Spurious Emissions

The Newsletter of the South Bay Amateur Radio Society

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SOUTH BAY AMATEUR RADIO SOCIETY
(SOBARS)
K6QM

PO Box 121132
Chula Vista, CA 91910

E-Mail: k6qm@sobars.org
Website: www.sobars.org

SOBARS is an ARRL-affiliated ham radio club with members from San Diego, National City, La Mesa, Chula Vista, Bonita, Imperial Beach, and San Ysidro, California.

OFFICERS

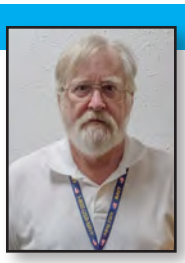
President: John Wright, K6CPO
president@sobars.org
Vice-President: Danny Lamb AI6JN
vp@sobars.org
Secretary/Treasurer:
Fred Curtis, KI6GRO
secretary_treasurer@sobars.org
Call-Sign Trustee:
Jim Beckman, N6RSL
Emergency Coordinator:
Ramon Dueñas, KJ6QQK
Property Trustee:
Louie Vignapiano, KI6SRR

SOBARS meetings are held at the Chula Vista RV Resort, 460 Sandpiper Way, Chula Vista, CA 91910
See the website for dates & times.

Club Repeaters:
146.085 (+) PL: 100.0
448.340 (-) PL: 100.0
Yaesu System Fusion®

CLUB NETS

Club nets are held every Tuesday evening on the following bands:
1830: (PT) 448.340 (-) PL 100.0
223.840 (-) PL 107.2
1900: (PT) 146.085 (+) PL 100.0
1930: (PT) 28.480 USB
7.240 LSB



From The President's Shack

By John Wright, K6CPO

The end of the year is approaching fast and so much has happened since the last issue.

Chula Vista RV Resort

Most importantly, we received word the Chula Vista RV Resort is closing to make way for the waterfront redevelopment project. We had to seek out a new place to meet. Thanks to Marlon King, the Chula Vista Emergency Coordinator, we have been promised use of a classroom at Chula Vista Fire Station Number 4. However, this will entail a move to a Monday meeting day instead of Wednesday. More information will be forthcoming as the details are worked out.

SANDARC Restructuring

The San Diego Amateur Radio Council Board of Directors is finalizing the restructuring of the organization from a council of member clubs to strictly a Volunteer Examiner Coordinator (VEC) organization with emphasis on education and testing. To this end, the member clubs and their delegates have been eliminated. New ByLaws and Articles of incorporation have been written and SANDARC is actively pursuing 501(C)(3) non-profit status.

There is some concern among the former member clubs that this action was taken with no advanced notice from the SANDARC Board. As this decision does not have an adverse impact on SOBARS, we are adopting a neutral position on the change.

New Members and Upgrades

We would like to welcome back Ed Ross, N6GZI after a short absence and congratulations to Curtis Price, K6IBP, who upgraded his license to Amateur Extra.

There is a incentive to upgrading your license class in the SOBARS ByLaws. Once you have been a member for one year, you are entitled to a one-time free membership when you upgrade your license to the next higher class.

Ham Of The Year Nominations

Nominations for the 2018 award of the K6SJA Memorial ham Of The Year Award are due by the end of the November meeting (Wednesday, Nov. 7, 2018.) If you wish to nominate someone, the form and guidelines were emailed to all the members and will be available at the November meeting. If anyone needs the forms prior to the meeting, contact the Secretary-treasurer and they will be resent. The award will be presented at the December meeting.

Election of Officers

Elections for the board of directors will be held during the December meeting. You should have been contacted by now asking if you wish to run for one of the three positions, President, Vice-President or Secretary-Treasurer. Please respond asap as the nominations will be read at the November meeting.

December Potluck

Our annual December potluck social is scheduled for the December meeting, Tuesday, December 4, 2018. This will be our last meeting at the RV Resort. If you plan on attending, please sign up using the form on the SOBARS website. Please indicate how many are attending and what you plan to bring.

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.

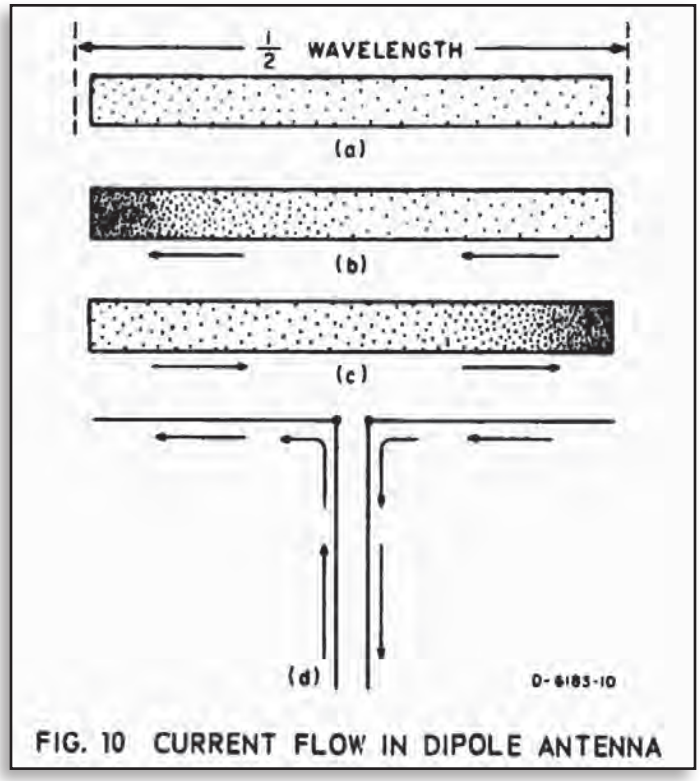


FIG. 10 CURRENT FLOW IN DIPOLE ANTENNA

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.

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.

ARRL President Suggests That We "Re-Brand" Amateur Radio

By Dan Romanchik, KB6NU

This Week in Amateur Radio recently reported (https://www.stitcher.com/podcast/this-week-in-amateur-radio/e/51325707) on a speech given by ARRL president, Rick Roderick, K5UR, at the 60th annual West Virginia State ARRL convention held August 25th at WVU Jackson's Mill Conference Center. Here are some things that he had to say:

"Are we even relevant anymore as ham radio operators? Well, let's see: We're world communicators. We provide public service. We help in emergencies and disasters. We help save lives. We talk to the jungles of Africa…to the beaches of the South Pacific. We bounce signals off the moon. We talk to astronauts. We promote technology. We do positive things. So absolutely—we are relevant.

"We've got to accept change and we've got to adapt if we're going to bridge that gap to that next generation. So the question that I have here that I have challenged my colleagues at ARRL with is this: is it time to rebrand ham radio? Maybe we need to rebrand the American Radio Relay League. That's a pretty profound statement."

Of course, I agree with K5UR on this and said so myself (https://www.kb6nu.com/are-we-amateurs-or-what/) several years ago. Unfortunately, according to the report, he retreated to the same old ideas that the ARRL has been spouting for years:

"Well I think we ought to get out there and stir things up. That's what I think we ought to do. I think you ought to go back and rejuvenate your club. Over the next year, get somebody into ham radio. The second thing I want you to do….I want you to help a ham that needs your help. And the third thing I want you to do is—if you're not a member of the American Radio Relay League, you need to join today…because you know that whether you like us or not, we're all you've got; ain't nobody else in Washington DC helping us. I want you to ask yourself this question: don't you think it's time to give something back? Now I believe as a group, if we all did that we'll make a difference in this hobby as we go forward. Be a champion of ham radio. Let's work together and get it done. Thank you very much."

I'd like to challenge K5UR and the ARRL to really stir things up. There are lots of us out here giving back by teaching classes, conducting exam sessions, and helping hams get on the air. That's not the problem.

What we need from the ARRL is real leadership, not just talk. Exhorting the troops is only going to go so far. For most hams, amateur radio is only a hobby, and they do what they can. It's really up to the ARRL to provide the leadership that ties it all together and provide the framework that will allow us all to be successful.

Saying, "Whether you like us or not, we're all you've got; ain't nobody else in Washington DC helping us" doesn't really cut it. You have to show people that you're really making a difference, not just say you are.

When he's not giving the ARRL the benefit of his opinions, 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 your thoughts about the ARRL at cwgeek@kb6nu.com.

Editor's note:

The opinions expressed in this article are those of the writer alone and do not necessarily reflect those of *Spurious Emissions* or SOBARS.

First Aid Kit, Part 2

Mike Bailey, MD, KK6NF

This article is the second of two articles related to first aid kits and preparedness. Last month's article examined our potential role as first responders due to our presence at high profile community events that have inherent potential for injuries (bicycle racing, triathlons, endurance horse rides, etc.) or have the potential for terrorist attacks given their "soft target" nature (think Boston Marathon). That focus was on the immediate and critical medical concerns, this month the focus will be on broader aspects of first aid and self-care. Use the items discussed in Part 1 as the core of your first aid kit and add on additional modules or components depending on your situation—in the field or urban environment, multi-day event away from medical care vs just a few hours, etc.

Let's start with **self-aid** before we move to first aid. All of you have been on a commercial flight at one point and heard the flight attendant announcement regarding oxygen masks, "*If you are travelling with a child or someone who requires assistance, **secure your mask on first**, and then assist the other person.*" The same philosophy is true for our team deployments. You must be able to care for yourself in order to care for others. So if you have medical conditions that could potentially impair your ability to function, make sure you carry the medications or other items that you need to manage the condition. For example, I have a severe bee sting allergy that has resulted in anaphylactic shock and required ER treatment. If I'm in the city or a phone call away from immediate EMS, I don't carry my Epi-pen. I can usually take a Benadryl or two, ice the area and monitor. If it gets bad, then I can go to the ER or call the ambulance. If I'm in the field or on a long distance bike ride in the boonies, then I carry an Epi-pen. So if you have severe allergies, angina, asthma, etc., make sure you have your rescue medications available to avoid becoming a casualty yourself.

The Red Cross has been synonymous with first aid education, training and disaster relief for over a hundred years. They have also developed a line of first aid kits and have advice to develop your own kit. http://www.redcross.org/get-help/how-to-prepare-for-emergencies/anatomy-of-a-first-aid-kit While not as versatile as medical providers would typically carry, a kit based on this list would still come in handy and could be modified to easily deal with the emergent issues.

Let's break this down into functional components to decide what you will need to carry. As you will see, some items are considered optional or for use in isolated or prolonged exercises. They will be italicized and marked with (*Optional*) for easy identification.

Infection Control

There are two aspects to infection control: prevention of acquiring an infection and fighting off an infection when present. You don't want to catch anything from anyone else and you want to kill off or prevent the spread of infection if one is present.

- **Non-latex or nitrile exam gloves**. In a time of universal precautions, gloves are your best defense to prevent exposure to blood, saliva and other bodily fluids that could carry a variety of viruses and bacteria. While 2 pair may be adequate for an immediate situation, I tend to carry more.
- **CPR Barrier shield**. CPR may be needed and you don't want to be a secondary casualty by getting exposed to pathogenic viruses and bacteria.
- **Antiseptic wipes/solution**. Out in the field, even minor cuts and puncture wounds can quickly be contaminated with dirt and debris. Having an antiseptic solution makes sense to sterilize the wound, right? Not necessarily! Antiseptics like hydrogen peroxide, rubbing alcohol, mercurochrome or iodine are more appropriate for sterilizing surfaces than treating traumatized tissue. These items can damage and kill skin cells leading to slower healing and increased scarring. Better to use lots of irrigation with water or saline solution with mild soap if you can to clean the wound and keep it covered and moist. The antiseptic wipes are handy to clean up the area around the wound and prevent transmission of blood-related pathogens to others. It is also handy to sterilize the tweezers you need to pick any dirt or debris out of a wound.
- **Antibiotic cream**. Most clean wounds may not need any additional care but if you start seeing significant inflammation or purulent material, a dab of antibiotic cream would be appropriate. Otherwise, if the wound is shallow and limited, try to get by without it. Studies have shown that antimicrobial creams and ointment actually kill off the good bacteria on your skin, leaving you wide open for the "bad" bacteria to invade.
- **Ziplock bag 1 qt**. You may need a container for your used gloves, bloody gauze pads, etc. Dump them into the bag and then seal for later appropriate disposal.

Bandage Materials:

So a bandage may serve several functions—keeping a dressing or splint in place or restricting movement/providing support for a joint. Bandages come in a variety of styles and material—triangular bandages to act as a sling, a compression bandage to reduce swelling, and an adhesive bandage to keep a dressing in place (think BandAid). The adhesive bandages come in variety of different sizes and shapes. I find that the more diverse your inventory, the better. This will be the essential treatment for the majority of your "boo-boo and ouchie" injuries. Get a multipack at Costco and grab a smattering of sizes and shapes for your kit. For dressing materials, you want some that are large and thick to handle hemorrhaging. For other wounds, use a non-stick pad directly over the wound and then cover with

a gauze pad and tape to keep in place. Elastic tape allows some flex for extremity movement. Alternatively, tubular elastic net dressing can be cut to go over a hand, arm or leg to hold dressing in place while allowing full movement of the limb--handy for runners or cyclists who need to get back into the race.

- 1-2 absorbent compress dressings (5 x 9 inches) For hemorrhage control.
- 8 Gauze sponges (4 x 4 inches) Useful for cleaning wounds.
- 6 sterile gauze pads (3 x 3 inches)
- 6 sterile gauze pads (4 x 4 inches)
- 4 small non-stick pads (2 x 3 inches)
- 4 medium non-stick pads (3 x 4 inches)
- 1-2 rolls of Medical Tape – adhesive or elastic self-adhesive.
- 1-2 yards of tubular elastic net dressing
- 1-2 triangular bandages for slings, etc.
- *Butterfly or Steri-Strip closures (Optional)*
- *DermaBond, Liquid Skin, New Skin wound closures (Optional)*
- Bandage scissors
- Q-tips – get the small sample size in "trial" aisle. Handy for cleaning wounds and applying creams or ointments.

Instruments/Equipment:

Not a lot of equipment per se is needed for a first aid kit.

- Bandage scissors are handy for cutting tape, removing clothing.
- Tweezers are useful for removing thorns, stingers, splinters or wound debris and handy for applying Steri-strips.
- *Sawyer Extractor Bite & Stink Kit (Optional)*
- *Splint material such as a SAM splint. (Optional)*
- *Thermometer (non-glass/non-mercury) (Optional)*

Medications:

These are kept to a minimum and used short-term only. If you share these with someone else, always ask about duplicate/overlapping meds and any medication allergies!

- Ibuprofen 200mg
- Acetominophen 325mg
- Aspirin 81mg (not enteric coated—for acute chest pain/MI)
- Benadryl 25mg (helpful for allergic reactions)
- Triple Antibiotic cream/Neosporin
- *Cortisone 1% cream (Optional)*
- *Antifungal cream (Optional)*
- *StingEze Dauber for insect bite and sting relief (Optional)*

Education, practice and familiarity works with first aid kits just as it does with radios. So get comfortable with your gear and know how to use it. Classes on first aid are available through the Red Cross, https://www.redcross.org/take-a-class. Locally, REI offers "First Aid Essentials - What's in your kit?", a free course on wilderness first aid at their Copley Street Store. Their next class is Thursday, August 02, 2018 from 6:30 PM to 8:00 PM. https://www.rei.com/event/first-aid-essentials-whats-in-your-kit/san-diego/211962 They also have an excellent stock of first aid items for the field. They do offer a 2 day course allowing for certification in Wilderness First Aid: https://www.rei.com/event/wilderness-first-aid-with-nols-and-rei/san-diego/190297

For more advanced training, UCSD has an annual 5 day course for Wilderness First Responders in December: https://rec.ucsd.edu/Program/GetProgramDetails?courseId=a520dfb3-41b5-45ca-8487-b83703ea3b25&semesterId=df1d3379-c068-4af8-b339-0ac7415d2048

Finally, don't forget YouTube videos as a source of some practical quick training on specific techniques. Check out their videos on the Sawyer Venom Extractor, Dermabond wound closure, Steri-Strip application, and even the use of Super Glue as a wound closure system.

Whatever you design your kit or kits to be, make sure it is with your deployment gear and check it regularly to ensure that items have not expired. Even the best first aid kit is useless if it is not with you when you need it! ►