

QRA NEWSLETTER

QUANNAPOWITT RADIO ASSOCIATION
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CLUB CALL: W1EKT

ON THE WEB AT: WWW.W1EKT.ORG

SEPTEMBER 2018

VOLUME 58, ISSUE 1

**QRA WAS FOUNDED ON NOVEMBER 18, 1948
IN WAKEFIELD, MASSACHUSETTS
1948-2018, OUR 70th YEAR**

CLUB OFFICERS

President – Don Melanson, KA1MAP
Vice President – Mike Rioux, W1USN
Secretary – Bob Reiser, AA1M
Treasurer – Jeff Hollis, W1CKH

Club Webmaster – Brian Gudzevich, WO1VES
Club Call Trustee – Brian Gudzevich, WO1VES
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QRA 2-Meter Net- Brian Gudzevich, WO1VES
Tom Cefalo Jr.- W1EX
Tim McNulty, K1TIM
Field Day Committee- Walter Callahan, KC1ENI
Jim Powers, KC1ENJ

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John Carrick, KB1YEF 2017-2019
Tim McNulty, K1TIM 2017-2019
Brian Gudzevich, WO1VES 2017-2019

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Banquet Committee- John Carrick, KB1YEF
Barbara Day, KA1EDV
Jim Fisk, W1HL

IT IS TIME TO PAY
YOUR DUES ?
ONLY \$20.00 PER YEAR

Dues can be paid to the club treasurer at the next meeting or sent to him at:
QRA c/o Jeff Hollis, W1CKH, 46 Bond St., Reading, MA 01867-2432

QRA MEMBERSHIP MEETING

The QRA holds its membership meetings at the Reading, MA Senior Citizen Center at 49 Pleasant Street in the old fire house. All are invited and holding an Amateur Radio license is not required. Meetings begin around 7:00 pm on the third Thursday of each month, September through June. We have very interesting speakers. Come join us and bring a friend with you.

GET A 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.

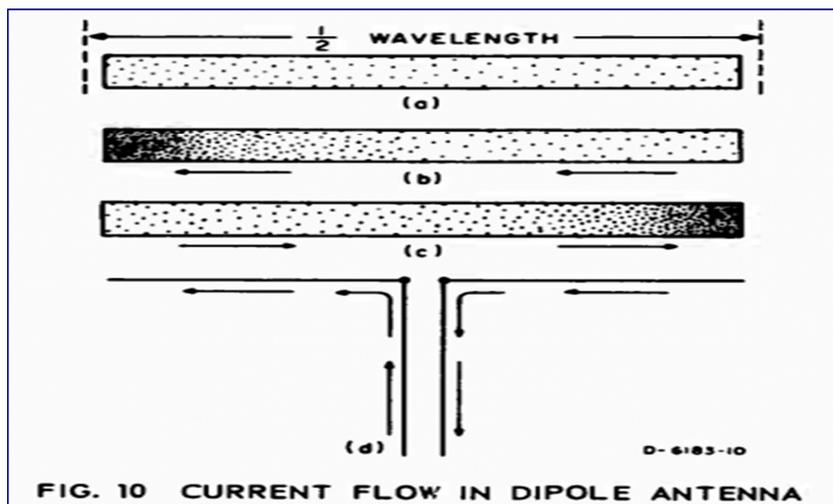
The preface to this document reads:

“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.



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 voltage, 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 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.

When he's not building dipoles or teaching ham radio classes, Dan blogs about amateur radio, writes exam study guides (www.kb6nu.com/study-guides), and operates CW on the HF bands. Look for him on 30m, 40m, and 80m. You can email him about your experiences with simple HF dipoles at cwgeek@kb6nu.com.

QRA IS
ON THE WEB AT: WWW.W1EKT.ORG
and
<http://www.facebook.com/QRAWolfPack/>

THE MINIE BULLET IN THE CIVIL WAR

by Jack Reiser

The reason why the Civil War is the deadliest War in American history is because of the innovations and inventions in guns that allowed the common soldier to shoot farther and more accurately causing more casualties and deaths than previous wars. Of these devices the minie bullet and rifling musket used together in battle allowed the musket to shoot far better than it once did in the Revolution and War of 1812. Although the minie bullet was not invented in the United States it did contribute the most to the Civil War's casualties and deaths especially with further contraptions and additions as the war was looming.

In 1849 Claude-Etienne Minié, a French army captain, created a new type of bullet that bears his name, the minie bullet. Instead of the rounded bullets that preceded the minie bullet in the War of 1812 and Revolution, the French army captain created a bullet with a pointed top that could slice through air more efficiently and effectively. Minié's bullet had a hollow, concave base so when the gunpowder ignited the expanding gases it created would fill the crater and create a seal with more power behind it and less rapidly expanding air escaping. The minie bullet was also small so it was easy to load in the gun. The minie bullet could also be fired when the rifle was dirty with gunpowder soot because of the bullet's smallness. Although Minié couldn't convince France to use the bullet in their army the British saw the advantages and used it during the Crimean War of 1853 against Russia.

Because of the advantages that the bullet provided, generals needed new military tactics that were experimented throughout the war, in the Confederacy and in the Union. The main reason why military strategists needed to change their tactics was because of the minie bullet's deadly accuracy and great range. Hitting a target a hundred yards away with a traditional musket is lucky compared to the two hundred to two hundred fifty yard range of the new musket with a minie bullet. In fact 150 soldiers with the new minie bullets equals the same firepower as 500 soldiers with regular muskets. With minie bullets it is easier to defend a city or town from a large army because of the new range, leading to a longer, deadlier and bloodier war. On the attack generals now dispersed their men on the offensive, instead of marching in uniform, making them less vulnerable from enemy fire. Generals also stopped using some military tactics; artillery used to be placed at 100 yards, just out of reach of muskets. However now the gunmen with minie bullets can pick them off. Generals also no longer ordered "Do not shoot until you see the whites of their eyes!"

"The minie bullet was first introduced to America by advisors to the Crimean War of 1853, involving Britain, Russia, and France, when Britain was using it. The United States was still reluctant to manufacture the minie bullet until James Burton's further innovations in the bullet's manufacturing and design. Independently in the 1850's James Burton, an armorer and a machinist at Harper's Ferry, created a way to manufacture the bullet without using an iron plug making it vastly cheaper to make. Without the iron plug it was also easier to mass produce making the United States army adapt it for use in 1855, leading to the Union and Confederacy using it in the Civil War. James Burton allowed more people to use the minie bullet for cheaper.

The minie bullet became even more effective with a rifling musket, shooting farther and more accurately. A rifled musket has spiraling grooves inside the barrel that force the minie bullet to spin making it more steady and straight in flight. The minie bullet also makes the rifled musket more effective because of its small size. Instead of cramming a bullet down the barrel, the smaller minie bullet slid down the barrel, and when the gases expanded the bullet's crater filled, pushing up against the rifling to fit snugly with less gases escaping. The rifled musket was used and manufactured by the United States Army in 1858 to join the minie bullet. The armory in Springfield Massachusetts was particularly successful in manufacturing and assembling the new rifled musket that could shoot much farther compared to the average rifled muskets made throughout the country. The rifled musket and minie bullet spread throughout the country and were used by both the Confederacy and Union during the Civil War. Because of James Burton the minie bullet was used in the Civil War and in all the minie bullet and rifled muskets accounting for 90% of the casualties in the Civil War.

The minie bullet can still be seen in military technology and bullets today and the devastating accuracy and range contributed to a vast number of deaths and triumphs in many wars. With each triumph there is a need for better technology and weapons and with every improvement and innovation is a faster way to kill more soldiers and even sometimes civilians. The minie bullet changed the bullets, guns, and wars to come and made the Civil War costly, bloody, and long. The unprecedented number of deaths at Antietam and Gettysburg was due to the minie bullet, the rifling musket and other innovations in killing with greater speed, at greater distance, and in greater numbers. The people who invent new and more lethal weapons are so focused on creating them, but then are horrified at the consequences. In the year 1863 in the Gettysburg address Lincoln wrote "highly resolve that these dead shall not have died in vain".

**NEXT QRA MEMBERSHIP MEETING IS THURSDAY
SEPTEMBER 20, 2018**

AND WILL BEGIN AT

*** * * 7:00 PM * * ***

**OUR MEETING WILL BE HELD
at the Reading, MA Senior Citizen Center at
49 Pleasant Street in the old fire house.**

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QRA ON FACEBOOK

Join us on our combined Facebook page at <https://www.facebook.com/QRAWolfPack/> and keep up to date with information about QRA and the Wolf Pack Repeater System. Both are being run by Brian Gudzevich, WO1VES.

**COME JOIN THE QRA 2-METER NET ON TUESDAY EVENINGS
WA1RHN/R AT 7:30 PM ON 147.075**

FM/FUSIO * PL Tone 151.4

Echolink: WO1VES-R (813502)

2018 QRA ANNUAL BANQUET AND INSTALLATION OF CLUB OFFICIALS

The QRA annual banquet and installation of club officers and BOD members was held as usual at the Reading Mass. Senior Citizen Center. We had 13 members and guests attending.

Our meeting started with club president Don Melanson, KA1MAP reading a proclamation from Massachusetts Governor Charlie Baker to make and celebrate June 24, 2018 as Massachusetts Amateur Radio day.

President Don installed member Bill Watt, W1HN as our newest BOD member.

Member Jim Fisk, W1HL rose to thank John Carrick, KB1YEF for his efforts in procuring the food and utensils for the banquet. As usual, John did a great job.

President Don reminded all about the upcoming weekend ARRL Field Day. QRA will be holding our FD at the Overlook Park in Burlington, MA. Setup will begin around noon on Saturday and operations will stop around 5 or 6 PM.

Member Mike Rioux, W1USN invited all to come to the Lightship Nantucket in East Boston on August 18, 2018 and either operate or just visit and get a tour of the lightship. We will be operating SSB and CW in the Annual International Lightship/Lighthouse Weekend Contest.

President Don passed on regrets of member Paul Allain, N1YPW who would be missing the banquet because of his wife's surgery. Don then wished all a safe Summer.

Member Tim McNulty, K1TIM asked for a BOD meeting to be held before the next membership meeting to be held in September. (submitted by QRA secretary Bob Reiser, AA1M)

Dave Libby, N1SJB (SK)

We regret to announce the passing of QRA member Dave Libby, N1SJB.

David Bruce Libby, a lifelong resident of Reading, died on July 18, 2018 at the Winchester Hospital. He was 67 years of age. David was born in Boston on March 4, 1951. He was the son of the late Henry T. and Florence (Walsh) Libby. David was a retired forklift operator for General Electric. He was an avid Ham radio operator and was a member of the Quannapowitt Radio Association in Reading. David had a passion for cars, animals and music. David is survived by his aunt Alice Schmidt of Everett and her children, cousins Allison MacMillan of N. Andover, Heidi Gostanian of Wilmington, Edward Schmidt of Bristol, NH and Pam Hurst of Wilmington. His aunt Betty Libby of Bristol, NH and her children, cousins William Libby of Alexandria, NH, Beth Libby of Monroe, NH and Eric Libby of Burlington. A funeral service will be held on Monday, July 23 at the Douglass, Edgerley and Bessom Funeral Home 25 Sanborn St. (corner of Woburn St.) Reading at 7:00PM. A visitation will be held prior to the service from 5:00-7:00PM. Burial is private. In lieu of flowers contributions may be made in David's memory the MSPCA 350 South Huntington Ave. Boston, MA 02130-4803.

KDA Custom Embroidery is owned by QRA member Paul Anderson, KA1GIJ and his wife Kathleen. For well over 20 years, Paul and Kathleen have been providing customized embroidery and screen-printing from their shop on Pearl Street in Reading. Names, monograms, call signs, logos and designs (stock or customized) can be stitched on hats, shirts, sweatshirts, polo-shirts and more. Purchase garments from them or provide your own.

Visit: www.kdaembroidery.com, email to kdace@aol.com or call Kathleen at (781) 942-0421.

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