



## President's Notes for September 2016

Welcome back from Summer! First off, we have our annual PEAC bike ride to support. <http://www.bikeprogram.org> The date is Saturday, September 10th. Please contact Pat Quinn to sign up! We need SAG support and rest area support.

Secondly, what is going on with the club repeater?? Yes, we still have that awful noise that comes on the analog repeater at sundown, and stops at sunrise. Yes, we also have a hum that shows up during many of our FM analog communications, sometimes loud, sometimes soft, sometimes, not at all! Time to discuss what is happening:

We suspect the hum is being picked up by the ADR unit, which is designed to avoid the repeater from locking up when the analog controller presses the PTT and tries to send audio during a digital communication. This unit detects the radio is in a digital communication and blocks and analog. It also performs the 100Hz PL decode. The box that does this is plastic, and not shielded. We tried to see if shielding helps, but could not get the job completed. So, the hum, which seems to be 120Hz, or a 60Hz full rectification, shows up. The hum is only present on audio coming from the 2m repeater, which is why the ADR is suspect.

We have been analyzing the nightly interference. The interference corresponds to the outside LED lighting starting up. When we were at the site, we could not trick the photocells into turning on the lights for some reason. But, we have heard 2m noises pick up when the lights are on, and we have confirmed the lights on causes the issue. The noise we hear does come and go, with various warbling sounds. During experiments, we have confirmed that the warbling requires the 2m analog transmitter to be functioning for this noise to occur. If the repeater is operating in its normal mode, the noise is present on the 2m output and the 220 machine output, which is linked to the 2m. When we command the repeater controller to stop activating the 2m PTT and stop sending the audio, the 220 machine also goes quiet. The 2m machine continues to receive and send analog audio to the 220 machine through the repeater controllers, but there is no interference on the 220 machine, and very little sign that the 2m receiver has interference on its input. The most we hear is an occasional squelch burst. The 2m repeater input sensitivity does not seem to be dramatically impacted, as we did ad hoc testing with transmitting to the 2m with low power, and it still send the data (with the hiss indicative of low power) to the 220 machine. There may be some reduction in sensitivity of the reception of digital modes, though, but this needs more study. Conclusion: We have some kind of receiver-transmitter problem that takes the noise, sends it out the 2m transmitter in a

way that is picked up back on the 2m receiver and causes it to build and warble. The key is the 2m transmitter is part of this feedback loop. So, is it again the ADR? Is there some problem with a noise on the 2m transmitter causing pick up in the 2m receiver? How do we break this feedback loop?

We struggle to work to address these issues due to limited access to the repeater site. The hotel staff so far has required their physical presence when we are up there, which is something we have not needed in the past. They asked that we wait until winter before we return. We are considering ways to assure them we are not a problem being up there without their presence. We also cannot get the LED lights to turn on when we are up there, which also is a problem. The hotel has problems with the light installation, as the power supply boxes are not sealed, and the connections to the LED strings are done with wire nuts on exposed wiring. This is an extremely poor installation that will fail over time. Finally, I have been unable to reach the System Fusion Repeater lead person at Yaesu in California. I have been too busy at work to keep calling him, and he rarely returns phone calls. We do need some quality time at the site to try remedies. We will keep working on this whole situation!

2016 Field Day! We will spend time this month in the club meeting going over the 2016 Field Day experience. The weather sure was much better than last year! The scores were not our highest, but we did very well overall. I hope you can make the club meeting!

73,

David Treharne, N8HKU

FARL Club President

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**Silent Key: Ivan Arthur Gilmore Love Jr.**

Age 78 of Livonia. Cherished husband of Dorothy for 59 years. Loving father of Colleen (Ronald) Blaisdell, Michael (Laura) Love, father in law of Doug Snodgrass and preceded in death by Denise Snodgrass. Proud Papa of Jeffrey, Kristina, Rebecca, Nicholas, Christopher, and proud great papa of Hayden. He also leaves behind many other loving family members and friends. Ivan enjoyed trips to Florida and up North, spending time on his pontoon boat, Ham radio, and fostering kittens, but most of all he enjoyed family time.

**Visitation:** 09/02/2016 2:30pm to 8:00pm at

Fred Wood Funeral Home – Rice Chapel 36100 Five Mile Rd. (E. of Levan) Livonia 48154

**Funeral:** 09/03/2016 Gathering 10:00am Service 11:00am at Fred Wood Funeral Home – Rice Chapel

**Memorial Contributions** may be made to the Huron Valley Humane Society, 3100 Cherry Hill Road, Ann Arbor, MI 48105, <http://www.hshv.org>



## Field Day in Review 2016

- David Treharne, N8HKU

Field Day is in the books for 2016. We and the LARC once again set RF into the atmosphere and made contacts all around the US and Canada. We operated the full 24 hours this year, with no weather related or major equipment related issues. While the bands were not exposed to any sun-related storm, they were not exposed to any of the beneficial sunspots as well! By the time the Field Day event began, we had been days without a single sunspot, something that is a bit unusual this early past the peak in the last sunspot cycle. Anyway, what this meant was that 40m was operational nearly day and night. 20m faded pretty quickly at sunset, and did not show back up until well after sunrise. 15m and 10 m were pretty useless to us. 80m was its usual self at sunset to an hour or so after sunrise. With 20m less open than usual, we ended up making fewer contacts than 2014, and just about the same number of contacts as last year, 2015, where we had problems with the wind/rain, and the network. All said, this was a very successful event and we were able to make a lot of contacts with our emergency equipment set-up for the full 24 hours of the operating event.

### What went right:

1. We worked the entire Field Day weekend! We basically had 24 hours of coverage this year, and all of the major equipment worked right.
2. Ready-made station: Thanks to Gerry, KG8HZ, and his son Jesse for bringing along a complete station to Field Day! They even had antennas, although we were best off using the G5RV wire antenna, since it played well on both 20m and 80m.
3. Stayed cool in the heat: The air conditioning worked in the camper, and we stayed cool when it was on, and were able to shut it off in the late evening and early morning to stay cool.
4. Food: Thanks for all the food. We had both meat and vegetarian options, and both went well. We had plenty of water.
5. Great antenna placement: We had all of the antenna we needed, at the height we wanted it to be at. Even the CW tent got to have a large, rhombic antenna.
6. Set-up time: The antenna was placed when we arrived, we just had to swap the choke balun to make it near the antenna feed. The camper worked fine on the grass and mulch in the area, and it was flat enough to get it leveled.
7. Teardown time: Everything went very smoothly in teardown. We were packed up and departed in 60 minutes.

8. We made a good number of contacts! Good SSB, CW, and digital contacts this year. About the same as last year, but the band conditions were not favorable, with zero sunspots to help propagation.
9. Attenuator function on the Icom IC-7300: That dramatically reduced the interference from the CW station, which was a problem during the event. The AGC pumping, which was muting the radio, disappeared with the attenuator on. It did reduce the ability to pick out some of the weaker signals.
- 10.9. Field Day Bulletin: We copied it Saturday night from the SSB station, unknown if the digital station also copied it.
11. Satellite contacts: We managed just 1 satellite contact, but that is one more than what was made last year.

## **What could be improved:**

1. Bring back the bandpass filters: We need to apply the bandpass filters again between the SSB and CW stations. We ran out of time to try it with the rhombic and the G5RV of SSB1 this year, as they moved to 10m during the last hour, with the SSB on 20m. With the CW on 40m and the SSB on 20m, the AGC pumping interference was pretty extensive. While the Rhombic had twin line feed directly to the tuner, we can insert the filter between the tuner and radio. We will need to try that next year.
2. Generator noise: The Honda inverter generators still are the quietest, but we did not have one large enough to run the Airstream camper for SSB1. The Lincoln Electric generator ended up doing the job, but its noise level was not consistent with the residential setting we were in. Mac noted that Tye may be able to help with generator support next year.
3. Solar contacts: We made our solar powered contacts, but we need to be able to separate the radio power from the camper power, so as to keep the A/C running, or provide some other type of ventilation. Dave N8HKU got so sweaty he irritated his eyes and had trouble seeing until the next day.
4. GOTA station: The clubs were unable to staff the coaches, so no bonus points for that. The station only made 13 contacts overall.
5. Message traffic: The NTS message traffic did not occur, so no bonus points.
6. Satellite station: Some trouble using the satellite station, as operating instructions for the radio and rotator were not available. The crew finally figured it out, but it could have been easier.
7. Digital station operation: We had some operators who would have used it, but need some better instruction on how to operate this station.

8. Network Server outage: One of the new LARC computers, the one that was running the Field Day software server, had the N3FJP program shutdown on it. No contacts were able to be logged until the problem was identified and the program reset. This resulted in duplicate contacts being put in, as each “enter key” from a station created another copy when the server did come back up. However, the N3FJP utility to eliminate duplicates worked well.

David Treharne  
N8HKU  
FARL President



## **Maker Faire 2016 - Roger Reini, KD8CSE**

Once again, the FARL, along with members of ARROW and LARC, participated in Maker Faire Detroit at The Henry Ford, which this year was held on July 30 and 31. We were located in our usual spot in the Pennsylvania Courtyard and had the usual 6BTV verticals mounted on the roof. What was new for 2016 was the FT-991 go-kit. Some of the other equipment present was an Electcraft K3 and a vintage Heathkit HW-11 setup.

Setup of the antennas could not be performed on Friday due to storms; rain delayed the setup on Saturday morning as well. We learned that the awnings protecting our gear and ourselves were good sunshades but were not waterproof; we had to cover all of the gear with tarps while the rain came down. It wasn't until late afternoon that everything was ready to go, but once we were operating, things worked out well. QSO counts were down thanks to the setup delays as well as poor propagation that weekend.

Our booth received a steady stream of visitors throughout the weekend. We didn't have a satellite display this year, but we did have a 3D printer courtesy of Joe, CALL SIGN (you can never go wrong at Maker Faire with a 3D printer). Later on Sunday, a crew from West Bloomfield Cable talked with some of our crew and conducted a more extensive interview with Roger, KD8CSE; some of that interview made it in their story on Maker Faire (available at [www.civiccentertv.com](http://www.civiccentertv.com)).

Teardown on Sunday afternoon went smoothly, taking around 90 minutes to complete; unfortunately, it started raining again just as we were loading everything in the vehicles. If the antennas had been more accessible, our teardown time would have been reduced. Still, it was a good weekend, and we are already thinking of our plans for next year.



August 13, 2016

[MCRC SPARK GAP]

## Instructors Needed for September Ham Radio Class

### Amateur Radio Classes @ Caroline Kennedy Library

The Dearborn Heights Caroline Kennedy Library, the Motor City Radio Club and the Southeastern Michigan IEEE Section will present a 10-part series of Amateur Radio license classes finishing with an examination to obtain your Amateur Radio license.

Planned Schedule: Tuesday evenings: 7:00 PM – 8:00 PM Amateur Radio License Class,  
8:00 PM – 8:30 PM Optional Morse code Class

#	Date	Primary Class Topic	Focus	CW Class Topic	Study Points	Letters
1	9/13/2016	What is Amateur Radio?	History & Fun	SPACING	Hear the spaces	KMRS
2	9/20/2016	Electrical principles	Basic Theory	COPYING CODE	Copy behind	USPT
3	9/27/2016	Electronic principles and components	Applications	USING A KEY, KEY EXERCISES	Key Setup & Use	LOWI
4	10/4/2016	Radio and electromagnetic waves	RF & Waves	SENDING PRACTICE	Dashes / Dots / Alternate	NJE
5	10/11/2016	Antennas and Feedlines	Launching Waves	COMMON WORDS & PHRASES	Straight Keys	FOY,
6	10/18/2016	Amateur Radio Signals	Getting on the Air	Q & QN SIGNALS	Sidewinders	VG5/
7	10/25/2016	Be Safe!	Safety First!	QSO PROCEDURES	Paddles	Q9ZH
8	11/1/2016	Station Setup and Operation	Station Examples	CW OPERATING & ON AIR COURTESY	Memory Keyers	E8B?
9	11/8/2016	Operating Procedures	Good Practices & Manners	ARRL MESSAGE FORMAT	Messages	427C
10	11/15/2016	Rules and Regulations	Part 97	NATIONAL TRAFFIC SYSTEM	Traffic Handling	1D6X
11	11/22/2016	Optional Exam (\$15.00 FCC Fee)	FCC Examination by VE's	NET OPERATING PROCEDURES	Getting on a Net	
Tuesdays						

Caroline Kennedy Library, 24590 George Street, Dearborn Heights, MI 48127, PH: 313-791-3800

Please **Register early** by phone or at the library as the class size is limited.

#### Amateur Radio License Classes Syllabus:

We will be using "The No-Nonsense Technician Class License Study Guide" by Dan Romanchik, KB6NU for tests given after July 1, 2014. It is a free download of 58 pages in PDF format available [here](#). Printed copies can be ordered at Amazon.com for under \$15. Read through each 'section' of the text for each class, before each class and we will discuss any confusing points when we meet. An optional 11<sup>th</sup> evening will provide an opportunity to take the official FCC examination for the Technician Class Amateur Radio License. (We will also provide students with a list of other test sites and dates where they may take the test. The license examination fee is always \$15.00.)

#### Class Costs:

- Text (Download and print, or read on-line) Free
- Instruction (Volunteer local 'Hams') Free
- Optional Morse Code Lessons Free
- Optional end of class 'FCC' Exam \$15.00 (*Exam fee is always the same.*)



## Club Repeater Information

The Ford Amateur Radio League operates 3 club repeaters under the club K8UTT license. All the repeaters are located in the Dearborn, MI area near the Southfield Freeway. All repeaters are open for members and guests to operate.

Repeater	Output Freq	Input Freq	Tone
2 M Repeater	145.270	-600 KHz	100 Hz PL
1 1/4 M Repeater	224.520	-1.6 MHz	100 Hz PL

**Club Net: 8pm on Sunday, 2 and 1-1/4 Meter Repeaters!**



## Classes and Exams

The following amateur radio clubs conduct license exams throughout the year. Many clubs allow walk-ins but pre-registration will insure an exam is available for you when you attend.

Club Name	Contact Person	Phone	Email
Ford Amateur Radio League	Bill Boyke	313-805-8877	wboyke@ford.com
South Lyon ARC	Christian Anderson	248-437-3088	K8VJ@arr.net
Motor City ARC	Don Novak	734-281-7030	K8THU@arrl.net
Hazel Park ARC	Jerry Begel	248-543-2284	w9npi@comcast.net
USECA ARC	Joseph Kennedy	586-977-7222	N8OZ@arrl.net
ARROW Assn	Roger Place	734-663-4625	merrogplace@aol.com

Some of the above clubs also conduct license classes. Please contact them for additional information.



## 2016-2017 Club Officers

Please contact any of the officers for information regarding the Ford Amateur Radio League, or go to the club website at [www.k8utt.org](http://www.k8utt.org) for current events and activities.

<b>President</b>	Dave Treharne	N8HKU	734-476-1666
<b>Vice President</b>	Roger Reini	KD8CSE	734-728-1509
<b>Treasurer</b>	Pat Quinn	WD8JDZ	734-729-1993
<b>Secretary</b>	Mac	KD8TPO	
<b>Repeater Chair</b>	Murray Scott	KE8UM	248-743-1704
<b>K8UTT Trustee</b>	Dave Treharne	N8HKU	734-476-1666
<b>Activity Chair</b>	Bill Boyke	N80ZV	313-805-8877
<b>Bolt Editor</b>	Rajiv Paul	KD8LHF	313-244-2515



## Club Meetings

The Ford Amateur Radio Club meets on the second Thursday of each month, except for Christmas and the summer months July and August. The meetings are held at 6:30 PM at the Ford Engine Manufacturing & Development Offices (EMDO) building. EMDO (located at 17000 Southfield Rd, Allen Park, MI) is south of I-94 on the east side of Southfield just north of the Allen Park Municipal offices. Park in the front of the building and come into the main lobby at the side. Knock on the inside door on the right if no one is standing there to let you in.



**Next Club Meeting: September 08, 2016 at 6:30PM**

**Topic: PEAC Bike Ride Support Preparation, 2016 Field Day Review, and Repeater Status!**

**The Ford Amateur Radio League**  
**PO Box 2711**  
**Dearborn, MI 48123**