



The **Blurb**



Newsletter of The Phil-Mont Mobile Radio Club

69 Years of Public Service, 1949-2018

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August 2018

There are no Meetings in July or August

Gwen, NG3P submitted an enlightening article, see page 4

Dan KB6NU tells us about a free HF Antenna guide, see page

Enjoy your summer, the days are getting shorter!

<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. Requests should be sent to the Editor: Rick DeVigiliis ND3B@ARRL.net 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: AJ3DI (18) WA3DSP (18) KB2ERL (18) K3RON (19) N3QV (19) WB3DZZ (19) W3AOK (A) W3RM (EMERITUS)</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 Blurbs 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: N3QV

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 ...



Happy Summer Phil-Monters,

Welcome to the dog days of Summer. The bands are not as good as we would like but if your persistent you can pull out a goody. I have been working with the newer digital mode called FT-8 and its been a lot of fun. If you have time and the equipment D/L the software and give it a go. The Tuesday night DEN has been experimenting with FLDIGI and FT-8. So listen in on Tuesday night on 147.030 and see how its done.

September is rolling back around soon and our meetings will begin, try and make a few and see what your club members are doing new and exciting. Also in the fall comes elections and if you have an ambition to run for an office please do it's a fun and fulfilling experience.

Hey how did you do with the 13 Colony event? I'm curious to see how many dedicated the time to get all your colonies and Special event stations. There is not much to report moe from my end except I wish it would stop raining!

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. Every thing helps us be the best Radio Club in the area.

Hopefully please listen to the nets and read the emails from the Philmontmobileradio newsgroup

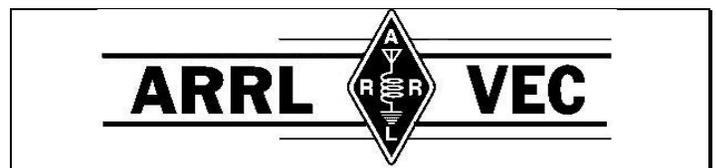
If anyone has an idea please send me an email at nc3u@verizon.net.

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 23rd this month.

As always, many thanks to our VE team!

Phil-Mont Birthdays & Tidbytes

AUGUST BIRTHDAYS

- 01 Ralph Germanotta – K3FXR
- 03 Mark Wallin - W3MJW
- 02 Tom Bohlander - WA3KLR
- 09 Carolyn Popovic - KA3VLJ
- 07 Michael Errigo - WB3EQW
- 14 Patricia MacKenzie (XYL W3RED)
- 16 Charles Farrell - AB3WD
- 18 Norma Coupe (XYL WA3BXH)
- 19 Donna Lynn Larkin - WA1WYQ
(XYL KA2FFP)
- 20 Keiko Simon – KB3SJT
- 23 Ray Kiesel - K3RIZ
- 24 Tim Coughlin - KC3DII
- 25 Linda Cantarella (XYL N3DTC)
- 27 James Lamont-N3SHM
- 30 Vincent Buono - WA3ADI

MEMBERSHIP STATS

At press time P.M.R.C. has:
 112 FULL PAID MEMBERS
 10 FAMILY MEMBERS
 2 YOUTH MEMBERS
 1 HONORARY MEMBER

Fun is Where You Find It

New digital communications are surprisingly engaging...but is it Amateur Radio?

By Gwen Patton, NG3P

I'll say it. Amateur Radio is in danger. Not from our spectrum getting sold -- it's actually far safer now than it used to be, and legislation is still in the pipeline to protect it further. Not from band conditions that make it far more difficult to use effectively, though that is a major issue. Not from the ever-increasing horde of jammers, unlicensed stations, lids, bananas, or trolls, whose members are quick to take offense, and quicker to attack a ham, repeater, or HF net with profanity, jamming,

recorded audio, music, or other forms of heckling...though that IS a major problem, and there are just too few FCC field operatives to find and shut down these people.

So what is so dangerous that it can threaten Amateur Radio? That's simple -- obsolescence.

Ham radio used to be cool, at least to the geekier crowd, because it allowed someone to build a machine to talk to other such geeks around the world in real time. It wasn't easy, and required a certain amount of luck and patience, but with a relatively small outlay of money, some skull-sweat, and some technical knowledge, you could build a radio and talk across great distances. But now, even *children* are given small, pocket-sized gadgets that can do the same thing quicker, easier, and without having to learn how the thing works before you can use it. You don't even need a license for it, you can just buy it and it works. I'm talking, of course, about the now common smartphone.

Hams have tried to mutate to accommodate these ubiquitous gadgets. Linked repeater networks make use of Voice over IP (VOIP) technology to connect repeaters together through the Internet, greatly increasing the reach of someone with a radio similar in size to a smartphone. But that's not enough anymore. Enter DMR, and the other forms of digital radio, which uses the Internet with greater and greater ease to allow people to talk on Internet-linked RF repeaters worldwide. What amount to radio "chatrooms" have been established online, and one can buy a DMR handheld for a relatively low price. There's still a learning curve, and the system isn't perfect, but it's usable. Add to that the advent of tiny, computer-driven micro-repeaters called "hotspots" that can connect a digital handheld to the world through a household Internet connection, freeing the ham from even the necessity to be close to a real digital repeater. What's more, a hotspot can allow a digital ham to connect to the online chatrooms, called "talkgroups", that they wish, not as reliant on what a local repeater operator wants to make available.

But it doesn't stop there. Now, there are organizations who have begun to link all of these pieces together, and to embrace the smartphone that

has endangered ham radio to begin with. When you can't beat 'em, join 'em. So we have the International Radio Network, run by the World Wide Amateur Radio Guild (The Guild), the DigiComm Cafe, and the Hamshack Hotline. They take all of the above and roll it together into a very usable and productive whole. You can access them using ANY or ALL of the available systems and their attendant gadgetry. If you want to connect via RF handie-talkie, you can do that by connecting to a local digital repeater. It can be Fusion, D-Star, or DMR. Or by the already extant Echolink nodes that are getting crosslinked into the growing constellation of access methods. And here's where we find our first connection to the smartphone -- Echolink has a smartphone app you can use to connect to the Echolink network.

It goes on from there. The IRN uses Teamspeak 3, a VOIP-like computer voice and text chat program made popular by gamers, who need to talk to one another in real-time while keeping their hands free to swing swords, fire guns, or cast spells at dungeon creatures in any number of online games. The technology can and has been easily extended to connecting RF repeaters together in similar fashion to Echolink or IRLP. Teamspeak has PC programs and smartphone apps, so you don't need to buy a dedicated digital handheld -- you just use the smartphone or computer you already have. The Guild and DigiComm Cafe both use Zello, another PC and smartphone program that works similarly to a handie-talkie or the old Nextel push-to-talk cellphones. You connect to their network, and push either a virtual or hardware push-to-talk button to speak half-duplex on an Internet chat channel. But The Guild and DigiComm Cafe take it a step further, and have crosslinked channels that tie to on-the-air linked repeaters, so you can take part in RF-based nets and discussions as if the phone were an Amateur HT.

The International Radio Network has a slew of "Network Radios" that resemble HTs or mobile rigs, but are actually Android smartphones inside, connecting to the various networks using Echolink, Zello, Teamspeak 3, and other apps. But wait, there's more! Hybrid devices that combine the features of amateur radio handie-talkies and

smartphones, rolling everything together into one device such as the RFinder M1 handheld, let you contact an analog or digital repeater, or connect to a VOIP system via Internet app. The RFinder devices are either Amateur handie-talkies with integral smartphones, or smartphones with integral ham radios, and can function equally in both worlds.

IRN, The Guild, and DigiComm Cafe are all extremely careful to keep non-licensed users out of the RF repeaters. Unless you have a ham ticket, you can't use the RF-linked channels, only the exclusively-Internet based ones. And that takes us full circle to a relatively new application of some relatively old technology.

Hamshack Hotline is a marriage of the new, Internet-cored, repeater-linked systems accessible by cellphone and PC, and has begun making use of VOIP telephones and adapters to build their own network. They supply a lifetime free telephone exchange over the Internet, connecting hams to one another on their very own private telephone system AND connect crosslink bridges into the repeater-linked channels of The Guild, IRN, DigiComm Cafe, the DMR and other digital ham repeater networks, and probably Echolink, eventually. It's still in the early days, with around 500 total members, but getting involved is dirt cheap and only a little technical.

I connected to Hamshack Hotline a couple of days before I wrote this article. I used a \$30 Cisco telephone adapter I bought on Amazon. This adapter, called an "ATA", lets you use standard old-fashioned analog telephones on a VOIP network. I sent them my callsign and the ID number of my particular adapter, and within a day or so was welcomed to the system. Then it was just a bit of hair-pulling as I worked to get the phone adapter working on their system, involving arcana such as "port forwarding" and "DMZ" and "TFTP provisioning" to get my device connected to their system. But around midnight, I finally succeeded, the old-fashioned dial tone in the earpiece of an old telephone I had in my upstairs office. The helpdesk tech who helped me called me on it to congratulate me and welcome me to the system, and it was startling to hear the old *Brrrrringggg* of the phone's

bell when the call came in. I talked to someone on a crosslinked RF bridge this morning, the QSO more

like a phone call than otherwise, but strangely satisfying. It appealed to my appreciation of things “retro” while tweaking my inner geek’s appreciation of things modern. There is also a way to get onto the “Experimental” branch of Hamshack Hotline using a VOIP “softphone”, an app that emulates a SIP device. Some are on HH using such an app on an RFinder hybrid HT-phone.

This may be where ham radio goes in the future, and may be what keeps it alive in an age where everyone carries a device capable of talking to anyone around the world and thinks nothing of what made it possible. I’m getting on at the ground floor and seeing where it takes me. Is it really ham radio, though? It still uses RF transceivers, at least at some points. It’s still a means of communicating around the world that’s every bit as much ham radio as going to the candy store and buying a new HT. Few people build their radios anymore, so we might as well have a say in what kinds of appliances constitute amateur radio, and to some degree keep things on our terms. We can stay in touch through the solar minimum and if something goes bang and we need emergency comms we still have our radios and the spectrum to use them on.

We might as well have some fun while we do it, right?

Getting Started -- Check out the following resources:

The Worldwide Amateur Radio Guild:

<https://theguildglobal.org/>

The International Radio Network:

<http://irn.theguildglobal.org/>

DigiComm Cafe: <https://digicommcafe.mn.co>

Hamshack Hotline: <https://hamshackhotline.com/>

Network Radios: <https://network-radios.com/>

RFinder Hybrid Handhelds: <https://rfinder.shop/>

Get your free copy of A Field Guide to Simple HF Dipoles

by Dan Romanchik, KB6NU

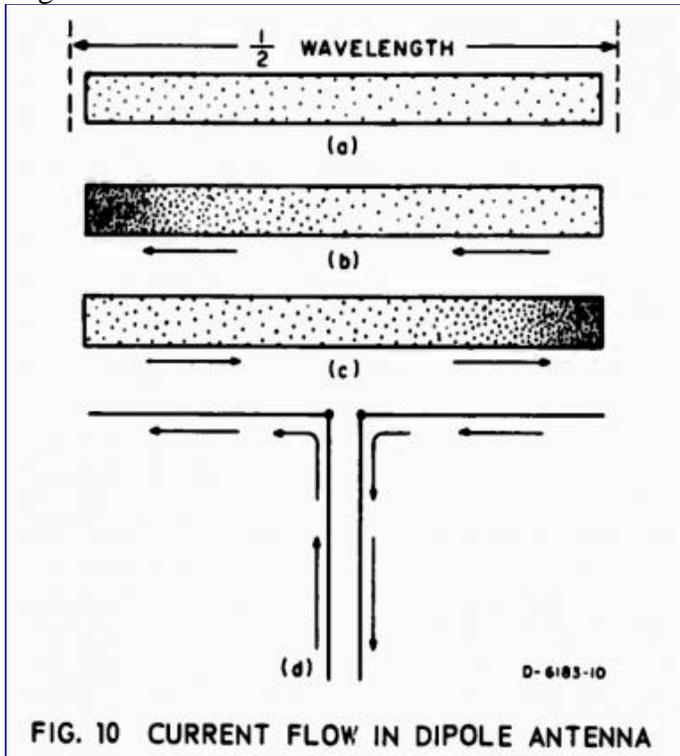
A link to *A Field Guide to Simple HF Dipoles* (<http://www.dtic.mil/dtic/tr/fulltext/u2/684938.pdf>) was posted to reddit recently, and I liked this document so much that I thought I would share it with you. It was originally written for the military, but is now available for free from the Defense Technical Information Center.

The preface to this document reads:

“Under project Agile, Stanford Research Institute has supplied several teams to assist operating personnel in improving the performance of field radio networks. In this work, it has been observed that U.S. military and civilian antenna manuals often contain misleading information regarding the operation of field antennas and tend to be overly complex. Consequently, this guide has been prepared to assist in training personnel concerned with the construction of simple HF antennas in the field.”

I must say that *A Field Guide to Simple HF Dipoles* does this very well. It not only explains how dipole antennas work, it also does a very good job of describing the basics of radio waves and propagation. And it does this without getting overly technical.

For example, below is Figure 10. It’s used to describe current flow in a dipole antenna.



The *Field Guide* reads:

“Electric current in a conductor consists of the flow of small particles called electrons. Figure 10(a) represents a dipole with electrons in it. When the transmitter is turned off, the electrons distribute themselves evenly throughout the dipole, as shown. All electrons repel each other and try to get as far from each other as possible; that is how they achieve the uniform distribution show in Figure 10(a). When the transmitter is turned on, the electrons flow back and forth from end to end as shown in Figures 10(b) and 10(c). First the electrons flow to the left and crowded at one end as shown in Figure 10(b). Second, since the electrons repel each other, the push off to the right and get crowded together at the other end, as in Figure 10(c).”

It then uses this description to talk about voltage and current distribution along a dipole antenna:

“The difference between voltage (volts) and current (amperes) in a dipole is also illustrated by Figs. 10(b) and 10(c). You can see that the maximum flow of

current is going to be in the middle of the dipole. An observer at the center of the dipole would see the electrons rush past, first one way and then the other. The center is the maximum current point. Very little current flows near the end of the dipole; in fact, at the extreme ends there is no current at all for there is no place for it to go. However, at the ends of the dipole, there is a great change of voltage; when the electrons are densely packed, this represents a negative voltages, and when there is a scarcity of electrons, it represents a positive voltage. Thus you can see that the voltage at each end swings alternately positive and and negative. An end of the dipole is a maximum voltage point.”

A *Field Guide to Simple HF Dipoles* is packed with all kinds of goodies like this. Download it (<http://www.dtic.mil/dtic/tr/fulltext/u2/684938.pdf>) right now.

August at Phil-Mont

- 5 Sun KC3DII
- 12 Sun NC3U
- 19 Sun KB3IV
- 23 Thurs VE Session
- 26 Sun WA3GM

Don't forget the ARES net on Sunday nights and the Digital net on Tuesday nights.

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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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