



HRAC meets the second Wednesday of each month at 7:00 pm at HACC, Shumaker Public Safety Center, Gate 5 on Industrial Road in Harrisburg (Elmer Time starts at 6:30PM)

## **CLUB OFFICERS**

### **PRESIDENT**

Tim Lehman  
KB3OZA  
(717) 982-8550  
KB3OZA@arrl.net

### **VICE PRESIDENT**

Terry Snyder  
WB3BKN  
(717) 896-0256  
WB3BKN@DJTerry.com

### **SECRETARY**

Steve Gobat  
KA3PDQ  
ka3pdq@juno.net

### **TREASURER**

Joe Stepansky  
KQ3F  
(717) 657-9792  
KQ3F@comcast.net

### **TRUSTEE**

Steve Gobat  
KA3PDQ  
ka3pdq@juno.net

### **NEWSLETTER EDITOR**

Terry Snyder WB3BKN  
HRAC.Newsletter@gmail.com

### **Webmaster**

Gary Cappello KV3Q  
Webmaster@w3uu.org

# **Harrisburg Radio Amateur's Club Newsletter**

## **From The Desk of The President.....**

With the end of the year fast approaching, things are beginning to settle down a bit. The PA QSO party is in the log and there's not too much in the way of radio events to look forward to for the next couple of months.

If you're a contester, you're aware that the CQ WW DX contest just concluded. I hope that all who participated had a good experience. I played for a few hours on Sunday afternoon. Seems like there was a direct line to the Caribbean and South America for most of the afternoon. Practically every station that I worked was on an island that could have been a site for filming Pirates of the Caribbean. It was fun working stations that I don't hear on the air regularly.

But hey! Wait a minute! There's the Winterfest coming up in January. It is scheduled for Jan 21, 2017 and we have a new location this year due to HACC renovating and re-purposing the student center.

The hamfest will be held at the Vietnam Veterans of America building at 8000 Derry St. For those of you who are familiar with the eastern side of the Harrisburg area, that's about a mile east of Walmart/Sam's Club. There are a number of possible routes to get there, so I won't try to muddy the waters with specific directions. I hope that I see a lot of you there this year.

This is the smaller of our two hamfests, but we could still use plenty of help putting this together. Most of it is simple stuff like advertising. If you check into any HF/VHF nets, feel free to mention the hamfest on those nets. Talk it up with your friends. Word of mouth advertising can be very effective.

We should have flyers printed up by the next meeting. Please feel free to take some to post on your local neighborhood bulletin boards. Places like the supermarket where you shop or the local laundromat. If you happen to live near a computer shop, that's also a great place to leave some flyers for customers to pick up.

We need folks to help the day of the hamfest as well. We'll have to set up the ticket table, figure out how to set up the sound system for best coverage, if we can't use the VVA's system. If we have enough folks to help out we can run a 50/50 drawing. Those are always popular, and a good money-maker for the club. In short, we need YOU in order to make this a success.

So, enough of my ranting. Our next meeting is coming up soon, Nov 9, to be exact. I hope to see you there.

73,

Tim KB3OZA

# September Meeting Minutes

The October 12, 2016 meeting of the Harrisburg Radio Amateur's Club, Inc. was called to order at 1905 HRS by the President, Tim Lehman (KB3OZA).

**Secretary Report** – The minutes of the September meeting were published in the newsletter. Rick (K2RBT) made a motion to accept the minutes as published, seconded by Lee (W3BBT) Motion PASSED

**Treasurers Report** – Joe (KQ3F) presented the Treasurer's Report. Rick (K2RBT) made a motion to accept the Treasurer's report as read, seconded by Chuck(N3WL), Motion PASSED.

**Equipment Trustee** – Terry (WB3BKN) Trailer – The trailer was lettered and some equipment has been installed.

**License Trustee** – Steven (KA3PDQ) Everything is normal.

## Repeater Committee

- .760 Repeater – Still being plagued by high noise levels and interference. The committee is looking for a different site.
- UHF Repeater – The UHF repeater is back in the possession of the club. The repeater has a power amplifier problem with only 5 watts output. A discussion followed about installing the repeater in the trailer as a special event system.

**Laurel VE Committee** – Steven (KA3PDQ) reported that the next test session is December 17 at HACC at 9:00 AM.

**Membership Committee** – Tim (KB3OZA) reported the Club has 102 members on the roll with 75 of those are ARRL members.

**Newsletter Editor** – Terry (WB3BKN) Thanked all who submit articles however he can still use more on any subject and the editor will decide if they can fit in the newsletter.

**Web Page** – Gary (KV3Q) Not present no report.

**Emergency Communications** – Terry (WB3BKN) reported that he is looking for a replacement to coordinate both the RACES and ARES position.

**DXCC Committee** – No Report

**Entertainment** – Terry (WB3BKN) asked the membership for ideas what they may want to hear.

**Hamfest Committee** – Tim (KB3OZA) reported that the Winter Hamfest will be held on January 21, 2017 at the Vietnam Veterans of America Building, 8000 Derry St, Harrisburg, PA

**Field Day** – No report at this time.

**Elmer Time** – Terry (WB3BKN) is seeking suggestions or presenters for 30 minute programs before the monthly meetings.

**Old Business** – Joe (KQ3F) reported that W3UU bonus station for the PA QSO Party was a huge success, with many reports of a job well done.

**New Business** – The President called for the formation of a nominating committee to come up with a slate of Officers for 2017. K2RBT volunteered to be on the committee, the Club still needs 2 additional members to round out the group.

**Good of the Club** – Tim (KB3OZA) reported that the ARRL was raising the cost of the outgoing QSL Bureau. There was some discussion on the bulk mailing the club provides to the membership and if the new fees would apply to each member who used the service.

**Adjournment** – The meeting was adjourned at 1980 HRS. Motion to adjourn Rob(K2RBT) Seconded by Nick(AA3T)

After adjournment a short discussion ensued on needed equipment for outfitting the communications trailer Items needed desk lights on moveable arms, Comfortable Chairs, Hamsticks for every band and coax switches.

Respectfully Submitted

*Steven Gobat, KA3PDQ*

## Weekly HRAC Net

The weekly information net is held every Wednesday at 8:00 PM on the 146.760 repeater, except for the second Wednesday of the month, which is club meeting night.

The next VE Testing session will be on **Saturday December 17, 2016** in the HACC Shumaker building at Gate 5 on Industrial road, Harrisburg, PA. Pre-Registration is required. Please arrive by 8:30am

We had a GREAT group of VEs on hand for the session!

We administered 5 elements all passed.

4 Technician

1 General

Those in attendance

KA3PDQ, Steven

KB3OZA, Tim

K3URT, Kurt

KB3MCK, Barry

K3DRE, Doug

K3WKK, Brian

N3FWE, Steve

KE3YC, Bill

KV3Q, Gary

As a reminder the question pool for Extra Class has changed on 7/1/2016

### Stolen Radios

I am reporting stolen radios. Please advise any members to be on the lookout for these items. Listed are the radios below. Yaesu FT-60 Serial # 5J920734 Yaesu FTM-100DR/DE Serial # 6G220133 Any help in this matter is greatly appreciated. Thank You for any and all assistance.

Contact Jim Seedor, KC3GYE,  
[jtseedor@comcast.net](mailto:jtseedor@comcast.net) 717-579-1733

Please send any articles for the newsletter to [hrac.newsletter@Gmail.com](mailto:hrac.newsletter@Gmail.com)

From the TV show  
Frequency



Rig here is home brew, and the mic is a Shure 522, which will not be invented until 2012.

Radio in 1996

# Calling all amateurs, get your foxhunting skills ready!

Many of you may have missed the news in the past year, but the FCC is shuttering/has shuttered 11 field offices around the US in efforts to cut costs. This means the FCC's Langhorne/Philadelphia office is being shut down. This was the primary office that enforcement agents worked out of. Instead, they are separating the US into 3 regions. We in Lancaster, PA fit into region 1, which is worked out of the Columbia, MD office. To give you an idea of how big the regions are, region one covers the states of Connecticut, Delaware, Illinois, Indiana, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, North Dakota, Ohio, Pennsylvania, Rhode Island, South Dakota (east of the Missouri River), Vermont, Virginia (Northern Virginia portion of the Washington, DC metropolitan area only), Washington, DC, West Virginia, and Wisconsin.

As you can see, that's a huge area to cover!

Here's where the problem lies. I have been told by many in the commercial radio field that the FCC will only be investigating complaints and interference involving public safety and emergency services radio systems, and no longer commercial 2-way or ham radio. In fact, to the best of my knowledge, there is no amateur radio enforcement chief anymore (previously Laura Smith who replaced Riley Hollingsworth)

This leaves us with a big problem. What happens when we have a source of interference on either ham radio or a business or industry using 2way radios? The FCC doesn't have resources anymore to find such interference. That's where we as hams can save the day. I was recently contacted by a local 2way radio dealer in the area who was experiencing interference from an unknown source to one of their systems, and offered a reward to the person who found the source of the interference.

I ended up tracking down the source to a very large industrial pharma company in the Philadelphia area, but it took a while to locate it. Meanwhile, the radio company's customer was having issues hearing their school busses because something was located on the input of their repeater.

This problem is going to get worse before it gets better. We need to be prepared to help not only industry but other hams track down sources of interference. Without enforcement, it is a free-for-all on the bands. Businesses are throwing up transmitters and using unlicensed radios, with no fear of being shut down, because the FCC is not investigating these matters anymore.

I would suggest holding a few fox hunting classes, and I think there should be some "go-kits" set up to be able to mobilize to find interference sources when we are called upon. Counties have these systems and mobile direction finders, but they are only used for interference issues impacting public safety communications.



## For Sale (PRICE REDUCED!!)

1986 F350 460CI

ALL RADIOS INCLUDED

Attached is a picture of the inside of the truck.

It is an old picture and lot of equipment has been added.

It has mono band radios for 6,2,220,440 and 1.2 ghz

It has 3 dual band radios, low band for Dauphin County, SGC HF radio and

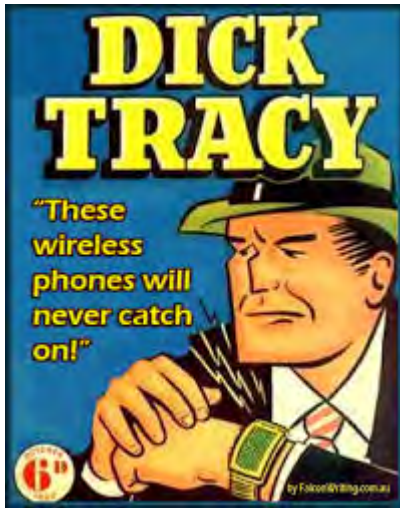
auto tuner. It has a 440 ATV transceiver and a satellite receiver for 1.2 ghz FM ATV. It has a VHS VCR, a GPS receiver, a small color monitor for use with ATV and the VCR. In the rack there is a GMRS repeater and a two meter repeater. The repeaters are just bolted in the rack and would need re-crystalled and tuned and duplxers if one wanted to try and use them. The truck itself is a 1986 Ford F350 ambulance, with a 460ci engine 4 barrel carb, automatic transmission. The Air conditioning has been removed. The truck gets about 6 miles to the gallon going downhill. It has not been inspected for 2 or 3 years. It is sold as is and includes all the radio equipment.

I hope this answers your questions. The reason we are selling it is the public service events that we once did have all but gone away with everyone having a cell phone in their pocket. We used to provide communication support for 20 events a year. **\$2,000.00** Contact Steven Gobat [Ka3pdq@arrl.net](mailto:Ka3pdq@arrl.net)  
717.439.0090 7am to 9pm REACT Communications Truck



So, your home made radio in 1996 is the same one I am using now? How did you get a mic from 2012 in 1996?

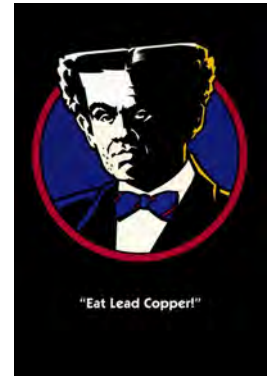
# DICK TRACY HAS ARRIVED



As a kid I was always fascinated by gadgets, and radios, but when you can combine both in one nice little package, I was really fascinated. Oh, OK, I still am!! One of my favorites was Dick Tracey's watch. I mean, really. A two way radio, and a watch. I always wanted a real one. Not some simple toy, but a real working one. Guess what!! They really did not exist. They do now.



Because of this amateur radio thing, as well as my broadcast career, I have a real need for correct time. To the second correct time for broadcasting, not as accurate for amateur radio. I have gone through maybe five of the "atomic" watches in the past several years. After some time they have all had problems with them, and still no radio.



I finally took a look at the new Samsung smart watches. The only thing not smart is spending \$350 on a watch. I added up all of the money I have spent over the past several years on

### America's Pin-ups



watches, and figured why not. Then I started looking for used smart watches, and ya know what? People actually trade in watches that are less than a year old. So, I got one and man is it cool. No radio, but an MP3 player and a phone and lots of apps.

Now I have to get a cool hat like Dick Tracey had, and a Tess Trueheart , but please, no Flattop Jones or B. O. Plenty.



Under Sea Data Cable Cross Section



## The "Radio" Blade Perfected the Safety Razor

It is *some* blade. Always up to the topmost efficiency—ready to clean off the toughest stubble or the tenderest growth with a smile for the shaver. The only equal of the "Radio" Blade is the second, third, or for that matter, the twelfth blade in every 'Ever-Ready' dollar Safety Razor.

In all the history of blade making there never before existed such perfect control of steel temper and blade keenness as produces the marvelous "Radio" blade.

In the 'Ever-Ready' dollar outfit, besides 12 individually guaranteed "Radio" Blades, you have the marvelous self-adjusted 'Ever-Ready' frame and handle, the development of many years—guaranteed for 10 years' utility.

After you've used 'Ever-Ready' "Radio" Blades you will appreciate why we go to such extreme care in wrapping each blade, so as to preserve its factory perfection.



Extra Blades,  
6 for 30c

# 'Ever-Ready' Radio Blades

'Ever-Ready' 12 bladed \$1.00 Safety Razor and extra "Radio" Blades are sold by dealers everywhere, principally cutlery, druggists, hardware and general stores, 6 for 30c or 10 blades for 50c.

Beware of worthless substitutes—Look for the trade-mark face. 'Ever-Ready' Blades also fit other brands of safety razors and improve their shaving.

American Safety Razor Co., Inc. Manufacturers Brooklyn, New York



# Learning Morse Code without Trying

New study demonstrates silent, eyes-free text entry

OCTOBER 27, 2016 • ATLANTA, GA



Study participants tapped Morse Code into Google Glass after four hours.

It's not exactly beating something into someone's head. More like tapping it into the side.

Researchers at the Georgia Institute of Technology have developed a system that teaches people Morse code within four hours using a series of vibrations felt near the ear. Participants wearing Google Glass learned it without paying attention to the signals—they played games while feeling the taps and hearing the corresponding letters. After those few hours, they were 94 percent accurate keying a sentence that included every letter of the alphabet and 98 percent accurate writing codes for every letter.

This is the latest chapter of passive haptic learning (PHL) studies at Georgia Tech. The same method—using vibrations while participants aren't paying attention—has taught people braille, how to play the piano and improved hand sensation for those with partial spinal cord injury.

The PHL projects are all led by Georgia Tech Professor Thad Starner and his Ph.D. student Caitlyn Seim. The team decided to use Glass for this study because it has both a built-in speaker and tapper (Glass's bone-conduction transducer).

In the study, participants played a game while feeling vibration taps between their temple and ear. The taps represented the dots and dashes of Morse code and passively “taught” users through their tactile senses—even while they were distracted by the game.

The taps were created when researchers sent a very low-frequency signal to Glass's speaker system. At less than 15 Hz, the signal was below hearing range but, because it was played very slowly, the sound was felt as a vibration.

Half of the participants in the study felt the vibration taps and heard a voice prompt for each corresponding letter. The other half—the control group—felt no taps to help them learn.

# Learning Morse Code without Trying

## Page 2

Participants were tested throughout the study on their knowledge of Morse code and their ability to type it. After less than four hours of feeling every letter, everyone was challenged to type the alphabet in Morse code in a final test.

The control group was accurate only half the time. Those who felt the passive cues were nearly perfect.

The research was recently presented in Germany at the 20th International Symposium on Wearable Computers.

“Does this new study mean that people will rush out to learn Morse code? Probably not,” said Starner. “It shows that PHL lowers the barrier to learn text-entry methods — something we need for smartwatches and any text-entry that doesn’t require you to look at your device or keyboard.”

Previous research on PHL used custom hardware to provide the tactile stimuli, but here researchers use an existing wearable device.

“This research also shows that other common devices with an actuator could be used for passive haptic learning,” he says. “Your smartwatch, Bluetooth headset, fitness tracker or phone.”

“In our Braille and piano PHL studies, people felt vibrations on their fingers, then used their fingers for the task,” said Seim. “This study was different and surprising. People were tapped on their heads, but the skill they learned was using their finger.”

Seim’s next study will go a step further, investigating whether PHL can teach people how to type on the trusted QWERTY keyboard. That would mean several letters assigned to the same finger, rather than using only one finger like Morse code.

*The work is supported in part by the National Science Foundation (Grant Number 1217473). Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the sponsors.*

## Monthly Ham Radio Lunch

The last Thursday of each month there is a Ham Radio Lunch at the "Old Country Buffet" at noon (unless it is a major holiday).

This restaurant is located on Route 22 in Colonial Park in the vicinity of Value City Furniture, K-Mart and Home Depot.

It's a great way to meet new people!

## From the Editor's Desk

Without your contributions to this newsletter, there is nothing to report, and the paper suffers. Keep those cards and letters coming in. Take pictures of things that you do and share them with us.

**Please note the new email address for articles:**

**Hrac.newsletter@gmail.com**

Tnx 73

Editor: Terry WB3BKN (AKA Perry White)

Proofer: Jim WF3J



Great Cesar's Ghost!! Where are all of my reporters??

## Band Edges

By Curt, K3URT

Contesting in the CQ WW SSB contest the last weekend of October was fun despite the poor radio weather, but it must have brought out the desperate contester. I saw some alarming (but not new) infractions of the US FCC regulations. I only mention this because the culprits were experienced Extra Class operators who should know better!

FCC Part 97.307(b) "Emissions resulting from modulation must be confined to the band or segment available to the control operator."

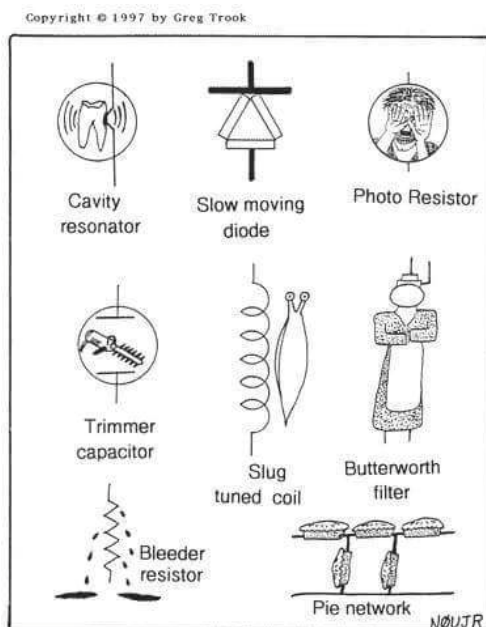
The accepted theory is that a single sideband (SSB) signal is 3 kHz wide, making it in nominally 6 kHz in total bandwidth. For example, on 14.150 kHz your actual bandwidth is from 14.147 to 14.153 kHz despite one sideband being suppressed (in this case the lower). I was listening to an operator on the 40 meter band tell other stations "yeah, we're also up on 14.150.5". That would put the lower sideband roughly into 14.147.5 kHz - a clear violation of FCC regulations. I listened on 14.150.5 and heard many stations respond to him. Another operator in Costa Rica, also a licensed US Extra Class Ham by the way, was operating exactly on 7.125 kHz. You wouldn't believe the responses he received (almost a pile-up) from those US Extra Class operators who were actually operating LSB 7.122 - 7.128 kHz. These violations weren't unnoticed by other amateurs who were dismayed and disdainful.

From the current Extra Class Question Pool:

E1 A03. With your transceiver displaying the carrier frequency of phone signals, you hear a DX station's CQ on 14.349 MHz USB. Is it legal to return the call using upper sideband on the same frequency?

- A. Yes, because the DX station initiated the contact
- B. Yes, because the displayed frequency is within the 20 meter band
- C. No, my sidebands will extend beyond the band edge
- D. No, USA stations are not permitted to use phone emissions above 14.340 MHz
- "C" is the correct answer.
- Even if you operated on LSB on 14.349, your emission would still be in violation.
- 
- I heard some comments suggest a "-40db certified carrier suppression" or "extra filters" or speech processors would make it legal. NOT. It's still a suppressed carrier and the laws of physics say it's still there and therefore an out-of-band emission.

Not only is it an FCC violation, it is also contest cheating!



Little known standard electronic symbols.

# Great Job on PA QSO Party

By Joe, KQ3F

Late in 2015, HRAC (W3UU) was named the bonus station for the 2016 Pennsylvania QSO Party. We were selected in part based on a plan to repeat our previous bonus station success involving multiple stations using the W3UU callsign from multiple PA counties.

The PA QSO Party was held on October 8-9 and it looks like we repeated our success. Here are the details:

- Total QSOs: 2,499 (at 200 points per QSO that's almost 500,000 extra points for participants). The split was close to 50/50 between CW/Digital and SSB modes.
- Total PA counties activated by W3UU: 23 or about 1/3 of PA's counties.
- Multipliers worked by W3UU: 66 PA counties (missed Adams), 68 ARRL sections and 1 DX multiplier.

This outstanding result would not have been possible without those who volunteered to operate as W3UU:

- Keith, W3KB – Fixed station in Cumberland county
- Curt, K3URT – Fixed station in Dauphin county
- Richard, KB3YRC – Fixed station in Dauphin county
- Terry, WB3BKN and Bill, KE3YC – Rocking the HRAC trailer in some of the rarer central PA counties
- Tim, KB3OZA – Mobile station #1 in central PA
- Charlie, KB3CO and Joe, KQ3F – Mobile station #2 in eastern, northern and central PA

Here are some comments on the operation from the 3830 score reporting site:

- W3UU Bonus stations were everywhere.
- The bonus stations did a great job too - made 14 contacts with W3UU.
- BONUS station W3UU/M worked 20 times!
- Thanks also to the great effort of the W3UU ops! You all did a great job!
- Great job W3UU getting all those bonus stations on the air.

That's pretty much what we were shooting for, saturating the airwaves with the W3UU callsign.

Whether or not HRAC mounts a future PAQP bonus station effort, I'd encourage those interested to continue putting W3UU on the air in future contests, using the HRAC trailer. You don't have to travel very far. A number of counties along route 322 (Perry, Juniata, Mifflin) and route 11/15 (Adams), are semi-rare, often appearing on PA QSO Party "most needed" lists.

I think everyone who participated will agree they had a lot of fun. Thanks again to everyone who operated as W3UU and those who worked us.

73, Joe KQ3F

# HRAC MEMBERSHIP APPLICATION

MAIL TO:  
Tim Lehman (KB3OZA)  
PO Box 453  
Hummelstown, PA 17036  
717-982-8550

Make checks payable to HRAC—Membership is \$15.00 (\$7.50 if over 65) per year.  
Family Membership is \$25 (Hams must reside in the same household)  
Dues end December 31st.

NAME \_\_\_\_\_ CALL \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

PHONE \_\_\_\_\_ E-MAIL \_\_\_\_\_

ARRL Member: Y \_\_\_\_\_ N \_\_\_\_\_ \* YEAR FIRST LICENSED \_\_\_\_\_

SIGNATURE \_\_\_\_\_

I agree to abide by the guidelines of the membership and The Harrisburg Radio Amateur's Club, Inc.

