



THE SIGNAL

Tulsa Repeater Organization

TRO's Official Monthly Newsletter

Volume 46 Issue 1 January 2013

TRO ANNUAL HOLIDAY PARTY TUESDAY, DECEMBER 18, 2012

Happy Holidays to all!
 from the
Tulsa Repeater Organization

The annual Christmas and New Year's party was held at Tally's Good Food Café on December 18th. Sorry for the late notice in the Signal, but, we tried to get the word out on nets and email blasts. TARC joined us with their Christmas party and we all had a great time of fellowship and some great prizes.

**NOMINATING COMMITTEE AND OFFICIALS FOR THE
 TRO 2013-2014 FISCAL YEAR**
 — BY MERLIN GRIFFIN WB5OSM NOMINATING COMMITTEE CHAIRMAN

The **TRO** is looking for a few good members to serve as officers, next year. Our president Stan KE5HPB has graciously served his two year sentence. It's time for him to be promoted to the exalted status of immediate past president, which by the way is still a board member.

All executive positions are open: President, vice-President, Secretary, Treasurer, and Trustee. Except for the President, all the other offices may be re-elected. That is if they are willing to serve again, and the club membership votes to let them do that.

Three things:

1. I need a couple of other regular members, not currently serving as officers to help me on the nominating committee.
2. If you are a current officer, other

than president and are willing to serve again, please let me know.
 3A. If you are a member and have a recommendation for an officer, let me know.
 3B. If you are a member and would like to be an officer, please let me know.

Who am I? Merlin WB5OSM current Trustee of the **TRO**, among other things.

I can be found on 146.88 and 444.1 which is sort of working again. 918.520.7668 or email me at WB5OSM@hotmail.com. You may also text me at 9185207668

73 DE WB5OSM

BTW the ARRL says I have served in 240 ARRL-VEC test sessions!

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The next TRO meeting will be Tuesday, January 22, at Tally's Good Food Cafe 1102 S Yale Avenue.

Remember the meeting will begin at 1900 instead of 1930.

Check the TRO website at tulsahamradio.org regularly for immediate updates of activities.

**VICE-PRESIDENT REPORT FOR DECEMBER 2012 FROM
JOE GORKOS—N5TEX
THE BALUN**



The origin of the word Balun is bal(ance) + un (balance) is this month's topic. What are they, how do we use them, and are they needed. Balun A balun ( [/bælʌn/](#)) is an electrical device that converts between a balanced signal (two signals working against each other where ground is irrelevant) and an unbalanced signal (a single signal working against ground or pseudo-ground). This is per wiki pedia. There are multiple types of Baluns; first of all there are voltage and current Baluns.

They can either be a choke Balun or a transformer Balun. Baluns are used for impedance matching, and line isolation. A balun can be used as an impedance matching device for antennas to the transmission line. Example: for my 540 foot wire loop antenna uses 75 ohm coax to connect to radio requires a 4:1 Balun to match the antenna impedance of 300 ohms. By using a current type Balun this helps minimize the RF from radiating on the coax shield leading to the antenna. The Balun provides line isolation or common mode rejection of RF feedback into the shack. Also it helps maintain the radiation pattern of the loop if the current flow can radiate on the antenna elements versus the feed line radiation. A voltage Balun is good for a dipole with equal wire lengths so the voltage is equal across both sections of the dipole.

A Balun can be made up of a magnetic toroid iron core being wrapped with multiple wires around the core creating a transformer or choke. The cost of a RF Balun can range from \$35.00 to over \$150.00 dollars depending on the materials used, power capabilities, required bandwidth, and if it is a single or dual core unit.

Most HAMS generally buy a Balun for their 100watt transceivers for the HF band 3 to 30 MHz. As a HAM gets the desire to be heard over others especially during contests or rare DX stations contacts they use amplifiers and the original Balun cannot handle the additional power and the core becomes saturated. RF flows everywhere but where it needs to, meaning the signal is flowing on the shield causing intrinsic losses and affecting the antenna's radiation pattern.

What to look for in a Balun, high winding inductance, low stray capacitance, large wire that does not change due to temperature, Teflon coating or Teflon tubes, large cores to prevent saturation. A Balun should have a solid waterproof enclosure, with connecting hardware that does not rust, and if needed extended bandwidth for 6 meters.

Baluns can come in different winding ratios from 9:1, 6:1, 4:1, 1:1 and some manufacturers will wind the Balun to your specific antenna requirements. You can always make your Balun or isolation choke using coax and toroid rings. In some antenna designs and transmission lines a Balun may not be required or a 1:1 Unun may be used to prevent RF isolation. Most of the information for this article came from DX Engineering, Radio Works, and Balun Designs LLC.

Finally hope to see you at the TRO meeting at Tally's Good Food Café located at 1102 South Yale in Tulsa on Tuesday, January 22nd starting at 7:00pm. Come early to eat.
73's Joe.... N5TEX



TREASURER'S REPORT BY GARY PARHAM—KC5ZQP

Treasury Report for December 2012

Not available at time of publishing

| | |
|--------------------------|-----------|
| Checking ending balance: | \$1696.89 |
| Ending savings balance: | \$1912.21 |
| Ending Paypal balance: | \$123.97 |

TRO Ending Accounts balance : \$3733.07

PREZ SAYS BY STAN CALLAHAN—KE5HPB

Wow!! What a year and it is already gone!! It seems like just a couple of months ago that I was writing this same article. This has been a very busy year for me personally as well as your President. I thank you for all the support that I've received from you as President and for personal support. We have had an array of events/activities this year from a 2 block trike race to a 150 mile event, a 5k run a 26 mile marathon. We did not have any new requests for events this year. For up-coming activities we have the annual Storm Spotting seminar on Feb 16, 2013, and the Post Oak Run on March 2/3, 2013 at the Post Oak Lodge in Sand Springs. Tom will have more on this event. Also in March is the annual Green Country Hamfest in Claremore. Watch your mailbox for more info for this event. January brings the nominations for the election of 2013 Officers. If you are approached to run for an office, PLEASE consider it!! This is your club, it will not function without representation. If you are going to run for a position, remember that you must prepare a biography of yourself for the February newsletter of an office. Then elections will be held at the February 26, 2013 and transfer of officers will occur March 1st.. Good Luck to everyone! It has been my pleasure to serve you for the past 2 years as your President. It has been very educational for me. I have met influential people and have done things that I would not have been able to have been exposed to otherwise. And I THANK YOU!! On membership notes, we had a few new members join us and a couple of past members renew their memberships. This past year we acquired some new sites for equipment. We have a new site for the .88 repeater after we lost the Mid-Con Building downtown. We have a lease for the .94 machine in the Sun Company building at 9th and Detroit, waiting on final equipment check before installing it. Thanks to "Rocky", we have a digi-peater south of Tulsa. We also have the Skyline location for future install of more equipment. BUT I can't take credit for work that I didn't do. This has been all possible because of members like you. Here is just a 'small' list of people that I know have had a hand in this: Steve Miller—AA5V, Ben Joplin—WB5VST, Joe Gorkos—N5TEX, Merlin Griffin—WB5OSM. I know that this list is not complete, but these are the players I was aware of. Thank you for your dedication. Also a Thank You to TARC for use of their link system when we had some issues with the .88 system. I am excited to see what the new year brings with new leadership and officers and activities.

The Bike MS Ride raised \$420,000.00 this year. Many thanks from everyone at the Tulsa/Oklahoma City offices. Mark your calendar for this year's event, September 21st & 22nd, 2013. This year the start/finish line will be in Chandler, OK.

Happy New Year to everyone!

73 *Stan Callahan—KE5HPB*



ARES/RACES Net Thursday evenings at 2000 local time on the TARC 443.85 UHF Link System.



Activities:

**Post Oak Challenge—Saturday & Sunday
March 2 & 3, 2013.**

Ok coming up on March 2nd, and 3rd, we will be in charge of communications for the Post Oak Challenge 2013. Here are the assignments that I am currently looking at filling for the event. Post Oak Challenge is a 2 day event with day one as a trail event and day 2 a road event we will help for both days. If you plan on attending please let me know so that I can start to get an ideal of what kind of support we can provide for this years event.

**Post Oak Challenge Saturday March 2nd, 2013
Assignments for Day 1**

Note: this will be an active list up to event day. Information will be updated as it is known.

- NCO -
- NCO Back-up - Tommy Stroud
- APRS / Mapping Support -
- Aide Station 1 -
- Aide Station 2 -
- Aide Station 3 -
- Aide Station 4 -
- Aide Station 5 -
- Safety 1 -
- Safety 2 -

Updates from Communication Director:
9/21 - Assignment list active

**Post Oak Challenge Sunday March 3rd, 2013
Assignments for Day 1**

Note: this will be an active list up to event day. Information will be updated as it is known.

- NCO -
- NCO Back-up - Tommy Stroud
- APRS / Mapping Support -
- Aide Station 1 -
- Aide Station 2 -
- Aide Station 3 -
- Aide Station 4 -
- Aide Station 5 -
- Safety 1 -
- Safety 2 -

To volunteer your help contact Tommy Stroud—KD5OPH on the 146.88 repeater at kd5oph@tulsahamradio.org or 918.695.3735.



Tech Report by Steve Miller—AA5V

I went to the roof CityPlex on Saturday, November 3rd to adjust audio on the three receivers, checked the notch frequency adjustment of the duplexer and had had some reports of hearing 88 on other frequendies. Back to Cityplex on Monday, November 12 and replaced the coax feedline from the end of the Heliacx to the antenna.

I went back to CityPlex again Saturday, January 5 to align the transmitter, bring the audio up on the receivers and do one last check of the duplexer. Accomplished all on this trip. Our output to the antenna feedline was around 55 watts and is now 83 watts and the spectrum analyzer shows it to be clean.

The audio is up on the receivers and listening to the Skiatook and Keetonville audio sounds good. I am not real sure about the Cityplex receiver yet. I doesn't seem like the sensitivity is improved on it any, but, then I may just need to listen more to be able to tell for sure.

I have plans to get back up there soon and finally get the Heliacx connector at the output of the duplexer replaced.

I still have to get a group together to get 444.1 and 146.94 installed, then maybe we will be in pretty good shape for the storm season.

TRO REPEATER STATUS

| Frequency | PL | Status |
|-----------------|------|--------|
| 146.34/94 | none | Down |
| 146.28/88 | 88.5 | Up |
| 146.205/805 | none | Up |
| 449.1/444.1 | 88.5 | Down |
| 449.725/444.725 | 88.5 | Up |
| 449.95/444.95 | none | Up |
| ATV 421.25 | none | Up |

AREA AMATEUR RADIO TESTING

Third Thursday of odd numbered months.
7:00 P.M. at the Red Cross building at 11th & 169.

Contact Merlin Griffin
Phone 918.520.7668
or email
wb5osm@hotmail.com

First Saturday of odd numbered months.
0915 to 1100 at Hardesty Regional Library
8316 E 93rd Street
Tulsa, OK 74133
2013 Schedule:
January 8th
March 5th
May 7th
July 9th
September 10th
November 5th

Walk-ins Welcome until 0945.
Contact Loyd—AE5MM at
AE5MM@arrl.net or
918.638.2393 (text msg or voice)

Second Saturday of even numbered months,
9:30 A.M. at the Church of Christ, 505 E Kenosha Street, Broken Arrow.
Walk-ins welcome.
Contact: Don Doyle—AC5II at
ac5II@arrl.net
or 918.379.0962

Last Saturday of even numbered months
10:00 A.M. to 11:00 A.M. at the Martin East Regional Library
2601 S Garnett Road
Tulsa, OK.
All testing by appointment ONLY. Please contact John—K5ENA at K5ENA@cox.net or 918.346.8284.

THE TRO WISHES TO THANK THESE SUPPORTERS

Tower Properties
Tulsa Tech College
Bates Realty
City Of Tulsa
City of Skiatook

Liberty Fire Department
Oklahoma Property Investors III, LLC

The TRO Proudly Serves Our Community and Supports Our Public Service Partners



Tuesday, Dec 18
7:00PM

TRO Holiday Party

Tuesday, Jan 22
7:00PM

TRO meeting—Tally's Good Food Café—meeting begins at 1900, come early to eat.
Business—Officer nominations.

Saturday, Feb 16
9:00AM

Annual National Weather Service Storm Spotter Training—Location not confirmed as of this writing—Tentative plans are to be at OU Schusterman Center at 4502 E 41st

Tuesday, Feb 26
7:00PM

TRO meeting—Tally's Good Food Café—meeting begins at 1900, come early to eat.
Business—Officer Elections, TRO plans for Green Country Hamfest club tables.

Saturday, Mar 2
Sunday, March 3

Post Oak Challenge—TRO to provide communications
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Friday, March 8
Saturday, March 9

Green Country Hamfest—Claremore Expo Center—www.greencountryhamfest.org
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Monday, May 27

Maple Ridge Run—TRO to provide communications



Tulsa Repeater Organization

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 wa5lvt@tulsahamradio.net 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 | | | 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 | NE3M | | ne3m@tulsahamradio.org |
| Op Standards | Ben Joplin | WB5VST | 918.639.2853 | wb5vst@tulsahamradio.org |
| By-Laws | Bud Blust | WA5QDZ | 918.747.3704 | debtfree@ionet.net |
| Past Pres. | Tom Stroud | KD5OPH | 918.695.3735 | kd5oph@tulsahamradio.org |