

I soon got over my little *faux pas* and started transmitting for real. And quickly enough I was joining in conversations. My first PSK31 contact was with Wen Johnson, K7RME, in Tucson, Arizona. A week later I failed in my attempt to check in to a multistate earthquake drill, but I did succeed in making contact with the group running the drill via PSK31. And the week after *that* I made my first *DX* PSK31 contact with Juan Bilbao, LU5DIT, in Argentina. Oh yeah! I can tell that digital modes are going to be a *lot* of fun!

Editor's note: ARRL member Gary Hoffman, KB0H, lives in Florissant, Missouri. He's been a ham since 1995. Hoffman says his column's name -- "The Amateur Amateur" -- suggests the explorations of a rank amateur, not those of an experienced or knowledgeable ham. His wife, Nancy, is N0NJ. Hoffman has a Web page.

Emergency Coordinators:

Emergency Coordinators for Tulare County:

RACES is Jim Reeves KC6YRU - kc6yru@tcarc.net

ARES is Hal Clover KC6LUB - hal90000@sosinet.net

August Birthdays:

Pam Drake KA2RQK

Al Yarbrough KF6SMN

Marion Petty N6EHA

September Birthdays:

Jim Reeves KC6YRU

Gloria Vicenti W6NRS

September Anniversaries:

Gloria & Alan Vicenti

Darlene & Chuck Wilcox

TULARE COUNTY AMATEUR RADIO CLUB, INC.
MEMBERSHIP APPLICATION

NAME (Self) _____ NAME (Family Member) _____

CALLSIGN (Self) _____ CALLSIGN (Family Member) _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

EMAIL _____

LICENSE CLASS (Self) _____ LICENSE CLASS (Family Member) _____

RES PHONE _____ BUS PHONE _____

EQUIPMENT _____

BANDS _____

INTERESTS (Please Check)

- ☐ EMERGENCY SERVICE
- ☐ TRAFFIC HANDLING
- ☐ CINTESTS
- ☐ RAG CHEWING
- ☐ Dxing
- ☐ QRP
- ☐ BUILDING
- ☐ ANTENNAS
- ☐ OTHER

DESCRIBE _____

_____

SIGNATURE _____

Membership Dues: ($20.00 - Individual - $25.00 - Family)

Mail To:

Tulare County Amateur Radio Club
P.O. Box 723
Visalia, CA 93279