

# W6VIO Calling

# JPL



Jet Propulsion Laboratory Amateur Radio Club  
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|                           |                          |        |                 |                            |              |
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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 is **March 25th: Josh Miller KB3UUS, "JPL Satellite Operations."**
- **JPLARC Board of Directors (BOD) meeting:** Normally, the first working Friday, every month, from Noon to 1pm in 180-703C. The next BOD meeting will be **April 8<sup>th</sup>**. Call-in: 818-354-4044 ID-number: **997 183 539** (without the spaces).
- **For more upcoming events, including upcoming licensing classes, see the ARRL Los Angeles Section website:** <http://www.areslax.org>

## In this issue:

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## Regular Membership Meeting Feb 26<sup>th</sup>

By Jim Marr AA6QI

Present were: Matt Bennett KF6RTB, Jonathan Cameron<sup>†</sup> KF6RTA, Pamela Clark (not licensed yet), Steve Collins<sup>†</sup> AG6YR, Bob Dengler<sup>†</sup> NO6B, Tim Eldridge KF6TIM, Chris Gaylord<sup>†</sup> W6YTB, Jorge Gonzalez KK6BJB, Mark Lysek<sup>†</sup> AG6TD, Jim Marr<sup>†</sup> AA6QI, Michele Marr<sup>†a</sup> KC6FSP, Josh Miller<sup>†</sup> KB3UUS, Steve Noland<sup>†</sup> WA6KLC, Mike Roche N6XLK, David Seidel<sup>†</sup> KC6NRL, Rob Smith<sup>†</sup> W6GRV, Umut Yildiz KK6TJJ.

Note: <sup>†</sup> indicates a 2015 or 2016 regular voting member

(i.e., JPL/Caltech/Retiree & 2015 or 2016 dues paid), and  
\* Indicates a 2016 BOD member.



**Figure 1: JPLARC facilities tour participants (most of them, anyway) before heading up to 180-R6.**

Today's meeting consisted of a tour of the JPLARC on-lab facilities. Tour participants gathered in the regular meeting room, 180-703C, then in the 180-9<sup>th</sup> floor hallway (Figure 1) before heading up to the roof of building 180 to look at the club facility in 180-R6.



**Figure 2: Bob Dengler NO6B (solid blue shirt) briefing the tour participants in 180-R6.**

180-R6: Bob Dengler NO6B provided an explanation of what was inside of 180-R6 (Figure 2) and demonstrated operation of the Yaesu FT-847 HF/VHF/UHF transceiver located on the bench in the northwest corner. He also pointed out the two servers in the room. One of these hosts the [jplarc.ampr.org](http://jplarc.ampr.org) web site and email exploder, as well as the Echolink/IRLP link between the internet and the 224.08 repeater through an interface provide by a 220MHz Clegg transceiver. Outside on the roof at the East end of 180, Bob pointed out the HF and VHF/UHF antennas.



**Figure 3: Jonathan Cameron, just outside of 180-R6, pointing out JPLARC facilities up on the Mesa.**

While outside on the roof (Figure 3), Jonathan Cameron KF6RTA pointed out the JPLARC repeater site on the west end of the JPL Mesa and the location of the HF Yagi's on the east end of the JPL Mesa.

Building 310 south parking lot (Figure 4): Chris Gaylord W6YTB identified this parking lot (across the street from

the JPL Fire Station) as the JEARS muster point and identified the usual parking place of the EmComm Van just to the west of the Fire Station garage doors. Matt Bennett KF6RTB pointed out the JPL CubeSat satellite station antennas on the roof of building 125 and Josh Miller KB3UUS pointed that these antennas are not tuned to the amateur bands. Jim Marr AA6QI told about the HF/VHF/UHF station in 310-106, adjacent to the JPL Emergency Operations Center (EOC) and pointed out the VHF/UHF vertical and HF DXCC multiband dipole antennas on the building 310 roof mounted tower.



**Figure 4: Briefing at the parking lot in front of B310 {Discussed: JEARS assembly point; CubeSat antennas; CommVan parking spot; & 310-106 radio room}.**



**Figure 5: Tour at B329, the new radio shack**

Building 329: The next stop was the new shack, building number 329 (Figure 5), up above the Mars Yard, where Jonathan Cameron pointed out the Cushcraft R-7000 multiband trap vertical antenna that has been recently mounted (temporarily) on the roof (but which hasn't yet been hooked up to a station inside). Jonathan then took everyone around to the south side of the building to point out the new hardline junction box (Figure 6) where Chris Carson KE6ABQ has begun putting terminations on the new hardlines going up to the Mesa antenna

farm. Jonathan also pointed out the temporary VHF/UHF antenna sitting on top of that junction box.



**Figure 6: Jonathan showing the junction box for the hardlines coming down from the Mesa antenna farm**

Jonathan Cameron provided a tour of the inside of the new shack (B329) while Chris Gaylord provided a tour of the inside of the EmComm van (Figure 7) that he had moved up next to the B329 shack for this tour. Jonathan Cameron also opened up the new storage trailer, allowing folks to take a peek at all of the equipment that had been moved up from the old shack (B173).



**Figure 7: Chris Gayload (inside) demonstrating the Comm Van (normally parked in front of B310)**

After the tour, a few of folks retired to the 167 Cafeteria for lunch and further conversation.

## BOD Meeting Mar 11<sup>th</sup>

By Jim Marr AA6QI

Present were: James Bartok† KK6IHF, Jonathan Cameron†\* KF6RTA, Chris Gaylord†\* W6YTB, Josh

Miller†\* KB3UUS, Chuck Sarture†\* KG6NF, Steve Townes†\* WB4ILW. On the Phone: Chris Carson† KE6ABQ, Jim Marr† AA6QI, Walt Mushagian† K6DNS.

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 all six BOD members present so we **did** have a quorum.

**Treasurer's Report:** No change. Balance is still \$5,053.70.

**Secretary's Report:** So far for 2016 we have 40 paid-up members, of which 33 are voting members and of which 72.7% are ARRL members.

**Facilities Update:** The new storage trailer up by B329 will need to be moved in March to a TBD location and won't be returned until sometime in November, although still awaiting brake line repair before it can be moved.

The container 7111 with our antennas in it (that we also share with Security) that was parked at the west end of the Arroyo parking lot has also been moved to an unknown location (Q: what happened to the StationMaster antenna that was on top of the container?).

We're still waiting for a quote from Facilities on the B329 mast (for the HF vertical).

**President's Report:** We had 17 people turn out for the JPLARC facilities tour, including Tim Eldridge KF6TIM from the ALERT group.

The Extra Class exam will take place over lunch on March 23<sup>rd</sup> in the 167 Cafeteria Special Events Room in the NE corner.

Last Friday, Jim Marr, Lew Soloway, Bill Weber (Figure 8) and I took the Cushcraft R-7000 multi-band trap vertical down, tuned it up, and gave it a trial using our Yaesu FT-1000D in an on-the-air check with Walt Mushagian (who also provided some real-time instruction on using the FT-1000D). We found that our FT-1000D's master oscillator may need adjusting. The leak in the roof of B329 hadn't been repaired yet [ed. It has been at the time of this writing] so the R-7000 was temporarily tied to a storage container adjacent to B329, awaiting a work party to re-install it on the B329 roof following the roof repair. Chris Carson KE6ABQ was also there last Friday installing connectors on the new hardlines to the Mesa (Figure-9).

The Field Day Committee met this week on Wednesday to kick off the Field Day planning and the Repeater Committee will meet next week.

Jonathan had been planning an off-lab lunch for early

March but has delayed it a couple of weeks. Stay tuned.



**Figure 8: Bill Weber, Jonathan Cameron and Lew Soloway tying the R-7000 to the side of a storage trailer**

Mike Tope agreed to continue taking care of the club's PO Box (see the header at the beginning of this newsletter) but the fee has gone up from \$58/year to \$104/year. The Board voted to approve the increase.

Jonathan plans to update the reference in our Bylaws to the HR-maintained JPL Club Guidelines once he finds a current version since these guidelines appear to have been removed from the HR website.

Bill Wood W6FXJ is willing to remain trustee of WR6AZN but is no longer able to go to Table Mountain to make repairs, so we are looking for volunteers willing to make the trip to Table Mountain when needed (under Bill Wood's guidance).

Randy Hammock KC6HUR is willing to help Bill Wood with the club's web server but needs to be accepted as an associate member by the Board once the Secretary receives his application and dues.

The JPLARC has been asked to participate in a JPL Fair on JPL Interest and Affinity Groups in the Mall in late summer or early fall. Should we participate? If so, how? Volunteers needed.



**Figure 9: Chris Carson KE6ABQ installing grounding kits on the new hard lines going up to the Mesa.**

The JPLARC has been asked to participate in "Eagle Horizon" drill at Armstrong Flight Research Center (Edwards). The request was from Phil Dolber W6WBT. The drill will be on RDO Friday April 15<sup>th</sup> but time is TBD. We've been asked to support 2m contacts via Table Mountain [ed. note that only the 220MHz repeaters are normally linked, so a 2m link would require linking the Table Mountain 2m and 220MHz machines via controller commands] and 40m contact. Jonathan recommended that we participate but, as usual, we'll need volunteers.

Jonathan still needs help completing the equipment inventory. B329 and most of the new trailer are done. Still need to do: complete the new trailer; 180-R6; container 7111 [ed. if we can find out where it is]; 35A (our Mesa repeater cabinet); and the Mesa HF antennas. Jonathan thinks we can do these over a few lunch hours but needs some help. Volunteers should contact Jonathan.

Monday Noon nets are going well, averaging more than twenty check-ins per week. Last Monday, experimented with check-in/check-out as would be needed during an actual emergency (so net control knows who's there and who isn't). Possible future nets: 220MHz net; simplex

nets; nets during fire drills.

The Board discussed naming conventions for the JPLARC frequency cards. Several options were discussed.

#### Related Radio Activities:

Pasadena Radio Club (PRC): Weekly net on Tuesday at 7pm on W6MPH (145.18 (-) 156.7). Club meetings the 4<sup>th</sup> Tuesday of every month. See <http://w6ka.net> for further information.

Altadena Local Emergency Radio Team (ALERT): Weekly net on Mondays at 8pm on the W6MPH repeater, followed by a simplex net on ALTA1 (147.480MHz). See <http://altadenaradio.com>.

**Next JPL Work Party**: Planned for the RDO weekend of March 18<sup>th</sup> & 19<sup>th</sup>. Goals: Get the Cushcraft R-7000 back up on the roof of 329 and tested. Inspect the telephone pole just north of the repeater cabinet (35A) for repeater antenna modifications (pending the repeater committee recommendations). Start organizing B329. Help with Field Day preparations.

**2016 Presentations**: the Board went over a list of planned regular meeting presentation and potential additions. [ed. see the list at the end of this newsletter].

**Field Day 2016**: Jim Marr presented a brief summary of activities needed to prepare for Field Day and a list of the seven RDO weekends available between now and then. Details will be distributed via the email exploder to all members.

## 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.

## Equipment For Sale

By Jim Marr AA6QI

The JPLARC Board has approved the sale of the following items and recently approved reducing the asking price by 50%. Please make your best offer to Club Treasurer Chuck Sarture. All equipment is sold as-is with a receipt from the JPLARC.

- ICOM IC-27H 25W 2m FM transceiver, asking \$40, **reduced to \$20.**

- Kenwood TR-9130 all-mode 25W 2m transceiver, asking \$60, **reduced to \$30.**

- ICOM IC-471A all-mode 70cm 25W transceiver with external PS-30 power supply, asking \$100, **reduced to \$50.**

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

- ICOM AG-35 70cm mast mount preamp, asking \$10, **reduced to \$5.**

## 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):

**April 22<sup>nd</sup>**: Nancy Darling K8NBD, "Altadena's ALERT team".

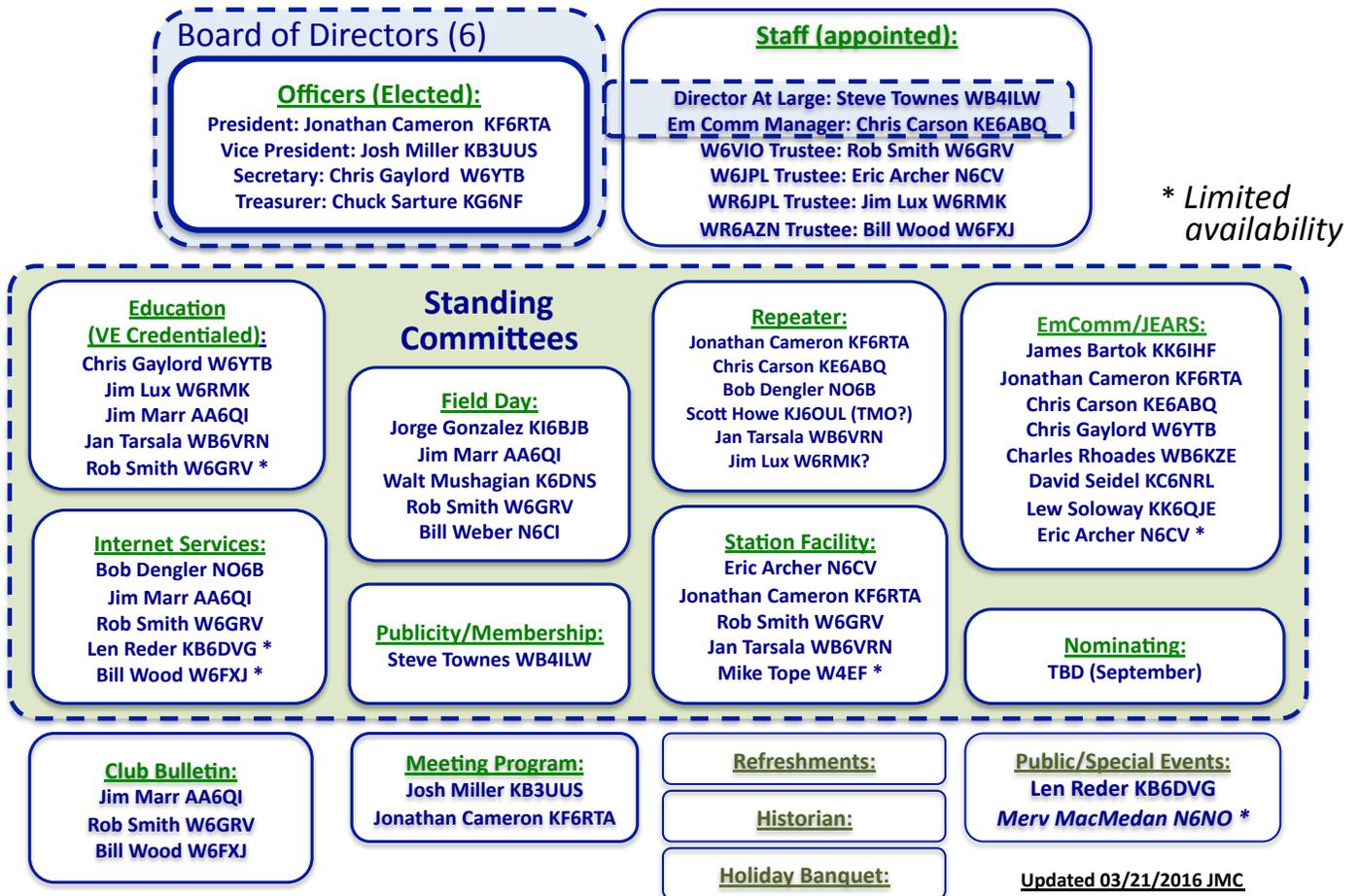
**May 20<sup>th</sup>**: Jim Marr AA6QI, "Making and using quadrifilar helical antennas for working amateur satellites."

**June 17<sup>th</sup>**: Bob Dengler NO6B, "IRLP node on a Raspberry PI."

**July 15<sup>th</sup>**: AMSAT's Patrick Stoddard WD9EWK, "AMSAT Future", talk via jplwebex. (alternate date Sep 23<sup>rd</sup> if Patrick can't make the July date).

**August 26<sup>th</sup>**: Chris Gaylord W6YTB, "Great Shakeout Planning."

# JPLARC Organization:



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