Hello!
For the month of April we have lots of exciting activities, like the Baker to Vegas race, the Visalia Ham Radio convention, Tax Day on the 15th and the sinking of the sun into the sea, and yet another excellent program about Static Electricity. You may not realize it, but static electricity is everywhere, and is the reason that your car sometimes shocks you.

The Ham Operating courses are well under way with the first class a tremendous success thanks to Jeff W6UX who is doing an outstanding job of teaching us low skill operators the “ropes” of proper Field Day operation. Talking about FD, I’m pleased to announce that the Generator Fund has attained its goal and now it is fully funded by both the generosity of the Club members and the W6NGO Trust Fund. The “FD donations collection can” from now on will be used for money to help with food expenses, as we plan to offer really good food during the Field Day event. By the way, if you plan to obtain or upgrade your Amateur Radio license, you can do it during our Field Day activities (see page 3).

This is our 80th Anniversary, so we have a new Club Logo designed by Bob, AF6C after several tests and discussions.

In closing, I wish everybody many happy returns on the 15th and hope to see you all at the next meeting.

73 DE AF6CF
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Feedback & Corrections:
rf_feedback@w6ze.org
Submit Articles:
editors@w6ze.org

Monthly Events:

General Meeting:
Third Friday of the month
at 7:00 PM
American Red Cross
600 Parkcenter Drive
(Near Tustin Ave. & 4th St.)
Santa Ana, CA

Club Breakfast:
Second Saturday of every month
at 8:00 AM
Jagerhaus Restaurant
2525 E. Ball Road
(Ball exit off 57-Freeway)
Anaheim, CA

Club Nets (Listen for W6ZE):

28.375 ± MHz SSB
Wed- 7:30 PM - 8:30 PM
Bob, AF6C, Net Control

146.55 MHz Simplex FM
Wed- 8:30 PM - 9:30 PM
Bob, WB6IXN, Net Control

7.086 ± MHz CW OCWN
Sun- 9:00 AM – 10 AM
John WA6RND, Net Control

VISIT OUR WEB SITE
http://www.w6ze.org
for up-to-the-minute club
information, the latest
membership rosters, special
activities, back issues of RF,
links to ham-related sites,
vendors and manufacturers,
pictures of club events and much
much more.

Club Dues:
Regular Members ...$20
Family Members* ...$10
Teenage Members ..$10
Club Badge** ...$3

Dues run from Jan thru Dec and are
prorated for new members.

*Additional members in the family of
a regular member pay the family rate
up to $30 per family.

**There is a $1.50 charge if you'd
like to have your badge mailed to
you.
Each spring, law-enforcement running teams (from around the world) have entered in a competitive foot-relay-race through the desert. This race, known as "Baker-to-Vegas" (and aka B2V), is a 120 mile long race, that starts outside Baker (CA), runs through the desert to Shoshone, then runs through Pahrump, NV and finishes at the Hilton Hotel in Las Vegas. The B2V race is broken into 20 “legs” or stages. This year, more than 275 different law enforcement teams will participate. The runners of the Orange Police Department have been supported for many years with communications by hams belonging to COAR (City of Orange Amateur Radio) RACES, the OCARC members, and Communications Volunteers from Cypress. This year, the B2V event is scheduled to begin on Saturday, April 13, with runners reaching the finish line on Sunday, April 14.

In photos below, OPD volunteers are testing radio equipment and procedures that will be used at the B2V race

Rich KR6BA set up the Shoshone center radios in his garage in Cypress

Here is the “trailer-hitch” system that will be used for holding the 144/440 MHz antennas for the Shoshone comm center.

Ken W6HHC set up equipment for the Pahrump center in his backyard with help from AF6C, KC6DLA, and AF6CF

The COAR RACES group set up three of the major Communications Centers on March 23, including Shoshone, Pahrump, and LV. Also tested was equipment that would be used in the Follow-Vehicle (along side the OPD runner) and the Communications-Support cars.

Thirteen members of OCARC are involved with planning, testing, or operations for B2V.

(L-R) Rich KE6WWK, Robbie KB6CJZ, and Steve KI6DDE set up a radio for LV center in a RV recreation center to talk to a nearby cross-band repeater

During the “dry run” equipment tests, these members will take various shifts in the Follow-Vehicle and support car

Steve KI6DDE is supervised to adjust the LV center antennas attached to motor home of KE6WWK

Both (L-R) Alfredo K6EGA and Kathleen K6IBH check out the radios that will be used in the Follow-Vehicle
ARRL AMATEUR RADIO VE TESTING

OCARC Field Day 2013 – Saturday June 22, 2013

From 1:00 PM to 4:00 PM

Walter Knott Education Center
7300 La Palma Avenue
Buena Park, CA 90620

Pre-Registration is requested and preferred.
Walk-ins also Welcome!

Contact V.E.: George T. Jacob Jr. N6VNI

Phone Numbers: Home 562-691-7898  Cell 562-544-7373
Email: jac2247@gmail.com  Or N6VNI@arrl.net

Sponsoring Club: N6ME Western Amateur Radio Association, Fullerton, Ca. "WARA"

Pre-Registration is requested and preferred. Please bring with you a valid picture ID, SSN or FRN, if you are upgrading your original and a copy of your current license, $15.00 fee, pen, pencils and calculator.

If you fail an element and wish to retake it, we are required to charge an additional test fee. If you pass an element, we typically offer and encourage you to take the next element. We do not charge an additional test fee for this and it gives you the opportunity to see what the next exam element is like!

Thank you and see you at Field Day 2013!
Fox Hunt

April 20th

The next southern California on-foot hidden transmitter-hunting event will be Saturday, April 20, 2013 at Schabarum Regional Park. If you are a beginner, there will be entry-level two-meter fox transmitters just for you, set by Joe Moell K0OV. For more experienced radio-orienteers, there will be a 5-fox two-meter international-rules course of moderate difficulty, set by Marvin Johnston KE6HTS. An optional 80-meter fox transmitter or two may also be on the air.

A ham radio license and knowledge of radio equipment are not required. Experts will be on hand to teach you the basic techniques of on-foot radio direction-finding (RDF). Also expect to see some folks training to compete in the 2013 USA ARDF Championships that will be in North Carolina this October.

If you don't have the antenna/attenuator system for on-foot foxhunting on two meters with your ham radio handi-talkie or scanner, you can easily make one during this session. If there is sufficient interest, Marvin Johnston KE6HTS will conduct a clinic for building his kits for measuring-tape yagis and for 90 dB offset-type attenuators. An assembled/tested attenuator in a special housing that goes inside the boom of the yagi is also available. If you wish to build kits at this workshop, you must register in advance by sending e-mail to marvin@west.net, so he will have the kits reserved in your name waiting for you.

It takes about an hour to put the kits together with tools and soldering irons that will be provided. If you're not an electronic technician, don't worry because there will be plenty of experts to help you. We want you to succeed! Then with your HT and the kit built equipment, you will be all set to hunt.

All transmitter hunting begins at 10 AM. The starting point for the advanced course will be a different part of the park, so if you plan to take on that course, please arrive at the gathering area before 10 AM so we can transport that group to the starting point. Beginners will start from the gathering area and will not need to be transported. If there is an antenna/attenuator clinic, it will start at 11 AM and there will still be time to hunt the beginner transmitters after that. Courses will close at 3 PM.

For the advanced 2-meter course, orienteering flags and electronic scoring will be used at each transmitter. If you have an "e-stick," be sure to bring it. Please donate $5 for the advanced course to cover expenses related to the use of Los Angeles Orienteering Club's e-punch equipment and maps. No donation is requested for the beginner course and the 80-meter transmitter hunt.

If you have them, bring a handi-talkie, receiver, or scanner covering the two-meter band for each person who will be going ARDFing. If you have directional antennas, attenuators, or other on-foot RDF equipment, be sure to bring that too. Make sure that all batteries are fresh. For those with no radio gear, some extra ARDF receiver/antenna sets will be available. Be sure to bring anything you'll need while going after those radio foxes, such as munchies, bottled water and sunscreen. For map plotting, bring your own compass, protractor and pencil.

Trails are primitive in some areas of the park, so wear sturdy shoes. All ages are welcome, but young children must be accompanied by an adult at all times.

Schabarum Regional Park is on the south side of Colima Road, just east of Azusa Avenue in Hacienda Heights. (Thomas Guide 678-G4) A map to the site is in www.homingin.com. There is a vehicular entry fee for the park, so carpooling would be a good idea. Upon passing through the entry gate, drive south (straight ahead, don't turn right) and continue to the end of the road (about 0.7 mile). Park in the last parking lot near the restrooms. Look for the orange and white orienteering flags and signs. Call K0OV on 146.52 simplex if you have trouble finding the gathering area within the park.

73,
Joe Moell K0OV
1953 Boy Scout Jamboree at Irvine Ranch

Expanded coverage from the “History Minute” at the March OCARC Meeting
It was difficult to distill all of the information from the 1953 Jamboree into a 7 minute presentation. Due to time constraints, much of the rich and interesting history of the event had to be omitted. If you missed the presentation, this video from KOCE was shown at the meeting:
http://www.youtube.com/watch?v=oaeQ_mFXeUA

The birth of a Jamboree
William “Bill” H Spurgeon III (grandson of Santa Ana founder) is credited with convincing Myford “Mike” Irvine (Grandson of Irvine Ranch founder James Irvine) into hosting the Jamboree on 3,000 acres of undeveloped land for 50,000 scouts. 8 miles of road were graded to the site, and named “Jamboree Road”. Irvine spent $250,000 ($2 million in today’s dollars) on the event. Irvine Co employee Ralph Whitford recalled that he worked every day for 7 months preparing the site. He said “I drilled 1,368 flagpole holes, and more than 2,500 latrine holes. We figured there were 18 miles of latrine holes.”

Amateur Radio – K6BSA
It is assumed that 1953 was the first national jamboree to feature amateur radio. QST magazine’s only record of the event was beforehand in the Strays in the July 1953 issue. Our very own OCARC “RF” had a brief mention in the November newsletter:
"Honors from the Boy Scouts of America to many Orange County Amateurs, notably the Fullerton gang who gave much of their time and effort."

Boy’s Life Magazine editor Harry Harchar W2GND logged many hours operating K6BSA, which was located near the headquarters of the event.

July 1953 QST. Used by permission.
Texas Troops Smuggle Valuable Horned Toads to Calif.
Trading of souvenirs in the trading tents was a big part of the jamboree. The Texas troops knew from past experience that Horned Toad lizards from their state would be prized possessions for trade. One of those scouts recalls his train trip to L.A. “The next interesting event occurred on arrival at the Los Angeles train station. Before we were allowed to unload, inspectors for the fruit and wildlife agency of California had to inspect all cars, to check on fruit, bugs and animals. As the inspection moved from one end of the train to the other, the horned toad population in the un-inspected cars grew at an alarming rate. Our Troop was located in the next to the last car, after the inspection I recovered 32 horned toads. I only had six prior to the inspection, the toads proved to be great trading items later.”
A Visit from the Vice President

President Eisenhower was busy winding down the Korean War, so he was unable to attend the Jamboree. In his place, Vice President Tim Goeppinger attended, and spoke one morning. “At four o’clock yesterday afternoon I left Washington, D.C., by plane. At two-thirty this morning I went to sleep in a tent here at this Jamboree. I found that Scouts get up very early, and so I got up at six-thirty with them. Tonight at ten o’clock I shall take a plane and we shall fly all night so that I will get back to Washington in time to open the Senate tomorrow at twelve.” Nixon had breakfast with the troop from Whittier, and said their scrambled eggs were better than what he had in the military. Nixon took part of the trading that went on, and had traded his nice fountain pen for a dried rattlesnake skin.

Epilogue

William H Spurgeon III went on to do great things in Scouting, specifically in Specialty Exploring (now called Venturing). In 1957, he organized the first specialty Explorer Post in the nation – Post 201 in Newport Beach, a science post sponsored by the Helipot Division of Beckman Instruments (and later Hughes Aircraft.) In 1963 he asked for one year of leave from the Irvine Company so that he could promote Explorer programs for the older scouts. That one year off turned into three, and Bill Spurgeon is credited as the father of specialty Exploring. After his death in 1970, the William H Spurgeon award was created to recognize individuals who make the greatest contributions to Exploring at both the national and local level.

The story for Myford “Mike” Irvine is not a happy one, and his death is still one of Orange County’s greatest mysteries. In 1959 he was found shot to death in the basement in his home in Irvine. He had 2 shotgun blasts in his abdomen, and a .22 caliber wound in his right temple. He was found with the .22 caliber revolver in his left (non-dominant) hand. No one in the home heard the shots. No suicide note was left, but yet his death was ruled a suicide.

About 4 days after the Jamboree ended, as many of the Scouts were still heading home on trains, great news was proclaimed. An armistice agreement had been signed to effectively bring the Korean War to an end on July 27, 1953. With a few skirmishes here and there over the years, that agreement has held until recently, when Kim Jong Un declared that agreement null and void. Let’s hope and pray that peace can be maintained.
Greetings Field Day Participants!

As we move closer to Field Day we continue to tackle the necessary tasks that will make us successful! Kris, KC6TOD, is fully on board with the food preparations which only means that that the food will be perfect...filling...and very satisfying! It also means that I can scratch that off the worry list as its clearly handled! Thanks Kris! Arnie, Bob, Chip and I had a chance to play with a few antennas and identify some minor problems now, rather than later. This is good news as we have time to make the proper adjustments. It also reminded us that our allocation of towers and skyhooks are still very fluid! I'm working on turning a 50' tower into a 70' so our phone signal on 40 will be LOUD! This is also a reminder to go through your equipment and make sure its ready to go! Don't wait until June! There has been a little discussion about Bonus Points; specifically, NTS messages. If we can get a person or two who will specifically take on this task, it will net us very significant points! Same goes for our satellite contacts! A handheld antenna on 2M/440 will be very difficult on Field Day weekend. Do we have any satellite gurus...or do you know anyone who you can recruit? I want to thank everyone who has stepped up to the plate so far! There are still plenty of ways EVERYONE can help. Come to our next Field Day planning meeting on the Thursday evening, 25th, at Bob's house to hear and find out more! 73!

Dino - KX6D
M2 Antenna Systems'  
15th Annual Open House and BBQ

On Saturday the 16th of March, a fantastic open house was held at the M2 Antenna Systems in Fresno, California. The event started with a Swap Meet at 8:00 am... lots of good stuff and wives were swapped. The M2 facility was open for everyone to mingle over coffee and donuts and see all the equipment used in the production of M2 antennas. The M2 Open House was an ARRL sanctioned event.

Amateur Radio Manufacturers, Vendors and Dealers in attendance:  
Yaesu, Janet Margelli KL7MF from Ham Radio Outlet, Jim N6DHZ and Linda Shryne from the DX Store, Kurt Andress K7NV, Skip Bolnick KJ6Y of Communications Service Co., Dave Bottom WI6R, from RadioSport Headsets, Gordon Yee KL6UH from QR Zed Engraving and more!

ARRL representatives had a great display with all the books and pamphlets, encouraging those not already members to join the ARRL.

Three HAMS from the Southern California area represented Amateur Radio Expo – Margie Hoffman KG6TRB, Kris Jacob KC6TOD and George Jacob N6VNI. An HF Special Event station K6M was operated by George N6VNI. The display included Widget sets and a Morse code key for young people to try. Margie and Kris visited with all those interested or just curious as to what was going on in ham radio.

Several clubs in the Fresno area had tables with information for those interested in ham radio.

Mid-morning, a tour of the production facility was available for those who really wanted to know about all the different equipment used to produce M2 antennas.

At noon, a great BBQ of hamburgers and hotdogs with all the trimmings, salads, etc. at the price all HAMS love... FREE. The lunch was followed by a fantastic raffle with prizes donated by HRO, The DX Store, Radio Sport Headsets, QR Zed Engraving, K7NV and Yaesu as well as generous gift certificates from M2 ANTENNAS.

Everyone had a great time and are looking forward to next year’s open house.

73
DE George – N6VNI
The Orange County Amateur Radio Club began holding meetings back in 1933. That was five years before the ARRL W1AW station was established! To celebrate, the club board approved a special anniversary logo for this year. Numerous logos were voted on at the board meeting and the final selection is shown below. Various derivations were tried, but in the end simplicity won out. The longtime club emblem remains unchanged with the words "1933", "2013", "80th" and "Year" added outside the logo. Our club artist Bob - AF6C, designed the winning logo, one of three he had submitted. Bob has to pass along a lot of gas and credits to Sheri, the wife of Tim - KJ6NGF who made many valuable suggestions.
THE MOJAVE DEATH RACE ISN’T DEAD!!!

Like a zombie rising from the grave, the Mojave Death Race returns with a vengeance June 1st and 2nd, 2013. Last run in 2005 the time has come for the Mojave Death race to return. Amateur Radio volunteers were there from the start and everyone was disappointed when the organizers decided to curtail it after the 2005 race.

The Mojave Death Race is not your average relay race. Teams of 12 traverse more than 250 miles and climb over 16,000 feet of inhospitable desert by foot, mountain bike and road bike to cover the 24 individual legs.

This is also not your average Public Service communications event. First, the location of the event in the Mojave Desert dictates that many of us will have to travel long distances to get to the course. Secondly, the length of the course; 275+ miles and the number of exchange points (24) requires a lot of volunteers to support the safety and welfare communications network. To put it in perspective, it’s more than twice the length of the Baker to Vegas Law Enforcement Challenge.

THE COURSE

The Mojave Death Race begins and ends at Nipton California, goes through the Mojave National Preserve through Kelso then west to Baker looping around on the Mojave Road then back to Kelso, south to Highway 66, East through Essex to Goffs, north through the valleys and mountains of the Mojave National Preserve to the finish line.

COMMUNICATION CHALLENGES

The topography is a challenge to reliable radio communications between Net Control, each Exchange Point and a medical team traveling along the course. Several mountains over 7,000 feet high lie between the southern extremes of the course and much of the course is in the Lanfair Valley which is between a 4,000 to 5,000 foot mountain range.

To make it even more challenging, it starts before zero-dark-thirty and runs all night. It is a crazy almost 24 hours of watching other crazy people do what hams would never think of doing, because we are too smart!!!

THE HAM NETWORK

Ham operators will be positioned at each exchange point and at several elevated relay points with repeaters set-up for the event. Shadows will be assigned to the two medical doctors roving the course. The communications setup at the exchange points should be a mobile radio, 25 watts or more, a good antenna with reasonable gain and a power source. HT’s will not work. Each operator will be assigned a position in the first half of the race and another at the second 12 legs for a total duty cycle of 8 hours with a long rest in between. Most bicycle exchange points are accessible by standard automobiles but many of the mountain bike and running leg exchange points are accessible only by high clearance vehicles. A few will require 4 wheel drive vehicles.

VOLUNTEER INFORMATION

The Race Organizers have a website with all of the details and a page to register as a volunteer. To register, go to http://mojavedeathrace.com, then click on the [volunteer] button and fill out the form. Be sure to list any equipment you may have, such as high gain antennas, telescoping poles or mounting hardware that will give you increased antenna height. If you have radios capable of cross band operation please list them also.
Part IV of IV - New PL-259s and Shortening the Feed Lines

In Part III (RF March 2013) the fabrication of the CadWeld ground rod welding process was covered. In this final part, installation of the coaxial cable and connectors will be discussed.

Introduction:
In the previous three articles, I described the making of the PolyPhaser grounding panel, the ground-rod installation, and the CadWeld placement and ignition procedure. This completed the basic requirements for lightning protection. Now, to finish-off the setup, I needed to shorten two of my feed lines that were coiled between the wall pass-through and the panel. (see Figure IV.1) This was the last step in organizing and grounding the feedlines, and protecting my rig...

I find the following procedure to be adequate for my application. The items needed include: paste flux for electronics, a soldering gun, a clip stand to hold your work, nippy cutters, a cable stripper, an insulation cutter, a wire brush, .062 solder, a ruler or small measuring device, and a PL-259 connector with an RG-8X reducer (UG-176). Also, a mat to protect the surface you’re working on, some 99% alcohol, and rubber gloves may help.

First, snip the cable to length, and slide on the reducer (RG-8X is just large enough to hold it without tape); be sure the large-end is facing back from the end. Next, strip the outer insulation 3/4-inch from the tip, comb the braid straight with the wire brush, and slide the reducer under the braid to the end of the outer insulation. Then, fold back, comb, and trim the braid to 3/8-inch around the reducer. Strip the inner dielectric to 5/8-inch from the tip, and gently twist the tip if the center-conductor is multi-stranded. While tinning the braid and center-conductor is recommended, I find it to be difficult, and unnecessary if you have a good eye and paste flux. The next step is to place the connector over the end of the cable. Be careful to pass all the strands of the center-conductor...
through the center-hole in the connector; this is where a good eye is needed. Then, unscrew the outer ring back from the end, slide it back and tape it. Holding the connector straight, screw the reducer into the back of the connector. The braid should show through the side-holes.

Soldering the connector is next. With a stand, mat, and soldering gun set up, clip the assembly or cable to the stand, with one of the side-holes facing up. Then, take a toothpick or small screwdriver and scrape some paste flux into the hole. Bend and fold the tip of some solder, snip off a small piece, and place it in the hole. Then, with the soldering gun pre-tinned and cooled, press the leading edge onto the side, near the hole, and pull the trigger. As soon as the solder starts to melt into the hole, turn the tip of the soldering gun on its side, and wipe the solder flat, pulling it off the connector. Repeat for each of the side-holes.

The last thing to solder is the center-conductor. Angle the tip of the connector so the opening is facing up, and point it slightly higher than horizontal. As with the side-holes, scrape some paste flux into the tip, and place a small, folded piece of solder into it. Then, press the leading edge of the soldering gun into the tip, and pull the trigger. Hold it long enough for the solder and flux to flow, and adhere to the tip. If you need to, snip the solder on the tip of the connector, so it goes into the matching SO-239 easily. Any solder that gets onto the threads of the connector, or that gets in the way of the outer ring can be snapped off. Also clean off any flux residue. Slide the outer ring and screw it all the way onto the connector. Plug in the cable and tune the radio with an antenna tuner. If a good amount of white noise and stations tune-in on the receiver, other stations can hear you transmit, and if you have good SWR, the connector is a success.

I used this procedure for both my 80-meter feed-line, and my seismometer antenna feed-line, both successfully. (The results are shown in Figure IV.2): the 80-meter connector third-down, and on the right of the PolyPhaser, the seismometer connector sixth-down and on the right.) While I decided to forego tinning the tip and braid of the end of the cable, and did not use intensive diagnostics in testing the results, doing so may be advantageous in your application. Lastly, I plan on buying a couple of "F" connector PolyPhasers (IS-75F-C1) for my two TV coax leads to complete the lightning protection project.

Good Luck and 73, Corey Miller

Figure IV.2: After: New PL-259s on shortened feed-lines make for a neat and organized setup.
The 2013 Treasurer for the OCARC is Ken Konechy – W6HHC. Ken’s interest in HAM radio started while he was in junior high school near Pittsburgh, PA. He got his Novice license in 1957 as WN3MHI. After two failed attempts to master 13 WPM CW, he finally earned his General class ticket as W3MHI. Going to college at the University of Pittsburgh to become an Electrical Engineer caused HAM radio to go on the back burner for a while. Right after graduation in 1967, Ken moved out to Orange, California to work at an Anaheim aerospace company and immediately picked up his new call as W6HHC.

Ken first got involved with the OCARC through Field Day in 1967. (He proudly points out that he has only missed one OCARC FD since 1967.) He has served as OCARC President four times and has served as OCARC WEBmaster since 1999.

Ken and his wife, Diane, live in Orange. His low-band station is an ICOM 756-Pro3 feeding a Cushcraft R6000 vertical antenna (20M-thru-10M).

Ken Watching his 1.2 GHz Digital-ATV signals received on a Notebook Computer Display

Ken's favorite HAM radio activities include Field Day, chasing DX, rag-chewing on OCARC nets, learning new HAM technologies (such as digital communications, especially Digital-ATV using digital modulation), learning how to create WEB sites (to be a WEBmaster), and emergency communications. Ken has been a long member of the City of Orange RACES group called COAR. Ken is also part of a world-wide team of hams who are designing a lower-cost Digital ATV transmitter, called DATV-Express.

Ken was born outside of Pittsburgh. He moved straight to Orange County in 1967 and has stayed put ever since. (He asks: “who really wants to live in cold winters and shovel snow from driveways before going to work?”) He is currently the VP and co-founder of a small engineering company that specializes in designing cryptography and internet security software.

His favorite non-HAM activities include reading books, enjoying the Sierra-Nevada Mountains, taking cruises with his wife to far-away places, taking technology classes, and skiing.

If you get a chance to talk to Ken at a meeting…ask him about the sun-spot-cycle of 1957.
Heathkit of the Month #49:  
by Bob Eckweiler, AF6C

Another April Heathkit Article:

Introduction:
It's April again and time to find another of the more esoteric Heathkit models to write about in honor of April Fool's Day. Unfortunately, two Aprils ago when I wrote on the Heathkit GU-1810 Gasoline Powered Log Splitter, I challenged my readers to name some of the other Heathkits that run on gasoline; nobody took up the challenge at all. So last April I wrote on the Heathkit Candlestick (no kidding - #39), and again challenged you, the reader, to see how many Heathkits you can think of that run on gasoline; again no response. I can think of at least four other kits and a lot more if you consider fuels other than gasoline; but alas no one seems to care about those Heathkits, so I won't bother with one of them this April. Actually, right now as I'm writing this, I have no idea what I should write on. Let me think..., let me review my catalogs.

Oh! I found one! I found one! I found one!

Wow, here is one of the more expensive kits Heath produced. It is from the Fall 1989 Factory Catalog #217. And from everything I see about it, it is worthy of an April HOM article.

The Heathkit HS-3860-M Laptop Computer Kit:
The Heathkit catalog page states: Enjoy the power of building our most powerful laptop computer kit. And powerful it is - but not by 2013 standards. It is Intel 80386 processor based, comes with 2 MB of RAM, a 3.5" 1.4 MB floppy drive, a 40 MB hard drive and a 2,400 baud modem. The processor runs at a blazing 12 MHz (with no wait states.) And NO I didn't get mega mixed up with giga! What is impressive is the factory catalog price: $5,249.00. If you didn't want to spend that much in the fall of 1989, you could get the less expensive non-modem HD-2860 (without the -M) for $4,999. If $5k+ meant little to you in the fall of 1989 you could add an additional one MB of RAM memory for a mere $799; just order the Assembled ZA-3034-ME Memory upgrade - [Heathkit] recommend[s] you install extra memory when first assembling your kit....

The Heathkit HS-3860 Laptop computer is shown in Figure 1. It is a kit equivalent of the Zenith Turbosport 386. I have seen the computer name also spelled TurbosPORT and TurboSport on various advertising and review articles. The specifications for the HS-3860-M are given in table I. One specification that seems confusing is the weight of the HS-3860-M laptop. The shipping weight is 38 lbs., but one Heathkit blurb states: Take along the HS-3680 at less than 15 lbs. There must be a lot of packing material, or maybe it is the weight of many 3.5" floppy disks? Looking at reviews of the Zenith version of this computer, the weight with battery and AC adapter is over 21 lbs. (26 lbs in one review), and just under 15 lbs. less AC adapter and battery. But why would you take along the computer without its battery or AC adapter?

The accessories you can purchase for the HS-3860 are listed in Table II along with their prices. The numeric keypad is detachable and features 24 keys. The expansion box has slots to hold up to three PC/XT cards. It includes an AC power supply and weighs in around 10 lbs depending on what is installed in it. Since it requires AC power and adds considerably to the system’s weight, it is not something that would likely travel with the laptop.

The screen used on this computer is a backlit monochrome liquid crystal display measuring just over 6” x 8” with a 640 x 400 pixel resolu-
The graphic standard used is double-scan CGA. The fluorescent back light results in a high contrast screen with “page-white” whites. The cost of the then new LCD technology probably accounts for a substantial part of the high cost of this early laptop.

The battery used in the HS-3860 is nickel-cadmium. It is designed for fast charging - about two hours to full charge with supplied charger. Battery life, according to a review in Info-World, is about two and a quarter hours under normal operation with moderate hard-drive access. While short by today’s standards, this amount of operating time got kudos as being above average by reviews of the time.

Building the Heathkit HS-3860 Laptop:
The kit is easy to assemble. Heathkit gives it a Skill Level one rating. Heath describes level 1 kits as: Kits [that] include relatively few components and require simple, if any, soldering. A few ordinary household tools such as pliers, blade and Phillips screwdrivers, wire strippers and a pencil soldering iron are all you need.

Heathkit classified the HS-3860 as a one evening kit. The motherboard comes pre-assembled and construction involves mostly installing and plugging the various assemblies together. Of course, the kit comes with a set of easy to read manuals and pictorials that made Heathkit famous.
Included Software:
The Heathkit HS-3860 and 3860-M models came with MS-DOS. The early Zenith units shipped with version 3.21, which was soon replaced with version 3.3 that solved a partitioning problem encountered by many users when setting up their hard drive. Also shipped with the computer is Diagnostix, Integrated 7, and MS Windows (evidently a pre-mouse version of Windows!) Integrated 7 is a relational database, spreadsheet, mail-merge, business graphics, word processor, terminal emulation and communications package. It was a $795 list price program by Mosaic Software.

Costing the Heathkit HS-3860 Laptop:
Zenith began shipping the Turbo-sport laptop in April of 1988. I was not able to find out exactly when it first came out as a Heathkit. My first catalog that shows it is the Fall 1989 catalog. It was also featured on the cover of the August 1989 issue of REMark magazine, with the headline: Heathkit’s version of the Zenith Turbosport.

At this time the computer industry was in a heavy growth mode. The RAM industry was in a turmoil and RAM was just beginning to become readily available after being in short supply. In the Fall 89 catalog Heathkit announced in numerous places that they were again shipping RAM memory with their computers, so evidently for a period Heathkit was selling computers without including any, or minimal, RAM. This also possibly accounts for the seemingly high price for RAM, even in the late eighties.
Looking at the high price of the HS-3860-M, one would believe that not many were sold to hobbyists. Businesses that purchased the computer would likely opt for the assembled Zenith units. Sure enough, a Google search showed up very little on “Heathkit” and “HS3680”. I was able to find more by googling “Zenith” and “Turbosport 386”. While the prices were given in the Fall catalog, the later Winter 1990 catalog had no prices, just a notice to “Call for new low pricing!”. In my searching for more on the HS-3860 I found two interesting ads. The first (See Figure 2) is selling the HS-3860 kit for a 45% discount (non modem version). The second (See Figure 3) is selling the assembled Zenith model for a 65% savings over the stated $8,499.00 MSP. Info World lists the MSP as $7,999.00 but without the 2400 baud modem.

The HS-2860 Laptop Computer:
Heathkit also made a 286 based laptop that had a factory price of $2,799.00 dropping to $2,599 when the 386 model was introduced. The hard drive for this model was extra; you could get a 20MB drive for $697.00 or a 40 MB drive for $120.00 more.

Later Laptop Model:
Heath Zenith replaced the HS-3860 TurbosPORT Laptop with the SupersPORT HS-3286-A in mid-1991. This computer is based on the Intel 80386SX processor running at 16 MHz and capable of up to 8 MB of RAM. The disk drive, 20 or 40 MB was extra cost. No price was given for this machine; the “Call for new low pricing!” was shown instead. Interestingly, MS DOS 3.3 was included but not any Windows software. Integrated 7 was replaced by MS Works and Lap_Link.

The HS-3860 and Retro Computing:
If you are into retro computing, there are a few things you need to consider before you choose the HS-3860 or its Zenith twin. Batteries are still available by secondary battery companies; the batteries go for around $130 to $160. However hard drive replacement may present a more difficult situation. The drives are low power 40-pin IDE units. However the setup program allows you to select between a limited number of different drive configurations, none of which are manufactured anymore. The drive table is hard coded into the SETUP program with no user defined configuration capability. Thus you are limited to finding an old hard drive, one that may be on its last legs even if it is still working. The CMOS battery is built into a Dallas 1260 IC, which must be replaced. They are still readily available.

Conclusion:
When I started writing these Heathkit columns, I had planned to not feature any of their computer products, instead focusing on ham and test equipment, occasionally tossing in Hi-Fi and household products. However, this computer kit gives reflection to the fast moving computer technology that we have been living with for the past few decades. Since the HD-3860 was introduced we’ve seen hard disk storage go up by 50,000 to 100,000 times. Processor speeds go up by 200 fold and RAM memory prices drop from $800 per MB down to 1.5¢ MB, and even less.

Thus ends another April Heathkit article. Once more I put out the challenge. Email me with a Heathkit that runs on gasoline, or another fuel. If you have one you really would like to see in print, send me as much information as you can! I have a Heathkit flashlight I plan to feature next April if I don’t get any responses.

73, from AF6C

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Remember, if you are getting rid of any old Heathkit Manuals or Catalogs, please pass them along to me for my research.

Thanks - AF6C
OCARC Board Meeting Minutes for: March 9, 2013

The OCARC Board meeting was held at the Jager-Haus Restaurant, 2525 East Ball Road, Anaheim, and called to order to order by President Nicholas Haban AF6CF on Saturday, March 9, 2013. Called to order at 8:15 am and all directors were present. Also attending was Bob Harrington representing the Field Day Committee. Additionally we had a guest and new member – Doug Wood– KJ6ZNT As well as Ken’s wife joined during the breakfast portion of the meeting.

DIRECTOR REPORTS

Vice President – General Meeting Entertainment Mar Glen Overbeck on DXpeditions; Apr. Walter Clark Ionization; May Nick Sava - KD8IPE on RC controls. Treas –Ken W6HHC - dues are flowing in with about $600 coming in during February. Current account balance is $6,680.95. Secretary – two letters received in postal box. Distributed to Ken W6HHC because they contained dues. Activities – Doug will not be at March or April meetings. Jeff Hall will run Opportunity drawing in his absence. Dinner meeting before General Meeting should be postponed during next 3 months because of the Field Day training sessions running at that same time. Membership – one new member joining and Jay said his brother Atlee Hitchcock N2CNC has rejoined as well. Publicity – will need copies of Club Flyer and also a write up that Dino has done for distribution at the Field Day event. Director-at-Large – no report from either.

Old Business:

4.) June General Meeting – A “motion” to move the June General Meeting to Friday June 14th subject to Red Cross approval for use of room. After discussion this motion was carried since Field Day setup will be going on during the evening of Friday 21st when we would normally have our General Meeting.

5.) OCARC equipment inventory – Treasurer Ken W6HHC had the update to the inventory list so that it now reflects the Kenwood club loaner radio. A question was asked if it makes sense to place a value on each of the items in inventory, say for insurance purposes, however, since we only carry insurance for liability through ARRL and not on loss of the equipment then it is not needed for that reason. Also, since much equipment has been donated it would be difficult at best to arrive at a value.


7.) Field Day –

- FD Planning Meetings - Next Field Day planning meeting is March 29th. The point of Field Day is to practice emergency preparation but of course Field Day is so much more. Bob let us know that Bret Collingwood will be there again with his Scout group. Kris – KC6TOD is getting the food plans organized. At this point we are looking to have some sort of BBQ catered for Friday evening. Club will provide water and Gatorade but members will want to bring their own soft drink choice. Anticipating that members will need to donate approximately $20 per person for food cost. Operations’ planning is well under way with a flatbed being arranged to transport towers and antennas. Recommended that Field Day committee develop a “wish list” that could be distributed to members of additional equipment needed so members could offer items they have available. Doug W6FKX is looking into getting the club a vinyl banner that can be displayed at the location and other club events. Additional banners will need to be printed so that people can properly make their ways around the school site. The club 50’ tower sections will be needed this year. Additionally there will be
a 106’ tower trailer on site. As well as an antenna balloon. VE testing is planned on being offered at FD between 1-4pm Saturday and will include all license levels. School will provide access to cafeteria for this purpose. Looking for a Public Relations Officer and greeters. Kris KC6TOD has a possible lead on the PRO position. It was requested that we have printed map of the location for hand out to visitors. Badge laminator might be available at FD for members to laminate their FCC license.

- **25KW Generator** –$100 has been donated so far to offset the generator rental and fuel cost.

8.) **Mug Logo’s** – The mug logo version designated “3 Baker” was chosen by the board. Bob – AF6C will forward the hi-res graphic Photoshop file to Paul – W6GMU for purposes of ordering some demonstration mugs as approved previously by the board.

9.) **Storage Container** – It was agreed to “table” action on this item at this time with the intention that it will be explored again after Field Day.

**New Business:**

1.) **Member resignation** – Recently two members chose to “resign” in dissatisfaction with the general atmosphere of the club. It was their opinion that other members of the club were not inclusive enough towards them and one example that they gave was the disorganized approach at last year’s field day where they felt not welcome especially as individuals that did not really understand what was going on at Field Day. It was generally agreed by the board that while we cannot make people feel more included we can improve how field day is organized. It is our goal to have a more informed Field Day experience. We also want and hope that all members will come and participate in some or the entire FD event. We have “big plans” and want this to be a FD long remembered.

2.) A request was made that the minutes of the Board meeting be made available to the Board within a week after the Board meeting occurring instead of waiting for it to be published in the club newsletter. The minutes will still also be published in the newsletter however it is thought that it would be helpful to the board members to have it available sooner since often times the newsletter does not come out until either the same time that the next board meeting is held or slightly later depending on when the newsletter is published. The early copy of the minutes will be distributed by email to the board members.

3.) It was suggested that next time the board is considering amendments to the bylaws that the position title of “Publicity Director” be considered for change to the title of “Public Relations Director”

**Good of the Club**

- **M2 Antenna Systems Open House** - Saturday March 16th is the M2 Open House in Fresno – see March newsletter for more details.

- **HamCon Inc 2015**. Planning is beginning for the next Southern California HamCon event in 2015.

Adjourned at 9:54 am
Respectfully submitted by:
Tim Millard KJ6NGF, Secretary 2013.
The OCARC General Meeting was held at the Red Cross Complex on March 15th 2013. The meeting was called to order at 7:01pm. 42 members and visitors were in attendance, including 6 board members.

Prior to the formal meeting start time a radio contesting class was held, led by Jeff Hall, W6UX. These practice and instruction times will continue to take place at 6 o’clock prior to our next couple of General Meetings. This class is being held to help the membership be better prepared to take part in the contesting portion of Field. If you feel ill-prepared for the stresses and strains of contesting, then these sessions will be a great help. If you’re doing fine, consider attending anyway - your help and expertise will be useful for the rest of us as we practice.

The evening’s entertainment was a presentation by Wayne Overbeck, N6NB and Carrie Tai, W6TAI. Their presentation was called “Two Rarotonga DXpeditions, … well, sort of DXpeditions”.

Wayne N6NB is well known in the ham radio world. He is Emeritus Professor of Communications Law at Cal State Fullerton, author of books such as “Major Principles of Media Law” and author of many QST, CQ and Ham Radio magazine articles. He served as Vice Directory with ARRL during the 1980’s and early 90’s. He was awarded the ARRL Technical Excellence Award in 1977 for, among other things, designing the Quagi antenna. This also led to his being awarded the Radio Amateur of the Year award in 1980 at the Dayton Hamvention.

The island of Rarotonga is in the South Pacific Ocean and is part of what is known as the South Cook Islands. Rarotonga is about the same latitude south of the equator as the Hawaiian Islands are north of the equator.

One of the great advantages of operating DX from Rarotonga is that it is serviced by a direct flight from Los Angeles on a weekly basis. So while you might need to pack carefully and compactly, it does not require the advanced packing and shipping that other more remote DX locations require. Now direct flights are nice, but if you want to take part in a weekend contest there is a distinct disadvantage as the return flight from Rarotonga to LAX leaves on Saturday night. So you either stay an extra week for the next direct flight or wait until Tuesday and fly to New Zealand. From there you can quickly catch a flight back to LA which retraces the same route you just flew but passes right over.

Rarotonga has excellent radio conditions for contacting many parts of the Northern Hemisphere, especially when operating from the KiiKii Motel [http://www.kiikimotel.co.ck/]. The local owners encourage ham radio operators to make...
the motel their base, and Wayne and Carrie made sure they had a handy 10,15,20 meter “Tribander” in their luggage for setup at their motel base.

So how good were conditions in Rarotonga? Carrie was able to come in 2nd in Oceania for her category.

If you go there, plan on spending some quality radio time but also enjoy hiking the Cross-Island Track with its great ocean views - and chickens! You may enjoy your time there so much that you too will be making “Two Rarotonga Dxpeditions” or more.

Next up was a short OC History presentation by Tim - N6GP - on the 1953 Boy Scout Jamboree held in Orange County, including KOCE video. See article by Tim - N6GP – on Page 6 for more details.

Quick mentions from members included that the March 15th episode of the TV show “Last Man Standing” includes a minor story line where one character discovers the broader world of ham radio after she has her other electronic devices restricted due to earning low grades in school. Also, the Mohave Death Race is on for this year and there is a call out for ham operators to provide communications support. Finally, former member, Sam Goda - W6JRA - is retiring from the hobby and is selling his various equipment.

Show and Tell:

Fig04– Show-and-Tell included a demonstration by Nicholas AF6CF of an easy to assemble portable station that can be used in an emergency or just for fun in a remote location.

Nicholas’s equipment included an 18-watt solar panel, portable MP1 super antenna, a small tuner, a basic SWR meter and a MFJ -9420x as part of an emergency or go kit radio.

Fig05 – Show-and-Tell included a discussion by Ken W6HHC on the newest Digital-ATV Transmitter layout design called the DATV-Express Project.

Ken - W6HHC - showed us a photo of the latest Digital –ATV transmitter layout board design which the project team hopes to be able to make
available for less than $300. Additionally, there is a 1.2 GHz DATV repeater setup being tested on Mt. Wilson which would enhance communication between the various DATV operators in Los Angeles and Orange County basin.

Reports:
Membership – 3 new members in last month.
VP – next meeting will feature speak Walter Clark on early history of Electronics and Physics.
Treasurer – members are paying their dues for renewal.
Technical – RF newsletters scans going back to 1990 are now downloadable on club website.
FD chair – plans are progressing well. Next FD planning meeting to be held March 29th.

Meeting adjourned at 8:50pm.

Meeting adjourned at 8:50pm.
Respectfully submitted by:
Tim Millard, KJ6NGF, Secretary 2013.

Strange news these days.
Check this link:


Some OCARC Members comments after checking the link:

-I don't share this often, but I have been diagnosed with a fear of macros - macrophobia.
Tim N6GP

-I am able to nod off after making just 2 JT65A QSOs!
Sent from my iPhone while sleeping
Jeff W6UX

-I’m on a macrobiotic diet.
Paul W6GMU

-This is all macromoronic
Nicholas AF6CF

====0====

Past President Paul - W6GMU, is working to obtain some logo items, such as coffee cups that will feature the anniversary logo. Paul will be providing more information in the near future.
NOW OFFERING
ARRL AMATEUR RADIO EXAMINATION SESSIONS
(All levels: Tech, General, Extra)

Sponsoring Club: Western Amateur Radio Association (WARA), Fullerton, CA

Exam Site Location
La Habra Community Center
101 W. La Habra Blvd.
La Habra, CA 90631

2013 Exam Session Schedule
Thurs, Apr 25 (Note: This is the 4th Thurs in April)
Thurs, May 16
Thurs, Jun 20

Exam Sessions begin at 6:00 PM

Contact VE: George T. Jacob, Jr., N6VNI
Phone: Home 562-691-7898 Cell 562-544-7373
Email: N6VNI@ARRL.net

Pre-registration is requested and preferred – Walk-ins are welcome, but please arrive within 15 minutes of the published start time or call the contact VE if you are going to be late as the exam team will close the session if there are no candidates by that time.

On Exam Day Bring the Following Items

1. A legal photo ID (driver’s license, passport) or
   Two forms of non-photo ID; e.g., birth certificate, social security card, library card, utility bill or other business correspondence with name of the examinee as it appears on the Form 605 and current mailing address.
2. Your Social Security Number (SSN) or FCC-issued Federal Registration Number (FRN).
3. If applicable, the original and a photocopy of your current Amateur Radio license and any Certificates of Successful Completion of Examination (CSCE) you may have from previous exam session. (Photocopies will not be returned.)
4. Two number two pencils with erasers, and a pen.
5. A calculator with memory erased and formulas cleared (no iPhones, iPads, etc.).
6. Test Fee: $15.00 (cash or check).

If you fail an element and wish to retake it, we are required to charge an additional test fee. If you pass an element, we typically offer and encourage you to take the next element. We do not charge an additional test fee for this and it gives you the opportunity to see what the next exam element is like!
Selected Upcoming Special Event Stations
(Source: www.arrl.org)

- 03/18/2013 | Omagh St Patrick's Day Parade and Festival
- 04/27/2013 | 222nd Birthday of Samuel F.B. Morse

QST QST QST W6ZE Field Day University for Phone Operators!

OCARC is commemorating its 80th year with a major Field Day operation! For our members who prefer to operate Phone there will be a 3-part training series offered for you to expand your CQ-ing and logging skills. Members of all Field Day experience levels are encouraged to attend!

These sessions will be held in our club's normal meeting room @ The Red Cross, 1 hour prior to the general meeting:

Class 1: Friday, March 15th @ 6:00 pm—COMPLETED
Fundamentals of holding a frequency, calling CQ, and exchanging Field Day reports

Class 2: Friday, April 19th @ 6:00 pm - Logging with N3FJP software (while you hold the frequency!)

Class 3: Friday, June 14th @ 6:00 pm - "pileup" management and fixing mistakes (while you hold the frequency AND log!)

You will start with the basics and progressively add dimensions to your operating. Attend these classes and you'll prepare yourself for maximum fun on Field Day!

Please RSVP with Jeff, W6UX (W6UX@W6ZE.ORG). This will help ensure there are enough handouts and instructors for each class.

See you there!
## Cash Flow - YTD
### 1/1/2013 through 4/4/2013

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