

# RF



## ORANGE COUNTY AMATEUR RADIO CLUB, INC.

VOL. LIII NO. 05

P.O. BOX 3454, TUSTIN, CA 92781-3454

May 2012

### The Prez Sez.....

by Paul W6GMU



Howdy, All!

May is the month when we all realize that Field Day is close, as in "**Next Month**"! By now, all Field Day participants should be firming up their plans for setup, operation and team member schedules, perhaps even finalizing them. We're hoping to have a great event with many folks attending and on-air participating.

Dee is doing her very best to ensure that OCARC FD will be

enjoyable for all of us. Please contact her for further info.

Our General Meeting will be held on May 18<sup>th</sup>, featuring our very own Secretary, Ken Konechy, W6HHC delivering a presentation on the seemingly magical world of Digital-ATV.

Enjoy and I'll look forward to seeing you at the Meeting,

73 de Paul W6GMU  
The "Prez"



### Special Announcement!!

**Kris Jacob** has won the **2011 Clipperton Award** from the So Calif DX Club in Visalia. This is the "Rookie of the Year" award for the new SCDXC club member contacting AND confirming the most countries in 12 months. <http://www.scdxc.org/awards.html>

### Next Meeting

Our General Meeting will be held on May 18<sup>th</sup>, featuring our very own Secretary, Ken Konechy, W6HHC talking on Digital-ATV:

### DATVexpress Project (A low cost approach...)

**Item of Note:** Nicholas AF6CF won't be at the May meeting in that he and his wife are traveling around Western Europe enjoying a "Vacation". Enjoy!!! -Ed.

The next general meeting will be on:

**Friday, May 18th  
@ 7:00 PM**

As usual, we will be meeting in the east Red Cross Building, Room 208. See you there!

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AMATEUR RADIO CLUB**  
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**Monthly Events:**

**General Meeting:**

Third Friday of the month  
at 7:00 PM  
American Red Cross  
601 N. Golden Circle Dr.  
(Near Tustin Ave. & 4<sup>th</sup> 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.

## City of Orange PD Communications during the Baker-to-Vegas Race 2012

by Ken W6HHC

Since 1985, 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 LVH Hotel (previously known as Hilton) in Las Vegas. (see **Fig 1**) The B2V race is broken into 20 "legs" or stages. This year, more than 275 different law enforcement teams participated. 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, nine OCARC members helped the OPD running team by providing planning and communications over the entire race course...and three more OCARC members helped the OC RACES organization.

The COAR RACES activities for the 2012 races began at least six months before this years race began. The COAR B2V communications project required the following five phases:

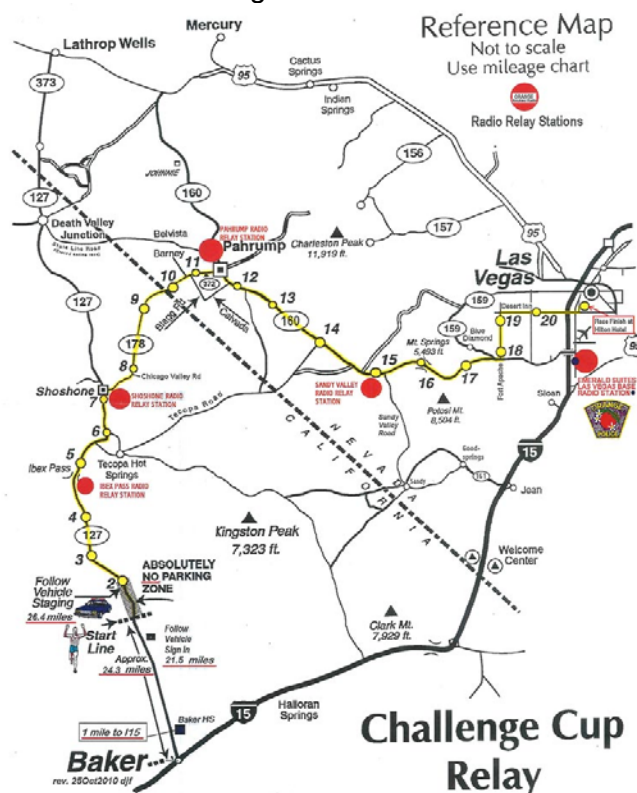
- Planning Sessions
- Equipment Testing Workshops
- Equipment Set-up for the Race
- Staffing and Operating the B2V event
- Post B2V Review Sessions

The City of Orange RACES plan was to set up five communications centers along the B2V race course in order to provide a "communications backbone" to support the mobile units used during the race.

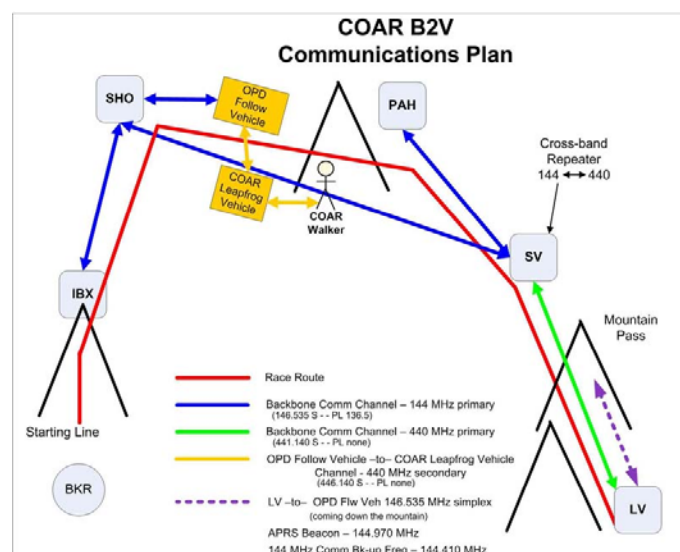
- Ibex Pass, California
- Shoshone, California
- Pahrump, Nevada
- Sandy Valley Road (near Rt 160), Nevada
- Las Vegas, Nevada

The race started on Saturday April 21 and finished Sunday morning. This year, the Orange PD running team finished very well and placed 42 out of more

than 275 teams. The race through the desert was really "extra difficult" this year. The temperatures at the Start Line were 110 degrees! The asphalt was measured at 150 degrees...some shoes melted!



**Fig 1 – Map of 120-mile-long B2V Race that starts about 18 miles outside of Baker on Route 127. Red DOTS are COAR Communication Centers.**



**Fig 2 – This Diagram is the 2012 Communications Plan for COAR RACES. The Orange PD runner's Follow-Vehicle was always in contact with one of the five COAR Communications Centers.**

(Diagram by Ken W6HHC)





**Fig 3 – Rich KE6WWK stands on his motorhome with the antennas set up for the testing session for radios to be used at Las Vegas two weeks before the Baker2Vegas race.**

(Photo by Sam W6RDS)



**Fig 4 – Ken W6HHC (seated at far right) set up a test bench for voice radios and APRS to be used at the Pahump Comm Center at his QTH**

(Photo by Ken W6HHC)



**Fig 5 – Les KM6SQ and Dick N6ISY teamed up to set up a testing of the cross-band repeater at QTH of N6ISY. The small trailer holds the radios. Large trailer will be “living quarters” at Sandy Valley Rd. The HF beam was not used.**

(Photo by Les KM6SQ)



**Fig 6 – This group photo taken at meeting before the race shows some of OPD runners (Team #51), some of their support team, and some of the COAR RACES hams (in the yellow shirts).**

(Photo by Bobbie KG6MIF)



**Fig 7 – OPD Follow-Vehicle gets loaded with runner supplies and four antennas installed (2 voice, APRS and GPS).**

(Photo by Bobbie KG6MIF)





**Fig 8 – An OPD runner, Dave Pasino, finishes Stage 4 in the heat and has a bottle of water poured over him.**  
(Photo by Quent W6RI)



**Fig 9 – As night falls at 8 PM...the runner exchange point at Stage 7 near Shoshone lights up.**  
(Photo by Quent W6RI)



**Fig 10 – In Shoshone, (L-R) Rich KR6BA and Steve KB6ROL ran the Comm Center in Shoshone.**  
(Photo by Bobbie KG6MIF)



**Fig 11 – At Pahrump Comm Center, Dave KG6RWU (center) and Jay KI6WZU send a message to LV by X-band (146→441) repeater. Polly KG6CUK is on left.**  
(Photo by Ken W6HHC)



**Fig 12 – The Comm Center located at Sandy Valley Road is “in the middle of nowhere”!! There are no fancy hotels (like in Shoshone). The cross-band repeater kept communications flowing on both sides of the mountain ridge.**  
(Photo by Dick N6ISY)



**Fig 13 – Sandy Valley Road is hot, windy and provides long hours. But, if you are lucky...you can take the time to enjoy some outstanding sunsets.**  
(Photo by Dick N6ISY)



**Fig 14 – At Las Vegas Comm Center are (L-R) Steve KI6DDE & Mike KF6QFY are waiting for the race to begin.**  
(Photo by Sam W6RDS)



**Fig 15 – This group photo shows most of the 28 ham volunteers who helped COAR RACES provide communications for OPD.**

# OCARC Field Day Planning

by Dee N8UZE

Field Day is a major event in the amateur radio community. Although it may not be possible to commit for the entire event, even a half an hour of your help is helpful. So please sign up at the upcoming meetings. Our category and the number and type of antenna installations will depend on how many volunteer to help. We need more people to help with setup and teardown. Additional operators are needed so that no one gets too worn out. The following list is a summary of the current status.

- **Band Captains** (We also would like commitments for additional bands - 80, 15, 10, VHF, UHF. Bands can be combined such as an 80/10 station)
  - 20 meter CW – Paul, W6GMU
  - 20 meter PH – Ken, W6HHC and Bob, AF6C
  - 40 meter All – Tim, K6GEP and Doug, W6FKX
  - 80/10 meter All – If no other volunteers, Dee N8UZE tentative
  - GOTA – Brett, W6BAC – tentative
  - Satellite – Jay, KI6WZU
  - VHF/UHF – Robbie KB6CJZ
- **Bonus Point Volunteers**
  - Media Publicity – Tim, K6GEP
  - W1AW message – Jeff, W6UX
  - Natural Power – Nicolas, AF6CF
  - Visit by elected official – Jeff, W6UX will look into
  - Educational Activity – Bob, AF6C
- **Other volunteers** (we need many more volunteers in these areas)
  - Operators – 3
  - Setup – 5
  - Teardown – 3





## TechTalk #100 (Bob's Tech Talk #45)

### Soldering - Basic Information by Bob Eckweiler, AF6C

#### Introduction

Soldering is a process of using a low melting temperature metal alloy to join two pieces of metal together. The process is also often used for coating metals. Plumbing and stained glass assembly are just a few of the many places where soldering is employed.. Soldering is used heavily in the electronic industry to connect circuits together. This white paper focuses on the process of soldering as it relates to the electronic hobbyist and ham operator.

Soldering involves heating the components to be joined as well the solder. Assuming the items to be joined are clean, when the area of the connection reaches the correct temperature the solder melts and binds the metal parts to be joined together when it cools. The success of soldering depends on cleanliness, proper temperature and keeping the connection still while the solder cools.

#### Solder Types

Solder comes in many alloys, integral flux types, and sizes. A quick survey listed over 150 different types of solder alloys, on top of that solder often contains one of several types of flux. We'll discuss flux in a bit. Solder also comes in different shapes and sizes. Most common is the wire shape, though sheet, bar and even brick shapes are available for specific uses.

In hobby electronics you will mostly be using wire solder; however even wire solder comes in numerous diameters. Wire solder can be found diameters from 0.125" (1/8") down to 0.015" and probably smaller. The largest solder you will probably use for electronic soldering is 0.062" (1/16"). This is good for chassis terminal work and "UHF" and "N" type coaxial connectors. Solder with a diameter of 0.040" or

0.031" (1/32") is normally used for through-hole circuit board hand assembly and can be used in place of the larger diameter solder if the larger size is not available. Just realize that you have to use a longer length of solder to get the same volume and sometimes the extra movement can add a bit of difficulty to feeding the solder. The small 0.022" (and even smaller diameters) are used for fine work and hand soldering of surface mounted components.

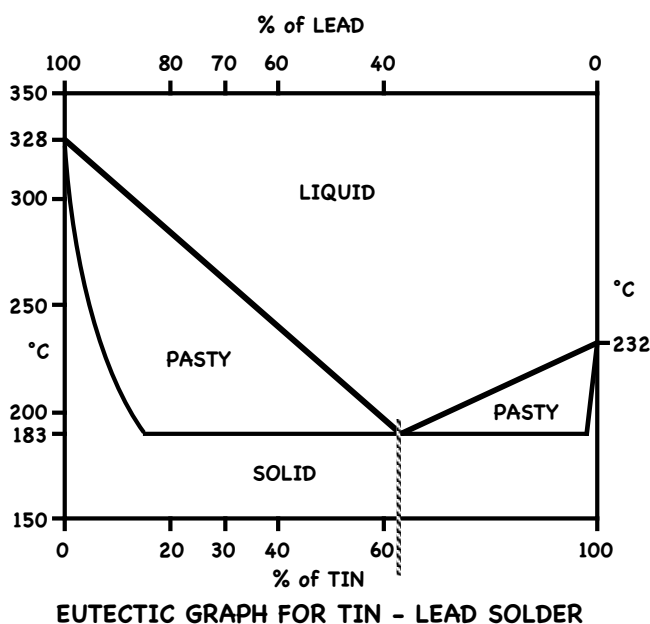
For many years the most common solder type for electronics contained an alloy of tin and lead (sometimes with traces of silver and or copper added). With the recent environmental movement, lead in solder has become less popular and lead-free solder is becoming more of a standard. Lead is a known heavy metal poison and while exposure during soldering can be controlled, the scrapped electronics that is ending up in our landfills contains a lot of solder that can leach lead into the soil. Many newer electronic components are now marked as RoHS (Restriction of Hazardous Substances) in part indicating the use of lead-free solder.

Tin-lead solder however has a lot of advantages for general electronic work for the hobbyist. For electronics it is usually found in a ratio of 60:40 - often designated SN60, or 63:37 - often designated SN63. The two numbers between the ratio colon are the percent of tin to lead. SN63 is ideal as it is an **eutectic** mixture (we'll discuss eutectic in a separate paragraph). SN60 is close enough to the eutectic point to work well, is less expensive and more readily available. Until lead-free solder came on the scene SN60 was the solder used for mostly all common electronic soldering.

#### Eutectic Point of Solder:

So, what is the eutectic point? Pure tin melts at 232°C; pure lead melts at 328°C. When you combine them the melting point of the alloy is lower than either element and varies with the ratio of the two. At one particular ratio the alloy melts at it's lowest temperature. This is the eutectic point. For tin-lead solder that point is

63% tin and 37% lead and has a melting point of 183°C. At this point the alloy goes from solid directly into liquid. At all other mixtures of tin and lead the solder goes through a stage of being "pasty" where the paste is one element being liquid and the other being solid particles within the liquid. This is illustrated in the following graph with the eutectic point marked by the broken line:



**Figure 1:**

If you look at the point for 60:40 tin-lead solder (just to the left of the eutectic point) you'll see there is a small temperature range where the solder is pasty. When you solder you want to be sure that the solder and the area it touches is above this pasty temperature zone. You also want to be sure that when the solder joint is cooling that the parts are held steady while the solder cools through this pasty zone. SN60 solder reaches its liquid state at 188°C so the pasty point is only 5°C wide and generally easily managed.

Solder can also contain other elements; trace amounts of silver and/or copper are sometimes added. These are elements that are dissolved by solder. While the copper in wire being soldered is not a problem, soldering iron tips often contain copper and the solder will erode these tips over time. Also silver bearing solder is sometimes recommended for soldering silver plated components such as plate coils. Silver and copper also add some additional tensile strength to the soldered joint.

As mentioned earlier, lead-free solder is becoming more prevalent in the electronic industry. The solder that comes with the soldering practice kit used in the club's soldering class contains lead-free solder that is 99.3% tin and 0.7% copper. It has a rosin flux core. This variety of solder melts at 227°C, 39°C higher than common SN60 solder. It is an inexpensive solder (actually the word cheap was used in the reference I perused) and is recommended for lead-free wave soldering. I must admit I have never used this type of solder, so I brought SN60 solder for students to use in the class if they desired. I recommend that you do use the SN60 solder, at least while you are new at soldering. You can switch to other RoHS solder after you gain experience. The chart on the next page lists a few common solder types and their specifications. Many of these are available at Radio Shack as well as electronic distributors.

### Flux

Flux is a reducing agent used to remove oxidation and help clean the parts to be joined. Flux can come as a liquid or paste and most wire electronic solder includes flux integral to the solder, usually inside one or more "cores" running lengthwise. "Solid wire" solder has no flux.

NOTE: ALL GUARANTEES ARE VOIDED AND WE WILL NOT REPAIR OR SERVICE INSTRUMENTS IN WHICH ACID CORE SOLDER OR PASTE FLUXES HAVE BEEN USED. WHEN IN DOUBT ABOUT SOLDER, IT IS RECOMMENDED THAT A NEW ROLL PLAINLY MARKED "ROSIN CORE RADIO SOLDER" BE PURCHASED.

**Figure 2: Flux Warning Accompanying Many Heathkits**



COMMON TYPES OF ELECTRONIC SOLDER							
CLASS & Designation	Tin (Sn)	Lead (Pb)	Silver (Ag)	Copper (Cu)	Melting Temperature	Eutectic	Comments
<b>LEADED:</b>							
<b>SN60</b>	60.0%	40%	(none)	(none)	188° C 370° F	(close)	Most common electronic solder
<b>SN63</b>	63.0%	37%	(none)	(none)	183° C 361° F	Yes	Less common eutectic version of SN60 electronic solder
<b>62/36/2</b>	62.0%	36%	2.0%	(none)	179° C 354° F	Yes	Higher strength tin-lead solder
<b>LEAD FREE:</b>							
<b>99.3/0.7</b>	99.3%		(none)	0.7%	223° C 433° F	Yes	(Inalloy 244) Supplied with soldering kit.
<b>96/4</b>	96.0%		4.0%	(none)	225° C 437° F	No	(ASTM96TS) Radio Shack 64-025
<b>99.2/0.3/0.5</b>	99.2%		0.3%	0.5%	221° C 430° F	No	Radio Shack 64-089 (0.022") or 64-091 (0.05"). Poorly reviewed.

**Figure 3: Common Types of Electronic Solder**

The two most common types of flux are acid and rosin. Acid core solder is primarily used for plumbing and metal work. It should not be used for electronic soldering. In the 40's and 50's acid core solder was very common and if used in electronic assembly will cause severe damage over a short period of time to the instrument. Most Heathkit manuals included a warning about acid core solder (See Illustration).



Figure 3 - Kester 44

Most electronic solder uses a rosin core flux. New organic fluxes are also sometimes found in some electronic solder. We will be using only solder with integral rosin flux, commonly referred to Rosin Core Solder.

Flux can also be found as a paste that comes in a small container or a liquid in a glass or plastic bottle. Generally this is not used for general electronic assembly, but certain non-corrosive types can be useful for tinning wires and coaxial cable braid. It can also be used when soldering to a plated steel chassis or working with brass or other metallic solderable shields. Choose the flux paste you intend to use carefully. Some "NoKorode™" solder paste actually is corrosive. Liquid rosin flux can be purchased and is okay to use on electronic circuits, especially if your solder doesn't contain a flux core.

### Soldering Guns and Irons

The obvious tool you will need is a soldering iron. They come in many different styles and wattages. Before I recommend one, let's look at what is out there.

One style that is common is the soldering gun. Weller and Wen are two manufacturers. These irons are shaped like a gun, hence their name;

they have an internal transformer that converts the AC line voltage into a very low voltage at high current. The current passes through the tip and the resistance in the tip creates a high heat quickly when the trigger is pulled. The tip also cools quickly, making it great for quick jobs. The guns vary in wattage from typically 80 to 250 watts. Some of the Wen models had thermal regulation and tips covering 25 - 100 watts, 100 to 200 watts and 200 to 450 watts. Besides generally being higher wattage than needed for some circuit work, soldering guns can be heavy and hard to get into tight places. A nice feature of the Wen and Weller soldering guns is that they have small light(s) that illuminate your work. Soldering guns can be helpful when soldering large connectors. However unless you find a light low-wattage soldering gun, I'd recommend a pencil soldering iron.

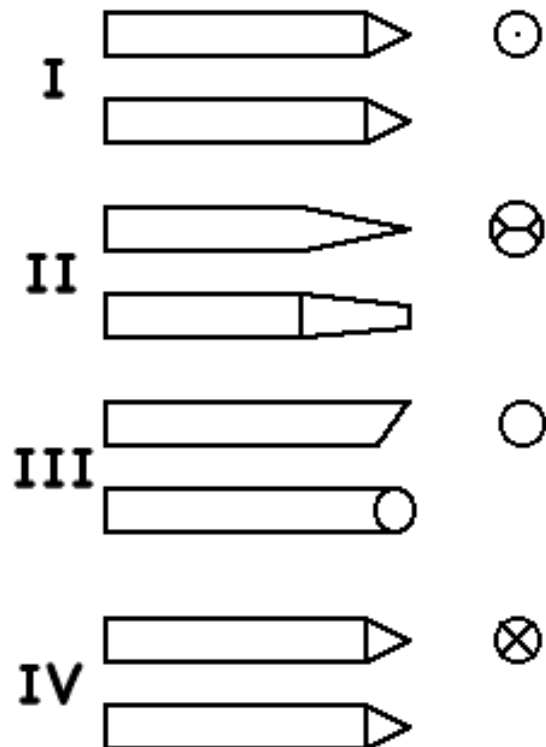
Pencil soldering irons either come as a complete unit or as a modular unit. The complete units sometimes have a replaceable tip, but are fixed as to their wattage. With the modular iron you can choose your handle among various styles, add a heating element for the job you need and select a tip that fits your job. The heating element comes in various wattages and temperature ranges; it screws into the handle and can be changed easily (with tools it can be done while still cooling). Similarly, the tips screw into or on the heater element and can be changed; you have to be careful though to use an anti-seize compound or else the tip can freeze on the element. Tips and elements come as either "thread-on" or "thread-in" depending whether the tip's thread is male or female.

Soldering stations are soldering irons with a built-in temperature sensor and adjustable temperature control. Some have digital read-out. They are handy, but not necessary for the casual amateur hobbyist. I'd start with a pencil iron which is always handy because it can be thrown into your toolbox unlike a soldering station.

The iron wattage depends on the job at hand. A 20 - 30 watt iron is good for most circuit board work and point to point wiring. A heavier iron is preferable when soldering chassis ground lugs and heavier wiring, where the heat gets drawn away rapidly by the mass of metal. An iron of 60 to 100 watts works well here.

### Soldering Iron Tips:

There are four general types of soldering iron tips, as well as numerous special tips for specific tasks. The four general types are shown in the figure below; their actual names sometimes vary depending on the angle of the taper. Type I includes cone, pencil and tapered needle - tips that come to a point; Type II includes chisel and screwdriver - tips that come to an edge; Type III includes spade - a circular shaft (usually a small diameter) with a diagonal flat cut in the end; Type IV includes pyramid - a circular shaft (usually a large diameter) with three or four diagonal cuts at the end that come to a point.



**Figure 4: Different Soldering Iron Tips**

Tips screw into or onto the heating element (some less expensive irons and many heavy

duty irons have tips that slide in and are held by a setscrew). If you want to be able to easily remove the tip it is imperative that you use an anti-seize compound on the threads and tighten the tip only hand tight. I usually leave my tips loose when not being used. Ungar sells a tube of anti-seize compound #8001.

Special tips include ones for unsoldering integrated circuits by heating all the pads at once, and ones with forked tips for bending wire on terminals, just to name a few.

### Unsoldering Tools

Part of learning how to solder is learning how to remove soldered components and wires. There are numerous unsoldering tools the electronic hobbyist can use. It can make correcting a mistake or changing a failed component a less difficult task. There are two basic types of tools, one that uses suction or a vacuum to draw molten solder away from the connection, and the other uses a material that is heated at the connection and soaks up the molten solder.

Expensive vacuum unsoldering tools are available, usually as part of a soldering rework station. Various less expensive "solder suckers" either have a suction bulb or a spring loaded vacuum plunger that allows you to use your iron to heat the connection and then, with the solder molten, suck the solder into the solder sucker. These devices have high temperature *Teflon* nozzles the limit the melting of the tip. They need to be cleaned often, as the tip tends to clog and the spring loaded devices need to be taken apart, cleaned and lubricated when they start to show signs of leaking.

A combination solder sucker heating iron is also manufactured. It has a hollow soldering tip that connects to a vacuum bulb. Heating the connection and then releasing the bulb can quickly clean solder from a connection. Radio Shack sells an inexpensive version, Model 64-2060 for \$12. It is 45 watts which helps heat the area quickly. Extra tips are available for \$2.00.

The best known solder absorbing tool is *Solder Wick* (which is now available under numerous other names). It is a piece of braid that is saturated in rosin flux. You apply it to the connection and heat it just as if you were soldering the braid to the board. The fine braid, aided by the flux, soaks up excess solder into the braid, removing it from the connection. It is most useful on circuit boards. *Solder Wick* comes in various braid widths depending upon the job at hand. The soldering practice kit includes a wicking braid, and students will get to practice with it.

### Other Tools:

There are numerous other soldering aids available. Heat sinks that clamp on to leads to keep the heat away from the component being soldered; I usually use a hemostat, but often a heat sink is not needed except for soldering critical components.

General Cement used to make a set of five soldering aid tools. These double ended pick-like tools are made of a chromium alloy that solder will not stick to. They have various ends for picking, reaming holes, bending wires, etc. They also have a stainless wire brush and scraper. I've never owned a set of these tools, but there were numerous times when I wished I had them handy. Harbor Freight sells some knockoffs of these tools for a few dollars each. Look in the soldering/welding section.

Anti-Seize was mentioned earlier. You just put a very small dab making sure you totally cover the threads of the tip and tighten the tip hand tight. Next you heat the tip and be sure to tin the tip if it hasn't already been tinned. The anti-seize puts off a lot of smoke when it first heats up so be careful not to breath the vapor.

A very important soldering accessory is a soldering iron holder. Radio Shack sells the model 64-2078 for \$9. It comes with a sponge for cleaning the tip. Most irons come with little wire or metal holders that are only the minimum of basic in design. If you solder regularly a holder is a good investment in safety.



Another soldering accessory is a tip cleaner. Many holders have built-in sponges. Weller/Ungar sells a high temperature plastic sponge holder with special refillable sponges. When I don't have a proper type sponge handy I just use a damp paper towel; it works as well! Ungar, which used to be a big name in soldering tools was bought by Weller and Weller is now a division of Cooper Tools.

### Soldering Safety:

Never leave your soldering iron unattended. Always be sure it is unplugged after use. Keep the work area you are soldering on free of flammable items. A hot unattended soldering iron is a fire waiting to happen! Be extra cautious of the soldering iron cord. Keep the tip away from the cord so you don't melt the insulation.

A soldering iron can give you a nasty burn. Be attentive to where the hot end is at all times. Make sure the cord is free from becoming entangled and is long enough to reach your work easily. If you do get burned, immediately put it under cool running water and leave it there. You want to cool the burned area. If it is a severe burn you should seek medical help. You might want to brush up on burn first aid before you do too much soldering. I'm not a doctor so I'll leave any further discussions to the experts.

If you get too much molten solder on the tip it can drop off. If it lands in your lap or on your thigh it will go through loosely woven clothing and burn you. Also, don't wear nylon or easily melted synthetic clothing when soldering if there is a chance a blob of solder could drop onto any part of your clothing. It is best to keep the work over the table to prevent this. However, sometimes you just can't, so take precautions to keep the molten solder from landing on you should a blob drop from the tip.

Lead is a heavy metal and you want to keep from ingesting lead based solder (probably all other solders too.) After handling solder you should wash your hands. Standard care should

be given handling solder. Keep it away from young children. Follow the warnings on the solder and flux packaging.

When you heat solder it gives off smoke and fumes. Rosin has a pleasant smell to many people, but to some it can cause an allergy. The best solution is to solder in a well ventilated area and to use a fan to keep the solder from rising right into your face. I use an old surplus "muffin" fan for this. It doesn't need to blow too hard. When you first fire up a soldering iron it often emits a lot of smoke. This is especially true if you have used anti-seize on the tip. Be extra cautious of the smoke when you are first tinning the tip on a new iron. The smoking will stop after a few minutes.

### My Soldering Iron Recommendation:

If you are looking for a practical first soldering iron let me recommend the Weller SP23L. It sells for around \$17, and is available at ACE Hardware and probably many other hardware stores. It is 20 watts and adequate for most jobs around the shack. The L designation signifies that the iron has a neon light in the handle signifying that it is ON. I've used an older Weller SP-23 (black handle with no light) and it has given me many years of good service. Replacement screw in chisel and point tips are available for the SP-23(L).



Figure 5: Weller SP23L with extra tips

Happy Soldering!

73, from AF6C



## OCARC BOARD MEETING MINUTES 2012-04-14

The OCARC Board meeting was held at the JägerHaus Restaurant, 2525 East Ball Road, Anaheim, and called to order by President Paul Gussow W6GMU on Saturday, April 14.

### DIRECTOR REPORTS:

- **VP** – Newly elected VP, Robbie KB6CJZ, reported that he now has leads on four programs for future OCARC program presentations: Digital-ATV, How to Use OCARC Web Site, Repeater Interference, and Using Solar Panels.

- **Treas** – Bob AF6C reported that the OCARC had banking accounts totaling \$6,524. Bob is changing the price to order a new badge to \$1.50 by mail. Bob made a motion to formally change the membership dues structure for new members joining in the second half of the year

- **In Q3** – new members can either pay \$10 to join for the rest of the year...or pay \$25 in order to pay for the rest of the year plus all of the next year.
  - **In Q4** - new members can pay \$20 for the rest of the year plus all of the next year.

The board approved the modified dues structure motion. The new badge pricing and dues structure will be listed on the club web site.

- **Publicity** – Tim K6GEP is currently working to get Channel 5 TV to publicize our Field Day.

### OLD BIZ:

#### • Newsletter Editors

- May – Paul W6GMU
- June – Nicholas AF6CF
- July - ???

- **FD GENERATOR TRAILER** – Ken W6HHC reported that Paul Miles WA6LJV has offered to store the club's trailer that currently carries the club's old FD generator. The move will probably occur in late May. A discussion was held about storing all of the club's scattered assets in a used shipping container. The containers are fairly inexpensive...less the than yearly costs of a storage locker. Perhaps the Red Cross offer to store the trailer could be transformed into an offer to store the shipping container, instead?

### NEW BIZ

- **OCARRO** – The OCARC representative at the OCCARO meetings, Paul W6GNU, reported that a new focus for OCCARO will be to get young people into ham radio. Your ideas will be welcomed by the Board.
- **Club E-Mail Adr for FD Chair** – Ken will set up a club e-mail address for our FD Chair, Dee N8UZE. The new e-mail address will be N8UZE@W6ZE.org

### GOOD of the CLUB

- **Mobile Drive-in Show** – There was strong discussion to "just do it" on holding an informal event to show off mobile rigs of our members before a club meeting this summer.

Respectfully submitted by:  
Ken Konechy W6HHC, Secretary



## OCARC GENERAL MEETING MINUTES 2012-04-13

The OCARC April General Meeting was held at the Red Cross complex in Santa Ana on Friday evening, April 13th, 2012. [NOTE: the OCARC General Meeting was held one week earlier than normal in order to avoid conflict with two important events – The Visalia DX Convention and the Baker-2-Vegas Race.] There were a total of 38 members and visitors present. Six club officers were present for a quorum....only Doug W6FKX, Kristin K6PEQ, and John W6JOR were absent.

The club President Paul W6GMU introduced our speaker, Dee Flint N8UZE, who spoke on:

### "Fine Art of QSLing...and Basics of LoTW"



**Dee N8UZE presented an outstanding talk on How to QSL with improved Success**

Dee N8UZE explained that there are basically four types of QSL cards that you can use:

- "paper" QSL cards (via postage mail)
- Logbook-of-The-World – LoTW (on line)
- eQSL (on line)
- E-Mail QSL cards (via e-mail)

She also recommended that there are four ways to pre-pay for the return of the other ham's QSL card;

1. Self Addressed Stamped Envelope – SASE
2. "Green Stamps" – dollar bills
3. International Reply Coupons – IRC
4. PayPal

### OLD BUSINESS

**VP Position** – At the March meeting Paul W6GMU announced that OCARC VP Carl N8AE resigned due to

time conflicts with his new job. At the April meeting, Nicholas AF6CF led the nominations efforts to elect a new VP from the floor. Robbie KB6CJZ accepted a nomination from the floor....and was elected to position of VP by the membership.

- **Field Day** – Dee N8UZE announced that there were sign-up sheets for members to sign up for helping on various bands at FD. Also Dee had a sign-up sheet for people to offer to sponsor a specific area of bonus points for the FD contest.
- **Soldering Class** – Bob AF6C reported that the last of the soldering classes was completed just before the regular club meeting started that night.

### NEW BUSINESS

- **OCCARO** – The chair of the Orange County Council of Amateur Radio Organizations (OCCARO), Kristine KC6TOD, reported that it is quite possible that the Ham Radio booth would not be implemented this year, because a suitable location at the fair had not been found. Kristine KC6TOD went on to explain that OCCARO will be turning its focus to promoting ham radio to young people

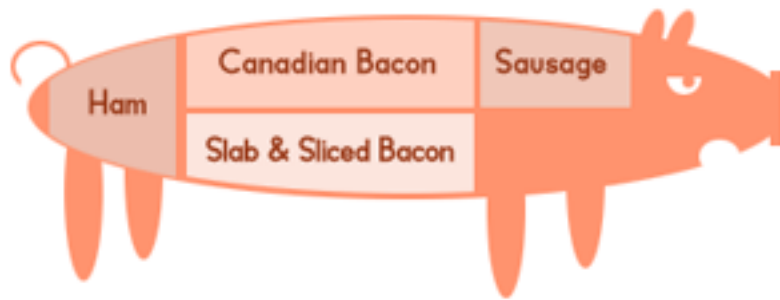
Respectfully submitted by:  
Ken Konechy W6HHC, Secretary

## OCARC WEB SITE TOPS 75,000 VISITORS

Ken W6HHC, OCARC web master, reported that in early April 2012, the number of visitors to the W6ZE.ORG website since May 1998 has reached 75,000! Ken stated "This year the OCARC website has been averaging over 750 visitors per month! This is compared to the 200 visitors per month we used to see back in early 1999."

As a note: the counter that OCARC uses on our web site to collect the visitors numbers is very "conservative" because it only counts visitors who "come in through the front door" (that is: the front page - aka the "index" page). Many visitors use links from a Google search that take them directly to a specific page or file (like newsletters). For a comparison, the club's web host (1 AND1) analysis tools show that the OCARC monthly number of visitors this years was actually more than 10,000/month.





## Ham Cuisine

*by Kristin, K6PEQ*

### Herbed Pepper Crusted Pork Loin Roast

#### Ingredients:

- 4 tablespoons black cracked pepper
- 4 tablespoons grated Parmesan cheese
- 4 teaspoons dried basil
- 4 teaspoons dried rosemary
- 4 teaspoons dried thyme
- ½ teaspoon garlic powder
- ½ teaspoon salt
- 1 3-pound boneless pork loin roast

#### Directions:

1. Pat pork dry with paper towel.
2. In small bowl, combine all rub ingredients
3. Apply rub to all surfaces of the pork roast
4. Place roast in shallow pan
5. Cook in a 350 degree F oven for an 1 hour
6. Check temperature and make sure it reads 145 degrees F
7. Remove roast from oven and let rest for 10 minutes

Would be great with some mashed potatoes or sweet potato pie and cornbread. I know what I'll be having for dinner soon!

Serves 6-8, with leftovers.

## The Puzzler Answer:

The answer to last month's Puzzler complements of Fried WA6WZO is:

**S E N D**  
**+ M O R E**  
**M O N E Y**

With a little (actually for me a lot of) thought you will find the answer to be:

**9 5 6 7**  
**+ 1 0 8 5**  
**1 0 6 5 2**

This will be the last Puzzler in this series due to a lack of interest and response. I did work out the answer, but got zero other responses. The ICOM 7800 (or whatever the prize that was to be chosen by the Puzzler awards committee) will not be awarded!

Bob - AF6C

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