



The Short Circuit

The February meeting of the United Radio Amateur Club will be held Friday, February 17th, at 7 pm in the break room of the Los Angeles Maritime Museum, located at Berth 84, foot of Sixth Street in San Pedro. Parking is available in the lots adjacent to the Acapulco Restaurant just south of the Museum. There is limited handicapped parking on the street across from the museum. The entrance to the break room is through the gate on the north side of the museum (towards the bridge and the Iowa). There will be a greeter on the gate.

Program: Hands On Troubleshooting 101

Two of our club's tech experts, Jim, KQ6EA, and Doug, W6HB, will present a hands-on program on troubleshooting. We will use our K6AA station as an example, but the lessons are applicable to all. In preparation, you can reference the following: www.arrl.org/files/file/Technology/tis/info/pdf/9311065.pdf which is an article from QST in November 1993 Or www.n6rpv.net/pvarc/.../Troubleshooting%20for%20the%20Non-Techie%20Ham.pdf which is from a presentation by Marty Woll N6VI, Vice-Director of our own ARRL SWD.

Jim Jerzycke KQ6EA



Boeing /Sea Launch, Direct TV, Hughes Aircraft, Torrance Wireless **Northern Illinois University**__Specialties: Transmitters, receivers, up and down converters, feedlines and antennas, HF through Millimeter Wave

URAC Club President, K6AA Station Trustee, Battleship Iowa Radio NI6BB President and Founder, licensed since 1962

Doug Dowds, W6HB





QST de President Doug, W6HB...

Many thanks to David Ziskin, AG6E, for the January program on Alvin, not the chipmunk. All seemed to enjoy the show.

Still no known project activity on the club's trailer tower. The clock is running folks. To get involved contact Bill, KB6WKT, or Steve, K6NT.

Lots of good food and chatter at the monthly breakfasts at the Think Cafe. Were you there?

Bill, W6AJ, as your Vice President is responsible to provide enlighten us on the program of the month so I will defer to him to do so in his monthly column.

Dues for 2017 are now past due. See Treasurer Gary, N6HMR, if you have any questions.

Per the corporate constitution and bylaws, your BOD reviewed our budget status and assessed the finances of the club at their meeting this month. Based on our current membership, annually committed expenses and potential income streams compliant for a 501(C)7 organization, we will be tightening our belt for 2017 by deleting the door prizes at the breakfasts and meetings. If membership increases and/or a dues increase is voted on for 2018, conditions and programs may change. These actions were taken to keep us solvent and provide adequate reserves for unplanned expenses primarily for station K6AA.

See you on the air most Thursday nights on 145.510 simplex....

73 - Doug - W6HB

February First Saturday Breakfast



20 members and guests arrived bright and early for the February Breakfast. Chat around the table went like this:

Guest: Brian, W6BDW, is now running the 40 Meter Swap net (11:30 am 7.235), and came all the way from Upland to be with us this am. An ensuing discussion covered the Swap Net (our own N6EFI is back up control) and other ways to listen in (See 'webSDR.org').

Bill, W6AJ detailed his exciting week for us. As VP and Program Chairman for the club, he announced that our next several URAC meetings would feature John (JHV)'s dad, talking about astronomy, and/or Jim KQ6EA talking practical electronics for your station.

John, KC6HV took a recent flying excursion over Los Angeles with Pacific Skies Aviation at Torrance Airport. Here are a couple of the great aerial shots he got from the Cessna airplane



Greek Theater from the air



Downtown LA from the air

Andrea (Homer, K6HKT)'s daughter, in addition to judging Horse Shows also coaches a high school swim team. She is working with Homer to do some swim tests and so far it has not worked out well. They will be trying again today...

Homer, K6HKT says he's dried out fine now...and doing well.

Steve, K6NT recently switched cable companies...squirrels chewed through the coax to the cable. He bought a 'game' camera for the back yard and has captured the images of 3 racoons, 1 skunk and 1 possum so far. There is a lot of animal activity in his back yard...

Don, NA6Z, is playing ham radio on JT65, 20E pacific rim coverage. He was recently able to acquire an IPAD pro with airline miles (!!)

Tom, KJ6JPZ has been jousting on the web with airlines for the best airfares to the us and Europe for his trip this summer. Is planning on joining ARES and going to the February meeting in Long Beach.

Scotty, K6ZNL is working on resources for K6AA station operators: Special Event Stations, Contests, and even ships in Port. She has sent that information out to current station operators and others approved (by LA rec and parks) and will aim to make it available to all members.

John, WA6SDK, passed.

David, W6KL reports that in his experience with backyard critters, even an IR triggered shower does not work: turns out that racoons like it!

Ingo: KK6EWB and xyl Mary are here in LA for a week before going back to Louisiana. In their RVing adventure, they already have reservations for a site at the Dayton Hamvention this year. Doug is requesting that they go to the Wright-Patterson Museum while they are in Dayton, and report back with their impressions.

Mary, xyl of Ingo, is very happy to see everyone.

Gary, N6HMR and Treva, N6HMS, both passed.

Larry, KK6TXN worked the Zane Grey special event station last week (which was being supported by our own Bruce KG7MXL) and has now attended his third CERT class.

Nick, N6EFI will be having his second cataract surgery this Monday. We hope it all goes well.

Bruce, AG6BJ stopped in but had no additional input.

Doug, W6HB advises us to try 160 meters. AND to try receivers on line: go to webSDR.org. you can use the receiver in northern California or the station in Cheshire, England. Try it.

Bill Carter won the certificate!

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Faithfully submitted,

Scotty Butler, K6ZNL, temporary gossip guru

NOTE: Special Letter to the Editor: *our recent program has provoked a response!! Somebody's paying attention!! Please feel free to weigh in on this if you disagree, or if you agree. This letter is from AG6VO, John, who is a retired teacher...*

At our recent URAC general meeting our guest speaker, David Ziskin AG6E, gave a very interesting and informative talk on the Woods Hole Oceanographic Institution Human Occupied Vehicle (ALVIN) project. There was a lot of discussion during the question and answer period. One question has been on my mind ever since. David stated that the atmospheric pressure onboard the ALVIN, when it is submerged, is roughly equivalent to the atmospheric pressure at 2000 feet. He also added that the temperature maintains around 55 to 60 degrees Fahrenheit, due to the body heat of the personnel within the sphere. I will assume for this exercise that the temperature at sea level is 81° F (judging from the video) and the atmospheric pressure is the standard pressure or 1 atm.

The question was asked; Did the ALVIN vent some air to achieve this change in pressure before or while it was submerged. David's reply was "no".

Having some physics and math background I couldn't help to address this question by utilizing the individual gas laws of Boyle's, Charles', and Gay-Lussac's. I am able to do this because I will assume that the personnel sphere is a closed system once the hatch is closed, therefore the molality and volume of gas remains constant. The ideal gas law states mathematically that

$$pV = nRT$$

where:

p = the pressure of the gas.

V = the volume of the gas.

n = the amount of substance of gas (in moles)

R = the ideal, or universal gas constant

T = temperature of the gas

In SI units, P is measured in pascals, V is measured in cubic meters, n is measured in moles, and T in kelvins (the Kelvin scale is a shifted Celsius scale, where 0.00 K = -273.15 °C, the lowest possible temperature).

First, let's explore some assumption parameters to this formula, because with this we can eliminate some of those messy variables.

1. The personnel sphere is a closed system while submerged thus leaving the volume to be constant.
2. The change in temperature is caused by the outside water temperature and the body heat of the personnel inside.
3. I will ignore the biological variable of the number of moles within sphere, i.e., digestion, breathing and other human energy conversion (with the exception of heat energy of course). Therefore, n is constant at the surface as well as submerged at any depth.

Now, I can apply one extension of the Ideal Gas Law when (n) the number of moles is constant, see number 3 above, this is called the Combined Gas Law. This law states that the ratio of pressure and volume to temperature is constant for all states of a gas or mathematically stated.

$$\frac{\rho_1 V_1}{T_1} = \frac{\rho_2 V_2}{T_2}$$

As you can readily see, this formula has eliminated R as well as n . Now, let's deal with the given.

$$\rho_1 = 0 \quad \text{meters above sea level (0 ft.)} = 101,325 \text{ pascals}$$

$$\rho = 610 \quad \text{meters above sea level (2000 ft.)} = 94,200 \text{ pascals}$$

$$T_1 = 81^\circ\text{F} = 300 \text{ K}$$

$$T_2 = 57^\circ\text{F} = 287 \text{ K}$$

$$V_1 = V_2$$

Because $V_1 = V_2$, we are able to substitute V_1 for V_2 and divide the Volume out of the formula. Now we have,

$$\frac{\rho_1}{T_1} = \frac{\rho_2}{T_2}$$

Solving for ρ_2 , by multiplying both sides of the equation by T_2 , gives us,

$$\rho_2 = \frac{\rho_1 T_2}{T_1}$$

Substitution with the given numerical values,

$$\rho_2 = \frac{101,325 \text{ pascals (287 Kelvin)}}{300 \text{ Kelvin}}$$

$$\rho_2 = 101,325 (0.96) \text{ pascals} = 96,934 \text{ pascals}$$

Percent error is

$$\% \text{ error} = \frac{|\rho - \rho_2|}{\rho} (100) = \frac{-(94,200 - 96,934)(100)}{94,200}$$

The percent error, based on the values given, is less than 3%, indicating that to approximate the pressure inside the personnel sphere at any depth is to simply know the temperature (converting to the SI Kelvin scale), pressure (pascals) at the surface and the temperature (Kelvin) submerged.

Deep-sea submersible Alvin turns 50...



* Cartoon from the Woods Hole website

A Word to the Wise about mobile operating...Subj: ARRL Southwestern Division e-Communicator

Amateurs in California and in several Arizona communities are facing recently enacted or impending bans on handheld electronic devices while driving. Here's what we currently know about these laws.

In California, Assembly Bill 1785 took effect on January 1 of this year. Now included in Section 23123.5 of the Vehicle Code, this law provides that "a person shall not drive a motor vehicle while holding and operating a handheld wireless telephone or an electronic wireless communications device unless the wireless telephone or electronic wireless communications device is specifically designed and configured to allow voice-operated and hands-free operation, and it is used in that manner while driving . . . For the purposes of this section, "electronic wireless communications device" includes, but is not limited to, a broadband personal communication device, a specialized mobile radio device, a handheld device or laptop computer with mobile data access, a pager, or a two-way messaging device."



Whether intentionally or unintentionally vague, interpretations of this language have ranged from applying to all mobile communications (a traffic court commissioner speaking to a radio club) to excluding mobile radios (a CHP spokesperson in Orange County). One of our ARRL Volunteer Counsel attorneys spoke with a staff member of the Assembly Transportation Committee, which introduced the bill. The staffer told him that the law was intended to apply to smartphones and similar broadband devices, not to Amateur Radio or other radio communication services. Another Volunteer Counsel attorney is attempting to get a clarifying statement to that effect entered into the official record.

Meanwhile, CHP in Sacramento has provided guidance to the Los Angeles County Sheriff's office that wired microphones permissible but handheld radios are not. Until the law is amended or clarified, it might be prudent for California Hams to avoid wielding a handheld while

driving.

In December, the Town of Oro Valley (in Pima County), Arizona adopted a "hands-free" ordinance that states, "No person shall, except as otherwise provided in this ordinance, use a mobile telephone or portable electronic device while operating a motor vehicle upon a street or highway, unless that device is specifically designed or configured to allow hands-free listening and talking and used in that manner while operating a motor vehicle." The ordinance defines "hands free" as the "use of a mobile telephone or portable electronic device without the use of either hand by employing an internal feature of, or an attachment to, the device." Like the new California law, this one was ostensibly targeting smartphones and the like, but its lack of clear definitions or specific exclusions has Amateurs concerned. The town has provided for a warning-only period of a few months during which mobile radio operators can make their case if stopped. (Source: Oro Valley Web site)

A similar bill was passed earlier in 2016 in the City of San Luis (in Yuma County) but has not led to any enforcement cases to date.

On January 10, the Tucson City Council approved in concept a law similar to Oro Valley's, and the final language is expected any time now. The stated purpose was to enable better enforcement of the city's four-year-old ban on texting while driving, and it appears that the implementation will be as a secondary offense, one for which you can be cited only if you are already being stopped for another offense such as speeding. (Source: Tucson News Now.)

Tucson Amateurs are contacting their council members to request inclusion of appropriate exemption or exclusion language.

It is worth noting that an overly broad mobile-communications ordinance enacted in Coconino County, Arizona in 2014 was amended after pressure from both Amateurs and commercial trucking interests, according to Section Manager Robert Spencer KE8DM.

In Dave Sumner's editorial devoted to this subject in February 2012 QST, he noted that "Safety must be our number one concern. Guiding a motor vehicle is an awesome responsibility. Radio amateurs have been operating mobile for decades without being perceived as a threat to public safety, but if there is ever any doubt in your mind about your ability to discharge that responsibility you should either pull off the road (if it is safe to do so) or turn off the radio." I encourage you to read the full editorial.

ARRL Southwestern Division
Director: Richard J Norton, N6AA
n6aa@arrl.org

Two Free Amateur Radio Courses

FCC **“Technician”** course (entry level)

FCC **“General”** course (2nd level)

Each course is 2 sessions

The sessions will be on 27 May and 03 June 2017

Technician 9:30 AM to 1:30 PM both Saturdays (bring your lunch)

General 1:30 PM to 5:00 PM both Saturdays

The FCC tests will be 10:00 AM to noon on 10 June 2017

At the start of the 27 May Technician course, the Palos Verdes Amateur Radio Club will give a 30 minute presentation on how to get further involved with amateur radio.

The class location is at Fred Hesse Community Park,
29301 Hawthorne Blvd., Rancho Palos Verdes.

Confirm your attendance to Walt, K1DFO at waltordway@juno.com

There is **no fee** for either course.

Taking the FCC test is \$15.

Optional Material (sold at cost)

Gordon West books with all the FCC test questions,

\$22 for the Technician and \$26 for the General

Paper copy of Walt's Power Point charts,

\$22 for the Technician and \$22 for the General -

For courses sponsored by the Palos Verdes Amateur Radio Club, students thru grade 12 who pass their examination at a PVARC VE test session will, upon application to the Club, be eligible for reimbursement up to a maximum of \$50 to cover the cost of materials and the examination fee.

Everyone who obtains their first ham radio license through a PVARC VE test session, regardless of age, will receive a free membership in the Palos Verdes Amateur Radio Club for the remainder of the current calendar year.

~ February 2017 ~						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2 Groundhog Day	3	4 URAC First Saturday Breakfast, 8 am Think Café, San Pedro
5 Super Bowl	6	7	8	9 K6AA 2M roundtable, 145.510 MHz, 8 pm	10	11
12	13	14 Valentine's Day	15	16 K6AA 2M roundtable, 145.510 MHz, 8 pm	17 URAC membership meeting. 7 pm, Los Angeles Maritime Museum, San Pedro	18
19	20 Presidents Day	21	22	23 K6AA 2M roundtable, 145.510 MHz, 8 pm	24	25
26	27	28				

~ March 2017 ~						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2 K6AA 2M roundtable, 145.510 MHz, 8 pm	3	4 URAC First Saturday Breakfast, 8 am Think Café, San Pedro
5	6	7	8 International Women's Day	9 World Kidney Day K6AA 2M roundtable, 145.510 MHz, 8 pm	10	11
12 Daylight Saving Time Begins	13	14	15	16 K6AA 2M roundtable, 145.510 MHz, 8 pm	17 Saint Patrick's Day URAC membership meeting. 7 pm, Los Angeles Maritime Museum, San Pedro	18
19	20 Spring Begins	21	22	23 K6AA 2M roundtable, 145.510 MHz, 8 pm	24	25
26	27	28	29	30 K6AA 2M roundtable, 145.510 MHz, 8 pm	31	

DX OPERATIONS FOR FEBRUARY 2017
Per NG3K

So Shetland Is, LU1ZI: Is now operating thru 2/28/2017. QSL via LU4AA.
 Guam, KH2: Is now operating thru 2/22/2017. QSL via JL3RDC.
 Vanuatu, YJ: Is now operating thru 2/23/2017. QSL via JH2BNL.
 Central African Rep, TL8TT: Is now operating thru 2/14/2017. QSL via I1HJT.
 Mauritius, 3B8HE: Is now operating thru 2/14/2017. QSL via G8AFC.
 Senegal, 6W2SC: Is now operating thru 3/3/2017. QSL via HA3AUI.
 Rwanda, m9X2AW: Is now operating thru 3/11/2017. QSL via DF2WO.
 Guinea, n3X: Is now operating thru 2/26/2017. QSL via F5OZC.
 Namibia, V5: Is now operating thru 2/18/2017. QSL via DD8ZSAX.
 So Cook Is, E51AMF: Is now operating thru 2/18/2017. QSL via K7ADD.
 Belize, V31VP: Will be operating from 2/9 thru 2/14/2017. QSL via WB0TEV.
 Easter Is, CE0Y: Will be operating from 2/10 thru 2/17/2017. QSL via DF8AN.
 Panama, HP: Will be operating from 2/10 thru 2/22/2017. QSL via W1USN.
 Guantanamo, KG4:n Will be operating from 2/10 thru 2/24/2017. QSL via W4WV.
 Panama, HP: Will be operating from 2/12 thru 2/15/2017. QSL via SQ3RX.
 Macao, XX9D: Will be operating from 2/13 thru 2/26/2017. QSL via XX9LT.
 San Andres & Providencia, HK0: Will be operating from 2/13 thru 2/27/2017. QSL via LW9EOC.
 Austral Is, TX5T: Will be operating from 2/13 thru 3/3/2017. QSL via M0URX.
 San Andres & Providencia, HK0: Will be operating from 2/13 thru 3/7/2017. QSL via AA4NC.
 St Kitts & Nevis, V4: Will be operating from 2/14 thru 2/20/2017. QSL via N8WD.
 Fernando de Noronha, PY0F: Will be operating from 2/15 thru 2/21/2017. QSL Via PY2QI.
 Pitcairn Is, VP6EU: Will be operating from 2/16 thru 3/5/2017. QSL via DJ9HX.
 Palau, T88DT: Will be operating from 2/17 thru 2/21/2017. QSL via JH1OLB.
 Micronesia, V63DXD: Will be operating from 2/17 thru 2/24/2017. QSL via JA7HMZ.
 Sint Maarten, PJ7: Will be operating from 2/17 thru 2/25/2017. QSL via OH2IS.
 Juan Fernandez, CE0Z: Will be operating from 2/21 thru 2/24/2017. QSL via Df8AN.
 Barbados, 8P9AL: Will be operating from 2/22 thru 3/7/2017. QSL via KG9N.

Special Event Stations for (the rest of) February from ARRL:

- **02/18/2017 | Bombing of Darwin by Japanese Aircraft 1942-02-19**

Feb 18-Mar 18, 0004Z-1200Z, VI8BOD, Darwin, Northern Territory, AUSTRALIA. Darwin Amateur Radio Club. 28.550 21.250 14.250 7.150. QSL. Stuart Birkin, P.O. Box 41251, Casuarina 0810, AUSTRALIA. Darwin was bombed on 19 February 1942 by the carrier force that attacked Pearl Harbour on 1941-12-07 with an additional aircraft carrier. The town was all but destroyed by 2 air attacks on the same day the second by land based aircraft from the Japanese held island of Ambon in the then Dutch East Indies, now Indonesia. It was the first attack on Australian soil, and was followed by other aerial attacks on 63 separate days over the next 18 months. www.vk8da.com

- **02/18/2017 | Frozen Lake Portable: Ice Station W0JH**

Feb 18-Feb 20, 1600Z-2345Z, W0JH, Stillwater, MN. Stillwater Amateur Radio Association & Radio City, Inc. 21.360 14.260 7.260 3.860. Certificate. Shel Mann, 1618 Pine St. W., (IceStationW0JH2017@radioham.org), Stillwater, MN 55082. W0JH QSL Certificates will ONLY be sent via e-mail in PDF format. (Send requests to: IceStationW0JH2017@radioham.org). W0JH is operating portable from a frozen lake in Washington County, MN (Grid Square EN34). Info: Radio City, www.radioinc.com; SARA, www.radioham.org

- **02/18/2017 | George Washington Birthday**

Feb 18-Feb 19, 0900Z-0900Z, K4US, Alexandria, VA. Mount Vernon Amateur Radio Club. 14.260 7.040. QSL. MVARC, P.O. Box 7234, Alexandria, VA 22307. mvarc.org

- **02/18/2017 | WRARC 7th Anniversary**

Feb 18, 1500Z-2300Z, W8WRC, New Springfield, OH. Western Reserve Amateur Radio Club. 21.300 14.305 7.200. QSL. Western Reserve Amateur Radio Club, 2050 East South Range Road, New Springfield, OH 44443. www.wrarc.net

- **02/22/2017 | 59th Daytona 500/2017 Speedweeks**

Feb 22-Feb 26, 0001Z-2359Z, N4DAB, Daytona Beach, FL. Daytona Beach CERT Amateur Radio Team. 14.265 21.265 14.070 21.070. Certificate. Daytona Beach CERT ART, c/o Steve Szabo - Daytona Beach Police Dept, 129 Valor Blvd, Daytona Beach, FL 32114. 59th DAYTONA 500 – SPEEDWEEKS 2017 Daytona Beach CERT ART Special Event Station – N4DAB February 22nd – February 26th, 2017 Commemorative QSL - Certificate Available Info on qrz.com and www.daytonacert.net WE HOPE YOU GET TO WORK US! Our Fourth Year! www.daytonacert.net

- **02/22/2017 | George Washington's Birthday**

Feb 22, 0001Z-2359Z, WS7G, Moses Lake, WA. Columbia Basin DX Club. 14.322 3.810. QSL. Brian Nielson, 11650 Road1 SE, Moses Lake, WA 98837. cbn.homestead.com/WS7G.html

- **02/22/2017 | Snow Bird Field Day**

Feb 22, 1500Z-2100Z, N7E, Mesa, AZ. SunLife and Venture Out Amateur Radio Clubs. 18.158 14.340 7.290 14.025. QSL. Earl Palmer, 560 S. Rosemont, Mesa, AZ 85206. On PSK, JT-65 and 0.1 watt WSPR. Spot us on DXSummit.fi. www.sunlifearc.org

- **02/25/2017 | 72nd Anniversary of the Battle of Iwo Jima**

Feb 25, 1500Z-2200Z, W0FSB, Waterloo, IA. Five Sullivan Brothers Amateur Radio Club. 21.240 14.240 7.240. Certificate & QSL. Five Sullivan Brothers ARC, 3186 Brandon Diagonal Blvd, Brandon, IA 52210. For QSL card: Send card and #10 SASE; For Certificate & QSL: Send QSL, address label and 3 Forever stamps; For eQSL & Certificate: Send eQSL, then an email to w0fsb@outlook.com, requesting a .jpg file of the certificate that you can print yourself. www.qrz.com/db/w0fsb

<i>2017 U.R.A.C. Executive Board</i>			
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SECRETARY John Rockwood WA6SDK		TREASURER Gary Forister N6HMR	
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DIRECTOR Larry Fadden KK6TXN		DIRECTOR David Reid W6KL	

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*** IMPORTANT NOTES ***

K6AA Station We can still use more operators for our K6AA station. See Doug, W6HB, and or Scotty, K6ZNL, for training and checkout.

Check out the special events page on k6aa.org for the latest from arrl and e-ham net.

Additional Calendar Notes

Club Roundtable

Held weekly on
Thursdays at 8pm
145.510 Simplex

Club Meeting

Held monthly on 3rd Friday of the
month (except August and December)

No Host Breakfast

Held monthly on the 1st Saturday of
the month at 8:00am. Location:
Think Café on 5th Street in San Pedro

"VE/CE Session for Amateur and Commercial Licenses

Monthly on 1st Saturday **by appointment**. Go to k6aa.org/licensing-exams/

Also available most Wednesdays, again ... **by appointment**.

If no one schedules an exam, there won't necessarily be an exam team or exam material available.



The Museum is at the Foot of 6th Street. To get to the Break Room, walk past the main entrance around to the north end (nearest the Iowa) until you see the gate. There will be a greeter at the gate to the Break Room.

