
W6VIO Calling



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

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Newsletter editor:	Jim Marr, AA6QI, email: aa6qi at arrl.net (your articles for the newsletter are requested, please)		

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 and usually 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 is September 23rd: speaker is: AMSAT's Patrick Stoddard WD9EWK discussing "AMSAT Status and Plans"**.
- **JPLARC Board of Directors (BOD) meeting:** Normally, the first working Friday, every month, from Noon to 1pm and usually in 180-703C. **The next BOD meeting will be Oct 7th.** Call-in: 818-354-4044 ID-number: **997 183 539** (without the spaces).
- **For more upcoming events, see the ARRL Los Angeles Section website:** <http://www.areslax.org>

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Regular Membership Meeting August 26th

By Jim Marr AA6QI

Present were: Gary Block[†] KJ6IZX, Jonathan Cameron[†] KF6RTA, Aram Dergevorkian KJ6YJS, Dave Gumpertz, Mark Lysek[†] AS6TD, Josh Miller^{†*} KB3UUS, Ian Pinkham[†] KE6RFV, Eric Shalov[†] KJ6ARC, Lew Soloway[†] AC6LS (formerly KK6QJE), Steve Townes^{†*} WB4ILW, Tom Ulrich AC9MK. On the Phone/JPLWebex: Paul Averill[†] KM6BZX, Chris Carson^{†*} KE6ABQ, Jim Marr[†] AA6QI, Steve Noland[†] WA6KLC, Stan Sander[†] N6MP, Rob Smith^{†*} W6GRV.

Note: † indicates a 2016 regular voting member (i.e., JPL/Caltech/Retiree and 2016 dues paid), and * Indicates a 2016 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 5 BOD members, 9 other regular members and 3 non-members (total of 17 attendees), so we **did** have a quorum.

The meeting this month was held in the JPL Emergency Operations Center (EOC) in 310-109.

There were no club officer reports or general discussion prior to the talk by our guest speaker.

Guest Speaker: Ian Pinkham KE6RFV (Figure-1) discussing "Great Shakeout Planning."

JEARS Concept of Operation:

Primary Roles: (1) Support Protective Services Division & public safety operations, including USAR; (2) Support EOC communications needs, including NASA-HF/SHARES; (3) Support NASA Mission Essential Functions; and (4) Provide other life safety/emergency communications.

B329 as Primary JEARS Command Post: (1) More

space than in 310-106, eliminating the crowding issue; (2) Access to Mesa antennas for better NASA-HF/SHARES signal strength and eliminating the B310 HF noise issues; (3) B329 provides a good configuration for physical check-in/out; and (4) B329 will have better supply storage options.



Figure 1: Guest speaker Ian Pinkham KE6RFV with JPL Protective Services Division (PSD)

Proposed Operational Coordination Structure: Figure 2 shows the proposed structure, using B329-based Net Control and supporting point-to-point communications where appropriate.

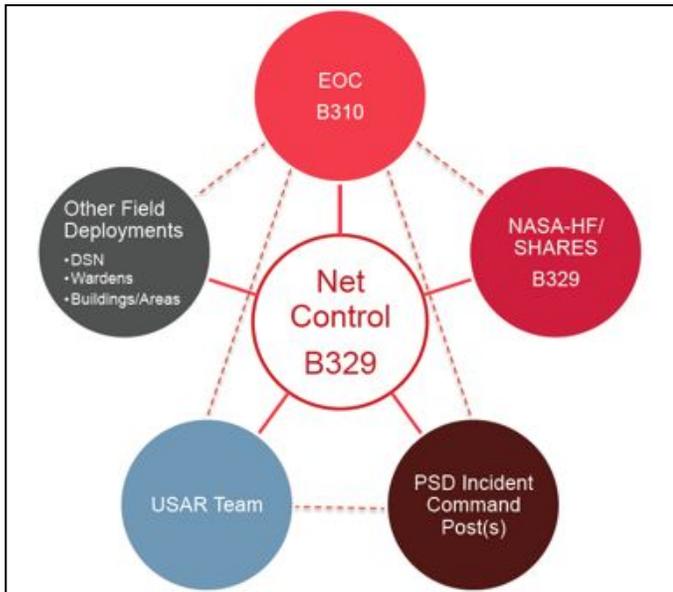


Figure 2: JEARS proposed operational coordination structure.

2016 Great ShakeOut Exercise: (1) Thursday, October 20, 10:20 AM to 12:20 PM, a Full-Scale exercise, including

Lab-wide evacuation; (2) Multiple JEARS objectives, including: "Exercise back-up hand held radio communication system (repeaters) & amateur radio capability," Integration with Lab Response Procedures, and Running B329 on generator power (a generator cheat sheet is in preparation); (3) Test check-in & assignment process, including staff in B329 & EOC, field assignments (ICP, USAR, Comm Van, etc.), and other NASA Center contacts; (4) Pass simulated messages; and (5) Deployment of the Comm Van to test procedures and gain familiarity.

2016 DSN Great ShakeOut Exercise: (1) Will be on a separate date (October 25th) due to mission schedule; (2) Will test amateur radio between JPL, Monrovia & Goldstone DSCC, for which 1 to 2 JEARS members will be needed to participate at the DSN DOC, B329 to simulate Net Control/EOC (note that Monrovia and GDSCC already have licensed individuals).

JEARS Training Program:

JEARS Training Program progression: Figure-3 shows the elements of the JEARS Training Program and the proposed progression through that program.

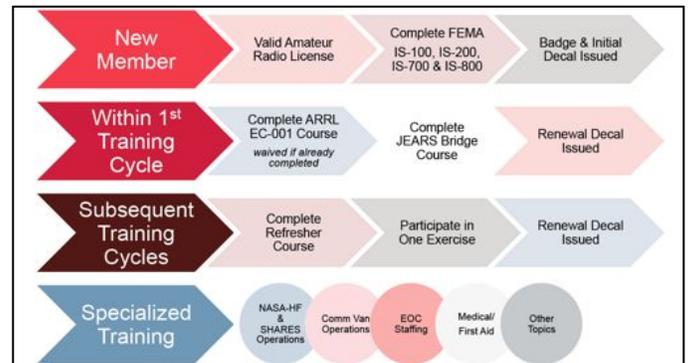


Figure 3: Proposed JEARS Training Program

ARRL EC-001, Introduction to Emergency Communication Course: Approval has been obtained to use the ARRL EC-001 course as basic JEARS training. PSD Section 203A will provide the course book and pay the exam fee. Participants will receive the ARRL completion certificate.

Some advantages of using the EC-001 course include: (1) It is the national standard for ARES (the Amateur Radio Emergency Service); (2) There is recognition for both the program and participants; (3) Forms the basis for better interoperability with other groups; and (4) Allows transferability.

JEARS Bridge Course: (1) Will build on the basic EC-001 material, focusing on JPL-specific information; (2) Members who take EC-001 elsewhere would only take the bridge session; and (3) will form the basis for a refresher course.

BOD Meeting Sep 9th

By Jim Marr AA6QI

Present were: Matt Bennett† KF6RTB, Bob Dengler† NO6B, Chris Gaylord* W6YTB, Josh Miller† KB3UUS, David Seidel† KC6NL, Rob Smith† W6GRV. On the Phone: Jim Marr† AA6QI, Walt Mushagian† K6DNS, Chuck Sarture* KG6NF.

Note: † indicates a 2016 regular voting member (i.e., JPL/Caltech/Retiree & 2016 dues paid), and * Indicates a 2016 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 present (and six other regular members) so we **did not** have a quorum.

Vice President Josh Miller conducted the meeting due to President Jonathan Cameron being on travel and unavailable.

Treasurer's Report: Treasurer Chuck Sarture KG6NF presented the current budget status: Previous balance of \$4,361.75; Income of \$20.00 for a new membership; No expenses; Ending balance \$4,381.75

Membership Report: We had one new member, David Gompertz KM6FCE (newly licensed; general class) who is also joining ARRL through the club, and Chris found Randy Hammock's KC6HUR membership application (honorary membership as approve by the BOD some time ago) bringing membership to 54 total members, of which 43 are voting members and 67.4% are ARRL members.

Guest speaker update: Now have a speaker lined up for October but November is still open. Jim Marr suggested that the current Board should line up a guest speaker for the January meeting since the new Board won't be installed until then so won't be able to do it. Jim suggested that Josh contact Bob Brehm AK6R, chief engineer (and co-owner) of Palomar Engineers about giving his RFI talk that we discussed at a previous Board meeting for at least one of the November or January slots. Bob's methodologies will likely be useful in addressing the 80m/20m noise issue in 310-106 and possibly elsewhere. Josh said that he would contact Bob.

Mesh Network Update: See the discussion in last month's issue of W6VIO Calling for the background for this update.

Two items in the temporary JPL Mesh Network have been replaced. One is the Nanostation M3 on the structure outside of 180-R6 that provides the link to the Orange County mesh network on Pleasants Peak. The other, thanks to Paul Averill KM6BZX, is the Toughswitch TS-8-Pro Powered PoE (Power over

Ethernet) switch that provides Ethernet connectivity in 180-R6.

Jonathan Cameron also provided a second Nanostation to Joe Ayers AE6XE to mount at Pleasants Peak to provide a dedicated point-to-point link between the JPL and Orange County mesh networks.

Jonathan also purchased two Nanobridge M5 units that that were set up to provide links to JPL from the QTH's of Randy Branson WB6NCT and Josh Miller KB3UUS, who were able to use VOIP phones over the network.

JPL Interest Fair: Preparations for the JPL Interest Fair that is to be held September 21st continue under Steve Townes' leadership.

August 19th Work Party Report: Participants: Jonathan Cameron, Tim Eldridge KF6TIM (ALERT team member), Steve Townes WB4ILW and Lew Soloway AC6LS. Work accomplished included: (1) guying the mesh node antenna on the fence at the Mesa repeater cabinet B35A; (2) temporary repair of the grounding lines at B35A (ends currently twisted together but needs a better connection); and (3) tested the mesh link between our new shack (B329) and 180-R6, achieving 130 mbps.



Figure 4: New shelving in JPLARC storage trailer up on the JPL Mesa, looking forward from the rear doors.

New shelving has been installed in the JPLARC storage trailer up on the JPL Mesa (Figure-4), courtesy of Chris Gaylord W6RTB and Ian Pinkham KF6RFV using JEARS funds.

Mesa Repeater Antenna Upgrades Update: The 70 cm "eggbeater" receive antenna (Figure-5) that would provide circular polarization coverage of the JPL campus has been purchased using JEARS funds, enabling the go ahead with the repeater upgrade previously briefed by Jan Tarsala WB6VRN for the repeater committee (Figure-6).

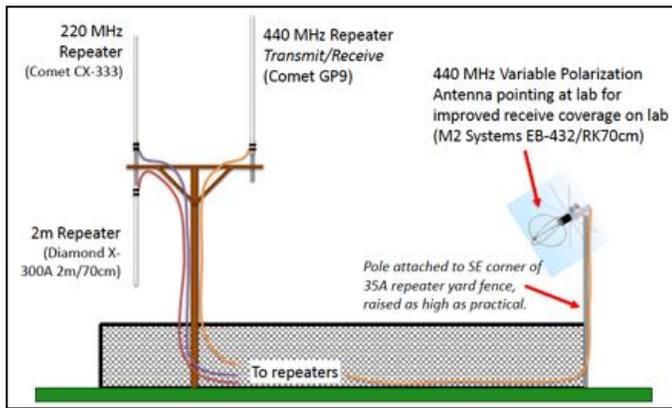


Figure 5: Proposed repeater antenna installation

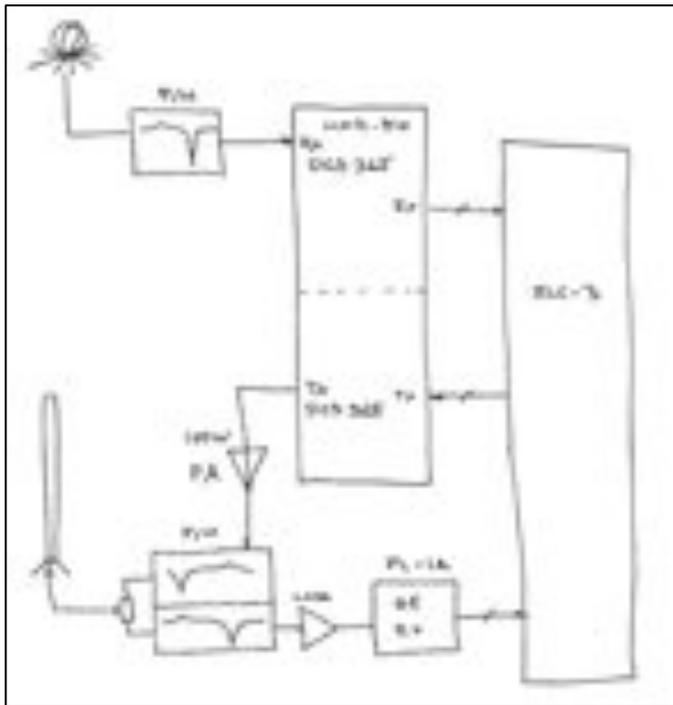


Figure 6: Proposed 445.20 repeater re-configuration

Upcoming September 16th work party discussed: Work to include: (1) setting up a patch panel in the B329 shack; (2) upgrading the repeater antennas on the Mesa; and (3) if it has arrived by the 16th, install the new JEARS-provided junction box at the base of the HF antenna tower so we can start hooking up the Mesa end of the new hardline runs from B329. Other open work items were also discussed but how much we actually get to will depend upon the work party turnout (as always).

Monday Noon Nets: Continue to go well with typical participation in the mid 20's. It was suggested that when folks are aware of a fire drill that they turn on their radios to the 445.20 repeater (J400).

Other clubs/nets: (1) Pasadena Radio Club, meets 4th wed of every month at the Kaiser facility in Pasadena.

See w6ka.net; (2) the ALERT net meets Mondays at 8pm on the W6MPH repeater (145.18, -, 156.7).

JEARS

By Chris Gaylord W6YTB

JEARS had its first official meeting on Tuesday, July 19. At this time, 11 people have completed the FEMA training. Approval has been received to use the ARRL EC-001 Introduction to Emergency Communication class as the primary training course for JEARS and the Emergency & Continuity Management Group will pay for the course books and the exam fee. A schedule is currently being developed. As a reminder, the Great ShakeOut exercise is on Thursday, October 20 and the August 26 Club meeting will focus on preparation for this.

Club members who work on-Lab and are interested in providing communications support during emergency situations are encouraged to join the JPL Emergency Amateur Radio Service (JEARS), a volunteer team co-sponsored by the Club and the PSD Emergency & Continuity Management Group (203A).

Prospective JEARS members must be currently licensed (any class) and complete the FEMA IS-100, IS-200, IS-700 & IS-800 courses. An online application and links to the courses are available at <http://goto/jears> (only accessible from on-Lab). Emergency credentials and additional training will be provided by 203A after joining.

For more information, please contact Chris Gaylord W6YTB at christopher.gaylord@jpl.nasa.gov or (818) 354-5584.

ARRL Membership:

By Jim Marr AA6QI

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

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 (unless otherwise indicated). Upcoming talks (always subject to change):

October 21st: Don Hill KE6BST and Joe Ayers AE6XE, "Mesh Networks for Amateur Radio," for some advanced information, see <http://ocmesh.org>. **Nominating Committee chair & members announced.** [Alternate meeting room to be announced].

November 18th: Guest speaker is still TBD. 2016 Officer Candidates presented by the Nominating Committee.

January 27th: Guest speaker is still TBD. 2017 Officers assume duties.

2016 JPLARC Organization:

