

# Zero Beat

SEPTEMBER 2010

<http://www.hcra.org>



## Surfin': iPhone Gets Software Defined Radio

By Stan Horzepa, WA1LOU

*This week, Surfin' discovers a software defined radio (SDR) in an iPhone.*

This is so cool, my typing fingers are numb from the cold: a software defined radio (SDR) application for the Apple iPhone, iPod touch and iPad called iSDR. It is a portable software-defined radio receiver designed for experimenters, short-wave listeners and Amateur Radio operators -- and it is free!

A caveat: receiving live on-the-air signals with iSDR requires purchasing or constructing a quadrature sampling detector (QSD) RF front-end device that connects between an antenna and the microphone input jack of the iPhone, iPod or iPad. Without the front-end, iSDR will play an internal audio file recording of actual radio signals recorded off the air during the 2008 CQ World Wide WPX contest.

The iSDR developers list the following features of the app:

- Three display modes: Spectrum, Waterfall and Oscilloscope
  - Frequency display with 100 Hz resolution with a touch to the display screen
  - Up to 44.1 kHz of available spectrum bandwidth
  - Monaural microphone input automatically adjusts display to 22 kHz bandwidth
  - Automatic display rotation
  - Recorded audio file built in for off-line use without external audio
  - Automatically detects if external audio is available
  - Five receive modes: USB, LSB, CW, DSB and Binaural
  - Reverse I/Q microphone input logic
- User-adjustable center frequency setting  
Visit the iSDR developer's [Web site](#) for more information.

# From the Shack



What's happening at HCRA — September, 2010

## K1SFA hosts September Meeting. Editor of the "ARRL Letter"

Our kickoff meeting this season will be a good one. Khrystyne Keane will be on hand to talk to us about amateur radio, RTTY, the ARRL letter and other cool stuff. K1SFA is the editor of the ARRL weekly letter, as well as an extremely active amateur and RTTY contester extraordinaire. Coupling this with her enthusiastic but relaxed presentation style you will be in for an enjoyable evening. Don't miss this one, it's a chance to be entertained and informed and of course a great time to catch up with old friends and renew your HCRA membership. See you there!



Khrystyne, K1SFA

## HCRA Field Day 2010 Rebuild, resize, remove???

HCRA Field Day this year is in the record books, and it was another good one. Considering the gods of propagation failed to respond to our midnight dance we did quite well, scoring about the same as last year. We probably scored well enough to place near the top in our section and I'll bet in the top 25 nationwide – not too shabby for the little radio club from the Pioneer Valley. High points from this year's Field Day were the GOTA station (thanks Frank & Marty), the VHF station (thanks Chuck and Kristen), networked scoring (thanks Matt) a Sunday morning visit from Tom, K1KI who actually ended up operating 20 CW for an hour or so and of course a great deal of sumptuous food served up by Jim, NN1Y. Everyone that attended had a great time, got in lots of operating as well as chatting and eating and returned home Sunday tired and satisfied.



Kelly working a pileup on 15M



## Have you heard of SOTA yet? Fun is "Peaking" in WMA

There's a new activity in town and it's called "Summits On The Air" (SOTA). SOTA is very similar to Islands On The Air (IOTA) except you activate mountain tops instead of islands. It is very popular in Europe and is starting to catch hold here in the colonies. It's fun, easy and best of all will get you out of your chair and into the fresh air for some exercise, fun and ham radio – what's wrong with that? Read more about it at: <http://www.sota.org.uk/>.



KK1W on Pocumtuck Rock

There's sixteen peaks marked off for the Connecticut River Valley, are you ready to activate all 16? Don't feel like hiking up to Mount Tom? That's OK, you can participate in SOTA as a 'chaser' instead. Keep an eye on the SOTA watchlist and see how many peaks you can put in your log. Quite a few of our members have given it a try so if you're interested raise your hand at the September meeting and we'll hook you up with a SOTA Elmer!

## September is renewal time! Lend your support to HCRA!

Yup, it's time to start a new year at HCRA and renew your membership to the area's coolest radio club. Enclosed in this month's Zero Beat is a handy application that you can fill out and bring to the September meeting. Making it even easier this year if you're renewing and your address, email and preferences haven't changed just fill out your name & call at the top and check the box below the renewal choice. Make sure we have your correct email so you won't miss a single copy of Zero Beat and please fill out the interests once again as they may have changed even if your address hasn't.

Again this year everyone that is on the books by the end of the October meeting will automatically be entered in a 'Sign Up' raffle. The raffle prize will be drawn at the end of the October meeting. Don't miss your chance, sign up early.

We have lots of ideas for new activities and events this year so be sure to 'sign-up' and join the fun.

If there was one disappointment this year it was attendance, which was down from previous years. The weather was good, the park is great and the food was free. Looking back a few years our membership was excited and enthused about Field Day and it is historically our biggest event. Is there something that needs to be changed to regain the old excitement or should we look for different activities? The logistics of setting up a Field Day operation the size of HCRA's is significant and if members aren't interested in participating maybe we need to consider other alternatives? It has been discussed to reduce the size of Field Day for 2011 or even drop it altogether. We need your input to help with this decision. If you feel strongly one way or the other about Field Day please drop me an email with your thoughts.



## All aboard for HCRA's Holiday Party! Mark your calendars now!

HCRA's Holiday Party will be returning to the Steaming Tender this year for our annual holiday bash. Circle December 6<sup>th</sup> on your calendar now for a visit to the beautiful restored railroad station in Palmer, MA. The meal will be buffet style and the restaurant is completely ours. Pleasant period surroundings filled with your friends, good food and holiday cheer sounds inviting, doesn't it? Details will be coming soon and tickets should be available by the October meeting. If you've never been to the Steaming Tender look at <http://www.steamingtender.com/> and see what you'll be enjoying come this December.

Do you have a willingness to help out HCRA and your fellow members, some organizational skill and a little time? We are looking for someone to step forward and help with arranging the party, are you that person? Wouldn't you like to put your mark on an HCRA event? You'll have plenty of help from the board and the heartfelt thanks of your fellow members. Contact any board member and we will get you 'on board' (on board, get it?).

**Don't forget to bring your application to the meeting this Friday!**

**F**  
**O**  
**R**  
**S**  
**A**  
**L**  
**E**

I have a 'like new'  
foosball table that  
needs a new home  
\$20

If interested, Jim  
k1jaw 567-4043 or  
146.910 8:00-8:30  
M-F



**F**  
**O**  
**R**  
**S**  
**A**  
**L**  
**E**

## Moron Qualifying Event or MQE for Short

OK guys,

So, here I am getting ready for the FPRFB contest this evening. (Flying Pigs Run for the Bacon). I kind of sort of configured N1MM to do the logging, set the IC756 up for 5 watts and checked it, configured the N1MM keyer memories, checked out the antennas and I was ready to go.

I heard N4BP calling CQ on 14.062 with a pretty good signal. I called him and he came back to me but needed a re-do on the call sign. We exchanged information and I went on my way. The band seemed pretty dead but I dialed down to 14.060 or so, called a QRL and started CQ'ing. Nothing, nada, zilch. Crap man, I didn't think the band died that fast. Listened up for N4BP and he was there, working stations. Damn, this QRP stuff sucks sometimes.

Warning, MQE follows - may not be suitable for small children!

It was then I realized I still had the antenna switch connected to the **dummy** load!

Holy crap Batman, I worked N4BP in FL, QRP, connected to a dummy load! Maybe there is something to this QRP stuff after all!

MQE aside it is amazing how sensitive these radios are. Certainly there is crosstalk within the antenna switch and some of the power was still going to the beam. How much, I'm guessing around a tenth of a watt? Let's assume the MFJ switch had 25 db of separation and the beam has 8 db of gain. That amounts to 17 db loss, or somewhere close to .1 watt (.099 to be exact) if we started with 5 watts. I'll bet if the rig was connected directly to the dummy load (not through the switch) I would never have been able to hear N4BP, much less work him.

There were other MQE's during the contest and I finally gave up around 10:30 as the headphones were squeezing my brains (what little I have left) out through my nose.

'73 for now...

MQEboy (aka Jim, KK1W)

### Zero Beat Contributions:

Anything of interest is welcome. This is YOUR Newsletter. It's not interesting without YOUR ARTICLE SUBMISSIONS.

Please submit your ideas, articles and more to [wb1dby@comcast.net](mailto:wb1dby@comcast.net). Thank you,  
Larry, WB1DBY, Zero Beat Editor

Hampden County Radio Association  
**Board of Directors Meeting Minutes**

Wednesday June 16th, 2010

**Attendees:** Dave Cain AA1YW, Marty Bowen W1MJB, Frandy Johnson N1FJ, Larry Krainson WB1DBY, Ed LaCombe KB1NWH, Jim Mullen KK1W, Irv Slitzky W6IS, Matt Wilhelm W1MSW

**Absent:** John Pise KX1X

Meeting called to order at 7:03 PM, at Hampden Bank in Longmeadow, MA.

### Officer Reports

#### Treasurer - Dave Cain AA1YW

George KC1V not present-He and Dave need to coordinate the transfer of treasures supplies, files and control of the club checking account, etc. - Completed

Current member count - 87

Club Balance - \$4672.31

#### Secretary - Marty Bowen W1MJB

The Board reviewed the May minutes as submitted by KB1PKJ. A motion to accept minutes with stipulated revision by Jim was seconded by Dave and carried by a unanimous vote. The minutes will be revised and sent to Larry for publication in the August Zero Beat.

The Black file container with files and supplies was turned over to Marty.

Marty will maintain the Data Base going forward.

#### Tech Report - Ed LaCombe KB1NWH

Open Issues:

Norm KB1NIE in East Otis has requested on site technical help to get on the air with HF.

Ed will follow up with an in person visit.

Norm W1BMK in Longmeadow wants a multi trap dipole put up. Norm will notify Ed when the dipole is ready to be put up.

Duane KA1SFK in Chicopee has requested help to

raise a tower.

Jose N4BAA will follow up with WA1GXY on antennas and logging software.

#### Zero Beat Editor - Larry Krainson WB1DBY

Deadline for article submission- Aug. 22<sup>nd</sup>

#### Membership - Matt Wilhelm W1MSW

Let the record show there were no new members, one renewal Rory N1RNR.

The breakfast gathering will continue through the summer months -Ed KB1NWH will publish the date and place in the HCRA Reflector.

Boxboro Bus Trip Update: - 1 van, 11 seats confirmed, 1 open seat. Presently and subject to change, the cost of Boxborough tickets and transportation to and from the event is \$35.00, payable by cash or check to Ed KB1NWH.

#### At Large-Frandy Johnson N1FJ

No open issues to report

#### Program - Open Position

(a) Reviewed open program for October meeting's speaker, W1MJB directed to contact Tom Homewood W1TO and confirm his engagement as the October guest speaker.

#### Old Business

WB1Z Plaque Criteria - tabled until next meeting (KX1X)

Use of Agawam EOC for BOD meetings- awaiting answer from Steve N1SR (KB1NWH)

Field Day Report (W1MSW) everything is going well, FD should be good.

What to do with stuff at church? After discussion, Ed

KBINWH was directed to purchase the required Rubbermaid Totes to secure the Club's property presently stored in the church storage room. All items not essential for meeting use will be stored in KK1W's garage.

### New Business

The next board meeting will be August 17, 2010

The Board, after discussion and a motion by Jim, seconded by Frandy, voted unanimously to hold future BOD meetings on the 1<sup>st</sup> Wednesday following each club meeting unless special circumstances require a date change.

The Board reviewed possible BOD meeting locations after which a motion to accept the Hampden Bank on Elm St in West Springfield was raised and seconded. The Board voted unanimously to hold future meeting at this West Springfield location unless special circumstances require a venue change.

Dave AA1YW will be the HCRA liaison with the bank and will secure the key prior to each future meeting.

The Board, after discussion and a motion by Marty, seconded by Dave, voted unanimously to fill the open Program board position with Jim NN1Y.

The Board, after discussion and a motion by Jim KK1W, tabled all planning for a 2010 HCRA Summer Picnic.

Can we get an [HCRA@arrl.net](mailto:HCRA@arrl.net) address? (W1MJJB)

A suggestion was made to eliminate the December board meeting-discussed and tabled for future consideration.

Respectfully submitted on this date - June 20<sup>th</sup>, 2010 -  
Marty Bowen

## Help Needed

Hello to All,

It is approaching the time of year that I need to start getting everybody together to help out with the Hartford Marathon. Some of you will get this message 3 times. I am sending it to the groups that helped out in 2007, 2008, and 2009. The Race is Saturday Oct 9. As usual it starts around 6:30-7AM and ends for most by 1PM This race supports several charities and is an important event for Connecticut. Please if you can help out again this year send me an e-mail as soon as you can commit to be there.

Your help is greatly appreciated.

Thanks

Larry Skilton; K1IED

Phone 860-644-2356

FT-857 pack portable! For SOTA



# SOTA—Summits On The Air



Setting up & guying the Buddipole



N1FJ + FT-857 + Palm Paddle + Battery = contacts



The Buddipole is up and working great!



Powerpoles are universal + watching the voltage



A good GO KIT is essential  
Photo's by WB1DBY



**Grand Raffle Prize**  
**2 Meter HT**  
*w/battery & charger*



# AUCTION

***November 5th !!!***

*Turn your old 'stuff' into cash!*

- *Set-up at 6:00 PM*
- *Auction starts at 7:00 PM*
- *Win a 2 Meter HT*
- *Hot dogs, soda, coffee & donuts!*
- *Lots of bargains!*



**Auction held at:**

Feeding Hills Congregational Church  
 21 North Westfield Street  
 Feeding Hills, MA 01030

Just North of the Pride station at the  
 intersection of routes 57 and 187

**AUCTION RULES:**

Amateur radio or computer related items only.  
 Mark all items with name/call and minimum acceptable bid.

Items without minimum will sell at any price!  
 10% of selling price goes to the HCRA.  
 Minimum fee = \$1.00

**If it doesn't sell - you bring it home!**

## QRP Corner

As I write this, I have just returned from a beautiful week of QRP (*and other family activities*) in sunny Kitty Hawk NC and what a blast. Using a 40m dipole at 20 feet, and my Elecraft K1, contacts were made in 7 states and one contact in VE land. Who said you can't have fun with QRP? As for the local club, they are as inviting as their website suggest. Check into .940 and every Monday they invite visitors to lunch! AWESOME!!!!

In preparation for this trip, it appeared that I was going to be forced to use a vertical as all of the research that I did showed no trees to hang a dipole but alas, with a friendly neighbor, a dipole between the two rentals proved to be just the right formula. For the first time I actually had contacts with folks back home....what a blast! Too bad that they didn't last long due to QSB and local QRM but it sure put a smile on my face! Many other contacts rounded out a very rewarding week. A big thanks to Frandy (FJ) and Steve (HFF) for the contacts as tough as they might have been.

In the radio department, I have been experimenting with a new (*or very old*) battery chemistry - NiZn. The purported claim is that they are designed to provide high current with 1.6 volts per cell. Unfortunately, I have two cells that do not meet specs after four recharge cycles and that tends to significantly reduce the performance of all of the cells sooner than I would expect. At \$18 for the 8 cells, it would have been perfect for the internal battery pack of my K1, and I may pick up a couple of replacement cells but failures "out of the box" put these batteries on a wait and see list. Too bad!

I have also put the 44' multi-band doublet

(*portable version*) on the back burner. While the one being tested at the home station is working flawlessly on 10 - 40 meters, and is tunable on 75/80 (*we won't talk about efficiency - or the lack thereof on 75/80*), the tuner in the K1 just doesn't compete with my tuners at home. This is a Cebik (SK) design and he called it a broad-band doublet. If you are properly challenged, this should be a real consideration. See [http://www.w8ji.com/short\\_dipoles\\_and\\_problems.htm](http://www.w8ji.com/short_dipoles_and_problems.htm) for W8JI's evaluation. (*See, I give you the resource for 'the rest of the story'*)

Most of you know that I am not a contester, but there are a few that I indulge in. Some are 'for the club' such as Field Day in June, and the 10 meter contest in December (*both at QRP levels*); others are for fun. The type that I really like are the QRP sprints which are typically for 2-4 hours such as the Home Brew sprint, and my favorite, the FYBO (*freeze your butt off*). I usually score in the lower third but that is not important. It is the casual, more relaxed, and friendly environment of these sprints. (*Yes, these are CW but the speed is much slower than Field Day!*) So if you are like me and don't get excited about contest, consider some of these sprints - - - just for fun! (*Don't forget to crank down the power*) <http://www.qrparci.org/content/view/6134/130/>

'That's all folks' and in closing, a BIG THANKS to the new board of directors, and we all wish them well for another great year. 73 and  
**GO HCRA.**

Jim k1jaw/QRP

# Tech Test Gets a Little More Technical

By Dan Romanchik, KB6NU

Ever since the FCC dropped the code requirement and the Novice license exam, the Technician Class license has really been misnamed. Being the first license that most hams obtain, it really should have been called the Novice license. The question pool was arguably at the appropriate level for newcomers to amateur radio, being heavy on rules and operating practices, and perhaps a little light on technical topics.

That's about to change. On July 1, 2010, the question pool for the Tech test changes, and this version has noticeably more technical questions than the previous test. You could say that the Tech test is getting, errrr, a little more technical.

For example, the new question pool contains more questions about electronics components and their functions. In addition to that, examinees must also be able to identify the symbols for these components on a schematic diagram. This is a big change from the previous test, which had no diagrams at all. There are also more detailed questions about transistors and how they work.

There are also questions on how to make basic measurements with a multimeter how to troubleshoot basic problems that Technicians are likely to encounter. One question asks, "What two measurements are commonly made using a multimeter"? Answer: voltage and resistance. A follow up question asks, "What is the correct way to connect a voltmeter to a circuit"? Answer: in parallel with the circuit.

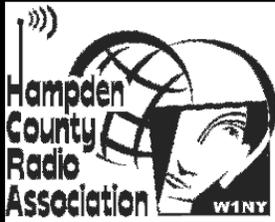
To make room for these questions, the committee dropped questions on operating practices

and rules and regulations. In general, these are not big losses, but two questions that I was sorry to see go are the questions on the "basis and purpose" of amateur radio. I think these are very important for new amateurs to learn and keep in mind. (If you don't recall them, go to <http://www.arrl.org/part-97-amateur-radio> and review them.)

By the time you read this--or shortly thereafter--the new version of my No-Nonsense, Technician Class License Study Guide should be available. You can download it free of charge from my website, [www.kb6nu.com](http://www.kb6nu.com). Look for the link in the right-hand column. It's currently in the hands of more than two dozen reviewers, who are proofreading it right now.

While it may not be in the initial release, I plan to include a section that contains links to websites that cover topics included in the study guide. That way, students can find more information on a topic, if they choose to do so. If you have any favorite websites that discuss making measurements with voltmeters or how to read schematic diagrams, I'd love to hear from you.

When not updating his No-Nonsense amateur radio license study guides, you'll find him on 40m, 30m, 20m, and if we ever get any sunspots to stick around, 15m and 10m pounding brass. You may even hear him trying to get the hang of using the bug he bought at Dayton this year. You'll find his blog at [www.kb6nu.com](http://www.kb6nu.com), and you can e-mail website suggestions to [cwgeek@kb6nu.com](mailto:cwgeek@kb6nu.com)



# HAMPDEN COUNTY RADIO ASSOCIATION

P.O. Box 562  
Agawam, MA 01001



## Application for New or Renewal Membership

DATE: \_\_\_ / \_\_\_ / \_\_\_

NAME: \_\_\_\_\_ CALLSIGN: \_\_\_\_\_

ADDRESS: \_\_\_\_\_ LICENSE CLASS: \_\_\_\_\_

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

PHONE: Home (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_ Cell (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_

Work (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_ ext ARRL Member:  Yes  No

Type of application:  New  Renewal (see below)

If renewal use data already on file?:  Yes  No

Class of application:  Regular  Family

*Donations are tax deductible!  
Thanks!*

Please list additional family members:

| Name | Call | ARRL Member  | e-mail |
|------|------|--|--------|
|      |      | <input type="checkbox"/> Yes <input type="checkbox"/> No |        |
|      |      | <input type="checkbox"/> Yes <input type="checkbox"/> No |        |
|      |      | <input type="checkbox"/> Yes <input type="checkbox"/> No |        |

**My interests: (please check all that apply, even if renewing)**

|   |  |   |
|---|--|---|
| <input type="checkbox"/> Alternative Power  | <input type="checkbox"/> Digital Modes           | <input type="checkbox"/> QRP                  |
| <input type="checkbox"/> Antennas           | <input type="checkbox"/> DX'ing                  | <input type="checkbox"/> Satellite            |
| <input type="checkbox"/> Board of Directors | <input type="checkbox"/> Emergency Communication | <input type="checkbox"/> Teaching Ham Classes |
| <input type="checkbox"/> Club Events        | <input type="checkbox"/> Field Day               | <input type="checkbox"/> Training (Elmering)  |
| <input type="checkbox"/> Contesting         | <input type="checkbox"/> Fox Hunting             | <input type="checkbox"/> VHF/UHF              |
| <input type="checkbox"/> CW                 | <input type="checkbox"/> Kit Building            | <input type="checkbox"/> ?                    |

Thoughts for improving 'our' club:

**Dues are \$15/year for regular membership. Additional family members are free.**

|                        |                |
|------------------------|----------------|
| Annual Dues:           | <b>\$15.00</b> |
| Donation: \$ _____     | .00            |
| <b>Total:</b> \$ _____ | .00            |

Received by: \_\_\_\_\_ Date: \_\_\_ / \_\_\_ / \_\_\_

## Meeting Location:

*Feeding Hills  
Congregational Church  
21 North Westfield St.  
Feeding Hills, MA 01030*



## Next Meeting:

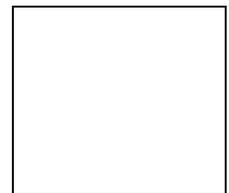
**September 3rd  
@ 7:30pm**

**Read inside to find out  
about the guest  
speaker!**

**See you There!**



The Hampden County Radio Association  
P.O Box 562  
Agawam, MA 01001



PLEASE HAND CANCEL