W6VIO Calling

JPL

Jet Propulsion Laboratory Amateur Radio Club
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Upcoming Events:

- **Emergency Communications Net:** Every Monday at Noon, on WR6JPL 224.08/(-)/156.7 & 445.20/(-)/103.5, or WR6AZN 223.96/(-)/156.7 on Table Mountain.
- **JPLARC Regular Membership meeting**: Second working Friday every month from Noon to 1pm in 180-703C. Call-in: 818-354-4044 ID-number: **997 183 539** (without the spaces). Slides (if any) broadcast via JPL WebEx (same ID-number). **Next was to be Oct 23rd, Guest speaker: Matt Bennett KF6RTB "Amateur radio on the International Space Station."**
- **JPLARC Board of Directors (BOD) meeting**: Normally, the first working Friday, every month, from Noon to 1pm in 180-703C. **Next is November 6th**. Call-in: 818-354-4044 ID-number: **997 183 539** (without the spaces).

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- BOD meeting: Oct 9th.
- Great ShakeOut 2015
- ARRL Membership.
- Equipment for sale.
- Future membership meetings & speaker topics.

Regular Meeting Sep 25th
By Jim Marr AA6QI

Present were: Gary Block† KJ6IZX, Jonathan Cameron† KF6RTA, Chris Gaylord† W6YTB, Jim Lux W6RMK, Mark Lysek† AG6TD, Steve Noland† WA6KLC, Ian Pinkham KE6RFV, Charles Rhoades† WB6KZE, Lew Soloway† KK6QJE, Jan Tarsala WB6VRN, Steve Townes†* WB4ILW. On the Phone: Chris Carson†* KE6ABQ, Merv MacMedan N6NO, Jim Marr†* AA6QI, Walt Mushagian† K6DNS.

Note: † indicates a 2015 regular voting member (i.e., JPL/Caltech/Retiree & 2015 dues paid), and * Indicates a 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 three BOD members, eight other regular members and three non-members (total of fifteen attendees), so we **did** **not** have a quorum.

President Steve Townes opened the meeting with introductions.

Secretary Report: Secretary Rob Smith was not present but Steve Townes reported that there had been no membership changes during the previous month. [*ed. See the membership status in the ARRL Membership discussion later in this newsletter*.].

Steve reported that the new shack is in place and bolted down, powered and lighted, and has been re-keyed so that it isn't the same key as our current shack (still need to re-key 180-R6 but 173 will not be re-keyed so don't throw your old key away until after we get our equipment out of there). Steve Townes led a discussion of work that still needs to be done to get the station working.

Treasurer's report: Chuck Sarture was not present so Steve Townes remarked that we had a detailed budget at the beginning of the year, of which essentially none has been spent, though we still intend to do the things that we budgeted for, just haven't gotten to them yet. [ed. It's almost time to put together the 2016 budget so please get your suggestions to Steve Townes].

Steve Townes announced that Jim Lux has agreed to chair the nominating committee and requested that we all help Jim out in finding candidates (including nominating yourself if you're willing to volunteer).

Figure 1: Ian Pinkham KE6RFV giving his JEARS talk.

Guest speaker: Ian Pinkham KE6RFV leading a discussion on JEARS progress (Figure 1). Recall that JEARS is the JPL Emergency Amateur Radio Service, an ARES-like service with JPL being the served agency.

Chris Gaylord and Ian are both relatively new to JPL and don't know all of the history of what has taken place before with JEARS but both are anxious to get JEARS moving forward.

Ian reported that he is still working with the City of La Canada on getting our repeaters moved back to Cerro Negro. There are some challenges from how the City wants to operate that site now so Ian thinks that we will have more luck going forward if we approach this through the JEARS path rather than the club path, as a government-to-government sharing opportunity. This may reduce the likelihood of them trying to charge us to be up there. Ian has had some favorable discussions with the City administration already towards getting things moving in the right direction.

NASA imposes certain training requirements on emergency personnel, requirements that also apply to JEARS members. We know that amateur radio operators can communicate more clearly than someone that you just hand a radio to, and that is what we're looking for from JEARS members.

JEARS is a volunteer organization, much like the club, and we know that not all club members may have interest in this. But if you do, we would really like your participation and support. Other than being a JPLARC

member, there are only a few boxes that need to be checked in order to become an emergency response member that gets you on the Lab during an emergency if the Lab is closed and we need your help.

Knowledge we need for JEARS members includes how to use the radios, understanding proper radio protocols, where we would go, and how we would want support for different activities in the time of a disaster. Our USAR (Urban Search And Rescue) members have the skills for rescues but while doing that they might not have the time to be on the radio. We'd like to be able to send out a JEARS representative with the USAR teams to provide communications for them back to net control. You have those skills.

We know that in a disaster that we will loose a lot of our typical communications infrastructure. Cell phones will go (either down or traffic overload) and land-lines will be questionable (same reasons). We don't want to rely on things like Citizens Band and FRS (family radio service).

So the JEARS concept is based upon the Incident Command System (ICS) concept, which is how we operate here at JPL. When an event takes place, once you're safe and able, bring your equipment and radio up to the building 310 parking lot just across the street from the fire station (south of it), our staging/meeting area. [*ed. Note that for this year's Great ShakeOut exercise, the meeting location was changed to the parking lot to the east of building 310 and might be there in the future*]. From there we can send people out to support different locations.

A JEARS Unit Leader will typically be inside the EOC with the Logistics Section to provide the communications with the JEARS team.

A JEARS net control operator will dispatch, coordinate and manage the assets in the field.

We also have the Mobile Communications Van, although it's not there right now because it is out having its air conditioning unit fixed. We would like to use the van regularly to make sure that the equipment is running.

Shares Net: One of NASA's objectives is that Centers can communicate with each other. During the Great Shakeout, one of our objectives will be to see that we can establish communications with another NASA Center here in California. Theoretically, Goldstone and AMES should be participating in the Great ShakeOut since they're here in California, so we would like to reach out to someone there and establish contact with them during the Great ShakeOut exercise.

The Incident Command Post (ICP) location is incident dependent. If it's the whole Lab, then the ICP will likely be in the EOC. But if it's confined to a single building or area, then the ICP would probably be closer to that

location. Operators would meet in the parking lot south of 310 and we would deploy them from there.

The training needed to be a JEARS team members consists of: 1. FEMA IS-100 and IS-200 that provide basic information about the Incident Command System (ICS); 2. FEMA IS-700 and IS-800 that provide information about the Emergency Operations Center (EOC) and how that functions; an as yet to be developed JEARS training course; First Aid and CPR training (free to JPL personnel through the fire fighters – sign up through LMS).

Chris Gaylord is putting together a JEARS website that is almost ready. It will have training links on one side that will take you directly to the FEMA courses. These courses are free and on the FEMA website and don't take that much time to complete. The website will also have JEARS documentation posted there for easy access by all JEARS members.

Chris Gaylord and Ian will check into the weekly JPLARC Monday Noon net from the EOC (310-106) and monthly they would like to check the operation of the equipment in the Comm Van. They also encourage all JEARS members to come up and use the equipment in 310-106 and the Comm Van so that they can become familiar with it in advance of needing to operate it in an emergency.

Other activities for JEARS members are things like ARES and RACES. The more opportunities that you have to practice your skills, the more effective you will be during an emergency. USAR does have exercises throughout the year and JEARS members are welcome to participate and are even encouraged to do so (check with Ian or Chris Gaylord to find out the details).

In the future, we would even like to consider having the ability to deploy to other NASA Centers, should they request it, following major disasters such as Katrina. Similarly for adjacent cities (La Canada, Pasadena, Glendale, Altadena) should their CERT teams need additional support.

Let's talk about the Great ShakeOut for a few minutes. Basic objectives: 1. Stand up net control in 310-106 to get the net coordinated; 2. Have someone check in from the new radio shack (using an HT for now); 3. Have someone check in from 173; 4. Standing up SHARES and testing HF link to another NASA Center; 5. Having operators available to support the EOC and USAR.

This year is just a duck-cover-hold exercise for the general Lab (next year will be a full exercise with building evacuations, etc.). There will also be an EOC functional drill going on during that time. The USAR teams will get together and we would like the JEARS team to also roll out during that time and man these positions.

Ian doesn't see this year's exercise taking more than about two hours, so it should be done before Noon.

Jan Tarsala asked about the government frequency radios that were handed out during the Great ShakeOut exercise last year. He suggested that it would be good to get some training on them since we can handle some communications on them that are not appropriate for amateur frequencies. Ian agreed and will set up a training session for JEARS members.

This year's Great ShakeOut will be at 10:15am on 10/15/15. After the duck-cover-hold is over, JEARS members should proceed to the building 310 parking lot for assignments. A JEARS Unit Leader will be appointed to the EOC Logistics Table and a JEARS Net Control Operator will be appointed to man the 310-106 station. Other operators will then be dispatched through Net Control.

Through all of this, we should strive to keep good records so that we continue to make this better for JEARS members in the future.

Building wardens will be getting radios soon. A new repeater for those radios has already been installed, the first pair of radios has been received and a training course is in preparation. These radios will allow building wardens to coordinate their evacuations and staging areas but is one more communications channel that needs to be managed.

Steve Townes adjourned the meeting at 1:00pm.

BOD Meeting Oct 9th
By Jim Marr AA6QI

Present were: Jonathan Cameron† KF6RTA, Bob Dengler† NO6B, Chris Gaylord† W6YTB, Charles Rhoades† WB6KZE, Steve Townes†* WB4ILW. On the Phone: Chris Carson†* KE6ABQ, Jim Marr†* AA6QI, Walt Mushagian† K6DNS.

Note: † indicates a 2015 regular voting member (i.e., JPL/Caltech/Retiree & 2015 dues paid), and * Indicates a BOD member. For a BOD meeting quorum, the JPLARC Bylaws require a majority of the BOD (four or more) to be present. We had three BOD members and five other regular members (total of 8 attendees), so we **did not** have a quorum.

Steve Townes opened the BOD meeting at 12:05pm with introductions.

Secretary Report: Secretary Rob Smith was not present but Steve Townes reported that there had been no membership changes during the previous month.

Treasurer's Report: Treasurer Chuck Sarture was not was not present but Steve Townes reported that, while he hadn't received the latest report from Chuck yet, he didn't believe that there were any changes during the

previous month.

Upcoming talks are as reported later in this newsletter. Steve is looking for topics for 2016 (doesn't have anything yet).

Nominating Committee chair Jim Lux was not present and Steve Townes hasn't received an update from Jim on how he is doing at filling the candidate roster for 2016 officers.

New Shack: Chris Carson reported that he is waiting for connectors for the new coax runs to the Mesa. With El Nino coming, it would be good to get at least the Mesa antenna-end connectors installed as first priority.

Chris Gaylord led a discussion of the **upcoming JEARS/Great-ShakeOut event (Oct 15th at 10:15am)**. This year will be a duck-cover-hold exercise for the whole Lab followed by an exercise for JEARS (and others) that will be conducted from about 10:30am through Noon. JEARS members will assemble in the parking lot south of building 310.

Chris will send out an email with the positions that will need to be manned by JEARS members and is looking for JEARS members to let him know if there are particular assignments that they would like to have. Positions expected to be needed include: EOC Logistics Desk, 310-106 net control operator, Incident Control Point (ICP) operator, building 173 HF operator, EmComm van operator, one operator to accompany a Urban Search and Rescue (USAR) team, and one person to go to the new shack and check in from there. Attempts will be made to contact AMES and Goldstone on HF if operators can be found to support the exercise from those centers.

All JEARS communications will be done through the repeaters this year (no simplex operations). Exercise communications should always begin "Exercise/Exercise/Exercise" followed by the exercise communication. If a real emergency arises, the statement "Code Blue" will indicate that the communications is not part of the exercise.

Great ShakeOut 2015

By Jim Marr AA6QI

I was hoping to have a write up from Chris Gaylord or Ian Pinkham regarding how the JEARS team performed during this year's Great Shakeout exercise and still hope to be able to have one for a future issue. In the absence of that, I'll provide some of my observations from listening to net control on 224.08 and from listening on HF 7.230 MHz & the NASA SHARES 40m frequency from my QTH in northeast Pasadena, thus this article will be highly biased towards what I can deduce through listening to whatever traffic I could overhear.

Pre-exercise, the JEARS meet-up point was to be the parking lot just to the south of 310, but that was changed at the beginning of the exercise to the parking lot to the east of 310 (as broadcast by net control).

Lew Soloway KK6QJE came up as net control from 310-106 and, in my opinion, did an excellent job throughout the exercise, even reminding folks to use 'exercise/exercise/exercise' regularly during their communications, as Ian had requested and which was often forgotten.

Steve Townes WB4ILW was situated at the Logistics table in the EOC as he was last year and had similar issues getting RF out of there. Last year he was able to switch to 224.08 (from 445.20) but apparently that must not have worked this year.

Jan Tarsala WB6VRN and Jonathan Cameron KF6RTA were able to check in to the Cal OES ACS net on HF 7.230 MHz, were (eventually) able to contact Goldstone KI6NSG on the same frequency but were not able to contact Goldstone on the NASA SHARES frequency just below 7 MHz (I could hear W6VIO calling on this frequency but did not hear any response from Goldstone). Initially Goldstone had some antenna issues that they were apparently able to overcome about an hour into the exercise, enabling the 7.230 MHz contact.

During the exercise, the Table Mountain repeater link wasn't established until about an hour into the exercise and net control hadn't ever done this before so had to rely on Chris Carson KE6ABQ to both bring up the link and take it down (Chris, of course, and a few others, have done this for every Monday Noon net). The required DTMF codes were described by Bob Dengler NO6B in his August 2013 JPLARC regular meeting talk about our repeater systems and a summary of that talk was published in the September 2013 issue of W6VIO Calling available at http://jplarc.ampr.org/calling/2013/Sep2013.pdf.

To establish the link between our 224.08 repeater WR6JPL and the Table Mountain 223.96 repeater WR6AZN, use the DTMF code 08961. To turn off the link use the DTMF codes 08960. All JEARS operators should know these codes by heart. (Note: the codes 89 for connect and 80 for disconnect that are shown on the jplarc.ampr.org/repeaters web page are NOT correct so this web page clearly needs updating).

One JEARS operator (I didn't write down who that was) was able to check in from the new shack using an HT and others supported additional assignments during the exercise but I didn't keep a record of those assignments (perhaps Lew could let me know who else participated this year so we can give them credit).

The exercise was over by about Noon, as advertised, and JEARS operators were released from their assignments.

Overall, it sounded like the exercise accomplished the exercise objectives set out by Chris and Ian (see meeting write ups earlier in this issue). Great job everyone.

ARRL Membership:
By Jim Marr AA6QI

As an ARRL affiliated club, we need to maintain at least 51% ARRL membership among our voting members.

As of August 14, 2015, of our 49 CY2015 members, 35 (73%) are either Life (7) or Regular (27) ARRL members. Note that 73% of our 44 voting-eligible members (i.e., JPLARC Regular members) are also 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 Secretary Rob Smith 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, 2014 regular membership meeting. Please make your best offer to Club Treasurer Chuck Sarture at JPL. All equipment is sold as-is with a receipt from the JPLARC.

- ICOM IC-27H 25W 2m FM transceiver, asking $40.

- Kenwood TR-9130 all-mode 25W 2m transceiver, asking $60.

- ICOM IC-471A all-mode 70cm 25W transceiver with external PS-30 power supply, asking $100.

- ICOM IC-471H all-mode 70cm 75W transceiver with internal power supply, asking $150.

- ICOM AG-35 70cm mast mounted preamp, asking $10.

- Packet Station consisting of an MFJ-8621A 2m Data Radio with crystals for 145.01 MHz & 145.09 MHz, and an AEA PK-232 MBX TNC, asking $15 for the pair.

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):

Potential topics for the rest of the year include (although not all speakers are confirmed yet and always subject to change):

November 20th: Guest speaker: Mike Roche N6XLK, "Digital mode DXing for the Beginner using PSK31 and JT65 HF modes", discussing his experience with setting up and operating PSK31 and JT65 modes.

    Also: nominating committee to present the slate of candidates for 2016 offices and take additional candidates from the floor. If only one candidate for any office(s), voice voting will take place at this meeting. If more than one candidate for any office(s), follow balloting process described in club Bylaws (http://jplarc.ampr.org/Bylaws-2014.pdf) article VII Section 3.

December 18th: We haven't been having December regular meetings for a while as a consideration to the heavy holiday schedule that most of us have and don't currently plan to have one this year either.

2016 meeting presentations: The Board is seeking ideas for 2016 regular membership meeting guest speakers. If you have suggestions or are willing to give a talk yourself, please contact Steve Townes as soon as you can to give the Board time to make arrangements with the speaker(s). Thanks in advance for your help with this.