

THE SIGNAL

Tulsa Repeater Organization

TRO's Official Monthly Newsletter

Volume 45 Issue 9

September 2012

INSIDE THIS ISSUE:

2012 ARES-Oklahoma Simulated Emergency Test (SET)

Date: October 6, 2012 - Saturday

Times:

Exercise activity should not begin before at 0900L and should conclude all exercise activity by 1200L. If an DEC or DEC wishes to extend the exercise past 1200L, that is their call. Status reporting via ARES-OK Statewide HF net to start at 1300L and finish by 1400L time.

Purpose of SET:

To find out the strengths and weaknesses of; ARES, NTS, and other groups in providing emergency communications here in Oklahoma. To provide a public demonstration--to served agencies such as the American Red Cross, emergency management agencies and through the news media--of the value to the public that Amateur Radio provides, particularly in time of need.

To help radio amateurs gain experience in communications using standard procedures and a variety of modes under simulated emergency conditions.

Focus

Most of the population and the bulk of the available radio amateurs live along the Interstate-44 corridor (I-44). The

majority of radio amateurs are in or near the two large metropolitan areas of Oklahoma City (Zone 3) and Tulsa (Zone 5). Groups will be encouraged to participate as combined District level response. All ARES-OK leaders and volunteers with in Zone 3 and Zone 5, shall participate together as a Zone response.

In Districts where NO DEC is currently appointed, local leaders should contact their ZEC and discuss appointing a DEC for SET, and work with your ZEC to find a DEC for your Districts. You can find ZEC contact info on www.ARESOK.org or via the CONTACT US feature on the website at http:// www.aresok.org/ContactUs.asp

Scenario for the SET

A straight line wind event has paralyzed ONE of the counties in your District (or Zone). Wind speeds exceeded 85 MPH and has causes many trees, branches and power lines to fail. Estimates are between 75 to 100 percent of homes in the effected county is without power. Many roads are impassible. Communications infrastructure has also suffered. Downed wires, power outages, bent antennas, and failed back-ups have crippled normal communications. Amateur Radio operSET 1 OFFICER REPORTS 2 Engineering 6 Activites/Events 7 Testing 11 OFFICER CONTACTS 12

FROM THE EDITOR

Want to be published?

Send in your ham radio related articles. Without vour contributions the newsletter would be blank.

Charles Sharpe— NE3M

MEETINGS

The next TRO meeting will be Tuesday, Sept. 25th starting at 1930 at Tally's Good Food Cafe 1102 S Yale

(Continued on page 8)

PAGE 2 SEPTEMBER 2012

The Signal



PREZ SAYS BY STAN CALLAHAN—KE5HPB

Thank God for cooler weather. The 100's are gone I hope! Looking forward to the fall season and hunting season.

Now for business. This has turned into

a busy month again. First it was Labor Day weekend, then right into DamJam in Pryor.

I was unable to attend DamJam because of a conflict and a twisted knee that kept me moving alot slower that weekend. I did listen in on the operation part of the day and things seemed to go smooth with maybe 1 injury.

One later (sounding like a broken record?) was the M. S. Ride the Mother road weekend. We had 10 operators show up for duty! The most we've ever had for this event. This 2 day event went off without a hitch and almost flawless. A couple of us (me) had some small radio issues but resolved quickly. The weather was perfect for this, overcast and much cooler temps. No injuries more that a twisted ankle and some scraps. We had great food and live music Saturday nite. The ride finished up around 3pm Sunday. Thanks to Ben Joplin, Tom Stroud, Kelly Baker, John Grace, Merlin and Lynda Griffin, Jim Beach, Charles Burka, Fred Williams and Brian Gnad whom all helped me and the M. S. event to be the smoothest ever. Thanks 'Guys'!!

Looking ahead, there is the Williams Rt 66 Marathon in November and the Fall Century Ride that TARC will be the primary on. Christmas is just over the horizon. The Xmas meeting will be 1 week earlier this year because Christmas is on the 4th Tuesday. This meeting will be December 18th. Plan to attend.

Elections will be soon as well. It's not to early to start thinking which office that you want to hold. All positions will be open. I did sign a lease agreement with Oklahoma Properties Inv. for the site at 9th and Detroit, the Sun Building. We now wait on Oklahoma Prop. Inv to their thing. Hopefully Kelly Baker will push hard on this to quickly finish the paper work. Thanks to Steve and Kelly on working this deal.

73's and good hunting

Stan Callahan

KE5HPB

Treasury Report by Gary Parham-KC5ZQP

Treasury Report 9-20-12 for August 2012 *TRO* Accounts Balance Beginning : \$ 4245.73 Checking beginning balance: \$ 2044.63 Check 3188 (aprs supplies) - \$ 407.74 Checking ending balance: \$ 1636.89 Savings beginning balance: \$ 1910.63 8-31-12 Interest + \$.32 Ending savings balance: \$ 1910.95 Paypal account beginning: \$ 290.47 Paypal account ending \$ 290.47 *TRO* Ending Accounts Balance : \$ 3838.31 Respectfully submitted by Gary Parham-KC5ZQP

The Signal

PAGE 3 SEPTEMBER 2012



VICE PREZ SAYS BY JOE GORKOS N5TEX

VP Corner Report from Joe Gorkos N5TEX

The fall season officially kicks off this Saturday.

The temperature is finally coming down to a reasonable and bearable range allowing us to get outside to work without melting into the ground. Speaking of ground, this would be a good time to check your system grounding both inside and out. In recent conversations with several Hams about grounding, they told how much of an improvement in reducing noise across the spectrum occurred by redoing their ground systems this summer.

Inside at the equipment each piece of gear should have a separate ground wire going back to a common point. The ground wires should never be daisy chained from one piece of equipment to another. Just what you do not need is to have a lightning strike go through all your gear following the ground wire path..... From the common point use as large a wire as possible to go to the outside ground rod. That is #6 has .517 ohms per 1000ft meaning it has over a half ohm in 57 ft. The NEC manual states ground should be substantially less than 25 ohms more like 5 ohms or less to be really effective ground. The resistivity is affected by number of ground rods, the type soil, and moisture content in the soil.

Safety first, make sure before driving the rod into the ground there are no pipes, underground utilities in the way. Place the ground rod near the cable entrance into the building or Ham shack. To drive an eight foot long 5/8inch diameter ground rod into the hard soil is a challenge. If available use a fence rod driver, or heavy duty hammer to pound the rod into the ground. First, water

the ground real good to loosen and soften the soil. As you drive the rod in continue to put water around the rod and move the rod around in a circular motion allowing the water to fill in the hole. This is a timely process, yes it takes time for the hard soil to dissolve and pass the copper rod. Once the rod is in all but four or five inches above the surface place an eighteen inch PVC pipe over the copper rod. Drive the PVC tube into the ground using the water as you did for the copper rod.

The plastic tube allows you to pour water on your ground rod improving its overall resistivity. When we have these tough drought conditions to make sure you have a good ground use water to penetrate the soil around the copper rod via the plastic tube.

I use steel wool to shine up the copper rod where the number 6 stranded wire will be attached. Put a coating of conductive grease on the shining portion of the ground rod prior to attaching the two bolt ground clamp. Use electrical tape to cover the connections, a lot of tape. Then I take a tube of RTV silicone and spread it over the tape providing a complete sealed coverage over the connection.

If you have a tower, ground your cables at the tower, and prior to the building entrance, do not bring the lightning strike in the house.

This next meeting we can discuss grounding, bring your horrors stories. Thanks Joe N5TEX 73's The Signal

PAGE 4 SEPTEMBER 2012

MEETING MINUTES BY ED COMPOS-K5CRQ



Newsletter for TRO Meeting 8-28-2012

Meeting was held at Talley's 11th and Yale and opened at 19:30 hrs by Stan Callahan Ke5HPB.

Everyone introduced them selves and the meeting got underway with the minutes being read by Ed Compos K5CRQ Secretary. Motion made by Stan KE5HPB to

accept as read and seconded by Ben Joplin WB5VST and motion passed on vote.

Treasurers report was given by Gary Parharm KC5ZQP and a motion was made to accept the report by Ed K5CRQ and seconded by Stan KE5HPB and passed on vote.

Steve Miller reported that the link equipment is being check out for programing problems at the Keetonville hill site and after the radio get back to him he will proceed.

Work is in progress to get the 146.94 repeater on the Sun Bldg at 9th and Detroit. The unit has to be installed in the cabinet checked out and then installed at eh bldg.

444.100 repeater is ready to be installed again, need a date and strong people to help move it.

9-22-2012 is a Boy Scout event need operators to set up a station in Broken Arrow and Get on the air with the scouts contact Tom Stroud KD5OPD.

Nov 17 and 18th route 66 marathon contact Tom Stroud KD5OPH to help with this we need operators.....

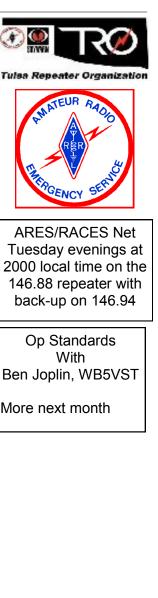
Meeting closed at 20:40 hrs

Joe N5TEX gave a educational program after the regular meeting....

FROM THE EDITOR BY CHARLES SHARPE NE3M



Fellow members, First let me apologize for the lack of a July only Signal. What do you want to see in the next issue? What do you want to see in your Signal? Are there any special topics you want to include? Do any of you have an special interests you would like to show off. Send your articles to me @ csharpe3@gmail.com. I'll get as many as I can in the next few issues.



TRUSTEE'S CORNER—MERLIN GRIFFIN WB5OSM

1. I'll echo Steve's engineering report a bit: Glad to get Keetonville receive site integrated into the system. I think it will be a valuable asset to us. Besides the 88 link, it also hosts the Keetonville APRS Digi on 144.39. We have some fine tuning to do. Now that cooler weather is here, we plan some more upgrades to the 88 machine. More good news in the we have a site for 94 and we get to keep the current .805 site. Hopefully we can get a crew up soon to get the 444.1 repeater out of my garage. It is on the air from low altitude here in Owasso. The last time we checked we still had permission to place it back up on the Skyline east building near 41st and Sheridan, which is now used by TCC and TTC for higher education purposes.

2. On September 20, we had one of our best VE Exam sessions in a long time. We had seven applicants and all seven got what they came for. We produced four new General class licensees, and three brand new Techs. It's great to see the interest in the higher license class.

The successful candidates were:

Carey Alexander KF5KFJ upgrade to General

Dennis Dollins KF5RZS upgrade to General

Joey Burks KF5OCN upgrade to General

Stanford Lane new Technician

Jeffery Best KB0NSF upgrade to General

Laura Dollins new Technician

Harry Carey Jr. new Technician

The Dollins are from Broken Arrow all other applicants are Tulsans.

The VE Team was John KC4URD, Eli W5PPD, Charles KE5AHE, and Merlin WB5OSM

Charles is a General Class VE, but is studying and hopes to upgrade to Extra before the November test session gets here.

Our next session will be November 15, 2012 back at the American Red Cross Tulsa Chapter.

3. Planning for the next Green Country Hamfest March 8 & 9 2013 at the Claremore Expo continues. You can already register if you like. Especially if you want a flea market table, those tend to go fast. ARRL says they will sanction us as the ARRL Oklahoma Section Convention this year. The final decision hasn't been made, but we are being considered for the 2014 ARRL West Gulf Division Convention. The Committee is starting to work on our prize package we are considering another Elecraft K3 as grand prize again this year, and possibly its little brother the KX-3 for second prize. The rest of the prize package, well we haven't got around to that yet. If you want to get involved be at the Rib Crib 81st and Yale on October 11 about 7:00 pm, earlier if you plan to eat. Our November meeting may be @ Los Aztecas in Claremore

73 DE WB5OSM

PAGE 6 SEPTEMBER 2012

PAGE 6 SEPTEMBER 2012	The Signal	
ENGINEERING REPORT FROM STEVE MILLER—AA5V Our equipment has been installed at the Keet- onville tower for a 146.28/88 remote receive	ed our coverage for the repeater. Use 88.5PL for both the Keetonville and the Skiatook remote receiver sites. The voting card at CityPlex will determine the best signal and use it.	
site. Many thanks to Bob Bufford - W5RAB for this effort and giving the TRO the opportunity to use this site. After installing the receiver/uplink package there were controller problems then VHF receiver COS problems. Bob fixed and/or replaced it all. Many thanks go out to W5RAB.	In other repeater news, TRO President Stan Callahan - KE5HPB submitted the lease agree- ment with Oklahoma Property Investors to use a location on top of the Sun Building at 9th and Detroit in downtown Tulsa for the 146.94 re- peater to Kelly Baker - N5TUG, Property Man- ager, for final signatures by Oklahoma Property	
There had been problems with two of the three UHF receivers for the remote uplinks to the 146.88 transmitter. Many thanks to Ed Compos	Investors.	
tem. Once that was varified and I verified on the bench that the COS's were working correctly again, it was a matter of getting the UHF receiv- ers back to the 146.88 transmitter site at the CityPlex Towers at 81st and south Lewis.	There is still some work to be done with the 146.94 repeater before it is ready for installa- tion, but, with the hot weather breaking I'm get- ting more work done on it.	
	Another bit of good news. We have permission to leave the 146.805 and 444.950 repeaters at the Autumn Oaks building. Thanks to Mike Reynolds - W0KIE for checking with the Autumn Oaks Building Management and Bud Blust -	
Tuesday evening, September 18, Merlin Griffin - WB5OSM, Kevyn (Merlin's Grandson) and my-	WA5QDZ for forwarding that information to me.	
self took the UHF receivers back to CityPlex to install and get Keetonville into the mix of recevier locations for 88. Listening and using myself, the receiver at Keetonville really extend-	I still do not have a scheduled date to get the 444.1 repeater installed back at the Skyline (Continued on page 7)	

Frequency Rev/Xmt	Location	PL	Status
146.940/146.340		none	Down
146.880/146.280	Cityplex	141.3	Down
146.880/146.280	Skiatook	88.5	Up
146.805/146.205		none	Up
444.100/449.100	Temp - WB5OSM	88.5	Up
444.725/449.725		88.5	Up
444.950/449.950		none	Up
434.250/421.250	ATV	none	Up

Page 7	September	2012
--------	-----------	------

Activities Chairman—Tom Stroud KD5OPH	(Continued from page 6)
The Fall Century, the last ride of the season, is Saturday September 28. The ride starts at	East Building. It is on the agenda and I hope we get that scheduled and completed in October.
the Whirlpool plant at 76th St N just east of highway 75 (7301 Whirlpool Dr) and the routes generally go	There has been no news that I have been made aware of concerning any of the other sites we are attempting to be able to locate repeater equipment.
through Sperry, Skiatook, Collinsville, Oologah, and Claremore. We need 8 – 10 volunteers to SAG the season. If	Happy Hamming Folks. Use the repeaters. Report any malfunctions or degradation of input or output of any of our repeaters to wa5lvt@tulsahamradio.org.
you can help please let Jay Eimer or myself know with a reply to this e-mail.	73, Steve - AA5V
Jerry Weikel	
Oklahoma Section Emergency Coordinator Ma	ark Conklin—N7XYO
ARRL West Gulf Div. Announces Radio Scouting Initiative HamCom 2012 in Plano was the official kick-off for the newly created West Gulf Division Radio Scouting organization when David Woolweaver, K5RAV, WGD Division Director announced the appointment of Frank Krizan, KR1ZAN, as the	scouting/. Initial short-term goals are to encour- age conducting Radio Merit Badge classes at all Section, State and Division conventions and to increase participation in Jamboree on the Air. Long-term goals are to implement Radio Scouting Committees in each of the 24 Councils in the West Gulf Division.
Assistant Division Director for Radio Scouting. Simultaneously, Assistant Section Managers for Radio Scouting were appointed for the four Sec-	If you're a Scout or Scouter who is interested in amateur radio, please make yourself known to the Assistant Section Manager for your ARRL Section. Keep your ASM informed of your plans
tions in the West Gulf Division. The ASMs are representing NTX, Richard M. Phillips, Sr., KB5YBQ; representing Oklahoma, Mark Ham-	and activities. Involved with or want to be involved with Scouts
blin, AE5MH; representing STX, Hal Miles, AD5L and	and Ham Radio? Let AE5MH know:
representing WTX, Leland Fellows, N5DGH. Position Descriptions for these new positions and contact information are available in the ED- UCATION/SCOUTING section of the West Gulf Division web site: http://arrlwgd.org/education/	Oklahoma Assistant Section Managers for Ra- dio Scouting Mark Hamblin, AE5MH email: ae5mh@sbcglobal.net

PAGE 8 SEPTEMBER 2012

(Continued from page 1)

ators have not gone undamaged. Repeaters that are not on back-up power are not functioning. Many large antennas systems are down or damages. Served agencies in the effected county have requested communications support from ARES-OK. To meet this it will require a combined response for your entire ARES-OK District. Log into www.ARESOK.org and select State Wide Breakdown for current District map.

What's working in this scenario?

VHF/UHF Simplex Limited Repeaters. (Repeater with back-up power may be use at DEC's discretion.) Limited Internet. (Internet may be use at the discretion of the DEC.) HF with NVIS type antenna systems Winlink2000 (WINMOR) Our ingenuity

Operations Guidelines and Goals

1. Simplex should be used wherever possible.

2. Traffic can be passed between fixed and mobile stations if needed.

3. All traffic MUST be preceded by "THIS IS ONLY A EXERCISE"

4. The scenario notes that roads may be impassable. Therefore, movement of mobile stations may be limited by the DEC. It may be necessary to assign other than usual operators to locations such as county EOCs, or other served agencies. Stations may operate from alternative location at the direction of the DEC.

5. All stations are encouraged to use their emergency power source and set up emergency antennas if possible. If it's something you'd expect to do during a real EMCOMM response, no better time than **now** to test it out.

6. Send local tactical message traffic on behalf of local served agency. (DECs to create their own mock messages).

7. Creative "thinking outside the box" is encouraged to circumvent the rules (provided it's legal!)

8. At the end of the day send each DEC shall send a status report to the NCS on the ARES-OK Statewide HF nets beginning at 1300L. (See format for status report at end of the document.)

9. Each Radio Operator and ALL Communications shall be noted/logged on the applicable ICS form(s). See: http://garlandr.s412.sureserver.com/graces/icsforms.html

10. Participants shall wear their ARES approved Deployment Vest. Don't have a vest yet? Please see www.ARESOK.org look on the left side of the page - click on Other Resources and scroll down to ARES-OK Gear.

(Continued on page 9,

The Signal

Continued from page 8)

11. Don't forget, let's have some fun with this!

Local Net(s) during Annual SET

The selection of VHF/UHF simplex frequencies will be at the discretion of the DEC. DEC shall note All operating frequencies on an ICS form 205 Communication plan. http://garlandr.s412.sureserver.com/graces/ icsforms.html

Repeaters with back-up power may be use at the discretion of the DEC.

Frequency/repeater selection should follow **County Resources** list (as noted on www.ARESOK.org by your ECs and DECs). IF INFORMATION IS NOT CURRENT ON www.ARESOK.org please take steps to up date the information. Need help with this contact ARES-OK Webmaster Roland Stolfa, KC5UNL via e-mail rstol-fa@yahoo.com

ARES-OK Statewide HF Nets during Annual SET

The ARES-OK Statewide HF nets will **ONLY** be active during the annual Simulated Emergency Test scheduled for October 6, 2012 during 1300L to 1400L. This is for the purpose of status reporting and/or forwarding messages over longer distances than can not be handled on local VHF and UHF nets, and to give increased exposure to ARES throughout the state and to encourage ARES-OK membership and activity through a high level of visibility.

The ARES-OK Statewide HF net will **NOT** be active in support the SET until 1300L

Statewide HF Nets will be at the direction of the Section Traffic Manager.

With a net schedule of:

Beginning at 1300L ARES-OK Statewide HF Net will be at: 7260KHz Lower Sideband Phone (+/- QRM)

If conditions require the alternate frequency will be at: 3900KHz Lower Sideband Phone (+/- QRM)

This will be a controlled net. STM will select Net Control Stations for each net session.

Documentation

All traffic **REQUIRES** proper documentation. Written documentation is essential for the review of current and future training and planing.

Each Radio Operator shall track their activity on an ICS-214 Unit Log. See: http://garlandr.s412.sureserver.com/graces/icsforms.html PAGE 10 SEPTEMBER 2012

The Signal

Continued from page 9)

ALL Communications traffic shall be noted/logged on an ICS-309 Communication Log. See: http://garlandr.s412.sureserver.com/graces/icsforms.html

Formal message traffic should be **written** to insure proper handling of the message. To better interface with our served agencies ARES-OK will use the NIMS message form ISC-213. The ISC-213 form may be downloaded from http://garlandr.s412.sureserver.com/graces/icsforms.html and reproduced as necessary.

The ARRL Radiogram maybe still be used and can downloaded from http://www.arrlal.org/RADIOGRM.pdf and can also be reproduced as needed. It is critical to establishing maintain written documentation.

Status reporting via the ARES-OK statewide HF net.

At the end of the SET each DEC shall send a status report to the NCS on the Oklahoma Section Statewide HF ARES Net. DEC's can designate any operator with in the District to send the status report – the DEC does not have to personally pass the report.

For status reporting the following schedule will be in effect:

Beginning at **1300L** ARES-OK Statewide HF Net will be at: **7260KHz** Lower Sideband Phone (+/- QRM)

If conditions require the alternate frequency will be at: 3900KHz Lower Sideband Phone (+/- QRM)

This will be a controlled net. STM will select Net Control Stations for each net session.

The status report message format will be short:

Zone Number and District Number reporting (See ARESOK.org): DEC in charge of local SET: (Name, Call) Call Signs of all EC's participating in your District (or Zone). Number of TACTICAL traffic handled: Number of FORMAL written traffic handled:

TRO'S OFFICIAL MONTHLY NEWSLETTER

September 2012

Page 11

AREA AMATEUR RADIO TESTING

When:

By:

Where:

Third Thursday of odd numbered months. Start @ 7:00 P.M.

Red Cross building at 11th & 169.

Email: wb5osm@hotmail.com

Tulsa Area Chapter 10151 East 11th Street

Tulsa, OK 74128

Phone: 520-7668

Contact:

Merlin Griffin

When: First or Second Saturday of ODD numbered months for 2012 January 7th March 3th May 5th July 7th September 8th (subject to change) November 3th From 0930 to 1100 AM. Walk-ins Welcome Until 10:00 am

By: Hardesty Regional Library VE Group (ARRL)

Where: Hardesty Regional Library 8316 E 93rd Street Tulsa, OK 74133

Contact: Loyd - AE5MM Phone: 918.638.2393 (text msg or voice) Email: ae5mm@arrl.net When: Second Saturday of even numbered months Start at 9:30 A.M. Walk-ins Welcome

By:

Where: Broken Arrow Church of Christ 505 E Kenosha Street Broken Arrow, OK 74012

Contact: Don Doyle AC5II Phone: 379-0962 Email: ac5II@arrl.net When: Last Saturday of even numbered months

Start at 10:00 A.M. All testing by appointment ONLY.

By:

Where: Martin East Regional Library 2601 S. Garnett Rd. Tulsa, OK 74129

Contact: John K5ENA Phone: 918.346.8284 Email: K5ENA@cox.net

THE TRO WISHES TO THANK THESE SUPPORTERS

Tower Properties (CityPlex) Tulsa Tech College Bates Realty City of Tulsa City of Skiatook Liberty Fire Department



The TRO Proudly Serves Our Community and

AREA AMATEUR RADIO COMMUNITY SERVICE

Dates	ates Event Need		Info
Nov 17th & 18th	Route 66 Marathon	Medical golf cart communica- tion, Safety, and Sweep re- sponsibilities.	Contact Tom Stroud



P.O. Box 1422 Tulsa, OK 74101

Mail To:

For more information about the TRO visit www.tulsahamradio.org

Want more information about the *Tulsa Repeater Organization* or have questions about articles in the newsletter, contact us at email address <u>wa5lvt@tulsahamradio.net</u> or write to:

Tulsa Repeater Organization P.O. Box 1422 TULSA, OK 74101-1422

TRO officer contact information:

President	Stan Callahan	KE5HPB	918.381.9990 KE5HPB@tulsahamradio.org
Vice-President	Joe Gorkos	N5TEX	918.230.8243 N5TEX@tulsahamradio.org
Secretary	Ed Compos	K5CRQ	918.231.7730 k5crq@cox.net
Treasurer	Gary Parham	KC5ZQP	918.369.1055 kc5zqp@aol.com
Trustee	Merlin Griffin	WB5OSM	918.520.7668 wb5osm@hotmail.com

Committee Chairperson contact information:

Membership	Joyce Callahan	l		joyce@tulsahamradio.org
Activities	Tom Stroud	KD5OPH	918.695.3735	kd5oph@tulsahamradio.org
Engineering	Steve Miller	AA5V	918.381.8574	steve@aa5v.com
Public Rel.	Charles Sharpe	e NE3M	918.630.3636	K5CED@tulsahamradio.org
Op Standards	Ben Joplin	WB5VST	918.396.1651	wb5vst@tulsahamradio.org
By-Laws	Bud Blust	WA5QDZ	918.747.3704	debtfree@ionet.net
Past Pres.	Mark Conklin	N7XYO	918.366.2007	n7xyo@arrl.net