



Mike Shy

Official Publication of
Society Radio Operators



Volume 74 Number 3 & 4

March - April 2014

SRO Spring Auction April 10th

at the Salvation Army - Norridge - 7:30 PM

Spring is slowly coming but should be here by the April meeting. We have had a couple early hamfests and a bunch more are scheduled for May, June and later. In the mean time, look in your drawers and closets for things you have not used in a while. Someone may be looking to have it and use it by taking it off your hands in exchange for some money. As in the past, the SRO cut will be 10% up to \$5.00. We always have a great time so put the 10th of April on your calendar and bring a friend.

Upcoming Events

CFMC Regular Meeting

April 24th - 8PM

Salvation Army 8354 W Foster Ave

Proper Grounding in the Shack

by Howard N9KTW



The Society Radio Operators Business Meeting Agenda Date February 12, 2014

At our January 29 board meeting, President Leibovitz prescribed use of an SRO meeting agenda form. Since December 2013 minutes were then in process, they follow a combination of the old and new forms. These February minutes comply with the new form. Here, an arbitrary outline replaces the content-following organization and humor of our old form. The secretary hopes that the more dignified, formal presentation will please our members. Please comment on changes.

Call to Order at 8:01 p.m.
Welcome to all (Nothing to report)

Welcome Guests (Nothing to report)

Entertainment

Tonight's program is the story of Watson, the IBM supercomputer. In 2011, Watson won the TV game show Jeopardy. The machine's competitors were the two best human players in Jeopardy history. The program traces Watson's development and programming, somewhat like training athletes. Since its Jeopardy days, Watson has been very helpful in medical research.

Unfortunately, about 25 minutes into the video, the projector went into a loop. Since our allotted meeting time was nearly over, we ended our presentation at this point. After the meeting, a replay of the video on another player proved that the DVD is all right. (Some video players aren't as fault-tolerant as others. Maybe a reading error caused the

problem at the meeting.)

Minutes – Call for reading or to waive the reading of the minutes (Nothing to report)

Events Reports

Past Events

The receive site of the club's northwest repeater is down. This site is in a field, with no access by road. For the time being, the site is under deep snow and is unapproachable.

Upcoming Events

SRO technical representatives will soon repair the northwest repeater.

Old Business

Call for old business (Nothing to report)

New Business

Edgebrook Field House is now charging for our meeting room. Mike Brost WA9DTS brought up these charges at our January board meeting. The main Edgebrook room is more expensive than the smaller back room. Tonight, to save money, we've moved to the back. According to the Treasurer, the charge for two hours tonight is \$30. Our meeting will necessarily be shorter than usual. Mike answers two questions about the room: For this room, no fee waiver is available to SRO. Mike negotiated room arrangements with the county's Forest Park office.

The club discusses possible arrangements here for our annual party. Estimating 4 hours in this room, the party would cost \$120. We might save money by preparing our own food. Otherwise, we could hire the same catering service at a considerable additional fee.

Members discussed potential

alternatives to Edgebrook Field House. In alphabetical order...

[-A-] The Citadel Salvation Army Center at Foster & Cumberland, Thursdays from 7 to 9 p.m. (8354 West Foster Avenue Norridge, IL 60706-3032; 708-456-6220;

[-B-] Devon Library (Northtown Branch: 6435 N. California, 60645; 312-744-2292; capacity 100)

[-C-] Giuseppe's at Lee & Mannheim: EVF's Dive club meets there. (1062 Lee Street Des Plaines, IL 60016; 847-824-4230)

[-D-] Lincolnwood Community Center, now in use by Mac Club. Contact Henry K9KDE, VE. (6900 N. Lincoln Ave., Lincolnwood, IL 60712; 847-673-1540. Rental Rates for Village Resident: Large room \$95 per hour; Small Room \$55 per hour. Rental Rates for Non-Resident: Large Room \$160 per hour; Small Room \$110 per hour.)

[-E-] Lincolnwood Library: Must exit at 8:50 p.m. (Roehri theater for 125. Has reservation policies.)

[-F-] Mark: Maybe his business

[-G-] Papa Chris Restaurant, near Leaning Tower. Must eat. Can use projector. Closes at 9 p.m. (6235 W. Touhy Ave., Chicago, IL 60646, near Merrimac & Mobile in Forest Glen; 773-631-4322)

[-H-] Police station communication room (5151 Milwaukee Ave Chicago, IL 60630)

[-I-] Portillos Hot Dogs by Lutheran General (8832 W Dempster Street, Niles, IL 60714; 847-795-0600)

[-J-] Skokie City Hall. Basement room might be available. (From Jim Barnard) Closes at 9 p.m.

[-K-] Walden Center on West Ridge (Touhy / Kedzie). Problem: No-food rule.

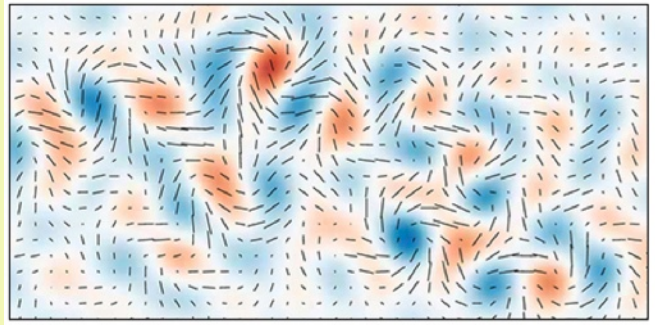
Our next meeting will be on Thursday, April 10 from 6 to 9 p.m. The meeting location is the Salvation Army's Norridge Citadel Corps Community Center. The presentation for this meeting is the spring auction. VE Mark promises that he will announce the meeting on the CFMC Web site.

Our next SRO board meeting will be on Wednesday, April 30 at BQS Realty.

President Leibovitz adjourns the meeting at 8:27 p.m. or thereabouts.

Footnote. Humor, as in previous minutes, has its costs. The seltzer bottle, baggy pants and painted-on smile can hurt feelings. Sometime in past columns, maybe they did. I apologize.

Respectfully,
Jim Hawes AA9DT, Secretary



BICEP2 Collaboration

First direct evidence of cosmic inflation

Almost 14 billion years ago, the universe we inhabit burst into existence in an extraordinary event that initiated the Big Bang. In the first fleeting fraction of a second, the universe expanded exponentially, stretching far beyond the view of our best telescopes. All this, of course, was just theory. But now researchers from the BICEP2 collaboration have announced the first direct evidence for this cosmic inflation. Their data also represent the first images of gravitational waves, or ripples in space-time. These waves have been described as the "first tremors of the Big Bang." Finally, the data confirm a deep connection between quantum mechanics and general relativity.



From
Jean's
iPad

SRO 2014 Roster

The roster will be included with the March - April issue.

Message from the President - Mike WA9EVF

I hope all of you are well and enjoying the beautiful winter we are having. I heard that we have had our 3rd highest snowfall in recorded history and it does not seem that bad to me. I remember the snows of 67 and 79 and even April 75 and I don't think this one compares. Maybe I am just getting used to it.

Somewhere in Mike Shy you will find two files I have sent to our editor. One is a list of maritime channels. With the event of cheap radios with lots of memory channels you might want to store them somewhere in the unlikely event that you may need to call for help while boating this summer. Within the continental USA boundaries you do not need a maritime radio license anymore. You can use them while on the water. Another attachment is a chart on how to find the distance to the horizon. You can use it to find how far out you should be able to hit a repeater from the site.

As you will find in other places in this publication we have had to move our meeting site due to the Field House starting to charge for use of their space. We will be meeting at the Salvation Army building on Cumberland and Foster. Unfortunately Wednesdays are not available so we will be meeting on Thursdays instead. We will also be shifting our hours to 7pm till 9pm. Sorry for any inconvenience. Thanks to our treasurer Mike WA9FTS for finding this site.

Next meeting is our bi-annual auction. Bring some of your goodies that have worn out their welcome at your QTH and lots of cash that have been making your wallet bulge out of your pants.

See you there...

73's DE Mike WA9EVF

Meeting Attendance

Edgebrook Field House Feb 12, 2014



Mike WA9FTS

Cathy KZ9ZWZ

Larry KB9OOR

Marc AB9OP

Don W9RA

Mike WA9EVF

Pete WV9P

Steve K9VO

Jim AA9DT

Jim Barnard

Jean KB9FXL

Upcoming SRO Events - 2014

Regular Meeting - Apr 10th at the Salvation Army - Norridge - 7 PM

Board Meeting - Apr 30th at BQS Realty - 7:30PM

Regular Meeting - Jun 12th at the Salvation Army - Norridge - 7 PM

Board Meeting - Jul 30th at BQS Realty - 7:30PM

Regular Meeting - Aug 14th at the Salvation Army - Norridge - 7 PM

Regular Meeting - Oct 8th at the Edgebrook Field House - 8PM



If you move, let the Editor know your new mailing and email addresses. It is our way of getting Mike Shy to you each time.

Foxhunt Report



CFAR Hunt - March 1st, 2014 - by John WD9EXW

Once again with crummy weather in play for the evening, we didn't want to hide far, a spot with ample room, safe parking with little danger to hunters.

Our last hide for a month, we thought we'd use take the opportunity to hide at a local college. We checked out a couple close by spots, and we were prepared to be outside, but realized the parking garage stair well would be dry and warm. Bingo. We made sure to chat with local gendarmes to explain.

The foxes were here: https://maps.google.com/maps?+road&hl=en&sll=41.779625,-88.092853&sspn=0.007073,0.010192&geocode=Fw7fwld4MvB-g%3BFVR_fQldf8q_-g&mra=me&mrsp=1.0&sz=17&t=m&z=17

Parking lot stairwell location at Google Maps: 41.776234, -88.097158

Google reports 14 mi away. We were high, 3rd level, with vertical tape measure beam pointed generally towards the start point, 5 watt mobile rig. We had muffled audio reports last week, so I made sure to check the mic connections and cord. The issue did not re-appear.

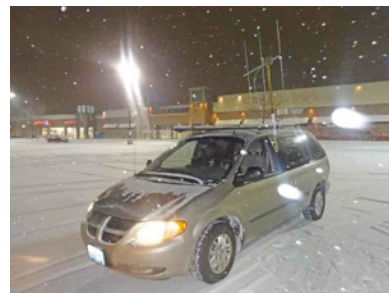
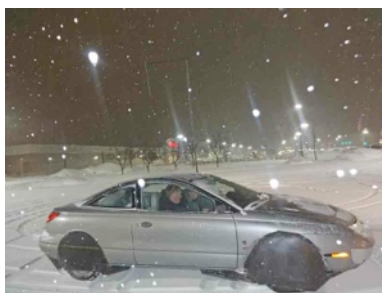
On the main approach, it was not readily apparent that there was multiple stairwells, which threw off a couple hunters, who ran up and down the other side. And we were careful about not laying footprints and tire tracks which are sometimes helpful to hunters.

We started @ 8:10 with all hunters hearing us.

We saw Matt's pickup first, paused near our entrance. We discovered later that Matt was already out at the time, running in the garage. We had a fairly equal mix of hunters discovering us while coming up, and down the stairs. No one entered from the (one step away) third floor door. And we surprised nearly everyone, as the stair layout meant not seeing us until a hunter turned the corner onto our flight. Close finish again too, where an extra red light, single wrong turn, or route made a difference!

- #1 Matt KC9SEM, Patty N9PLS, Jake and Mack @ 8:54
- #2 Bill (hunting with Tony AA9CC & Joanie KC9QQY) @ 8:55 Without knowing Bill was in, Tony scored separately just a moment later.
- #3 Mike WA9FTS, Tom N9IHZ @ 9:31
- #4 Don W9RA @ 9:31 Just in time for the pics.

Munched at Passero's Pizza at 53 and Maple.



3D Printers and 3d-Printed Cars

Submitted by Jim AA9DT

Functional Auto Drives Out of 3D Printer
And 3D Printers You Can Buy (Reasonable)

Who needs the Auto Show? Now you can print a vehicle! At Kor EcoLogic, Jim Kor's Canadian company, a unique car is taking shape. Mr. Kor calls his car the Urbee. Under the hood is a hybrid power source, including electric motors and an eight-horsepower backup gas engine.

The Urbee's body emerged from large 3D printers at contract manufacturer Statasys. Statasys (SSYS) uses fused deposition additive modeling (FDM) to manufacture such parts.

Kor EcoLogic has demonstrated a drivable prototype of the Urbee. With its svelte, printed body, the two-seat car wowed trade-show attendees at TEDxWinnipeg in 2011. If a production model becomes available, it should achieve 200 mpg. The top speed will be 70 mph.

More about 3D printing: Statasys, printer of the Urbee car, owns MakerBot. For those who don't recognize MakerBot, it's a brand of 3D printers for the home and office. The raw materials for such printers are fine filaments of plastics such as PLA and ABS. With such a printer, one might make a replacement knob for a radio. These desktop machines can't machine metal filaments. The parent company also manufactures industrial machines. These can print both plastic and metal. Such machines can print anything from gears to airplane wings.

Dell has begun remarketing MakerBot Replicator home printers. Dell competes with HP, whose 3D product is the 3D DesignJet. Recently Radio Shack stores began offering the Affinia. Affinia is a U.S.-made machine from Minnesota.

Folks without 3D printers can go online and print whatever they want through a service bureau such as Shapeways. The only requirement is a 3D file. The bureau handles production and fulfillment, including worldwide shipping. The industry standard format for the necessary 3D printer files is "STL" (stereo lithography). Programs such as SolidWorks can produce such files. Radio Shack sells its own 3D CAD software.

Desktop printer pricing follows the usual high-tech curve: A few years ago, a desktop machines would set you back 10 kilobucks. Today, a Radio Shack machine is under \$2,000, cheaper than a LaserJet Series II in 1987. Of course, that \$1,699 printer at Elek-Tek would cost \$3,583.26 in today's dollars. Plus, an Elek-Tek store would be difficult to find today!

REFERENCES

- + Affinia printer video: http://www.youtube.com/watch?v=tpT_OvSB1Ao
- + Chilcote, Ryan. 3D Printed Cars a Reality? Take a Ride in One;
+ <http://www.businessweek.com/videos/2013-11-08/will-3d-printing-revolutionize-your-life>
- + Dell. Makerbot Replicator & Solidworks, etc.: <http://goo.gl/oqANph>
- + HP DesignJet 3D printer: <http://goo.gl/saU4to>
- + MakerBot:
+ <http://store.makerbot.com/replicator2?gclid=CIPTrSP5rwCFSo7AodKioAcw>
- + McCue, T.J. (Contributor). 3D Printing Industry Will Reach \$3.1 Billion
+ Worldwide by 2016; <http://wohlersassociates.com/blog/2011/10/jim-kor-and-his-car/>
- + Radio Shack & Affinia printers:
+ <http://www.radioshack.com/product/index.jsp?productId=23160006>
- + Shapeways: <http://www.shapeways.com/>



Affinia Printer at Radio Shack

Afinia H479 H-Series 3D Printer

Model: H479 | Catalog #: 277-181

Price: **\$1599.99**

★ ★ ★ ★ (No reviews)
Be the first to Write a Review

ABS Filament is available in:



PLA Filament is available in:



✓ **Free Shipping**
(Free Ground Shipping on orders over \$25 [Details](#))



How far is the horizon?

The answer to this question lies in the height of the observer. Since the Earth's surface is curved, the higher your point of view, the farther you can see. Using some basic geometry, some simple math and making a few assumptions, we can approximate the distance to the horizon and calculate how far away distant objects can be seen.

VISUAL DISTANCE TO THE HORIZON

This is determined by:

- ① Measuring the height of your view in *feet* above the surface
- ② Taking the square root of the height.
- ③ Multiplying the result by 1.224 to get the distance to the horizon in *miles*.

Example:

A child 3 feet tall

Square root of 3 x 1.224 = 2.1 miles

An adult 6 feet tall

Square root of 6 x 1.224 = 3.0 miles

CALCULATING DISTANCES

Assuming these conditions

- The Earth is a perfect sphere.
- Visibility is unrestricted.
- Light rays are not refracted by water vapor.
- Radius of the earth is 4000 mi.

Viewing Sears Tower from the lake

Standing on a boat 10 feet above the water gives a horizon distance of about 4 miles

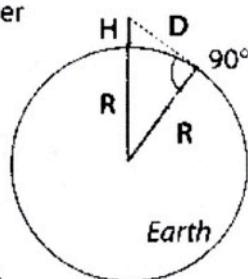
Sears tower, at a height of 1,450 feet would appear upon the horizon at a distance of about 47 miles

(Square root of 1,450 x 1.224 = 46.6 miles)

So on a 10 foot boat on the lake, Sears Tower is visible from about 51 miles away.

(4 miles + 47 miles = 51 miles)

THE GEOMETRY



Distance to horizon increases with the height of observer

$$R^2 + D^2 = (R + H)^2$$

H = Height

D = Distance

R = Earth's radius

WGN / Steve Kahn, Tom Valle

Contributed by Mike WA9EVF

Repeater Etiquette

- If you have questions about the use of the repeaters, please ask. FCC Part 97 rules apply AT ALL TIMES.
- Listen for at least 10 seconds before transmitting to be sure the repeater is not already in use or ask "Is the repeater in use?".
- The repeater does not have a timer. However, long transmissions are not recommended. Keep them short - one to two minutes at the longest. Give someone a chance to check in or respond to what you said. WAIT for the repeater to drop before transmitting.
- If you wish to join a conversation in progress, wait until the end of a transmission and give your call sign promptly. There is a short delay between the end of a transmission and the repeater drop. Stations already in conversation wait for the repeater to drop before transmitting.
- If you need access to the repeater for an emergency transmission, say "EMERGENCY" and give your call sign when you break into an ongoing conversation.
- Do not use "break" or "break break" since they have special meaning for most operators and usage varies around the U.S. Use "EMERGENCY" or your call sign.
- **Always allow a breaking station to transmit immediately.** Allow a station an opportunity to report emergencies or ask for directions or other assistance. This is particularly important during commuting periods and periods of bad weather when the need for emergency assistance calls are most likely.
- Avoid business talk (FCC Part 97 rules). When in doubt, DON'T.
- Remember Amateur frequencies are not private lines - what you say on the repeater can and will be heard by many people (including the FCC). Always assume you have an audience.
- Do not say things that may offend others who may be listening. Be circumspect in discussing private personal family affairs on the repeater. Do not "advertise" your house will be unoccupied during vacations, etc.
- The repeater gives its own ID. You must also identify your station by giving your call sign every 10 minutes during a conversation and at the end of your participation. You do not have to identify the other stations nor do you have to identify yourself with every transmission.
- Monitor the repeater. Members or visitors may call for assistance. Visitors may just want a friendly conversation on the way through the Chicago area.
- If you hear what you believe to be deliberate interference, do not attempt to communicate with the interfering station. Switch to the repeater input frequency and, if you can hear the signal, record the following information for use in locating the source:
 1. signal strength
 2. your location
 3. date and time
 4. your antenna and receiver
 5. and characteristics of the RF, audio or voice that might help in identification
 6. direction if it can be determined

Report the information to a member of the Board of Directors or the Club Officers.

- Do not discuss interference incidents on the air.
- While the repeater pairs are exclusive in this area, there may be times when other repeaters may be heard. Propagation conditions are occasionally such that we will hear output signals from other repeaters. The input signals from stations in other repeater service areas will sometimes bring up our repeater. Our use of the minimum power necessary to access our repeater will help minimize interference with our neighbors. Be tolerant of the annoyances resulting from these unusual conditions.

SRO Officers

President
Mike Leibovitz - WA9EVF
Vice President
Jean Pressel - KB9FXL
Secretary
Jim Hawes - AA9DT
Treasurer
Mike Brost - WA9FTS

SRO Directors

Jim Quinn - K9JQ
Don Moriarty - W9RA
Jon Tammen - K9IQF

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708.457.0966 Voice

Mike Shy is published 6 times a year by the Society Radio Operators. Deadline is 2 weeks before the meeting. Contributions are welcome & should be sent to the Editor.

Regular Meeting Place

Salvation Army every even month at 8 PM unless other-wise indicated in Mike Shy and SRO web site. Check for exact date & time.

Standing Committees

Membership - K9JQ
Program - AA9DT
Meeting Refresh. - AA9DT
Foxhunting - WA9FTS
Repeater - K9IQF
Field Day - WA9EVF
Education - WA9EVF
Mike Shy - WA9FTS
Picnic - WA9FTS
Dinner/Play - Open for 2013
Christmas / Hanukkah Party - WA9EVF
Webmaster - WA9FTS

SRO Web Site

www.w9sro.org
Mike Brost - WA9FTS

SRO Repeaters

	In	Out
CFAR (107.2) PL	147.750	147.150
TOOFAR (110.2) PL	223.260	224.860

Repeater Personnel

Trustee - K9JQ
CFAR Chairman - K9IQF
Site Maintenance
K9IQF, W9RA & W9BEA
Control Operators
K9IQF, TBD
NW Maintenance
WA9FPT
Northeast Maintenance
K9IQF & TBD
Lisle Maintenance
WA9AEK

Regular meetings - Salvation Army
- 8354 W Foster Av, Norridge

Board Meetings - Every 5th Wed -
7:30 PM - BQS Realty - 6023 N
Cicero Av Chicago IL

Mike Shy

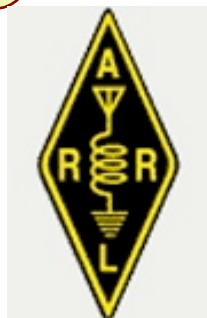
Mike Brost - WA9FTS - Editor

5127 N. Monterey Dr.

Norridge IL 60706-3245



First Class Mail



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