

# The HIARC Bulletin

May 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.

**Club Station:** The club station is K4HRS in Building 15, Room 321. 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](http://www.qsl.net/hiarc). Website administrator; Jim , KC7SSW

**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, University Of Central Florida, June 10, 2017: <http://www2.mmae.ucf.edu/wiki/Tailgate>

### **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

## **President's Message**

Good news Rich K2YRZ is doing better and is back home.

The HIARC 145.47 repeater is doing well, lots of good reports on it. I can bring it up at the Indian River county line with a HT.

The next HIARC club meeting is this Thursday May 11 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 Grid Dip Meters with slides and demonstrations. Plus good food and friends.

73's

Butch WA4AQV

## **Notice Of Club Name Change Vote**

The former Harris Semiconductor business / Intersil at 1650 Robert J Conlan Blvd has been sold and will no longer use the Intersil name. In light of this, a proposal to change our club name from "Harris Intersil Amateur Radio Club" to "Harris Amateur Radio Club" was made at the February HIARC meeting. Such a change would be a bylaws change. A two week notice was sent to all members April 24. A vote on changing the club name will be conducted at the May meeting. Eligible voters are current and former employees of Harris and Intersil.

## **Presidents Thoughts On The Name Change Proposal**

Leaving the club name the same avoids issues with the bank and taxes. "Intersil" can live in the club name denoting that we have and accept former Intersil employees as voting members.

## **2017 HIARC Field Day Press Release**

Attached:

## **International Crystal Going QRT**

International Crystal Manufacturing (ICM) is going out of business. They were reportedly the last crystal manufacturer in the US that would sell in quantities of 1.

<http://www.arrl.org/news/international-crystal-manufacturing-going-out-of-business>

<http://www.RadioWorld.com/business-and-law/0009/international-crystal-will-close/339307>

They were down to 10 phone orders a week one ICM representative said. Some say they are now swamped in the panic to get the last crystals. Alternative vendors:

<http://www.jancrystals.com/>  
<http://www.ancestralresearch.co.uk/quartslab/>  
Crystek and Biomar perhaps?

What a bummer.

Butch WA4AQV

## **Broken Mike Plug Retaining Clip? RJ45 Blues?**

At one time you were not supposed to connect up to the phone jacks in your house, only the local phone company could do that. That changed around 1975 and the “Registered Jack” RJ45 modular plug connector born. They were registered by the Federal Communications Commission (FCC) as the official public interface to the phone network.

Now many ham radio manufacturers have adopted the RJ45 modular plug / handset connector for microphones. Such as Icom. The RJ45 plug is electrically reliable but the retaining clip breaks off: it then falls out. Time to compose a 12 bar blues song?

So this has spawned a number of fixes both commercial and home grown. One I use is the snap on “rjclip”. I’ll even bring some to the Thursday HIARC meeting for those afflicted. The other fixes you engineers have devised:

The two zip tie fix: <http://www.instructables.com/id/Repair-a-Broken-Ethernet-Plug/>

The commercial product fix: <https://www.rjclip.com/collections/rjclips>

Here is a patent idea to fix it: [http://pdfpiw.uspto.gov/.piw?Docid=09184538&homeurl=http%3A%2F%2Fpatft.uspto.gov%2Fnetacgi%2Fnph-Parser%3FSect1%3DPTO2%2526Sect2%3DHITOFF%2526u%3D%25252Fnethtml%25252FPTO%25252Fsearch-adv.htm%2526r%3D4%2526f%3DG%2526l%3D50%2526d%3DPTXT%2526p%3D1%2526S1%3D\(\(\(rj45.BSUM.%252Bor%252BBrj45.DETD.%252Bor%252BBrj45.DRWD.\)\)%252BAND%252B\(clip.BSUM.%252Bor%252Bclip.DETD.%252Bor%252Bclip.DRWD.\)\)%252BAND%252B\(repair.BSUM.%252Bor%252Brepair.DETD.%252Bor%252Brepair.DRWD.\)\)%2526OS%3Dspec%2Frj45%252Band%252Bspec%2Fclip%252Band%252Bspec%2Frepair%2526RS%3D\(\(SPEC%2Frj45%252BAND%252BSPEC%2Fclip\)%252BAND%252BSPEC%2Frepair\)&PageNum=&Rtype=&SectionNum=&idkey=NONE&Input=View+first+page](http://pdfpiw.uspto.gov/.piw?Docid=09184538&homeurl=http%3A%2F%2Fpatft.uspto.gov%2Fnetacgi%2Fnph-Parser%3FSect1%3DPTO2%2526Sect2%3DHITOFF%2526u%3D%25252Fnethtml%25252FPTO%25252Fsearch-adv.htm%2526r%3D4%2526f%3DG%2526l%3D50%2526d%3DPTXT%2526p%3D1%2526S1%3D(((rj45.BSUM.%252Bor%252BBrj45.DETD.%252Bor%252BBrj45.DRWD.))%252BAND%252B(clip.BSUM.%252Bor%252Bclip.DETD.%252Bor%252Bclip.DRWD.))%252BAND%252B(repair.BSUM.%252Bor%252Brepair.DETD.%252Bor%252Brepair.DRWD.))%2526OS%3Dspec%2Frj45%252Band%252Bspec%2Fclip%252Band%252Bspec%2Frepair%2526RS%3D((SPEC%2Frj45%252BAND%252BSPEC%2Fclip)%252BAND%252BSPEC%2Frepair)&PageNum=&Rtype=&SectionNum=&idkey=NONE&Input=View+first+page)

Here is another patent idea to fix it: [http://pdfpiw.uspto.gov/.piw?Docid=07862384&homeurl=http%3A%2F%2Fpatft.uspto.gov%2Fnetacgi%2Fnph-Parser%3FSect1%3DPTO2%2526Sect2%3DHITOFF%2526u%3D%25252Fnethtml%25252FPTO%25252Fsearch-adv.htm%2526r%3D25%2526f%3DG%2526l%3D50%2526d%3DPTXT%2526p%3D1%2526S1%3D\(\(\(rj45.BSUM.%252Bor%252BBrj45.DETD.%252Bor%252BBrj45.DRWD.\)\)%252BAND%252B\(clip.BSUM.%252Bor%252Bclip.DETD.%252Bor%252Bclip.DRWD.\)\)%252BAND%252B\(repair.BSUM.%252Bor%252Brepair.DETD.%252Bor%252Brepair.DRWD.\)\)%2526OS%3Dspec%2Frj45%252Band%252Bspec%2Fclip%252Band%252Bspec%2Frepair%2526RS%3D\(\(SPEC%2Frj45%252BAND%252BSPEC%2Fclip\)%252BAND%252BSPEC%2Frepair\)&PageNum=&Rtype=&SectionNum=&idkey=NONE&Input=View+first+page](http://pdfpiw.uspto.gov/.piw?Docid=07862384&homeurl=http%3A%2F%2Fpatft.uspto.gov%2Fnetacgi%2Fnph-Parser%3FSect1%3DPTO2%2526Sect2%3DHITOFF%2526u%3D%25252Fnethtml%25252FPTO%25252Fsearch-adv.htm%2526r%3D25%2526f%3DG%2526l%3D50%2526d%3DPTXT%2526p%3D1%2526S1%3D(((rj45.BSUM.%252Bor%252BBrj45.DETD.%252Bor%252BBrj45.DRWD.))%252BAND%252B(clip.BSUM.%252Bor%252Bclip.DETD.%252Bor%252Bclip.DRWD.))%252BAND%252B(repair.BSUM.%252Bor%252Brepair.DETD.%252Bor%252Brepair.DRWD.))%2526OS%3Dspec%2Frj45%252Band%252Bspec%2Fclip%252Band%252Bspec%2Frepair%2526RS%3D((SPEC%2Frj45%252BAND%252BSPEC%2Fclip)%252BAND%252BSPEC%2Frepair)&PageNum=&Rtype=&SectionNum=&idkey=NONE&Input=View+first+page)

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[http://www.fnet.html/fptofsearch-adv.htm%26r%3D49%26f%3DG%26l%3D50%26d%3DPTXT%26p%3D1%26S1%3D\(\(\(rj45.BSUM.%26Bor%26Brj45.DETD.%26Bor%26Brj45.DRWD.\)\)%26BAND%26Bclip.BSUM.%26Bor%26Bclip.DETD.%26Bor%26Bclip.DRWD.\)\)%26BAND%26B\(repair.BSUM.%26Bor%26Brepair.DETD.%26Bor%26Brepair.DRWD.\)\)%26OS%3Dspec%2Frj45%26Band%26Bspec%2Fclip%26Band%26Bspec%2Frepair%26RS%3D\(\(SPEC%2Frj45%26BAND%26BSPEC%2Fclip\)%26BAND%26BSPEC%2Frepair\)&PageNum=&Rtype=&SectionNum=&idkey=NONE&Input=View+first+page](http://www.fnet.html/fptofsearch-adv.htm%26r%3D49%26f%3DG%26l%3D50%26d%3DPTXT%26p%3D1%26S1%3D(((rj45.BSUM.%26Bor%26Brj45.DETD.%26Bor%26Brj45.DRWD.))%26BAND%26Bclip.BSUM.%26Bor%26Bclip.DETD.%26Bor%26Bclip.DRWD.))%26BAND%26B(repair.BSUM.%26Bor%26Brepair.DETD.%26Bor%26Brepair.DRWD.))%26OS%3Dspec%2Frj45%26Band%26Bspec%2Fclip%26Band%26Bspec%2Frepair%26RS%3D((SPEC%2Frj45%26BAND%26BSPEC%2Fclip)%26BAND%26BSPEC%2Frepair)&PageNum=&Rtype=&SectionNum=&idkey=NONE&Input=View+first+page)

So even IBM has worked on this problem! Thursday will be HIARC RJ45 plug repair night.

73

Butch WA4AQV

## **Heinrich Hertz Special Events Station**

Here's link to QRZ page for special event station honoring Heinrich Hertz. Put in newsletter for general interest.

Bill WA4EMU

## **A25UK Botswana**

This rare one has been active on 20 meter SSB and other bands.

Thanks to Marvin W6FUV for the spotting

## **KA4NHW**

Here is me at the Viet Nam Moving Wall event at Wickham Park. My school had a booth set up. Training disabled vets and putting them back to work. This electronics program is 5 months long. Students get certifications in Electronics that local industries want. Picture:



Clayton KA4NHW

## **Cheap homemade 30 MHz - 6 GHz vector network analyzer**

<http://HForsten.com/cheap-homemade-30-mhz-6-ghz-vector-network-analyzer.html>

Improved homemade VNA

<http://HForsten.com/improved-homemade-vna.html>

Henrik's Blog

<http://HForsten.com/>

HF is capitalized in his domain name because his name is Henrik Forsten. It doesn't stand for high frequency.

73,

Ken N8KH

Clayton at vet booth.jpeg



HF0HERTZ - Callsign Lookup by QRZ.COM.HTML

HF0HERTZ  Poland

HEINRICH HERTZ Special Event Station by SP5PPA

ul. Kordeckiego 66

Warszawa 04-355

Poland

**QSL:** via SP5PPA / OT-37



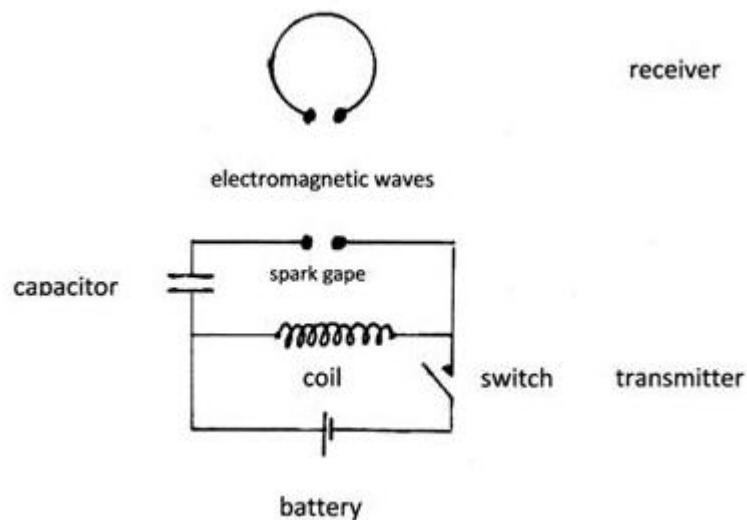
The most dramatic prediction of Maxwell's theory of electromagnetism, published in 1865, was the existence of electromagnetic waves moving at the speed of light, and the conclusion that light itself was just such a wave. This challenged experimentalists to generate and detect electromagnetic radiation using some form of electrical apparatus.

The first clearly successful attempt was made by Heinrich Hertz in 1887. For his radio wave transmitter he used a high voltage induction coil, a condenser (capacitor, Leyden jar) and a spark gap - whose poles on either side are formed by spheres of 2 cm radius - to cause a spark discharge between the

spark gap's poles oscillating at a frequency determined by the values of the capacitor and the induction coil.

This first radio waves transmitter is basically, what we call today, an LC oscillator. More information about this subject could be found in basic electronics text books.

To prove there really was radiation emitted, it had to be detected. Hertz used a piece of copper wire, 1 mm thick, bent into a circle of a diameter of 7.5 cm, with a small brass sphere on one end, and the other end of the wire was pointed, with the point near the sphere. He added a screw mechanism so that the point could be moved very close to the sphere in a controlled fashion. This "receiver" was designed so that current oscillating back and forth in the wire would have a natural period close to that of the "transmitter" described above. The presence of oscillating charge in the receiver would be signaled by sparks across the (tiny) gap between the point and the sphere (typically, this gap was hundredths of a millimeter).



In this experiment Hertz confirmed Maxwell's theories about the existence of electromagnetic radiation.