



RF



ORANGE COUNTY AMATEUR RADIO CLUB, INC.

VOL. XLIV NO. 5

P.O. BOX 3454, TUSTIN, CA 92861-3454

May 2003

The Prez Sez:

On April 30, Ken W6HHC and Bob AF6C went with me to the meeting between us (OCARC) and the City of Santa Ana Parks, Recreation and Community Services Agency. The Agency again granted OCARC the use of Portola Park, for Field Day, and still with no charge to the club. A big OCARC thanks goes to the Parks and Recreation Agency.

I want to give Ken a big thank you, for all of the work he did in getting the meeting scheduled and having all of the information ready, the meeting went very smoothly.

We need a volunteer to take over as the 40 Meter band captain. I hope to have somebody by the end of our next general meeting. Remember the next meeting is May 16.

See you at the meeting,
73's---Lowell-KQ6JD

Field Day is Coming!!!

**Mark your Calendar to
Come to FD – June 28 & 29**

This is the most fun event of the year for the OCARC. And everyone is invited and welcome to:

- Look at the activity and/or
- Help operate/log and/or
- Help setup/teardown and
- Come for 1 or 2 hours or
- Come for 24 hours

Field Day is a practice of an emergency communications event that lasts for 24 hours. The FD contacts start at 11AM on Saturday, June 28, and continue until 11AM on Sunday, June 29. Setup of equipment will begin at 7AM in Portola Park in Santa Ana (on Santa Clara Ave, west of Tustin Ave.)

The club will provide food for dinner and breakfast.

Plan to come even if you can only stay for 1 or 2 hours.

April Meeting

The guest program speaker will be April Moell, WA6OPS who will discuss the key issues of amateur radio support of hospitals during emergencies.

.....HDSCS

The Hospital Disaster Support Communications Systems is a specialized unit of the Amateur Radio Emergency Service (ARES) in Orange County. HDSCS claims to be the first and largest ARES unit dedicated solely to hospital support.

Don't miss it. All members and visitors are welcome.

The next general meeting will be:

**Friday, May 16th
@ 7:30 PM**

We will be meeting in Anaheim Room in the east Red Cross Bldg.

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**THE ORANGE COUNTY
AMATEUR RADIO CLUB,
INC.**

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Monthly Events:

General Meeting:

Third Friday of the month
at 7:30 PM
American Red Cross
(near Tustin Ave & 4th St)
Santa Ana, CA

Club Breakfast:

First Saturday of the month
at 8:00 AM
CowGirl's Cafe, Too
2610 S. Harbor Blvd
(just south of Warner)
Santa Ana, CA

Club Nets (Listen for W6ZE):

7.115 ± MHz CW **OCWN**
Sun- 9:00 AM – 10 AM
Rick KF6UEB, Net Control

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

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 January 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 charge if you'd like to have your badge mailed to you.

A Power Connector Standard

By Bob Eckweiler – AF6C

(This month we're going to pause on our trip from the antenna to the radio to discuss a timely subject. Next month we'll continue down the feed line and eventually reach the antenna tuner and transmitter. However, this month we are going to look at a standard power connection for 12 volt radios and accessories.)

Why a standard?

Most all of today's VHF, UHF and HF radios, up to 100 watts, are designed to run on a nominal 12 volts DC power. The actual rating is usually 13.8 volts which corresponds with a 12 volt automobile system with the engine running and the alternator charging the battery.

Wouldn't it be nice if there was a standard connector that had universal acceptance so everyone could hook their radios up in a moment to any of numerous power sources and be on the air without delay. It wouldn't be necessary to modify the radio, only the power cord. And if you have a favorite 'other' connector you only need to make an adapter or two and keep them available with the radio. Unfortunately, each manufacturer (and sometimes model) seems to use a different plug between the radio and the power cord. In an emergency, when time can be of the essence, connecting to an available power supply can be a problem unless the connectors are standardized.

The standard:

After some false starts, a standard connector has been agreed upon by most of the nation. The ARRL, Orange County RACES, and many law and safety organizations have selected the Anderson Powerpole® PP15/30/45 series of connectors as the standard. This is the connector used on the Rig Runner 12V power distribution strips. For a 12V (13.8V) system Red (positive) and Black (negative) are the chosen colors. Figure 1 shows a photo of a typical Powerpole® two wire connector wired to the standard. Note that the red connector is on the left when

facing the front of the connector and the opening is up. Figure 2 is a drawing of the two wire connector as seen from the front (the wires come out the back.)

The Connector:

The Anderson Powerpole® is a modular connector. It may be purchased as a set with the housing and contact, or the pieces can be bought individually, making stocking easier. While the connector comes in ratings up to 180 amps, only the 15, 30 and 45 amp ratings are part of the standard. The Anderson line of Powerpole® connectors offers the following features:

Modular – Housings dovetail together to make multi pole connectors. They're easily keyed. Housings are available not only in Red and Black, but also in nine other colors: Green, White, Blue, Yellow, Orange, Gray, Brown Purple and (for the YLs) Pink! Red should be reserved for 12 volt systems.

Androgynous (genderless) – There is no need to stock separate male and female parts.

Commonality – A single housing supports 15 ampere, 30 ampere or 45 ampere contacts. The different sized contacts are rated by the wire size they'll accept:

15A for #16 to #20 AWG

30A for #12 to #16 AWG

45A for #10 to #14 AWG

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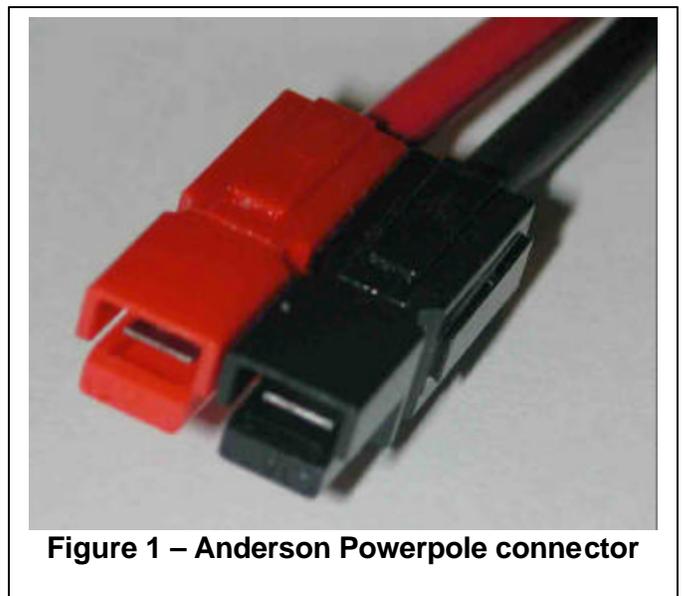


Figure 1 – Anderson Powerpole connector



+13.8 VDC - COMMON
Fig 2 – A Front View of Anderson Connectors with RED 12V connector on left, when the front lip (contact-protector) is on the bottom of housing.

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– The mating surfaces of these three sizes are identical so connectors using any of the three contact sizes will mate together, but the current will be limited by the smallest rated contact. The lower current connectors are ideal for accessories and lower power radios.

Low cost – Powerpole® connectors are inexpensive, especially when bought in bulk.

Connectors can be purchased in sets (a red and a black housing, two contacts and a roll pin – used to hold the housing pairs together) or the individual pieces can be bought in bulk. The housings are available in eleven different colors. Numerous other accessories are also available; we'll mention some later in the article.

Installation:

To make a standard two-wire connector, slide a red and black housing together as shown in the figures. Next strip insulation off of each lead of wire for 5/16 inch. Choose the correct contact for the wire size of the power cable and slide it over the wire. The contact can be either crimped or soldered to the wire. The 45 amp contacts are open-barrel type and need to be crimped; if you don't have the proper crimping tool, a pair of needle-nose pliers may be used and then the crimped part can be soldered for added security.

The contacts can then be slid into the housing with the convex side of the contact up (as viewed in figures 1 and 2.) Either an Anderson insertion tool or a small screwdriver can be used to help push the contact home. The positive lead should go into the red housing.

If you need to remove a contact the same Anderson insertion tool can be used, or you can use a small (jeweler's) screwdriver. Insert it in between the contact and the housing spring, depressing the spring, and remove the contact by pulling gently on the wire.

Soldering vs. Crimping:

Crimping is a very good way to make connections. That's why it's used on missiles and airplanes subject to high vibration; that's also why it is the method recommended by Anderson. The common 15 and 30 amp contacts have a barrel section that the wire slides in. If you don't have a crimping tool you can carefully flow solder into the hole once the wire is installed. The 45 amp contact is open barrel and has wings that must be crimped or bent over the wire. If you use a pair of pliers to accomplish this, a little solder can be flowed between the wire and contact to add strength. If you do solder the contact, be sure not to get any solder on the outside of the contact. Excess solder will have to be removed before the contact will fit into the housing. If you get solder on the actual contact surface, you are in for a problem down the road unless you replace the contact now.

Tools:

Good crimping tools are expensive; ones used in aircraft production are regularly calibrated to assure they are exerting the correct force. Good crimping tools are full cycle; once the crimp is started the tool cannot be opened until the correct amount of force has been applied and the crimp complete. If you are a serious hobbyist or professional you might consider buying a good crimping tool. One moderately priced full cycle crimping tool I'd recommend is the Sargent 2100 series crimper. You can buy the tool as a bare frame

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OCARC General Meeting Minutes

April 18, 2003

The April meeting of the Orange County Amateur Radio Club was called to order at 7:40pm by Pres Lowell KQ6JD in the East building of the American Red Cross Campus. We had a total of 27 members and visitors at the meeting. Congratulations to April Hughes - KG6CJI, who is graduating from high school in June.

VP Steve KB1GZ then introduced Art Goddard W6XD, ARRL Southwest Division Director, who aired the brand new 6 minute video from the ARRL. Art then presented "Corsica-The Story of TK4Z". Thank you Art for a great presentation.

The Business Meeting was called to order at 9:20 by Pres. Lowell. The roll call was taken: Absent-Cory AE6GW. A quorum was present.

Secretary: No correspondence.

Treasurer: \$2661.77 was in the bank at the end of March. We paid the World Radio bill.

Membership: 35 current members.

Publicity: An article on Field Day was published in the Foothill Sentry.

Activities: Matt displayed raffle prizes.

Technical: Article to be published in the May edition of the RF will discuss Anderson Connectors, a new standard for ham equipment power cables.

Member at Large: Nothing to report

OLD BUSINESS:

Field Day: Meeting is scheduled, April 30 @1:30 with Santa Ana Parks to finalize request for the FD site at Portola Park.

We are looking for a 40M Team Captain.

NEW BUSINESS:

Matt K6LNX discussed the possibility of holding a grand prize raffle with tickets at \$5.00 apiece possibly later in the year.

Cindy KC6OPI - May meeting in Room 232 as a movie will be shown in our regular meeting room.

GOOD OF THE CLUB:

Following the meeting, Rick Clifford KF6UEB and Ian Wilson K3IMW provided demonstrations of Rockmite 40M QRP ham equipment – and made contacts across the room.

Meeting adjourned 9:43PM.

Respectfully Submitted,
David Mofford W7KTS - Secretary

OCARC BOARD MINUTES

May 03, 2003

The May club breakfast and Board meeting of the OCARC was held at Cowgirls too! Café. A total of 14 members and visitors attended. Roll call revealed that Bob KD6BWH, David W7KTS, Phil N7PA, and Frank WA6VKZ were not present.

Treasurer – Currently \$2,507 in the bank, as of the end of April.

Secretary - Nothing to report

Publicity: Larry K6LDC has finished drafting a publicity press release around the communications provided at the recent Baker-to-'Vegas law enforcement race. Motion approved to spend up to \$20 for printing of pictures for mailing to 12 newspapers.

Technical: Bob AF6C suggested that the club standardize on Anderson Connectors for powering rigs. A motion was approved to allow the club to spend up to \$100 to allow paying for the cost of

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alone or with a die installed. Dies are easily changeable and available for many different connectors including the 15 and 30 amp Powerpole®, most crimp type coax connectors, modular phone plugs, D-connector pins and sockets, etc. The Powerpole® die is part # 2100-82. This tool will set you back about \$60 for the frame and \$25 to \$60 for each die set.

PowerWerk (<http://www.powerwerk.com>) sells an low-cost crimp tool for the Powerpole® for about \$10.00 that should suffice for ham applications.

Unfortunately, none of the tools mentioned above work with the 45 amp contacts. (Sargent may have come out with a die after my catalog was printed.) Anderson does sell a 45 amp crimp tool, but it is expensive.

Anderson also sells an insertion/extraction tool for about \$10. It eases assembly and repair and is worthwhile having if you plan to use a lot of these connectors. A set of tools including a crimping tool and insertion/extraction tool could be shared among a group of club members.

Accessories:

Anderson sells a line of Powerpole® accessories. Housings are available not only in Red and Black, but also in nine other colors: Green, White, Blue, Yellow, Orange, Gray,

Brown Purple and (for the YLs) Pink! Red should be used for 12 volt systems. Red and Blue mounting wings are available for mounting the connectors to a flat surface. A 'Blok Lok' is also available that locks a set of connectors together in rough environments; it replaces the roll pins. Long and short spacers are available for special keying of connector blocks when needed. Powerpole® connectors may be panel mounted using a mounting clamp accessory. Clamps are available for connectors of 2 to 8 poles. Part numbers for parts and accessories are shown in table one

In Closing:

After you modify all your radio power cables to use the new standard, modify your 12 volt accessories too. Scanners, 12V lamps and anything else that runs on 12 volts that might be handy in a time-of-emergency should be standardized. If your 12V power cord has a fuse, be sure it remains in the cable for safety sake.

Also, remember that though Anderson Powerpole® connectors have a high current rating, they are not meant to be connected or disconnected "HOT". Turn OFF your device before plugging it into a 12 V power source.

The club is going to make a quantity buy of Powerpole® connectors. See the article in this month's RF.

Next month we'll continue on our RF journey. See you then.

73, de AF6C

Part No.	Description	Std	Part No.	Description	Std
	(Housing and Contact Set)			(Accessories)	
1395	Red Housing with 15 amp contact	*	110G21	"Blok Lock" Retainer (2-pole)	
1395G1	Black Housing with 15 amp contact	*	1399G9	Mounting Wing (Red)	
1330	Red Housing with 30 amp contact	*	1399G8	Mounting Wing (Blue)	
1330G4	Black Housing with 30 amp contact	*	1399G6	Red Short Spacer	
1345	Red Housing with 45 amp contact		1399G1	Red Short Spacer (with end Hole)	
1345G6	Black Housing with 45 amp contact		1399G2	Red Long Spacer	
	(Discrete Parts)		1462G1	2 & 4 Pole Mounting Clamp Set	
1327	Red Housing (15, 30, 45 Amp)	*	1442G1	Splash Boot (Male)	
1327G6	Black Housing (15, 30, 45 Amp)	*	1441G1	Splash Boot (Female)	
1327G5	Green Housing (15, 30, 45 Amp)			(Tools)	
1327G7	White Housing (15, 30, 45 Amp)		111038G2	Insertion/Extraction Tool	
1332	15 amp (closed-barrel contact)	*	1309G2	Hand Crimp Tool (1331 contact)	
1331	30 amp (closed-barrel contact)	*	1309G2	Hand Crimp Tool (1332 contact)	
261G2-LPBK	45 amp (open-barrel contact)	*	1309G3	Hand Crimp tool (261G2 Contact)	
110G16	Retaining (roll) Pin (1 block high)	*			
110G17	Retaining (roll) Pin (2 blocks high)	*			
			* - Indicates this part is used in the Standard		

PREVIOUS OCARC FIELD DAY LOCATIONS

By Bob Evans WB6IXN and Bob Eckweiler AF6C

2002 - 2001	Portola Park, Santa Ana, CA (off Santa Clara Ave.)
2000	Garden Grove Park, Garden Grove, CA
1999	East Yucca Valley, CA (off La Crescenta Rd.)
1998	Irvine Civic Center Park, Irvine, CA (at Barranca and Harvard)
1997 - 1991	USMCAS(H) Tustin, Tustin, CA (southwest field)
1990	Columbus Tustin Park, Tustin, CA (Prospect at 4th St.)
1989 - 1987	Centennial Park, Santa Ana, CA
1986	USMCAS(H) Tustin, Tustin, CA (southwest field)
1985	Centennial Park, Santa Ana, CA
1984	USMCAS(H) Tustin, Tustin, CA (southwest field)
1983	USMCAS(H) Tustin, Tustin, CA (west side by "Mushroom")
1982	Centennial Park, Santa Ana, CA
1981	USMCAS El Toro, El Toro, CA (west field)
1980 - 1973	USMCAS(H) Tustin, Tustin, CA (MARS Station Area)
1972	Naval Air Station Los Alamitos, CA
1971 - 1970	A field off Camden Drive, Lemon Heights, CA
1969	Pacific View Memorial Park, Newport Beach, CA
1968 - 1967	Site of Mountain View School, Santa Ana, CA (S. Raitt St. north of Segerstrom Ave.)
1966 - 1964	Site of Orange Hill Restaurant, Orange, CA (Chapman Ave. near Orange Park Blvd. @ 1000')
1963	-- Not known --
1962	-- Not known --
1961	Somewhere in the area of Lemon Heights, CA

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shipments of connectors and to allow buying extra connectors.

Old Business:

Field Day: Lowell KQ6JD reported that the City of Santa Ana had approved our request to use Portola Park on Santa Clara Ave for FD (pending an insurance rider). Ken W6HHC reported we still needed a 40M Team Captain.

Special Raffle: Matt K6LNx lead discussions on a new 3-or-4 month special raffle. Larry K6LDC said he could prepare letters requesting donations/discounts. Matt K6LNx to present the idea at next club meeting to membership.

New Business:

Larry K6LDC lead discussions to have club prepare a list of equipment in August that members plan to sale at auction. Larry also plans to announce the Auction on local nets.

Good of the Club:

Ken W6HHC announced PIXs of recent "Baker-to-Las Vegas" communications event are now posted on the club WEB site under "Pictures of Club Events". Seven club members participated in providing race communications.

Meeting adjourned at 9:20am.

Respectfully Submitted:

Ken Konechy W6HHC, acting-Secretary

Club Nets

April check-ins for Wednesday evening 10M and 2M phone nets and the Sunday morning 40M OCWN CW net:

KD6BWH	K6LDC
AF6C	KE6LEX
K6CCD	KG6MIG
KS6CW	KG6MIH
K6GVG	KG6MPW
KB1GZ	W6NT
W6HHC	WA6OGO
W7IB	KE6OIO
K3IMW	WA6RND
WB6IXN	AE6UC
KQ6JD	KF6UEB
K3JIL	K6VDP
W6KFW	WA6VKZ
KG6KGG	KC6VQH
W7KTS	KØIOA
KG6KYJ	

Check WB6IXN's NetNews
monthly reports on
WWW.W6ZE.ORG

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Time Dated Material.

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