

Kilowatt Harmonics

May, 2013



Ye Olde Editor Says

Inside This Issue

- 1 Ye Olde Editor Says
- 2 May Meeting Minutes
- 3 Western PA Digital Net
- 4 Intro to Microcontrollers
- 8 Dayton 2013 Wrap Up
- 10 Field Day Press Release

Well, the Dayton Hamvention has come and gone. I heard the official attendance was a bit higher than last year, which is a good sign the economy is improving a bit overall. I also got to visit the DARA clubhouse. They have 4 HF operator positions in their radio room, along with the usual 2 meter/70 cm rig. They also have their repeater voter units there as well (their actual repeaters are off-site at the WHIO-TV tower). They recently expanded their clubhouse. It looks more like an office suite than an actual clubhouse when you walk into it! Out of respect for those good folks, I did not take any pictures of the inside of their clubhouse. Naturally, I took pictures at the Hamvention itself and will include them here in this issue.

Next event – Field Day!

73 de Ye Olde Editor

Minutes of the May Business Meeting

Minutes of the Steel City ARC meeting Tuesday, May 21, 2013

Meeting was started at 8 PM by President N3SBF with a Pledge of Allegiance, a moment of silence for our departed members and a Roll Call from 20 members and 4 visitors. The minutes were accepted as published in the April newsletter. The Treasure's report was submitted by KA3YNO and accepted by the members.

Committee Reports

Clubhouse KB3YYE reports that the mower needs repairs and that the toilet water supply leaks; needs replaced. The "Clubhouse Committee" is waiting for return of borrowed mower for some detail grass cutting. W3SVJ built an extension to the generator shed to house the propane tanks. WA3FWA sprayed the weeds at the clubhouse entrance.

Technical WA3BKD will have a "climber" to relocate the VHF and UHF antennas on the tower and find and fix an intermittent connection in the patch panel.

Membership KB3VHT gave the 2nd reading for Jen KF5ODL and the 3rd and final readings for Rich W3RKT and grandson Gabe KB3ZKC who were voted into the membership. Welcome!

Ways And Means WA3FWA will have the after meeting 50/50 raffle and collect any outgoing QSL cards.

Contest AD3Q stated that the June ARRL VHF contest is on June 1 & 2, West Virginia QSO party on the 15 & 16 and Field Day will occur on the 22 & 23.

Newsletter NU3Q requested info and photos for the newsletter.

Volunteer Exams AD3Q said the next exam date is July 2nd.

Public Service KA3MSE will run the net next Wed. night. The WPA ARES conference will be held at Pitt's Johnstown campus on June 15. NU3Q described the Race for the Cure activity.

Computer K5BPC will install the logging software. AA3CE presented the advantages of using the N3FJP program. After a discussion of the various programs, the members voted to use N3FJP for Field Day and Write Log for all other contests.

Field Day N3SBF already ordered T-shirts and additional funds was approved for food. The proposed GOTA station will probably not be allowed to be added to the club's score. NU3Q will attempt to get an official to visit the club's FD station for the extra points.

Old Business WA3BKD has renewed the CCAC scholarship offer for the 6th year. N3EQP displayed 2 new CD's for the library. W3SVJ complained that unknown members have borrowed club items and we have no good system of knowing who they are. AA3EE suggested that we put up signs notifying borrowers how to check items and to notify the president. AD3Q thought a member should oversee the loaning of club equipment. Contact Colin, KØLIN (3humps@gmail.com) email and phone 412-606-4763) to borrow any club equipment. AD3Q would like to see a current membership list. W3SVJ wants to have dues bills sent members at the beginning of the year with via the club's SASE. Dues payments should be handled in an organized and business manner. Preparing an accurate list of all members' current info is a work in progress.

New Business KB3VHT offered the club's assistance to Walt, KA3YNO, for damages he suffered a devastating house fire. This included monetary as well as physical aid. He thanked all for their generous support but was not in immediate need. Walt told us that the community, amateur as well as the general public, has been very generous to him and he would call if he needs help.

N3EQP has been approved funds to buy a backup battery and accessories for the Public Service station. N3BSF and KB3GMN forwarded our tax exempt papers from Allegheny County to the lawyer. N3SBF will buy 3 "lite" chairs and AD3Q will order 3 "heavy" chairs for the operating rooms. On a vote by the membership funds were approved for that purchase.

Good of the Order WA3BKD announced that 4 out of 10 students passed the CW course that he ran. A round of applause for Art's time and energy in that ten week project. NU3Q was given approval to use the club's table banner for use in the Scott Twp. Public Safety Day event.

Adjourn on a motion by KB3GMN.

50/50 winner W3LA

Western PA ARES HF digital training net

The Western Pennsylvania ARES HF digital training net will alternate with our existing VHF/UHF net with the following schedule:

- 1st and 3rd Sunday of the month at 8PM: 147.195 (PL 131.8) and 443.45 (PL 100) repeaters in New Castle and Pittsburgh and the W3YJ-R Echolink node.
- 2nd and 4th Sunday of the month at 8PM: 3.583 MHz with a waterfall center frequency of 1500 Hz. Initial mode will be 8/500 Olivia. We may switch to MT63-500 or MT63-1000 for bulletins depending upon conditions and length of bulletins. Once we're comfortable with operating an HF net and master the basics we will start experimenting with the new high-speed modes and Flamp.
- 5th Sunday of the month (our Blue Moon scenario): haven't decided yet.

I will be monitoring the 147.195/443.45 repeaters and the W3YJ-R Echolink node during the HF net, so if you have problems or need assistance you can give me a call. I will publish the HF net procedures sometime before the first net, but it will not be very different from any other HF net. I see no reason to reinvent the wheel.

We want our focus to be on Western Pennsylvania and we don't want to be overwhelmed, so we will not be accepting check-ins from out-of-state on our HF net. We will accept check-ins from Eastern PA, but we won't go out of our way to encourage EPA participation.

If you check into the HF net, please prepare in advance a message to transmit during the net. We want this to be a net where we all practice sending traffic not just learn how to check in. I find "check in" nets where the primary activity consists of checking in to be boring and not very useful as a training exercise.

Please join the WPAARES-DIGITAL Yahoo group if you're interested in these nets. Also feel free to email me with any questions.

73,

Harry Bloomberg W3YJ

Assistant SEC, Western PA ARES

hbloomb@gmail.com

A Quick Intro to Modern “Programmable Solutions”

A Quick Intro to Modern “Programmable Solutions”

Dave Mueller AA3EE

During a conversation last week at the clubhouse with Nate W3SVJ, we crossed the subject of the current wealth of microcontrollers, and I mentioned that I've been dabbling. There are now several excellent beginner boards and software packages that allow even grade school students to become “programmers”. At the forefront are the Arduino, and the very new Raspberry PI, a single board computer (SBC). Both boards are well under \$50.

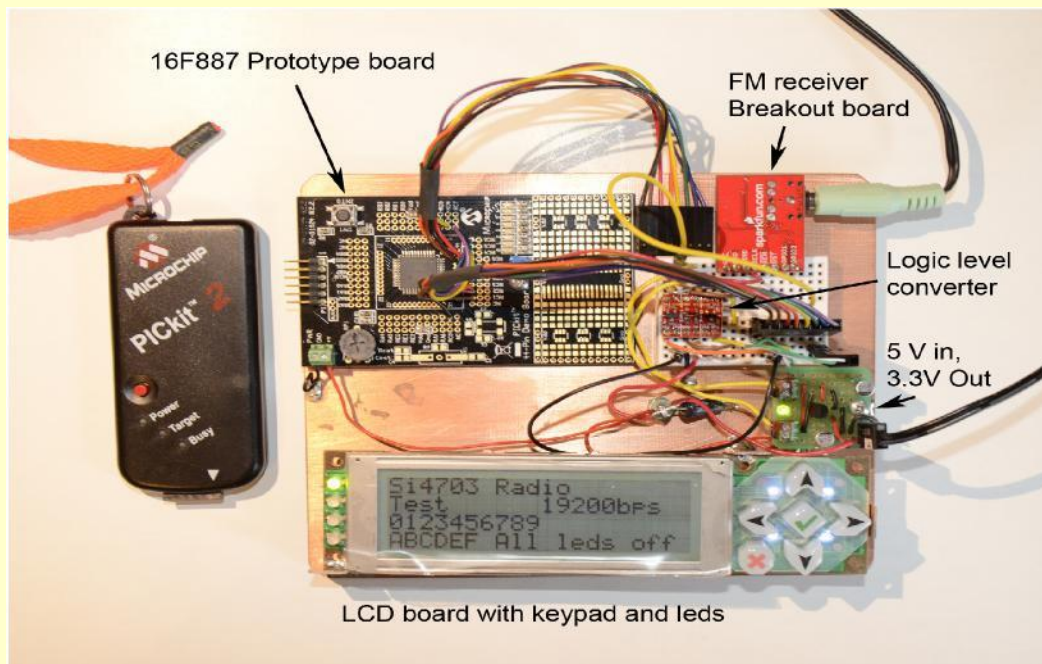
Brand Loyalty There are two major vendors in the microcontroller world, Atmel and Microchip. Discussing the two is as useful (and fervent) as Coke vs Pepsi, Ford vs Chevy, or Kenwood vs Icom vs Yaesu. Atmel has the advantage of being used on the Arduino. Either vendor can provide a \$5 chip that beats the pants off the computer that sent man to the moon. Micros are available in 8 pin, 8 bit instructions up to >64 pin, 32 bit DSP powerhouses.

Arduino (www.arduino.cc): “Arduino is an open-source electronics prototyping platform based on flexible, easy-to-use hardware and software. It's intended for artists, designers, hobbyists, and anyone interested in creating interactive objects or environments”. The Arduino is probably the most popular platform ever. It is based on Atmel brand microcontrollers. The current version, R3, is based on the Atmega328. It runs at 16 MHz, has 32KB of flash memory, 14 digital I/O pins and 6 analog inputs and is less than \$30. The Arduino board brings most of the pins of the micro out to headers and takes care of reset circuits, voltage regulators etc. The placement of the headers allows “shields” to be stacked on top of the Arduino board. The shields are prototyping board that allow you to build your own circuit, or add a ready made shield that allows for an LCD display, motor control, GPS receiver and so on. The Arduino R3 is programmed via USB. Programs are written in the “Wiring” language, and developed inside an integrated development environment (IDE) based on “Processing”. Wiring is a simple, easy to use and learn language that sort of follows C programming. There are several Arduino boards that vary with system voltage (3.3 or 5 VDC), size, features and so forth.

Microchip “PIC” (www.microhip.com): While Atmel enjoys success based on the open source Arduino platform, it seems to me that a lot of projects on the net are based on the PIC chips. Although you can take an Arduino project and put it onto an Atmega328 with supporting hardware, most people who want that type of solution start with a PIC to begin with. The most popular (and now retired) PIC was the 16F84. The newer 16F628A is taking its place, but for a few pennies more you can get a 16F887 with more I/O, faster clock, PWM outputs and more. Microchip even sells the '887 on a development board.

Raspberry Pi (www.raspberrypi.org): "The Raspberry Pi is a credit-card sized computer that plugs into your TV and a keyboard. It's a capable little PC which can be used for many of the things that your desktop PC does, like spreadsheets, word-processing and games. It also plays high-definition video. We want to see it being used by kids all over the world to learn programming." The Pi was developed with students in mind, and is a complete computer versus the simple microcontroller of the Arduinos. That means USB support for keyboard and mouse, HDMI output, composite video and audio outputs, and an operating system. Most people will use some version of Linux running on an SD card instead of a hard drive. The heart of the Pi is a 700 MHz ARM1176 CPU. There are two versions of the Pi, A and B. The A costs about \$30. The B version adds 10/100 Ethernet, has twice the RAM (512K vs 256K) and a second USB 2.0 port, for about \$40. Like the Arduino, many I/O pins are broken out to headers.

Programming dongles Both Atmel and Microchip products require a "dongle", or programmer, between the PC and the microcontroller. You can roll your own from schematics online, or buy one of either flavor for about \$30. The Atmel is the AVR ISP II, and Microchip is pushing the PICkit 3, although the PICkit 2 has better support.



Editor's Note: Thanks for the informative article, Dave. PIC's have come a long way since the early 1980's. My brother designed PICs back in those days and they are primitive to today's PICs!



NORTH HILLS AMATEUR RADIO CLUB

An ARRL Special Service Club

28th ANNUAL HAMFEST

SATURDAY JULY 6, 2013

GENERAL ADMISSION \$5 EACH

Gates open 8:00 am to 2:00 pm

CHINESE RAFFLE : 3 Grand Prizes

Plus Hourly Prizes and 50/50 Raffle

Set-up Time: 6:00 am
Indoor Tables \$10
Tailgaters \$5/Space
Advanced Reservations
Available from:

John Fowler—KB3YBS
200 Lee Ave.
Pittsburgh, PA 15237
johnr.fowler@gmail.com
412-366-3133
412-496-3720
REGISTER NOW!

Location

Parkwood Presbyterian Church
4289 Mt. Royal Boulevard
Allison Park, PA 15101
Talk-in Frequency 147.090 PL 88.5
FREE PARKING
Vendors and Dealers—Flea Market
Handicap Accessible
Light Breakfast and Lunch Available
FREE COFFEE!
VE Sessions to be held

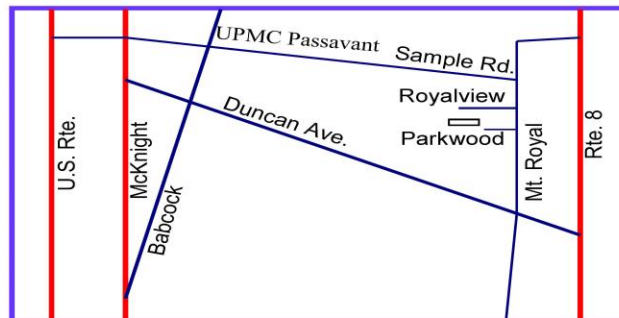
To Parkwood U.P. Church:

From Rte. 8 south - Travel to light at Mt. Royal Blvd., turn left. Continue to Parkwood Church on right, just past Royalvue.

From Rte. 8 north - Travel to Mt. Royal Blvd., turn right. Continue to Parkwood Church on right, just past Royalvue.

From Rte. 19 or McKnight Rd. south - Turn right on Cumberland Rd. past UPMC Passavant Hosp. Continue across Peebles on Sample to Mt. Royal Blvd., turn right to Parkwood Church on right.

From Rte. 19 or McKnight Rd. north - Turn left on Cumberland Rd. past UPMC Passavant Hosp. Continue across Peebles on Sample to Mt. Royal Blvd., turn right to Parkwood Church on right.



THREE GRAND PRIZES

1. **Kenwood TS 2000 HF/All Mode Transceiver** -The all new Kenwood TS-2000 series transceiver offers today's demanding Amateur operator high performance standards without the compromising limitations found in other similar multi-band, multi-mode transceivers.
2. **Yaesu FT-857D -HF/VHF/UHF Mobile Transceiver** The world's smallest HF/VHF/UHF mobile transceiver, provides base station-type performance from an ultra-compact package that's ideal for mobile or external battery portable work.
3. **RigExpert AA54 Antenna Analyzer** -A powerful antenna analyzer designed for testing, checking, tuning or repairing antennas and antenna feedlines.

The Grand Prizes will be offered in a Chinese Auction. Buy as many tickets as you wish and place the stubs in the Raffle Barrel of the Prize or Prizes in which you are most interested. The Prize will be drawn only from those tickets found in it's barrel. The Grand Prize winners need not be present and will be notified shortly after the Hamfest. Tickets available at the door

OTHER RAFFLES

50/50 Raffle 50% of the amount collected in the Prize Jar all day. The winner need not be present. We'll call you if you win the prize.

Hourly Door Prizes We will raffle a prize every hour beginning at 9 am until 2 pm. Prizes will include gift certificates for various ARRL Publications and other useful items. Prizes will be called by number from your admission ticket so please don't toss it. Winner must be present.

GUNS OR AMMUNITION MAY NOT BE SOLD DURING THIS EVENT



Somerset County PA Hamfest

Presented by the Somerset County Amateur Radio Club
P.O. Box 1241
Somerset, PA 15501

Talk-In on K3SMT Repeaters

147.195+ pl 123 and 443.250+ pl 123

All-You-Can-Eat pancake & egg Breakfast for \$6.00 served from 8 to 10am,
while supply lasts, children under 13, \$3.00
followed by lunch items featuring Blackburn & Russell products
with potatoes provided by Snyder of Berlin



ARRL
Sanctioned

Free Parking

Free Coffee

Sunday, July 7th, 2013 – 8:00 a.m. to 1:00 p.m.

Where: Somerset County Technology Center
281 Technology Drive, Somerset, PA 15501

Grounds Open at 6:00 am for vendors and tailgaters.

Entrance Fee: Adults \$5.00, children under 13 FREE

GPS Coordinates
40° 00' 17" N
079° 01' 48" W

VE Testing at 10:00 am
Fee \$15.00
FREE
Outside
Tailgating

Main Prizes by KJI Electronics

FIRST — YAESU FT-8800R 50/35W 2M/440 MHz FM Mobile

SECOND — MFJ-259B SWR Analyzer 1.8—170 MHz

THIRD — JETSTREAM JTPS28 Power Supply

FOURTH — 2 Band HT (to be determined)

Prize Tickets: \$1.00 each

PLUS Black Box Mystery Prize Tickets @ \$5.00 each

2013 Pre-Registered Vendors as of June 2013

KJI Electronics (()))
SERVING AMATEUR RADIO SINCE 1978

Created By Amy

Plus Fldigi demo by
W3YJ Harry



EAGLE 1 will have a smaller outside display — to pre-order call Ron at 304-264-9069

America's County®
SOMERSET • PENNSYLVANIA

No-cost Pre-Registration
REQUIRED
for indoor space
contact Stew, AK3J at
ak3j@arrl.net or 814-444-0637
for flyer updates visit
www.k3smt.org

**Directions from PA
Turnpike Exit 110**

Go straight off
ramp and turn left
at 4th stoplight onto
Route 31 East

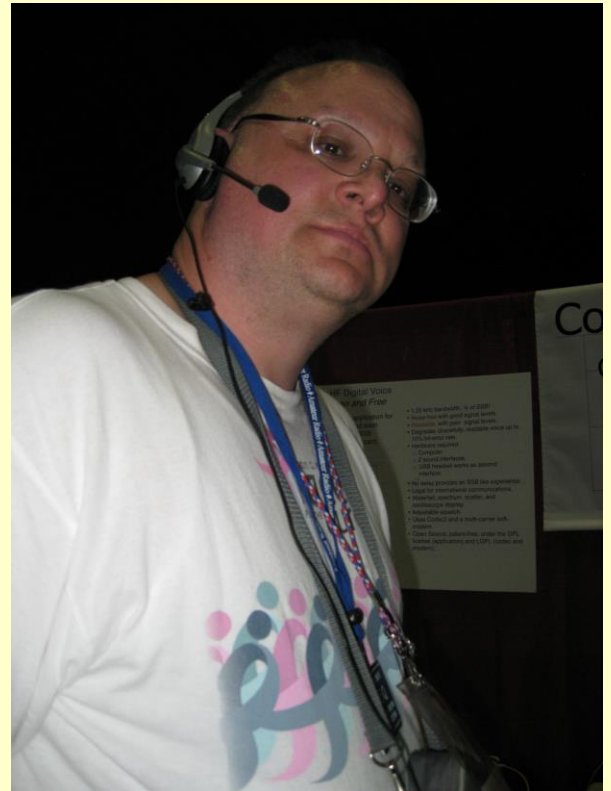
Go 2.0 miles and
turn left onto
Technology Drive.

The Hamfest will be
on your right
behind the building



For more local events and attractions see: www.laurelhighlands.org
for Hamfest updates www.k3smt.org and
www.arrl.org/hamfests/somerset-county-arc-hamfest

Dayton Hamvention 2013





NEWS RELEASE

For Immediate Release

For additional information, please contact:

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Corresponding Secretary
Steel City Amateur Radio Club
(412) 279-9016 – Home
(412) 736-7385 – Cell
nu3q@nu3q.us

Richard Danko
President
Steel City Amateur Radio Club
(412) 884-1466
n3sbf@comcast.net

Tens of Thousands of “Hams” go On Air the weekend of June 22nd

Collier Township, PA (June 10, 2013) – Tens of thousands of Amateur Radio operators will be firing up portable radio stations from unexpected locations the weekend of June 22nd. These radio operators aid in emergency communications support during major emergencies.

Called “hams,” they are often among the first to provide rescuers with critical information because they can send messages from isolated and remote locations without phones or Internet, using only emergency power sources. On June 22-23, the public can meet these radio operators and, in some cases, have a chance to get on the air under the supervision of a ham. Over 35,000 operators will operate from parks, malls, schools and yards around the country. They'll send and receive messages to other operators in the U.S. and around the world. Using everything from digital and satellite communications to Morse code, “Field Day” is the climax of the week long “Amateur Radio Week” sponsored by the American Radio Relay League, the national association for Amateur Radio.

Recently, the news has been full of reports about Amateur Radio operators providing communications during unexpected emergencies in towns across America. “The fastest way to turn a crisis into a total disaster is to lose communications,” according to Robert Mente, Corresponding Secretary, of the Steel City Amateur Radio Club in Collier Township. “Ham radio provided reliable communication networks in the first critical hours of the Oklahoma tornado outbreaks last month. Because ham radios are not dependent on complex systems, they work when nothing else is available. We need nothing between us but air.”

Their slogan, “Ham Radio Works” is more than just words to the hams as they prove they can send messages in many forms without any other infrastructure that can be compromised in a crisis. They invite the public to come and see ham radio’s new capabilities and learn how to get their own FCC amateur radio license before the next disaster strikes. The Steel City Amateur Radio Club will have their annual “Field Day” weekend, starting at 2 PM on Saturday, June 22nd. This event runs for 24 hours straight. Their clubhouse is located at 208 McMichael Road in Collier Township.

There are now over 700,000 Amateur Radio licensees in the US, and more than 2.5 million around the world. Through the ARRL’s Amateur Radio Emergency Services program, ARES®, ham volunteers provide emergency communications for thousands of state and local emergency response agencies and non-emergency community services too, **all for free, at no cost to the taxpayers.** #ARRL #Fieldday



COMMONWEALTH OF PENNSYLVANIA
OFFICE OF THE GOVERNOR
HARRISBURG

THE GOVERNOR

GREETINGS:

It is my pleasure to join with amateur radio operators across the Commonwealth in support of June 2013 as "Amateur Radio Month."

Thousands of our Commonwealth's citizens have been licensed by the Federal Communications Commission as amateur radio operators. These men and women, also known as Hams, have worked diligently over the years to provide vital supplemental communications to their communities during times of emergencies and natural disasters, and at public events since wireless radio's earliest days. Amateur radio is both a hobby and service, and Hams use radio communication for public service and recreation. I commend all the men and women throughout the Commonwealth who volunteer their time, talents and efforts as amateur radio operators.

As Governor, and on behalf of all Pennsylvanians, I am pleased to recognize June 2013 as "Amateur Radio Month" in Pennsylvania. Please accept my best wishes for continued success in the future.



A handwritten signature in black ink that reads "Tom Corbett".

TOM CORBETT
Governor
June 2013

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The Steel City Amateur Radio Club is a not-for-profit organization as defined under IRS Rules and Regulations Section 501 (c)(3).

Editor: Bob Mente, NU3Q – (412) 279-9016 – nu3q@nu3q.us. All newsletter contributions welcome.

Kilowatt Harmonics is published monthly for the members of the Steel City Amateur Radio Club. Reprints/quotes permitted provided credit is given to the original author and the Steel City Amateur Radio Club. The opinions expressed are not necessarily those of the club, its members and officers.

The Steel City Amateur Radio Club (412) 787-0777
2M Repeater: 147.030/147.630MHz (123.0 hertz PL tone)
70cm Repeater: 444.450/449.450MHz (103.5 hertz PL tone)

Club Officers

President, Richie Danko, N3SBF

Vice-President: Carol Danko, KB3GMN

Treasurer: Walt Atkins, KA3YNO

Recording Secretary: Joe Mielnicki, WA3FWA

Corresponding Secretary & Newsletter Editor: Bob Mente, NU3Q

License Trustee: Chuck Davis, N3UUZ