



K6QLF

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Amateur Radio Club of Alameda

President's Message

Most people involved in Radio Communications are aware that Guglielmo Marconi is often referred to as the father of radio. Indeed he did provide something very important to the development of radio; he was able to prove the commercial possibilities of a barely emerging technology. Marconi was neither a scientist nor an engineer, he was an experimenter who leveraged the work of Heinrich Hertz (whose name we remember as the unit of frequency -Hz).

Hertz was able to prove that the theoretical work about electromagnetic waves by James Maxwell Clerk was true. He showed this by practical

demonstration using the first spark transmitter and the very first antenna, which we know today as a dipole (less popularly known as the Hertzian antenna).

No doubt Marconi and his team had many technical difficulties to overcome, but probably the most important of these was pioneering the use of the vertical antenna (also known as the Marconi antenna). He discovered the importance of a good ground in addition to the vertical element and at the same time challenged the scientific community by demonstrating the "impossible." Radio waves could apparently pass

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ARCA/ARES Update

The EMCOMM section of the ARCA website has been brought up to date. There you can find numerous downloads including the ARES application, the ARES manual, and a copy of my last ARES/EMCOMM presentation. The presentation details our plans for getting ARES participants signed up and up to speed on Emergency Communications skills and the Incident Command System (ICS).

As you remember, one of our ARES education goals is for all members to complete the ARRL Introduction to Amateur Radio Emergency Communications (EC-001) course <http://www.arrl.org/cce/courses.html#EC-001>. This is a basic course to raise awareness and provide additional knowledge and tools for any emer-

gency communications volunteer. For ARRL members the cost of the course is \$50.00 or \$85.00 for non-members. The course has 23 lesson units, is expected to take approximately 25 hours to complete over an 8-week period. It is an online course and no manual is required but I strongly suggest that you purchase the manual (Amateur Radio Emergency Communications Course -- Level I (ARRL Item 8462)). It will make completing the course easier and is a valuable resource for information on Emergency Communications. As I write this, the ARRL has not published its 2010 schedule for this course so you should check the ARRL website (https://www.arrl.org/forms/cce/reg.html?co_num=EC-001).

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Alameda's Weekly Disaster

- Each Thursday at 1900 444.575 MHz plus (PL 88.5)
- Dec 3: David **KI6AWR**
 - Dec 10th: Max **KA1MAX**
 - Dec 17th: Tom **KJ6BIT**
 - Dec 24th: **Xmas Eve**
 - Dec 31st: **New Years Eve**
 - Jan 7th: Joe **KC6ZZT**
 - Jan 14th: Garret **KJ6GEC**
 - Jan 21st: Howard **KI6SID**
 - Jan 28th: Michael John **KF6YRG**

Upcoming Meetings at 431 Stardust Place on Alameda Pt.

- Dec. 7th - Shop Night
- Dec. - No Monthly Meeting
- Jan. 4th - Shop Night
- All meetings at 7:00 pm

President's Message (continued from page 1)

through solid objects, and could also travel over the visible horizon, a serious scientific mystery until the existence of the ionosphere was proved 26 years later. Fortunately for us, he didn't believe the establishment he just went ahead anyway.

So what is the point of all this? - see a theme yet? - Antennas of course !!! Marconi was interested in commercializing the long distance capabilities that he imagined wireless communications could provide. Here in Alameda however we have a more modest challenge - how to set up an effective communications network around our small island town.

The first step in this was the installation of our **K6QLF** repeater at the Alameda Hospital (much thanks to the hospital for supporting this endeavor). The second part of this was

adding more depth to our net control roster (thanks to all you new operators!). The next step is to improve our general communications capability which we can accomplish in several ways, the first of which I will talk about this month.

The simplex portion of our net is important for testing communications without the use of the repeater. This may be a necessity if the repeater is unavailable because of technical or operational difficulties. Not to worry though, there is good news here. Coverage can be dramatically improved by working on your antenna. No-one needs to invest heavily in new equipment, what you have is certainly up to the job. I don't know of any radios that perform substantially better than others at least in terms of sensitivity and power output. The power output of HTs is about the same

and sensitivity (how well the receiver can pick up signals) is the same regardless of brand or model. The big difference between stations that can hear and be heard is the antenna!

The rubber duck antenna supplied with your HT was optimized for size. Although it solves the problem of portability, it is seriously compromised when it comes to performance. This coming year we are going to test different types of antennas to help all of you that are hampered by that rubber duckie! Marconi figured out the antenna was highly important and we are going to follow his example. Unlike Marconi, we can be certain this is going to work.

73

David, **KI6AWR**

ARRL Continuing Education Online Course Registration

Registration remains open through **Sunday, December 27, 2009**, for these [online course sessions](#) beginning on **Friday, January 8, 2010**: Amateur Radio Emergency Communications Level I; Antenna Modeling; Radio Frequency Interference; Antenna Design and Construction; Ham Radio (Technician) License Course; Propagation; Analog Electronics, and Digital Electronics.

Each online course has been developed in segments --

learning units with objectives, informative text, student activities and quizzes. Courses are interactive, and some include direct communications with a Mentor/Instructor. Students register for a particular session that may be 8, 12 or 16 weeks (depending on the course) and they may access the course at any time of day during the course period, completing lessons and activities at times convenient for their personal schedule. Mentors assist students by answering questions, review-

ing assignments and activities, as well as providing helpful feedback. Interaction with mentors is conducted through e-mail; there is no appointed time the student must be present -- allowing complete flexibility for the student to work when and where it is convenient.

For more information or to register for any of these courses, visit the Continuing Education Program [page](#) or [contact](#) the Continuing Education Program Coordinator.

ARRL Stocking Stuffers

courtesy of ARRL.org

If you're still looking for that "just right" stocking stuffer for the ham in your life (or maybe you want to treat yourself), look no further than the ARRL Online Store. This holiday season, we are proud to present two new items: the [ARRL holiday ornament](#) and the [Pocket Ref by Thomas Glover](#).

The ARRL stoneware ornament is the perfect holiday keepsake -- and a great way to show off your service to Amateur Radio and your support of the ARRL. Imprinted with **Amateur Radio -- Goodwill, Peace, Service**, this 3 inch ornament features full-color artwork on one side and will hang on your tree or

ornament stand from its red ribbon. The ornament comes with its own attractive gift box, making this an ideal gift.

The *Pocket Ref* by Thomas Glover features tables, charts, drawings, lists and formulas, making this the go-to guide for radio amateurs, as well as contractors, students, travelers, electronics hobbyists, craftspeople, engineers and technicians in virtually every field. This pocket-sized book includes information on wire rope, hardware, tools, electric, construction, weights of materials and so much more. With its cover embossed with the ARRL's logo, this special edition of Glover's *Pocket Ref* will surely serve as an indispensable reference for years to come.

Dec. Calendar

December

4th - 6th - ARRL 160 Meter Contest

7th - **ARCA Shop Night**

12th - 13th - ARRL 10 Meter

Contest

No DEC. ARCA Monthly Mtg.

Paid Your 2010 Dues?

It's that time of year again and ARCA is now accepting Dues for the 2010 year.

Please send your check in the amount of \$20.00 (\$30.00 family) **made payable to ARCA** to:

Bruce Gillis
38 Purcell Drive
Alameda, CA 94502

ARCA/ARES Update

Continued from page 1

Two final notes: If you are getting ready to take one of the FEMA IC courses, feel free to contact me via email (KO6JF@ARRL.NET) and I will give you some hints on completing it successfully. Also, if there is enough interest, I plan to conduct a workshop on ARCA/ARES communication procedures sometime during the first quarter of 2010.

Have a safe holiday season and I hope you get the Ham goodies you are wishing for.

Sandy Lavine, **KO6JF**, City of Alameda Emergency Coordinator

Answers to Crossword Puzzler (page 5)

S	N	N	I		T	C	E	R	E		T	R	O	S
A	R	A	H		N	O	N	E	T		A	H	A	T
Y	A	R	G		E	O	R	A	D		D	E	I	C
R	E	R	I	F	L	I	F	A	M	P	A	R	E	Y
			E	L	E		W	O	T	P				
D	E	N		O	R	H			N	A	M	R	E	T
E	N	O	T	C		S	M	S	I		R	A	L	A
R	O	S	S	E	C	O	R	P	H	C	E	F	E	S
A	R	I	A		I	A	G	Y		T	I	L	T	M
P	A	M	P	E	A	R	P		G	I	G		C	A
			A	S	A	N		M	O	V				
R	E	R	O	P		R	O	T	A	L	U	D	O	M
T	O	N	C		X	E	N	I	N		T	O	L	V
M	O	I	C		T	E	N	I		S	H	I	S	T
X	S	I	R		N	O	X	O	M		R	S	W	V

The K7RA Solar Update

Recent sunspot activity--which ended on November 22--pushed up the moving average we've been tracking for several years. Because we have all the data for November, we now have the most recent 3-month average of daily sunspot numbers, which centers on October. For 2009, the 3 month moving average centered on January through October was 2.19, 2.02, 1.49, 2.01, 4.23, 5.2, 4, 4, 4.64 and 7.1. The latest value is the highest since April 2008, when it was 8.89.

The monthly averages of daily sunspot numbers are also rising, although not as smoothly as the three month average. The monthly averages for March through November 2009 are 0.77, 1.27, 3.97, 6.6, 5.07, 0.39, 6.6, 7 and 7.7. The November average is the highest since March, 2008 when it was 15.87.

Current projections show a steady quiet planetary A index of 5 for December 4, then 8 for December 5-6, and back to 5 through the end of the month. Solar flux predictions show December 4-6 at 72, 73 on December 7-10, then 75 on December 11-23. The predicted solar flux value of 75 seems to correspond to the return of an active region that we can see emerging from the dark spot on STEREO. An area that looked promising a few days ago has moved over the horizon and not produced any sunspots.

Geophysical Institute Prague predicts quiet to unsettled conditions December 4, unsettled December 5, and quiet December 6-10.

The same 45 day forecast from NOAA and US Air Force referenced above also predicted a planetary A index of 5 for December 3, but in fact all indices that day were zero, according to <http://www.swpc.noaa.gov/ftpdir/indices/DGD.txt>. The last time the planetary A index was five or above was November 24-26. The directory at <http://www.swpc.noaa.gov/ftpmenu/forecasts/45DF.html> has links to the daily forecast for the past few weeks. By sampling the forecasts, you can see that the forecasters seem to prefer a planetary A index of 5 for their minimum value. Five is an indicator of very stable and quiet conditions, but in fact conditions have been even quieter.

Low geomagnetic activity should be good for the ARRL 160-Meter CW Contest this weekend. And, perhaps we will see some sunspots return for the ARRL 10-Meter Contest the following weekend.

Over the past few years we've received reports from Dave Greer, N4KZ of Frankfort, Kentucky, usually about 6 meters. The last was in Propagation Forecast Bulletin ARLP028 in July. How do I know? By

pointing a search engine at the propagation bulletin archive on the ARRL web site.

Use any search engine, such as lycos.com, bing.com, altavista.com or google.com, enter a call sign or a word or any string of characters, then a space, followed by site:<http://www.arrl.org/wlaw/pr op/> and hit Search. In this case, I entered N4KZ site:<http://www.arrl.org/wlaw/pr op/> and found eight bulletins since May 19, 2005 containing that call.

Sunspot numbers for November 26 through December 2 were 0, 0, 0, 0, 0, 0, and 0 with a mean of 0.107. cm flux was 74.7, 73.7, 72.9, 72.1, 72.4, 72.2, and 71.4 with a mean of 72.8. Estimated planetary A indices were 6, 2, 3, 1, 2, 0 and 1 with a mean of 2.1. Estimated mid-latitude A indices were 3, 0, 2, 1, 1, 0 and 0 with a mean of 1. NNNN /EX

If you would like to make a comment or have a tip for our readers, email the author at, k7ra@arrl.net.

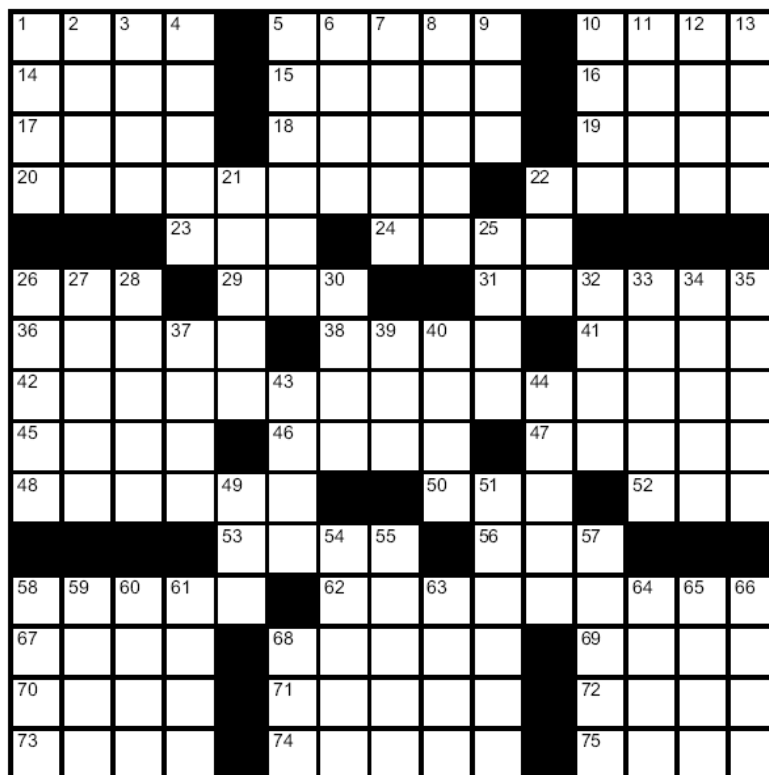
by Chris Codella, W2PA

11/20/2009

Signal Makers

Across

1. Ant. meas.
 5. Cousin of 38-across
 10. Caucasus region prefix
 14. Part of DE, on phone
 15. Lid like
 16. PW1 maker
 17. Part of 23 across
 18. Eastern zone-36 prefix
 19. NA or SA, e.g.
 20. Encoder, in a way
 22. Last stage, with 62 across
 23. Measuring dev.
 24. W5LFL's employer, once
 26. SDR part
 29. Band booking
 31. RX starter
 36. Prefix with -band
 38. Parasitic array
 41. Part of a score, maybe
 42. Political pundit?
 45. Apple spray
 46. Theories
 47. Lisbon prefix
 48. Seminal radio textbook author
 50. Equipment seller
 52. Homer's neighbor
 53. Eastern zone-28 prefix
 56. Dir., for one
 58. Dit dah doer
 62. See 22 across
 67. Tea type
 68. Dig, so to speak
 69. Eight in some circles
 70. HS denizen
 71. Part of some joints
 72. Dayton digs



73. QSL bureau process
 74. Put up, as a crank-up, say
 75. Lodges
- Down**
1. DVM predecessor
 2. "QSY!"
 3. "___ Thing"
 4. Q followers
 5. JD1 name
 6. "Get ___!"
 7. It's a gas
 8. Probably contains a 41 across
 9. W5 sect.
 10. KP4 name
 11. Harbor vessel
 12. Turin prefix
13. Apache or Cheyenne, e.g.
 21. Gates' job
 22. Hole goal
 25. Span's partner
 26. Amateur 24 across partner
 27. Having two parts
 28. RIT button
 30. Swindles
 32. 90 degrees
 33. Illegal lighting?
 34. Belfast prefix
 35. Cut down
 37. School session
 39. Ready for firing
 40. "Gee!"
 43. Kink companion
 44. Gut bug
49. MI, MO and MT QP mo.
 51. Give in
 54. Water walker
 55. Bratislava prefix
 57. CD followers
 58. SB-401, 301, 201 and 101, once
 59. EME artifact
 60. Y2K part
 61. Menu option
 63. CPU part, abbr.
 64. EP place
 65. Take home
 66. SM-land rugs
 68. Took the cake, say

(answers on page 3)

ARCA

Next Meeting: January 22, 2010
(no December Meeting)

Monthly EB Radio Club Events

- 4th Friday* Amateur Radio Club of Alameda
7:00 PM, 431 Stardust, Alameda
- 3rd Friday Mount Diablo Amateur Radio Club
- 3rd Friday Hayward Radio Club
- 2nd Saturday Electronics Flea Market in Sunnyvale
(closed in winter)
- 2nd Friday East Bay Amateur Radio Club
- 1st Sunday Livermore Swap Meet (closed in winter)
- 1st Saturday ORCA Monthly Meeting - Oakland

* Some exceptions. See www.arcaham.org for more details

Amateur Radio Club of Alameda meets 7:00 PM at
431 Stardust Place on Alameda Point.

East Bay Amateur Radio Club meets at 7:30 PM at the
Salvation Army, 4600 Appian Way, El Sobrante.

Hayward Radio Club meets at 7:30 PM 1401 West Winton Ave. in Hayward behind Hayward F.S.#6, next to the Hayward Air Ntl. Guard Base.

Oakland Radio Communications Assoc. meets at
9:00 am at Fire Station #1, 17th @ MLK Way

EB Weekly Nets

- Thursdays Alameda Emergency Preparedness
7:00 PM 444.575 MHz plus PL 88.5
- Thursdays Oakland ARES/RACES Net
7:30 PM 146.88 MHz minus PL 77
- Wednesdays ACSCT Net
7:00 PM 147.240 MHz & 442.20 MHz
- Thursdays NALCO ARES/RACES
7:15 PM 440.9 MHz plus PL 131.8
- Mondays EBARC
7:30 PM 10M "Explore Net" 28.425 MHz,
USB
- SundayVHF NTS Net
7:30 PM 145.110 (-) PL82.5

ARCA Officers

President:	David Haycock	KI6AWR
Vice Pres.:	Allen Sweet	KG6HM
Secretary:	Joe Springer	KC6ZZT
Treasurer:	Bruce Gillis	KI6CYT

Ex-Officio Directors:

CERT Liaison:	Fred Blas	KI6BES
ARES RO:	Sandy Lavine	KO6JF

ARRL Pacific Division Officers:

Director: Bob Vallio **W6RGG** - w6rgg@arrl.org
Vice Director: Jim Tiemstra **K6JAT** -
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East Bay Section Manager: James Latham **AF6AQ**
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<http://www.eastbaysectionarrl.org/>

The ARCA Newsletter is published monthly. Any articles can be used with attribution. Articles, news and photos submitted make for a more interesting newsletter; thank you!

Please submit materials for the next issue by Dec. 29th to Bruce **KI6CYT**, b_gillis@sbcglobal.net. Thanks again!

ARCA on the web:
arcaham.org and
[groups.yahoo.com/](http://groups.yahoo.com/group/arcaham/)
[group/arcaham/](http://groups.yahoo.com/group/arcaham/)