

The HIARC Bulletin

September 2019 Edition

The Official Bulletin of the Harris-Intersil Amateur Radio Club

Club Meetings: Second Thursday of each month at Meemaw's Barbecue on Babcock Street between Palm Bay Road and Port Malabar Road. Supper is at 6:00 PM, business is at 7:00 PM. Our programs start at 7:30 PM. As some members have allergies, we kindly ask that you refrain from wearing fragrances if possible thanks.

Club Station: Building 15, Room 321. Contact Butch for access.

Repeaters: K4HRS, 145.47 Mc, tone 107.2 cycles, elevation 170 feet, Melbourne

HIARC Web Site: www.qsl.net/hiarc. Website administrator; Jim , KC7SSW

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

Treasurer: Bill WA4EMU

Secretary: Open

Repeater Chairmen: Bud W4HXP

Program Chairman: Open

Field Day Chairman: Bill WA4EMU

Sunshine Chairman: Open

Club Jester: Ken N8KH

Membership:

All welcome to join.

Dues are \$12.00 per year to:

Bill WA4EMU

Annual Events: Annual swapfest at the October meeting. Field Day (always the fourth full weekend in June)

Selected Hamfests:

- August 10, 2019 : Fort Pierce at Indian River State College, 3209 Virginia Ave, Talk in 147.645 Mc. tone 107.2 Hz. www.pcars.org
- September 14, 2019 at 9 AM. Melbourne PCARS free swapfest. Exact location: W4MLB shack site / fire training center at Electronics Drive and Hughes Road. Talk in 146.61 Mc repeater, no PL tone, map <https://www.google.com/maps/@28.1392468,-80.6690535,68m/data=!3m1!1e3>
- October 11, 2019 Melbourne Hamfest, Melbourne Auditorium.
- November 13, 2019 at 9 AM. Melbourne area, PCARS free swapfest. Exact location, W4MLB shack site / fire training center Electronics Drive and Hughes Road. Talk in probably 146.61 Mc repeater, no PL tone needed: map <https://www.google.com/maps/@28.1392468,-80.6690535,68m/data=!3m1!1e3>

Ham Radio Lunches:

- Every Friday, 10:30 AM till 12:30 PM or so, Golden Corral on Palm Bay Road in Palm Bay
- Every Friday, 9:00 AM till 11:00AM or so, Umpa's Diner, 1115 N Courtenay Pkwy, Merritt Island, FL 3295, (321) 454-3422

July President's Message

Hurricane Dorian was a close shave. Thanks to all who volunteered. Florida has a statewide UHF amateur repeater system these days <https://www.sarnetfl.com/>. Try 444.375 Mhz locally, PL 107.2 Hz.

The Melbourne Hamfest is little more than four weeks away at October 11.

The September meeting will be this Thursday September 12, 2019 at MeeMaws Barbecue. 6 PM for supper, 7 PM for the meeting. The program will be "Vertical Antenna Ground Systems" by Butch, WA4AQV. We will also look at the newly relaxed AM broadcast station antenna efficiency requirements.

73's

Butch WA4AQV

Free Online HF Reception

There are now many online receivers around the world that you can tune into. Website: <http://websdr.org/>

Carrington Event

In 1859 the earth was hit with a solar flare of such magnitude that aurora was seen over much of the earth that many thought the sun was coming up.

Of course, there are many concerns that such an event happening today would have severe effects on the power grid, communications, and well-functioning of society and public safety should such systems fail.

Here is an account of the effect of the Carrington event on telegraph lines:

<https://timesmachine.nytimes.com/timesmachine/1859/09/05/79574906.pdf>

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Marty W1MD

Tuning Into The Bahamas By Ground Wave

A possibly less common DX'ing approach is ground wave reception, the mode of propagation where radio signals continuously refract into the earth and reach over the horizon. It is a very reliable mode of propagation providing steady signal strengths. Indeed, steadiness of signal strength can be the indicator of ground wave propagation.

Want to DX an AM broadcast station by ground wave? One that is in the news? Listen locally for ZNS-1 "The Voice Of The Bahamas" Nassau, Bahamas on a frequency of 1540 kc during daylight hours. It makes it all the way here 290 miles away. For me, reception has been successful within about ¼ mile of Indian River Lagoon (the ground wave signal rapidly dissipates over land); at sites without electromagnetic interference; and with a sensitive AM radio capable of resolving to the natural atmospheric noise. One place that worked was Castaway Point Park at the mouth of Turkey Creek. The stock AM radio in my rusted but fully paid for 2001 Dodge Truck does fine. It has a fender mounted 30-inch broadcast whip antenna common to older type vehicles. The "in the windshield antennas" and other types on newer vehicles may lack the needed sensitivity.

Technical data for ZNS-1. ZNS-1 is licensed for 50 kilowatts of transmitter output power with a single lobe directional antenna pattern pointing to the southeast and away from us. Palm Bay is therefore in a 17 dB deep radiation pattern null making the radiated power towards our azimuth about 1.0 kilowatt. The FCC seems to have given ZNS-1 a daytime clear channel even after the recent AM station expansions. I have heard no cochannel interference to ZNS-1 from other stations at midday when skywave propagation is minimized. Cochannel interference however wipes ZNS-1 out at night due to skywave propagation from many other stations. FCC data for

Bahamas ZNS-1 is at <https://transition.fcc.gov/fcc-bin/amq?list=0&facid=105377>. The station website is <https://znsbahamas.com/radio/nationalvoice/>.

1540 kc ZNS-1 survived Hurricane Dorian. Another Bahamas AM station was the 1 KW station C6B3 on 810 kHz in Freeport Grand Bahama island. It was knocked off the air by Hurricane Dorian and last I checked still down.

Radio amateurs do occasionally make contacts by ground wave propagation. We in coastal Brevard have particularly good opportunity to use this mode, given that we are in a shallow bay reaching from West Palm Beach to the Carolina Barrier Islands.. There used to be a noon get together on 1.845 MHz upper sideband with stations from up and down the southeast seashore talking. Ground wave propagation over Florida soil is much less effective than seawater. Other requirements for ground wave are vertical antenna polarization and frequencies typically below about 3 MHz.

Butch WA4AQV