

FEEDBACK



JOHNSON COUNTY RADIO AMATEURS CLUB, Inc.

The Johnson County Radio Amateurs Club normally meets on the 2nd and 4th Fridays, 7:30 PM at the Overland Park Christian Church at 75th and Conser streets, west of the Fire Station.

September Meetings

Friday, September 13, 2013 7:30 pm
The program this evening will be on "History of Technology in the National Weather Service" by Matt Foster N0EYE.

Friday, September 27, 2013 7:30 pm
The program for this evening will be announced on the Wheatshocker Net. Stay tuned to 145.29 at 8 pm on Thursday the 26th for details.

JCRAC Dues Choices

Remember, you have an option now on JCRAC dues; pay \$40 for TWO YEARS, as compared to the regular rate of \$24 per year, and your grandchild under the age of 18 qualifies as a member of the family for membership purposes.

Amateur License Testing

When?
Third Saturday of each month, at 9:00 am.
Where?
Johnson County Public Library
Blue Valley Branch, 9000 West 151st St.
Overland Park, KS
(Just west of Antioch on north side of 151st St.)
Fee? \$14
Pre-registration is NOT required.
Walk-ins are welcome!
For more information contact
Jim Lee, N0KCB 913-745-5121 or
e-mail: JimLee@kc.rr.com
Commercial RadioTests are also available.

Happy Birthday

When you get a chance, say "Happy Birthday" to the following club member(s). If your birthday is not listed here, it was not listed in www.qrz.com, but, you can email us the month and day (we don't publish the year!) and we will add it to the list:
Tim McQuiston N0SZE Sep 24
Andy Anderson W0AFQ Sep 27

NOTICE: Because Waid's closed, QCWA has a new meeting location for lunch on Thursdays. See Page 3 for details.

The Moon and the Magnetotail

The following is interesting in light of the present solar cycle. For an explanation of the meagnetotail see the following site:

http://www.nasa.gov/topics/moonmars/features/magnetotail_080416.html

And in a news release dated August 2013 "The sun is gearing up for a major solar flip, NASA says." In an event that occurs once every 11 years, the magnetic field of the sun will soon change its polarity in a matter of months, according to new observations by NASA-supported observatories. But not to panic because it has happened many times prior to the present occurrence. For more information see the following site:

<http://www.space.com/22271-sun-magnetic-field-flip.html>

Another interesting thought about the sun's magnetic field reversal is the possible effects it has on the net magnetic field we experience on earth and the relationship between that field and our radio propagation conditions.
Dick N0TO

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President's Corner

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The club mailing address is: JCRAC, P.O.Box 93, Shawnee Mission, KS 66201. FEEDBACK is published monthly for the JCRAC membership. Opinions expressed herein are not necessarily those of the Club or the officers. Items for FEEDBACK should be in the Editor's possession by the fourth Friday of each month for publication in FEEDBACK for the following month. The Johnson County Radio Amateurs Club website address is:
<http://www.w0erh.org/>

I hope everyone had a safe and enjoyable Labor Day holiday. Saturday was muggy and hot. Sunday, after the cold front went through, ended on a nice note. Did you happen to see the shelf cloud as it moved through the metro area early Sunday? What a classic weather event. Hope no one received any damage as the system swept across the area. Labor Day was a real outdoor day. While I was waiting for the kids to come over, I managed to do some repairs on three of my antennas.

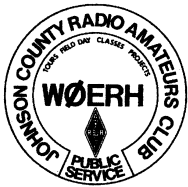
September is the month that sees the winding down of the public service events. Two of the biggest are this month. The MS Ride and Bikers for Babies. No sooner will September end and the 2013 October SET will be here. This exercise includes the entire metro area and a lot of volunteers are needed.

Jack from the Sheriff's office emailed me to tell me he had some items for the auction. These items are in storage waiting for October 26. He said he should have more for us before the auction. Take a look at the "stuff" around your shack that you can not remember the last time it was in use. Another possibility is that hamfest item "had to have", but is adding to you objects that collect dusts. The auction is a good place to help find a good home for it. The activities that will start Friday evening. So mark the dates October 25 and 26 for the JCRAC festivities and auction at the Ensor Farm Site.
Bill KA2FNK, President

Public Service Events List

Larry Staples W0AIB compiles, and makes available by e-mail, a list of the public service activities/events in the metro Kansas City area. Please let W0AIB know of any ham-type public service events, with confirmed dates, scheduled to be held in the metro area in 2013.

"A nice adaptation of conditions will make almost any hypothesis agree with the phenomena. This will please the imagination but does not advance our knowledge."
J. Black, 1803.



New QCWA Lunch Location

Come enjoy lunch with other hams. The lunch location has been updated on both the National and the Chapter 35 QCWA webpages. The icon on the local page is also a link to RC's webpage. Local web site: <<http://www.qsl.net/qcwa35/>> National web site: <<http://www.qcwa.org/events.php>>

Remember, ALL hams are invited to join with the Chapter 35 folks on Thursday, 1100 CDT, RC's, Martin City, MO. Mid-Continent Chapter 35 serves the Metro KC area in both Kansas and Missouri. Ron Wood K0BRO is President and JCRAC club member George Yantis K0GY is Chapter 35 Secretary and Treasurer. Starting in January 2013 QCWA publications will be on-line only as one means of reducing costs. More information on QCWA and Mid-Continent Chapter events can be found at <http://www.qcwa.org/>

For Sale and Wanted

FOR SALE:

Name badges with your name, call letters, and QTH; top quality, engraved in a wide range of colors. For sale, 4" diameter multi-colored embroidered patches, with the WØERH call sign, for sale at \$3.00 ea. This will give the club a small profit on each patch. Contact Jim McCoy WØLQV at 913-648-4406 or w0lqv@arrl.net

FOR SALE:

KLM Model PA10 160BL, 2m amplifier, 12V, SSB/FM, 10W IN 160W OUT. See eHam.net review of PA10-160BL and also see photo on QRZ.com. Asking \$160.

Mirage B108 "built like a brick" pre-MFJ 2m SSB/FM amplifier. Anderson PowerPole 12V connector and SO239 connectors IN and OUT. 10W IN gives 75 to 80 watts OUT and 5 watts IN gives 30 40W OUT. Makes a good ht amplifier or for use with the older mobile rigs that were 10 20 watts OUT. \$100 and you have a good amplifier. Dick N0TO clayfeet@att.net

Ensor Museum

If you can visit the Ensor Park and Museum, just 5 minutes South of central Olathe but haven't, do it now and see a most interesting and original flashback to the mid-1900's. Our motto "SEE IT TO BELIEVE IT" is true. A site map, Ensor GPS coordinates, and much more can be seen on the website at www.w9bsp-w9ua.org/ Larry Woodworth WØHXS, Ensor Park and Museum Manager

Wheatshocker Net

The weekly Wheatshocker Net is on Thursday evenings, 8 pm on 145.29 (-). There is usually a 'meeting-after-the-net' on or about 28.475 MHz usb. The Amateur Radio Emergency Services (ARES) net is also called on 145.29 (-) at 7:00 pm local, on Tuesday.

Treasurer-Elect Cal KC0CL and Long-time Treasurer Mac WØLQV

Mac was previously presented a plaque for his many years of service to the Johnson County Amateurs Radio Club, but we did not have the photo at the time.



The clubs congratulations go to both KC0CL and WØLQV.



Johnson County Radio Amateurs Club Meeting Minutes

Meeting Date: Friday, August 9, 2013. The meeting Started at 7:30 pm. Attendance: Self-introduction with name and call sign. 37 signed the check-in sheet. This was followed by the Pledge of Allegiance. The minutes from July 26, 2013 were read and accepted with one opposed vote.

The Treasurer's report, as follows, was read and accepted unanimously.

Cash on Hand	\$ 599.89
Checking Account	\$ 605.41
Savings Account	<u>\$ 7,618.86</u>
Total	\$ 8,824.16
Repeater Operating Reserve	\$ 796.25
Memorial Fund	\$ 150.00

Old Business:

- Ensor Auction October 25 and 26. An Auctioneer has been lined up (he is a Ham). Please spread the word about this event on any nets you are checking in on. Fliers will soon be available.

New Business:

- We need to look for a new place to hold the "Annex" Meeting (Pizza). A committee will be formed to investigate a new location. Committee members are Jaimie Charlton AD0AB, Rich Zaban KC0VDH, and Ron Bozich KD0VXL.
- Plans are still in the works to offer a Boy Scout Radio Merit class.
- Dennis Baker provided copies of an article that appeared in the Winter 2013 edition of QRP Quarterly. The article was "Refining an End Feed Antenna" by Ward Harriman AE6TY (<http://www.qrparci.org/qqsampl/qqsampl.pdf>). This is the type of antenna the CW Station used at Field Day this year.

Reports:

- 6 m Down Cycle right now.

- 10 m SSB Roundtable 4 participants on August 8.
- 440 Wheat Shocker net 16 check-ins on August 7 and 14 check-ins on July 31.
- 2m Wheat Shocker 19 check-ins on August 8 and 19 check-ins on August 1.
- 2 m Repeater- The power amplifier (PA) is still not working properly.
- HF Activity Abdallah Hamad AL-Muzayan, 9K2GS in Kuwait on 20m. KOIZ worked some of the Museum Ships.

Announcements:

- Santa Fe Trail Amateur Radio Club Hamfest September 14
 - Joplin Hamfest August 23.
 - Camp Fire at Ensor Saturday July 27.
 - Technician Class - August 17 & 24 at Providence Medical Center. Contact Brian Short, KC0BS.
 - MEEC Meeting at the Wyandotte County EOC August 10.
 - MS150 Bike Ride September 14 and 15.
 - Fox Hunt next meeting meet at 6:30 pm in the Church Parking lot.
 - Look for other Public Service events on Larry's List.
- Business meeting adjourned at 7:57 pm.

Program:

- The program was a presentation by Tom Wheeler N0GSG on the new 145.29 MHz repeater controller, how it's programmed and the things the controller can do.

Submitted by Ted Knapp, N0TEK, Secretary.

Johnson County Radio Amateurs Club Meeting Minutes

Meeting Date: Friday, August 23, 2013.
Tonight's meeting was a Fox Hunt. No official meeting took place.
Submitted by Ted Knapp N0TEK, Secretary.

JCRAC ENSOR Auction

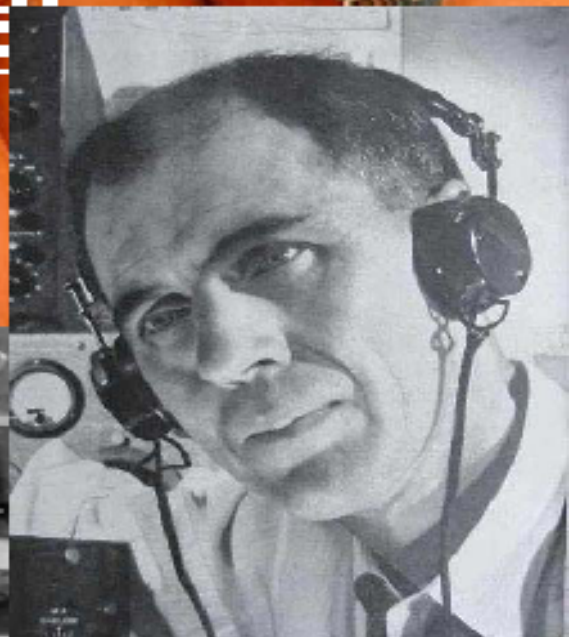
Tailgate & Campout

18995 W 183rd St Olathe

Time	Event
Friday	
5P-10 P	Free Tailgating
6:00 P	Campfire Dinner & Potluck
8:00 P	Twilight Foxhunt
9:00 P	Movies
10:00 P	Overnight Campout Setup
Midnight	Marshall Society Induction
Saturday	
9A-11 A	Site Tours & Breakfast
10A-11A	Field Ops Workshop
11:00 A	Auction Setup & Lunch
12-1:30 P	Auction



Fri & Sat
Oct 25/26



Using the Kenwood TS-940 with Modern Linear Amplifiers

Tom Wheeler, NØGSG
Johnson County Radio Amateurs Club
April 2013

The Kenwood TS-940 is a classic radio. Introduced in 1985, it is the successor to the TS-930 and is highly valued for its nearly bulletproof reliability, excellent receiver, and high-quality transmit audio. One of the TS-940's strengths is the use of PIN diode transmit-receive switching, which enables the radio to be used for full-break-in CW keying (QSK). In QSK mode the radio quickly switches back to receive in between transmitted CW elements.

This strength is a weakness when interfacing the TS-940 to modern linear amplifiers, which are very sensitive to transmit signal timing. Most new amplifiers will go into a fault-protective mode if RF energy is present on their input connector during the off-to-on transition of their send relay; because of the QSK nature of the TS-940, and a relatively slow transmit-receive (T-R) relay internal to the radio, this issue is very likely to occur when it is interfaced to modern amplifiers. There are many possible solutions; two of them are as follows:

a) Use an external MOSFET on the TS-940's accessory connector to switch the linear amplifier into transmit mode. This solution is good if you want to preserve full QSK nature of the TS-940, but unfortunately may still be dangerous to the health of your amplifier, as the TS-940 only presents about a 3 ms delay between activation of its internal transmit signal and emission of RF. That's not enough margin for safety in my book; hot switching an amplifier is a sure method of causing its eventual demise.

b) Slow down the TS-940 RF output timing so that there is no possibility of ever hot switching the linear. This will eliminate full QSK on CW, but the amplifier will be protected much more fully. This is the method I have chosen. The modification is quite simple and easy to perform, and is shown in Figure 1 below. Essentially the modification increases the R-C time constant of the enable signal (TB) driving the second transmit mixer in the TS-940. A non-polarized capacitor is necessary because this signal swings both positive and negative. The values shown give about a 30 ms delay between keydown and emission of RF from the transmitter.

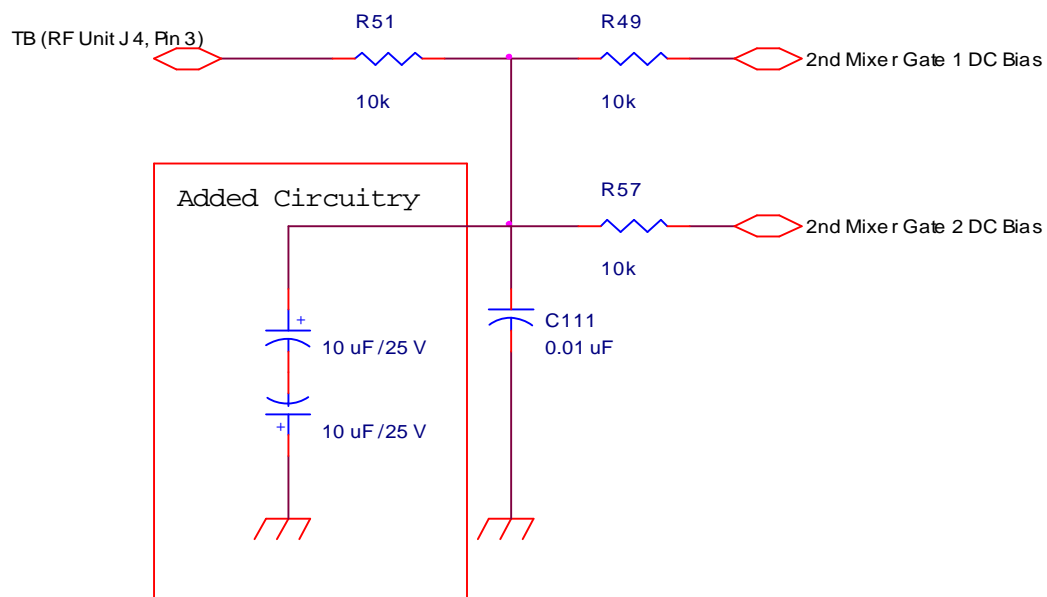


Figure 1: Modification for Delayed RF Output from TS-940

Modification... cont'd from Pg 6

This modification is easy to perform - - and easy to remove, should you change your mind at a later date. The capacitors are added at the junction of R51, R57, and R49, which is next to connector J2 on the RF Unit. This can be completed with the RF Unit PC board in place. The resulting transmit timing is shown in Figure 2.

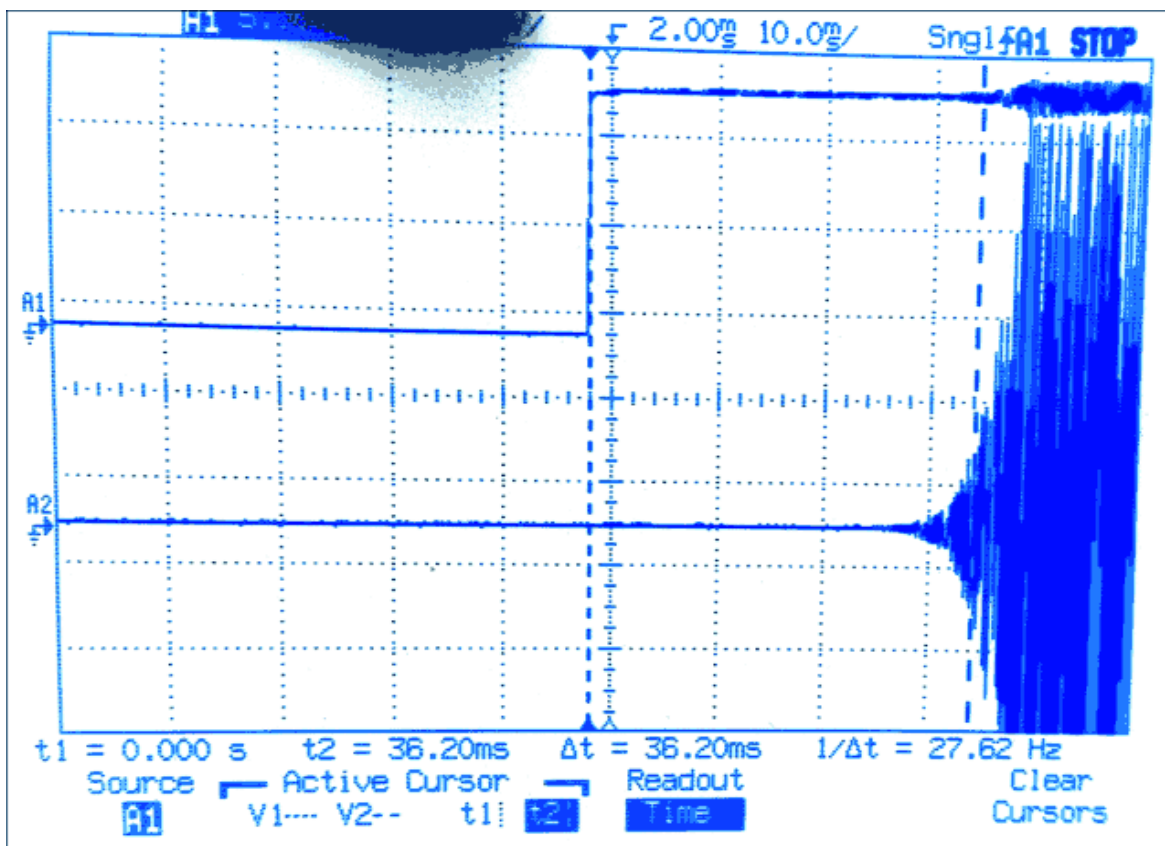


Figure 2: Transmit Timing after the Modification.

The top trace in Figure 2 is the TB (Transmit B+) signal inside the TS-940, and the bottom trace is actual RF at the antenna connector. The unit is in RTTY mode in this photo, but similar timing is enforced for all modes, as the delay circuit is active in all modes. Once this modification has been performed, QSK capability in CW is still present, but the first transmitted CW element may be truncated. With some additional thought, this could be prevented by adding an electronic switch to take the capacitors out of the circuit in CW mode.

Conclusion

Transmit timing is critical to the health of linear amplifiers, especially modern solid-state models. The TS-940 will provide excellent service in these applications with the addition of this modification.
