



Mike and Key

An ARRL Special Services Club

Founded 1914

SARC Calendar

- April
- 8th General Meeting: Sierra 2 at 7:00 PM. Informal get-together at 6:30 PM.
- 22nd Executive Committee Meeting: Sacramento Blood Bank at 7:00 PM.
- May
- 13th General Meeting: Sierra 2 at 7:00 PM. Informal get-together at 6:30 PM.
- 27th Executive Committee Meeting: Sacramento Blood Bank at 7:00 PM.
- June
- 10th General Meeting: Sacramento Blood Bank at 7:00 PM. Informal get-together at 6:30 PM.
- 24th Executive Committee Meeting: Sacramento Blood Bank at 7:00 PM.
- 27th-28th Field Day

MEETING LOCATION CHANGED

Until further notice the SARC general meetings will be held at the

SIERRA 2. The school is located at 2791 24th Street in Sacramento. This is at the corner of 24th Street and 4th Ave. Park in the back. Sorry for the inconvenience. The move is due to construction at the blood bank.

Personality Profile

Gary E. Bryant, KB6KZZ

By Tom Hughes WA6ZYK

Gary is a native of Sacramento and grew up in the Alkali Park area. He attended St. Joseph's Elementary School and Christian Brothers High School. He has served in the California Military Reserve both in communications and medical, rising to the rank of First Lieutenant in the medical field during the approximately six years that he was involved there. His present primary public service efforts are with the Nevada-Yuba-Placer (NYP) Unit of the CDF. He is now in his ninth year with that organization in the VIP program. We've enjoyed his slide programs at S.A.R.C showing pictures taken during his three years at the Mt. Howell lookout near Colfax off Hwy.80. He has also been affiliated with the Amador-El Dorado Range Unit for five years.

In addition to the above, he has been a member of the DART team, the Broderick Fire Dept. as their first EMT and the Sacramento Fire Dept. Reserves. Somehow during all of the above, Gary worked 18 years for the state of California as an Office Technician.

While still in school, he sent in a box-top and a dollar to Cheerios in return for which they sent him his first camera, a box camera. Those were the days prior to radio scanners so, armed with his box camera; he would ride over to nearby Armondo Magri's Harley shop on 12th St. and listen to the police dispatch on the motorcycle radios. If he heard of something going on nearby, which might provide a good "Photo Op", he would jump on his bike and go to the site. As a result, Gary had his first photo published in the Sacramento Union on August 21st. of 1966. This hobby grew into a business as attorneys and insurance companies, as well as the Sacramento Bee and the Sacramento Union began buying copies of his pictures. All of this occurred prior to his graduating from High School in 1970.

After Scanner Radios appeared on the market, Gary was able to work from home and, as technology advanced, he switched from film to video for much of his work. He

began doing work for KCRA-TV in their "News Hawk" program and KXTV in their "Sharp Shooter" program as well as KOVR.

Continued on page 4

Our People

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PREZ SEZ

Dear Club Member:

I would like to take this opportunity to thank those members who were responsible for allowing me to serve as their club for a sixth year, after a short hiatus.

I also would like to welcome our new club members for 1998.

As one of my goals for 1998, as I stated at the January meeting, was to try to beef-up our membership numbers. One of the things I am trying to accomplish is to seek help from the many multi-talented members we have, to bring ideas of what type of speakers, or hands-on projects you would like to see presented at our monthly meetings. So please see me at one of our meetings, or give me a call by voice or fax at (916) 646-1171 with your ideas. I promise you all ideas will be voiced at the following board and/or regular meeting for feasibility and interest.

Because of unforeseen remodeling work at the blood bank we are being displaced for possibly 4 or 5 months for our meetings both regular and board. All of our alternate meeting places have not been set in concrete, so please bear with us. I apologize in advance for any inconvenience it may cause you.

Please stay tuned, I think this is a year we are all going to enjoy as

members of the "Sacramento Amateur Radio Club".

73's from KB6KZZ
YOUR CLUB PREZ!!!!

Q: Who killed Snap, Crackle, and Pop ???

A: The Cereal-killer !!

APRS and MIR

By Tom Preston, KQ6EO

As some of you may know there has been an on-going effort to QSY APRS to 144.390. This change is being made to prevent interference with future space operations around 145.80. As of late the frequency change has been growing in momentum. In what I am sure was a thank you from the space people on March 10, 1998 the Russian space station MIR was to act as an APRS digipeater on 145.985, for two orbital passes across the United States. The second pass had problems and the digi was not on. It was then decided to leave the digi on for all passes of MIR for the night of March 10-11.

Since two of the passes would be over the western part of the country I decided to join in the fun. I reconfigured my APRS station and watched for a while. Nothing. Oh well, the early passes were to the east anyway. I went to bed. The next morning I got up and checked the map. All right! The experiment had worked. My USA map was dotted with call signs from every call area and several from Canada. I later learned that my station had been seen as far east as Kansas and Illinois. Not bad for a bunch of low power 2-meter stations.

KIT KORNER

By Frank Zawalick, WD6DCV

For many of us, our earliest memories in amateur radio was the excitement of scrounging old radios

and televisions for their wealth of electronic components. It was a labor of love removing, cataloging, and storing each electronic component for the many projects destined to be built in the future.

For many who were not blessed with a ready available source of old electronic items, the well designed electronic kits, was the next best thing. In the early sixties and into the late seventies, such names as Heath, Knight, Ten Tec and Lafayette were synonymous with reasonable, well designed ham radio kit projects. Many a night spent was spent at the kitchen table, where parts were inventoried and painstakingly soldered in place with the ultimate goal of communicating with the world. There was pride in a project that passed the "smoke test" the first time around.

Although the old names are no more, there is a new generation of companies that are following the traditions of the past while providing newer, up-to-date design layouts and components. In the coming months, I will provide information on the various companies, their product line, ordering, current costs and reviews. With this information in hand, you too can experience the thrill of building a kit and say proudly "I built it myself".

FEMA OFFERS GUIDANCE AND SUPPORT TO COMMUNITIES IMPACTED BY SEVERE WEATHER

Washington March 18, 1998 – The Federal Emergency Management Agency (FEMA) has always been in the business of helping people recover from major natural disasters. El Nino, the abnormal warming of the ocean temperatures in the tropical Pacific, and the associated weather patterns have

effected thousands of Americans across the country. Experts from the National Oceanic and Atmospheric Administration predict that the El Nino conditions will continue through May and will bring significant storm activity and precipitation across California and the southern tier of the United States through March and into April.

Homeowners and business owners across the country are dealing with the effects of El Nino. To help all citizens affected by El Nino-driven storms, FEMA has developed a national initiative called Project Impact: Building a Disaster-Resistant Community. Project Impact is designed to help shift the focus of emergency management from responding to disasters to initiating action prior to disasters, which will reduce potential damage. And right now, prevention and preparation are especially important to those communities that are at risk for more severe weather related to El Nino.

"Forces like El Nino can effect us all, not just the mudslide victims we see in California or the tornado victims in Florida," said FEMA Director James Lee Witt.

"Communities across the country are coping with severe and unusual weather, so through programs like Project Impact, FEMA is offering guidance to help alleviate the effects of these storms.

" FEMA offers the following prevention tips for individuals and businesses:

* To reduce the risk from floods, move valuables and appliances out of basements that are prone to flooding and elevate the main breaker or fuse box and the utility meters to above flood levels.

* To reduce the risk from wind events, install hurricane straps to secure the roof to the walls and

foundation and install storm shutters over exposed windows and glass surfaces.

* To reduce the risk from landslides and mudflows, plant ground cover on slopes, build retaining walls and build channels or deflection walls to divert flow away from buildings. Be careful to

On the Air

W6AK

146.91 – PL 100

442.80 + PL 100

Sacramento Valley Noon Net
Every day at Noon

On the Net

<http://home.sprynet.com/sprynet/w6ak>

Meetings

General Meetings are the second Wednesday of every month at the Sacramento Blood Bank, 1625 Stockton Blvd. Sacramento.

7:00 PM

Please Join Us

not divert the flow directly to harm your neighbor's property.

* To reduce the risk from wildfires, move shrubs and other landscaping away from the sides of buildings; clear dead brush or grass and install tile or flame-retardant shingles on roofs.

FEMA also offers the following preparedness tips:

* Have a family disaster and evacuation plan.

- * Have an emergency and disaster supply kit in your car and your home.
- * Keep a full tank of gas in your car.
- * Purchase flood insurance to cover your home or business and its contents.

To reduce risks to business operations:

- * Develop a business interruption plan that aims to reduce the long-term effects of job loss and reduced business activity.
 - * Line up alternate vendors for essential supplies and equipment.
 - * Develop and maintain an employee emergency call out list.
 - * Maintain an up-to-date inventory of assets.
 - * Educate your employees about disaster prevention and preparation.
- Work with community leaders to ensure the stability of local infrastructure, like utilities, roads and transportation.

Prevention and preparation measures such as the above can greatly reduce the impact of natural disasters. These measures can save lives, protect property and accelerate short- and long-term economic recovery. Furthermore, anyone can undertake these activities on their own or in conjunction with others in their community. FEMA is available to provide support and resource information to protect your family, co-workers and community.

"This is an idea whose time has come," said Witt. "This common sense approach to natural disasters is catching on in communities across the country."

For example:

- * In Deerfield Beach, Fla., work is underway to retrofit the high school, which also serves as the town shelter during hurricanes.
- * In Seattle, Wash., the community is investing nearly \$7 million (\$1 million from FEMA) to undertake residential retrofitting and school safety programs aimed at reducing the risks from earthquakes.
- * In Pascagoula, Miss., a local bank has offered special loan arrangements to homeowners who borrow money for projects to protect their homes from hurricanes, tornadoes and flooding.
- * In Oakland, Calif., homeowner Sue Piper has organized 400 homeowners and seven neighborhood associations to take action to prevent the damage from the next natural disaster, whether it is a landslide, wildfire or earthquake.

Under Project Impact, seven pilot communities (including the four mentioned above) have been selected to demonstrate the economic benefits of pre-disaster mitigation to individuals, businesses and state and local governments. The other Project Impact pilot communities are Allegeny County, Md.; Tucker and Randolph counties, W. Va.; and Wilmington/New Hanover County, N.C. FEMA's goal is to have at least one disaster-resistant community per state by September 1998.

Personality Profile cont.

Having proven his abilities with this work, he progressed to the status of Stringer with the stations. That arrangement continues today with calls coming for work that the stations don't have enough people to cover. In what he refers to as his

"still work", Gary says he considers his biggest story to have been the airplane crash into Ferral's Ice Cream Parlor. He was the first person on the scene with a camera.

His photos from this event were on AP and UPI and were printed in the German magazine Quick. Another major accident he covered, with both 8MM movie and Stills, was the crash of a Greyhound bus into the San Juan Overcrossing that took 13 lives.

An interesting sidelight was the work he did for a postcard company in San Francisco. He was sent to various locations locally and nationally to take pictures for reproduction on their postcards. Surprisingly to me, Gary says that one of the biggest money producing events, for him, was the accident involving Bobby Hurley near ARCO Arena.

He had a brief affiliation with the broadcast industry while attending high school when he served as an office assistant for radio station KROY for a couple of years at their studio located above the Country Maid Restaurant at 11th & "J". After they moved to Arden Way, he advanced to the position of Traffic Reporter.

Gary got his Technician license in 1981 after having completed the classes being conducted by Cecil Gronvall, WB6ROS (Rusty Old Scow). Earlier, Jim White had mentioned to me that he too had attended those classes in preparation for his license tests. I guess the message here is that, if you'd like to do something with a positive effect on a person's future, start an Amateur Radio License prep class!

The Sacramento Amateur Radio Club Founded 1914. An ARRL Special Service Club. **1998 SARC Officers:** President—Gary Bryant, KB6KZZ, 646-1171; Vice President—vacant; Secretary—Jim Rich, N6SZQ, 361-3542; Treasurer—Steve Cates, KC6TEV, 391-7341; **Directors:** Les Ballinger, WA6EQQ, 393-4775; Herb Bennett, KA6VHF, 451-6864; Stan Harter, KH6GBX, 424-1269; Glen Hartzell, W6WBO, 555-5555; Tom Preston, KQ6EO, 722-9358; Jim White, WS6K, 456-9206. W6AK Trustee—Keith Crandall, K6QIF, 452-5056; Mike and Key Editor—Tom Preston, KQ6EO, 722-9358. **Club Dues**—\$16 per year, from January to December (new memberships will be prorated). **The SARC Newsletter, Mile and Key**, is published monthly by and for the membership of the Sacramento Amateur Radio Club. Permission is granted to other amateur radio organizations to reproduce in whole or in part for internal non-profit use, provided credit is given to the SARC Newsletter and to the authors of the reproduced materials. **Articles**—Manuscripts and letters are welcome. Items may be sent to Tom Preston, packet at kq6eo@km6px.#nocal.ca, email at KQ6EO@ns.net, or snail-mail at Editor, Mike and Key, 8425 Arcaro CT, Citrus Heights, Ca. 95610. **Advertising**—commercial non-personal advertising, business cards through full page, is available. Contact the editor above for information. Classified advertising is free to members of SARC. Submit ads monthly to the Editor at the above addresses.

He was guided toward membership in the S.A.R.C by Cecil and others. Prior to his present office as President, he has served and additional five years as President sometimes concurrently serving as Treasurer.

ANTENNAS & SLINGSHOTS

By Les Ballinger, WA6EQQ

Most of us have had the experience of putting up a portable antenna in a remote area -- most often for Field Day. My most memorable time was on a deer hunting trip. I climbed a small pine tree to put up a random wire. I then spent an hour trying to get the pitch off me and my clothes.

Since that time I have used several other methods that don't require one to get so personal with the supports. I tried tying a rock to the end of a rope with the intention of throwing it over a low branch. The rock kept coming off the rope and I succeeded in knocking a dead branch off the tree. I had to settle on a lower branch and had to worry about tall campers running under it.

I saw an article where someone used a bow and arrow to put up an antenna and I decided to give it a try. I used my archery fish reel on the bow with some Dacron line. It worked very well. I was able to put up a 137-foot random wire that turned out to be vertical. The best tree for the antenna was a tall pine about 20 feet in back of my camper. I was glad that I used an arrow with a blunt head, because when it came down it landed on top of my camper with a thud!

In archery, the rear sight of the bow is called the anchor point. It is on your face, cheek, corner of your mouth or etc., where you place your fingers of the hand that you use to draw the string. When putting up the antenna, unless it's a

very tall antenna, you will not need a full draw. Another ham was erecting his first antenna using a bow and arrow for Field Day a few years ago and used a full draw. The arrow shot up over the tree and headed for parts unknown. He never found the arrow but did find the string on the opposite side of the tree and was able to get the antenna up.

Another method I have used that works well is the use of a slingshot and "Jetline". Jetline is used by utility companies and others for putting up power lines and such. It lends itself to antenna work very nicely. It comes in a plastic tube. I hold the tube in the same hand that I hold the slingshot, with the open end of the tube in the direction the fishing sinker is to be propelled. Fishing sinkers are great for pulling the Jetline from the tube and carry the weight up and over whatever you want to use as your aerial support. A 2-1/2 or 3 ounce weight is used to provide enough weight to get the Jetline over a rough branch surface and back down to where you can reach it. I haven't figured out a way to get the Jetline back into the tube. There is enough in one tube to put up several antennas -- depending upon the height of course. Fishing reels with monofilament line have also been used with good results. Before Amateur Radio antennas were installed on Sacramento's new Blood Bank building, we needed to put up an antenna in a hurry to fulfill our obligation in an upcoming Simulated Emergency Test. The garage of the building has a 40-foot ceiling with exposed rafters and stringers. I used the slingshot to put up a forty meter dipole inside the garage. It was successful, the radio worked fine, and the Blood Bank officials were very impressed. The slingshot and Jetline was also used at several forest fires to put 2-Meter "J"

antennas in pine trees at a fire camp.

I find the slingshot and fishing sinker easier to use and pack in the trunk of a car than the bow and arrow. The slingshot I use and prefer is a folding Wrist-Rocket. It also makes a usable survival weapon for taking small game. I used it in a park to put up an antenna for Field Day and don't believe it appears as threatening as a bow and arrow to other park users. Both methods make a difficult job both easy and fun, a slingshot is cheaper than pole climbing spurs, and keeps you from getting emotional about a pine tree.

Meeting Minutes

by Jim Rich N6SZQ

Board Meeting

The SARC Board met on Wednesday, March 25, at Keith's house. We discussed a possible Public Service activity, a NVIS antenna for the relocated Blood Bank radio station, the Special Services Club application, future programs, a Saturday morning field trip later this year, and a temporary meeting place while the Blood Center undergoes renovations. - N6SZQ

The June ARRL VHF QSO Party:

Are You Ready For Some Competition?

by Jim Rich N6SZQ

This contest occurs during a weekend in mid-June, and often involves driving or hiking to a mountain top or other high point. The object: to work as many Amateur stations in as many different 2 degree times 1 degree grid squares as possible using any Amateur frequency above 50 MHz.

Use of repeaters is not allowed. There is a "multioperator" category for clubs. Les Ballinger, WA6EQQ, and a few other SARC members would like to compete in this year's contest, but they need someone with VHF contest experience to "show them the ropes". If you can help Les, please give him a call at 393-4775.

Renew Your SARC Membership Today!

by Jim Rich N6SZQ

Here are some of the programs the SARC Board is working to bring about in 1998:

A visit to the new City or County Communications Center.

A discussion on new developments in HF digital radio.

An antenna program featuring a local antenna expert.

A talk by an FCC official. Amateur Radio operators searching for signs of extraterrestrial life.

A visit to an FAA radar facility.

During 1998 the SARC will continue to support the Sacramento Blood Center. We will again field a strong team on Field Day. Our new Web site will probably continue to improve. We may even visit a Children's Hospital. So renew your SARC membership, and join in the fun.

RUBBER DUCKS CAN BECOME RUBBER FLOPS

by Stan Harter, KH6GBX

The ubiquitous rubber duck antenna atop virtually every hand-held radio is compact, small, convenient --- and terribly inefficient. It is a trade-off between daily convenience and effectiveness. It behooves all policemen, fire fighters, surveyors,

and hams --- any user of the popular hand-held two-way radio. Uhh, I mean wireless. But you knew that.

What you may not know is that, brand new out of the box, fully charged battery, a 5-watt transmitter only radiates 0.05 watt from your belt holster and 1.6 watt at face level! I'll describe the problems, first for laymen and supervisors and second for the more technically tuned.

First, the rubber ducky is short and flexible. Inside the new (shiny and clean) or old (grungy, nicked and dirty) rubber housing is a coiled spring or helix. This makes the antenna very flexible and short. Whenever an antenna is made shorter than its true electrical wavelength in free space, it is a compromise antenna. Whenever a compromise is achieved, it is done so at the expense of efficiency. Loss of efficiency means lowered power output (range) and reduced received effectiveness (range again).

You've all seen those attractive (to a trucker) white fiberglass CB antennas fastened on to their rear view mirrors. Well, a full quarter-wave antenna at the CB frequencies is about 9 feet tall. It's the best --- but the least practical.

"Wha'hoppen to da 5 watts I paid for?" you say. The rubber duck is a very lossy radiator. You may accept its convenience --- and limitations --- when you know how poorly it really performs. Cut to the chase: is there a wonder cure you are about to offer? No.

Convenience still overrides efficiency. You can replace the rubber duck with a telescopic half-wave or 5/8-wave telescopic whip and get closer to the 5 watts ERP (Effective Radiated Power) you paid for. Unfortunately, such antennas have a life expectancy of

10 to 30 days depending upon the child factor, impatience, speed, mood, nearby objects intruding on your space, and a host of other reasons. I carry one in my response kit, however, because I will get out then the ducky doesn't. I value my safety and health and those in my charge. Out of radio range? Don't proceed. Solve the problem. That's what Comm Unit Leaders do on forest fires.

Unfortunately, few understand what a host of sins that nice black rubber (neoprene or whatever) hides! I was unaware until I saw the light at the National Interagency Coordination Center in Boise, ID, to have my Communications Unit Leader red card renewed. (More on that in future articles.) They have developed a method of testing Handie-Talkies with the rubber ducky on. True, there are tests using metering jacks and dummy loads, but they don't test the antenna over the air. (Again, more on this in the future.) Suffice to say, the typical rubber duck becomes defective in 6 months. Most don't last over a year. A few are destroyed on the first incident, campaign, or project fire. When I say "typical" I include all law enforcement, fire suppression, and hams on the street or in the field. The antennas look fine from the outside. Their failures are hidden from you. The most common breakdowns are invisible and can be corrected only by replacing the antenna, and replacing it on a regular basis.

For the more technically inclined, a new rubber ducky, a 5-watt 150 MHz hand held portable (HT) at belt level (walking around or on solo bike officers) has 0.05 watt ERP. Held up at face level, the radio now has 1.6 watt ERP. That's quite a difference = 15 dB. The following findings appeared in the NIJ TAP 203-83, page 9 by LESL, NBS in 1983:

Antenna loss(dBd)	Antenna type	VHF	dBr*	UHF	dBr*
	One-quarter wavelength telescoping (extended and held at face level)	5	0	20	0
	One-quarter wavelength telescoping (collapsed and worn at belt level)	45	40	50	30
	Rubber duck at face level	10	5	25	5
	Rubber duck at belt level	25	20	50	30

In

* "dBr" means a reference antenna; i.e., the 1/4-wave telescopic extended and held at face level. Moral: Buy two new rubber ducky antennas. Install one, toss the old one away, and get ready to use the spare a lot sooner than you have in the past. There is nothing more annoying than hearing a scuzzy signal coming through the repeater when it's quite possible that the owner-operator or the radio shop can and should correct those nasty little hidden problems.

VIPS help with Bayne Road Arson Patrols

By Les Ballinger, WA6EQQ

The following is an article from the Mountain Democrat, Friday, February 28, 1997. Since most of you (El Dorado County CDF VIP Hams) participated in the Bayne Road patrols last August, you can be pleased in your work to help bring this about. The CDF is very appreciative of our contribution to the events that led to this conclusion.

"WOMAN CHANGES PLEA, ADMITS TO COMMITTING ARSON"

By Mark Coovelis, Staff writer

A Kelsey woman has changed her "not guilty" plea and pleaded "no contest" to two counts of arson in connection with two wildland fires that started approximately 100 feet from her property. A no contest

plea essentially admits guilt. Oma Anne Beaston, 43, was arrested in Oct. 1996, after an 11-month investigation by the California Department of Forestry. Arson investigators found an incendiary device at the scene of one of the fires that led them to focus on Beaston, said Capt. Frank Orr, with the CDF Arson Unit. Beaston faced a maximum sentence of six years, eight months in prison for the arson charges. But, as a result of the plea arrangement, she will be sentenced to no more than a year in jail and ordered to participate in mental health counseling, possibly at the state facility at Atascadero, El Dorado County deputy district attorney Jim Wagoner said. Beaston reportedly suffers from organic brain damage after being kicked in the head by a horse.

The arson unit focused its efforts on Beaston following the investigation of 18 arson-sparked fires in the Kelsey area, beginning in November of 1995 and continuing through the 1996 fire season. The blazes ranged in size from a small spot to a blaze that consumed an acre of oak woodland vegetation. The fires caused only minimal property damage, and although no structures were burned, the danger of damage and loss of life was "tremendous," according to the CDF. "Our biggest concern in the potential of another Kelsey Fire," Orr said in October. "That would have been a major problem if the fires in the area didn't stop," he added.

1994, an arsonist set a series of blazes that blackened over 860 acres, destroyed 14 homes, some 53 outbuildings and 15 vehicles. The CDF estimated that the fires caused over \$7 million damage. The arson unit that built the case against Beaston is the same unit that arrested 19-year-old Michael Gabrielson for the 1994 Kelsey Fires. Gabrielson was convicted of 16 counts of wildland arson and sentenced to 11 years in prison, the longest term for an arsonist arrested by CDF investigators. "When someone starts a fire, they don't know what's on the other side of that hill, or where the fire will go," Orr said. He noted that fires, even giant wildland blazes, begin with a flame the size of a quarter. Orr said arson investigations focus on physical evidence, such as the incendiary device found near Beaston's property, the arsonist's modus operandi, witness reports and other information. Beaston will return to Placerville Superior Court on Monday for formal sentencing.

April Speakers

The April speakers will be Bill Ozment from CDF-VIP and Teri Mizuhara from the CDF. The topic will be "Time to think about fire season and how hams can help. Come join us for what will be a very interesting talk.

April Speakers

Teri Mizuhara CDF
Bill Ozment CDF VIP

Time to think about file season and how Hams can help.

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FIRST CLASS

To: