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# W6VIO Calling

# JPL



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

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President:	Stephen Townes, WB4ILW	4-7525	EmComm. Mgr:	Christopher Carson, KE6ABQ	3-3888
Vice President:	Courtney Duncan, N5BF	4-8336	W6VIO Trustee:	Rob Smith, W6GRV	3-7937
Secretary:	Rob Smith, W6GRV	3-7937	W6JPL Trustee:	Eric Archer, N6CV	4-7350
Treasurer:	Chuck Sarture, KG6NF	4-2706	WR6JPL Trustee:	Jim Lux, W6RMK	4-2075
Director at Large:	Jim Marr, AA6QI	3-1528	WR6AZN Trustee:	Bill Wood, W6FXJ	760-256-9576

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## 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 August 1<sup>st</sup>, then August 29<sup>th</sup>.**
- **QST, QST, QST**: JPLARC Regular Membership meetings: Second working Friday every month from Noon to 1pm in 180-703C. Call-in: 818-354-3434 ID 7373. Slides (if any) broadcast via [meetingplace.jpl.nasa.gov](http://meetingplace.jpl.nasa.gov), ID=7373. **Next is August 15<sup>th</sup>. Guest speaker: Gary Wong W6GSW will discuss the Broadband Hamnet (formerly known as Ham Meshnet).**

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## In this issue:

This issue covers:

- President's message.
- May regular membership meeting (July 18<sup>th</sup>).
- Board of Directors meeting August 1<sup>st</sup>.
- Emergency communications.
- ARRL Membership
- Future membership meetings & speaker topics.

## President's Message:

By Steve Townes WB4ILW

We are approaching a significant change for the JPLARC. With the completion in September of JPL's new parking structure, building 173 will be demolished to make way for changes in the East Gate area appearance and traffic flow. There are plans to install a new building (a repurposed guard shack) at the location of the current Building 88 for our use. First, however, Building 88 must be demolished and the site prepped for installation of our new shack. We are hoping that we will not have to move out of 173 until the new shack is ready. In the meantime, we will be working to make sure that the new shack will have the necessary capability for power (regular and emergency), heating and cooling, cable runs to the antennas up on the Mesa, etc. As we continue to try to reduce our footprint, we will be triaging the Club equipment, so look for more

potential sale items, and in general packing up things in 173 in anticipation of the move. Note that until we have to start disassembling things in 173, we still have operational HF capability in case anyone feels the desire to operate from there.

## July 18th Regular Membership Meeting:

By Rob Smith W6GRV

Present (or on the Phone) were: Bob Cesarone WA9JIB, Jorge Gonzalez† KI6JIB, Dayton Jones† K6DJ, Jim Marr†\* AA6QI, Steve Noland† WA6KLC, Chuck Sarture†\* KG6NF, Rob Smith†\* W6GRV, Mike Tope† W5EF, Steve Townes†\* WB5ILW. On the phone: Chris Carson†\* KE56ABQ, Merv MacMedan N6NO, and Walt Mushagian† K6DNS.

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 five BOD members, five other regular members and two non-members, so a quorum was present.

Steve Townes: Have had an external inquiry about setting up a packet repeater on Table Mountain; Topic has been given to the repeater committee.

Rob Smith: The computer that the club uses for the web page, e-mail reflector, and EchoLink is getting old. Some

of the individuals that are continuing to maintain the software no longer have on-lab access to the hardware. We are starting to evaluate how to replace the functionality and have multiple individuals able to administer each of the software systems capabilities.

Eric Archer & Bob Develle; had a discussion regarding what the new parking lot means for our station & equipment in Building 173. Steve Townes will set up a time with Bob Deville to understand the impacts/plan/schedule for moving out of Building 173 and into the new facility. Since the new facility is not ready, a backup plan could potentially be to use building 180-R6 and storage container C7111.

**Upcoming meetings:** What to with the third working Friday this month? Plan to use it for a second BOD meeting since we didn't have one in July (fell on the 4<sup>th</sup>).  
August 1<sup>st</sup> - Board of Director's meeting  
August 15<sup>th</sup> - Regular General Meeting  
Aug 29<sup>th</sup> - Board of Director's meeting

**Treasure report:** No change from last time. Balance is still \$4,338.14. Field Day expenses are all in and were under budget.

#### **Repeater Committee:**

The BOD is still waiting from the repeater committee for a proposal for repeater coverage augmentation. Although purchase of a remote computer for building 35A has been approved for a couple of months now, no word yet from the repeater committee regarding the status of that purchase.

#### **Upcoming talks:**

August 15th - Gary Wong - 2.4Ghz Broad band Hamnet  
Sept. 26th - Sidewalk EME

#### **Guest Presentation:**

Jim Marr presented a summary of the successful Field Day event. The talk summarized Field Day preparations, provided a description of the Field Day setup, showed some pictures of setup and operations, discussed what went well and what didn't go well, and provided some thoughts for how to improve next year's Field Day. The talk was intended to augment the article in last month's W6VIO Calling, so that the pair (that article and this presentation) provide fairly complete coverage of the 2014 Field Day.

Since the slide presentation from this talk was sent out via email to all members on the email reflector, the contents of that presentation will not be repeated here. If you didn't receive a copy but would like one, please contact Jim Marr and he can send you a copy.

## **BOD Meeting August 1st**

By Jim Marr AA6QI

Present (or on the Phone) were: Bob Dengler<sup>†</sup> NO6B, Jim

Marr<sup>†</sup>\* AA6QI, Steve Townes<sup>†</sup>\* WB5ILW. On the phone: Chris Carson<sup>†</sup>\* KE56ABQ, and Merv MacMedan N6NO. Only Jim, Steve and Merv were present for the entire meeting. Other Board members were away and unable to make the meeting.

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 only three BOD members so we did not have a quorum.

While waiting for a others to show up, there was a brief discussion about special events and whether we should ask Rob Smith W6GRV, the W6VIO Trustee, to authorize the use of the W6VIO call sign from member home stations for specific special events until we get our Mesa antenna farm back on line with our new shack. Merv and Steve recalled that JPL and Langley had the first ever 1x1 calls for the Viking landings (JPL N6V and LaRC N4V). There was general agreement that we should identify some potential events and see if we can muster up some operator interest.

Steve Townes opened the meeting with some slides, which were broadcast over MeetingPlace for those on the phone (as usual).

Regular meeting talks are lined up for the rest of 2014 (except for December because we need to decide whether we're going to have a December regular meeting first). Jim has confirmed that Gary Wong is still planning to give his talk at the August regular meeting and is working now on getting Gary and a TBD partner cleared for the August meeting. There are no talks yet lined up for 2015. Jim agreed to send Steve the Excel workbook that he and Rob Smith have been using to arrange for speakers [done].

No changes in the treasurer's report but Steve presented an accounting by Jim of the year's expenses against our approved budget, showing that we've spent a total of \$505.22 against our approved 2014 budget of \$2,428.00. Of these, Field Day expenses were only \$54.00 compared to the approved Field Day budget of \$380.00. Other expenses for preparing for Field Day went against equipment maintenance budget items. After this last batch of expenses clears into our Credit Union account (they should be in the August Credit Union statement), we should still have \$3,980.49 in the account.

Next there was a discussion about EmComm year-end purchases. Steve agreed to maintain the master list of specific items, their cost, and their priority for discussion with Will Michael before the end of August so they can get purchased before the end of the fiscal year. A partial list of items is already circulating. Items considered should be easily obtained through Ham Radio Outlet. Steve said that he would talk with Jim Erickson N6PGC, our EmComm Committee Chair, about this list. Steve brought up some comments from Will Michael regarding the Comm Van needing headphones and Jim mentioned that he believed that Eric Archer N6CV has already purchased some of the equipment needed so Steve should check with him before adding those items to the EmComm purchase list. Jim also agreed to send Steve a copy of the extensive Comm Van

work list that he put together after the Say HI to June event last fall in which Jim and Will tried to use the CommVan from the JPL Mesa [done].

**Work List:** Steve presented a short work list, which was discussed.

1) Jim agreed to provide a proposed list of additional JPLARC equipment items that could be offered for sale and agreed to have that by the next BOD meeting on August 29<sup>th</sup>.

2) The work needed to prepare the existing shack in 173 for the move to the new shack this fall was briefly discussed as was where we might move items in 173 to (e.g., 180-R6 and C7111). We need to help Will Michael to make sure that our efforts are coordinated with the move and so that the new shack is equipped in an appropriate way.

3) There was brief discussion about the status of JEARS. It has been about a year now since we've heard a status from Will Michael KC6LOK and it was suggested that we get Will to give a talk at a 2015 regular meeting.

4) Now that Field Day 2014 is behind us, we need to get back to troubleshooting the HF noise problem in 310-106 (30dB over S9 on 80m & 40m). Bob Dengler said that the spectrum analyzer that he was planning to bring to the troubleshooting effort has a dead \$400 battery and he has been unable to interest anyone in purchasing a replacement battery. A brief discussion then followed about approaches to finding the source of the noise. Jim agreed to follow up with a troubleshooting event on an upcoming RDO.

The next discussion involved the club's IT infrastructure. Jim volunteered to start the process of pulling together a complete picture and to coordinating the completion of that definition.

Bob Dengler next brought up the issue of repeater performance. Bob remarked that we really need to find a better location for our repeaters that are now located in enclosure 35A on the Mesa. He reported that his signal is noisy into the repeaters even from his office on Lab, so the current location isn't even working very well for on-lab coverage. There are a number of arguments for why the current location is not capable of meeting the needs of JPL EmComm: 1) it doesn't have complete coverage of the JPL campus due to antenna radiation patten from the Mesa (Cerro Negro was much better); 2) not capable of reaching people in an emergency, especially if they're at home and are needed at JPL or an incident site; 3) with the current poor coverage, the repeater frequencies are going to be co-channelled with other repeaters that will cause interference to our repeaters during an emergency; and 4) our control operators live in locations where they can't reach the repeater so the repeaters are basically uncontrolled most of the time. Bob agreed to write a white paper making the case for finding a better location.

Bob also mentioned that the HiNet has now been extended to 35A and we will need to find a way to pay for the monthly HiNet connection fee.

The meeting adjourned at 1:10 p.m.

## JPL ARC EmComm

By Jim Marr AA6QI

This month's regular meeting speaker, Gary Wong W6GSW, will be talking about the Broadband Hamnet, which the July ARRL ARES E-letter below shows is still growing in capability...

**From the ARRL ARES E-Letter from July 18, 2014:**

### *Broadband-Hamnet Greatly Expands its Usefulness, Adds 5.8 GHz Support*

*Broadband-Hamnet is proud to announce a new firmware release, an update to the original Linksys WRT54G/GL/GS gear, and for the Ubiquiti firmware originally released for the 2.4GHz ham band this past February. With this release, Broadband-Hamnet now supports the Ubiquiti M5-series hardware, giving hams use of the 5.8 GHz band for mesh networking. Among the release's many new features are the ability to easily connect collocated nodes into clusters and to span the mesh across both ham bands. For more information and to download the firmware, please visit <http://www.broadband-hamnet.org>. -- Jim Kinter, K5KTF, Webmaster, Broadband-Hamnet*

Next, some may still question the usefulness of amateur radio during real emergencies, but FEMA doesn't...

**From the ARRL Letter for July 24, 2014:**

*The ARRL and the Federal Emergency Management Agency (FEMA) have announced a Memorandum of Agreement (MOA) that will enhance cooperation between the League and FEMA in the area of disaster communication. FEMA Administrator Craig Fugate, KK4INZ, and ARRL President Kay Craigie, N3KN, signed the agreement July 18 during the ARRL National Centennial Convention in Hartford, Connecticut.*

*"Radio is one of the most resilient communications technologies we have," Fugate said. "When the power is out and telecommunications are down, the Amateur Radio community can serve as a vital resource in support of emergency responders and survivors during a disaster. This MOA will strengthen FEMA's partnership with ARRL and build upon our work to expand emergency communications capabilities and the use of Amateur Radio in emergency management."*

*The new agreement will allow FEMA and ARRL to work together to provide resources, services and personnel, as available, in order to strengthen capacity in areas of emergency communications, mass care and emergency assistance, disaster preparedness, response and recovery, while also raising public awareness about the use of Amateur Radio as a public safety resource. The pact also outlines the ways in which FEMA and ARRL will cooperate to carry out their respective responsibilities, with*

respect to disaster mitigation, preparedness, response and recovery operations in the event of a natural or manmade disaster.

Craigie said that from radio's earliest days of experimentation to the present, ham radio volunteers have combined a passion for technology with a devotion to assisting agencies that respond to disasters. "This combination of inventiveness and service has saved lives for a century," she said. "We look forward to working with FEMA to further develop opportunities for trained, equipped and prepared Amateur Radio operators to serve the public interest whenever and wherever disasters affect our country and its communities."

Fugate echoed his afternoon remarks as the keynote speaker at the ARRL National Centennial Convention Banquet Friday evening. He said that before he even became FEMA administrator, it became clear to him that Amateur Radio could support ad hoc communication without relying on conventional communication systems. "The more sophisticated our systems become, the more fragile they become," he told the gathering of some 900 dinner guests. He again emphasized the need for resiliency in communication systems, and asked, "How many public safety networks can come close to ham radio's bandwidth?"

"The relevancy of ham radio only grows," he asserted. "Amateur Radio is taking that hobby and turning it into saving lives."

## ARRL Membership:

By Jim Marr AA6QI

As an ARRL affiliated club, at least 51% of our membership must be ARRL members. Today, we have 66% as either Life (8) or Regular (23) ARRL members. That leaves sixteen 2014 members who are not 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 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.

## 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. Call in is via MeetingPlace 818-354-3434 with ID 7373. Slides, if any, will be broadcast via <http://meetingplace.jpl.nasa.gov> also with ID 7373. Upcoming talks (subject to change):

September 26<sup>th</sup>: Dr. Doug Millar, EdD, K6JEY, "Sidewalk EME" (rescheduled from May).

October 24<sup>th</sup>: Steve Townes WB4ILW, Software Defined Radios & introduction to the 2015 Officer Nominating Committee.

November 21<sup>st</sup>: N5BF, Bicycle Commute APRS & Introduction of 2015 Officer Candidates.

December 19<sup>th</sup>: Club holiday celebration; currently TBD.

## Advertisements:



<http://www.hamradio.com>

The Burbank HRO store is offering a 5% discount on ham radio "accessories" to JPLARC members, upon presentation of a valid JPLARC membership card.