



RF



ORANGE COUNTY AMATEUR RADIO CLUB, INC.

VOL. L NO. 3

P.O. BOX 3454, TUSTIN, CA 92781-3454

March 2009

The Prez Sez..... by Nicholas AF6CF



QST, QST, QST,

Remember to keep your calendars open for ARRL Field Day in June. Field Day is always the fourth full weekend in June, which this year is the 27th and 28th. We already had a few meetings and I'm very happy with the level of preparation we will have for this traditional event. The board will discuss F.D. at every board meeting until then and I thought it would be nice to get the club's score up to where it should be: **FIRST PLACE!** With upwards of 80 members we should be able to do this, so keep us (the club) in mind when we need OPs and donations. For those of you who are new to Field Day, it's a real blast and challenge. We basically operate 24 hours straight in all kinds of modes in the name of fun and emergency preparedness. You can check out past F.D.s in

our picture gallery on the WEB site.

See you all at the meeting and 73 to everybody.

DE AF6CF

OCARC General Meeting Minutes
February 20, 2009

The OCARC February General Meeting was held at the Red Cross complex in Santa Ana at 7:00 PM on Friday evening, February 20, 2009. There were a total of 44 members and visitors present. There was a quorum of directors present, with the following officer absent – Hank Welch W6HTW.

The members and guests introduced themselves. Nicholas AF6C, our president, announced an Antique Radio Swap Meet at Ford Electronics on Saturday, Feb 21.

Kristin, K6PEQ introduced our guest speaker for the evening – John Haslett, KI6MCB. John's presentation on the **Voyage of the Manteno** was very interesting and very daring. His inspiration was based on the book, **Kon-Tiki** by Thor Heyerdahl, his intention was to sail a raft made of balsa wood, bamboo and manila rope from Ecuador five thousand nautical miles across the open sea to Hawaii. John had copies of his book available **Voyage of the Manteno – The Education of a Modern-Day Expeditioner** (St. Martin's Press),

many of our members took advantage of having a signed copy. A special thank you to Ken – W6HHC for his photos of John and his presentation.(See Pg. 18)

We had four new members introduced at this meeting – Ernie N6HY, Robert KI6LNY, Phil KI6VEN and David KG6RWU.

Motion to adjourn the meeting at 8:45 PM by K6PEQ seconded by N6PEQ.

Respectfully submitted by
Kristine Jacob – KC6TOD
OCARC Secretary

In This Issue: Page

The PREZ SEZ	1
CLUB INFORMATION	2
Visalia DX Convention Info	3
Upcoming OCARC Events	4
Ham Publications News	5
OCARC History – Part 13	6
Heathkit of the Month	7
Russian 40 M CW Beacons	11
B2V Equipment Testing	16
OCARC Board Minutes	17
HAM Cuisine-Irish Stew-Plus!	19
Misc Items for your perusal	20
Companies that support us	23

The next general meeting will be:

**Friday, March 20th
@ 7:00 PM**

We will be meeting in Room 208
In the east Red Cross Building



2009 Board of Directors:

President:

Nicholas Haban, AF6CF
(714) 693-9778

AF6CF@w6ze.org

Vice President:

Kristin Dankert, K6PEQ
(714) 544-9846

K6PEQ@w6ze.org

Secretary:

Kris Jacobs, KC6TOD
(562) 691-7898

KC6TOD@w6ze.org

Treasurer:

Paul Gussow, W6GMU
(714) 624-1717

W6GMU@w6ze.org

Membership:

Bob Eckweiler, AF6C
(714) 639-5074

AF6C@w6ze.org

Activities:

Dan Dankert, N6PEQ
(714) 544-9846

N6PEQ@w6ze.net

Publicity:

Ken Konechy, W6HHC
(714) 744-0217

W6HHC@w6ze.org

Technical:

Hank Welch, W6HTW
(562) 697-2239

W6HTW@w6ze.org

Director-At-Large:

Rich Helmick, KE6WWK
(714) 343-4522

KE6WWK@w6ze.net

James Noll, AF6DE
(714) 639-2425

AF6DE@w6ze.net

2009 Club Appointments:

W6ZE Club License Trustee:

Bob Eckweiler, AF6C
(714) 639-5074

AF6C@w6ze.org

Club Historian:

Bob Evans, WB6IXN
(714) 543-9111

bobev@netzero.net

RF Editor (rotating):

Paul Gussow, W6GMU
(714) 624-1717

W6GMU@w6ze.org

WEB Master:

Ken Konechy, W6HHC
(714) 744-0217

W6HHC@w6ze.org

Assistant WEB Master:

Bob Eckweiler, AF6C
(714) 639-5074

AF6C@w6ze.org

ARRL Awards Appointee:

Arnie Shatz, N6HC
(714) 573-2965

N6HC@aol.com

Larry Beilin, K6VDP
(714) 557-7217

K6VDP@aol.com

OCCARO Delegate:

Steve Brody, N1AB
(714) 974-0338

stevebrody@sbcglobal.net

Monthly Events:

General Meeting:

Third Friday of the month
at 7:00 PM

American Red Cross
601 N. Golden Circle Dr.
(Near Tustin Ave. & 4th St.)
Santa Ana, CA

Club Breakfast:

First Saturday of the month
at 8:00 AM

Jagerhaus Restaurant
2525 E. Ball Road
(Ball exit off 57-Freeway)
Anaheim, CA

Club Nets (Listen for W6ZE):

7.086 ± MHz CW **OCWN**
Sun- 9:00 AM – 10 AM
Rick KF6UEB, Net Control

28.375 ± MHz SSB
Wed- 7:30 PM - 8:30 PM
Bob AF6C, Net Control

146.55 MHz Simplex FM
Wed- 8:30 PM - 9:30 PM
Bob, WB6IXN, Net Control

VISIT OUR WEB SITE

<http://www.w6ze.org>

for up-to-the-minute club information, the latest membership rosters, special activities, back issues of RF, links to ham-related sites, vendors and manufacturers, pictures of club events and much more.

Club Dues:

Regular Members ...\$20
Family Members* ...\$10
Teenage Members ..\$10
Club Badge**\$3

Dues run from Jan thru Dec and are prorated for new members.

*Additional members in the family of a regular member pay the family rate up to \$30 per family.

**There is a \$1.50 charge if you'd like to have your badge mailed to you.

CONVENTION TIME IS APPROACHING!!

Visalia International DX Convention 2009

The 2009 International DX Convention will take place April 17th, 18th & 19th, 2009 at the Holiday Inn Hotel & Conference Center in Visalia, California. This is an ARRL sanctioned convention that is sponsored this year by the Northern California DX Club. It is expected to draw visitors from around the World and will feature programs from recent DX-Peditions and contest operations.

To celebrate this, the 60th year of this event, your Convention Committee has planned the following Special Attractions:

- Contest Academy by the Northern California Contest Club.
- Radio Arcala Project by OH2BH and OH8NC.
- Special Guest and Banquet Speaker: The Hon. J. Scott Redd (K0DQ), Vice Admiral, U.S. Navy (ret).
- Breakfast Program: The Desecheo, K5D DX-Pedition.

Other Convention offerings will include: DX, Top Band and Contest Forums, technical talks, many door prizes, both Friday and Saturday evening "attitude adjustments", Saturday Barbecue Lunch, Saturday night banquet, Sunday morning "power" breakfast, Vendors Exhibits and QSL card checking.

Current information and registration forms are available on the Convention web page, which can be found at www.dxconvention.org. Additional registration information can be obtained by contacting Convention Registration Chairman, Dick Letrich, W6KM via Email at dlw6km@aol.com.

If you're interested in DX, DXing or Contesting, the Visalia International DX Convention is *the* place to be. We hope to see you there!



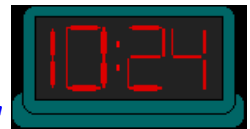
Upcoming OCARC Events!!!

(Check the club website for updates and additions
<http://www.w6ze.org>)

March 20, 2009 (Friday 7:00pm)

Jim Newcomb of Lido Mounts will be the guest speaker at our March meeting. The missing link between the mobile electronic device you purchased and enjoying that device in your vehicle is the perfect mounting solution. Lido offers a wide range of "No Holes" mounting solutions for the radio amateur. The Digital Communications DVD, originally scheduled for the March meeting, has been

moved to a later date TBD.



April 17, 2009 (Friday 7:00pm) "Precision Timing and Frequency Standard"

Dennis Kidder - W6DQ, will be our April guest speaker. Dennis, a very dynamic presenter, will talk on measurements. He will also be bringing equipment and providing a demonstration.

May 15, 2009 (Friday 7:00pm) "General Meeting"

The program for the May meeting is pending. Check back often for updates.

June 19th (Friday 7:00pm)

"Heil Presents"

Speaker: Chip Margelli - K7JA of Heil Sound will present our June Program. He will be showing us the new Heil product line. He's also an innovative entertainer in his own right.



The Orange County
 Amateur Radio Club "OCARC"

P.O. Box 3454

Tustin, CA 92781

Web: <http://www.w6ze.org>

Email: ocarc_info@w6ze.org

HAM PUBLICATIONS NEWS FROM BOB, AF6C

A Great New ARRL Membership Benefit:

QST articles from December 1915 through December 2005 are now available in scanned PDF format in the Members Only section of the ARRL website. This new service further enhances the benefit of being an ARRL member. If you need a higher quality re-print they are still available from the ARRL at a nominal price through the ARRL Technical Information Service:

<http://www.arrl.org/tis/>

The other publications that can be searched on the ARRL website - **QEX**, **NCJ**, and **Ham Radio Magazine**, are by index only. The articles are not [yet?] available for download. The QST articles are for personal use by ARRL members only.

For the past ten years or so (since 1999 when the ARRL wised up and started selling the **QST** on CD-ROM in PDF format which can be read on platforms other than Windows), I've been purchasing the CD-ROM at the end of each year and passing on the **QST** magazines to others interested in the hobby. It sure cuts down on the clutter. Now I also have access to the back issues, so often referenced in current **QST** articles, that are back before 1999.

de Bob, AF6C

A New WorldRadio Online:

Former subscribers of **WorldRadio Magazine** will be glad to know that, though the magazine has stopped publication in paper format, it is still available in PDF format on the web. The last published print issue was January 2009. The first electronic magazine ("eZine") issue, February 2009 is available at:

<http://www.cq-amateur-radio.com/WorldRadio.html>

There you'll find all your favorite **WorldRadio** columns including: **DX-World**, Kurt N. Sterba's **Aerials**, **10-10**, and more. The eZine is scheduled for monthly publication.

de Bob, AF6C

A HISTORY OF THE ORANGE COUNTY AMATEUR RADIO CLUB - Part 13

by Bob - WB6IXN, Club Historian

*** THE MODERN ERA – cont'd ***

1992

In 1992, for the fourth time Frank Smith WA6VKZ once again picked up the president's gavel. Then the club again lost its meeting place when the Republic Federal Savings bank on 17th Street was sold. The OCARC moved meeting locations to the Anaheim EOC., 909 E. Vermont, Anaheim, for February meeting! Bob WB6IXN and Nancy N6XQR were handling the CW Net on 21.175 MHz on Thursday evenings at 8:00pm local time. An information page on the local WA6TWF "Super System" appeared in Jan. 'RF' newsletter.

The Club scheduled a square dance for Fri., March 27, and a 'Camp-In' April 24, 25, & 26 at Indian Cove Campground, in Joshua Tree National Monument. WB6IXN, Bob, calls the square dances, and brother, Lee, with Don & Carol Thompson, provide the music, at the Orange Police/Fire Substation at 8525 Fort Road. Then on April 22, just before the club campout, there was a 6.1 mag. Earthquake centered very near the 'Camp-In' site to be held on April 24-26. Most Ops felt at least two aftershocks!

Field Day was held June 27-28, at the USMC Air Base in Tustin. The Club operated 5A, with Don Hughes, KC6ONZ, cooking food for the operators and visitors. The Club amassed 2,983 QSOs for 7,530 points. During Field Day on Sunday morning, the Landers 7.4 magnitude and the Big Bear 6+ magnitude earthquakes struck! Tents, trailers and equipment rattled and rolled, giving FD Ops a chance to work under real emergency conditions, since commercial power in various parts of Southern CA was knocked out from several minutes to days depending on you location. John Dawson, WA6RND, decided to operate Field Day on his own in Joshua Tree National Monument. His trailer was parked not more than 10 miles from the epicenter! WA6RND was operating CW at the time, and he was literally thrown up in the air and was unable to stand up during the initial shock! Luckily, John was not injured. Rolf Franzke, KK6QW...now KK7LX, suffered major damage to his Big Bear chalet from the Big Bear quake.

In June, the 15m CW Net moved to 40m at 7.140 MHz with John, WA6RND, as Net Control signing as W6ZE.

Jim, N6XTJ, and Chris, KJ6ZH, were auctioneers for the Oct. Club Auction. The Club netted \$277 on the auction. The Christmas Banquet was held at the Officers Club Dec.20, 1992 at the USMCAS in Tustin. There was a gift exchange. Don, KC6ONZ, was awarded the 1992 'Good of the Club' plaque.

1993

La Presidente Jane Breller, KC6TAM, took up the gavel in 1993. W6RE, Alex, was airing NewsLine Tapes as part of the club Wednesday evening nets. In Feb, "Tom" Thomas – WA6PFA was featured in an ATV article in the OC Register titled, "Do-It-Yourself TV". The article showed a picture of WA6PFA in his shack, talking with, and watching Bud Barkhurst, WA6VPP, (a past president) on his ATV monitor. WA6PFA also installed ATV at the Orange PD station for emergency use. Tom-WA6PFA was one of the founding members of the COAR (City of Orange Amateur Radio) RACES group that was always populated with many hams from OCARC. Although not mentioned in previous OCARC history articles, the Club continues to work many public service events, every year! The Club always supplies operators to help provide communications during the 120-mile-long Law Enforcement "Baker-to-Vegas" running race and to help run the Amateur Radio Booth at the Orange County Fair. The booth is sponsored by the OCCARO (Orange Council of Amateur Radio Organizations) and is supported by all the local radio clubs.

The Club Lake Hemet Campout was held May 14, 15, and 16. The Club campout at Lake Hemet got rained out! In May or June, Jim Rafferty N6RJ, a past member and the manager at the HRO "candy store", became a Silent Key.

1993 Field Day found Larry, VDP, as Band Coordinator and Don KC6ONZ handled cooking chores. Larry Beilin K6VDP announced that the Club would be operating 4A at Field Day. Field Day was held once again at the USMC's Lighter-Than-Air Base in Tustin. The Club garnered 3,063 QSOs for 8,136 points. OCARC took 1st place in California for Class 4A at Field Day!

The Club Annual Christmas Banquet was held Dec. 12 at the Country Harvest, Katella & Euclid, Anaheim.

(To be continued next month
...Bob Evans, WB6IXN, Club Historian)

Heathkit of the Month

by: Bob Eckweiler - AF6C

**The RX-1 Mohawk
Ham Band Receiver****The TX-1 Apache
Ham Band Transmitter**

Though Heathkit has been selling ham transmitter kits since their first AT-1 in 1951, their line of ham receivers was limited. Their AR-1 through AR-3 receivers were for general SWL coverage and had none of the features needed for a good ham radio receiver.

In 1958 Heathkit introduced the TX-1 Apache transmitter to replace the DX-100B. At that time Heathkit also released its first real ham receiver, the RX-1 Mohawk, a companion receiver for the Apache. The Mohawk sold for \$274.95 in 1958. It remained in production until 1964, some months after their new SB-300 receiver was introduced.

Heathkit TX-1 Apache Transmitter

The Mohawk is physically almost identical to the Apache in appearance. Controls are similarly located on the front panel and both units use the same cabinet which measures 19-1/2" W x 11-5/8" H x 16" D (Heath Part # 90-82). The Mohawk weighs in at 52 lbs. assembled. Shipping weight of the kit was 66 lbs.

Frequency coverage of the Mohawk is ham band only except that it also covers the (then new) citizen's band, as well as a continuous 4 mc band for use with optional VHF converters:

160M	1.80 mc	to	2.00 mc
80/75M	3.50 mc	to	4.00 mc
40M	7.00 mc	to	7.30 mc
20M	14.00 mc	to	14.35 mc
15M	21.00 mc	to	21.45 mc
11M	26.96 mc	to	27.23 mc
10M	28.00 mc	to	29.70 mc
6M & 2M	22.00 mc	to	26.00 mc*



*Separate converters, the Heathkit XC-6 and XC-2, allow coverage of the six and two meter VHF bands. The converters have an output of 22 mc to 26 mc.

The Mohawk has a dial-rule frequency display that utilizes a rotating drum so that only one band's scale is visible at a time. A scale for the six and two meter VHF bands is also on the drum. The drum turns with the band switch showing the dial scale for the proper band.

Electrically, the fifteen-tube Mohawk includes many of the features found in more expensive receivers of the time including dual conversion, five levels of selectivity from 5 kc down to 0.5 kc., a notch filter for reducing heterodyne interference, delayed AGC, an S-meter, a long dial for more accurate tuning with a weighted main tuning knob for smooth tuning, a 100 kc crystal oscillator, a dual crystal-controlled second oscillator for easy sideband selection, and many other features.

The 15-tube lineup is:

6BZ6	RF Amplifier
6CS6	First Mixer
12AT7	HF Oscillator / Buffer
6BA6	First IF (1682 kc)
12AT7	Dual Second Xtal Oscillator (1632 kc / 1732 kc)
6CS6	Second Mixer
6BA6	First 50 kc IF
6BA6	Second 50 kc IF
6BJ7	AM detector / AVC / ANL
6CS6	Product Detector
12AT7	Audio Amp / S-meter Amp
6AQ5	Audio Output
6BA6	100 kc Crystal Calibrator
0A2	Voltage Regulator
5V4	Power Supply Rectifier

On the front panel (L to R):

Top Front Panel Controls & Indicators:

S-Meter (Lighted)

Slide-rule Tuning Dial (Lighted)

Middle Front Panel Controls:

(three toggle switches - top to bottom)

ANL / OFF	Toggle Switch
OFF / AVC	Toggle Switch
CW-SSB / AM	Toggle Switch

BFO	Control
STANDBY / RECEIVE	Toggle Switch
NOTCH TUNE	Control
CALIBRATE	Push Button
LSB / USB	Rotary Switch
TUNING	Tuning Knob
CALIBRATE	Capacitor
ANT TUNING	Capacitor



Bottom Front Panel Controls:

OFF / AFG(ain)	Control w/switch
RFG(ain)	Control
NOTCH DEPTH	Control
IFG(ain)	Control
SELECTIVITY:	5 - 3 - 2 - 1 - 0.5 kc

	Rotary Switch
BAND:	160 - 80 - 40 - 20 - 15 - 11
10 - CONV.	Rotary Switch
PHONES	1/4" Phone Jack

Circuit Operation:

The Mohawk's Front end including RF amplifier, 1st mixer and 1st Oscillator and buffer come factory assembled and aligned. The antenna input is designed for 50 - 75 ohm unbalanced or 150 - 300 ohm balanced input. Both an UHF coaxial and a screw-terminal strip antenna connector are present on the back panel. The signal is passed to a tuned grid - tuned plate RF amplifier and to the first mixer. The first oscillator uses 1/2 of a dual 12AT7 triode; the other half is a buffer to isolate the oscillator for stability. The oscillator tunes with the main tuning control and operates on a different frequency range for each band.

Heathkit RX-1 Mohawk Ham Receiver

Output from the first mixer is at 1682 kc where the signal is amplified in the first IF and fed into the second mixer. The oscillator for the second mixer consists of a dual triode, with each triode a separate crystal oscillator. The lower sideband oscillator runs at 1632 kc and the upper sideband oscillator runs at 1732 kc. The correct oscillator is selected by the LSB-USB toggle switch on the front panel. The second mixer output is at 50-kc.

The 50-kc second IF consists of two stages of amplification. Gain in these stages is secondary to selectivity. High-'Q' coils are used instead of IF transformers. The loading and coupling of these coils are switched to change the bandwidth of the second IF from between 5 and 0.5 kc in 5 steps. A tunable 50-kc bridge T-notch filter is located between the IF stages. It may be switched in to eliminate or reduce heterodynes. One feature not found in very many receivers is a separate IF-gain control. This control varies the gain of the first IF and the last amplifier stage in the second IF. It is normally left fully up, but can be reduced to improve strong CW and SSB reception. The 50-kc second IF is actually aligned slightly above 50-kc to improve unwanted sideband suppression.

A product detector is used for SSB and CW detection. The oscillator section of the detector is not crystal controlled, but is tunable. It is normally set directly on 50 kc.

One diode of a triple-diode tube provides detection in the AM mode. The other two diodes are used for AVC (automatic volume control - also known as AGC) and as a selectable noise limiter. The triple-diode also feeds the S-meter amplifier that drives the S-meter. The S-meter amp is half of a dual-triode. The second half of the tube is the audio amplifier, which drives the audio output stage. Audio output is about two watts maximum. Audio is available at 500 ohms and 8 ohms on the back panel. The phone jack on the front panel supplies 500-ohm audio for headphones. The 8-ohm output normally drives a speaker like the optional Heathkit AK-5 speaker. When a plug is inserted, the 8-ohm output on the rear panel (but not the 500 ohm output) is muted.

Construction:

As one can surmise from the size and weight of the RX-1, it is a rugged piece of equipment. The chassis is a frame that divides the circuitry into different compartments for shielding and isolation between circuits. The mechanical tuning and band-switching design, while not as complex as the Collins 51J4, is well thought out with gears and coupling links. For the avid kit builder, this offered a break from soldering tasks and made the kit even more fun to build. Like the typical Heathkit, the mechanical designs work as well as the electrical designs and were as easy to assemble. The manual with its clear step-by-step instructions and diagrams made assembly a pleasure - as typical

with Heathkits.

A Bit of Personal History:

In my early general-class ham days in the early sixties I was the proud young teenage owner of an Apache transmitter. My dream was to have the matching Mohawk receiver. I never got to own one, but a friend, who was a year behind me in high school, got one as a present from his reluctant father who worried that the kit would never work. My friend assembled the kit and invited his father to see it “fire up” for the first time. That expression turned out to be literal; as the Mohawk was turned on for the first time smoke almost immediately billowed out of it. My friend’s father was furious, and my friend called me for help.

The receiver was brought over to the basement workshop in my parent’s home and I took a look. The kit was very neatly put together, and the soldering was clean. My friend had done an excellent job assembling the kit - almost. What had burned was obvious; insulation had melted off all the filament wiring. An examination showed that the filament wire string, at the last tube socket, was connected to the wrong terminal, which was a ground. Luckily my friend has been smart enough to turn the receiver off before destroying the filament winding of the transformer. I replaced the filament wiring, which was a chore as it ran right against the chassis and under most of the other wiring and components. When that was done the rest of the kit was checked one instruction at a time. No other errors were found.

With a bit of trepidation I turned the receiver on; the lamps lighted, as did the tube filaments. The receiver was then aligned per the Heathkit manual, and for a test I brought it up to the shack and put it in place of my NC-88 receiver for a good checkout. The checkout went better than I had ever imagined. By bedtime I had doubled my DXCC worked count, on both CW and AM. I called my friend and told him the good news, and that I thought it best I keep it for a few more days to burn it in and realign it.

That next week was a DXer’s dream to me. It was near the peak of a record sunspot cycle and the bands were alive. I could finally hear the stations that were calling me. I even got a chance to try the receiver on SSB when Marty - K2MDL dropped off his Heathkit SB-10 Sideband Adapter to give me a chance to try it with my Apache.

Alas, all good things come to an end. I returned Marty’s SB-10, and took the receiver back to my friend’s house. We took it down to his basement ham shack, and when it was turned on and worked my friend’s father was joyous.

Conclusion:

The Mohawk has a few weaknesses. The selectivity skirts are not as steep as receivers that use mechanical filters and crystal filters. Yet, they did offer five bandwidths. Mechanical filters were very expensive in those days as were crystal bandpass filters. One filter was required for each bandwidth. Heathkit went to the crystal bandpass filter in their SB-300 receiver in 1963.

In use, the weaknesses of the RX-1 Mohawk were reported to be frequency stability, poor AVC and ANL action, and audio distortion. In my few weeks with the RX-1 Mohawk, I could not honestly say I noticed any of them. Numerous fixes were published to cure these shortcomings. Compared to my inexpensive National NC-88 receiver, the Mohawk was a dream receiver!

Here follows an article written by OCARC Contributor Arend Ubbink, PA2AWU.
He is a member of PA6Z, a Dutch HF Contest Club

Radio Beacons Around 7039 KHz and Their TX Sites in Russia

This is an article about the 7039 KHz Russian Letter Beacons, some BIG Russian tx locations found via Google Earth (got inspired by ur RF newsletter page 5, Januari 2009! t u!!) and a cobbled-together SDR receiver on 40 and 80 meters, that can be listened to, via internet, from anywhere in the world.

A couple of months ago, I got interested in the Russian Letter beacons around 7.039 MHz. What started as a sort of casual interest soon increased and I wanted to know more and more about them. About the time I started to prepare and write a Powerpoint presentation about them for our radio club in Zutphen, Paul skyped me and asked me to pls provide my previously promised article for the Orange Country ARC ☺. Here follows that article:

Googling on "Russian Letter Beacons", you'll find some background info (1) about these CW beacons around 7.039 MHz, transmitting year after year

ID	HF Russian Letter Beacons shortwave frequencies (KHz.)
D	3593.7, 4557.7, 5153.7, 7038.7 , 8493.7, 10871.7, 13527.7, 16331.7, 20047.7
P	3593.8, 4557.8, 5153.8, 7038.8 , 8494.8, 10871.8, 13527.8, 16331.8, 20047.8
S	3593.9, 4557.9, 5153.9, 7038.9 , 8494.9, 10871.9, 13527.9, 16331.9, 20047.9
C	3594.0, 4558.0, 5154.0, 7039.0 , 8495.0, 10872.0, 13528.0, 16332.0, 20048.0
A	3595.1, 4558.1, 5154.1, 7039.1 , 8495.1, 10872.1
F	7039.2 not heard by me, last 3 months
K	5154.3, 7039.3 , 8495.3
M	5154.4, 7039.4 , 8495.4, 10872.4, 13528.4, 16332.4

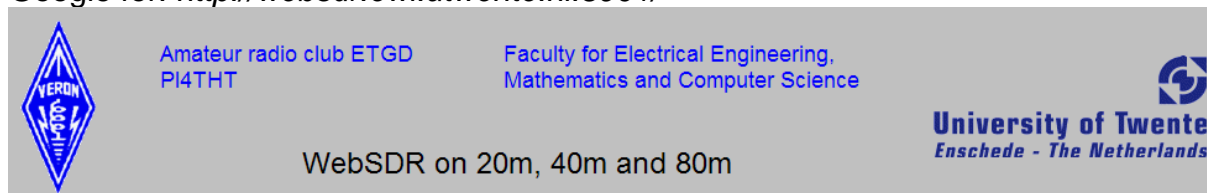
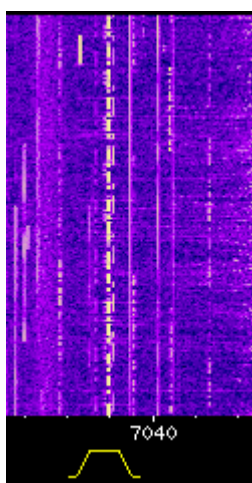
Table 1: Russian Letter Beacons sorted by frequency

As you can see, Moscow is centered on 7039.0 KHz, probably not by accident.

The lowest beacon tx frequency is 7038.7 KHz. Letter –D-, location Odessa, north of the Black sea. The highest frequency I've heard so far is 7039.4 KHz, letter –M-, location Magadan, north of Korea.

Every morning, before jogging with my dog Babouch at 0645 local time, I listen to them on an interesting internet site created by Pieter Tjerk de Boer, PE1FWM, who works at the University of Twente, which is 46.27 km (28.75 miles) from my place. If you listen on that site, you can hear how OUR 40 mtr band sounds, day and night! Please feel free to peruse that site. You will find photos of his simple SDR receiver which, of course, is still under construction/modification/improvement!

Google for: <http://websdr.ewi.utwente.nl:8901/>

I only listen the 40 mtr beacon frequencies, around 7039 KHz.
 Picture to the left: you see vertical lines, in Morse.
 Picture: 23:35 local time: 59+:
 –C- = Moscow (2000 km) and left of it:
 –D- = Odessa(1900 km). In between these two:
 –S- = Arkhangelsk(2600 km). To the utmost right:
 –A- = Astrakhan(3000 km) situated north of the Kaspic Sea.

Distances from my RX QTH: Zutphen, The Netherlands

picture 1: Waterfall from University of Twente SDR rx. Abt 7039 KHz. D, S, C and A in CW

From Tony Sparks, KB9YIG, I ordered my Rockwell Lite v9.0 SDR circuit board + components. This is an incredibly good / astonishingly fine SDR receiver. My Ham friend, Frans, PA5CA finds it has a more comfortable audio quality than the AF from his FT2000. A month ago, I attached, to a low spot in my postage-stamp-sized garden, a 40 M sloping dipole. Tho not 55 meters high, as is the antenna on the university, it still works very well!

In a corner of my living room sits, on its side, not in use... my XCVR, an FT1000MP.

Below: locations in degrees: Cold War - / Pre Google Earth-coordinates, I guess.

ID:	Place:	Country:	Coordinates:
D	Odessa	Ukraine, Black Sea	30.70E 46.48N
P	Khaliningrad	European Russia	20.50E 54.72N
S	Arkhangelsk	European Russia, , near White sea	41.00E 64.66N
C	Moscow	European Russia	37.58E 55.75N
A	Astrakhan	Russia, near Caspian Sea	48. E 46. N
K	Khabarovsk	Asiatic Russia, along the Amur river	135.10E 48.50N
M	Magadan	Asiatic Russia, Sea of Okhotsk	150.83E 59.63N

Table 1: Russian Letter Beacons with coordinates

The coordinates with the following pictures were found after googling the internet. If you copy these for a search on Google Earth, you will find interesting locations. Try: Magadan! Read about its history: incredible!!(2)

Be aware that, more than once, you will not find the exact location, nor info elsewhere on the internet about power or tx antenna. You can probably see antenna masts at the Magadan location. No ham living there could or would tell you anything about it; Military secret.

By the way, looking around Khabarovsk on google earth , I found a picture, situated near the river numbered PA013751, with 12 huge antenna masts visible far away, nearby the horizon. Photograph by Mr. Habaroff



After some research in the neighbourhood, I found the coordinates: 134.821056E 48.485691N The horizontal "road" is 2.5 km long and the vertical "roads are 1.3 km long.



The shortwave b'cast station of the Dutch "Radio Nederland Wereld Omroep" stopped ruling the airwaves from their TX location in Flevo Polder, The Netherlands on 04/17/2008.



5.455439E 52.362220N. Those were the days! Other countries/places appeared to be able to transmit on lower cost. Below: Tashkent: 69.150818E 41.219673N There you see why!



In a row: 20 huge construction masts. And more!

By the way, do you know where the tallest (guyed) structure of the world stood?
NOT in The States, No sir! Not in Taipei 101, nor the CN Tower,
It was in Poland, between 1974 and 1991 in the town of Gabin, 96 km northwest of Warsaw. Height:
646.38 metres (2,120.67 ft). A tall radio mast of the Konstanytown long wave transmitter. Photo below



Because of a high voltage potential (120 kV), the mast stood on 3 2-metre-high insulators. It operated as a half wave radiator due to its height. But something went dramatically wrong. The mast collapsed due to an error in exchanging the guys on the highest guy point of the mast. Research this on Google and you'll find out what happened.

If you want to find information about antennas / structures in general that have found their most stable form on the earth again after service, look at:

http://en.wikipedia.org/wiki/List_of_catastrophic_collapses_of_radio_masts_and_towers

Greetings from Arend, PA2AWU
member PA6Z Dutch DX and Contest Group
Feedback is always welcome ☺: pa2awu@amsat.org

Footnotes:

- (1) http://en.wikipedia.org/wiki/Letter_beacon
- (2) <http://en.wikipedia.org/wiki/Magadan> note: Wikipedia in Dutch describes an for me unbelievable history of Magadan. But the English story is much shorter and different ! Well you can try to read and understand it!? <http://nl.wikipedia.org/wiki/Magadan#Geschiedenis>

COAR RACES HAMS Testing Equipment for Baker-2-Vegas Relay Race – 2009

by Ken – W6HHC

Each year, over 240 law enforcement agencies participate in a relay foot race through the desert, called “Baker-to-Vegas” or just “B2V”. This year, the race is scheduled for March 14-15 and consists of 20 legs that begin near Baker (in California) and heads towards the small town of Shoshone...and then heads over the mountains to Las Vegas.

The hams of the City of Orange COAR RACES group have been planning to provide communications for the Orange PD running team along the entire 120-mile course. The photos below show a B2V equipment testing workshop held in February for two of the five communication centers and vehicles that were testing the B2V equipment.



Testing equipment for the Pahrump Comm Center are: (L-R) Nicholas AF6CF, Mike-WA6OUE, Ken-W6HHC, David-KG6WRU, Kathleen-K6IBH, and Bob-AF6C



Testing equipment for the Las Vegas Comm Center are: (L-R) Robbie-KB6CJZ and Steve-KI6DDE

Remember to pay your OCARC 2009 Dues!!

March 31st is the last chance to pay your 2009 club dues and not be in arrears.

OCARC**Board Meeting Minutes****2009-03-07**

The ORARC Board meeting was held at the JagerHaus Restaurant in Anaheim, at 8:15 AM on Saturday, March 7, 2009. There were a total of 11 directors and visitors attending. There was a quorum of directors present, with the following two directors absent: Dan – N6PEQ and Hank W6HTW.

DIRECTOR REPORTS:

- PRESIDENT – Nicolas AF6CF asked for newsletter volunteers for May (Ken W6HHC volunteered), June & July are still open.
- VICE PRESIDENT – Kristin K6PEQ has speakers lined up for the next eight months, she has done a great job of providing the club with interesting presentations.
 - March – Jim Newcomb – Lido Mobile Mounts
 - April – Dennis Kitter W6DQ – Precision Timing and Frequency Standard
 - May- pending
 - June- Chip Margelli K7JA- "Heil Presents" New Products
 - July – ICOM
 - August- Gordon West WB6NOA
 - September – pending
 - October – Auction
- Treasurer – Paul W6GMU reported that the club had a balance on hand of \$4,046.16 in the bank accounts. The club audit for 2008 was verified and signed by Kristin – K6PEQ, Dan – N6PEQ and Kristine KC6TOD.
- Secretary – Kristine KC6TOD thanked Ken for handling the February Board Meeting, the minutes approved and brought up Field Day to be discussed in new business.
- Membership BobAF6C reported we had 46 members renew, 3 new members, 7 Honorary Members, one Life Member and 31 yet to renew. Bob also reported the sale of the T4X transmitter and L4B amplifier. He also asked for someone to back him up on the badges

- Ken W6HHC and Kristin K6PEQ both said that they would help.
- Publicity – Ken W6HHC will work to get business cards OCARC after his commitment to Baker to Vegas.
- Director at Large – James AF6DE is attempting to contact local ARRL for ARES information and designated person. Suggestions were made to him to contact Dick Norton or Carl Cardenas.

OLD BUSINESS:

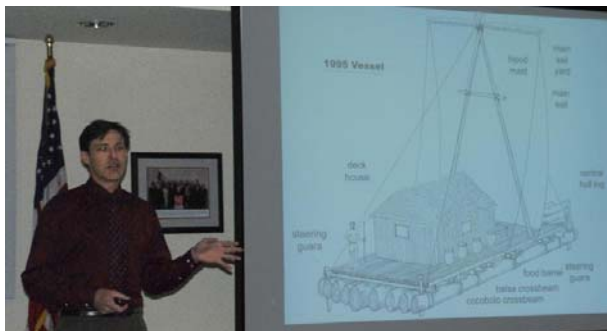
- **QSL Printing and Mailing** – the QSL design for the club card was circulated and reviewed by the directors – Bob AF6C did some fine-tuning on the QSL card. Motion to approve was made by Ken W6HHC and seconded by Kristine KC6TOD.
- **Morse Code Class Kristin**
K6PEQ and Larry K6YUI will hold the class on Saturday, March 7th, 1:00 PM at the QTH of N6PEQ/K6PEQ.
- **Field Day June 26th-28th, 2009**
 - Field Day planning meetings to be held immediately following each month's board meetings (first Saturday of each month)
 - Discussed chuck wagon – Kristine KC6TOD to be in charge with similar menu as last year
 - Suggested Field Day donations solicited in advance at meetings to offset the costs. Donations at Field Day are voluntary, the Boy Scout troop participating always make a donation to help.
 - Field Day Captain – Larry K6YUI is canvassing for volunteers, band captains needed at this time.
 - Towers are being stored at K6LDC's home
 - Bob AF6C to help with Field Day planning
 - Paul W6GMU has written letter to commander of base requesting use of the area same as previous year

Board – cont'd from Pg 17**NEW BUSINESS**

- Bob AF6C updated website for activities
- Generator stored at Bob AF6C, he has done maintenance on the generator and found a possible carburetor problem
- Discussion on suggested activities for the club, Kristine KC6TOD mentioned Antennas in the Park on May 9th.
- Orange County Fair – Kristin needs volunteers as soon as possible for Saturday, July 18th and Wednesday, August 5th. She needs to have everyone's full name including middle initial and zip code to be submitted for Megan's Law. This is very important. Paul provided checks to cover the 2009 OCCARO membership dues and \$100 donation to the Orange County Fair.
- Discussion regarding the Inland Empire not hosting a 2009 SW Division ARRL Convention this year. George N6VNI guest provided this information. Santa Barbara will have a convention over a two-day period to make up for the Inland Empire withdrawing and they are looking for volunteers.

Bob AF6C made the motion to adjourn and Kristine KC6TOD seconded it. Meeting adjourned at 9:30 AM.

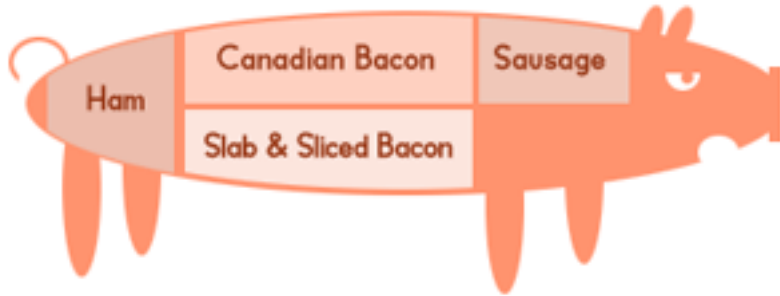
Respectfully submitted: Kristine Jacob KC6TOD

General Meeting – cont'd from Pg 1

February Speaker John Haslett –KI6MCB describes a drawing of the first raft he used in 1995



John – KI6MCB shows an early artist painting of a native raft that uses different sails and will be used for his next adventure.



Ham Cuisine

by Kristin, K6PEQ

Beef and Irish Stout Stew

In honor of St. Patrick's Day, we are breaking away from ham and diving into Irish stew.

Enjoy!

Ingredients:

2 pounds lean beef stew meat
 3 tablespoons vegetable oil, divided
 2 tablespoons all-purpose flour
 freshly ground black pepper to taste
 1 pinch cayenne pepper
 2 large onions, chopped

1 clove garlic, crushed
 2 tablespoons tomato paste
 1 1/2 cups Irish stout beer (e.g., Guinness)
 2 cups chopped carrot
 1 sprig fresh thyme
 1 tablespoon chopped fresh parsley for garnish

Cooking Directions:

Toss the beef cubes with 1 tablespoon of vegetable oil. In a separate bowl, stir together the flour, salt, pepper, and cayenne pepper. Dredge the beef in this to coat.

Heat the remaining oil in a deep skillet or Dutch oven over medium-high heat. Add the beef, and brown on all sides. Add the onions, and garlic. Stir the tomato paste into a small amount of water to dilute; pour into the pan and stir to blend. Reduce the heat to medium, cover, and cook for 5 minutes.

Pour 1/2 cup of the beer into the pan, and as it begins to boil, scrape any bits of food from the bottom of the pan with a wooden spoon. This adds a lot of flavor to the broth. Pour in the rest of the beer, and add the carrots and thyme. Cover, reduce heat to low, and simmer for 2 to 3 hours, stirring occasionally. Taste and adjust seasoning before serving. Garnish with chopped parsley.

Serving Suggestions:

Drink with a Guinness!



Attention Members!!!

Do you know a fellow ham that would be interested in joining OCARC? Do you have a friend that is curious about ham radio and wants to learn more about our hobby? Why not invite him or her to one of our exciting monthly meetings?!?! The meetings are fun, informative and entertaining. Check out the upcoming events page in this newsletter to see the exciting speakers we have lined up for the next couple of months. Don't forget about the great raffle prizes too. So bring a visitor to one of our meetings, and help **your** club expand!

Make sure to inform your friends of our club's website, which is always kept up to date. Information on club meetings, activities and our newsletter archive make it a worthwhile site to surf! <http://www.w6ze.org>

Unscramble the St. Patrick's Day Words!

GLDO

EDARPA

NRIEDLA

OKSMRCHA

PCULNEERHA



Renew Your OCARC

Membership

It's that time of the year again. Time to renew your OCARC membership for 2009, if you have not already done so.

Help continue to support your growing club. There are many entertaining monthly meetings, speakers and events planned for this year. But it can't happen without your support for OCARC.

Dues can be paid at the monthly club meetings, club breakfasts or via snail mail. Regular dues are only \$20. Additional family members are \$10 (Total). Membership for teenagers is only \$10 as well. What a deal!



OCARC
P.O. Box 3454
Tustin, CA 92781

SUBMIT AN ARTICLE

You don't need to write like William "Bill" Shakespeare in order to write an article for the RF Newsletter. In fact, we prefer articles without the words "Thy", "Whilst", "'Tis" and "Oft".

Do you have an idea for a newsletter article? Maybe you have acquired a new piece of equipment, designed or constructed a new antenna, took a trip focused around ham radio, want to share an amateur radio related experience or discuss a technical topic. Why not write an article for the monthly RF newsletter? The article can be short or long, simple or elaborate, and can even include pictures!

The RF newsletter relies on articles from our members. So why not give it try? Write an article and send it to the newsletter editor. It's fun, and at the same time, your contribution helps support our club and hobby!

If you want you can also try your hand as the newsletter editor. We have a rotating editor monthly and would love to have someone new give it a try. There is a template and it is easy and fun!!



PLEASE SUPPORT OUR SPONSORS

The following organizations support our club's events in numerous ways. Please consider them when making your Amateur Radio and Electronics purchases:

A&A Engineering

<http://www.a-engineering.com/>

ADI / Pryme Radio Products

<http://www.pryme.com/>

Burghardt Amateur Center

<http://www.burghardt-amateur.com/>

The DX Store

<http://www.dxstore.com/>

Elecraft

<http://www.elecraft.com/>

Ford Electronics

<http://www.fordelectronics.com/>

Ham 4 Less.com

<http://ham4less.com/>

Ham Radio Outlet, Anaheim, CA

<http://www.hamradio.com/>

Hamstore.com

<http://www.hamstore.com/>

Heil Sound

<http://www.heilsound.com/>

Hobby Radio stop

<http://www.bearcat1.com/scanners.htm>

ICOM Elmer.Com

<http://www.icomelmer.com/>

M2 Antenna Systems

<http://www.M2inc.com/>

MFJ Enterprises

<http://www.MFJenterprises.com/>

NGC Company / Comet

<http://www.cometantenna.com/>

Nifty Ham Accessories

<http://www.niftyaccessories.com/>

Photo QSLs.com

<http://www.photoQSLs.com/>

Universal Radio

<http://www.universal-radio.com/>

Vibroplex

<http://www.vibroplex.com/>

Icom Elmer.Com

M2 Antenna Systems

Nifty! Ham Accessories

HEIL SOUND
Hearing Is Believing

MFJ
THE World Leader in Ham Radio Accessories!

VIBROPLEX®

A & A Engineering

The DX Store
Amateur Radio Equipment for DXers!

Whether you're operating from halfway around the world or just up the hall from your living room, you want equipment you can count on to perform... You want

HEIL SOUND
sales@dxstore.com
www.dxstore.com

NCG COMPANY
COMET

Ham
projects.com

Ham4Less.com
Your online discount store

universal radio inc.

HAM RADIO OUTLET
WORLDWIDE DISTRIBUTION

Hamstore.com
Your internet source for quality used gear

ELECRAFT

PRYME®
Radio Products

ADI

FORD ELECTRONICS
ELECTRONIC COMPONENTS
COMMERCIAL EQUIPMENT
TEST EQUIPMENT