



AARC COVER

**Keeping Austin Wireless
for Over 94 Years!**

Bulletin of Austin Amateur Radio Clubs

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Issue 1-2016

AARCOVER Newsletter Looking for New Editor to Start in March

As you may have heard, I am stepping down as Editor for the AARCover. What is needed is someone to step up. Being the editor has been a very fun and interesting time but I feel after almost 13 years, it needs a fresh set of eyes and some fresh talent to keep it from being the 'same ole same ole' newsletter.

I spend maybe an hour and a half a month working on putting the newsletter together using Microsoft Publisher, a very easy program to use. So if you are someone who is interested in taking on this challenge, please contact me at kd5hcv@arri.net

I will work with you to help you figure what to do, where information comes from and how to put the newsletter together. After a short while, you will be on your way to being an even bigger asset to this club!

Thank you,
Mitch London, KD5HCV

Periodic Events

Sun	7:00 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	147.100 +
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+
Thu	11:45 a.m.	Lunch Whataburger Oltorf & Burleson	146.94-(107.2)
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 December 5th at Bethany United Methodist Church:

Technician Class Licenses Processed

Jeffrey D. Brinkman KG5KSN
Shannon J. Kerlick KG5KSM
Richard J. Wright KG5KSL

David A. Davisson KG5KSJ
Ty J. Rasmussen KG5KSO

Joshua J. Dixon KG5KSH
James B. Robinson Jr. KG5KSK

General Class Licenses Processed

David W. Boren W5DKE
John R. Howell KG5KSI

Kristopher E. Botz KG5DWT
Lynden M. Wright KG5KFD

Edward F. Gobbel W8EFG

Extra Class Licenses Processed

Don F. Sullivan AG5BR

John W. Weaver AG5BT

Examiners Participating in this Test Session

Mark Esslinger W5MAE
Joe Makeever W5HS

Gene Hinkle K5PA
Jim Peisker AF5NP

Mark Hunt AF5TW
Matt Porcher K5LF

Next ARRL VE Test Sessions

January 9th - Bethany United Methodist Church, Disciple Bldg. Room 203/204
February 6th - Bethany United Methodist Church, Disciple Bldg. Room 203/204

TNX ES 73 DE W5HS
Joe

12-20-15

The South Austin W5YI VE team heartily congratulates the following people who earned new or upgraded amateur radio licenses at our December 19th session:

Technician Class (NEW)

Brett Chandler-Finch Michael Smith
Robert Richards
Chris Synan
Tynan Childs

Joseph Lamar
Ryan Lowther

General Class

Kevin Lord
John Oventile

Dirk Roelofs

Extra Class

Janet Noe

Blake Ormand

Our administering volunteer examiners were:

Craig Bean, AC5KW
Isaac O'Hern AG5AR

David Glosson N5DPG

Our next two amateur radio exam sessions will start at
2 PM on January 16, and February 20, 2016 in
Fleck Hall, room 118 on the campus of St. Edward's University.
All sessions are walk-in and the exam fee is \$14 (cash or check).

For additional information regarding our amateur radio examination sessions,
please contact Craig, AC5KW at (512) 474-6443 or by e-mail to ac5kw@arrl.net or visit our web page at
<http://texashams.org/w5yi-austin/>

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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
146.880 107.2 PL Tone	No	General
146.940 107.2 PL Tone	No	Most popular, WX, Swapnet & Newsline
224.800	No	
444.100	No	
444.200 107.2 PL Tone	No	
440.650 +5	No	70cm D-Star Repeater [W5KA B]
146.780/ -600kHz	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, simp./reversible)[W5KA A]

Persons using the repeaters are asked to join the club to help support these valuable resources.

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Viewpoints expressed in the AARCOVER do not necessarily reflect those of any club, or of its members, directors, or officers. Material quoted from the ARRL Letter is supplied by the American Radio Relay League, Inc.

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 22nd of the month.

Material may be used in a later issue. Unless otherwise noted, permission is granted to reprint AARCOVER articles, provided you credit the author and the AARCOVER.



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

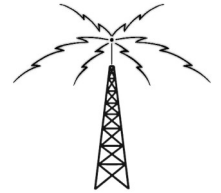
See Jay Hoffman, KA5OST

ka5ost @ arrl.net

Jay handles all changes for membership information .



Over the WWWWaves...



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)

I love to DX the AM Broadcast Band. I have a friend James in Sioux City who has been getting interested in Crystal Radios and AM Broadcast listening.

First video early this week is with a DX crystal radio I built a couple years ago.

<https://drive.google.com/file/d/0Bw6J-dDnxOpdTWh5bGpYbFY2OUk/view?usp=sharing>

The next evening is a video using a shielded, un-tuned Pixel Loop nulling out AM stations and hearing other stations underneath.

<https://drive.google.com/file/d/0Bw6J-dDnxOpdZy1MV3QtY3BtaGs/view?usp=sharing>

Forwarded by: Juanita Miyasaki, KD5OIE

Worth a look/listen...

<http://makezine.com/2015/06/23/tripped-impressive-musical-drawings-oscilloscope/>

Forwarded by Rick Herndon, K5FNI

Maybe an ad for wind power, but still cool to see how a turbine is erected.

<https://www.youtube.com/watch?v=84BeVq2Jm88&feature=youtu.be>

Forwarded by Jay Hoffman, KA5OST

AWESOME LINK OF THE MONTH!!!

Wow. I was impressed with this site:

<http://www.radioblvd.com/nevradiohist.htm>

that covers Nevada Radio History - 1901 to 1930 and is associated with the Western Historic Radio Museum.

Forwarded By Rick Herndon, K5FNI

The Challenger Launch

Crockett Grabbe, KF5LTT

© 2015

30 years ago NASA launched the shuttle Challenger with 7 astronauts aboard, including the heralded teacher Christa McAuliffe who had been chosen out of a pool of over 11,000 applicants. They never made it to space, but plunged to their deaths from 10 miles altitude. In those brief moments after the explosion radio transmissions were received from several astronauts, conveying the sudden developments.

Back in the 1970's the shuttle had been made the premier program to put humans in space, despite its prospects of being much more expensive (by about a factor of 10) than non-manned flight. To help rectify the public image of this expensive program, a decision was made at NASA to restrict all the development of satellites in the United States to launching them from the space shuttle, not the ground. Missions that were already being designed for launching from their own rockets suddenly had to have their plans scrapped and redone because of the switch to launching them from not from rockets, but from the space shuttle while in orbit. All of our dynamic development of satellites was heralded as being tightly controlled through the space shuttle flights. But then NASA made a very serious colossal error that stunned the world as it was quickly broadcast around the globe.

That serious colossal error involved personnel and contractors working with NASA for the launch of the Challenger on January 28 of 1986, in a flight whose primary mission was delivering a communication satellite into orbit (a mission that could have been done much less expensively using an unmanned launch). 73 seconds after the launch the shuttle exploded with 7 astronauts aboard.

In a later interview on satellite radio I pointed out that the astronauts were killed, not by the explosion itself, but by the impact of the shuttle hitting the ocean 10 miles down from the site of the explosion. Not only had NASA provided no safety equipment for them to escape that death plunge, but it had created that colossal error sending them plunging by repeatedly minimizing the importance of the symptoms from previous shuttle flights.

The shuttle was launched despite the repeated strong objection of engineers at Morton-Thiokol, the maker of the solid-rocket booster for the shuttles. The explosion occurred when the seal of an O-ring in that booster failed because Challenger was launched at much lower temperatures than those at which the ring had been tested. This was despite particularly Engineer Roger Boisjoly's very strong objections, who went to great lengths to try to get NASA officials to scrub the launch because the O-ring was unsafe at these low temperatures. He had expressed objections to them before at the launch of a previous shuttle at 53° F, then strongly tried to have NASA stop the launching of Challenger at temperatures below freezing. The momentous push by 2 NASA officials to go ahead with the mission won over the engineers' objections, and the shuttle and its 7 astronauts were tragically lost.

Because of the colossal error resulting in this momentous Challenger tragedy, no space mission was launched for the next 3 years. NASA's policy of launching all new space-missions from the space shuttle resulted in the delay of missions like the Galileo spacecraft to Jupiter by almost a decade. It was primarily responsible, for example, for the failure of Galileo's large antenna for transmission of data back to Earth. This quite-flawed policy was ended and ground-based launches were resumed in 1989.

Here is to the memory of those astronauts who met their untimely deaths 30 years ago, who were bold pioneers worthy of the highest praise for their venture. However, it should also be remembered that in the followup investigation of the disaster, Nobel-prize winning physicist Richard Feynman showed how easy it was to expose the O-ring flaw by dipping it into a bucket of icewater (the seal showed a large obvious gap at 32° F). A student could have verified the engineers' claims that Challenger was unsafe to launch.

But too many officials in charge at NASA never really learned the lessons from that colossal error. That fact was dramatically portrayed 17 years later, when the long-shadow of the Challenger disaster hit Columbia.
COMING SOON -- Columbia: Shadows of Challenger



2015 AARC Christmas Party

Photos By Paul Kinney, KD5VRU





*Merry
Christmas!*



An Invention Inspired in the Back Seat of a Car

Forwarded By Juanita Miyasaki, KD5OIE

Note: Be certain to pay special attention to the last line of the story?!?

Seems like cars have always had radios, but they didn't. One evening, in 1929, two young men named William Lear and Elmer Wavering drove their girlfriends to a lookout point high above the Mississippi River town of Quincy, Illinois, to watch the sunset. It was a romantic night to be sure, but one of the women observed that it would be even nicer if they could listen to music in the car.



Lear and Wavering liked the idea. Both men had tinkered with radios (Lear served as a radio operator in the U.S. Navy during World War I) and it wasn't long before they were taking apart a home radio and trying to get it to work in a car.

But it wasn't easy: automobiles have ignition switches, generators, spark plugs, and other electrical equipment that generate noisy static interference, making it nearly impossible to listen to the radio when the engine was running. One by one, Lear and Wavering identified and eliminated each source of electrical interference. When they finally got their radio to work, they took it to a radio convention in Chicago.

There they met Paul Galvin, owner of Galvin Manufacturing Corporation. He made a product called a "battery eliminator", a device that allowed battery-powered radios to run on household AC current. But as more homes were wired for electricity, more radio manufacturers made AC-powered radios.

Galvin needed a new product to manufacture. When he met Lear and Wavering at the radio convention, he found it. He believed that mass-produced, affordable car radios had the potential to become a huge business. Lear and Wavering set up shop in Galvin's factory, and when they perfected their first radio, they installed it in his Studebaker.

Then Galvin went to a local banker to apply for a loan. Thinking it might sweeten the deal, he had his men install a radio in the banker's Packard. Good idea, but it didn't work. Half an hour after the installation, the banker's Packard caught on fire. (They didn't get the loan.)

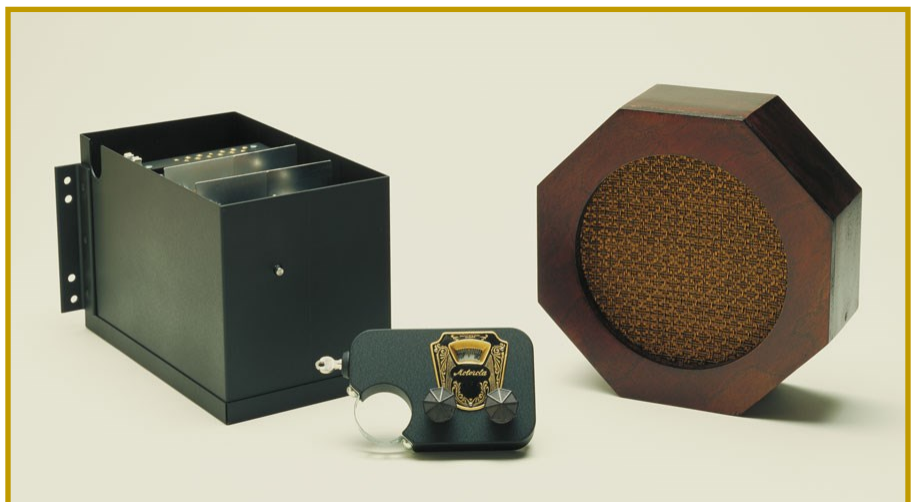
Galvin didn't give up. He drove his Studebaker nearly 800 miles to Atlantic City to show off the radio at the 1930 Radio Manufacturers Association convention. Too broke to afford a booth, he parked the car outside the convention hall and cranked up the radio so that passing conventioners could hear it.

That idea worked --

He got enough orders to put the radio into production.

WHAT'S IN A NAME That first production model was called the 5T71.

Galvin decided he needed to come up with something a little catchier. In those days many companies in the phonograph and radio businesses used the suffix "ola" for their names - Radio-la, Columbiola, and Victrola



(Continued on page 9)

(Continued from page 8)

were three of the biggest. Galvin decided to do the same thing, and since his radio was intended for use in a motor vehicle, he decided to call it the Motorola.

But even with the name change, the radio still had problems:

When Motorola went on sale in 1930, it cost about \$110 uninstalled, at a time when you could buy a brand-new car for \$650, and the country was sliding into the Great Depression. (By that measure, a radio for a new car would cost about \$3,000 today.)

In 1930, it took two men several days to put in a car radio --

The dashboard had to be taken apart so that the receiver and a single speaker could be installed, and the ceiling had to be cut open to install the antenna. These early radios ran on their own batteries, not on the car battery, so holes had to be cut into the floorboard to accommodate them. The installation manual had eight complete diagrams and 28 pages of instructions. Selling complicated car radios that cost 20 percent of the price of a brand-new car wouldn't have been easy in the best of times, let alone during the Great Depression

Galvin lost money in 1930 and struggled for a couple of years after that. But things picked up in 1933 when Ford began offering Motorola's pre-installed at the factory. In 1934 they got another boost when Galvin struck a deal with B.F. Goodrich tire company to sell and install them in its chain of tire stores. By then the price of the radio, with installation included, had dropped to \$55. The Motorola car radio was off and running. (The name of the company would be officially changed from Galvin Manufacturing to "Motorola" in 1947.)

In the meantime, Galvin continued to develop new uses for car radios. In 1936, the same year that it introduced push-button tuning, it also introduced the Motorola Police Cruiser, a standard car radio that was factory preset to a single frequency to pick up police broadcasts. In 1940 he developed the first handheld two-way radio -- The Handy-Talkie for the U. S. Army.

A lot of the communications technologies that we take for granted today were born in Motorola labs in the years that followed World War II.

In 1947 they came out with the first television for under \$200.

In 1956 the company introduced the world's first pager.

In 1969 came the radio and television equipment that was used to televise Neil Armstrong's first steps on the Moon.

In 1973 it invented the world's first handheld cellular phone. Today Motorola is one of the largest cell phone manufacturers in the world. And it all started with the car radio.

WHATEVER HAPPENED TO the two men who installed the first radio in Paul Galvin's car?

Elmer Wavering and William Lear, ended up taking very different paths in life. Wavering stayed with Motorola. In the 1950's he helped change the automobile experience again when he developed the first automotive alternator, replacing inefficient and unreliable generators.

The invention led to such luxuries as power windows, power seats, and, eventually, air-conditioning.

Lear also continued inventing. He holds more than 150 patents.

Remember eight-track tape players? Lear invented that. But what he's really famous for are his contributions to the field of aviation. He invented radio direction finders for planes, aided in the invention of the autopilot, designed the first fully automatic aircraft landing system, and in 1963 introduced his most famous invention of all, the Lear Jet, the world's first mass-produced, affordable business jet. (Not bad for a guy who dropped out of school after the eighth grade.)

Sometimes it is fun to find out how some of the many things that we take for granted actually came into being!

AND It all started with a woman's suggestion!!



AARC Meeting Info.
Baby A's near the Arboretum
9505-B Stonelake Blvd.
(Come early and have dinner!)

Business Meeting 7:00 pm

January 5th—NVIS (Near Vertical Incident Skywave) Theory and Practice by Lew Thompson

Officers Meeting

Officers meet via Skype and meetings are open to club members. Contact an officer for more information.

2016 Upcoming Amateur Exams

ARRL VEC— January 9th & February 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- January 16th & February 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/>

2016 Calendar of Events

Jan 9 2016 San Antonio Radio Club Fiesta

Location: Schertz Civic Center 1400 Schertz Parkway, Schertz, TX 78154 Talk-In: 146.940 - (PL 179.9)
 Contact: Rowena Archer, KF5JCZ 210-415-6894 oldfwd-grandma@gmail.com San Antonio Radio Club <http://w5sc.org>

Jan 15-16 2016 North Texas Section Convention

(Cowtown Hamfest)
 Forest Hill Civic & Convention Center 6901 Wichita Street Forest Hill, TX
 Cowtown Amateur Radio Club
 Talk-In: 147.280 (PL 110.9)
 David, KC5UYR 817-925-5126 kc5uyr@compuserve.com
<http://cowtownhamfest.com>

Jan 16 2016 25th Annual Lou Withrow Skywarn Class

815am - 415pm
 Location- ACC Eastview Campus, Building 8500
 3401 Webberville Rd, Austin, TX 78702
 NWS Basic/Advanced SkyWarn Training Instructor: Paul Yura, Warning Coordination Meteorologist
 Hosted by Troy Kimmel KE5BCK tkim-mel@mail.utexas.edu
 NWS Austin San Antonio tweeting live during the session - #ATXSKYWARN
www.utexas.edu/depts/grg/kimmel/skywarn.html

Upcoming Meetings...

Jan	Feb	Austin Meetings/Happenings	Time	Address
5	2	AARC Meeting Baby A's	7:00 p.m.	9505 Stonelake Blvd.
26	23	Travis County A.R.E.S. Pickle Research Ctr	7:00 p.m.	10000 Burnet Rd.
28	25	CERT Meeting, CTECC	6:30 p.m.	5010 Old Manor Rd.
25	22	CTDXCC Meeting Old Quarry Library	6:30 p.m.	7051 Village Ctr Dr.

If your club is listed here and has incorrect time or dates, please let us know!
editor@austinhams.org