

# ALL EARS

www.earsclub.org

The official bulletin of the Escondido Amateur Radio Society – N6WB October 2014

## October's Meeting Details

Our meeting in October will be given by our very own Roger Gagos, K6EQ. Roger will present an overview of digital voice communication systems



See Matt's VP article for more details...

## EARS Event Calendar - 2014

- Oct 09 EARS meeting, 7:00 p.m.
- Oct 16 Board Meeting, 6:00 p.m.
- Oct 18 Monthly Breakfast, 8:30 a.m.
- Oct 30 [VE Testing](#)
- Nov 13 EARS meeting, 7:00 p.m.
- Nov 15 Monthly Breakfast, 8:30 a.m.
- Nov 20 Board Meeting, 6:00 p.m.
- Nov 29 [VE Testing](#)
- Dec 13 EARS Christmas Party, 4:00 p.m.
- Dec 18 Board Meeting, 6:00 p.m.
- Dec 20 Monthly Breakfast, 8:30 a.m.
- Dec 27 [VE Testing](#)

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## The Presidential Prose

By Mike Hightower, KF6SJ



Have you heard strange buzzing and hissing sounds on the EARS 2 meter repeater lately?

It sounds broken and the noise is annoying.

Well, it's not broken!

That is the sound of our new repeater when someone is transmitting digital voice through the machine.

On September 28<sup>th</sup>, we replaced our decades old 2 meter repeater with a new Yaesu DR-1X System Fusion repeater.

The new repeater will retransmit classic FM analog audio, the type of audio that we all have, but it can also retransmit digital voice transmission using new Yaesu C4FM modulation format.

Our repeater is the first in San Diego North County and one of only a few in Southern California.

The old 2 meter repeater was having problems for some time. There were sensitivity issues and other strange problems with the repeater.

At the September board meeting, the board approved the purchase of a new repeater. It was felt that the Yaesu digital repeater offered both performance and a new digital voice mode at the price of a modern repeater.



With a standard FM analog radio, you will probably want to check your radio tone squelch settings. Our repeater requires that your radio transmit a 107.2

Hz sub audible tone to bring up the repeater.

This sub audible tone is called CTCSS (Continuous Tone Coded Squelch System). It is also called by many by the Motorola term, PL tone (Private Line).

On many radios, when the radio is programmed to transmit the CTCSS tone, its receiver will not open the squelch until the radio hears the same CTCSS tone.

Other radios have individual settings for transmit CTCSS and receive CTCSS. This is what you want when listening to the new repeater since the repeater does not transmit a CTCSS tone when transmitting in digital mode.

If your radio is set up to require the reception of the tone, you will not hear the C4FM digital transmission from the repeater and you won't be listening to the buzzing and hissing of a digital transmission.

When an analog FM signal is being transmitted from the repeater, it has the CTCSS tone and your receiver squelch will open.

If you have been hearing the digital transmissions on the repeater, your receiver tone squelch is not enabled on the receive side. Dust off your radio manual and see if you can turn on the tone squelch for the receiver.

Here are a few notes regarding the system:

- There is currently no courtesy beep on the squelch tail. We would like to have one, but the repeater doesn't offer that feature.
- The repeater is not in any way DSTAR, P25, MOTOTRBO, etc. compatible. Only Yaesu System Fusion radios can use the repeater in digital mode.
- At this time, Yaesu offers a handie-talkie (FT-1DR) and a mobile unit (FTM-400DR) that transmits using their C4FM format.
- The repeater transmits at 50 watts.

We measured the repeater receiver sensitivity to be -122 dBm before the diplexers. That is about 20 dB more sensitive than the old repeater.

The new repeater will be a learning experience for all of us. The System Fusion's digital mode offers very good audio quality, digital data, and digital image transmission that are not offered by some of the other digital modes available to amateurs.

The next club meeting in October will feature a presentation on the capabilities of the new repeater system.

I hope to see you there.

Happy operating and 73,  
Mike, KF6SJ

## Verbal from the VP

By Matt Tucker, N6EAJ



Thanks to Jeff Murdock AE6GM for presenting about the role of Carlsbad CERT in the May 2014 Carlsbad fires.

I was so mesmerized by Jeff's presentation that I forgot to take a picture of Jeff in action!

Our October meeting will be on Thursday October 9th (7PM). Roger Gagos K6EQ will present an overview of digital voice communication systems.

He will include a look at the various modes currently in use for professional and amateur radio with an emphasis on Yaesu's "System Fusion" which was recently added to our 2 meter repeater. See President Mike's (KF6SJ) article in this All EARS for more information about the new repeater that went up on 9/28/2014.

Roger will also be showing a 15 minute video from Yaesu - that talks about their System Fusion radios and repeater.

A beautiful color touch screen greets you on the Yaesu FTM-400DR VHF/UHF analog/C4FM System Fusion radio.



Unfortunately I'll be headed to the airport for the Pacificon Ham convention the night of the meeting, but I encourage you to come hear about the digital modes and see some of the capabilities of the new repeater.

#### Technology:

I have considered buying a car error code reader (OBDII reader - On-board diagnostics) for a few years. Harbor Freight has them on sale occasionally, but I could never convince myself to buy one for occasional use. I then came across this Bluetooth OBDII reader on Amazon:  
[http://www.amazon.com/dp/B005NLQAHS/ref=pe\\_385040\\_30332200\\_TE\\_item](http://www.amazon.com/dp/B005NLQAHS/ref=pe_385040_30332200_TE_item)

It is \$23.99 and qualifies for Amazon Prime shipping. It plugs directly into your car's OBDII port (1996 model cars and newer) and communicates over Bluetooth to Android cell phones. Since it uses your cell phone as the display, they were able to make the selling price low. There are a few phone applications that interface with the reader.

Torque is one of the popular ones. There is a free version that gives you the basics and a paid version of the app for \$4.99.

Here is a link to the free version  
<https://play.google.com/store/apps/details?id=org.prowl.torquefree&hl=en>

The BT OBDII reader along with the Torque app can give you a slew of information about your car. I have tried it on my 2003 Toyota and my wife's 2003 Ford. They both report about the same amount of information (some cars offer more information over OBDII than others).

Data about RPMs or coolant temperature may already be displayed on your dash, but there is a lot of information unique to OBDII (air fuel ratio, transmission temperature, MAF (Mass Air Flow), timing advance, and Intake temperature). Being able to measure transmission temperature is very popular with people that tow.

Torque lets you customize what information is on each page. Here I have a digital square display for Intake temperature and analog style gauges for everything else.



Here is a page setup with an emphasis on RPMs, and a few analog style displays of various sizes.



Besides monitoring engine information, you can read error codes and use an internet lookup feature to give you an idea of what the error code means. Torque (along with the BT OBDII) lets you clear error codes also. When you clear the error code, your check engine light goes off. If you still have the problem, then the check engine light will reappear.

This BT OBDII reader only works with Android based phones. There are some Wi-Fi based OBDII readers that work with iPhone (Apple limits Bluetooth functionality), but I have not experimented with those. For less than \$30, you get a very useful automotive tool and app and another gadget that is fun to play with.

Matt  
N6EAJ

## Teri's Tales

By Teri Bloom, W6TRB



Sometimes the extra effort is worth it...and memorable!

I was asked if I would be interested in helping out at the next VE testing session by helping test a blind person.

Now this is not a quick answer...

- Can I read out loud smoothly?
- Can I read out loud without giving away the answer?
- Can I read out loud without inferring the answer he gave was the wrong answer?
- Can I read out loud without stuttering or stammering?

This was a tough question to answer.

I practiced for the month prior to the testing by reading the Technician's test in my ARRL Ham Radio License book, 35 questions a session, 3 times a week. I worked on my voice, making sure there was no inflection, no changes for correct answers, no changes for incorrect answers, no change at all.

The day arrived...

In came my student. After he was signed in, I took him to the back of the class. I had set up a table and chairs, facing myself to the carpeted wall so my voice would not carry. I didn't want to distract the others there taking the test.

Before I had his test in hand, we made sure there were no diagrams in the test. No fair to ask what is the underlined symbol!

We started off by telling a little bit about ourselves.

This was helpful in relaxing both of us before starting the test. He mentioned he had been testing online and passing. Now I was stressing again.

We started the test and the 5<sup>th</sup> question, he answered wrongly. Crud! What now. Do I continue or do I make sure he understood the question. I asked him "Did you understand the question; do you want me to read that to you again?" No he was



ok and ready to move to the next question. Whew, did I make him nervous? OK, let's continue. We continued and I never questioned him about his answers again. He finished the exam in 35 minutes.

I took the test up to the VE table and waited and watched while they graded it. I saw they each marked 3 questions wrong - Questions # 5 and two others.

### He Passed!

I couldn't tell him yet, that was The VE's job. We sat talking about his Ham plans and maybe upgrading to a General until he was called up and then he received his signed certificate.

I walked him out to the parking lot where his wife was waiting and the joy when she found out he was now a Ham!

A very exciting day!

The thing about being a Ham is to be prepared. And practice. And enjoy what you are doing.

## Opportunity Drawing Update

By Teri Bloom, W6TRB



The Drawing for the Powerwerx DB-750X Dual Band VHF/UHF will happen at the end of the upcoming October meeting!!

*Last minute ticket sales before the meeting starts - Last chance to get your winning ticket!*



Don't miss out on this excellent Opportunity Drawing!!

73

Teri, W6TRB

## EARS Elmer List

By Steve Venner, W6TAN



Here is the current list of those kind souls who have volunteered their Elmer services:

1. Harry Hodges, W6YOO
  - *Award programs such as WAC, WAS, DXCC, VUCC, IOTA, etc. to include card checking.*
2. Dick Kalkofen, K6KAL
  - *Software development and hardware interfacing.*
  - *Radio to PC communications.*
  - *Logging Software: WinTest, Writelog, DX4Win, N1MM, Ham Radio Deluxe and many others.*
  - *Digital mode software, link FLdigi, MMTTY for PSK, RTTY, WISPR, JT65 etc.*
  - *Kit building (WinKeyer USB, FA-SM CW/Voice Keyer, Idiom Press Voice Keyer.*
  - *Antenna setup and tuning.*
3. Matt Tucker, N6EAJ
  - *General electronics (analog), power supplies, audio, batteries.*
  - *PSK31 and similar digital modes.*
  - *Operating and setting up the computer/radio interfaces.*
  - *Basic antennas (VHF for home or car), HF dipoles and multi-band doublets / antenna tuners.*
4. Mike Hightower, KF6SJ
  - *HF and in particular, digital modes of PSK31 and JT65.*
5. John Musselman, N6EP
  - *HF, electronics, contesting, "other"...*
6. Marvin Munster, W6MJM
  - *Emergency Power Sources, Batteries, Solar, etc.*
  - *DC Cables and Hook-Up*
  - *Coax Cables and Connector Assembly*
  - *DC Power Distribution*
7. Ron Pollack, K2RP
  - *Antique and tube equipment (boat anchors)*

## General Information

### EARS Club Officers for 2014:



#### President

Michael Hightower, KF6SJ  
(858) 382-4041  
[mike@hightower.com](mailto:mike@hightower.com)



#### Vice President

Matt Tucker, N6EAJ  
(760) 839-1205  
[mail4tucker@gmail.com](mailto:mail4tucker@gmail.com)



#### Secretary

John Musselman, N6EP  
(760) 747-5303  
[n6ep@arrl.net](mailto:n6ep@arrl.net)



#### Treasurer

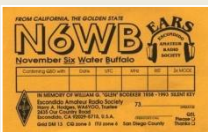
Teri Bloom, W6TRB  
(949) 874-9250  
[w6trb@earsclub.org](mailto:w6trb@earsclub.org)



#### Emergency Services Coordinator

John McNelly, AF6UA  
(858) 449-3326  
[ears@mcnelly.org](mailto:ears@mcnelly.org)

### About ALL EARS:



**ALL EARS** is the official bulletin of the Escondido Amateur Radio Society.

An e-mail subscription to **ALL EARS** is FREE!

You don't need to be a member. Just drop a note to:

[allears@earsclub.org](mailto:allears@earsclub.org)

Permission is given to copy any article contained in ALL EARS when not otherwise copyrighted, and provided proper credit is given.

**Note: The deadline to submit material for the bulletin is by the 1<sup>st</sup> Thursday of the month.**

### Officers at Large:



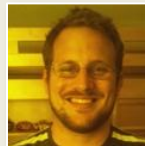
Dirk Reschly, N6SUN  
(760) 743-5839  
[n6sun@earsclub.org](mailto:n6sun@earsclub.org)



Steven Richards, KI6SBQ  
760-532-8643  
[ki6sbq@yahoo.com](mailto:ki6sbq@yahoo.com)



Jo Ashley, KB6NMK  
(760) 741-2560  
[kb6nmk@amsat.org](mailto:kb6nmk@amsat.org)



Zac Petersen, KJ6MLT  
(858) 888-6090  
[kj6mlt@earsclub.org](mailto:kj6mlt@earsclub.org)



Bud Hennessy, AE6BH  
(760) 803-1866  
[ae6bh@arrl.net](mailto:ae6bh@arrl.net)

### Non-elective:



#### Past President

Jeff Murdock, AE6GM  
(760) 622-5346  
[cozy765@pacbell.net](mailto:cozy765@pacbell.net)



#### Historian

Harry A. Hodges, W6YOO  
(760) 743-4212  
[w6yoo@cox.net](mailto:w6yoo@cox.net)



#### Webmaster and Newsletter Editor

Steve Venner, W6TAN  
+44 1895 636099  
[w6tan@earsclub.org](mailto:w6tan@earsclub.org)

## General Information cont'd

### SUNDAY EVENING NET

EARS Sunday evening net is every Sunday at 8 p.m. local time. You can get the latest information on club activities there.

Just tune in to the club's 2m repeater at 146.88 MHz, negative offset and PL of 107.2, check in and say "Hi!".

### SECTION NEWS

The latest happenings around San Diego are available at the official website of the ARRL San Diego Section:

<http://www.arrl.org/Groups/view/san-diego>

### EARS PINS

EARS 2010 Board had EARS lapel pins made. They are yellow 1" circles with the EARS Logo in the middle.

They are only \$5.00 each, so get yours today by contacting: Robert Kitson; [ki6sbl@earsclub.org](mailto:ki6sbl@earsclub.org)

### AMATEUR RADIO LICENSE RENEWALS AND CHANGE OF ADDRESS

To renew your license or supply the FCC with a change of address, use NCVEC Form 605 (obtainable from Harry, W6YOO).

Attach a photocopy of your license and mail to:

SANDARC VEC,  
5511 Maryland Drive,  
La Mesa,  
CA 91942-1519.

Note: You **MUST** include your FRN Number.

There is no charge for this service.

### HAM RADIO LICENSE PLATES

All California hams may receive their call sign on their license plate.

Use DMV Form REG17A. The cost is \$21.00 and is a one-time fee.

### VE TESTING

A SANDARC Volunteer Examiner team administers license examinations on the last Saturday of each month at 9:00 a.m. at:

LDS Church  
2255 Felicita Road  
Escondido,  
CA 92026

For more details, see:

[http://www.earsclub.org/ears\\_ve\\_sessions.html](http://www.earsclub.org/ears_ve_sessions.html)

Contact Harry, W6YOO, at (760) 743-4212 or [w6yoo@amsat.org](mailto:w6yoo@amsat.org) to schedule an appointment.

### SANDARC

"EARS" is a member of the San Diego Amateur Radio Council, an association of San Diego area Amateur Radio clubs.

Among other things, SANDARC runs the local Volunteer Examiner program (SANDARC-VEC), and manages the ARRL southwestern Division Convention when held in San Diego every fourth year. See [www.sandarc.net](http://www.sandarc.net)

### CLUB REPEATERS

"EARS" operates three repeaters in the Escondido area.

- 146.88 MHz, minus offset, PL 107.2
- 224.14 MHz (AE6GM repeater), minus offset, PL 156.7
- 449.24 MHz, minus offset, PL 127.3

The 2m and 70cm repeaters are local in nature and primarily serve the immediate Escondido area.

### ECHOLINK

The 2m repeater is tied to the EchoLink system as node 2846.

See the Club website, [www.earsclub.org](http://www.earsclub.org) for information on EchoLink.

There is also a listing of local EchoLink codes in the members section of the website.

## General Information cont'd

### EARS WEB PAGE

"EARS" is on the Internet!

You can read about upcoming activities, get links to other ham radio sites, read back issues of All Ears, or update your call or address.

The site is updated regularly. Check it out at [www.earsclub.org](http://www.earsclub.org)

### EARS REFLECTORS

These are free services that keep members up-to-date via e-mail.

To subscribe to either one of the reflectors, go to the EARS website and click on the Yahoo or Google Group links at the bottom of the main page.

We are also on Facebook!

### CHANGE OF ADDRESS OR CALLSIGN

Please let us know if you change your address, call-sign, telephone, license class, e-mail, etc.

We want to keep our records up to date, so please contact any club officer with the updated information.

### CLUB BADGES

Let everyone know that you are a member of EARS, and avoid having them guess what your name is.

Get your Club Badge from:

Glaser Bailey,  
2015 S. Escondido Blvd,  
Escondido,  
CA 92027  
(760) 743-5551

### MONTHLY BREAKFAST

EARS members meet socially on the third Saturday of each month at 08:30, at:

J and M's Family Restaurant,

1215 East Valley Parkway  
CA 92027

(760) 745-3710  
[www.jandmsrestaurant.com](http://www.jandmsrestaurant.com)

### ARRL LETTER

The ARRL Letter, a weekly e-mailing of Amateur Radio related news, is available to ARRL members free of charge directly from ARRL HQ.

To subscribe for e-mail delivery, ARRL members first must register on the Members Only Website, [www.arrl.org/members](http://www.arrl.org/members).

The ARRL Letter is also available to all, free of charge, at [www.arrl.org/arrlletter](http://www.arrl.org/arrlletter) where it is posted each Friday after it is distributed via e-mail.

### EARS HATS, SHIRTS AND JACKETS

Hats, shirts and jackets are available with the EARS logo.

Order them directly from:

Print World,  
107 S. Andreasen Dr.,  
Escondido,  
CA. 92029  
(760) 747-6443

Just let them know you are a member of EARS.



## Emergency Services

### MONTHLY ARES® MEETING

The San Diego section ARES® meets on the second Saturday of each month at 8:00 a.m. at:

Scripps Memorial Hospital,  
Nobel Room,  
Schaetzel Building,  
9890 Genesee Ave,  
La Jolla,  
CA 92037.

Parking is available in the first lot to the right after the guard shack. The parking fee is \$4.00 and is antenna friendly.

If interested, go to [www.sdgares.net](http://www.sdgares.net) or contact Steve Early, Section Manager, (619) 461-2818, or via e-mail at [ad6vi@arrl.org](mailto:ad6vi@arrl.org).

### EMERGENCY SERVICE NETS

#### Amateur Radio Emergency Service (ARES) San Diego

Sunday, 08:30 146.730 (-) 107.2

#### Community Emergency Response Team (CERT) Escondido

Tuesday, 19:00 146.880 (-) 107.2

Followed by 146.445 SIMPLEX, as directed

#### Community Emergency Response Team (CERT) North County and Back Country

Wednesday, 19:00 147.030 (+) 103.5

Followed by 146.445 SIMPLEX, as directed (on 2<sup>nd</sup> & 4<sup>th</sup> Wednesdays)

#### Radio Amateur Civil Emergency Services (RACES) San Diego County

Monday, 7:30 PM 147.195 (+) 114.8

# Escondido Amateur Radio Society

## Membership Application and Renewal Form

\*Call \_\_\_\_\_

\*Last Name \_\_\_\_\_

\*First Name \_\_\_\_\_

\*Street Address \_\_\_\_\_

\*City \_\_\_\_\_ \*State \_\_\_\_\_ \*Zip \_\_\_\_\_

Home Phone \_\_\_\_\_

Cell Phone \_\_\_\_\_

\*Email \_\_\_\_\_

License Expires \_\_\_\_\_

EARS Family Members \_\_\_\_\_

License Class \_\_\_\_\_

First Licensed \_\_\_\_\_

Old Calls \_\_\_\_\_

Date of Birth \_\_\_\_\_

ARRL Member (Y/N) \_\_\_\_\_ Life Member (Y/N) \_\_\_\_\_

Amateur Related Interests \_\_\_\_\_

*ARRL, RACES, ARES, SATERN, Red Flag, HF, VHF, UHF, Packet, EchoLink, D-Star, T-Hunt, ATV, Field - Day, Contests, Antenna Design, Equipment Building*

Are you willing to run for a club office (Y/N)? \_\_\_\_\_

Note: Fields marked with a (\*) are required.

A Telephone number is requested, but may be unlisted in the roster if you prefer.

### Membership Rates:

One year ..... \$15.00  
 Family membership ..... \$4.00  
 Lifetime membership ..... \$150.00  
 Lifetime membership (family) ..... \$38.00

Mail this form with payment to:

EARS,  
 PO Box 3243,  
 Escondido,  
 CA 92033,

Or give it to the treasurer or any other club officer at a regular club meeting.

Checks please, it is safer than cash, and you have a record!

Membership is from January 1 to December 31.

After July 1, membership to the end of the year is ½ the annual fee.

Special rates apply for family membership for each additional licensed amateur radio operator in your immediate family and for lifetime membership.

For membership confirmation, include a self addressed stamped envelope with this form.