

AARC OVER

*Keeping
Austin
Wireless*

*for over
99
Years!*



AARC

Bulletin of the
Austin Amateur Radio Club

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January, 2019

Sorry Electrolytics!

By Joe Fisher, K5EJL

ARRL Technical Specialist and CLM

A while ago at K5LBJ (LASA HS ARC) we acquired a NETGEAR GS108 gigabit Ethernet switch (image at right) for free from the UT System surplus property disposal facility. With a little cleanup, it looked like new. It was to be used to replace a slower 10Mbit switch in the Radio Room. Austin ISD had upgraded to 1-Gbit Ethernet a few years ago.



But when a known good 12VDC power supply was plugged into the unit, strange things happened. It seemed to boot up fine, and when only one active Ethernet cable was plugged into any port, the network traffic indicator LEDs blinked just like one would expect.

If another active cable was plugged into any other port, the thing continually rebooted itself! . . . Ohhh Kay. Looking back, that's probably the reason the unit was declared "surplus"!

This smelled like a power problem to me, and since the Amazon used price is currently \$25 to \$50, I thought it worth a closer look. Hold those thoughts for a minute.

Couple of years ago we had a failure of an A/C unit at our house. Technician who came out said he suspected that a motor "starting capacitor" had failed. That's a special electrolytic capacitor used to start AC motors. Said it looked to him like the top of the aluminum can was "puffed up". He pulled it out.

I couldn't tell that the device was "puffed up", but then again my old eyes aren't all that good anymore. He put the circularly cylindrical can top side down on the flat concrete walkway; it wobbled, slightly.

"Yep, that's it alright", he said. And then replaced it and presented a bill, Good work; A/C's worked fine since.

(Continued on page 4)

HAM RADIO TEST RESULTS

AARC would like to congratulate the following individuals on their accomplishments!

The following are the results of the ARRL VE test session held on December 1st, 2018 at Bethany United Methodist Church:

Technician Class Licenses Processed

Mark Belshin KI5CMV
Jason Dunn KI5CMU

Deidra Christenson KI5CMX
Irasemi Hensley KI5CMW

Marc Christenson KI5CMY
Jovon Hodge KI5CMT

General Class License Processed

Rosemary Redelinghuys KI5CEG

Extra Class Licenses Processed

David Artman KD9FI

Micah Kemp AG5SJ

Festus Redelinghuys KI5BXL

Examiners Participating in this Test Session

Craig Bean AC5KW
Jim Kinter K5KTF

Milt Cram W8NUE
Joe Makeever W5HS

Rick Herndon K5FNI
Rob Porter K5FAR

Next ARRL VE Test Sessions

January 5th - Bethany United Methodist Church, Disciple Building, Room 203/204

February 2nd - Bethany United Methodist Church, Disciple Building, Room 203/204

TNX ES 73 DE W5HS

Joe

12-20-18

The South Austin W5YI VE team heartily congratulates the following people who earned new or upgraded amateur radio licenses at our December 15th session:

General Class

Seannon Baker, KD4IYI

Technician Class

Paul Westerman, KI5CQL

Andrew Smith, KI5CQO
Paul Crown, KI5CQM

William Norris, KI5CQM

Our administering volunteer examiners were:

Craig Bean, AC5KW

Gary Popp, AE5JR
Steve Anness, KJ5T

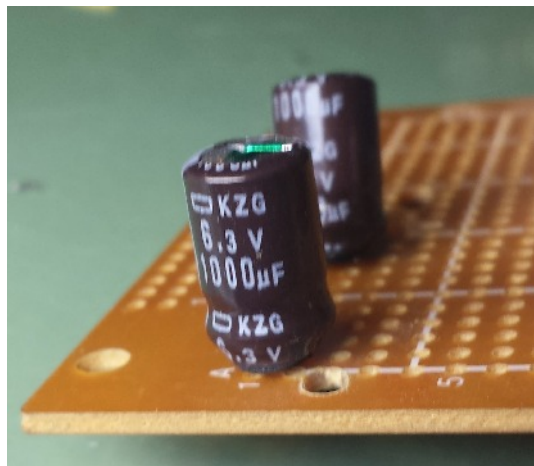
Glosson, N5DPG

Our next two amateur radio exam sessions will start at 2 PM on January 19th and February 16th in Fleck Hall, room 118 on the campus of St. Edward's University. All sessions are walk-in and the exam fee is \$14.

For additional information regarding our amateur radio examination sessions, please contact Craig, AC5KW at (512) 474-6443 or by e-mail to craigmb5 /at/ gmail.com

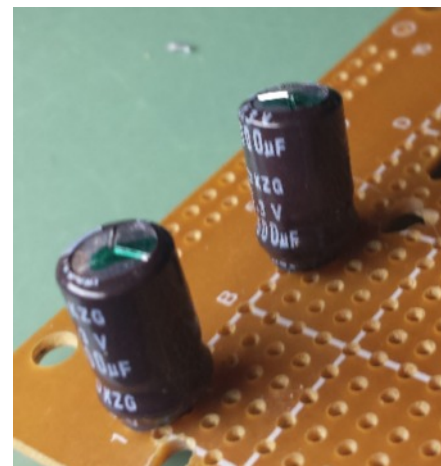


Now back to K5LBJ. I didn't need to pull two of the electrolytics off the unit's PCB to see that they were "puffed up" this time. Even the not-so-good photos of the extracted caps, shown here on a piece of "perf board" I had



laying on the bench, reveal a slightly bulging top on both.

Well, I couldn't find any 1000µF 6.3V caps, but did find some old, but unused, 820µF ones at 6.3V. That's close enough. Put 'em in and now it runs like a bandit.



For a "hacker bench engineer" like me, electrolytics are a black art. I've seen some that have sat on the shelf for decades and, when installed, work fine indefinitely. Other brand new stock will fail in a few years; maybe months! I just don't know why. Must be related to "materials or workmanship", to use a popular Warranty phrase.

In the past I have heard anecdotes of equipment manufacturers having had similar experiences. That's likely the reason for the move to tantalum caps in newer designs. And Niobium caps for Surface Mount Device (SMD) construction. There's lots of seemingly good info on the Web on all types of capacitors and theories of operation; see the Wikipedia article on Capacitor Types.

Real hams just love the sight of molten solder and the smell of smoking rosin core flux! And they love bringing electronics, especially radios, back to life. So, when you acquire a device that's "broke" [sic], especially if it's free, don't automatically recycle it. I know... Buying a new one, if available, is more "economic" [also sic]. But from where are the bragging rights coming if all you do is plunk down some money? Besides, I am not an economist; I want to be a better technician.

So, don't burn yourself with the soldering iron! Unless your mother's available to treat it, that is.

73 DE K5EJL



AARC Meeting Info

Tuesday, January 8, 2019 / 7:00pm to 9:00pm

Location: Applied Research Laboratories
10000 Burnet Rd., Austin TX 78758

Main Presentation

WinLink Express

Solar Wx Summary
by Lew Thompson, W5IFQ

Upcoming Amateur Exams: 2019

ARRL VEC - January 5th and February 2nd
9 a.m. At Bethany United Methodist Church.
Room 203/204. \$15 fee. For more info, contact:
Joe Makeever, W5HS (512-345-0800)

W5YI VEC - January 19th & February 16th
2 p.m. In Room 118, Fleck Hall,
St. Edwards University. \$14 fee.
For more info, contact:
Craig, AC5KW [at] ARRL.net

2019 - Calendar of Events

Jan 12 - San Antonio Radio Fiesta 2019

Schertz Civic Center 1400 Schertz Parkway Schertz, TX
78154 San Antonio Radio Club <http://w5sc.org/> 146.940+
(PL 179.9) Contact: JC N5RXS 210-522-6167
Email: n5rxs2 [at] gmail.com

Jan 12-19 - MPMT's Ham Cruise #6

Ham cruise reservations are closed, but... Please watch DX
cluster posts and listen on the bands for us using "Carnival
Freedom" suffix! Seven-day cruise from Galveston to Key
West, FL; Freeport; Nassau, Bahamas then back to
Galveston. Special permission to operate Maritime Mobile
HF radio! Ship's Engineers install two antennas for two
separate HF stations. Contact Debbie, N5DSR,
832-656-0731 or email: mypinmoneytravel [at] yahoo.com

Jan 19,26, Feb 2 - Amateur Radio Class by W8EFG

Attend a free, technician license "ham cram"
This is a free class for ages 12 and older. Free lunch
provided before exam!

When:

January 19, 2018 @ 10:30am - 2pm

January 26, 2018 @ 9am -1pm

February 2, 2018 @ 9am -12pm

Testing Session to be held at 1PM on February 2 after the
final class

Where:

El Nuevo Mexico Restaurant, 201 Childers Drive,
Bastrop, TX 78602. This class is offered free of charge by
the Bastrop County Amateur Radio Club

Visit: <http://www.bcarc-hams.org>

Questions? Email bcarc.hams [at] gmail.com
or call: 512-537-0015

Jan 20 - Big Bend Ultra Marathon

The Big Bend Ultra Marathon returns to Big Bend Ranch
State Park. 50 mile option is back by running the 50k and
30k loops instead of the BIG loop to the Northern side. No
new break points, but may have longer hours, likely
extending before daylight & after dark. If you would
consider helping with the upcoming event, let Charlie
KC5NKK know please.
Charlie Land, KC5NKK, charlesdland [at] gmail.com

Jan 26-27 Winter Field Day

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

N5OAK will be active <http://www.n5oak.org/>

Feb 2 - 28th Annual Lou Withrow SKYWARN

(Official NOAA WX Spotter Training)

8:15am-4:15pm — Basic & Advanced Training

ACC Eastview Campus, Building 8500

3400 Webberville Road, Austin, TX 78702

Austin / South Central Texas Severe Weather Spotter Training
Session

NWS Basic/Advanced SkyWarn Training Instructor:

Paul Yura, Warning Coordination Meteorologist

Keynote Speaker/Talk – TBA (Probably Kevin Kloesel)

NWS Austin San Antonio tweeting live during the session - #ATX-
SKYWARN

Hosted by Troy Kimmel, KE5BCK, tkimmel [at] mail.utexas.edu

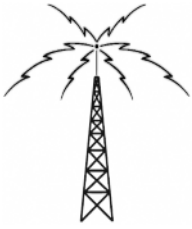
<http://www.la.utexas.edu/users/kimmel/skywarn.html>

SkyWarn Book

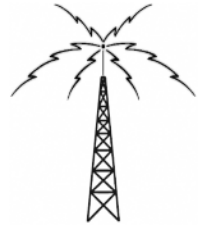
<http://www.la.utexas.edu/users/kimmel/skywarnbook.pdf>

More info & events listed in the [SwapNet Newsletter!](#)

Visit <http://austinhams.org/swapnet>



Over the WWWaves...



COWs in the air!

No. They're not farm animal with wings. COW is "Cell On Wings," and can extend coverage farther than other temporary cell sites. AT&T successfully tested all-weather drones for disaster response. The Flying COW drone will be one of two types of drones that AT&T will offer for its Network Disaster Recovery system. Read the article at: <http://go.newbaymedia.com/e/262762/er-drone-for-disaster-response/r4qxl/1226495799?h=9KdcDQnS58SYU6uPvXrNkoMIBW0GCC9D1DnbdBXOy5M>

FCC to Suspend Most Operations on January 3rd

If the partial lapse in federal government funding continues, the FCC will suspend most operations on Thursday, January 3rd, at mid day.

Read more at: <http://www.arrrl.org/news/fcc-to-suspend-most-operations-on-january-3-if-government-shutdown-continues>

Ground Plane Antennas

The latest topic of the ARRL's "The Doctor is In" is available as a podcast. More info at: <http://www.arrrl.org/news/the-doctor-will-see-you-now-94>

K7RA Solar Update

Can't make it to the January AARC Meeting to hear/see W5IFQ's Solar Wx Summary? Check out the Solar Update at ARRL:

<http://www.arrrl.org/news/the-k7ra-solar-update-557>

Also, don't forget the Region 6 Army MARS Solar Weather site at:

<https://region6armymars.org/resources/solarweather.php>



President's Corner

2018 has been a great year! We had a good turnout for Field Day. The monthly club meetings had good presentations. And we gained a few more members. I'd like to thank all the members and visitors for all their participation and hope you join

us again for another great year in 2019!

Don't forget... The January meeting is rescheduled and will be held on Tuesday, January 8th, 7:00 p.m., at our normal location - the Applied Research Labs. We all look forward to seeing you then!

Until then, have a safe and Happy New Year!

73 DE WB5WTF
Ruben

Just For Fun...

Word Search

Can you find all the words listed below in this puzzle? The words are taken from articles, news, events, or *anywhere* in this newsletter.

```

I V R P W P Q A D I T L E V M
N R Q V F H N O X R L G L D A
O G T I B N K H A U B L E R R
C L B N E S P N C Y N A C O A
R E T T E L S W E N L B T T T
A O N G L M S F Z F L N R I H
M A O Z I O N W W U I S O C O
Z P V T A F F R B K U K L A N
S A T E L L I T E R C S Y P V
R E W D U F H R P V U M T A Z
R A T P R G Y L N J O V I C S
I N G X I O U E X M D G C A O
F L Y L S S N R A W Y K S U L
C R U I S E U E A S N Q I H A
Q H S F R V N V Y D Q W A F R

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ANTENNA
CAPACITOR
CRUISE
DRONE
ELECTROLYTIC

GOVERNMENT
LIGHTBULB
MARATHON
MARCONI
NEWSLETTER

SATELLITE
SKYWARN
SOLAR
SURPLUS
TRANSMITTER

This Month In History

- 1902-01-01** – Nathan Stubblefield makes 1st public demonstration of radio, Pennsylvania
- 1903-01-18** – The first transatlantic radio transmission to originate in the United States is sent by a transmitter in Massachusetts
- 1904-01-07** – Marconi Co establishes "CQD" as 1st international radio distress signal
- 1909-01-23** – 1st radio rescue at sea
- 1940-01-05** – FCC hears 1st transmission of FM radio with clear, static-free signal
- 1965-01-27** – 1st ground station-to-aircraft radio communication via satellite

Source: <https://www.onthisday.com/literature/radio>

Action on the Airwaves

Looking for something new to do this new year?
Check out some [activities on the air!](#)

01/02/2019 | 13th Annual Straight Key CW Event

Jan 2-Jan 31, 0000Z-2359Z, K3Y, Various Cities. SKCC - Straight Key Century Club. 21.050 14.050 7.055 3.550. QSL. SKCC c/o Jeremy Downard - KD8VSQ, 511 W. Pottawatamie St., Tecumseh, MI 49286. K3Y/0 thru 9 plus KH6, KL7, KP4 and DX member stations in six WAC areas operating straight key, bug and cootie keys. QSL card confirms one QSO per area, up to 19 for all-area sweep. See URL for sched, map, stats, etc. www.skccgroup.com/k3y

01/09/2019 | Lake Havasu City Balloonfest

Jan 9-Jan 14, 0000Z-0000Z, K7B, Lake Havasu City, AZ. London Bridge Amateur Radio Association. 18.145 14.245 7.200 3.890. Certificate. Garry F. Fisher, 1850 Rainbow Ave S, For Certificate, Lake Havasu City, AZ 86403. www.lbara.org

01/15/2019 | 4th Annual "RST" Special Event

Jan 15-Feb 28, 0000Z-2359Z, VE8RST, various, AK. North Country DX Association. All bands, all modes. Certificate & QSL. For QSL: John Reisenauer, 2573 Old Georgetown Rd W, Kershaw, SC 29067. For QSL, US please send \$1 and SASE, foreign send \$3 and SAE. See website for information on receiving a certificate, and for more information on this event. Participating calls: KL7RST, VE8RST, OX7RST, VY1RST, VY0RST, N1RAC, and K7ICE. www.qrz.com/db/k7ice

01/19/2019 | Quartzfest

Jan 19-Jan 27, 0800Z-1200Z, W7Q, San Luis, AZ. Quartzfest. 28.385 21.385 14.285. QSL. Kristyn Weed, 1519 N Camino Emiliano, Tucson, AZ 85745. Quartzfest.org

01/26/2019 | See The Light

Jan 26, 1200Z-2359Z, WA4TRS, Fairview, NC. The Road Show Amateur Radio Club, Inc.. 14.240 7.074 7.072 7.070. Certificate & QSL. The Road Show Amateur Radio Club, Inc., 57 Echo Lake Drive, Fairview, NC 28730. The practice run for the 2019 Lightbulb QSO contest, March 9th 20:00 UTC through March 10th 20:00 UTC. Test your "Lightbulb Antenna" and work ours! <http://www.wa4trs.org/>



A New Look



For An Old Friend

The Austin Amateur Radio Club is moving swiftly into its 100th year! Yes, really. **100 years old!** That should make you feel younger, right? As Editor, I'm switching software and trying out a new format for the *AARCOVER* newsletter. In the switch, I'm giving the newsletter a little face lift. Not that it's absolutely *needed*, but in the interest of keeping things lively, I want to try some changes and hopefully get some feedback from you about what you like or don't like.

We (Editors, past and present) have used Microsoft Publisher in the past, and it's been pretty good for publishing a newsletter. But it's slow and sometimes drives me (*more?*) insane when it doesn't work the way I want it to.

I've been using Serif's PagePlusX9 for some other projects and it's been, for me, easier to use than Publisher. PagePlus is zippy fast and provides organization that was difficult, nigh impossible, with Publisher. It has a large selection of templates, though I'm creating my own for use with the *AARCOVER* Newsletter. Development on the software has ceased, but they still sell it (really cheap now! Only 20-bucks for a new license) and it does a great job on Windows 7 and Windows 10. This isn't a sales pitch! I'm just enjoying using it more than Publisher. Even with creating a new template, it has taken significantly less time than would have been the case with Publisher. I'm inclined to stick with it for a while to make sure it's going to work out. And if anyone else takes over as editor, I'll provide both formats and let them choose which works better for them.

I'll still be tweaking a few things over the coming months. Maybe a font face change here. Or a background color change there. And I'm not *thrilled* with the cover page yet; colors need a little tweaking. My goal is to rearrange a few things and create a new, visually appealing format for you - our trusted readership! So what do you think? Change is good!?! Or... What happened to the "Good Ol' Days?" See an email to: editor /at/ austinhams.org and let me know (spam prevention: replace /at/ with @).

73 DE Editor

P.S. Happy New Year!

(Cartoon glasses image used per CC BY-NC 4.0 License. Source: <http://clipartmag.com/cool-cartoon-glasses-clipart>)



Upcoming Meetings...

Jan	Feb	Austin Meetings/Happenings	Time	Address
8*	5	AARC Meeting @ Applied Research Labs.	7:00pm	10000 Burnet Rd
22	26	Travis County ARES @ Applied Rsrch Labs	7:00pm	10000 Burnet Rd
24	28	CERT Meeting @ TBD (see Link / Contact)	7:00pm	TBD
?	5	CTDXCC Meeting @ Mimi's Café	6:30pm (dinner @ 5:15pm)	10515 N Mopac Expwy NB Bldg O, Austin

*January meeting moved to January 8 due to 1st being New Years Day.

If your club is listed here and has incorrect time or dates, please let us know!
Email: editor [at] austinhams.org

Periodic Events

Sun	7:00 p.m.	Travis Co. ARES net	147.36 MHz _ (131.8)
Sun	8:00 p.m.	Travis ARES Packet (*in UNPROTO)	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 - (107.2)
Mon	7:30 p.m.	STX ARES Net	3.873 MHz
Tue	7:30 p.m.	Hays ARES net	147.100 MHz +
Tue	8:00 p.m.	Bastrop ARES Net	443.750 MHz + (114.8)
Wed	11:30 a.m.	Ham Social Luncheon, Jim's	146.94 MHz - (107.2)
Thu	9:00 p.m.	2m SSB Net	144.250 MHz (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	7:00-8:30 a.m.	Breakfast @ Waterloo Ice House	444.1 MHz +
Sat	9:00 a.m.	Chapter 67 QCWA QSO Net.	3.920 MHz LSB
Sat	7:00 p.m.	AARC Elmer Net	146.94 MHz- (107.2)
Daily	6:30 p.m.	Central Texas Traffic Net	147.14 MHz+

Meeting Minutes

There are no meeting minutes for December as we held the annual Christmas Party instead of a business meeting.

Meeting minutes for November are not available due to extenuating circumstances. Does anyone have any notes about the November meeting? Please send to: president [at] austinhams.org

Austin Amateur Radio Club, Inc. / PO BOX 4739 / AUSTIN TX 78765-4739 / Web site: <http://www.austinhams.org>

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

REPEATERS

AARC maintains the following repeaters:

Frequency (MHz)	PL Tone (Hz)	Use / Notes
146.780 (-)	-	2m D-STAR repeater [W5KA C]
146.880 (-)	107.2	Analog/Digital Fusion (Yaesu)
146.940 (-)	107.2	Most popular, TCARES WxNet, SwapNet
224.800	-	-
440.650 (+5)	-	70cm D-STAR repeater [W5KA B]
444.100	-	-
444.200	107.2	-
1293.100 (-20)	-	23cm D-STAR repeater [W5KA A]
1248.200	-	23cm D-STAR DD (data, simp./Reversible) [W5KA A]

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

Note: **No** AARC repeater has **autopatch** capability any longer.

The Austin Amateur Radio Club offers annual scholarships to licensees living in Travis, Williamson, Bastrop, Hays, Blanco, Caldwell, and Burnet counties. Please see <http://austinhams.org/scholarships> for more information.

OFFICERS

President	Ruben Fuentes	WB5WTF	president [at] austinhams.org
Vice President	Lew Thompson	W5IFQ	vice-president [at] austinhams.org
Treasurer	Mark Jenkins	W5MPJ	treasurer [at] austinhams.org
Secretary	Carston Buehler	KG5PAL	secretary [at] austinhams.org
Editor, AARCOVER, website	Michael Skurka	K5MSK	editor [at] austinhams.org
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ARRL Travis Co. Emer. Coord.	Michael Marks	KG5RXG	kg5rxg [at] gmail.com
TCARES PIO	Ruben Fuentes	WB5WTF	pio [at] austinhams.org

* Replace [at] with @ in email addresses.

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Members and other readers are encouraged to submit material for publication. Contact the Editor, if mailed submissions are required. Email and/or electronic files are encouraged! Submissions may be edited for publication (for content and/or space). **Deadline is usually the 25th of each month**, but late articles may be considered for future publication. Material may be used in a later issue. Unless otherwise noted, permission is granted to reprint AARCOVER articles, provided you credit the original author and the *AARCOVER*. If material is included in another publication, a courtesy copy to the Editor is appreciated.

AARC Members:

For Changes in your ADDRESS, PHONE NUMBER or CALL SIGN
Contact: Mark Jenkins, W5MPJ / treasurer [at] austinhams.org
Mark handles all changes for membership information.

