

The HIARC Bulletin

February 2017 Edition

The Official Bulletin of the Harris-Intersil Amateur Radio Club

Club Meetings: Second Thursday of Every Month at Meemaw's Barbecue on Babcock Street between Palm Bay Road and Port Malabar Road. Supper is at 6:00 PM, and a short business meeting is at 7:00 PM. Our programs start around 8:00 PM. Exception: In December, the HIARC Christmas Dinner is held instead at someplace fancy TBD.

Club Station: The club station is K4HRS in Building 15, Room 321. E-mail Butch to sign up.

Nets: The South Brevard Emergency Net meets every Thursday at 7:00 PM local on the 146.85 Mc repeater.

HIARC Website: <http://qsl.net/hiarc>

Repeaters: 145.47 MHz, tone 107.2 cycles, elevation 170 feet, Melbourne

HIARC Web Site: www.qsl.net/hiarc.

Officers: President: Francis ("Butch"), WA4AQV

Treasurer: Bill WA4EMU

Secretary: Jim , KC7SSW

Repeater Chairmen: Bud W4HXP

Program Chairman: Eric N4SCS

Field Day Chairman: TBD

Sunshine Officer: Open

Club Jester: Ken N8KH

Membership:

Dues are \$12.00 per year to:

Bill WA4EMU

Annual Events: Annual swap-fest at the September meeting. Field Day (always the fourth full weekend in June) at Grant Community Center Fairgrounds, Field Day web site link

<https://sites.google.com/site/hiarcfieldday2013/>

Selected Upcoming Hamfests:

Orlando Hamcation, February 10, 11 ,12 <http://www.hamcation.com/>

Stewart FL, March 18. Free and friendly. Easy 1.5 hour drive from Melbourne, no city traffic. Details <http://stuarthamfest.com/>

President's Message

The Orlando Hamfest is this weekend, don't forget! One of the biggest in country.

The next HIARC club meeting is this Thursday February 9 at Meemaw's Barbecue on Babcock Street. Supper starts at 6:00 PM, and the formal meeting is at 7:00 PM. The program will be on aircraft HF communications. Aircraft HF is as busy than ever. The many aircraft stations provide useful propagation beacons worldwide and make for interesting monitoring. Their locations range from New York to the South Pole. So come learn how it's done and how to listen in.

73's

Butch WA4AQV

Aluminum Truck Bodies and Antennas

Vehicle roof mount VHF and UHF monopole antennas work very well. The increased height, 360 degree azimuth view, and large ground plane of roof mounting all contribute to increased realized gain and a omnidirectional radiation pattern. Actually mounting the antenna on the vehicle roof is the problem, a task becoming more difficult due to thin vehicle sheet metals. Last month lots of suggestions were received as to how to mount roof antennas on thin aluminum body Ford F150 pickup trucks. A common idea was to add a backing plate under the thin truck sheet metal in order to distribute the load.

Turns out much of the Ford F150 roof area sheet metal is now corrugated. A large backing plate would preferentially have the same corrugation pattern, but such plates do not seem to be on the market at present. A new generation of antenna mounts might be a good seller?

Another idea was a steel backing plate under the truck aluminum roof and then use a magnet mount antenna through the aluminum. I measured the capacitance of a large magnet mount antenna base to the steel vehicle at one time. It was 30 picofarads for a capacitive reactance of 36 ohms on 2 meters. The 2 meter $\frac{1}{4}$ wave whip had to be a little longer than normal for resonance in order to buck out this base capacitance! That mag mount antenna seemed a good performer in casual use though.

Using a through glass antenna was another idea and a few are still around <http://www.universal-radio.com/catalog/hamantm/5079.html>. Auto glass is getting more complicated however due to "passivated glass". There are many trade names but the glass increasingly contains metal particles, conductive tin oxide or indium tin oxide, metal films, and who knows what to reduce UV and IR light penetration. Physics makes for a difficult trade between infrared light (IR) rejection, glass electrical conductivity, and RF field penetration, electron mobility is required to reflect the IR. The glass therefore may not be a good dielectric and in turn may not be suitable for through glass antennas. There seems little to no published information of the relative permittivity and electrical conductivity of auto glass by vehicle. A good QST article to write?

Another idea was to mount the $\frac{1}{4}$ wave 2 meter whip upside down under the truck, as was done on unmarked police cars many years ago.

Interestingly, the 2017 Ford F150 pickup truck continues to use a 30 inch AM FM broadcast receive whip in the right front fender. Passivated glass perhaps? Even it may have weak mounting: Auto Car Wash Destroys Aluminum F-150 Fender at Antenna Mount <http://www.Ford-Trucks.com/articles/automatic-car-wash-destroys-aluminum-f-150-antenna/>

New car sheet metal is becoming “powerful weak”!

Butch WA4AQV

Appointed ARRL SE Division Director Petition

On 01/20/2017 we received notice that certain wording and additional information was “required by ARRL” on the petition sheets. *Another notice was received 2/3 asking for yet another revision*
Attached is the revised copy of the signature sheets.

Please print several and take them to your next radio club meeting or ARES meeting, or ham gathering. We have until 3/10 to get these signed in order to deliver them to ARRL HQ by their deadline.
Note that those signing are attesting that they were an ARRL member as of 12/31/2016. If you signed a petition form prior to 2/2/0/17 you will need to sign a revised form.

Please send completed sheet to Jim Schilling, KG4SJZ.

A notice of recall petition was filed on 01/07/17.

Your immediate help is needed to secure the necessary signatures.

Please visit www.gotvotearrlse.webs.com for further information.

This is not about the person, it's about transparency and representation. We had a director appointed for us after the sitting director was declared ineligible for nomination. No reason for ineligibility has ever been provided, no matter who was asked or who did the asking.

Make your voice heard.

Thank you for your support of a transparent ARRL.

73,
Sherri, W4STB

Please visit www.gotvotearrlse.webs.com for further information.

How to Learn Code

<https://www.ScientificAmerican.com/article/how-to-learn-morse-code-mdash-semiconsciously/>

The Art and Skill of Radio Telegraphy
http://CW.HfRadio.org/cw_resources/The_Art_and_Skill_of_Radio_Telegraphy-3rd-edition.pdf

73,
Ken N8KH

Radio Antenna Engineering text online

Radio Antenna Engineering is a free introductory textbook on radio antennas and their applications. See the [editorial](#) for more information....

<http://www.Vias.org/radioanteng/>

73,
Ken N8KH