

#### In This Issue

- A Word
- Editor's Note
- Projects
- On the Bench
- The Operating Room
- Humor
- ARRL Calendar
- TARA Calendar
- Reference Information
  - Local Repeaters
  - Club Repeaters
  - Officer's/Committees
  - Meeting & Club info
  - Membership Application

#### Contact Us

- Via Facebook
- Via WWW.AC6EE.ORG
- U.S. Mail: TARA P.O. Box 134

Keene, CA 93531

# **A Word**

#### Dan Mason, AB6DM, President

Hello, TARA friends!

We are charging hard into 2023. But I must note we had a fantastic December. Our December meeting/party was a great success. Everyone had a good time, and the Don Pericos restaurant took great care of us. Also, as you probably heard, we went on run #1 of our Comanche Drive caravan (presentation at the next meeting). We hope to do a run #2 a bit later, as weather permits.

In the meantime, we are now getting ready for Winter Field Day (WFD), 2023. Our WFD participation will be at Kern River Campground sites 12 and 13 (partway between California Living Museum—CALM and Lake Ming). More on this at our TARA General meeting this Thursday night, 7 PM, at the Tehachapi Police Department conference room (email reminder to come). We are also planning other great ham activities through out the year. Semi-monthly VE sessions will also resume February 11th, at 11 AM (not 2:30 PM), at the Tehachapi Salvation Army. Lastly, if you're in eyeshot of this newsletter (and I suppose local) and have not renewed with us, please consider renewing to make TARA better and stronger.

73,

Dan Mason - AB6DM

Volume 7, Number 1 1 of 13

#### **EDITORS' Note:**

For the February newsletter the focus is <u>Contesting</u> — describe your station and favorite contest experiences.

We're looking for themes for the coming months. Please tell me what topics you would like to see as a theme for this year's monthly newsletters. Please send your ideas to me at w6qpa@ac6ee.org

73 ...Ray W6QPA

# **Projects**

I hope this "Project" topic will let others know the ham activities you find interesting and perhaps introduce another aspect of our hobby to someone. Maybe a group project will evolve from these items — who knows. ...Ray, W6QPA

#### <u>Charlie Flint — K4CMF</u>

Happy New Year, everyone. After being in TN for two years now, and getting some health issues dealt with in 2022, I've been slow to build a permanent ham shack, in my upstairs playroom. To some extent, I had other priorities, but maybe I was also just being lazy. Ok, I'll admit I'm still spending time on my other hobby, building and flying RC aircraft. In 2021, I set up a 20 meter doublet over the garage in the crawl space, but it's marginal. Then I threw a G5RV up between two trees, it's only been used as a temporary setup. I would unwind a coax cable through the yard about 100 feet up to the garage for my tool box portable FT-857 radio. Meh, I got tired of setting up and breaking down my equipment each time I wanted to work HF in my unheated garage, and I was limited to better weather. Until now, I hesitated to bring the coax into the house for grounding concerns of lightening strikes. It can be pretty stormy out this way.

So, for 2023, I purchased a 6ft. ground rod, Alpha Delta lightening suppressor and mounting bracket to try to protect my house from lightening. I still have to bring the coax from the upstairs shack through the space above the garage, crawl across the unfinished trusses under the roof and send the cable down the garage wall, then to the outside, while trying not to fall through the ceiling. I also need to bury the coax in the yard in conduit. For this, I need to rent a ditch witch. Before this happens, a fence will be installed in the back yard, then the ground rod will go in by the entry point to the house. Overall, I still have a lot to do, but I hope to have it completed by summer. Well, yeah, that's what I said last year.

Volume 7, Number 1 2 of 13

### Anthony Luscre — K8ZT

John, KM6DXY, came across this article and offered it as a source of Project/Activity ideas. Anthony, K8ZT, not a member of TARA, was kind enough to allow us to reprint it here. Thank you Anthony.

If you don't have projects in mind, consider using the checklist as a source. Maybe we can compare notes in December and see what happened.

#### 2023 Amateur Radio Activity Challenge List

Happy New Year! As we begin a new year of Amateur Radio, I wanted to pass on a few suggestions to both new and seasoned hams across the state. Over my 40+ years of AR, I have always been overwhelmed by the wide variety of activities available to us as licensed amateurs. But I am often disappointed to see most hams get stuck in a rut of only doing one thing. New hams often feel limited by their license privileges to try new modes or bands. Even though there are limitations, Tech licensees have a wide variety of things they can try "beyond the local FM repeater." For more on this, look at my slideshow "Technicians, Life Beyond Repeaters... & Activities Not Just for Technicians" at <a href="tiny.cc/btech">tiny.cc/btech</a> or watch the video recording at <a href="https://youtu.be/-m8tOFBY14E">https://youtu.be/-m8tOFBY14E</a>.

Even more confounding to me are seasoned hams with General or Extra class licenses that don't exercise their license privileges and band allocations. Unlike Techs, there is no problem with license restrictions and, in most cases, definitely not for lack of equipment! Many of us have radios on which we have not used all the available bands and/or modes. Maybe the lack of an antenna for a specific band is holding you back. Don't let this stop you; a temporary or non-resonate antenna with a wide-range tuner may work fine, so give it a try. Maybe you are just not comfortable with HF yet; if so, look at the three-part series that Dennis, W6DQ, and I did recently, "Beginner's Guide to HF." The slideshow is tiny.cc/bghf, and the three videos at https://youtu.be/cjZZjfKYPak, https://youtu.be/dH5gsA1CZSc and https://youtu.be/eG3kFbCZEM8. Or the UK version at http://tiny.cc/bghf with recordings at Denby Dale ARS-www.youtube.com/channel/UCq9nFTkJJAjOdPZVytoPOcg/videos.

If you are interested in learning about Contesting, Logging, QSLing Online, etc. I have a list of dozens of slide presentations and recorded videos I have done at *tiny.cc/k8zt-p* (by the way, if your local club would like a meeting presentation, I would be happy to do one in person or via Zoom; just email me).

To help you try some new things in AR this year, I have put together a checklist for you to track your progress. You can use this for ideas to try. It works even better when you use it with a friend or group as a friendly competition. It would be a great club project your group could track over the year and maybe provide recognition of accomplishments with newsletter articles, certificates, or even prizes.

Some are very easy, some harder. Some may also have a profound effect on helping others in AR. If you are interested in learning CW in 2023, look at my "Having Fun with Morse"- tiny.cc/fwm. Please feel free to add extra activities to my list (I'm sure I missed many ideas).

Volume 7, Number 1 3 of 13

Band Worked	Mode Worked	Activity (or mode of op)
□ - 2,200 M (135 kHz)	□ - SSB	□ - Repeater QSO (2 M and up)
□ - 630 M (472 kHz)	□ - CW	□ - Repeater QSO (10 or 6 M)
□ - 160 M (1.8 MHz)	□ - AM	□ - Simplex FM QSO (VHF/UHF)
□ - 80/75 M (3.5/3.8 MHz)	□ - FM	□ - SSB QSO (VHF/UHF)
□ - 60 M (5.3 MHz)	□ - PSK (31, 63)	□ - CW Contact
□ - 40 M (7 MHz)	□ - FT <sub>4</sub>	□ - Contest Contact
□ - 30 M (10.1 MHz)	□ - FT8	□ - Satellite and/or EME Contact
□ - 20 M (14 MHz)	☐ - Other WSJT- X Modes (FSK441, JT6M, JT65, etc.)	□ - Fox Hunt (ARDF)
□ - 17 M (18 MHz)	□ - <u>JS8cal</u> l	□ - WinLink Contact
□ - 15 M (21 MHz)	□ - Packet radio (AX25)/APRS	□ - EchoLink Contact
□ - 12 M (24.9 MHz)	□ - SSTV or Fast Scan ATV	□ - WAS (work all 50 states)
□ - 10 M (28 MHz)	□ - Digital FM- DMR, D-Star,	□ - Work 50 countries
□ - 6 M (50 MHz)	Fusion, etc.) including Hotspots	□ - Work 100 countries
□ - 2 M (144 MHz)	□ - Pactor, Clover, Olivia, Throb, DominoEX, MT63,	□ - WAC- Work All Continents
□ - 1.25 M (222 MHz)	Thor, AMTOR, etc.	☐ - POTA (Parks On The Air) or
□ - 75 cm (440 MHz)	□ - FAX or Hellschreiber	SOTA (Summits On The Air) Chaser Contact
□ - 33 cm (902 MHz)	Club	☐ - POTA or SOTA Activation
□ - Higher Microwave Bands	□ - Attend an ARC meeting	□ - POTA Activator
Build or Install	□ - Present at ARC meeting	□ - Work you State QSO party
□ - New VHF/UHF Antenna	□ - Head a committee	Build/Test/Repair
□ - New HF Antenna	□ - Attend a Hamfest	□ - Electronics Kit or Homebrew
□ - New Mobile Radio	□ - Teach a Licensing Class or be a VE	□ - Use an Antenna Analyzer or nano- VNA to measure
□ - New Mobile Antenna	□ - Mentor a new ham	□ - Fix non-working Radio

Volume 7, Number 1 4 of 13

Band Worked	Mode Worked	Activity (or mode of op)
□ - Computer/Radio Interface	□ - Write a newsletter article	□ - Arduino, Rasp Pi or other
		microprocess Project or Program

<Anthony has a table specific to European/UK hams. However, I did not include in the interest of space. ...Ray, W6QPA>

#### Ray Gretlein — W6QPA

My projects for 2023 include a few in the "Committed" category (i.e., the parts are on hand, reservations made, etc.), a few in the "I hope to" category and one in the "It's a stretch" category.

#### Committed

- Build of a <u>QRPLabs QCX-mini</u> on 40 meters This will be my second build of this model now a 40 meter version.
- Build of a QRPLabs <u>50 Watt CW AMP</u> This is a non-linear CW-only amp. When tuned well and powered properly (needs a 20 volt DC supply) I'll be boosting my QRP 5 watt signal by 10 db... and leaving the QRP ranks...at least occasionally.
- Build a 40 db fixed attenuator to use in spectrum analysis of the QRP rigs I'm assembling. The design I'm using is from an <u>article</u> I came across on <u>QSL.net</u>. It fits in an Altoids tin, one of my favorite reuse project boxes.
- Operate in Winter Field Day QRP category and CW. This will be a challenge as my CW confidence is not the strongest. If nothing else it'll be fun to exercise the gear I hope to use at ARRL Field Day.
- Operate in <u>QRP fox hunt</u> contests. I started using these to provide CW practice and have become an enthusiast. These run on 40 & 80 meters in the winter and 20 in the summer. The 80 meter contest is almost impossible for me to score in, at least with the current propagation conditions, as most of the hams playing the fox role are east of the Rockies. I've been doing ok in the 40 meter band.
- Operate in more of the <u>KrUSN Slow Speed CW Contests</u>. Even at QRP power levels I have logged 15 or so QSOs an hour. Not an impressive rate for a "contester," I'm using it as a personal challenge and a source of practice.
- Operate in the CWOPS conTests (CWT). This is a real challenge for me as the CW speeds are typically above 25 WPM (words per minute) and many run at 35 WPM.

#### I hope to

- Participate as an Activator in one (hopefully more) <u>Parks-on-the-Air</u> activation. I've been making contacts (27 so far) as to what the program refers to as a "Hunter" the ones operating in the comfort of their ham shack providing someone for the Activators to contact.
- Get WinLink up and running reliably. I've had it up a couple of times, however, from my QTH the node I connect to has not been reliable.

Volume 7, Number 1 5 of 13

• Operate in more of the <u>State QSO Parties</u> contests. I've tried one so far, it provided ample contacts and experience ... just need more of it.

- Install a VHF/UHF rig more permanently in my car. I've been using an HT with a mag mount for years. I'd like to make a more usable installation including an APRS tracker.
- Operate packet radio ... again. I played with a BayComm unit in the mid-90's, I'd like to give that mode a go again.

#### It's a stretch

• Operate ham satellites by building an autonomous tracking antenna. I saw this <u>article</u> a few years ago. I suspect it will need some updating due hardware availability. With this I would steer a dual band <u>Arrow II</u> antenna. I'll also need to acquire appropriate radios.

These are my Projects for the year...please wish me luck!

# On the Bench

This is a semi-regular column for members to share the off-the-air aspects of their ham radio activities. Using a sports metaphor, on-the-bench refers to a player not currently active in the game. So, applying that in a ham radio context, what is "On-the-(work)bench" in your shack?

### HT-based Mini-Repeater

#### Micah Martin — KN6VUT



I recently got a **Baofeng repeater kit** from Amazon.

It took a little bit of time, but I got it working. Ironically, it took all my radios to check it out. As with any repeater, one radio receives and sends the audio over the connection to the other radio. The transmitter is keyed using VOX so just keying up doesn't key the transmitter, audio is required. I found out, after much irritation, the receiving radio volume had to be turned up high to provide enough audio to key the transmitter, but it finally worked!

I'm using the <u>Baofeng UV-5R</u> to transmit, and a <u>Baofeng UV-82HP</u> as the receiver.

Now with my two portable antennas (spaced at least 5 meters apart), I can climb a mountain and be king!

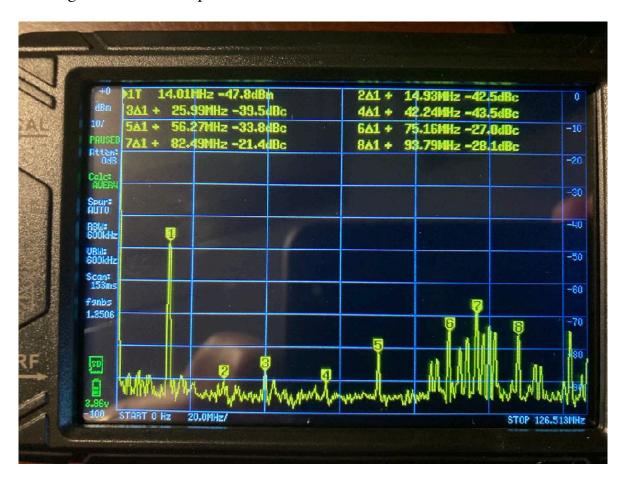
In reality it is probably ok for campsite with hills and valleys, or perhaps an event needing local area coverage.

Volume 7, Number 1 6 of 13

#### A Look at Spectral Purity

### Ray Gretlein — W6QPA

I was gifted a <u>TinySA Ultra</u> spectrum analyzer for Christmas (Thanks Santa!). With it I have embarked on getting a feel for the spectral purity of kits I've been assembling. Of course, this little device is far from simple and intuitive, thus I've spent a number of hours on the <u>YouTube channel</u> of the designer, Erik Kaashoek. I've barely begun to get a handle on its use, however, I've run some rudimentary checks. As I've not finished the 40 db fixed attenuator (see my "Projects" note), I'm using a short whip antenna that came with the unit and radiating my test signals into a <u>QRPLabs dummy load</u> that leaks enough to be detectable. Here is a screen shot of a test looking at the harmonics produced.



QCX-Mini on 20 meters Markers at 1 - 5 are the fundamental at 14.010 MHz and the harmonics. Markers 6, 7, 8 are FM broadcast stations... kinda noisy here. I can't wait to get the attenuator built so I can get rid of the antenna — and the on-air noise!

Volume 7, Number 1 7 of 13

# **The Operating Room**

This is a semi-regular column for club members to share the on-the-air aspects of their ham radio activities.

### Operating Radio During the Comanche Point Road Trip

#### <u>John Dyer — KM6DXY</u>

Early on December 23rd, 2022 a small band of amateur radio operators gathered for breakfast before their trip to Arvin, CA via the Comanche Point Road from Stallion Springs, Ca.

After a hearty breakfast at P-Dubs in Tehachapi, Ca the team made its way to Stallions Springs to fuel up and begin their trip. As the team progressed along Comanche Point Road their goal was to verify the condition of the road itself, but also to check communications with our W6SLZ 2 m repeater, APRS on the WA6LDQ-3 digipeater, two of the repeaters on the KERN System network of repeaters, as well as simplex on 145.58.

Simplex on 145.58 was used between the vehicles and as a backup should communications via the repeaters fail or be difficult to read. We were able to maintain contact with our "Overwatch" crew most of the time on the W6SLZ repeater, but "played" on the KERN System repeaters as well.

APRS worked well as we progressed. In areas where we could not reach our local digipeater, we were able to reach other digipeaters which, of course, relayed our information and was visible on the website APRS.fi.

We also were able to track our progress using cell phone pings from 2-3 area cell towers. This proved very interesting and we hope to share more about this and our trip at the next meeting on January 12th.

Photos and data images from our trip are included on our Facebook page and our web page. Links to each of these can be seen below.

AC6EE website: <a href="https://ac6ee.org/photo-album/">https://ac6ee.org/photo-album/</a>

Facebook page: <a href="https://www.facebook.com/media/set/?set=a.449164437431385&type=3">https://www.facebook.com/media/set/?set=a.449164437431385&type=3</a>

### Vallerie Mason — KK6WLQ

Our Comanche Drive trek to Arvin out of Cummings Valley was successful. But just to let everyone know no vehicles larger than a mid sized truck and 4x4 or All-wheel-drive vehicles would be best. It took us some time to get over, however, knowing that it is possible for an emergency escape route is good. All the rain may have washed it out a little more, but if you're careful it is an option.

Volume 7, Number 1 8 of 13

#### **ARRL RTTY Round Up**

### Ray Gretlein — W6QPA

The <u>ARRL RTTY Roundup</u> was the 7-8 of January. I hadn't planned on working it, but time became available! I spent about a half-hour getting <u>N1MM+</u> Contest Logging software to talk with <u>FLDIGI</u>. The N1MM+ makes operating in a contest pretty easy and FLDIGI does a great job as a RTTY modem. I enjoyed operating with an Elecraft KX-3 feeding 5 watts to a 30' <u>ZeroFive</u> Flagpole Antenna (Stealth for the HOA). I also use an SGC-230 antenna coupler at the base of the flagpole. In two roughly four hour periods I worked 75 stations in 33 states and Hawaii (which counts as a DX entity!) for a score of 2550 points. That QSO rate of -9 per hour is certainly not note worthy, but I enjoyed the activity and am looking forward to more such contests.

### Humor

#### Laura Sherrod — KI6EOG

What is the only food that doesn't spoil? Honey.

## **ARRL Contest Calendar**

This page provides a summary of events sponsored by the ARRL, the national association for amateur radio. The most current information is on the website at: <a href="http://www.arrl.org/contest-calendar">http://www.arrl.org/contest-calendar</a>.

Another source for contest and on-the-air activity is WA7BNM Contest Calendar at <a href="https://www.contestcalendar.com/weeklycont.php">https://www.contestcalendar.com/weeklycont.php</a>

### January 2023

- 1 Straight Key Night
- 7 Kid's Day Jan
- 7-8 <u>RTTY Roundup</u>
- 21-23 January VHF Contest

### February 2023

- 13-17 School Club Roundup
- 18-19 <u>International DX CW</u>

### **March 2023**

• 2-4 International DX- Phone

Volume 7, Number 1 9 of 13

# TARA Calendar

This page is a summary of events sponsored by or involving our club. All dates are subject to change. Please check the club Facebook and website for updates.

### January 2023

- 4, 11, 18, 25 1900 hrs PST "Just Because" Net (W6SLZ VHF rpt, 146.70 / 123.0)
- 5 1900 hrs PST, TARA Board Meeting, Via Zoom (invite via email)
- 12 1900 hrs PST, TARA Club Meeting, Tehachapi Police Department Conference Room, 220 W C St, Tehachapi.
- 14 0830 hrs PST, TARA Club Breakfast at Gracian Grill
- 28—0800 hrs PST, TARA Club Breakfast at BVS Mulligan Room. Reserve a spot with Valerie Mason by 14 January.
- 27-29 Winter Field Day Sites 12 & 13 at Kern River Campground. Setup begins afternoon of 27 January. Operating hours are from 1100 hrs PST 28 January to 11:00 hrs PST 29 January. Checkout is not later than 1200 hrs PST 29 January.

### February 2023

- 1, 8, 15, 22 1900 hrs PST "Just Because" Net (W6SLZ VHF rpt, 146.70 / 123.0)
- 2 1900 hrs PST, TARA Board Meeting, Via Zoom (invite via email)
- 9 1900 hrs PST, TARA Club Meeting, Tehachapi Police Department Conference Room, 220 W C St, Tehachapi.
- 11 0830 hrs PST, TARA Club Breakfast at Gracian Grill
- 11 1100 hrs PST VE License Exam Session Salvation Army Community Room 538 E Tehachapi Blvd, Tehachapi, CA
- 25—0800 hrs PST, TARA Club Breakfast at BVS Mulligan Room. Reserve a spot with Valerie Mason by 14 February.

#### **March 2023**

- 1, 8, 15, 22, 29 1900 hrs PST "Just Because" Net (W6SLZ VHF rpt, 146.70 / 123.0)
- 2 1900 hrs PST, TARA Board Meeting, Via Zoom (invite via email)
- 9 1900 hrs PST, Club Meeting, Tehachapi Police Department Conference Room, 220 W C St, Tehachapi.
- 11 0830 hrs PST, TARA Club Breakfast at Gracian Grill
- 25—0800 hrs PST, TARA Club Breakfast at BVS Mulligan Room. Reserve a spot with Valerie Mason by 14 March.

# **Reference Information**

Local Repeater Information				
TARA APRS Digipeater	144.390	No tone	AC6EE-3	APRS

Volume 7, Number 1 10 of 13

Local Repeater Information				
BVS APRS Digipeater	144.390	No tone	WA6LDQ-3	APRS
BVS Repeater Backup Freq.	146.700 145.580	123.0 Hz Tone Simplex	W6SLZ	Open Machine
BVS Repeater	440.625	100.0 Hz Tone	W6SLZ	Open Machine (WIN System node)
Tehachapi Repeater	444.225	100.0 Hz TONE	KG6KKV	Overlooks Bakersfield
DMR Digital	442.675	Offset: +5.000 ColorCode: 1	K7RET	Brandmeister, Bakersfield, CA The location is in the Tehachapi Mountains near Cummings Mountain
DMR Repeater	447.120	Offset: -5.00 ColorCode: 1	KR6DK	Brandmeister, McKittrick, CA The location is in the Tehachapi Mountains near Double Mountain This repeater is permanently linked to the KR6DK analog repeater system.
Tehachapi Simplex	145.58	No Tone		Local Simplex
Tehachapi Simplex	146.54	No Tone		Local Simplex

In addition to the repeaters listed above the following repeaters, part of the Kern System, can be reached from locations throughout the Tehachapi area and much of the San Joaquin Valley. They are linked together and more information may be found at <a href="http://www.KernSystem.org">http://www.KernSystem.org</a>

KERN System Linked Repeaters				
Frazier Mountain (8,000')	447.860	141.3 Hz Tone	KK6AC	Jerry Garis
Cummings Mountain (7,800')	442.95	141.3 Hz Tone	KI6HHU	Lee Bouchard

Volume 7, Number 1 11 of 13

KERN System Linked Repeaters				
Double Mountain (8,000')	446.320	151.4 Hz Tone	KI6HHU	Lee Bouchard

ARRG Linked Repeaters				
Cummings Mountain	444.425	100 Hz Tone		
Mountain (7,800')				

### **ATTENTION:**

For those interested in monitoring dispatch for the Bear Valley Springs Police Department

- KCSO Eastern Dispatch 460.225
- KCSO East TAC 460.125

All dispatch for BVSPD will be handled by the Kern County Sheriff's Department

Club & Other Websites			
TARA website	http://www.ac6ee.org		
TARA Facebook	https://www.facebook.com/TARAtehachapiamateurradio/		
Antelope Valley Amateur Radio Club (AVARC)	http://www.k6ox.club/index.html		
Kern County-Central Valley Amateur Radio Club (KCCVARC)	http://www.w6lie.org		
ARRL	http://www.arrl.org		
West Kern County Amateur Radio Emergency Services (WKCARES)	http://westernkerncountyares.org/index.html		

Officers & Committee Chairs			
Officer/Committee Chair	Name	Call	Email
President	Dan Mason	AB6DM	ab6dm@arrl.net
1st Vice President	Dan Mason (Interim)	AB6DM	ab6dm@arrl.net
2nd Vice President	Ray Gretlein	W6QPA	w6qpa@ac6ee.org

Volume 7, Number 1 12 of 13

Officers & Committee Chairs			
Officer/Committee Chair	Name	Call	Email
Secretary/Treasurer	John Dyer	KM6DXY	km6dxy@ac6ee.org
Technical Director	Dick Brown	W6SLZ	db24130@sbcglobal.net
Web Page & FaceBook Committee Chair	John Dyer	KM6DXY	km6dxy@ac6ee.org

### **Meeting and Club Membership Information**

The Tehachapi Amateur Radio Association meets every second Thursday of the month at 7:00 PM (except for July - no meeting). Our meetings are on Zoom and in-person, our meeting site is now the Tehachapi Police Department Conference Room, 220 W C St, Tehachapi.

Member Annual Dues: \$25.00/year

Additional Family Member: \$12.50/per person

### **Membership Application**

Download a copy of our Membership Application <u>here</u>. Please share this with any friends, family or neighbors that are either hams or may be interested in amateur radio. Applications are accepted at all club meetings or you may mail your application along with the applicable dues to the club Post Office Box:

Tehachapi Amateur Radio Association (TARA) P.O. Box 134 Keene, CA 93531

Volume 7, Number 1 13 of 13