



AARC OVER

Keeping Austin Wireless
for Over 93 Years!

Bulletin of Austin Amateur Radio Clubs

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Issue 6-2013

How Far Can I Reach?

By Stuart Rohre, K5KVH

Do you wonder how far you might reach if your 440 or 2m antenna was at a certain height above your station?

There is a little bit of math that will give you a useful answer.

First, you have to decide where the effective point of take off is for your antenna. If you have a horizontal beam, it is the plane of the elements, but if it is a vertical antenna, the center of the element is probably an adequate choice.

The reason you don't have to worry this point is that radio waves at many frequencies will refract over the earth's uneven terrain and go further than otherwise. (The classic case is a knife edge refraction effect over the top of a mountain ridge that your antenna points to).

Now, you must select the height of mast or tower you are considering.

Let h be the height of the tower. Let's say 100 feet.

Let D be the distance to the point (in miles), illuminated by your antenna at 100 feet. (If no obstacles are in the way).

(Continued on page 6)

Periodic Events

| | | | |
|-------|-----------------|------------------------------------|-----------------------|
| Sun | 7:30 p.m. | Travis ARES net | 147.36 MHz + (131.8) |
| Sun | 8:00 p.m. | Travis ARES Packet | 145.73 MHz - |
| Sun | 8:00 p.m. | Williamson ARES net | 146.64 MHz - (162.2) |
| Sun | 9:00 p.m. | ARO Swapnet | 146.94 MHz - |
| Sun | (After Swapnet) | Newsline | 146.94 MHz - |
| Mon. | 7:30 p.m. | STX ARES Net | 3.873 MHz |
| Tues. | 7:30 p.m. | Hays ARES net | 444.150 + (114.8) |
| Tues. | 8:00 p.m. | Bastrop ARES Net | 443.750 + (114.8) |
| Wed | 11:30 a.m. | Ham Social Luncheon, Jim's | 146.94 MHz - |
| Thu | 9:00 p.m. | 2m SSB Net | 144.250 (USB) |
| Thu | 11:00 a.m. | Lunch, Pokey Joe's 183&Great Hills | 444.1 MHz+ |
| Fri | 8:00 p.m. | 6m SSB Net | 50.230(texasvhf.org/) |
| Sat | 7:00 - 8:30a.m. | Breakfast @ Waterloo Ice House | 444.1 MHz + |
| Sat | 9:00 a.m. | Chapter 67 QCWA QSO Net. | 3.920 MHz LSB |
| Daily | 6:30 p.m. | Central Texas Traffic Net | 147.14MHz+ |

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Ham Radio Exams Results

The following are the results of the ARRL VE Test Session held on May 4th at Bethany United Methodist Church:

Technician Class Licenses Processed

| | | |
|-------------------------|---------------|-------------------------|
| (anon) KF5VNE | (anon) KF5VNF | Jan H. DuPlessis KF5VNG |
| Jose C. Martinez KF5VNH | (anon) KF5VNI | Jerry L. McNeill KF5VNJ |

General Class Licenses Processed

| | | |
|------------------------|---------------------------|--------------------------|
| Abdulkarim Bora KF5VNN | Matthew J. Goodman KF5VNK | Robert W. O'Brien KF5VNL |
| (anon) KF5VNM | (anon) KF5VNO | Jacob S. Yarnell KF5UVN |

Extra Class Licenses Processed

| | | |
|----------------------|-----------------------|-------------------------|
| Sam R. Burnes KA5QYU | Aften A. Giotis K5RDJ | Richard A. Stitt KF5DVN |
|----------------------|-----------------------|-------------------------|

Examiners Participating in this Test Session

| | | |
|-------------------|------------------|---------------------|
| Joe Bryan K5BRY | Craig Bean AC5KW | Larry Gunter WB5BEK |
| Joe Makeever W5HS | Tom Nevue W2MN | Donald Sitze AF6VA |
| Joe Thiel N5SMN | | |

Next ARRL VE Test Sessions

June 1st - Bethany United Methodist Church, Disciple Bldg. Room 203/204

July 6th - Bethany United Methodist Church, Disciple Bldg. Room 203/204

TNX ES 73 DE W5HS

Joe

5-18-2013

The South Austin W5YI VE team heartily congratulates the following persons who earned their new or upgraded amateur radio licenses at our May 18th session:

Extra Class –

General Class –

| | | |
|----------------------|----------------------|----------------------|
| Lloyd Burson KF5CSM | Henry Groover KF5VFU | Peter Kendall KF5RGI |
| Ximone Willis KF5VGE | | |

Technician Class - (new)

| | | |
|------------------|----------------------|-----------|
| Marvin Buck, Jr. | Jay Dawson | Lory Furr |
| Ryan Rodriguez | Julieanne Whitehurst | |

And thanks to the W5YI administering volunteer examiners:

| | |
|----------------------|------------------|
| Craig Bean, AC5KW | Gary Popp, AE5JR |
| Walter Marusa, K5WLY | Bill Duke, AF5JD |

Our next two sessions are set for June 15th and July 20th in Fleck Hall room 118 on the campus of St. Edward's University. All sessions are walk-in and the exam fee is \$14. Bring two forms of ID (one with your picture) & a copy of your license, if upgrading.

For additional information regarding our amateur radio examination sessions, please contact Craig, AC5KW at (512) 474-6443 or by e-mail to hamradioexams@hotmail.com or visit our web page at

<http://texashams.org/w5yi-austin/>

| | | | | |
|------------------------------|-----------------|--------|----------|-------------------------------|
| President | Lori Schmidt | KM5MQ | 632-6789 | president@austinhams.org |
| Vice President | Rich Kerschner | KC9VFT | | vice-president@austinhams.org |
| Treasurer | Jay Hoffman | KA5OST | | treasurer@austinhams.org |
| Secretary | Jorge Harada | KF5IED | | secretary@austinhams.org |
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| ARRL Travis Co. Emer. Coord. | Glen Reid | K5FX | 263-5700 | k5fx@arrl.net |
| TC ARES PIO | Steven Polunsky | W5SMP | | tcares-pio@gmail.net |

Please contact a club officer, attend a meeting, mail us to join the organization, you can also join or renew online.

The Austin Amateur Radio Club, Inc. (AARC) has annual membership dues of \$20.00 per person or \$30.00 per family. AARC maintains the following repeaters:

| FREQUENCY | AUTOPATCH | USE |
|-----------------------|-----------|--|
| 146.780 | No | |
| 146.880 | Yes | General |
| 146.940 107.2 PL Tone | No | Most popular, WX, Swapnet & Newslite |
| 224.800 | No | |
| 444.100 | No | |
| 440.650 +5 | No | 70cm D-Star Repeater [W5KA] |
| 146.480/+1.0 | No | 2m D-Star Repeater [W5KA C] |
| 1293.200/-20 | No | 23cm D-Star Repeater[W5KA A] |
| 1248.200 | No | 23cm D-Star DD (data, simplex/reversible) [W5KA A] |

Persons using the repeaters are asked to join the club to help support these valuable resources. To use the autopatch, announce your call sign, press * and dial the phone number then release the PTT. When finished, press # to hang up the phone. Dial 911 (no * needed) for emergency services.

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Members and other readers are encouraged to submit material for publication. Call Mitch London, if mailed submissions are required. Electronic files are encouraged! Submissions may be edited for publication. **Deadline is the 20th of the month.**

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For Changes in your ADDRESS, PHONE NUMBER or CALL SIGN:

See Jay Hoffman, KA5OST

ka5ost@arrl.net

Jay handles all changes for membership information .



AARC Meeting Minutes: May 7, 2013

Meeting called to order: 7:00 PM by President Lori Schmidt, KM5MQ.

Officers Present:

Lori Schmidt KM5MQ, President

Jay Hoffman KA5OST, Treasurer

Jorge Harada KF5IED, Secretary

Meeting started with a welcome to all. We had <unknown> in attendance w/ 11 visitors & 1 new members. 1 new member KI0RU, no upgrades reported, 3 new hams licensed in the past month.

Minutes: last meeting's minutes approved as written in AARCOVER.

Past Events:

STATE PARKS ON THE AIR, 4 participants, 49 contacts.

Upcoming Events/Announcements:

May 11th – Armed Forces Radio on the Air

May 18th – Dayton HAMVENTION

June 7th - HAMCOM Plano TX

June 22nd and 23rd – ARRL Field Day

August 2nd and 3rd – Austin Summerfest

September 8th – Tour De Cure

October 19th and 20th – Jamboree On The Air

January 19th, 2014 Ham Radio Cruise

AARC dues for 2013 are due

AARC Apparel is available

Some members requested technical assistance with their stations, member volunteers will assist as necessary.

These items, other upcoming events, and scheduled presentations are listed in the AARC Swapnet newsletter, at www.austinhams.org, and on the Yahoo user group.

REPORTS:

President: None

V-P:Not present

Treas: None

Secretary: Several ARRL publications have been added to the Austin Public Library catalog with more to come. Materials are now available for checkout. Visit library.austintexas.gov for more information.

Editor: Announced newsletters available at austinhams.org

Tech Committee: None

ARES: None

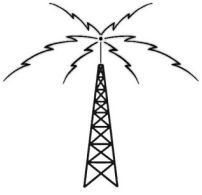
SIG/Other: None

Space WX: by Lew Thompson W5IFQ. Interpreted current data and mentioned TXARMY MARS training available at txarmymars.org

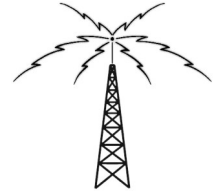
Old Business: None

New Business:

(Continued on page 5)



Over the WWaves...



A Collection of useful and interesting Websites sent in by our readers (All links have been checked by editor as working at time of publication)

To ensure a continuing supply of telephone numbers in Central Texas, starting June 1, 2013 a new 737 area code is being added to the area served by 512. This means that any call to the 512 or 737 area code will require all 10 digits. - Don Dudley, AC5YK

Changes such as this are governed by NANPA, the North American Numbering Plan Administration. They are found at <http://nanpa.com>

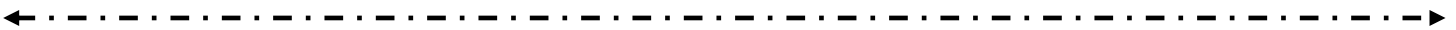
Briefly, all of North America, most of Central America and many of the Islands from Florida to South America differ in phone numbers _only by the area code_. This means it is quite easy to make an international call without intending to. It is easy to look up the location and history of an area code using the link below.

http://nanpa.com/enas/npa_query.do

This and other useful area code related info is on the basic web page under the "tools" link. Regardless of what you may see published elsewhere, NANPA is the industry standard and the single authoritative resource on area codes.

As Don mentions, it will be necessary to dial all 10 digits to even call across the street. Various news reports show June or undetermined as the date. NANPA shows July 1st, but it absolutely will happen.

Rick Kirchhof, NG5V



(Continued from page 4)

ARES Station Maintenance Budget Allocation

Stuart Rohre K5KVH proposed allocating \$500 as a line item to current budget for ARES station upgrades at the Red Cross location and put forth a motion to the membership to do so.

President requested motion to be put before the board

Stuart Rohre took the floor to put membership to vote

Steve Laird KF5UHY made an amendment to the motion to request a written proposal for discussion

Stuart requested original motion to be put to the membership

Steve motioned to deny original motion

Original motion was put to vote \$500 for renovation, all ayes have the vote

Amendment for written proposal was put to vote, all voted yes for Stuart to present written proposal

Roy Miyasaki AD5EA motioned to move on to other business, all voted yes

Ham-of-the-Month: Paul Kinney KD5VRU

Door Prizes: 2012 ARRL Handbook, hardcover won by Joe Canfield N5HPC

Adjourned: 7:45 PM

But wait you say, what about the earth's curvature?

Well this equation takes that into effect and is known as "the 4/3 Earth's radius correction" but is simply:

h equals $(D \text{ squared} / 2)$

You enter h , (100) and solve for the radius from your tower, D .

Doing the algebra of multiplying both sides of the equation by 2 to remove 2 as a denominator; you get (D squared) equals 200. D would be the square root of 200. Now, you do remember the simple square roots, right? Square root of 200 is square root of (100 times 2). This is easy, square root of 100 is 10, the square root of 2 is 1.414, (a familiar number in electronics, and their product is 14.14, or just over 14 miles to the distant point using simplex, with lower terrain between you and that 14 mi. horizon.

Now things like weather in the area between you and the 14 mile point may increase your range. Early of a morning, you can find 2m repeaters having a storm front between their locations, easily making the path between them, such as Houston to Austin. The Austin repeater at 450 feet above its terrain (if flat ground) would reach out only 30 miles by the formula without any weather effects.

Now you can plan your new antenna farm and get on paper if it is worth the effort to put up h amount of tower or mast. ■

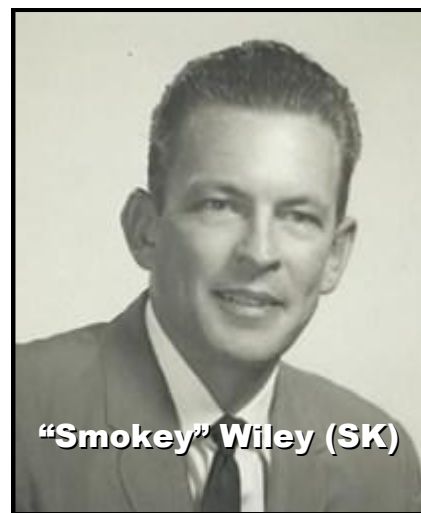
Something Wonderful!

When a loved one passes away, it affects us. It leaves a hole in our hearts that is difficult to deal with. So we try to remember the person in various ways. There may be a monument erected in their name. Some people have memorial events each year to remember.

In the Amateur Radio community we feel no less of a loss at the passing of a fellow ham. Not long ago we lost a long time Amateur Radio operator and personal friend of mine, H.G. "Smokey" Wiley, K5RDJ. Numerous hams from Around Austin attended his funeral and subsequent burial not far from his home in Cedar Park, Texas.

Many fellow hams, knew that Smokey was the man who got many a ham interested in transmitter hunting. He would loan you equipment if you did not have it, and even if there were not enough people to conduct a T-Hunt, he would gladly sit at a restaurant with you and chat about everything from airplanes to his life working in the telephone line industry. Shortly after his passing plans were made to hold a Smokey Wiley Memorial Transmitter Hunt thinking this would be a great tribute to Smokey.

Many people who talk to Smokey, either on the air or at the ARES luncheon at Jim's every Wednesday, knew he had grandkids that he was very fond of. Just recently, Smokey's granddaughter, Aften Giotis of Cedar Park became an Extra Class amateur radio operator. She earned her Technician Class license in February, and here General Class license in March, and just this month she got her Extra Class license. She then applied for and received her grandfathers call sign. She is now, K5RDJ. We should all be proud of her achievement and congratulate her on this wonderful tribute to her grandfather.



Steps to Eliminate RF Feedback and Audio Squeal from a Mobile Radio

By Stuart Rohre, K5KVH

Some car radios are being reported as being on whenever the car is operated. Car radios being used during the time of ham radio use, may also encounter RF feedback in any car. Sometimes this can be eliminated by careful grounding of the mobile ham radio. (These same procedures lessen the possibility of feedback of RF into other car electronic circuits so prevalent today.)

1. Run fused power leads directly from the car 12 volt battery plus and minus posts to the radio or a distribution panel installed for ham equipment. Use just the length of cable needed or avoid coiling up excess.

2. Make sure hood has a ground strap to the firewall and the trunk lid to the body near the hinge. (Metal hood and trunk lid). In pickups, ground the bed to the frame, since many are mounted on rubber.

3. Ground the coaxial cable shield at the antenna to the frame, or main body metal, by wide, short, and direct conductor. Copper strap or braid.

4. Bond strap to exhaust pipes near their exhaust ends and attach to frame members. Many exhaust systems are nearly a quarter wave antenna at 10m, and hung on rubber, thus you have to make sure the far ends are as grounded as the engine end is to the engine block.

5. Check the grounding quality of the coaxial cable shield end to end. (The resistance of the shield should be less than that of the center conductor.)

6. All along the runs of coax, make sure screw on plugs are tight. (Those on the outside of vehicle at antenna bases may work loose from road vibration.)

7. In issues like feedback into the car AM / FM radio, or other electronics check with the car manufacturer's district engineer for this area. They will be aware of technical bulletins relating to installations of mobile radio in your model. A modification of the AM radio to eliminate "always on" might be useful, but may need to be done by dealer to keep up warranty.

8. You often can learn of other's problem solutions by a focused Goggle search. You do this by careful choice of key words and put them into quotation marks. Try "RF feedback in (brand) car, model (x)."

9. To get a good ground from jumpers may require paint removal under the bolt on point. Sometimes apparently bare metal is clear coated with an insulating film.



AARC Meeting Info.

Waterloo Icehouse

**8600 Burnet Rd. South of 183
(Come early and have dinner!)**

Business Meeting 7:00 pm

June 4 - Field Day 2013. Who, what, when and where!

Officers Meeting 7:00 pm

June 18 - Officers meetings are open to club members.

2013 Calendar of Events

Jun 1-2 Museum Ships Weekend

Brazos Valley Amateur Radio Club, KK5W
WW II Submarine USS Cavalla and Destroyer Escort USS Stewart.
Operating from Seawolf Park in Galveston, Texas, NA-143.
SSB (MHz) 7.260, 14.260, 21.360, 28.360
CW (MHz) 7.039, 14.039, 21.039, 28.039
WA5CYI 146.94(-)PL 167.9 on Saturday and Sunday from 11AM - 1 PM Local time.
USS Texas (NA5DV), Elissa (N5E), Grandcamp/High Flyer Memorial (AC0TX)
USS Lexington – W5LEX, National Museum of the Pacific War – N5P
Operation on OSCAR satellites is planned for daytime passes on Saturday, June 1.
A balloon launch is scheduled for Saturday morning. Work all six for coveted "Clean Sweep" endorsement. www.bvarcmswe.org for information on how to claim the certificate.

Ron, K5HM Event Coordinator k5hm.ron@gmail.com
www.grz.com/db/k5hm

Jun 7-8 HamCom in Plano

www.hamcom.org/

Jun 22-23 ARRL Field Day

AARC- Red Cross on Pershing (inside w/AC!)
WCARC- NQ5L QTH (suggests 147.430 2m FM simplex for FD Q's)
Hambuds- Sam Bass Park (Williamson Co, west of I-35)

2013 Upcoming Amateur Exams

ARRL VEC– June 1st & July 6th 9a.m. at Bethany United Methodist Church. Contact Joe Makeever, W5HS (345-0800) or Joe Thiel, N5SMN (832-0450) for info. \$15 fee.

W5YI VEC- June 15th & July 20th

2p.m. in room 207, Fleck Hall, St. Edwards Univ.
Contact Craig Bean, AC5KW @arrl.net,
(474-6443) for more info.

<http://texashams.org/w5yi-austin/>

Upcoming Meetings...

| June | July | Austin Meetings/Happenings | Time | Address |
|-------------|-------------|--|-------------|----------------------|
| 4 | 2 | AARC Meeting Waterloo Ice House* | 7:00 p.m. | 8600 Burnet Rd. |
| 8 | 13 | Austin QRP, Alvin's Sandwich Shop | 11:00 a.m. | 12200 Research Blvd. |
| 15 | no | QCWA Tres Amigos \$ | 1:30 p.m. | 7535 U.S. 290 |
| 26 | 24 | Digital Wednesday at Red Cross | 7:00 p.m. | 2218 Pershing |
| 24 | 22 | Travis Co. REACT Jim's 183 & Burnet | 7:30 p.m. | 9091 Research Blvd. |
| 25 | 23 | Travis County A.R.E.S., ARL Auditorium | 7:00 p.m. | 10000 Burnet Rd. |
| 27 | 25 | CERT Meeting, CTECC | 6:30 p.m. | 5010 Old Manor Rd. |
| 25 | 23 | CTDXCC Meeting Old Quarry Library | 6:30 p.m. | 7051 Village Ctr Dr. |

**AARC Business Meeting is at Waterloo Ice House Come early and grab dinner before the meeting.*

% New Meeting Location for ATV

\$ QCWA Now meets quarterly visit <http://www.qcwa.org/chapter067.htm> for info