

# W6VIO Calling



Jet Propulsion Laboratory Amateur Radio Club  
PO Box 842, La Canada CA 91012-0842

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Director at Large:	Jim Marr, AA6QI	3-1528	WR6AZN Trustee:	Bill Wood, W6FXJ	760-256-9576

## Upcoming Events:

- Every Monday: Emergency Communications Net: Noon, on WR6JPL 224.08/(-)/156.7 & 445.20/(-)/103.5, or WR6AZN 223.96/(-)/156.7 on Table Mountain.
- JPLARC Board of Directors (BOD) meetings: Normally, the first working Friday, every month, from Noon to 1pm in 180-703C. Call-in: 818-354-3434 ID 7373. **Next is December 5th.**
- **QST, QST, QST**: JPLARC Regular Membership meetings: Second working Friday every month from Noon to 1pm in 180-703C. Call-in: 818-354-4044 ID: 992-258-811. Slides (if any) broadcast via JPL WebEx, ID=7373. **Next is November 21st. Guest speaker: JPL's Allen Farrington K6AHF will give a talk about ham radio in model rocketing, PLUS Introduction of 2015 Club Officer Candidates.**

## In this issue:

Topics in this issue:

- Regular membership meeting (Oct 24<sup>th</sup>).
- Board of Directors meeting (Nov 7<sup>th</sup>).
- Emergency communications.
- 2014 Field Day Scores.
- Goodby MeetingPlace, hello JPLWebEx.
- Demolition begins at new shack site.
- ARRL Membership.
- Equipment for sale [NEW items for sale].
- Future membership meetings & speaker topics.

## October 21st Regular Membership Meeting:

By Jim Marr AA6QI

Present were: Vaughn Cable† K6ZTA, Bob Cesarone WA9JIB, Walt Ciszczon† KK6DUL, Dayton Jones† K6DJ, Bob Dengler† NO6B, Courtney Duncan†\* N5BF, Jorge Gonzalez† KI6BJB, Jim Marr†\* AA6QI, Lew Soloway (no call), Mike Tope† W4EF, Steve Townes†\* WB4ILW). On the phone: Chris Carson†\* KE6ABQ.

Note: † indicates a regular member, and \* Indicates BOD member. For a regular meeting quorum, the JPLARC Bylaws require a majority of the BOD (four or more) and at least five other regular members. We had four BOD

members, six other regular members and two non-members, so a quorum WAS present.

President Steve Townes opened the meeting with introductions around the room and then proceeded to with a set of introductory slides that covered the following topics...

**Treasurer's report:** Balance \$3,990.19 with no change from October (there are some pending deposits that should show up next month).

**Nominating Committee:** Jim Marr, the committee chair, encouraged volunteers or nominations for the four elected positions of President, Vice President, Secretary, and Treasurer be sent to him at his JPL email address. Nominees will be presented to the general membership at the next regular membership meeting.

**Great ShakeOut exercise (Oct 16<sup>th</sup>):** Steve Townes provided a brief recap of the exercise. Jim Marr relayed that Will Michael wants to have a post-exercise debrief with JEARS members who participated in the exercise (though all are invited to listen in). We plan to use the next Board meeting (Nov 7<sup>th</sup>) for this. Jim has prepared a set of slides with all of the participant feedback categorized. These slides will be used in the debrief.

**Additional Equipment for Sale:** Jim Marr summarized the next round of JPLARC equipment sales, this time focusing on VHF/UHF equipment. Jim presented the list of equipment that was previously approved by the Board that, per the Bylaws, requires approval by a quorum of regular

members (which we have at today's meeting). Those present approved of the Board's recommendation except for the Amateur TV equipment that it was suggested should not be sold and so will not be. [*ed., see the list of equipment for sale at the end of this newsletter.*]

**Upcoming speakers:** Steve Towns highlighted some of the upcoming speakers [*ed., see the list at the end of this newsletter.*]. Steve indicated that it is not likely that we will have a December regular membership meeting but that we might have a pizza get together somewhere early next year.

**Today's Guest Speaker:** Steve Townes gave a very informative talk on **Software Defined Radios (SDRs)**. [*ed., sorry, but I forgot to take a picture of Steve giving his talk to include here.*] Topics include:

- Defining what an SDR is, including a block diagram, and key elements (front-end hardware, digital processors, software).

- Important considerations (A/D & D/A 'goodness'; pre-distortion; and processing power).

- Descriptions of several SDRs ranging from a few \$ to many thousands of \$. Proliferating rapidly. For a giant list see [http://en.wikipedia.org/wiki/List\\_of\\_software-defined\\_radios](http://en.wikipedia.org/wiki/List_of_software-defined_radios). Steve showed six examples ranging from the \$17.95 NooElec Model R820T (which Steve demonstrated at the end of his talk) to the \$7,500 Flex 6700.

- Steve identified several sources of SDR software, including: GNU Radio's GQRX for OSX & Linux; PowerSDR (FLEX); SDR#; and HSDR, indicating that there are many more than just these.

- Steve ended his talk with a demonstration of his NooElec R820T SDR.

As usual, there was a lot of very good discussion about the slides that you had to be there to appreciate.

A PDF copy of this talk was emailed to the club's email reflector. If you didn't get one (or can't find it), contact either Steve Townes or Jim Marr and we'll see that you receive one.

## BOD Meeting Nov 7<sup>th</sup>

By Rob Smith W6GRV

Present were: Bob Dengler†, NO6B, Courtney Duncan\*, N5BF, Jim Marr\* AA6QI, Rob Smith\* W6GRV, Chuck Sarture\*, KG6NF, Jan Tarsala†, WB6VRN. On the phone: Chris Carson\*, KE6ABQ, Charles Rhoades†, WB6KZE.

Note: † indicates a regular member, and \* indicates BOD member. For a BOD meeting quorum, the JPLARC Bylaws require a majority of the BOD (four or more). We had five BOD members so we DID have a quorum.

Jim Marr announced that JPL is replacing MeetingPlace with jplwebex and we will need to use jplwebex for the November 21<sup>st</sup> regular membership meeting. Jim will include instructions in the November issue of W6VIO Calling.

Treasurer Chuck Sarture reported that there have been no transactions over the past month but he did deposit some membership monies received over a couple of months prior to that.

### New Shack:

Chris Carson discussed routing for the cables going up the hill from the new shack location up to the antenna farm on the JPL Mesa. They will be run on the ground, not suspended on supports, and will have anchors every 50 feet. Heavy PVC will be used in strategic locations to keep equipment from driving/going over lines. The new cables will terminate on top at the Mesa antenna tower with 10ft of extra cable. They will terminate at the new shack with 20ft of extra cable. The JPLARC is responsible for putting terminations on the cables (connectors & weather proofing).

Chris said that demolition is now under way so we need to get the details of the cables in next week. Eric Archer suggested in an email that we have a meeting next week to put together the specifications. Chris Carson will get them to those who need them.

Chris reported that the new shack is wired for 240V/100A and wanted to know whether that was sufficient. Those present thought that it should be. We do need to do an equipment layout to communicate where station connections should be placed in the new shack.

### Great ShakeOut JEARS Exercise discussion:

Most of this meeting was devoted to discussing what we learned from the Great ShakeOut JEARS Exercise. Slides from this discussion are available for those who would like to see them. A brief summary of these slides is included in this month's JPL ARC EmComm article.

## JPL ARC EmComm

By Jim Marr AA6QI

Last month in this column I discussed a few of the things we learned from the Great ShakeOut JEARS exercise. This month, I'd like to expand upon that with a discussion of some of the things that will be happening as a result of that drill.

One of the issues that I discussed last month was the ineffectiveness of the foot runners that we instituted due to our inability to reach the Logistics desk in the EOC via radio. Discussing this with Will Michael, uncovered that our runners were expected to enter the EOC through room 106 rather than the main EOC door. This practice was apparently implemented in response to prior year's drills in which traffic through the main EOC entrance was very distracting. Unfortunately, we didn't know about this during the exercise so our runners were pretty frustrated while waiting outside the main entrance that never seemed to open.

Will Michael plans to form a new JEARS Unit at the EOC Logistics Section to help formalize JEARS operations

with specific job responsibilities for the EOC and field operations. He will also add any needed 2m/70cm equipment at the Logistics table.

Net Control was run out of 310-106 (adjacent to the EOC), first by Chris Carson and then by me. We had originally planned to check in with Walt Mushagian K6DNS on HF using the HF radio in 310-106 but I found that, while I could hear Walt, I was too busy as net control to be able to also talk with Walt. Additionally, the Great ShakeOut exercise master log was being maintained in the same room at the same time, so there was a lot of background conversation with similar terms, which got pretty confusing at times since I wasn't wearing headphones. As a result of these problems, Will Michael will be adding two more positions to 310-106 (VHF/UHF net control; HF operations; Business Band operations and Comm Flow control), and will obtain headphones for all positions. These will be welcome changes.

Will Michael will also work with the JPLARC to develop "Go Kits" for JEARS members that include such things as hard hats, distinctive communicator's vests, message forms, writing instruments, and a supply of AA batteries.

To effect all of these changes, Will Michael will work with a single point of contact (POC) within the JPLARC, both to develop these changes and to help plan regular JEARS working/training sessions.

## Field Day 2014 Scores

By Jim Marr AA6QI

Field Day (FD) 2014 scores have now been released on the ARRL website. Pasadena Radio Club's (PRC's) Paul Gordon N6LL, 2014 PRC FD chair, wrote: *"Congratulations, gang. The ARRL Field Day results are out. Six California stations entered the 6A category, and we're number one in that group! Our JPL contingent deserves special thanks for their tenacity in the chair grinding out QSOs. Thanks also to everyone who helped make it a fun event."*

Overall, we were 13<sup>th</sup> out of 29 total category 6A entries nationally and 330 out of 2,686 total entries in all categories nationally.

For those who might have missed the Field Day 2014 film produced by Bruce Nolte N1BN, see <http://youtu.be/DsM-WnBoLts>.

I echo Paul's thanks for all who participated in a fun and successful Field Day 2014 with the PRC, CITARC and JPLARC.

## Goodbye MeetingPlace, Hello JPLWebEx

By Jim Marr AA6QI

On November 21<sup>st</sup> JPL is shutting down the MeetingPlace application that we have been using to broadcast presentations during JPLARC meetings, replacing it with a JPL WebEx application.

This change requires some changes in the instructions that are needed to remotely access the meeting.

To just listen to the voice broadcast, call 818-354-4044 and enter the meeting ID as 992-285-811 (without the dashes).

To watch the slides, go to <http://jplwebex.jpl.nasa.gov>. Once there, join meeting 992-285-811 (without the dashes).

JPL WebEx works on all computer platforms (macs, windows, linux) and on smartphones, making it easier to join and participate in meetings.

JPL WebEx allows either a separate call in number or you can use the computer connection for audio (which is reported to be of lower quality, especially on a slow link).

Please be patient with us as we learn how to use this new method of sharing presentations.

## Demolition begins at new shack site:

By Jim Marr AA6QI

Demolition has begun at the site of the new JPLARC shack. JPL buildings 87, 88 & 143 (Figures-1 & -2) will be demolished to make way for our new shack, after which new coax will be run to our antenna farm on the JPL Mesa.



Figure 1: Map showing location of the future site of the radio shack.



**Figure 2: Demolition begins on buildings 87, 88 & 143.**

## ARRL Membership:

By Jim Marr AA6QI

As an ARRL affiliated club, at least 51% of our membership must be ARRL members. Today, we have 73% as either Life (8) or Regular (27) ARRL members. That leaves thirteen 2014 members who are not ARRL members (a few of which are family members of ARRL members). While there are no requirements to maintain ARRL membership, there are some clear advantages to having ARRL membership. Some of these are:

- Receiving the monthly QST magazine and having access to all back issues electronically.
- Being able to subscribe to weekly ARRL news, propagation forecasts, and satellite ephemeris notifications.
- Being able to subscribe to the electronic monthly Amateur Radio Emergency Service (ARES) newsletter that may be of interest to members who wish to stay current on emergency communications.
- Member discounts on materials and training. For example, the ARRL Introduction to Emergency Communication Course is \$85 for non-members but only \$50 for members.
- You support ARRL, the only significant amateur radio advocacy organization in the U.S. that is fighting to protect our access to the airwaves.

Should those of you who are not already members and may wish to join, please do so through the Club rather than joining directly through ARRL. Why? If you join through the Club (new members), the Club retains \$15 of your membership fee to support Club activities. From your point of view, the amount you pay is the same either way. Even if you are a member who is just renewing, doing so through the Club nets the Club \$2, again without changing your costs at all.

To renew through the Club, see Jim Marr who will help you with the paperwork (don't worry, it's really simple!).

Thanks in advance for considering joining ARRL or for maintaining your membership.

## Equipment For Sale

By Jim Marr AA6QI

The sale of the following items of surplus JPLARC equipment was approved by the quorum present at the October 24<sup>th</sup> regular membership meeting. Please make or send your best offers to Jim Marr and Chuck Sarture at JPL. All equipment is sold as-is with a receipt for the JPLARC.

- ICOM IC-27H 25W 2m FM transceiver, asking \$75.
- ICOM IC-281H 50W 2m FM transceiver with 70cm receive, asking \$100.
- Kenwood TR-9130 all-mode 25W 2m transceiver, asking \$100.
- ICOM IC-471A 1W to 25W 70cm all-mode transceiver with external PS-30 power supply, asking \$300.
- ICOM IC-471H 10W to 75W 70cm all-mode transceiver with internal power supply, asking \$400.
- ICOM AG-35 70cm mast mounted preamp, asking \$20.
- Packet Station consisting of an MFJ-8621A 2m Data Radio with crystals for 145.01 & 145.09, and an AEA PK-232 MBX TNX, asking \$40 for the pair.
- RS232 to RS422 level converter, EASY model IC456A-R2, asking \$10.

## Future Meetings

By Jim Marr AA6QI

All JPLARC meetings are being held on non-RDO Friday's from Noon to 1 PM in 180-703C. Upcoming talks (subject to change, as always):

January 16<sup>th</sup>: Kate Hutton K6HTN will talk on Ham Radio in Earthquake Prediction. We will also be introducing the new JPLARC Officers.

February 27<sup>th</sup>: Andy Klesh KD0DLH, Scott Tripp KD8IPK and Matt Bennett KF6RTB will give a talk on Cubs Communications using the building 125 cubesat station.

March 27<sup>th</sup>: Courtney Duncan N5BF will give a talk "Bicycle commute using APRS."

April 24<sup>th</sup>: TBD.

May 22<sup>nd</sup>: Marty Woll N6VI, ARRL Deputy Division Director, topic still TBD (somewhat our choice from topics on Marty's web site <http://n6vi.com>).