

CROSSTALK

Volume 55

Issue #05

Celebrating Our 55th Year

May 2014



President's Message



While it's Prom and graduation season for some, for others it's a month that features a charity walk on Mother's Day, taking a trip to the Dayton Hamvention, and participation in a Memorial day event in one of our local communities. Welcome to this year's fifth edition of our club's Crosstalk newsletter, in this, the fifty-fifth year of our club! Can you believe it? It's May already!

As you might have noticed, our club was busy in April with a number of events and activities. We started the month with an excellent presentation from **John Dilks (K2TQN)** who has authored the "Vintage Radio" column for the ARRL's QST magazine for a number of years. His combined visual/audio presentation on "Radio Pioneers" provided a unique insight into some of the stories behind those who developed and promoted the technology and use of radio that we benefit from today. Thank you, and well done John!

We continued the month with major progress being made each week on the new clubhouse. Thank you to everyone who is involved! If you missed it, you can see new pictures of the flooring going in and other activities, now posted on our web site, **w2mmd.org**. As of this writing, though there are a number of 'mostly cosmetic' things left to do, we are close to applying for our certificate of occupancy. Getting that "CO" will be a major milestone for this project indeed!

On April 18, we had the opportunity to present amateur radio to the Boy Scouts of Troop 9. You can read more about the presentation in this issue of Crosstalk. We look forward to Troop 9 camping out and joining us in some "Get On The Air" action just under two months from now, at Field Day this year!

April also put GCARC at the forefront of the progressive regional amateur radio spotlight when we installed one of the new **DR-1 144/430 MHz** dual band conventional **FM and C4FM digital repeaters** from Yaesu for evaluation. If you were at the April meeting, you might have seen this modern marvel that isn't even available for sale to the public yet. It is now in operation. More details are available on our web site, **w2mmd.org**. Keep those signal reports coming to the Repeater technical committee, but be sure to date and timestamp them, as adjustments are sometimes being made daily. They're just getting started! Look for updates concerning planned antenna and infrastructure updates in the weeks ahead.

Wonder what May has in store? Invite a friend and come on out to the next club meeting on May 7 to find out! We'll be welcoming new members, recapping our visit to the Battleship New Jersey, and more. Hope to see you there! Respectfully, Jim Wright, N2GXJ



Down Jersey DXing By Bill Grim, W0MHK

Is it the conclusion of some very good spring DX conditions or is it the Sun's turbulent output of CME's (Coronal Mass Ejections) that is disrupting our productive DXpropagation of late??? There is no way to know for sure, but we will probably have "mixed" DX results in May as we head into summertime conditions. We saw some excellent conditions especially on 10 and 12 Meters. Hope you scored some DX successes!

During May, you should be watching WWV K Index numbers to help you navigate whatever the sun throws at us for propagation. A K Index of ZERO or ONE is a reading of geomagnetic stability and less absorption of radio signals over the pole to improve DXing chances especially for long-haul DX. Most clusters include WWV data in a corner of their DX "spots". www.spaceweather.com has similar info on its left band of solar info. I still like tuning into WWV (usually at 10 or 15Mhz) at eighteen minutes after each hour to get the latest propagation statistics verbally. Detailed data on possible occurrence of radio blackouts and major solar flares is also given.

Interestingly, WWV is once again transmitting on 25Mhz for a limited time during the day for the next few weeks. It had abandoned that frequency years ago. Tuning in on them at 25Mhz is a handy way of determining if (and how well) 12 Meters is open to Colorado and the Western USA!

May is also the usual beginning of the 6 Meter season for Down Jersey. Don't expect many openings, but the potential is there for VHF'ers on this band. Expect the unexpected on 6 Meters. Tropo propagation has already been very kind to 6 Meter stations in Europe and in the southern USA. Although we usually can't take advantage of this sort of skip, it might bode well for the upcoming Magic Band spring reawakening.

Expect fewer DX openings on 10 and 12 Meters as summer advances to us. The DX workload will shift from the HF low bands and the higher HF bands to 40 through 15Meters. Yes, it is noisy on 40 Meters in the summer because of atmospheric QRN, but it can offer some good openings to the Pacific area along with 20 Meters. Rely less on 10 and 12 Meters, but do not completely forget about their DX potential, especially to the southern areas of the world in summer.



GCARC world traveler, AA2WN, Harry, will be signing the PJ4 prefix from Bonaire while taking breaks from his other favorite hobby of diving in the warm waters of the Caribbean. Catch Harry from the island from June 22nd to the 27th. He'll be running 100 watts on 40-10 Meters on phone and cw. I'm sure he'll be happy to hook you up with a QSL card if you need PJ4 for any awards!

What DX are you working? What are you having trouble working? How do you find propagation lately? Does "Down Jersey DXing" help or hinder your DX pursuits? Any comments or questions are gladly appreciated at w0mhk7388@aol.com.

Here are some DX picks for May. It's another "fill-in" month that will keep you turning your beam in different directions:

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| CALL | DATES | HIGHLIGHTS | DIFFICULTY (5=MOST RARE) | ENTITY |
|-----------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------------------|
| 3B8/M0RCX | 05/02 - 05/28 | 40-6M/SSB, Digital | 2 | Mauritius Island |
| SX5LA | 05/03 - 05/11 | 9 Ops/160-6M/CW, SSB, RTTY | 1 | Dodecanese Island |
| JD1YBT | 05/03 - 05/12 | 2 Ops/All Bands/Modes | 3 | Ogasawara Island |
| HB0DRK | 05/04 - 05/18 | 80-10M/CW, SSB, RTTY, PSK | 1 | Liechtenstein |
| V25M/V25N | 05/07 - 05/15 | 40-10M/CW, SSB, RTTY | 1 | Antigua |
| V65OXG | 05/09 - 05/15 | 40-10M/CW, SSB, RTTY | 3 | Micronesia |
| OY | 05/14 + | HF/SSB | 1 | Faroe Island |
| FY | 05/15 - 05/25 | 80-10M/CW, SSB, Digital | 1 | French Guiana |
| *7QNL | 05/18 - 06/10 | 80-10M/CW, SSB Yes, strange callsign, but check out their website using that call! http://www.malawihf.org/ | 3 | Malawi |
| | May 24-25 | CQ WW WPX Contest-CW | | |

Credits : NG3K ADXO



Having Fun with AM and FM on HF

By Cory Sickles, WA3UVV

“Thank you!” to all who came out last month to meet John Dilks, K2TQN, and hear him speak, plus enjoy his presentation. John was so impressed he decided to join the club!

This month’s program will cover two more modes you might have never tried on HF – AM and FM. While most think of AM operation on 160, 75 and just the top end of 40 meters, you can find AM enthusiasts elsewhere – especially on 10 meters.

Speaking of 10, that’s where most FM activity takes place. Not just through repeaters, mind you, but lots of FM simplex DX. It’s just a matter of knowing where and how to look. In fact, you might try some FM activity on 12 meters – if you know the inside story.

If you like the thought of having conversations with a bit more fidelity than SSB allows, then be sure to be in attendance at our May meeting.

Update from Bill Szkromiuk, W4WCS

Club member Bill Szkromiuk (now W4WCS) writes to us from his new QTH in the Carolinas. He tells us that he attended his first meeting of the North Augusta-Belvedere Radio Club, www.k4nab.org, saying they are very involved in community and ARES/RACES, and allow all club members use of a radio room on the roof penthouse of the Aiken Regional Medical Center where meetings are held. He says with a fresh \$20 bill, he was voted in as a member immediately! They also have a trailer with some comms gear they can deploy in a parking lot. Good DX, Bill! Maybe we'll catch you on the air during field day?



SkyWarn Training Class

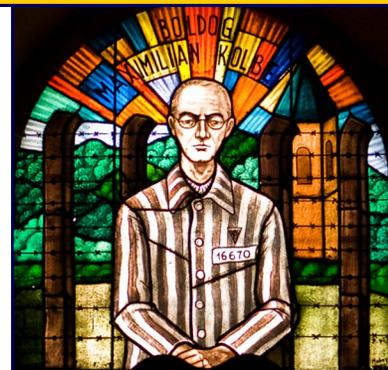
By Tom Gorman, KE2ES

The Camden County OEM will be hosting a SKYWARN Training class on May 12, 2014. It will be held in Lakeland at the Camden County Regional Training Center. All are welcome and encouraged to attend. It is open to everyone regardless of membership status and you don't need to be a Amateur Radio Operator to attend. For more information, go to www.k2eoc.org or contact Tom Gorman, KE2ES.

ARRL 2013 Field Day Results for the Gloucester County Amateur Radio Club

| | 2013 | Rank | | Total # |
|--------------|--------|------|--------|---------|
| Score | 11,368 | #27 | out of | 2,547 |
| Category | 11A | #1 | out of | 2 |
| QSOs | 2,937 | | | |
| Power Mult | 2 | #21 | out of | 2,149 |
| Section | SNJ | #2 | out of | 21 |
| Division | AT | #4 | out of | 252 |
| Participants | 35 | | | |

Maximilian Kolbe, SP3RN Patron Saint of Amateur Radio Operators



Boy Scouts Get Excited About Ham Radio

By Jim Wright, N2GXJ

On April 18, GCARC presented an introduction to ham radio to Boy Scout Troop 9 at their Scout Center on Red Bank Avenue in West Deptford. Special thanks to club member (and scout liaison) Frank Simila, KC2SJ, for helping to set this up.



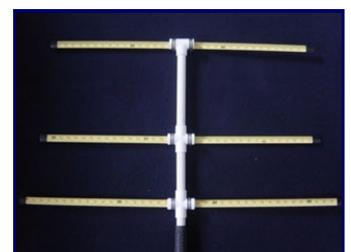
Over 20 scout members and some parents were in attendance. For the majority of the troop, this was their first introduction to ham radio. Many are new members. Only three of the (now senior) members raised their hands to say they remembered camping out with us when we showed pictures of Troop 9 setting up out at our field day site from June of two years ago.

The presentation started with a slide and video presentation, and then split up into interactive demonstrations at several activity stations set up around their meeting room. The slide and video portion of the presentation was based on providing a quick overview of the general requirements the scouts would need towards obtaining their Radio Merit Badge. This included a whirl-wind introduction to broadcast radio, two-way radio, electromagnetic spectrum, how radio waves travel at different wavelengths, solar activity, how radio waves are created, and modulation types (like on-off keying). That was followed up by a whirl-wind introduction to amateur radio and emergency communications, including why the FCC has an Amateur Radio Service, and then featuring amateur radio activities such as DX, Contests, Packet and digital, Camping, "Fox" hunting, field day, Jamboree on the air, public service, and providing assistance in disasters. The radio merit badge requirements do cover quite a few topics! Yet to keep things moving, we didn't even touch on Electronic components and Safety; topics the scouts will also have to master for their radio merit badge. Perhaps next time?

The video portion of the presentation featured a "Hello" video from the ARRL, followed by portions of another video that featured how Amateur radio played a big part in helping after Hurricane Katrina. We then broke into groups that went to various stations for more interactive activities. Near the end of the evening, we showed the clip from Jay Leno's Tonight show when he had a competition between Morse Code and text messaging "back in the day" when texting was done on a flip phone.



On display at one station were things related to the "you can build-it-yourself" aspect of being an FCC licensed amateur radio operator. Featured were a soldering station, a mini 'QRPme Lil Squall' CW transmitter kit that fit in a tuna can, and some fox hunting equipment which included a 'Byonics MicroFox' hidden transmitter and a tape-measure hand-held fox hunting antenna under construction. A pair of Midland FRS walkie-talkies were available to play with to get familiar with wireless communications, and for feature comparison with an inexpensive dual-band 'Baofeng' HT and other radios we had there for use in the Amateur service. Also available to play with was an interactive talking "Leap Frog Explorer" globe, which the scouts used to first find where New Jersey is on our planet, to find other states around the USA, and then to find and measure the distance to other countries on different continents around the curve of the Earth.



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With thanks to Bill Price, NJ2S, who had launched a G5RV wire antenna up into some trees outside ahead of the meeting, one activity station included live demonstrations of short wave signals from around the world. As the kids turned the dial on 40 meters, strange language broadcasts and music drifted in and out from far-away places. They stumbled upon CHU (a WWV-like shortwave time signal radio station in Canada) and listened to the mechanical clicks and beeps until the time announcement (in English and French) each minute. They had lots of questions about what it was they had discovered. For example, why were they saying zero hours 16 minutes when that was not the correct hour time compared to what was shown on their cell phone displays? Projecting a live map display of the world with the current day/night terminator (“greyline”) up on the screen, we handled their questions, as best as we could, as they came to terms with the idea of “coordinated universal time”, and how it could be “tomorrow” already in another part of the world, like Australia and New Zealand, when it was just after sunset here. It was fun when those knowing smiles started to appear, as their prior world view got stretched, and then expanded.

Of course, ham band signals were also featured. We listened in on sideband nets, with stations checking-in from different call areas around the USA. When the radio was tuned to 14.070 MHz, digital signals were heard. We then projected the output from Ham Radio Deluxe’s ‘supersweeper’ display onto the projector screen. The scouts were on the edge of their seats, trying to keep up with all of the PSK31 QSOs being decoded simultaneously on the screen. For every new United States callsign they would see decoded, they’d try and figure out where in the US they were located based on their call area or QTH mentioned in the typed conversation. For every DX callsign, they’d announce the name of the country as the program displayed it on the screen, and then argue amongst themselves where they thought that country was located. The favorites seemed to be the decodes from the Italian stations, as several of the scouts had a great grandfather or other relative that they knew who had originally come to the United States from there.

With kudos to club member Sheldon Parker, K2MEN, the hit of the evening turned out to be the activity at his station. Using computer-based “Just Learn Morse Code” software (www.justlearnmorsecode.com), he had the kids clamoring over each other in a “friendly” competition to be able to recognize the sounds of a small set of various letters sent in Morse code. There were some nominal prizes for those who could concentrate the best and get all the letters that were being practiced right.

Building on the excitement from this evening, the scouts are now looking forward to camping out and participating in field day with us at the end of June (which is only 2 months from now). They have also agreed to help out at our Hamfest later in September of this year.

Welcome New Club Member:

John Dilks, K2TQN, who holds an Amateur Extra class license and lives in Egg Harbor Township, NJ.
Laurie Love, KD2EYW, who holds a Technician class license and lives in Penns Grove, NJ.
Jennifer Robinson, KD2EYR, who holds a General class license and lives in Salem, NJ.
Laurence Rockhill, WA2SJG, who holds an Amateur Extra class license and lives in Bridgeton, NJ.

We are glad to have you as members of the Club and hope to see you regularly at Club functions and meetings.



Gloucester County 4-H Fair and New Jersey Peach Festival
July 24 - 27, 2014
www.gc4hfair.com

Our Bilingual Repeater

By Cory Sickles, WA3UVV

Have you ever traveled somewhere and found yourself surrounded by people speaking a language you don't understand? Maybe it was a foreign country, a tourist destination like Disney World or just your local gas station. It can feel a bit isolating at first, but it is an opportunity to learn something new.



It may seem a bit like that in recent weeks, as more and more digital conversations take place on the 78/18 machine. If you have gone ahead and enabled Tone Squelch on your rig (s) then you're just seeing that the repeater is increasingly busy. If you didn't, then you're hearing the digital signals as well. Either way, you're probably wondering what's being said. (If you are particularly paranoid, then let me assure you that yes, we are all spending our time talking about you)

Actually, a lot of what is being said has to do with signal reports, questions about the new methodology, comparisons to D-STAR, DMR and the others, plus the "regular" sort of conversations we have with ham radio. Overall, the conversations are clearer and allow us to share where we're located and how far apart we are.



That's a nice feature, because if two of us are talking just two miles away, we might want to QSY to 147.525 MHz for a simplex QSO – thus freeing up the repeater for others – both digital (C4FM FDMA) and analog (FM). If you're keeping score – our unofficial "Best DX" award goes to Andrew, KC4ZPL. Note that the picture shows him just over 59 miles away, while I talked to him – parked next to the repeater.

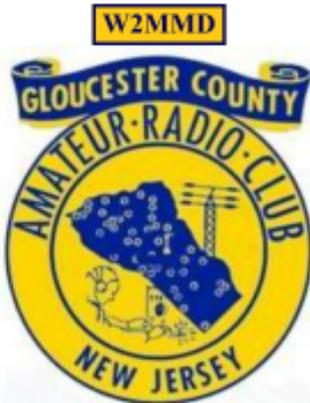
The clarity is surprising to many, as the audio has a better overall "fidelity" than D-STAR and some others, plus doesn't exhibit the fluttering of FM. Yes, digital has some interesting artifacts (Ghosting, R2D2, Turkey Talk) when you've hit a bad spot, but it's solid until that time. Tests have shown that users can make it into a repeater at a longer distance while digital, than analog. It's just one of the advantages of Forward Error Correction (FEC).

In the coming days, I'm going to make up an MP3 that you can download from the club's web site. That way, you can hear what the digital clarity sounds like, with voices you know. Perhaps that will make you want to join in on the fun. With current pricing and specials, you can now get a Yaesu FT1DR silver hand held for a net price of just under \$350. That's a more-than-fair price for a dual-bander with APRS, GPS, on-the-fly text messaging and digital voice capabilities. (If you already have a 30 or 60 watt HT amp laying around, that's enough to make for a passable mobile setup)

In the meantime, I'd like to thank all concerned for being so "neighborly" in reasonably accommodating both the analog and digital camps. By practicing the age-old wisdom of listening for a time before transmitting, we are happily sharing a valuable resource.

Speaking of neighbors, there's also a DR-1 on the air in Toms River (146.31/146.91) and Brigantine should be on the air by the end of the month (442.575/447.575). I'm hoping to soon see one pop up in Philadelphia.

See page 19 for regional System Fusion repeaters on-the-air.



South Jersey's Biggest Hamfest
Sunday, September 14, 2014

Hamfest 2014

Celebrating Our 55th Year

22 miles from Philadelphia, PA
28 miles from Wilmington, DE
67 miles from Dover, DE
77 miles from Reading, PA
81 miles from Allentown, PA
91 miles from Baltimore, MD
107 miles from New York City, NY
125 miles from Harrisburg, PA

Open to the public 8 am to 2 pm, rain or shine
Gates open at 6 am for tailgaters and sellers

GCARC 36th Annual Hamfest

* Tailgaters and sellers of new, used and antique radio, computer and electronic equipment

ADMISSION: \$8.00

Non-Ham spouses and kids FREE



DXCC-VUCC-WAS Card checking 11:30 am



ARRL VEC License Testing

Testing begins at 9:00 am

Please bring a copy of your license and any CSEs

- ◆ Entry ticket is good for **Door Prize Drawings** throughout the day (Must be present to win)
- ◆ Tailgaters \$7.00 per space *
- ◆ \$10.00 Pavilion tables or table space **
- ◆ Some pavilion spaces have electric
- ◆ Space price does not include admission
- ◆ **Talk-In Repeater : 147.180+ PL 131.8**
- ◆ **GPS : 39.715607°, -75.211816°**



Location : Gloucester County 4-H Fairgrounds

(Event will be held in Pavilion area)

240 Bridgeton Pike (Rt 77) • Mullica Hill, NJ 08062

Off Exit 2 of the New Jersey Turnpike



* Tailgating rules (open grassy areas only) : \$7.00 per vehicle space, up to 10 feet. No reserving or holding spaces for tailgaters not yet present. *First come, first serve.*
** Table rules (covered pavilions only) : \$10.00 per table (yours or ours), or table space up to 8 feet. Tailgating under pavilions will fall under "Table Rules" rates.

Contact : Cory Sickles, WA3UVV at wa3uvv@arrl.net or (856)582-9146 • Club Website : w2mmd.org
GCARC, PO Box 370, Pitman, NJ 08071

What Color is Your DVM?

By Cory Sickles, WA3UVV

Here's a recent info from the blog of Sparkfun (www.sparkfun.com), a hobbyist electronics retailer. They recently received a nasty-gram from US Customs saying a shipment of 2,000 multimeters was being barred from entry into the country. Why? Trademark law. Seems a company named Fluke holds a trademark on multimeters that have a "contrasting yellow border."

Sparkfun's multimeters are a yellowish orange, but it was enough for Customs to stop the shipment. Simply returning the shipment was not an option, because of China's import taxes. (I guess the word "returns" translates to "taxes", in Cantonese)

So, the DVM's had to be destroyed. At \$15 per, it cost Sparkfun \$30K, plus the \$150/hr fee (to add insult to injury) for destroying them. Sparkfun had no idea about the trademark, and didn't mind changing the color, but they note such restrictions are a flaw in the trademark system.

"Small business does not have the resources to stay abreast of all trademarks for all the products they don't carry. If you're going to put the onus on the little guy to avoid infringing IP then you shouldn't need an army of consultants or attorneys to find this information." Lest the good folks at Fluke be portrayed as "the bad guys" in all this, they handled the potential PR nightmare in a gallant way.

SparkFun: We Hear You
March 20, 2014 at 3:47pm

Over the last 24 hours, we've been watching the conversation around SparkFun. We've wanted to join the conversation sooner, but needed to make sure we had all the information in front of us so we could help find the best solution. Thank you for your patience.

Like any organization that designs and manufactures electronics, we actively work to stop lookalike products from making it to the marketplace. We do this to protect our company and the jobs of our employees. We also do so because it is a matter of safety for our customers. Our tools are used in high-energy industrial environments, where precision and safety is an absolute necessity.

I mention this because we firmly believe that we must be – and will continue to be – vigilant in protecting Fluke and our customers. One step in doing that was registering a trademark protecting the look and feel of our devices so our customers know that if it looks like a Fluke it's a Fluke.

It's important to know that once we've filed for and received trademark protection, US Customs has the responsibility to determine what to stop at the border, or what to seize. In this case, we first learned of this issue from SparkFun's blog.

We understand how troubling this is for a small company serving the needs of DIY-ers and hobbyists. Here is what we are going to do.

Earlier today we contacted SparkFun and offered to provide a shipment of genuine Fluke equipment, free of charge for them to sell on their site or donate. The value of the equipment exceeds the value of the Customs-held shipment. SparkFun can resell the Fluke gear, recouping the cost of their impounded shipment,

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or donate it into the Maker community.

While we will continue to enforce our trademark, we are taking this one-time action because we believe in the work of SparkFun supporting the Maker and education communities. This is important to us. We have been supporters of the Maker community for years through the donation of over half a million dollars worth of tools and employee time to organizations like First Robotics.

We look forward to continuing our support of the community, of our customers, and of all the innovators out there.

*Sincerely,
Wes Pringle
President, Fluke Corporation*

While it's a shame all that equipment still had to be destroyed, Fluke "turned a frown upside down" into a PR win-win.

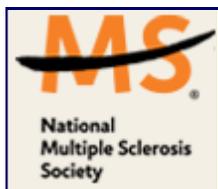
Cycling Event Updates

By Cory Sickles, WA3UVV

The 4th annual Bob Riccio Memorial Tour de Pitman bike race will be held on Saturday June 7th. Consisting of multiple events through the morning, these are fast-paced, multi-lap races that run through the small town streets of Pitman.

Members of the GCARC and local ARES/RACES have assisted with this community event from the beginning. It's a great morning to come out and experience the thrill of high-speed professional cyclists, while assisting Pitman's Police, Fire and EMS Professionals.

Tour de Pitman is a high-profile opportunity for us to show how we can benefit our communities and the type of communications professionalism we offer when additional EMCOMM needs arise. Work is being done to possibly add a few enhancements and surprises, this year, so you may want to be a part of it – just that much more. If you haven't signed up yet, please email Ed Champion [N2RO <at> comcast <dot> net](mailto:N2RO@comcast.net).



Also, the MS-150 weekend cycling event is scheduled for September 27th and 28th. That date is closer than you may think. Also, it helps the MS Society's "sanity factor" if they have people volunteer early. There are many positions available on the route for Saturday, Sunday or both – and – your skills are greatly appreciated by all concerned.

So whether you've participated in using ham radio to help ensure rider safety and support in the past, or you're looking to assist for the first time, please contact them and ask for additional information by sending an email to [N3MSS <at> mail <dot> com](mailto:N3MSS@mail.com).

The MS-150 is another high-profile opportunity for us to demonstrate the kind of professional-grade services we offer, plus it's unique in that the communications support involves a mix of ham radio, GMRS and CB. So, if you know someone who might want to help out in non-ham ways, then please share this info with them.



**GCARC Day at the Battleship
New Jersey
April 27, 2014**

*More pictures on w2mmd.org on the
Battleship New Jersey page*

Certificate of Recognition

With grateful appreciation, American Radio Relay League proudly recognizes

Mr Kenneth Dwaine Newman, N2CQ

for achieving 60 years of loyal ARRL membership.

Kay Craigie
Kay Craigie, N3KN, ARRL President

March 2014

ARRL The national association for AMATEUR RADIO®




Another 23 Channels of Interest

By Cory Sickles, WA3UVV

Originally, our 10 meter band went all the way to 30 MHz. That was also at a time when this area of the spectrum was referred to as “UHF” by many. With some of the reallocation work that’s gone on over time, the top got trimmed back to 29.7 MHz.

Ever wonder what goes on in that 300 KHz of spectrum? Well, in many other countries, they have what’s referred to as a 29 MHz band. The band plan and transmitter parameters may sound familiar to many. There are typically 23 channels, with AM allowed at 4 watts out and SSB allowed at 12 watts PEP. Seems the easiest and least expensive way to get companies to make equipment for it has been to make it as “CB like” as possible, with channel spacing being somewhat variable.

As to what it’s used for, the following chart details how South Africa utilizes it. That should give you some idea. Also, if you listen in some time and can hear activity, that should be a good indicator that 10M is open to Cape Town.

29 MHz Radio – Land/Marine Mobile

29.7100 MIXED MOBILE/FARMING/BUSINESS/BOATS/GOVNMT

29.7225 MIXED MOBILE/FARMING/BUSINESS/BOATS/GOVNMT

29.7350 MIXED MOBILE/FARMING/BUSINESS/BOATS/GOVNMT

29.7475 MIXED CIVIL EMERGENCY CHANNEL 1

29.7600 MIXED MOBILE/FARMING/BUSINESS/BOATS/GOVNMT

29.7725 MIXED MARINE – SKI BOATS

29.7850 MIXED MOBILE/FARMING/BUSINESS/BOATS/GOVNMT

29.7975 MIXED MOBILE/FARMING/BUSINESS/BOATS/GOVNMT

29.8100 MIXED MOBILE/FARMING/BUSINESS/BOATS/GOVNMT

29.8225 MIXED CIVIL EMERGENCY CHANNEL 2

29.8350 MIXED MOBILE/FARMING/BUSINESS/BOATS/GOVNMT

29.8475 MIXED MOBILE/FARMING/BUSINESS/BOATS/GOVNMT

29.8600 MIXED MOBILE/FARMING/BUSINESS/BOATS/GOVNMT

29.8725 MIXED OFF-ROAD ASSOCIATION OF S.A (ORRA)

29.8850 MIXED OFF-ROAD ASSOCIATION OF S.A (ORRA)

29.8975 MIXED OFF-ROAD ASSOCIATION OF S.A (ORRA)

29.9100 MIXED MOBILE/FARMING/BUSINESS/BOATS/GOVNMT

29.9225 MIXED RURAL FIRE EMERGENCY

29.9350 MIXED Channel A - Marine emergency NSRI

29.9475 MIXED CIVIL EMERGENCY CHANNEL 3

29.9600 MIXED MOBILE/FARMING/BUSINESS/BOATS/GOVNMT

29.9725 MIXED MARINE SKI BOATS

29.9850 MIXED GOVERNMENT



May 16 - 18, 2014

**Georgia QSO Party
April 12, 2014**

**Call: WB2P
Operator (s) : WB2P
Station: WB2P**

**Class: Single Op SSB HP
QTH: NJ
Operating Time (hrs):
Location: Out of State/Province**

Summary: Compare Scores

| Band | CW-Dig Qs | Ph Qs |
|-------------|------------------|--------------|
|-------------|------------------|--------------|

| | | |
|------|---|----|
| 160: | 0 | 0 |
| 80: | 0 | 1 |
| 40: | 0 | 2 |
| 20: | 0 | 20 |
| 15: | 0 | 0 |
| 10: | 0 | 0 |
| 6: | 0 | 0 |

| | | |
|--------------------------|----------|--------------------|
| Total: | 0 | 23 |
| CW-Dig Mults | 0 | Ph Mults 19 |
| Total Score = 437 | | |

Club: Gloucester County Amateur Radio Club

Comments: Conditions were very bad on Saturday

**Georgia QSO Party
April 12, 2014**

**Call: N2CQ
Operator (s) : N2CQ
Station: N2CQ**

**Class: Single Op CW LP
QTH: SNJ
Operating Time (hrs): 7.5
Location: Out of State/Province**

Summary: Compare Scores

| Band | CW-Dig Qs | Ph Qs |
|-------------|------------------|--------------|
|-------------|------------------|--------------|

| | | |
|------|----|---|
| 160: | 0 | 0 |
| 80: | 0 | 0 |
| 40: | 30 | 0 |
| 20: | 69 | 0 |
| 15: | 2 | 0 |
| 10: | 0 | 0 |
| 6: | 0 | 0 |

| | | |
|-----------------------------|------------|-------------------|
| Total: | 101 | 0 |
| CW-Dig Mults | 68 | Ph Mults 0 |
| Total Score = 13,736 | | |

Club: Gloucester County Amateur Radio Club

**New Mexico QSO Party
April 12, 2014**

**Call: N2CQ
Operator (s) : N2CQ
Station: N2CQ**

**Class: Single Op LP
QTH: SNJ
Operating Time (hrs):
Location: Out of State/Province**

Summary: Compare Scores

| Band | CW Qs | Ph Qs | Dig Qs |
|-------------|--------------|--------------|---------------|
|-------------|--------------|--------------|---------------|

| | | | |
|------|---|---|---|
| 160: | 0 | 0 | 0 |
| 80: | 0 | 0 | 0 |
| 40: | 0 | 0 | 0 |
| 20: | 7 | 0 | 0 |
| 15: | 0 | 0 | 0 |
| 10: | 0 | 0 | 0 |
| 6: | 0 | 0 | 0 |

| | | | |
|--------------------------|----------|----------|----------|
| Total: | 7 | 0 | 0 |
| Mults 6 | | | |
| Total Score = 168 | | | |

Club: Gloucester County Amateur Radio Club

**Michigan QSO Party
April 19, 2014**

**Call: N2CQ
Operator (s) : N2CQ
Station: N2CQ**

**Class: Single Op LP
QTH: SNJ
Operating Time (hrs):
Location: Out of State/Province**

Summary: Compare Scores

| Band | CW Qs | Ph Qs | Dig Qs |
|-------------|--------------|--------------|---------------|
|-------------|--------------|--------------|---------------|

| | | | |
|------|----|---|---|
| 160: | 0 | 0 | 0 |
| 80: | 21 | 0 | 0 |
| 40: | 37 | 0 | 0 |
| 20: | 2 | 0 | 0 |
| 15: | 0 | 0 | 0 |
| 10: | 0 | 0 | 0 |
| 6: | 0 | 0 | 0 |

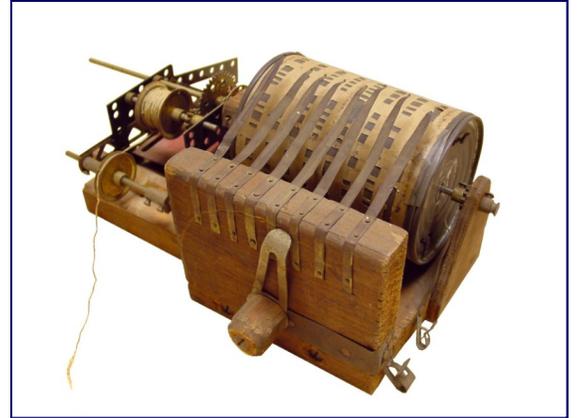
| | | | |
|----------------------------|-----------|-------------------|----------|
| Total: | 60 | 0 | 0 |
| CW Mults | 29 | Ph Mults 0 | |
| Total Score = 3,480 | | | |

Club: Gloucester County Amateur Radio Club



Old Radio Column by K2TQN - Home Brew, Learning the Code By John Dilks, K2TQN

I've always appreciated well-made home brew equipment, probably because I had to build most of my early stations on used chassis from scrounged parts. No, my early stations were not well made. They were hastily thrown together monstrosities made from pieces of blue wire, old radio and TV parts, and became known as "rats-nests," as my mother called them. Mom was smart, she refused to dust anywhere near those "death-traps," another name she had for them. Somehow I learned and gradually became better at laying out the parts first, and I began to put some thought into safety.

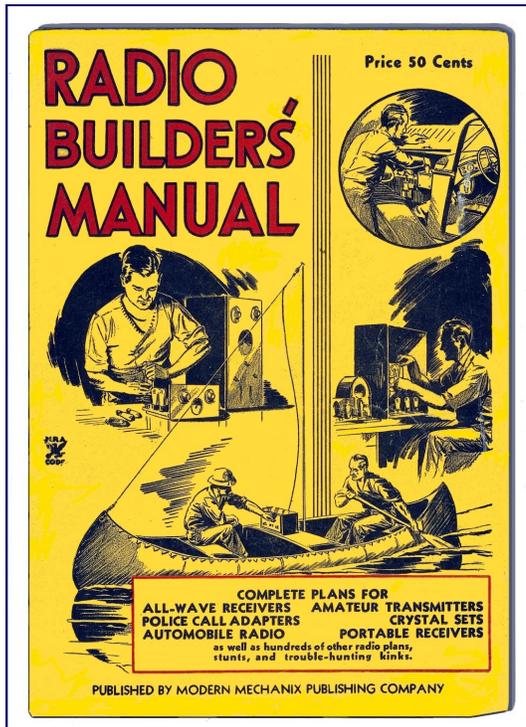


Alarm Clock Omnigraph

It was after I went to work for Western Electric and the training I received there that I became obsessive about building well thought out projects, built on new chassis, with new parts. And now I began to use several different colors of hook-up wire to connect everything together, not just the single 18-gauge blue wire from the 500 foot roll someone had given me early on.

Today I get real excited when I find a great piece of home brew gear. I appreciate the thought and care that was put into the project. This year, as the column starts it's fifth year in *QST*, I will feature some nice projects every couple of months. If you have something in your collection you think would be of interest, please email me and include one photo if you can. My email address is below. I'll get right back to you.

This months project was built about 1935 by Wilson Smith, WB3ICR from Nescopeck, Pennsylvania, when he was first getting interested in ham radio. Wilson is now a SK, but his work lives on. This was some project, much more than I would have tackled when I wanted to learn the code.



Radio Builder's Manual

About ten years ago I was given a great 1935 paperback book by a ham that was first licensed around the same time, John Roberts, N2DSX, now a SK. John was a young W9 from Michigan at the time. He entered WW-II as a radioman in the Army. He told me it was his favorite book and he took it with him everywhere he went, while he was in the service. I have enjoyed reading his book many times since then.

It was titled *Radio Builder's Manual*, and published in 1935 by Modern Mechanix Publishing Company. It is 130 pages of radios and radio related projects. Aimed at the beginner, it had detail physical drawings of the parts lay out, with pictorial schematics, and regular schematics. Projects ranged from simple to complex, from receivers and transmitters, from gadgets to Morse code keys and simple test equipment. Everything a budding ham would need to get started and more.

(Continued on page 15)

(Continued from page 14)

It must have been the article *Alarm Clock Omnigraph – Teaches Code to Radio Fans* that I remembered. One day while looking on EBay, there it was. A project from the book, and no one was bidding on it. I entered a bid, and eventually won that auction.

The Omnigraph

It was a device designed for sending pre coded Morse code through a buzzer. One would listen to the letters while learning the code. There was a control of some sort, where the speed could be increased as you learned. And there was a way to change the order of letters to help eliminate anticipating the next letter being sent.



It's obvious that Wilson Smith had this book, because it is almost exactly like the article. Wilson must have spent hours cutting out the wood, tin and brass pieces, and putting them all together. It even has a universal joint between the motor device and the rotating drum, just like in the article. It must have taken him hours and hours to build, probably longer than it took to learn the code once it was running.

What convinced Wilson to build this and how does it work? It's interesting to read from the article:

“The principal features of the instrument can be seen in the accompanying drawings. The clock works rotate a tin can, which is connected to the minute hand shaft. A simple universal joint is used to couple the clock and can.

In preparing the clock works for use on the Omnigraph the escapement mechanism must be removed and also the main spring. A small wooden spool is then mounted on the main spring shaft. The clock works is operated by a cord wound around this spool and force applied by means of a weight.

The tin can drum is covered with a paper held in place by rubber bands, as illustrated in the figure. The dots and dashes are cut in this paper and a contact spring makes contact through the holes in the paper as the can is rotated, thus completing an electrical circuit and making the radio signals.”

The one thing different between Wilson's Omnigraph and the one in the article, is that Wilson used Erector Set parts to build the clock works, rather than use an old clock for the parts. The result is the same. The string is wound around the spool. A weight is attached to the end of the string, and the drum turns as the weight pulls the string on it's way toward the floor. The speed is adjusted by the amount of weight applied.

The article continued and told how to make the paper code lessons by using graph paper and putting 1/8 inch wide holes in the paper. Dots should be 1/20 to 1/16 inches long and dashes should be 3 times as long as a dot. Spaces between dot and dashes should be equal to one dot. The spaces between letters should equal 4 dots, and the space between words should equal 8 dots. (See figure 1 which has all the alphabet, numbers 0 through 9 and basic punctuation. Note the period at upper right is the old di-dit di-dit di-dit.)

The switch arm is interesting. It allows the operator to move between 8 different rows of letters. The operator will not be able to guess the next letter by changing the switch at random while the can is turning.

(Continued on page 16)

(Continued from page 15)

Also by turning the paper upside-down on the drum, it changes the row the letters are on. Other charts can be made for additional practice as the operator gains experience.

Figure # 2 shows a detail drawing of all the various pieces. From this plan you could make one for yourself, if you wanted to. Also included is a schematic diagram to show how the unit was wired to a buzzer and batteries. The .002 MFD condenser helps eliminate sparking. See figure # [figure 3].

Want to build one?

For anyone wanting to build a tin can Omnigraph, I scanned and placed the entire three-page article on my web page. <http://www.eht.com/oldradio/arrl/2004-01/Jan2004.htm>

Look for my hat at the hamfests, and say hello. – *K2TQN*

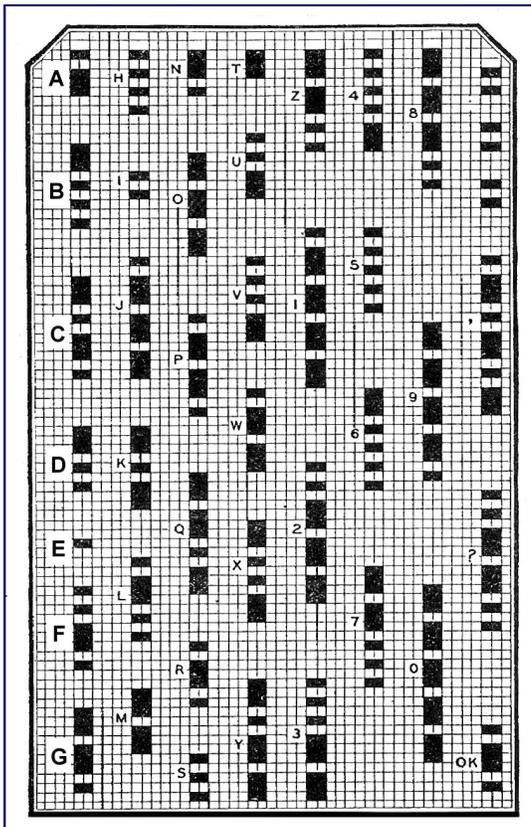


Figure 1 - Chart paper

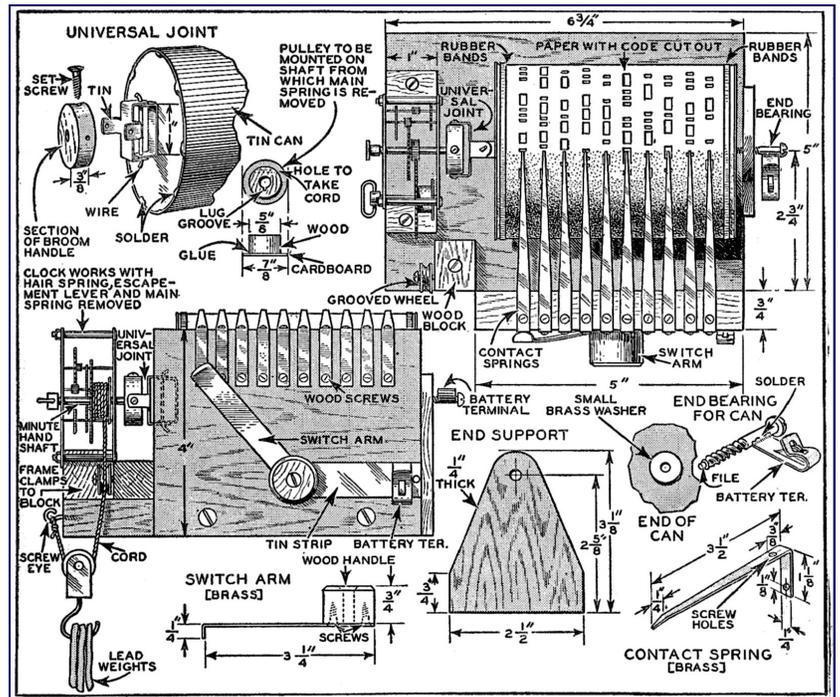


Figure 2 - Diagram

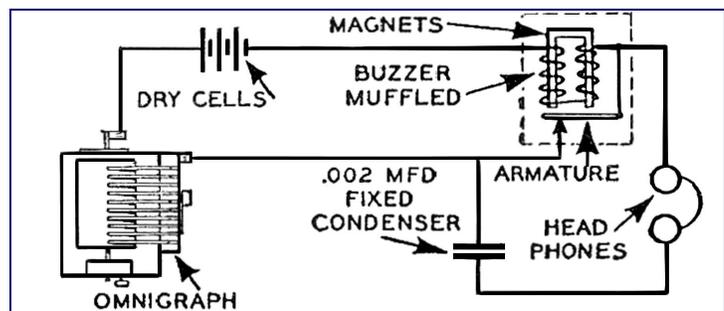


Figure 3 - Schematic



Club House Update

By Ray Martin, W2RM

Thanks to all who came out to the work parties throughout the Site Replacement Project so far, especially Saturday, April 26th when the cleanup and furniture arrangements were completed. It was quite a day; not only did everything get put in place but it looks great!

Special thanks to the following for their laborious efforts on Saturday:

| | |
|---------------|------------|
| Mark-WA2DIY | Jim-N2GXJ |
| Jeff-KC2WCS | Dan-N2TXG |
| Mark-W2OCY | Kyle-W2KBT |
| Kevin-KD2FFZ | Bill-NJ2S |
| Al-KB2AYU | John-K2ZA |
| Frank-W2FJM | Tom-AB2YG |
| Sheldon-K2MEN | |

Here is the latest update of the progress which has been made. The majority of the trailer was cleaned up to everybody's liking. Shelving was added in a few places and more are planned to be installed. The items that we couldn't use have been put outside. As soon as I get time, I will need help loading all of it into my trailer to take to the county dump for disposal.

The plumbing and septic inspections occurred a few days ago and everything went well. Many thanks to Bob Durham W2RAD and his son for doing a good job in that department. A few items weren't up to spec for the township, so through the efforts of Bill Price in my absence, he secured George's Plumbing from Mullica Hill to complete the project. I want to thank everyone who helped in that area.

For those of you who didn't know, the main valves had to be replaced and all new feed line had to be installed. A hose hookup was installed on the front of the trailer and one was installed at the rear so garden hoses can be attached when needed. The one at the rear has a dual purpose: to supply water and to be used as a drain for the system. Heat tape comes next.

When I took over the Site Replacement Project in November, 2013, I asked for donations of tables, chairs etc., A lot of items were promised which I thought we were going to use. My trailer and I circled the Tri-State area it seemed, to pick up items that I thought would help the cause. Then Mark Gottlieb WA2DIY stepped up to the plate and donated 95% of all the chairs and tables for the site and shelving. He not only donated all those items, but donated the entire flooring for the trailer as well.

Through the efforts of John Zaruba Jr., K2ZA, we now have a brand new dual band FM transceiver permanently mounted in the VHF room. Bill Price, NJ2S, bought a new dual band vertical antenna and Kevin Hall KD2FFZ mounted it outside. Kevin also leveled the trailer and put six more supports.

The hurricane straps were fastened and completed and are now ready for inspection. Doors were cut to the proper size and installed. The only items left to purchase for our final inspection on Monday, April 28th, are the fire extinguishers. I will take care of that first thing Monday morning just before the scheduled 10:30 am inspection.

(Continued on page 18)

(Continued from page 17)

After the inspection a few last, but more important items have to be taken care of: The skirting at the bottom of the trailer, painting the steps and the blinds for the windows. We have a lot left to do but it was important to report to you the project's progress for this edition of Crosstalk.

73's Ray W2RM, Site Replacement Chairman.

P.S. April 28, 2014 - Our clubhouse has passed the final inspection - We Have Our CO!!!



More pictures on www.w2mmd.org on the Clubhouse Replacement Project page



John Zaruba, K2ZA, through his efforts, has had the opportunity to have a brand new 2 meter, 70 centimeter transceiver with power supply, coax, and antenna donated to the site. After the shelving has been mounted it will be installed at the site. So no matter when we are there after the proper frequencies are installed, we will be able to monitor all communications in the tri-state area.

Tom Gorman, KE2ES, received his certificate for successful completion of FEMA's Emergency Management Institute (EMI) Advanced Professional Series (APS) in the area of emergency management training. A total of ten (10) classroom delivered courses were required for certification. APS courses are delivered through the New Jersey State Police, Office of Emergency Management (OEM) in West Trenton, Delaware Emergency Management Agency (DEMA) and other State EM agencies. For additional information, please visit <http://training.fema.gov/emiweb/aps>



Congratulations to Al Arrison, KB2AYU, for becoming a Life Member of the Gloucester County Amateur Radio Club.

Regional System Fusion Repeaters on-the-air:

- *Atlantic City, NJ K2ACY 447.575- PL:156.7 *Toms River, NJ W2DOR 146.910- PL:127.3
- *Philadelphia W3QV (Phil-Mont) 444.800+ PL:186.2
- *Calvert County, MD K3CAL 146.985- PL:156.7
- *Centre County, PA W3PHB 146.430 (+ 1 MHz offset) PL:173.8

May Birthdays

Congratulations to these
members celebrating birthdays this
month

Walton Ashton Jr. WB2OYQ

Insu Chon AB2IT

Mark Harris KC2VEF

Carmen Inverso WA2TRS

Brian Jones KD2BXD

William Jones KD2FHM

Darrell Neron AB2E

Joseph Shevlin KC2PHM

Virginia Wallace KB2JCQ

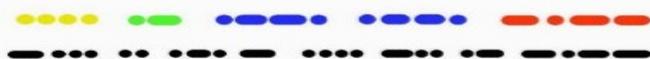


Museum Ships Weekend 2014

0000Z June 7 through

2359Z June 8, 2014

www.nj2bb.org/museum/



Regional Hamfest and Events

May 3, 2014 : Garden State Amateur Radio Association Hamfest, MOESC Adult Education Center, 100 Tornillo Way, Tinton Falls, NJ - www.gardenstateara.org

May 3, 2014 : Antietam Radio Association (The Great Hagerstown Hamfest), Washington County Ag-Center, Route 65 South Sharpsburg Pike, Hagerstown, MD - www.w3cwc.org

May 4, 2014 : Warminster Amateur Radio Club Hamfest, Middletown Grange Fair, 576 Penns Park Road, Wrightstown, PA - www.k3dn.org/hamfest.htm

May 9-10, 2014 : Delaware Valley Historic Radio Club, Antique Radio Meet & Auction, Renningers Antiques Market, 740 Noble Street, Kutztown, PA - www.dvhrc.info

May 17, 2014 : Ocean-Monmouth Amateur Radio Club - Tailgate Hamfest, InfoAge Project Diana Site, 1600 Marconi Road, Wall Township, NJ - www.n2mo.org

May 18, 2014 : Jersey Shore Amateur Radio Society (JSARS Hamfest by the Shore), Pine Park, 500 Country Club Drive, Lakewood, NJ - www.jsars.org

May 24, 2014 : Bergen Amateur Radio Association - BARA Spring Hamfest, Westwood Regional High School, 701 Ridgewood Road, Washington Township (Bergen County), NJ - www.bara.org

May 25, 2014 : Maryland FM Association - Memorial Day Hamfest, Howard County Fairgrounds, 2210 Fairgrounds Road, West Friendship, MD - www.marylandfm.org/hamfest.htm

New Jersey Emergency Preparedness Conference - May 5 - 9, 2014
Tropicana Hotel and Casino, Atlantic City, NJ
www.njepa.org



Greater Delaware Valley WalkMS Upcoming Events

The following Walks are happening in South Jersey on May 4, 2014:

Washington Lake Park, 626 Hurffville-Crosskeys Road, Sewell, NJ
Medford Lakes, 79 Tecumseh Trail, Medford Lakes, NJ
Ocean City Boardwalk, 501 Atlantic Avenue, Ocean City, NJ

Go to http://walkpae.nationalmssociety.org/site/PageServer/?pagename=WLK_PAE_EventDetails for more information.

MS-150 Update

The MS-150 weekend cycling event is scheduled for September 27th and 28th. While that certainly seems like a long time off, the year will move all too quickly. Also, it helps the MS Society's sanity factor if they have people volunteer early. There are many positions available on the route for Saturday, Sunday or both.

So whether you've participated in using ham radio to help ensure rider safety and support in the past, or you're looking to assist for the first time, please contact them and ask for additional information by sending an email to [N3MSS <at> mail <dot> com](mailto:N3MSS@mail.com).

Crosstalk Submissions

This is your Club newsletter. Make use of it.

Feel free to contribute general interest articles and ideas for articles.

All submissions, queries, comments and editorials should be addressed to Jeffrey Garth, KC2WCS at [jeff.garth <at> comcast.net](mailto:jeff.garth@comcast.net).

Submission deadline for the June issue: Thursday, May 22, 2014

Club Website <http://www.w2mmd.org>
Club E-Mail Reflector: gcarc@mailman.qth.net

Contest Calendar

For more information on the contests, please go to the WA7BNM Contest Calendar website:
<http://www.hornucopia.com/contestcal/>

May 2014

| | |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| + AGCW QRP/QRP Party | 1300Z-1900Z, May 1 |
| + NRAU 10m Activity Contest | 1700Z-1800Z, May 1 (CW) and 1800Z-1900Z, May 1 (SSB) and 1900Z-2000Z, May 1 (FM) and 2000Z-2100Z, May 1 (Dig) |
| + NCCC RTTY Sprint | 0200Z-0230Z, May 2 |
| + NCCC Sprint Ladder | 0230Z-0300Z, May 2 |
| + 10-10 Int. Spring Contest, CW | 0001Z, May 3 to 2359Z, May 4 |
| + Microwave Spring Sprint | 0600-1300 local, May 3 |
| + QRP to the Field | 1200Z-2359Z, May 3 |
| + ARI International DX Contest | 1200Z, May 3 to 1159Z, May 4 |
| + 7th Call Area QSO Party | 1300Z, May 3 to 0700Z, May 4 |
| + Indiana QSO Party | 1600Z, May 3 to 0400Z, May 4 |
| + New England QSO Party | 2000Z, May 3 to 0500Z, May 4 and 1300Z-2400Z, May 4 |
| + MIE 33 Contest | 2300Z, May 4 to 0300Z, May 5 |
| + RSGB 80m Club Championship, SSB | 1900Z-2030Z, May 5 |
| + ARS Spartan Sprint | 0100Z-0300Z, May 6 |
| + NCCC Sprint Ladder | 0230Z-0300Z, May 9 |
| + EUCW Fraternizing CW QSO Party | 1000Z, May 10 to 2000Z, May 11 |
| + VOLTA WW RTTY Contest | 1200Z, May 10 to 1200Z, May 11 |
| + CQ-M International DX Contest | 1200Z, May 10 to 1159Z, May 11 |
| + FISTS Spring Sprint | 1700Z-2100Z, May 10 |
| + 50 MHz Spring Sprint | 2300Z, May 10 to 0300Z, May 11 |
| + RSGB 80m Club Championship, Data | 1900Z-2030Z, May 14 |
| + His Maj. King of Spain Contest, CW | 1200Z, May 17 to 1200Z, May 18 |
| + EU PSK DX Contest | 1200Z, May 17 to 1200Z, May 18 |
| + NAQCC Straight Key/Bug Sprint | 0030Z-0230Z, May 22 |
| + RSGB 80m Club Championship, CW | 1900Z-2030Z, May 22 |
| + NCCC Sprint Ladder | 0230Z-0300Z, May 23 |
| + CQ WW WPX Contest, CW | 0000Z, May 24 to 2400Z, May 25 |
| + Baltic Contest | 2100Z, May 24 to 0200Z, May 25 |
| + SARL Digital Contest | 1300Z-1600Z, May 25 |
| + MI QRP Memorial Day CW Sprint | 2300Z, May 25 to 0300Z, May 26 |
| + NCCC Sprint Ladder | 0230Z-0300Z, May 30 |

2014 Club Officers - 1 year term

| | |
|----------------------------------|------------------------------|
| President : | Jim Wright, N2GXJ |
| Vice President : | Cory Sickles, WA3UVV |
| Treasurer : | Al Arrison, KB2AYU |
| Recording Secretary : | Sheldon Parker, K2MEN |
| Corresponding Secretary : | Bart Conrad, KC2WVP |

Board of Directors - 3 year term

| | |
|--------------------------------|--------------------|
| Chuck Colabrese, WA2TML | <i>(2012-2014)</i> |
| Dave MacDonald, WB3JOY | <i>(2012-2014)</i> |
| Jeffrey Garth, KC2WCS | <i>(2013-2015)</i> |
| Mark Townsend, W2OCY | <i>(2013-2015)</i> |
| Dan Tremolini, N2TXG | <i>(2014-2016)</i> |
| John Zaruba Jr, K2ZA | <i>(2014-2016)</i> |

Trustees - 4 year term

| | |
|----------------------------|--------------------|
| Ray Schnapp, WB2NBJ | <i>(2011-2014)</i> |
| Martin Wilt, W2ILT | <i>(2012-2015)</i> |
| Ray Martin, W2RM | <i>(2014-2016)</i> |
| Brian Jones, KD2BXD | <i>(2014-2017)</i> |

Committee Chairs

| | |
|----------------------------------------|------------------------------------------------------|
| Awards and Contests | Kenny Denson, WB2P |
| Budget | Al Arrison, KB2AYU |
| Clubhouse Replacement Project | Ray Martin, W2RM |
| Clubhouse Site | Al Arrison, KB2AYU |
| Club License Trustee | Darrell Neron, AB2E |
| Club Publications | Jeffrey Garth, KC2WCS |
| Community Outreach | Cory Sickles, WA3UVV |
| - Scout Liaison | Frank Simila, KC2SJ |
| Constitution and By-Laws | Ron Block, NR2B |
| Database | Ken Newman, N2CQ |
| DX | Bill Grim, W0MHK |
| Emergency and Public Service | Joe Shevlin, KC2PHM |
| - ARES/RACES | Joe Shevlin, KC2PHM |
| - CERT | Martin Wilt, W2ILT |
| Field Day Co-Chairs | Mark Townsend, W2OCY and Kyle Townsend, W2KBT |
| Hamfest | Tom Gorman, KE2ES |
| - Hamfest Contact | Cory Sickles, WA3UVV |
| Health and Welfare | Ray Martin, W2RM |
| Historian | Jeffrey Garth, KC2WCS |
| Hospitality | Dave MacDonald, WB3JOY |
| Membership | Cory Sickles, WA3UVV and Ray Schnapp, WB2NBJ |
| Nominations | Jim Wright, N2GXJ |
| Programs | Cory Sickles, WA3UVV |
| Publicity | Cory Sickles, WA3UVV |
| Repeaters | Al Arrison, KB2AYU |
| Special Services | Darrell Neron, AB2E |
| Technical and TVI | Cory Sickles, WA3UVV |
| VEC Liaison and License Testing | Gary Reed, N2QEE |



The W2MMD Repeaters

Output: 147.180 MHz
Input: 147.780 MHz
Offset: +600 KHz - PL: 131.8 Hz
(Conventional FM plus C4FM Capability)

**Output: 442.100 MHz
(Temporarily Out Of Service)**

Output: 1284.400 MHz
Input: 1272.400 MHz
Offset: -12.0 MHz
PL Tone: None

The above 3 repeaters are all
located in Pitman, NJ
GPS: 39.728481°, -75.131088°

Output: 224.660 MHz
Input: 223.060 MHz
Offset: -1.6 MHz
PL Tone: 131.8
Location: Sewell, NJ
GPS: 39.781382°, -75.099963°

GCARC 2M Ragchew Net

Thursday, May 15, 2014
20:00 Hrs
147.180+ MHz (PL131.8Hz)

ARES/RACES Net

Sunday 20:00 Hrs
147.180 and 224.660 repeaters

VE License Session

Thursday, May 8, 2014 @ 1900 Hrs
Franklin Township Public Library
Franklinville, NJ
Gary Reed, N2QEE
[glreed49 <at> verizon <dot> net](mailto:glreed49@verizon.net)

GCARC Meetings

General Membership

19:30 Hrs, Wednesday, May 7, 2014
Pfeiffer Community Center
Williamstown, NJ

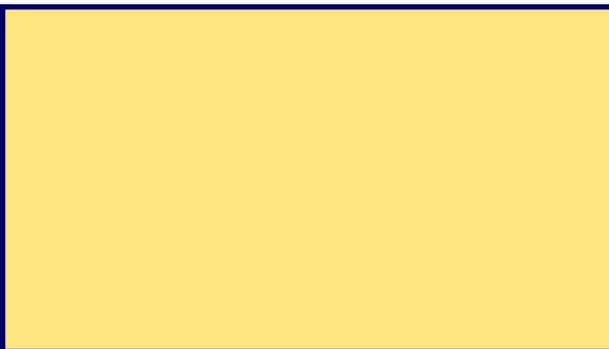
Board of Directors

19:00 Hrs, Wednesday, May 21, 2014
GCARC Clubhouse
Harrison Twp. 4-H Fairgrounds
1 mile south of Mullica Hill on RT77

Club Meeting Program

Wednesday, May 7, 2014

**Having Fun with
AM and FM on HF**



**GCARC 11:00 am Brunch
Every Friday @**

**The Seven Star Diner
1890 Hurffville Road, Sewell, NJ**