



January 2018

# ARCO *vet*

A Community Service Organization Dedicated to Amateur Radio Since 1970

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## Outgoing and incoming President's Message for January ARCOVER

Ray, WA6OWM is the new SBARC President for the 2018 year as Bruce, KK6BJ resumes his role as vice president. This was a remarkable year, capped off with a great Holiday Banquet organized by Paul, KK6BY with a great fellowship and camaraderie, tale telling, reminiscing and planning and this that we hams are famous for.

Bill Robinson, WB6RMY is a volunteer ARRL lawyers and will be our January speaker and will be discussing antenna law and other things of interest to hams. Please see his bio elsewhere in this issue. We will continue to try to find speakers and presenters that will cover a wide variety of timely and hopefully interesting topics for our monthly meetings. Let Bruce know if you find an enjoyable Speaker.

We will be refocusing on things that will keep us radio-active, looking toward community service opportunities ranging from race coordination for the Sean O'Brian ultr 50-50 race through the Santa Monica Mountains, to hopeful participation in the Torrance Armed Forces Day Parade, to helping coordinate the Memorial Day flyby.

Another group build project will take place this spring to follow the highly successful Pixie build organized by Alan, KG6ZLI and Paul, KK6BY. Suggestions have ranged from various Arduino builds, to QRP antennas, field strength meters and all other thoughts will be encouraged.

We hope to have at least two picnics, in addition to field day to let us show off our skills in the outdoors as well as confirming the saying that the definition of HAM is "Have Another Meal."

The club has a new website that is up and running, courtesy of a lot of hard work by Heidi, KG0GGY and Paul's son, who in this international internet age was able to complete his part of the puzzle from his QTH in Poland. There are many little tweaks and expansions in this site so give us your feedback.

Chuck, K6CSH and Tom, KI6RC continue to man our spot at the TRW swap meet, still at the same site on the last Saturday of each month so come buy and buy something, sell something or join the radio philosophy sessions that abound.

We hope you had a chance to join us on the New Year's Straight Key Night and plan to announce many upcoming events and contests that will keep us all radioactive This is your club. Let us know what you want and join in and keep our hobby alive, relevant and fun.

Ray, WA6OWM

## < 2018 CLUB OFFICERS >

**President:** Ray Grace -WA6OWM 2706 Spreckels Ln, Redondo Beach, 90278 310-370-1913 wa6owm@arrl.net

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# January MEETING

## Bio for Bill Robinson WB6RM

### January 18, 2018 SBARC Presenter

Bill received his Advanced Class ham license age 16 BSEE and MSEE from UCLA in 1974 and 1975 and his JD 3 years later from Loyola. His home is at the highest point along the California coast between the Santa Monica Mountains and Palos Verdes and is topped by a 4 element SteppIR atop a 60' tower. He is an accomplished intellectual property litigation lawyer as well as Volunteer Counsel for the ARRL, helping hams with legal issues such as antenna and licensing.



Please join us on Thursday January 18th in the Richard Hoffman Conference Center of Torrance Memorial Hospital, Room 1 at & 7:30pm for his timely and fascinating presentation.



A single membership is \$ 20.00. Membership for two is \$30.00 (both have voting privileges) and family memberships for 3 or more are \$30.00 (only one member has voting privilege).

Please make checks payable to SBARC and mail to PO Box 536, Torrance, CA 90508-0536 . Checks preferred please.  
Thank you. Joe, WB6MYD



- 1) Suppose that you have three Scrabble tiles, N, T, and O. If you randomly place them in order, what is the probability that they spell an English word?
- 2) I throw a nickel and a dime in the air. If at least one of the coins falls as a head, what is the probability that the nickel falls as a head?
- 3) Why are elephants so wrinkled?
- 4) Why don't more elephants join the police force?

### December 2017 Quiz Answers

1) There are 30 student's in a science class. At the end of the semester, each boy had completed two notebooks, one half of the girls had completed three notebooks and one half had completed one notebook. How many notebooks were completed in all?

***Since 1/2 of the girls had completed three notebooks and 1/2 had completed one notebook, on average, each girl completed two notebooks which is the same as the boys average. So  $2 \times 30 = 60$  notebooks completed in total.***

2) Lakes are bodies of water not connected, except by rivers, to other lakes or to an ocean. What is the largest lake in the world? In North America? Wholely in the USA?

***Caspian Sea, Lake Superior, Lake Michigan***

3) What is blue and goes "Ding Dong"?

***An Avon lady at the North Pole.***

4) What is black and white and hides in a cave?

***A zebra who owes money.***

**Thursday  
Night  
Net**

Please join us on W6SBA 224.38 minus offset and the PLat 192.8 hz 7:30pm on Thursdays. You can share any info or just say hello!

## Bouvet DXpedition Nears its Moment of Truth

The group mounting the 3Y0Z Bouvet Island DXpedition reports that it's sorting through the myriad of details necessary to make a DXpedition to the second most-wanted DXCC entity a reality. Plans call for 3Y0Z to be on the air in late January and early February.



A shipping container holding tons of gear is now in Punta Arenas, Chile, set to be moved out of "customs bond" soon. Last-minute supplies being collected to take as extra baggage include ice screws, "should we find ourselves camping on refrozen melt areas on the glacier."

Shelter and antenna layouts have been finalized, as has marine transportation. Team members will take a marine safety course before embarking. Still under negotiation is the cost of helicopter shuttles from the ship to and from the island.

Two years of detailed planning have gone into the Bouvet Island DXpedition. "We want to live up to all that is expected of us on this 'generational' DXpedition, which is likely the largest and most challenging DXpedition ever," the DXpedition team said earlier this fall. "Indeed, there may never be another like it." The 3Y0Z Propagation Page has been updated and now includes a button visitors can click, enter a call sign and grid square, and get a propagation forecast specific for their location -- all bands over a 24-hour period.

A dependency of Norway, Bouvet is a sub-Antarctic island in the South Atlantic. The last Bouvet activation was 3Y0E, during the winter of 2007-2008. -- Thanks to The Daily DX for some information ARRL Letter 12/21/2017

## The ARRL International Grid Chase Kicks Off with the New Year!

Ready, set, go! The ARRL International Grid Chase 2018 gets under way on January 1 UTC (New Year's Eve in US time zones). The objective of the year-long event is to work stations on any band (except 60 meters) in as many different Maidenhead grid squares as possible, and then upload your log data to ARRL's Logbook of The World (LoTW). Many hams are familiar with grid squares from the VHF/



UHF and satellite realms, and everyone lives in one. An online calculator by David Levine, K2DSL, can determine your grid square. Enter a postal address, ZIP code, or a call sign, and the calculator will return the grid square for that location. Each new grid square contact confirmed through LoTW will count toward your monthly total.

Any contact you make in 2018 can count for your Chase score; as long as the other operators participate in LoTW, you'll get credit automatically when they upload their logs. This means that contest contacts will also count, as will contacts with special event stations, or other on-air activity that uses LoTW to confirm contacts.

There are no restrictions on modes or bands, as long as they are legal. Satellite contacts are valid for the Chase. The event is open to all radio amateurs.

Complete details of the ARRL International Grid Chase 2018 appeared in the December 2017 issue of QST. For more information, contact the ARRL Contest Branch. ARRL Letter 12/21/2017

## Radio Amateur's Invention to Treat Alzheimer's Patients Going to Clinical Trials

Inveterate inventor and radio amateur Eric Knight, KB1EHE, may be on the cusp of medical history as a device he developed in collaboration with a prominent Alzheimer's disease researcher enters clinical trials this month. Both are hoping that the device, which essentially saturates the brain with low levels of RF, may prove to be a viable treatment for the dreaded disease affecting millions.



Eric Knight, KB1EHE.

"Sometimes breakthroughs happen in ways that are unexpected," Knight told ARRL.

Knight learned of experiments that world-renowned Alzheimer's researcher Dr. Gary Arendash was carrying out on mice specially bred to have the disease, exposing them to low levels of RF. Knight said the effects were dramatic, sometimes even reversing the disease's effects in the mice. Borrowing some concepts from his early experiments with small rockets and avionics, he set about developing, and later patented, a device that could provide the requisite RF exposure to the human head.

"In the early 2000s, we were trying to figure out then how to make antennas that would wrap around the airframes of the rockets we were designing," he said, noting that the diameter of his group's space vehicle was about the same as that of a human head. Knight learned that Arendash was attempting to extend his investigations in a similar vein, and eventually they collaborated.

"He came at it from mice and science, I came at it from an aerospace and hobby perspective," said Knight, who patented a device based on a bicycle-type helmet. At the same time, Arendash was developing a similar wearable -- a fabric cap resembling an old-time aviator's headgear. Both devices are embedded with small antennas to bathe the brain in electromagnetic radiation in the 900 MHz spectrum set aside for Industrial, Scientific, and Medical (ISM) applications -- some 100 MHz higher than a cell phone's frequency.

"Ironic for sure," Knight said. "Who would imagine that cell phone radio waves could be a potential treatment for Alzheimer's disease?"

Knight, who has no medical background, said the device to be used in the clinical trials consists of the cap plus a palm-sized transmitter and wiring harness worn on the arm. The resulting combination has been dubbed the NeuroEM 1000. Participants will get doses of RF twice a day.

From the Food and Drug Administration's (FDA) standpoint, the clinical trials aim primarily to show that the technology is safe, but Knight said he and Arendash are also looking for data that might demonstrate that the device could be beneficial in treating Alzheimer's. The protocol they've developed goes further than what the FDA requires and includes before-and-after baseline data, with cognitive testing, assays of spinal fluid and blood, and PET scans.

"The hope is that there is a tiny bit of efficacy. Then we can work to refine it," Knight said, adding, "No one is expecting a magic cure." ARRL Letter 12/21/2017



## FCC Penalizes Marketer of Ham-Band Drone Audio-Visual Transmitters

The FCC has imposed a \$180,000 civil penalty on a Sarasota, Florida, company that had been marketing noncompliant audio-visual transmitters intended for use on drones in violation of the Commission's Amateur Service and marketing rules. In an Order released on December 19, the FCC explained that Lumenier Holdco LLC (formerly known as FPV Manuals LLC) was advertising and marketing uncertified AV transmitters capable of operating on both amateur and non-amateur frequencies, including bands reserved for federal government use. Some of the transmitters also exceeded the 1 W power limit for Amateur Radio transmitters used on model craft, the FCC said.

"Moreover, entities that rely on amateur frequencies in operating compliant AV transmitters must have an amateur license and otherwise comply with all applicable laws for such operation," the FCC said in the Order. The FCC said that while it generally has not required amateur equipment to be certified if it operates solely on Amateur Radio frequencies, certification is required if a device can operate outside of the ham bands. Last January, in what it called an "extremely urgent complaint" to the FCC, ARRL targeted the interference potential of a series of audio/video transmitters used on unmanned aircraft and marketed as Amateur Radio equipment. ARRL General Counsel Chris Imlay, W3KD, said those transmitters used frequencies intended for navigational aids, air traffic control radar, air route surveillance radars, and global positioning systems.

In addition to paying a civil penalty, Lumenier, which has admitted to marketing the noncompliant AV transmitters, will enter into a Consent Decree with the FCC to settle the enforcement proceeding and terminate the investigation.

The case stemmed from complaints received by the Enforcement Bureau's Spectrum Enforcement Division. "The investigation revealed that some of the AV transmitters marketed by Lumenier were capable of being operated outside of the authorized Amateur Radio Service bands, including on frequencies reserved in whole or in part for federal agencies, but were not certified or otherwise compliant with the rules," the FCC said in its Order. "These AV transmitters are considered intentional radiators and must comply with the Commission's Equipment Authorization and Marketing rules." The FCC said that Lumenier ceased marketing the noncompliant transmitters after receiving a Letter of Inquiry from the FCC last April. ARRL Letter 12/21/2017



## Logbook of The World to Add Support for CQWAZ Award

Participants in CQ magazine's Worked All Zones (WAZ) award program will soon be able to use the Logbook of The World (LoTW) system of ARRL, the national association for Amateur Radio, to apply for the WAZ award and its endorsements, ARRL and CQ announced on December 14.



Amateur Radio operators will be able to use LoTW logs to generate lists of confirmed contacts to be submitted for WAZ credit. Standard LoTW credit fees and separate CQ award fees will apply. Implementation, documentation, and internal testing of the link between LoTW and WAZ is complete. ARRL and CQ are now assembling a team of external beta testers to assure that the link is ready for widespread use. A separate announcement will be made when LoTW's support for CQ WAZ is available to everyone.

Logbook of The World is ARRL's electronic confirmation system for Amateur Radio contacts. It provides a confirmation when both stations in a contact submit their logs to the system and a match between the logs is confirmed. LoTW has supported the CQ WPX Award program since 2012.

"I am very pleased that participants in the CQ Worked All Zones award program will finally be able to use Logbook of the World confirmations in their applications for WAZ awards and endorsements," said CQ magazine Editor Rich Moseson, W2VU, adding that "WPX program participants have made excellent use of this service for the past five years and we look forward to providing it to WAZ program participants as well."

"We are excited about the prospect of supporting CQ magazine's WAZ program through Logbook of The World, as it is something that many ham radio operators have been asking for," said Greg Widin, K0GW, ARRL First Vice President and chair of the Logbook Study Committee. "We believe this partnership will enhance the Amateur Radio experience for many practitioners."

Worked All Zones is the second-oldest active Amateur Radio award program, behind the International Amateur Radio Union's Worked All Continents (WAC) award. ARRL Letter 12/14/2017

## Radio Anniversaries Abound in December

December is the month in which three notable events in radio history occurred -- the first radio transmission heard across the Atlantic Ocean in 1901, the first broadcast of the human voice and music in 1906, and the first successful transatlantic Amateur Radio HF transmissions in 1921.

On December 12, 1901, Italian wireless pioneer Guglielmo Marconi succeeded in receiving the first transatlantic radio signal, transmitted from Poldhu, in Cornwall, England, to St. John's, Newfoundland, Canada. Marconi's team in Cornwall transmitted the letter "S" in Morse code, and this was heard by Marconi and his assistant George Kemp at a facility set up in Cabot Tower on Signal Hill in St. John's. On the Cornwall side, Marconi had erected a powerful spark-gap transmitter feeding a massive antenna. The receiving team used a kite antenna. The experiment proved that radio signals could be transmitted beyond the line of sight, opening the door to global wireless communication.



Marconi at Signal Hill in Newfoundland.

An article in the December 2007 issue of QST suggested that absorption may have been less in 1901 than in the 21st century, perhaps contributing to the success of the feat, which occurred during daylight on the Canadian end.

On Christmas Eve 1906, experimenter Reginald Fessenden made what may have been the first radio broadcast to include speech and music. The transmission originated at Brant Rock, Massachusetts, about 30 miles from Boston.

In 1921, ARRL sponsored two series of transatlantic tests to see if signals from previously qualified Amateur Radio stations could be heard at a receiving station in Ardrossan, Scotland. The second series succeeded, with several ham stations heard on the receiving end, using equipment far superior to what had been available to Marconi just 20 years earlier. "The Story of the Transatlantics" chronicled the events in the February 1922 issue of QST, to great fanfare. As Mike Marinaro, WN1M, recounted in "The Transatlantic Tests," in the May 2014 issue of QST, the first signal "unofficially" heard in Scotland was actually



Reginald Fessenden.

that of a pirate, identifying as 1AW and not using the prearranged transmission format.

Marconi at Signal Hill in Newfoundland. The "rough listening post" in Scotland, staffed by receiver designer Paul Godley, 2ZE, and D.E. Pearson of the Marconi Company, was equipped with a superheterodyne and regenerative receiver connected to a 1,300-foot Beverage antenna, 12 feet above ground.



Paul Godley, 2ZE.

On December 10, the CW signals of official entry 1BCG, owned by Minton Cronkhite, "were solidly heard on 230 to 235 meters," Marinaro wrote in 2014. "This signal derived from the specially designed and constructed station of the Radio Club of America at Greenwich, Connecticut -- the only station heard that morning." ARRL Letter 12/14/201

## SPOT the INFORMATION

- Elections:** The roster of new council members is included in this ARCOVER issue. As the last ARCOVER issue mentioned, the Secretary and Treasurer roles are now shared between myself AF7OO and Joe WB6MYD. The combined workload became too much for just one person. With this said, as your new club secretary I will do my best, but no one will ever be able to do all that Joe has done: The club members owe him a HUGE round of applause and thanks!
- Council Meeting January 4, 2018:** President Ray Grace WA6OWM chaired with a majority of the Council present. The focus is on making it easier for members to become and remain active. In addition to Council members who handle traditional roles such as the SwapMeet and VE, other Council members have volunteered to undertake lead Community, Membership, and Activity roles. Specifics have not been decided, but it probably would not be out of place to start thinking of these roles in terms of "increased outreach", "liaison", "Elmering", and fostering increased and positive interaction among All club members. More to follow on this at meetings and in future ARCOVERS as things get rolling.

Bill, AF7OO

## CALENDAR

**Council Meeting** - 1st Thursday of the month  
Call Joe - WB6MYD (310) 328-0817

**Club Meeting** - 3rd Thursday of the month  
**January 18, 2018- 7:30 p.m.**  
Torrance Memorial Med Center  
Health Conference Center, **Room 1**

**Club Nets** - **W6SBA WEEKLY NET**  
Every Thursday @7:30pm  
(except the night of club meetings)  
**PVUSD EMERGENCY NET**  
1st Tuesday of the month  
09:30 Hours on the W6SBA repeater

**TRW Swap Meet** Saturday,  
**January 27, 2018**, 7-11 a.m.

**VE Session** - Contact: Joe WB6MYD  
Phone: (310) 328-0817  
jmlanphen@gmail.com or w6sba@arrl.net  
(All VE sessions are scheduled for Room 4 in the Health  
Conference Center for 2018)

**Social Event** - Contact: Joe WB6MYD  
Phone: (310) 328-0817  
jmlanphen@gmail.com or w6sba@arrl.net

## CLUB SERVICES

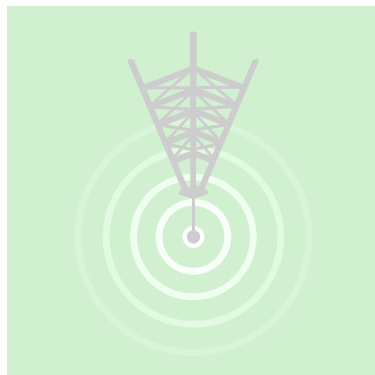
Awards Manager (HF/VHF)	Cliff - K6LH
Health & Welfare	Joe - WB6MYD
Swap Meet Chair	Tom-KI6RC, Chuck- K6CSH., Bill-KQ6Z
VE Test Liaison	Betty Barch-N6VZF
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**South Bay Amateur Radio Club Repeater**  
224.38 MHz · PL - 192.8 Hz Offset -1.6 MHz  
(See Calendar for Weekly Net Times)

## NEWSLETTER SUBMISSION

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