I would be remiss if I didn’t mention Sharon Cowart for staffing our Welcome booth. Sharon was a smiling and informative greeter that welcomed over 50 visitors to our site and made sure they knew where to find the various operations.

Thanks to Tim N6GP for making it possible to access Walter Knott EC once again.

73 DE N6TMT

Next General Meeting

The next OCARC General Meeting will be held on:

Friday, June 19th, 2015.

See page 3 for speaker details.
**2015 Board of Directors:**

President:  
Tim Millard, N6TMT  
(714) 744-8909  
N6TMT@w6ze.org

Vice President:  
Tom Cowart, W6ETC  
(714) 454-0571  
W6ETC@w6ze.org

Secretary:  
Ken Konechy, W6HHC  
(714) 744-0217  
W6HHC@w6ze.org

Treasurer:  
Greg Bohning, W6ATB  
(714) 767-7617  
W6ATB@w6ze.org

Membership:  
Don Mech, N6XBP  
(714) 206-6548  
N6XBP@w6ze.org

Activities:  
Doug Wood, K6PGH  
(714) 501-5527  
K6PGH@w6ze.org

Publicity:  
Robbie Robinson, KB6CJZ  
(714) 478-9713  
KB6CJZ@w6ze.org

Technical:  
Bob Eckweiler, AF6C  
(714) 639-5074  
AF6C@w6ze.org

**Directors-At-Large:**  
Nicholas Haban, AF6CF  
(714) 693-9778  
AF6CF@w6ze.org

Paul Gussow W6GMU  
(714) 624-1717  
W6GMU@w6ze.org

**2015 Club Appointments:**

W6ZE Club License Trustee:  
Bob Eckweiler, AF6C  
(714) 639-5074  
AF6C@w6ze.org

Club Historian:  
Bob Evans, WB6IXN  
(714) 543-9111  
WB6IXN@w6ze.org

RF Editor (rotating):  
Nicholas Haban, AF6CF  
(714) 693-9778  
AF6CF@w6ze.org

WEB Master:  
Ken Konechy, W6HHC  
(714) 744-0217  
W6HHC@w6ze.org

Assistant WEB Master:  
Bob Eckweiler, AF6C  
(714) 639-5074  
AF6C@w6ze.org

ARRL Awards Appointees:  
Arnie Shatz, N6HC  
(714) 573-2965  
N6HC@aol.com

John Schroeder, N6QQ  
(562) 404-1112  
N6QQ@msn.com

**Monthly Events:**

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

**Club Breakfast:**  
First Saturday – July 4 at 8:00am  
Marie Callender’s Restaurant 2525  
1821 North Grand Ave  
Santa Ana, CA  
(North of 17th Street)

**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

**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
July Speaker will be Bill Prats K6ACJ.

Topic: Building Arduino, PICAE and Raspberry Pi Projects with DIY Examples

Bill K6ACJ will speak on the basics of building (including real do-it-yourself examples) Arduino and Raspberry Pi projects. He will begin by covering the small power supplies and its batteries. He will discuss proto boards and associated problems with each that have to be overcome for ham radio OP’s (for example electrical noise generated by some power supply modules and power cable resistance).

Those in attendance will be exposed to Bill’s vast expertise and knowledge of the subject of Arduino and Raspberry Pi and will leave with a better understanding of the basics of this subject. The bonus to those that attend will be provided with a unique insight into the tools, project examples and key background considerations for the development of DIY home projects that can provide better results the first time around.

Bill then turns up the power… so to speak towards the evolution into Arduino and Raspberry Pi project examples for OP’s using examples from ‘Ham Radio for the Arduino and PICAXE’ and ‘Arduino for Ham Radio by Glen Popiel KW5GP.’ While the focus will be on building and creating single board computer projects there will be no bits and bytes discussed. You don’t want to miss this informative, fun filled, insightful presentation.
## Field Day Summary

**The Orange County Amateur Radio Club - W6ZE**

**by:** Ken / W6HHC & Bob / AF6C

| YEAR | 160M | 80M | 75M | 40M | 30M | 20M | 15M | 12M | 10M | 6M | 2M | 1.8M | 1.2M | 70CM | 220 | 440 | UHF | UHF | ATV | Dig | QRO | TOTAL |
|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|------|------|-------|-----|-----|-----|-----|-----|-------|
| 2015 | 0   | 53  | 121 | 115 | 567 | 661 | 1161 | 190 | 324 | 0   | 1   | 71  | 3    | 60   | 45  | 0   | 6   | 0   | 0   | 77   | 1   |
| 2014 | 0   | 111 | 122 | 756 | 723 | 1059 | 1113 | 559 | 382 | 0   | 43  | 0   | 0    | 13   | 44  | 0   | 0   | 0   | 121 | 23   | 47  |
| 2013 | 0   | 269 | 339 | 8551052 | 89560 | 1960 | 484  | 38  | 37  | 6   | 60  | 40   | 0    | 60   | 44  | 11  | 0   | 0   | 144 | 4    | 186 |
| 2012 | 0   | 14 | 51 | 125 | 78 | 215 | 735 | 185  | 350 | 0   | 0   | 12 | 1    | 50   | 37   | 5   | 0   | 0   | 13   | 408 | 2264 | 5634 |
| 2011 | 0   | 58 | 176 | 168 | 217 | 253 | 703  | 32  | 198 | 0   | 16 | 40  | 0    | 57   | 0    | 37  | 0   | 0   | 16   | 139  | 2110 | 5278 |
| 2010 | 0   | 0  | 0   | 240 | 342 | 223 | 727  | 49   | 0   | 0   | 0   | 1   | 96   | 0    | 32   | 1   | 7   | 0   | 0   | 160  | 1878 | 4786 |

Note: These are raw contacts taken directly from the log sheets. Adjustments have not been made for duplicate contacts, and bonus points have not been added yet. Final scores appear in QST.
Lightning Protection Steps Checklist
Addendum to The Lightning Protection Process
By Corey Miller KE6YHX

In the previous addendums, I covered Short Circuit Protection, and the Lightning Protection Supply Checklist. In this article, the whole process is laid out in a step-by-step checklist. It is in chronological order.

- **Make PolyPhaser Panel**
  - Plan location.
  - Measure location and studs.
  - Lay out lines on metal.
  - Lay out PolyPhasers on metal in proper orientation.
  - Drill bolt-holes,
    - Place PolyPhaser and drill hole,
    - attach PolyPhaser,
    - place next PolyPhaser,
    - drill hole for next PolyPhaser,
    - attach PolyPhaser,
    - remove previous PolyPhaser,
    - repeat.
  - Remove PolyPhasers.
  - Cut-out panel.
  - Drill holes for wall-stud screws and solder lug.
  - Scrub and sand panel metal.
  - Bolt down PolyPhasers using conductive silver grease.
  - Crimp or solder no. 4 welding cable to solder lug.
  - Attach No. 4 Welding Cable to PolyPhaser Panel.
  - Screw PolyPhaser Panel to Wall.

- **Drive the Ground Rod.**
  - Plan location at least 4-feet from foundation.
  - Dig pit and soak with water.
  - Grind point on ground rod.
  - Place end-cap and drive the ground rod.
  - Cut excess ground rod a few inches above ground.

- **CadWeld Welding Cable to Ground Rod.**
  - Cut welding cable to-length and strip end
  - Clean rod and cable.
  - Twist CadWeld crucible onto ground rod.
  - Position hole on side of CadWeld for cable.
  - Press cable into sleeve in hole on side.
  - Pour welding material.
  - Place lid on crucible.
  - Pour starter material into hole.
  - Prepare with gloves and safety glasses, and ignite starter material.
  - Let smolder for 5 minutes, then tap-away CadWeld crucible.
  - Pour water-softener salt into pit, and cover with soil.
Shorten Feed Lines
- Gather tools and supplies.
- Attach New Connectors,
  - Snip cable to length,
  - slide-on reducer,
  - remove insulation and comb braid,
  - slide reducer under braid,
  - fold-back braid and trim,
  - strip inner dielectric,
  - place connector (mind the center conductor),
  - slide-back and tape outer ring,
  - screw-in reducer,
  - solder outer conductor and tip.
  - trim solder and remove flux,
  - slide and screw-on outer ring.
  - repeat.
- Attach and test.

Short Circuit Protection
- Attach ground bus (copper or aluminum) to rig table.
- Make Ground Wires.
  - Measure equipment ground lug diameter.
  - Crimp (or solder) tongue-ring to 10-gauge ground wire.
  - Attach tongue-ring on ground wire to equipment.
  - Run ground wire to ground bus.
  - Cut ground wire to-length.
  - Crimp (or solder) tongue-ring to end of ground wire.
  - Drill hole smaller than screw for tongue-ring in ground bus.
  - Attach end tongue-ring to ground bus with hex-head screw.
  - Repeat.

Make Common-Ground
- Crimp (or solder) tongue-ring to common-ground wire.
  - Drill hole smaller than screw for tongue-ring in ground bus.
  - Attach common-ground to ground bus with hex-head screw.
  - Cut common-ground wire a little long to reach breaker-box ground.
  - Run common-ground wire to nearby breaker-box ground.
  - Cut common-ground wire to-length.
  - Attach end to breaker-box ground.

--Good Luck and 73, Corey Miller KE6YHX
Bill Pasternak WA6ITF, a well known California ham who produced the well-known “Amateur Radio Newsline” reports on a weekly basis for decades, passed away in June.

Bill Pasternak was first licensed as a ham in 1959 and later created an audio report on Ham Radio events and issues each week, initially called the “West Link Tapes” back in 1976. Later the weekly reports were renamed to the current name: “Amateur Radio Newsline” reports. Another accomplishment of Bill Pasternak was to create the yearly “Young Ham of the Year Award” to recognize and to award accomplishments of young hams.

There was a reason that the “West Link” reports were called ”Tapes”. Back in the 1980’s and in the 1990’s, OCARC club members would call up a “West Link” phone number and record the audio report onto their cassette tape recorders. Older members in the OCARC may remember that the OCARC 2M net would try to play the West Link Tapes or Newsline reports every week...for the second half-hour of the 2M net. That OCARC service of re-broadcasting these weekly ham reports for OCARC nets finally ended in 2009.
The OCARC General Meeting was held at the Red Cross Complex on June 19th, 2015. The meeting was called to order at 7:00 PM. A quorum of officers was present with only Robbie KB6CJZ absent with a family-event conflict. There were a total of 35 members and visitors in attendance.

Program for General Meeting

Our speaker for the evening was Chip Margelli K7JA giving club members a tour at the huge "Arecibo Radio Telescope in Puerto Rico"

Arecibo is the world’s largest radio telescope, 305 meters across, dug unto a mountain valley.

Chip explained that the reflective dish of the telescope is:
- Constructed of 38,300 aluminum plates
- Can be aimed +/- 19.7 degrees of arc
- Has a freq range from 300MHz to 10GHz
- The radio platform weighs 900 tons

Biz:

HAM JAM - Janet KL7MF (who is manager of the local HRO store) announced that the yearly "Ham Jam" event will be sponsored by the HRO store in Anaheim on Saturday, July 11.

FIELD DAY
- FD co-chair Don N6XBP provided a description for OCARC FD plans this year.
- BSA Troop 440 from Buena Park presented the meals menu that will be available from the scouts during FD at a price of $30 per five meals.
- The following FD budget was voted on and approved:
  - Truck rental $45
  - FD gasoline $100
  - Food tickets - guests $150
  - "pre-paid" Food tickets – will "pass thru"
  - Water and coffee $100
  - Cleaning Service $50
  - Misc - $305

Expected net expense $850

Respectfully submitted by:
Ken W6HHC - secretary
The OCARC Board meeting was held at the Marie Callender’s Restaurant on Grand Ave in Santa Ana on July 4th, 2015. There were a total of 10 directors and members attending. There was a quorum of Directors with only Bob AF6C absent because of a family-event conflict.

**Director Reports:**

- **Treasurer** – Greg W6ATB reported that the OCARC has taken in $1,644 of income so far during 2015 [see report on Page 12]. Quicken software for tracking club finances has a very steep “learning curve” and is very time consuming to learn.

- **Publicity** – Robbie KB6CJZ reported that publicity for OCARC FD had been submitted to several social revenue sites. A copy of press-release sent to newspapers will be sent to Tim N6GP for submission of to ARRL FD Bonus Points.

- **Membership** – Don N6XBP will send out completed YTD membership roster during the coming week. In addition, members who “paid twice for 2015” will be asked next week if the extra money can be applied to their 2016 membership.

**OLD BIZ:**

- **Newsletter Editors**
  
  Jul – Nicholas AF6CF;  
  Aug - Tim N6TMT;  
  Sept - Paul W6GMU;  
  Oct - Corey - KE6YHX;  
  Nov - Greg W6ATB  
  Dec - Bob AF6C

- **Program Speakers for Club Meetings**
  
  July - Bill K6ACJ on RaspberryPI HamRadio  
  Aug - Panel-of-Experts  
  Sep - Show-and-Tell  
  Oct - Radio Auction  
  Nov - (pending) and elections  
  Dec - Club Christmas Party

**NEW BIZ:**

- **FD Storage Unit for Club Equipment**
  The board has agreed that it would be much better to store OCARC equipment in a storage unit. The cost may be as much as $100/mo (or higher depending on size). If this plan is implemented at a commercial storage company, it would require an increase in OCARC dues. Don N6XBP, Greg W6ATB, and Nicholas AF6CF will investigate costs at units that they use and report back to the board. This plan will be discussed at General Meeting.

- **Sell Old Club Generator?**
  The club still owns an old Briggs & Stratton 4 KW generator on a trailer that is very noisy and was replaced with the newer Honda

- **Field Day Report**
  - **FD Scores Report** – Ken W6HHC reported that a total of 3,396 QSOs were made during 2015 FD efforts. That is the 5th best QSO-count in the last 16 years of OCARC FD efforts. A detailed report of FD results will appear on Page04 of the July newsletter.
  
  - **VE Testing** – OCARC had several people show up for VE Testing at FD because the ARRL web site still showed “VE Testing” available as a club feature. OCARC Secretary will remove “VE Testing” from the ARRL web description of OCARC.
  
  - **Missing Extension Cord** - Robbie KB6CJZ is missing a yellow 100ft heavy-duty 110V extension cord from FD. It has a label with KB6CJZ on it. If it does not “show up” in three months, the club will compensate Robbie for it.
  
  - **Soccer Club** – The Board considered whether OCARC a gift should be given to the Cypress Futbol Club for sharing the field with us. Final consensus was that they are just another tenant like us. No further action is planned.
  
  - **Los Alamitos JFTB** – because of pressures from the Soccer Club at the Walter Knott school grounds, the Board has asked Paul W6GMU to pursue asking JFTB for permission as a alternate FD site,
Saturday, July 11 will be a day of ham radio fun at Ham Radio Outlet in Anaheim from 10AM-5:30PM.

Join us along with reps from Icom, Kenwood, and Yaesu, Gordon West, the Red Cross, Orange County RACES, Anaheim RACES, the Hospital Disaster Services, local clubs like MARC (the Motorcycle Amateur Radio Club), and the San Diego Six Shooters, and other experts who will be showing us “what’s new in ham radio” from C4FM digital to an antenna analyzer with a full color TFT LCD screen. See a 200w mobile HF installation in a Smart Car, and compare notes about what you learned at Field Day this year.

There will be three prize drawings throughout the day, and hot dog lunches to keep you fortified. We will offer license testing for all classes from 11AM to 3PM (be sure to call or email the store for reservations.)

Come join us to learn, to see and be seen, to laugh, to eat, and completely enjoy a day filled with everything ham radio.

Respectfully submitted by:
Ken W6HHC - secretary

Sell Old Club Generator? – cont’d
5 KW generator. A suggestion was made to sell the old generator and trailer. Another suggestion was made to mount the new Honda generator on the old trailer and sell only the old generator. Keeping the trailer may require finding a new storage location for it? A decision concerning the trailer can’t be made until the plans for a club storage unit are finalized. This matter was tabled.

Purchase Motorcycle Ramps?
Bob AF6C has reported that the motorcycle ramps that Gene KJ6OML loans to the club are very helpful to load the club Honda generator onto a truck to transport to Field Day. Perhaps it is time for the OCARC to purchase a set (on sale now at Harbor Freight). This decision is tied to the suggestion about mounting the Honda generator onto the generator trailer (see above item). This matter was tabled until decision on club trailer is finalized.

Increase in OCARC Dues
The Board of Directors recognizes that the club can not afford to pay for a new storage unit (perhaps $1200/year) unless we raise the membership dues. Ken W6HHC also reported that the OCARC has not raised the cost of dues in over 15 years (raised to current $20 in 1999). A motion was approved to increase the OCARC Membership Dues to $30/year beginning with the dues for 2016.

Respectfully submitted by:
Ken W6HHC - secretary
OCARC
Cash Flow - Year To Date
1/1/2015 through 7/6/2015

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HAMCON 2015

The 2015 ARRL Southwestern Division Convention is September 11-13, 2015, at the Torrance Marriott South Bay Hotel, 3635 Fashion Way, Torrance, CA 90503.
Check our website at: www.hamconinc.org

HAMCON 2015—also the 2015 ARRL Southwestern Division Convention— is produced by 13 amateur radio clubs in Los Angeles and Orange Counties committed to providing a positive convention experience for all attendees.

The ARRL’s annual Southwestern Division Convention rotates yearly from the Los Angeles-Orange County area to a location in Arizona, then to a site in Santa Barbara or Ventura County, and finally to the San Diego area before repeating this four-year cycle. The ARRL’s Southwestern Division includes the Southern California counties of Imperial, Inyo, Los Angeles, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, and Ventura as well as the entire state of Arizona. It is 2nd largest of the ARRL’s 15 Divisions in terms of amateur radio licenses issued—only the ARRL’s Southeastern Division (all of Alabama, Florida, and Georgia) has slightly more amateur licenses outstanding.

We welcome all amateur operators to HAMCON 2015 during September 11-13, 2015, at the Torrance Marriott South Bay Hotel.

You don’t need to be an ARRL member to attend and hams living outside the ARRL’s Southwestern Division are also invited. No matter what your amateur radio experience level may be we’re sure you will find many topics, products, and people of interest at HAMCON 2015.
Digital Amateur TeleVision Exciter/Transmitter

now available from

DATV-Express

- A more affordable DATV exciter can now be ordered
- Fully assembled and tested PCBA
- DVB-S protocol for DATV (using QPSK modulation)
- Can operate all ham bands from 70 MHz-to-2450 MHz
- RF output level up to 10 dBm (min) all bands (DVB-S)
- Software Defined Radio (SDR) architecture allows many variations of IQ modulations
- “Software-Defined” allows new features to be added over the next few years, without changing the hardware board
- As extra bonus, the team has been able to get the board to transmit DVB-T 2K mode, however we cannot guarantee the performance of that protocol. Caveat Emptor!
- Requires PC or ODROID running Ubuntu Linux (see User Guide)
- Price is US$300 + shipping – order using PayPal

For more details and ordering

www.DATV-Express.com

Register on the web site to be able to see the PURCHASE page