



AARC OVER

**Keeping Austin Wireless
for Over 96 Years!**

Bulletin of Austin Amateur Radio Clubs

ISSN 1067-0262

July 2017

Issue 07-2017

What's That Gobbledygook?!

Introduction and Initial List by Crocket Grabbe, KF5LTT
(Title and edits by the Editor)

When it comes to my normal vocabulary, I am usually as good as anybody. But when people start talking by throwing out abbreviations, I am often totally at a loss! While it is good to specify what the abbreviations are the first time one uses them, most people do not. It is too time-consuming to specify that, taking away from the efficiency by which they are saying it.



I have been tackling that problem by creating an *Abbreviation Dictionary*. Note I have not defined a few of these abbreviations because I still do not know what they are (updated by Editor). Please email me (sealane@sealane.org) with any info that is missing or in-error here. This is the Dictionary I have:

(continued on page 5)

Periodic Events

Sun	7:00 p.m.	Travis 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)
Sun	(After Swapnet)	<i>Newsline</i>	<i>146.94 MHz - (107.2)</i>
Mon.	7:30 p.m.	STX ARES Net	3.873 MHz
Tues.	7:30 p.m.	Hays ARES net	147.100 MHz +
Tues.	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 - 8:30a.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+

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Ham Radio Exams Results

The following are the results of the ARRL VE Test Session held on **June 3rd** at Bethany United Methodist Church:

Technician Class Licenses Processed

Charles E. Elwood KG5TPD	Derrick P. Hinkle KG5TPH
Julia E. La Colla KG5TPE	Manuel J. Ziegler KG5TPF

General Class Licenses Processed

Gary Fabian KG5TPG

Extra Class Licenses Processed

Robert A. Krause KR4USE

Examiners Participating in this Test Session

Larry Gunter WB5BEK	Chris Howell KC5DVR	Mark Hunt K5NM
Ted Iglehart KF5END	Joe Makeever W5HS	Johnny Twist K5ACL

Next Two ARRL VE Test Sessions

July 1st @ 9:00a.m. - Bethany United Methodist Church, Disciple Bldg. Room 203/204

August 5th @ 12:30p.m. - ARRL South Texas Section Convention at Austin Crowne Plaza Hotel

TNX ES 73 DE W5HS

Joe

6-17-2017

The South Austin W5YI VE team heartily congratulates the following people who earned new or upgraded amateur radio licenses at our **June 17th** session:

Amateur Extra Class

Kourtney DeHaas, KB5PRZ

General Class

Michael O'Toole, KG5SPJ	Michael Bonoan, KG5TLK
-------------------------	------------------------

Technician Class (NEW)

Angela Durbin	Michael Baird	Cameron Weber
Jeremy Wyble	Travis Driver	Robert Oxford, Jr.
James Zeringue		

Our administering volunteer examiners were:

Craig Bean, AC5KW	Sam Mihalik, KM5MY	Gary Popp, AE5JR
Stuart Wolfe, KF5NIX	Wally Marusa, K5WLY	Albert Karch, N5OVH

Our next two amateur radio exam sessions will start at **2 PM** on **July 15th** and **August 19th** 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 **AC5KW@ARRL.net**

2017 Officers

President	James Hollan	KG5SGR	president@austinhams.org
Vice President	Lew Thompson	W5IFQ	vice-president@austinhams.org
Treasurer	Jay Hoffman	KA5OST	treasurer@austinhams.org
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TC ARES PIO	Steven Polunsky	W5SMP	tcares-pio@gmail.net

Please contact a club officer, attend a meeting, or mail us to join the organization.

Sorry... Online membership registration is temporarily unavailable.

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

146.780/ -600kHz
146.880 107.2 PL Tone
146.940 107.2 PL Tone
224.800
444.100
444.200 107.2 PL Tone
440.650 +5
1293.100/-20
1248.200

USE

2m D-STAR Repeater [W5KA C]
Analog/Digital Fusion
Most popular, TCARES WXnet, Swapnet
The 146.94 repeater is online with a backup until the original can be repaired.
70cm D-STAR Repeater [W5KA B]
23cm D-STAR Repeater[W5KA A]
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.

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.

AARCOVER Information: ISSN 1067-0262, CODEN AAOVE3. ©Austin Amateur Radio Club, Inc. Published monthly by the Austin Amateur Radio Club, Inc.

Viewpoints expressed in the AARCOVER do not necessarily reflect those of the 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. 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 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
See: Jay Hoffman, KA5OST / ka5ost@arrl.net
Jay handles all changes for membership information.



Over the WWaves...



This is for Electronics enthusiasts and ham radio operators: it is a reminder of an earlier era 65 years past.

http://n4trb.com/AmateurRadio/GE_HamNews/issues/GE%20Ham%20News%20Vol%2006%20No%204.pdf

...a little nostalgia <sniff>

I remember this publication fondly. I used to enjoy receiving it.

--

Rick Herndon K5FNI

Looking for an inexpensive, crystal-controlled QRP rig? K5FNI (Rick) sent us this link:

<http://www.al7fs.us/AL7FS2.html>

A nice write-up with links to PC Board and more!

It's True! Radio Volunteers ARE a Key Component of Public Safety

<http://www.govtech.com/em/disaster/Radio-Volunteers-a-Key-Component-of-Public-Safety.html>

Yakima Herald-Republic in Washington wrote about their local Amateur Radio Emergency Service volunteers and how they are recognized at the local and state level.

FYI: The URL for **Texas Army MARS** with its space weather pages is now:

<https://www.region6armymars.org/>

DE W5IFQ, AAR6IK (Lew)



ICS-300 Training Class

There are seats available for the ICS-300 class, Intermediate Incident Command System for Expanding Incidents, July 24-26 at St. Edwards University, Fleck Hall, Room 305, 3001 S. Congress from 8:30 to 17:00 each day. This class is **free of charge** and is being taught by TCARES member Matthew Porcher, K5LF. Register online at PreparingTexas.org.

Prerequisites include the online courses ICS 100, 200, 700 & 800.

KG5DLD

TCARES EC



REMINDER

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.



Abbreviation Dictionary

- A-index** = index of conditions of Earth's magnetic field (better is lower)
- AFC** = automatic frequency control
- AFSK** = audio frequency-shift keying; a modulation technique which is transmitted by switching between 2 audio tones fed into FM transmitter (RTTY mode) (ed.)
- AGC, ALC** = automatic gain control, automatic level control - provides a controlled signal amplitude at its output, despite variation of the amplitude in the input signal (ed.)
- APRS** = Automatic Packet Reporting System for real-time packets (position/object/item) of digital info
- AR** = prosign noting end of a formal message in CW (Morse code)
- ARQ** = automatic repeater request -- 2 stations confirm each other's transmissions if error occurs
- AMTOR** = amateur teleprinting over radio, upgrade of Baudot code with error-correct
- ASCII** = American National Standard Code for Info Interchange, with 7 info bits
- ATV** = Amateur TV
- AX.25** = digital protocol for transporting APRS, typically using 1200 baud Bell 202 AFSK on 2-meter band (70 cm UHF APRS in Europe today), & unnumbered frames (ed.)
- AWG** = American Wire Gauge (#12 needed for 20 A, #14 needed for 15 A)
- Baudot code** = 5-bit code used up to 1980 for teleprinters
- BFO** = Beat Frequency Oscillator; a dedicated oscillator used to create an audio frequency signal from Morse code (CW) transmissions to make them audible (ed.)
- BiCMOS** = IC logic model using both bipolar & CMOS transistors for hi-input impedance of CMOS & low-output impedance of bipolar
- C** = chirpy or unstable signal, when describing CW (Morse-code transmission) in RST report
- CCW** = coherent CW
- CMOS** = complementary metal-oxide semiconductor (P & N channel transistors operate in complementary ways)
- CODOFF** = Codec off, switches transceiver to 30 m & turns off audio codecs -- will allow SSTV or other data modes to be transmitted
- COMPR** = microwaves compressor, processor
- CQ** = looking for a call
- CRT** = Cathode Ray Tube, used in the predecessors prior to the LCD monitors (ed.)
- CSCE** = certificate of successful completion of exam
- CTCSS** = continuous-tone squelch system, the sub-audible tone with voice transmitted to open receiver squelch
- CW** = Continuous Wave, for Morse mode
- Chirp** = changes in carrier frequency of CW (cause chirping sound); also a free application for programming several amateur radios (ed.)
- dBd** = decibels relative to dipole antenna = dBi - 2.15
- dBi** = decibels relative to isotropic antenna = $10 \log(10)G$ where G=gain over isotropic
- dBm** = power ratio in decibels (dB) of the measured power referenced to one milliwatt (mW). Compare dBW, which is referenced to one watt (1000 mW)
- DE-9** = 9-pin connector often used for serial data port; usually referred to, incorrectly, as DB-9 (ed.)
- DIN** = family of multi-circuit connectors for audio & control signals
- DDS** = direct-digital synthesizer circuit.
- DRM** = digital radio mondiale - a set of digital audio transmitting technologies designed to work over the bands currently used for analogue radio (ed.)

DSB = double-sideband, for voice mode (ed.)

DSP = digital signal processor

DX = distant, as in a distant station (ed.)

Echolink = Program that allows worldwide connections between stations & computers (see ac6v.com/repeaters.html#EL)

EME = moonbounce digital mode

ERP = emitted radiated P, increased by reducing dynamics of voice.

FEC = Forward-error correcting codes (using extra data transmitted to correct errors); used by JT65 to decode by many dB below the noise floor

FHSS = frequency-hopping spread spectrum; a method of transmitting radio signals by rapidly switching a carrier among many frequency channels, using a pseudorandom sequence known to both transmitter and receiver (ed.)

FR mode = full-rate mode (uses full bandwidth)

FSK = frequency-shift keying - a frequency modulation scheme in which digital information is transmitted through discrete frequency changes of a carrier signal; used in amateur radio, caller ID, and emergency broadcasts (ed.)

FSK441 = multi frequency-shift keying using 4 tones at 441 baud. (ed.)

Full-duplex mode = simultaneously listening to downlink as we are transmitting uplink (ed.)

Half-duplex mode = transmission of data/voice in one direction at a time (ed.)

HT = handheld transceiver

IMD = intermodulation-> $2f(1)+-f(2)$ & $2f(2)+-f(1)$ products from unwanted signals

IP = Internet Protocol

ITU = International Telecom Union (denotes regions of the world; 2=US)

JFET = junction field-effect transistor (acts as a variable resistor)

JT65 = digital mode optimized for use at extremely-low S/N ratio & long transit t; especially useful for EME communications

KN = listening only for specific station(s)

L band = 23 cm band (1.26-27 GHz)

L/U = sat operating mode, uplink in :-Band, downlink in UHF (435-38 MHz)

LCD = liquid-crystal displays

Lid = in Amateur Radio, a rude or unobservant person, often illegally interfering with other operators (ed.)

LO = local oscillator

LSB = lower sideband

Maidenhead Locator System = aka QTH or QRA grid system, is a geographic coordinate system used by Amateur Radio operators to succinctly describe their locations. A six-character code divides Earth grid into 2.5-feet of Latitude by 5-feet of Longitude. The code can be extended to eight characters for even more precise location mapping.

MDS = minimum detectable signal, taken as -174 Db for perfect receiver at room T.

MFSK = Multi-frequency shift keying - a variation of FSK that uses more than two frequencies (ed.)

MFSK16 = 16 tone MFSK developed for the HF band, designed for long-path DX, typically 316 Hz bandwidth

MMIC = Monolithic microwave integrated circuit, used in microstrip construction to build microwave amplifier, with input & output impedance of 50 ohms

MOSFET = metal-oxide semiconductor field-effect transistor (insulated gate from source/drain channel by thin dielectric)

MPE = maximum permissible exposure - the highest power or energy density that is considered safe (ed.)

MSK = Minimum-shift keying (ed.) - a type of continuous-phase frequency-shift keying

NAK = Not-AcKnowledged signal

NTSC = fast scan TV (525 horizontal lines/frame) (National TV Standard Comm.)

NVIS = Near Vertical Incidence Skywave (ed.)

PACKTOR = binary data teletype combining AMTOR (error-correcting) with packet radio (bandwidth efficient)

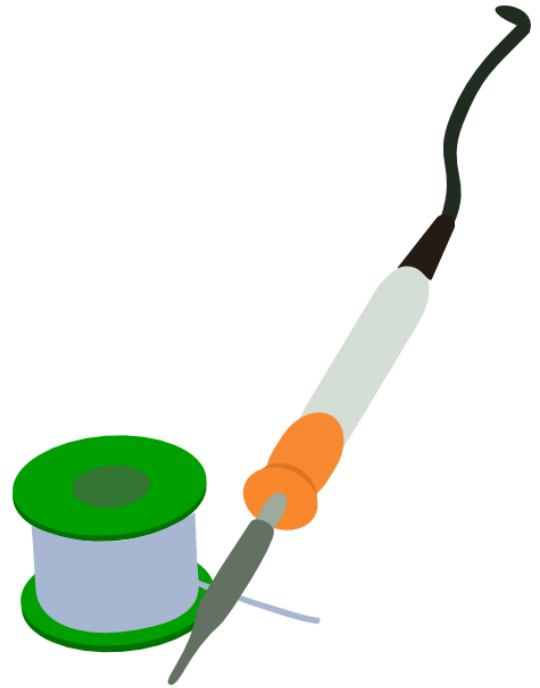
(continued on next page)

PIV = peak inverse voltage
PL Tone = used to filter out other channel users on the repeater
PL-259 = RF connector (male) generally good for frequencies up to 150 MHz; female version is SO-239 (ed.)
PLL = phase-locked loop
PSK31 = phase-shift keying at 31.25 baud transmission rate; has the narrowest bandwidth (37.5 Hz)
PTT = Push-to-Talk, used to key the transmitter
Q = Quality factor (E loss to R/E stored in reactance)
QRL = Are you busy? (ed.)
QRM = You are being interfered with (QRMs = bad signal propagation)
QRP = Low power transmit (ed.)
QRQ = send faster
QRS = send slower
QRV = ready to receive
QSK = break-in telegraphy, transmitting stations can receive between code chars
QSL = acknowledging receipt of message
QSO = I can communicate with ...
QST = ARRL newsletter
QSY = change transmission to another frequency (ed.)
RCA Phono (plug/jack) = commonly used as an audio signal connector (ed.)
RIT = receiver incremental tuner
RST = 3-letter code for reporting Readability, Strength, & Tone (ed.)
RTTY = Radio teletype, using frequency-shift keying (FSK) (ed.)
S band = 13 cm band
SAR = specific absorption rate
SCR = silicon controlled rectifier
SDR = Software-Defined Radio (eg FlexRadio; uses DSP) (ed.)
SIM = simulator or simulation
SMA = small-threaded connectors for frequencies up to several GHz (ed.)
SO-239 = RF connector (female) generally good for frequencies up to 150 MHz; male version is PL-259 (ed.)
SQL = Structure Query Language, programming to manage data held in a relational database
SSTV = Slow Scan TV
SWR = Standing-wave ratio
TNC = Terminal Node Controller (e.g. soundcard interfacing a radio to a computer). In packet radio, two hams are in contact with each other when TNC is connected
Type-N = moisture-resistant RF connector for frequencies up to 10 GHz (ed.)
USB = upper sideband (ed.)
VFO = Variable-frequency oscillator (with tunable C & I)
U/V = sat operating mode, uplink in UHF (435-38 MHz), downlink in VHF (144-46 Mhz)
V/H = sat operating mode, uplink in VHF, downlink in HF (21-30 MHz)
V/U = sat operating mode, uplink in VHF, downlink in VHF
VCO = Voltage-Controlled Oscillator
VFO = Variable-Frequency Oscillator
VIS = Vertical Interval Signaling
VoIP = network protocol Voice-over-IP
VOX = Voice-operated relay or relay, also Voice Operated eXchange (ed.)
VSF = vestigial sideband
VUCC = VHF/UHF Century Club Award, given by ARRL for 100 contacts in Maidenhead locator system

New Product Discovery!

DE K5FNI (Rick)

I've been soldering over 50 years. I've never seen an iron like this one (TS100). If you look at the first and third links below, you can see a discussion of its features and an "unboxing" video in the third one. The second link shows the custom firmware mentioned in the first video. The first video mentions being able to run the iron off of a laptop power supply with sufficient current output. The iron takes 65W at 24VDC, but it will run all the way to 12 VDC (17W) with reduced capacity to heat soldered material. I included the manual link, because I always like to find and read a product user manual before I buy the product, so I can do evaluation beyond just reading the normal sales pitch.



Usual disclaimer:

I'm not selling the iron and I don't even have one... yet. But, this looks like the next purchase for me.

Video extolling virtues of the iron: <https://www.youtube.com/watch?v=X7rCPJAmAG8>

Custom firmware mentioned in above video: <https://github.com/Ralim/ts100>

Reference: upgraded iron sale site <https://www.banggood.com/MINI-UpGrade-TS100-Digital-OLED-Programable-Interface-DC5525-Soldering-Iron-Station-Built-in-STM32-Chip-p-1021266.html>

User manual: <https://imgmgr.banggood.com/images/upload/2015/11/TS100/TS100%20Soldering%20Iron%20Instruction%20Manual.pdf>

[Thanks for the cool find, Rick! -Editor]



FEATURED HAMFEST

OK City Ham Holiday 2017

DE SwapNet, N5MNW (Jeff)

Friday, July 21— Saturday, July 22, 2017

It's a new location for Ham Holiday 2017 and Oklahoma ARRL State Convention!

Tower Hotel, 3233 NW Expressway, Oklahoma City, OK 73112

Sponsor: Central Oklahoma Radio Amateurs

Friday runs from 3:00p.m. to 7:00p.m., with a banquet at 7:30pm.

Saturday runs from 8:00a.m. to 3:00p.m. Lunch available at 11:00a.m. from two local food trucks.

Talkabout Frequency for announcements and information: 146.49 MHz simplex, and DMR radio on the NW OKC Local talkgroup

<http://hamholiday.com/>

Register online now for a chance at the Pre-Registration prize!



Meeting Minutes — AARC General Meeting, 6 June 2017

Start time: 7:01 pm

Attendance: 37

We had two visitors this month. Chris Williams, KJ6WKH and Chuck Kutz-Marks, KG5SLA. Welcome!

We had one new ham this month: Chuck, KG5SLA. Congratulations!

We had one upgrade this month: Richard, AG5KL. Congratulations!

The minutes from May were approved as printed in the AARCover.

Announcements:

- ◆ The July meeting was moved to July 11 as the first Tuesday is July 4.
- ◆ Lew Thompson, W5IFQ, has a completed compact jump kit and you are welcome to come see it if you're interested. Contact him for details
- ◆ See the swapnet newsletter for upcoming events.

Officer reports

- ◆ Treasurer: Jay Hoffman, KA5OST - I'm behind in processing memberships - thanks for your patience. We made a payment to the attorney regarding the Greenwood estate; things are moving slowly. Yaesu is selling inexpensive Fusion repeaters - I propose the club buy two of them (pending approval of the technical committee).
- ◆ Secretary: Angie Steelman, KF5ZXI - We had 37 people sign in last month. Thanks for signing in if you have, please do sign in if you haven't yet.
- ◆ Vice-President: Lew Thompson, W5IFQ - I handle the presentations and am always looking for presenters or topics. Email me if you have ideas.
- ◆ President: James Hollan, KG5SGR: I'm currently going around and around with PEC regarding lightning arrestors, If anyone else is having this problem, I can let you know who to speak with.
- ◆ Newsletter: Michael Skurka, K5MSK - not present.
- ◆ ARES: Kerby Spruiell, KG5DLD: There is (was) an event in Galveston this weekend. There was a net control class this past Saturday. The TCARES meeting this month is about protecting your PC from a cyberattack.
- ◆ Stuart Rohre, K5KVH: There is no news of repeater problems. I will bring the idea of the Fusion purchase to the rest of the technical committee.

Space weather was presented by Lew Thompson, W5IFQ.

End of business meeting: 7:55 pm.

The subject of tonight's presentation was Field Day HF Antennas by Lew Thompson, W5IFQ and AARC Field Day 2017 by Jeff Schmidt, N5MNW and Stuart Rohre, K5KVH.

~~~ End of Minutes ~~~



## **A Special Thanks...**

to all who contributed to this month's newsletter.  
Your contributions are much appreciated. Keep 'em coming!

## 2017 Calendar of Events

### AARC Meeting Info

7:00pm to 9:00pm / Tuesday, June 6, 2017

Location: Applied Research Lab

[10000 Burnet Road, Austin TX](#)

#### Topic:

Jim George (N3BB) - Discussion of the book *Contact Sport* and the behind-the-scenes story of the book and the World Radiosport Team Championship of 2014 in New England

Solar WX Summary: W5IFQ (Lew)

#### Officers Meeting

Officers meet from 6:00 to 7:00p.m. prior to regular club meeting and is open to all. Contact an officer for more information.

### Upcoming Amateur Exams: 2017

#### ARRL VEC - July 1st & August 5th

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 - July 15th & August 19th

2 p.m. in Room 207, Fleck Hall, St. Edwards University. \$14 fee.

Contact Don Dudley  
AC5YK @ ARRL.net  
for more info. \$14 fee.

#### Jul 8 - Texas City, Tidelands Hamfest

Doyle Convention Center from 8am to 2pm

Talk In 147.140 MHz Tone 167.9

Secondary 442.025 MHz Tone 103.5

<http://texascityhamfest.org/>

<http://tidelands.org/>

#### July 27-30 - CSVHFS Conference

Rally the VHF/UHF/microwave hams in your area and across the country. Plan to join us in sunny Albuquerque!

Brian N5ZGT 2017 Central States VHF Society President

<http://2017.csvhfs.org/>

#### August 4-5 - Austin Summerfest

Austin ARC & Texas VHF-FM Society

Crowne Plaza Hotel 6121 North IH-35 Austin, TX 73301

<http://www.austinsummerfest.org/> Joe, W5HS @ arrl.net

#### Aug 19-20 Huntsville Hamfest

Von Braun Civic Center, 700 Monroe Street

Huntsville, AL 35801

<http://www.hamfest.org/>

#### Sept 29-30 Six Meter BBQ (6m VHF Enthusiast Convention)

Co-Hosted by DX Engineering and FlexRadio Systems

Lonestar Court in Austin, TX.

Near the Domain, off Mopac/Loop 1

Friday afternoon-evening for a meet n greet

Main events Saturday from 9:00am to 5:00pm

You -must- preregister for admission

The 6M BBQ website: <http://www.sixmeterbbq.com/>

#### Oct 6-7 Belton Ham Expo

Bell County Expo Center

Temple Amateur Radio Club

<http://tarc.org/hamexpo/>

More events listed in the SWAPNET Newsletter!

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

## Upcoming Meetings...

| July | Aug. | Austin Meetings/Happenings                                               | Time      | Address             |
|------|------|--------------------------------------------------------------------------|-----------|---------------------|
| 11   | 1    | AARC Meeting @ Applied Research Lab                                      | 7:00 p.m. | 10000 Burnet Rd     |
| 25   | 22   | Travis County A.R.E.S. @ Applied Rsrch Lab                               | 7:00 p.m. | 10000 Burnet Rd     |
| 27   | 24   | CERT Meeting @ TBD (see <a href="#">Link</a> / <a href="#">Contact</a> ) | 7:00 p.m. | TBD                 |
| 24   | 29   | 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*

Visit our new website at <http://austinhams.org/>