



The Blurb



Newsletter of The Phil-Mont Mobile Radio Club

68 Years of Public Service, 1949-2017

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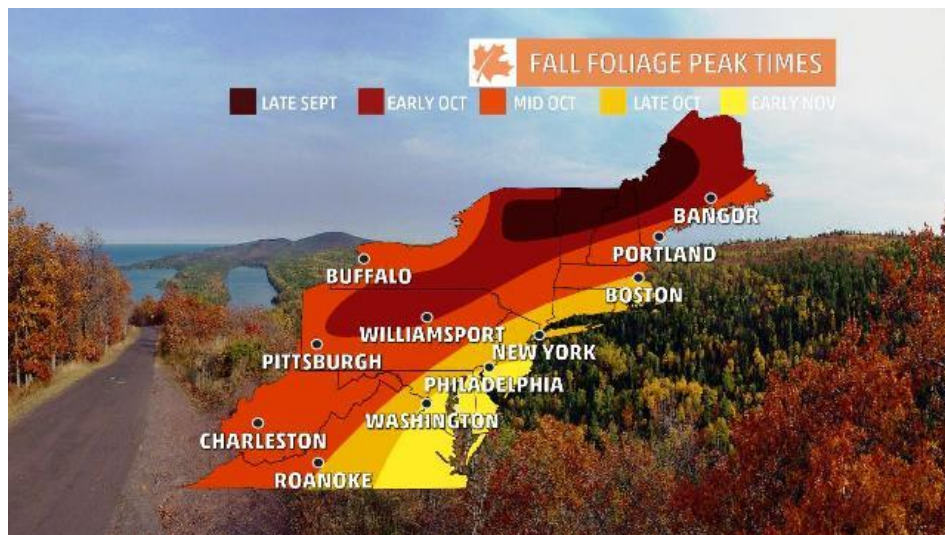
September 2017

The Board Meeting is on the 6th, the General Meeting on the 13th

September is here and that means...

*Back to school
Jewish Holidays
Labor Day
Fall Begins
Club Meetings Resume*

*Inside ... Barry K3EUI gives a preview of his September meeting presentation on RFI
New member applicant Robert F Clearfield KC3JPI
And meet Scholarship winner Matt Rainey N3EEE*



<p><i>The Blurb</i> is published monthly by and for the members of The PHIL-MONT MOBILE RADIO CLUB, Inc., whose purpose is to promote Amateur Radio in general, and Mobile Radio in particular. Copying and quoting is permitted with a credit line. We gladly exchange publications with other amateur radio clubs.</p> <p>Requests should be sent to the Editor: Rick DeVirgiliis ND3B@ARRL.net</p> <p>Subscriptions are available to non-members for \$12, addressed to the Treasurer.</p> <p>Labels and mailing: KB3IV</p> <p>Submissions deadline: All copy must be in the hands of the Editor by the 20th of the previous month.</p>	<p>Directors:</p> <p>AJ3DI (18) WA3DSP (18) KB2ERL (18) N3QV (17) W3RM (17) K3HWG (17) W3AOK (A)</p>	<p>Contact Phil-Mont: P.O. Box 404 Warminster, PA 18974 http://www.phil-mont.org Website: Eric N3QV & Andrew KC2PMW</p> <p>For club information: Contact any club officer, or the repeaters listed below. Address or club directory changes and articles for the membership e-mail list should be sent to: KB3IV</p>	
<p>Sunday Morning Net Schedules</p> <ul style="list-style-type: none"> • 2 Meter/ 70cm Net..... at 0930L on W3QV repeater • 10-on-10 Net at 1000L 28.393 MHz USB (±QRM) • 75 meter Net at 1020L 3.993 MHz LSB • ARES at 2100L on the W3QV repeater 			
<p>Committees</p> <p>Blurb folding: KB3IV & N3GLU Directory: KB3IV Field Day: KC2PMW Fusion Coord: NC3U</p>	<p>Internet: N3QV & KC2PMW Membership: K3HWG Net Control: KB3IV</p>	<p>Program: W3AOK Publicity: W3RM Refreshments: W3AOK Repeater: W3AOK</p>	<p>Scholarship: W3RM Sunshine: N3GLU VE Program: NS3K Welcome: N3UBY Youth: KC2PMW</p>

All visitors are welcome!

The club meets at 7:00 PM on the *second* non-holiday Wednesday each month except July and August at Giant Supermarket, 315 York Rd, Willow Grove, PA
 Maps and directions are available at www.phil-mont.org.

License Examinations are held on the fourth **non-holiday Thursday** each month at **Community Ambulance Association, 1414 E. Butler Pike, Ambler PA 19002**
 Registration begins at 7:00 P.M. Applicants should contact Jim McCloskey NS3K at 215-275-2979 or jmccloskey@msn.com for the latest information.

Club Stations W3QV/R: The Jim Spencer Memorial Repeater System
 Ridge & Port Royal Avenues, Philadelphia, PA **Trustee: W3RM**
147.03 MHz + PL 91.5 Hz 444.80 MHz + PL 186.2 Hz C4FM Fusion digital
 Reach us on EchoLink through W3QV-R
W3AA Trustee: WU3I
W3EM: Field Day/special event station Trustee: N3OV

The Officers

President: NC3U Sal Marandola nc3u@verizon.net
Vice President: WA3GM Greg Malone wa3gm@yahoo.com
Treas: KB3IV Ed Masarsky kb3iv@comcast.net
Secretary: WU3I Steve Hoch wu3i@arrl.net

The Prez Sez ...

Hello Phil-Mont Members,

I hope summer has been good to everyone. The heat has taken its toll on me this summer but all is well now. Meetings, YES Meetings start back up in September. I hope to see everyone there.

We are having a problem with operators timing the repeaters out on a regular basis. The board meeting coming up in September this will be on the agenda to be discussed. Repeater etiquette is not being followed. PLEASE try and be respectful to other club members.

Barry K3EUI will be our guest speaker his topic is interesting RFI we all have some! If anyone has seen or heard of a good topic for a meeting please get in touch with us please.

Maybe you have heard of the digital mode FT8 it has taken the ham bands by storm. We will be discussing it before the meeting in the back of the room where refreshments are served. Please ask questions we have people who love to answer questions about these modes.

I would like to thank everyone who helps make Phil-Mont the club that it is, from the officers to the people who update web sites and face book and our all-important repeater gurus and system operators. Everything helps us be the best Radio Club in the area.

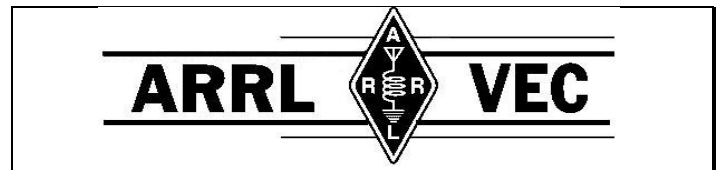
Hopefully please listen to the nets and read the emails from the Philmontmobileradio newsgroup. If anyone has an idea please send me an email at nc3u@arrl.net or at nc3u@verizon.net.

Don't forget that Phil-Mont has a Yahoo mailing list. This is one of the best ways to get some up to date news on things going on at the club. Look up philmontmobileradioclub in the Yahoo list and you will find us.

I hope to see everyone at a meeting and have the opportunity to shake your hand.

Remember we are not a club without YOU

73, Sal NC3U



***Thursday evening session is
on the 28th this month.***

As always, many thanks to our VE team!

New member application:

***KC3JPI
Robert F Clearfield
Elkins Park, PA 19027
Technician Class***

Phil-Mont Birthdays & Tidbytes

SEPTEMBER BIRTHDAYS

- 01 Sol Volen - N3UBY
- 02 Gregory Malone - WA3GM
- 04 Eileen Livezey (XYL KC3EOO)
- 06 Linda Witmer (XYL W3RW)
- 13 Marge Concordia (XYL WB3KAC)
- 15 Bob Freer - W3YLT
- 16 Robert Siegrist -KB3ZKN
- 17 Vikye Swanson (XYL N3GLH)
- 20 Michael Taraborrelli - N3MT
- 21 Susan Bogash - KB1ZNK
- 23 Eileen Kerrigan (XYL ND3B)
John Simon – KB3SJS
Patricia Day (XYL WA3QED)
- 24 Virginia Buono (XYL WA3ADI)

MEMBERSHIP STATS

At press time P.M.R.C. has:
 102 FULL PAID MEMBERS
 11 FAMILY MEMBERS
 2 YOUTH MEMBERS
 1 HONORARY MEMBER
 2 Pending

Radio Frequency Interference (RFI)

De Barry, K3EUI

One of the features all hams share in common is our experience with radio interference, either as our station causing interference to others (often not hams) or as our station receiving interference from others (often not hams). The purpose of this brief BLURB article is to define what we mean by RFI, to identify the common sources of RFI, and to suggest some of the common cures of RFI. Radio frequencies used by urban societies extend from sub Megahertz up to the Gigahertz region of the spectrum. We hams rely on phone (AM, FM, or SSB) and digital (CW, RTTY and other sound card based digital modes). Our outdoor or indoor antennas seem to “catch” all sorts of RF both from desirable and undesirable sources.

Radio Frequency Interference (RFI) or **Electromagnetic Interference (EMI)** is increasing in modern society, as we rely more and more on gadgets using radio frequencies. What we mean by RFI is **unintentional** radiation from an electronic device. Common sources of RFI for the urban amateur includes switching AC power supplies (often in your own shack), light bulbs, thermostats of all kinds, home furnaces, doorbell transformers, and power line arcs and corona in high voltage lines at utility poles.

Radio interference

- ▶ Electromagnetic interference, also called radio frequency interference (RFI) when in the radio frequency spectrum, is a disturbance generated by an external source that affects an electrical circuit by electromagnetic induction, electrostatic coupling, or conduction.



Let's take a typical example of RFI. You listen on your HF SSB radio, and hear a constant "buzz" sound. You become suspicious that what you are hearing is RFI. You tune across the entire 80 meter band, and the noise level is a constant S9. As you tune to higher frequency bands, from 80m to 40m, 20m, and 10m and find the noise decreases with increasing frequency. This is a common experience with many RFI arcing sources. When you tune to 2 meter FM radio, you hear practically no "noise" (another common experience) since FM is less prone to most noise sources. So what exactly might be causing this "noise" on the lower HF bands but does not affect VHF/UHF FM radios?

The first thing to check is whether the noise coming from your own shack, or from within your own home? So you start unplugging devices in your shack, one by one, to see if you can isolate the source of the RFI. Monitors, switching power supplies, wall warts and LED bulbs are common culprits. No luck, so you take a more drastic step. You turn off the main AC circuit breaker to your home, and run your HF radio on a battery. If the noise disappears, you are in luck... just turn the breakers back on, one by one, and isolate the circuit that is causing your high noise level. You might be surprised by the result. You might be lucky enough to locate the culprit, and then fix it or replace it with a device that does not generate RFI.

But what if the noise level stays the same S9 even running your rig on batteries, with the entire home circuit breaker turned off. Then you start to think... What in my neighborhood might be causing my RFI problem? If you talk with other local hams, say 2 to 10 miles from you, and they report the same high noise level, then the likely culprit might be coming to an entire region via the ionosphere ... perhaps a distant thunderstorm, affecting everyone receiving a sky wave on 80 meters. But what if other nearby hams (1-10 miles) report lower noise levels (S2 to S5) on 80 meters. Now you suspect a noise source closer to your own home, somewhere within a block or two of your own QTH. You start to wonder: will changing antennas help? Will putting on your brand new digital radio's "noise reduction filter" or "noise blanker" help? Perhaps, but the noise is still

interfering with your operations. You want to find the **SOURCE** of the RFI.

Now you go on a RFI hunt to track down the source of noise. Often hams begin by using a small portable AM broadcast radio, tuned to a frequency where there is no broadcaster... Say 1000 kHz. AM radios at this low frequency are very susceptible to catching small arcing RF sources. So you walk around your neighborhood looking for suspicious sources, and listening to the radio's speaker to see if the noise level goes up or down as you pace through the neighborhood. That is exactly what I did a few years ago, discovering a very loud noise source on a utility pole about 200 meters from my own home (West Chester). I looked at the pole, and saw what looked like an older bare ground wire running down the length of the pole with a few metal staples on the bare wire. When I held the AM radio next to the ground wire, it went crazy with noise. Well, that was lucky. I found at least one source of noise in about one hour. But when I continued to walk around my neighborhood, I located two other sources of AM noise on 1000 kHz. These turned out to be electric dog fences set to operate to teach dogs to stay inside the homeowner's property. Very clever, but the transmitters were spewing RF way above 1 MHz, something not necessary to just teach the dog to stay within the antenna's perimeter. By the way, the antenna for the dog fences was a single wire, buried just an inch or so below the soil, surrounding the whole perimeter of the home. This caused a rapid "tick... tick" sound in my AM broadcast radio.

Some sources of RFI can prove to be very difficult to locate, and perhaps even more difficult to repair or replace. You also may have to approach a neighbor to discuss how "unintentional" RFI is generated by some devices commonly found in a modern home. During the September PMRC General Meeting, I will go into more detail on how one can track down sources of RFI, including the use of SDR's or software defined radios (to examine the **spectra** of an RFI source) and sound card oscilloscopes (to examine the time domain **signature** of the noise). Often the RF noise culprit is something you can fix, or suggest a simple cure to your neighbor (like putting a torroid RF choke on

the dog fence antenna wire) but sometimes, the utility company has to be called in to do any needed repair to a utility pole. In my case, PECO was notified of my discovery of the power line RFI caused by arcing staples on a ground wire, came out within a month, and cured the problem. Now my noise level on 80 meters is back down to a very comfortable S2 on most days. By the way, I am now surrounded by THREE electric dog fences, all on different frequencies.

I would at this time ask PMRC members reading this article to contact me directly with your own experience with RFI in your own shack. I will welcome comments and concerns from PMRC members and modify my September PMRC talk to your concerns. I will also bring in a few useful ARRL books and some test equipment to show what you can use to help track down stubborn sources of RFI.

We might also talk about how we can prevent our radio transmissions from interfering with our neighbor's stereo, TV or telephone (a common experience).

Barry K3EUI – at – aol.com August 15, 2017

Meet PMRC Scholarship winner Matt Rainey, N2EEE



Hello There!

I'm Matthew Rainey. I'd like to thank you for having a scholarship program at the Phil-Mont mobile radio club. It really helps make college affordable.

I guess I should share a bit about myself. I am 19 years old and attending Rowan University. Currently, I am a sophomore with a major in Electrical and Computer Engineering, and I'm minoring in German Studies. Why minor in German? Because during high school, I took four years of it, and I visited Germany on a student exchange... and it'd be fantastic to operate CW QRP Portable. Additionally, it is the most useful business language to know. Similarly, I became interested in electronics through a game called Minecraft, more particularly with an in-game material called "Redstone." It behaved similarly to electricity and implemented the logic of diodes, inverters, and comparators. With these alone, I first build an adder, then calculator, and then a 4 bit computer. I was hooked.

Outside of video games, I've built my computer from scrap PC parts and it runs Linux mint xfce. I've designed and programmed a Geiger counter with a Russian SBM-20 tube, a clock, calculator, and a Morse code paddle all on an ATTINY88 in AVR RISC assembler. I couldn't get C to compile. I've built kits, such as the elektroslych where you can hear magnetic fields and an MFJ 9320K, which



*I wonder if she got this before or after
Pluto was demoted?*

I make CW contacts on regularly. I have a small electronics lab consisting of a variable temp. soldering iron, a Rigol 1054z oscilloscope (unlocked to 100mhz), a homemade variable power supply and an off-brand signal generator up to 24 MHz I was able to afford these items through working during high school. Currently, I work at a local repair shop, cleaning cars, cleaning up after the technicians and general maintenance. It'll pay for about 30% of my school's tuition if I can work 25 hrs during the school week.

How did I get into Amateur Radio? I was first interested in CW during sophomore year of high school. I saw it as an easy opportunity to cheat during tests. The only problem was nobody else would learn it, ha-ha. I came across Amateur Radio when googling about Morse code. One month later, I went for my tech, passed it with flying colors. I took the general in the same session, passed it. A month later, I decided to surprise my Elmer Jim, N2GXJ, by taking the Extra. Passed with a 46/50. After this test, I picked up the vanity call N2EEE, replacing my old call KD2HVJ. At this point, I still only had a Baofeng HT. Even though they are terrible radios (failing part 95 compliance), they give new hams a chance to dip their toe into the vast ocean of amateur radio. I was fortunate enough to have gear donated from Bart, KC2WVP, and this included an Icom IC-718, a Powerwerx 20 amp power supply and an MFJ SWR meter. After college, I'm going to pay it forward and give these to a young ham that can't afford a radio. Currently I have 149 contacts on HF, SSB and CW. I'm proficient with CW at 20 WPM sending on a straight key and i can receive at 35. Any faster and the error rate exponentially increases. I've been looking at purchasing a paddle (new or used) for easy sending, more particularly a Bencher BY-1. Anyway, that's where I am currently.

Thank you again for having this scholarship program. It will make a huge difference, because it's the first scholarship I've received. I have attached a photo of myself as requested.



I think this is the way they used to process bill payments back in the stone age!



Where were you when the lights went out?

September at Phil-Mont

- 3 Sun NC3U
 - 4 Mon Labor Day
 - 6 Wed Board Meeting
 - 10 Sun W3AFV
 - 13 Wed General Meeting
 - 17 Sun KB3IV
 - 20 Wed Rosh Hashanah begins
 - 22 Fri Fall falls today (Equinox)
 - 24 Sun K3XS
 - 28 Thur Evening VE session
 - 29 Fri Yom Kippur begins
- Don't forget the ARES net on Sunday nights and the Digital net on Tuesday nights.***

For Sale

1/8" (290#) & 3/16" (380#) Dark Olive Drab Braided Cord · 100% Polyester/Dacron Knit Braided. Nice stuff! Tough and long lasting · UV Resistant and Low Stretch Proudly Made in the U.S.A.! Contact Steve WU3I at wu3i@arrl.net or 215-605-6074

DAIWA CS 201 Two position SO239 Coax Switch
 \$25.00 each. I have 5.
 Bill K3HWG K3HWG@arrl.net

First Class Mail

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 The Phil-Mont Mobile Radio Club, Inc

