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*The*  
**ANTENNA**

**The Brandon Amateur Radio  
Society Newsletter**

OVER 39 YEARS OF PUBLIC SERVICE TO THE BRANDON AREA  
BRANDON, FLORIDA, USA  
VOL XLIII, NUMBER 8 AUGUST 2016

**Come to the Club Meeting Thursday August 18<sup>th</sup>**

Our meeting this month is at our usual location: Brandon Assembly of God 710 South Kings Avenue in the Annex. Things get underway at 7:30 p.m. when Doris WB9VDT bangs the gavel to start things off.

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**August Program: EMP 101:**

**What is it? What do I need to know? And Can I Survive it?**



Our presentation for the August meeting is by Ezra Graham, a Retired Lockheed Martin Aeronautical Engineer. Here is the scenario: You are driving home from work when suddenly your car loses power. No power steering, brakes, not even the radio. You and all of the other cars around you crash. Your air bag does not work. You have a bloody nose but that is about it, but others are seriously injured. You get out of your car to call 911. Nothing! Your phone is dead. Suddenly you hear a nearby thunderous explosion. You look at the billowing black smoke on the horizon just in time to see another airplane crashing, more black billowing smoke followed by several more. What just happened? **The U.S. has just been hit by an EMP attack!** It will be an interesting and timely program!

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## Saturday 6 August Testing Session



We had six test candidates at our August testing session. The results were: Two upgrades to Extra and two new Technician class licensees.

In addition we had one commercial examinee scheduled who passed the RADAR endorsement (element 8) and the GMDSS Operator examination (element 7). Examinations are given on the first Saturday of the month in the church annex at Brandon Assembly of God 710 South Kings Avenue in Brandon (the same location where we have our meetings).

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## ARRL Reports Growth in New Amateur Radio Licensees Ahead of Last Year's

The ARRL Volunteer Examiner Coordinator (VEC) reports that 20,447 new US Amateur Radio licenses have been issued since January 1. That's nearly 1500 ahead of the number that had been issued by this time last year. At the present pace, the US is on track to exceed 30,000 new radio amateurs for the third straight year by the end of the year.

"While I am thrilled with this prospect, I'm also keenly aware that without some mentoring, these new hams' initial curiosity and enchantment may fade if they don't get on the air right away," said ARRL VEC Manager Maria Somma, AB1FM. "Let's show these new hams what the magic is all about," she urged.

In addition, the ARRL VEC reports that upgrades are on track to reach nearly 11,000 by year's end.

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## K4TN Repeater Work Update

Bernie Huth W4BGH

I am attaching a photo showing the current status of the repeater test setup. The Mirage 35 Watt VHF/UHF amplifier is a stand-in for a PA that Ray Negron, WA6KDW, is planning to put together from GE Mastr II parts with the help of Tony Stone, W4TAS. The Mirage is putting out approximately 20 Watts through the Phelps Dodge Duplexer and the Triplexer. We hope to get a little more with the GE Mastr II amplifier.

The Kenwood TKR-720 is a clone of the VHF repeater currently on-line at the TECO site. We shouldn't have to change anything with the VHF setup to install the new UHF equipment, but we are hoping to add another GE Mastr II VHF amplifier so we can turn the power down on the Kenwood TKR-720.

At this point I think the controller programming is stable and I don't know of any major changes. We will be able to link the two repeaters as far as analog FM is concerned, but the Fusion Digital on UHF is in a "bubble" by itself. By that I mean that even though the repeaters are linked, anyone transmitting on UHF Fusion will only be heard by other UHF Fusion users. Also a VHF user will be heard by UHF analog FM users, but not UHF Fusion users. That's just the way it works!

I will give more info when we can get the GE Master II PA working.

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## **Amateur Radio Sleuthing Pins Down Source of Strange RF Interference From ARRL News**

08/09/2016

Police in Evanston, Illinois, contacted the ARRL Lab, after an apparent interference source began plaguing wireless vehicle key fobs, cell phones, and other wireless electronics. Key fob owners found they could not open or start their vehicles remotely until their vehicles were towed at least a block away, nor were they able to call for help on their cell phones when problems occurred.

The police turned to ARRL for help after striking out with the FCC, which told them it considered key fob malfunctions a problem for automakers, although the interference was affecting not just key fobs but cell phones, which are a licensed radio service. ARRL Lab EMC Specialist Mike Gruber, W1MG, believes the FCC should have paid more attention.

“This situation is indicative of what can happen as a result of insufficient FCC enforcement, especially with regard to electrical noise and noncompliant consumer devices,” Gruber said.

Evanston authorities worried that a serious situation could develop if someone were unable to call 911, putting public safety at risk. They also were concerned that the RFI could be intentional and indicate some nefarious or illegal activity. Given the seriousness of this situation, Gruber contacted Central Division Director Kermit Carlson, W9XA, to ask if he could look into the matter.

On June 2, Carlson met with an Evanston police officer, her sergeant, a local business owner, and the local alderman, and he quickly confirmed that the 600 block of Dempster Avenue in Evanston was plagued with an odd RFI problem. Carlson determined that the problem prevailed along a set of eight on-street parallel parking spots in the downtown commercial district of the North Chicago suburb.

Carlson employed a Radar Engineers 240A Noise Signature Receiver and UHF Yagi antenna to survey the affected block. Since key fobs typically operate at around 315 MHz and 433 MHz, he looked on both frequencies.

The survey identified several noise sources in the affected block, but in particular a strong signal in the middle of the block. The interference source turned out to be a recently replaced neon sign switching-mode power supply, which was generating a substantial signal within the on-street parking area just across the sidewalk, between 8 and 40 feet from the sign.

The problematic power supply interference also disabled Carlson’s cell phone when he was within a few feet of the device. Carlson anticipated that further investigation would show that the harmful interference could disrupt licensed radio services in close proximity. The troublesome transformer was not replaced, but the building owner agreed to turn off the sign should problems arise.

Carlson called the Evanston case “a particularly alarming example of radio interference,” especially since local authorities considered it a public safety matter. “This situation demonstrates the electromagnetic compatibility problems that are evolving in an atmosphere of noncompliant, unintentional RF-emitting devices,” he said.

A return visit to the area with calibrated antennas and equipment capable of measuring the radiated signal strength with quasi-peak detection is planned for later this year. Since the initial visit, several other instances of unexplained key fob malfunctions have been reported in the Greater Chicago area. — *Thanks to Kermit Carlson, W9XA, and Mike Gruber, W1MG*

That wraps it up for this month. Have FUN with radio!

**Keep in Mind Our Weekly Nets and Bulletins**

**Monday 8 p.m. The Two Meter Net 147.765 - 147.165 MHz Hosted by Doris Haskell  
WB9VDT**

**Tuesday 7 p.m. 6-meter Roundtable 50.200 MHz USB followed at 8 p.m. with the 10  
Meter Roundtable 28.365 MHz USB**

**Send us your articles AND PICTURES! We do much more in the digital format! I  
would like to have pictures of BARS members and their ham shacks!**

**Remember to check out the BARS website:**

**[brandonhamradio.org](http://brandonhamradio.org)**