Our Speaker:
David Corsiglia, WA6TWF
on Airline Worldwide Communications!
...and...
Michael Mercado, KC6VTC, about General Care and Radio Maintenance... also how to describe what's wrong with your radio (other than "It's BROKEN"!)

The Prez Sez.....
by Ken Konechy, W6HHC

The Prez said he didn't get his article done in time 'cause he was working so hard. The Prez said he would be at the meeting, though and would do better next month. The Editor decided to NOT write an article for the Prez that said that the Prez was too busy to write his article because he was studying code for his Extra class.... The Editor is being nice(??)

NEW TIME:
Mondays 6:15 pm 144.330 simplex
WB6NOA, Gordo - Code practice and "News behind the News"

Mondays 8:00 pm 28.333
Bob, AB6CH & David, WA6TWF, Beginner's Net, Code Practice and Tech Talk.

We STILL are looking for one or more OPs to act as Net Control on the Thursday night CW net!

WB6RVM, Dave Browers of Anaheim became a Silent Key last week. Dave was a member of the OCARC during the late 60s, holding the positions of Public Relations Chairman in 1967, Secretary in 1968, and Vice-President in 1969.

In This Issue
ANTENNA STORY
NET NOTES
JULY MEETING MINUTES
AUGUST BOARD MINUTES
RADIO BEIJING SWL
SOVIET CONTEST
2 METER BEAM PLANS
QRP - PART 1
PREZ SEZ...

The OCARC AUCTION is coming in October! Are you ready...
Another raffle for a Yaesu FT470 Dual Band Handheld Radio has begun... only 450 tickets will be sold... Get Yours!
Most folded dipole antennas use two close spaced parallel conductors, shorted at each end and fed in the center of one conductor. Equal and in-phase currents flow in each conductor. The current at the feedpoint is one half and the input impedance four times that of a single wire dipole. This is a good match for 300 ohm twinlead.

300 ohm twinlead became available after WWII with the introduction of television. I used both a vertical and horizontal folded dipole then with good results.

A newer type of 300 ohm twinlead is now available which is called "300 ohm ladder line." It is a low loss version of the old 300 ohm twinlead and is available from The Radio Works in Virginia for 11 cents per foot.

A 40 meter folded dipole, using "300 ohm ladder line" was constructed. This antenna is 65 feet long with a 66 foot feed line. The apex is at 43 feet with the ends at 35 feet.

A memorable QSO on 40 meters with Saratoga, CA, 400 miles north running 7 watts resulted in RST 399 to 399+10 dB over a 30 minute period. YB0UJK, JA6EVL, and VE2DWW/Zone 2 were worked the first day on 30 meters.

Two wires might be better than one - try a folded dipole and you might agree.

---

FOR SALE
Kenwood TM-731A
2m-440 dual band mobile
with Duplexer and Magmount
$625 complete
Ralph, N6ZTL (714) 654-2842

FOR SALE
Icom 02AT
2m handheld
5w & 2.5w batteries,
quick charger and
accessories
$250
Skipper, KC6WJJ
Call (714) 639-3443

Fast Track Radio School
Weekend No Code Technician Classes
in Orange County
September 13, 14, 15
Pre Registration is A MUST!
You will receive study material by mail.
For more information contact:
Bob Gregg, AB6CH
(714) 892-3728
On the Nets - July, 1991
by Bob Evans, WB6IXN

7/3 15m phone net - RND, XQR, & YZG chat on an informal net, as XQR brings dinner from the microwave to the rig, and RND looks around for more OPs, & XQR thinks abt plans for the 4th!

7/3 2m phone net - W6ZE/Ixn checks in BPX, ZH, VDP, YZG, RE, RND, XQR, TAM, ESD, OPI, U6L, AF6C, & HHC. Old age is catching up with BPX & Ixn as Wyatt packs & packs beans & watermelon. Ixn has discomfort in the left leg & hip. ZH & TAM will spend a quiet 4th at the QTH & 'fireworks' at Cerritos, weekend in Moreno Valley for IBR & IBP's BD celebration. VDP tells OPs abt Ray Davis, W6NTO (No Talent), who was one of the Founders, & a Trustee, of the NARS Men. YZG reports OPs on the 15m net to Ixn, & Lu & XYL will picnic at the neighbors' home tomorrow. RE & XYL will watch fireworks at Tustin H.S., tomorrow night, & Alex announces that 3rd party traffic is now OK between the U.S. & the Philippines before airing Newsline. After FD adventures in the Mts., RND will 'cool it' tomorrow, as John 73's to try for a CW Certificate on 3590 KHz! XQR will get a new generator for the shack this weekend, & Nancy works YV4DDD/QRP CW, & also ZF2QJ, but loses a T32Z in the pileup! ESD & XYL will 'barbecue' at the daughter's QTH as Bob rests up from installing a new sprinkler system & unloading abt 900 old tubes at the TRW Swapmeet! OPI will 'picnic at the park' with family tomorrow while ONZ completes a day of work! U6L returns from a vacation in the middle west & tells OPs that most of the 'old stomping grounds' have reverted back to pristine! ZH & U6L say that Lorraine McCarthy will be handling ham radio operations at the Orange County Fair. AF6C motors off to the airport to pick up family, & tells OPs its time to turn on FD logs! HHC guests a former high school friend as Ken busies himself with processing FD scores!

7/10 15m phone net - Wid HHC not present, QE & RND meet informally. Returning frm a meeting, Ixn hears their 73s!

7/10 2m phone net - W6ZE/Ixn checks in BPX, QE, RE, W6VO, ZH, XQR, RND, DVP, QW, U6L, COJ, KAA, & VMS. BPX & grandson paints the sides & roof of a metal shed. QE still can't hear all OPs on 2m, & RE & XYL defeat the apricots but now battle the boysenberries! But Alex still finds time to aid 2 wheel chair patients & a YL with high tramp trouble! RE informs OPs that OSCARs 10, 11, & 12 will pass thru lunar shadows during the solar eclipse. ZH & TAM picnic at the park, clean the garage, fireworks at Cerritos, & party at the IBR/IBP QTH over a 4-day 4th holiday! 'Fish oil on the fuschias'...XQR finally joins the 'farmers' on the Club net wid her 4 tomatoes & chives! And Nancy garners a new generator for the shack! U6L tells OPs that Lorraine McCarthy needs volunteers for the O.C. Fair, & RND spends a quiet 4th at home as he contemplates a new feedline for the G5RV ant. VDP has 'home' fireworks in Costa Mesa as Larry ponds the 216-220 MHz possible addition to the ham bands! QW battles the flu, solves a connector loose wire problem in the 'Omni', & works P29DX on 40m from Big Bear, sells the 440 for a new TS 850, & joins the net 'farmers' wid 'water lillies in the pond'! COJ offers the Officers' Club at LTA as a possible Christmas Party site, & NGO helps Dave wid a generator governor problem. KAA rushes north to a collapsed ceiling in the rental at Bakersfield on the 4th, a broken water pipe to a evaporator cooler being the culprit! VMS brings up the rear of the net wid a CW contact to Guantanamo Bay, 3D2AG in Rotuma, & tells OPs that P2J/AA67T frm the DX Packet Cluster, is wrkng frm the Netherlands Antilles! All this while painting the QTH!

7/17 15m phone net - W6ZE/HHC checks in AF6C, NGO, Ixn, RND, QW, & VMS. AF6C recovers quickly frm a root canal as he plans to look over old ARRL handbooks concerning vintage radios, etc., discovered at W6OYS' shack! NGO eats down some high bushes & enjoys sherbert as he chats wid OPs. QW gets a new 850! Sounds great, Roll? & RND enjoys a dip in Lake Shasta just before the weed killer spill! Ixn confirms AF6C's query abt Al Jenny, W6OYS. He was on the Club roster fer 1929. And VMS tells QW that both the 850 & the Omni have FB audio!

7/17 2m phone net - W6ZE/Ixn checks in ZH & TAM, RE, XQR, BPX, PFA, RND, BWZ, AF6C, N6VM, QW, HHC, ESD, KAA, & VDP. Wid the beans picked, the vines pulled, & Blanche attacking oceans of cherry tomatoes, Wyatt gets his eyes checked! RE alerts OPs that OCARO needs help at the O.C. Fair, & tells us that N. Korea will be added to the ARRL DXCC list. & as Lorraine McCarthy is the rigged boysenberries! ZH & TAM reach us, using a 220 link, frm the spa, as they contemplate Jane's 20 yr high school reunion. XQR & OPs congratulate OPI on the upgrade to amateur Extra! PFA loses & regains faith in the 2m rig after rig failure, exploratory surgery finds nothing wrong, & it works again! RND & OPs thru Nancy & RF contributors for another fine 'RF'. John also tells OPs abt a FB trip to Reading, CA. BWZ busies himself with experimental ants., as he fights the QRN problem at the QTH! OPs compliment AF6C on success wid postal service in distribution of 'RF'. And Bob tells OPs that he was 1st licensed in 1959, the same yr that W6OYS appears on the Club roster! VMS tells OPs that new N. Korea prefix will be P5, as Bill busies himself building a shack furniture & working Ron, ZK1CQ, Cook Is. QW & Ixn, hearing that XQR now tracks O.C. Register Animals (OCRA) fer the Earthquake net (O.C. runaway cats & dogs), Roll & Bob think Nancy's new job description ought to be 'dogcatcher!' And Roll has been wrkng great DX to Europe, S. Amer., & Africa! Tennessee Valley Indians have gone on the warpath frm ESD's TV to the rig! Bob will now route the 'warpath' to grid! KAA announces a new source of 6m RFI, traffic signal computers! And VDP vaguely remembers W6OYS, Al Jenny, frm the NARS group.

7/24 15m phone net - W6ZE/HHC checks in AF6C, NGO, ESD, RND, Ixn, XQR, KB2KVA, Ed, from Buffalo, N.Y., & Jeff, N4UTL, from Tallahassee, Fla. 15m is wide open, & Ed & Jeff take the opportunity to check in! XQR will help Ed wid possible radio contact wid relations in Mission Viejo. Ixn took the General ticket test in Buffalo! And AF6C isn't Ed's 'banjo picker' frm Long Beach! NGO hears a W8 in there, but we don't pick him out of the QRM! ESD hears ZL land OPs just below us while RND tells OPs that he used to work in Rochester, N.Y. HHC marvels over wrking the DX contacts off the back of the beam!

7/24 2m phone net - W6ZE/Ixn checks in TAM & ZH, BPX, RE, NGTD, RND, VDP, ESD, HHC, KAA, XQR, KK6DO, & OPI. TAM brings back OP 'old memories' as Jane mentions her 2nd 10

Continued on Page 4

August, 1991 - RF / 3
On the Nets - May, 1991 (Continued)

yr HS reunion! And ZH takes over the mike to mention QSLs from KH3, Johnson Is., 9Q3TE in Zaicro, & a QSO in Guatemala on 20m! And BPX is still cherry tomato pickin' as he & Blanche 'juice up' for the winter! RE & XYL, knee deep in boysenberries, are jam, jelly, & juicing as fast as they can go, just barely giving Alex time to record 'Newslime' & trim a few bushes! NG7D finally gets the ceiling in the shack painted & he & IXN test John's new homemade 15m QRP smr. RND has his 3rd H.S. Class reunion coming up in Oct., & ESD solves rig RFM thru the TV by adding ferrite beads on each leg of the 300 ohm twin lead at the set terminals! HHC announces that all FD scores have been sent to ARLL, 2nd call for ready to go to OCA RO for local clubs competition! KAA 'flies in & flies out'! What's this?...XQR knows YLs who got their ham tickets in the men's locker room at a football stadium...!! OPI gets home from the O.C. Fair in time to check in, & Cindy spent time helping her grandmother move.

7/25 15m CW net - Net was informal. No net control as yet! IXN & RND are joined by XQR. Bob & John discuss radio controlled hobbies & Nancy joins us to tell us that FD logs were dropped off to HHC, & code tapes to Skipper for future upgrading.

7/31 15m phone net - W6ZE/HHC checks in YZG, IXN, RND, QNU/AF6C, KVA, ZL1BMK, & NG7D. IXN & choir singing hymns at a prayer service for a deceased nun, YZG suffers a compressed nerver in his arm, causing paralysis, & suffers severe vertigo 'without flying'. Lu & BMK give each other 5/5 sig rpts! KVA hears all OPs FB in Buffalo, NY, & RND listens to rescue operations (repeaters) for the lost Boy Scout on San Gorondo Mt. IXN/landlines NG7D, who comes on frequency to chat with BMK for 50 min. plus!

7/31 2m phone net - W6ZE/IXN checks in BPX, RE, XQR, RND, ZH, TAM, AF6C, HHC, VDP, ZRB, OPI, & ESD. BPX goes to the 'aspirin clinic' to live his shoulder twisted by the Doc! Next Wed.'s MR1 (shoulder pix) will show something now, Wyatt! RE...as he swallows a boysenberry w/ the coffee, tells OPs that 3XISG & 3K1AU are acceptable for DXCC immediately, & abt 3456 MHz & 57600 MHz contacts between N6CA at Palos Verdes City Hall, & KH6HME on 8200 ft. Mauna Kea volcano in HI! XQR attends a training class in message handling, & RND tackles painting the QTH this week. ZH is off to get more QSL card holders as QSLs arrive from EA6, HK0, ZP5, & OH lands, & Chris & TAM contemplate Janes's 'RAC' award & prepare to host Chris' daughter for 2 wks! AF6C will live 4 days of travel & 3 days of work at 'places unknown'...Hm...! House chores & the job keep HHC busy as Ken enjoys the fine ski conditions on 15m tonite! VDP gets the J-poles installed, looks for a 6m beam, & gets Wyo. & Utah on 6m for two more grids! Ray Davis, W6NT, SASE's Larry for a Club application! & VDP picks up a rare QSL from India wrked in 1989! ZRB 'flies in & flies out', & OPI gets a landline, but IXN & Cindy talk later abt ON7's plans to upgrade...See U on the CW net, Don! ESD arrives home frm the harmonic's QTH, tells OPs of his J79FO contact in Jhabuti, Afr., ZK1WL on N. Cook Is., & hearing a ZD9 on 10m phone in Tristan De Cuhna, an Is. off S. Afr.!
Minutes of OCARC Board Meeting
August 3, 1991

Meeting called to order by President Ken Konechty at 8:40 AM. Officers present were Ken-W6HHC, Mike-K6KAA, Bruce-KC6DLA, Bill-N6VMS, Tom-WA6PFA, Bob-AF6C, Larry-K6VDP and Frank-WA6VKZ. There were 29 members and guests present.

Treasurer's Report - We have $696.13 in checking after the Yaesu FT-470 is purchased for the raffle.

Raffle - One hundred eighty one of the 450 tickets have been sold for a Yaesu FT-470 dual band HT.

Lost Scout - Tom, WA6PFA, reported on the activities involved with the hunt for Michael Negrete (lost scout) in the San Gorgonio mountains.

A motion was made by Nancy, N6XQR, and passed to send complementary copies of the RF to John Christopher, NG7D.

Frank, WA6VKZ, reported that he lost an element from his antenna following field day. He called the manufacturer, Alabama Amateur Electronics, to inquire about a replacement. Two days later they had replaced the element without cost to Frank.

Meeting adjourned 9:25 AM.
Respectfully submitted, KC6DLA, Bruce Creager - Secretary

RADIO BEIJING Answering Local Ham
On the Air!

On September 8th and 10th in the Listener's Letterbox segment, Radio Beijing will be answering Scott Tokar's request for a report on the magicians in today's China. China is well known as the birthplace of numerous classic magic effects including the infamous Chinese Linking Rings. Scott Tokar, N62HV, is a professional magician as well as a member of the Orange County ARC. Broadcast Times and Frequencies North America West Coast

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Special Bulletin #23 From ARRL HQ July 30, 1991

Soviet Union's Radio Magazine is sponsoring the Stars of the Air Competition from 2300 Zulu August 17 to 0700 Zulu August 18. Amateurs worldwide are invited to compete from their home stations while Soviet amateurs compete on site. About 25 Soviet stations will be on the air with R1AA thru R1AZZ call signs and will be competing against each other on 7 and 14 megahertz bands only. Rules for non-on-site stations will operate CW only on the 3.5 to 28 megahertz bands, excluding the WARC bands. The exchange is signal report and consecutive serial number. Contacts with your country count zero, with other countries in your continent, one point, and with other continents 3 points. Multipliers are DXCC countries per band. Your final score is the total QSO points times total multipliers. Entry categories are single operator, and multi-operator, single transmitter only. The contest call-up is CQ SOA. Logs, summary sheet, and multiplier list should be sent by September 15 to UW3AX, PO Box 679 107207 Moscow, USSR. Enclose 3 IRCs for a copy of the results.

Radio School U
"U" for Under-One-Roof

- No-Code Technician Class
- General Code Class
  + Theory Review
- Advanced Theory Class

OCTOBER 11, 12, 13
Airporter Hotel, Orange County
Bring your friends
to no-code class!

Attend an upgrade class at the SAME Hotel on the SAME Weekend!
3 Classes in 3 Classrooms
Next classes: November 8, 9, 10 LAX
December 13, 14, 15 Orange County

Gordon West Radio School, Inc.
INFO LINE (714) 434-0666
REGISTER (714) 549-5000
WEEKEND GENERAL CODE CLASS
AUGUST 17th & 18th
Santa Ana
Only prerequisite:
Copy code at 10 wpm for
class entry
"Dit-Dah" Dan, AA6LM
Instructor
Call Gordon West Radio
School to register now!
(714) 549-5000
Class space limited for
more individual attention!
Course Fee: $150.00

Fred Bowen, W6CLH, Estate Sale
Item Mfg'r Model Item and Description Price
4 Kenwood AT-200 Antenna Tuner $100.00
7 Yaesu FT-209RH 2 Meter HT Transceiver (#7,8,9) $225.00
8 Yaesu MH-12 Speaker Mike for FT-209 HT (Less FNB-4 Battery)
9 Yaesu PA-3 12V Car adapter - charger (for FT-209 HT)
10 Butternut HF-5B "Butterfly" antenna (#10,11) $165.00
11 Alliance 73 SWR Meter (Cross needle (10, 12, 15, 17, & 20 You remove.)
16 Diawa CN-460M Atenna Rotor 15/150 watt) $50.00
26 Isopole 440 Antenna $25.00
27 Drake DL300 Dummy load $20.00
28 Isopole 2 meter antenna $25.00

Item numbers not listed have been sold.
Contact Frank Etter, KE6ZW (714) 775-3923

2 METER 5-ELEMENT PORTABLE BEAM

CONSTRUCTION STEPS
1. Cut and drill boom pieces per sketch
2. Cut elements to exact length
3. Assemble Gamma on driven element
4. Melt solder at midpoint of remaining elements
5. Assemble boom pieces to PVC cross
6. Slip elements in from top
7. Attach and route coax
8. Use 4 foot PVC piece as mast

TO COLLAPSE
1. Slip all elements out
2. Remove boom pieces

Passed along by
Jim Edds, KA6G

August, 1991 - RF / 6
QRP Power at its Best - the Two-Fer II (Part 1) by John P. Christopher, NG7D/QRP

Hi There! At the request of several members of the OCARC, I have been asked if I would do an article for RF on the subject of “QRP” in Amateur Radio Communications. For some of you, it could very well change the way you view, and think about Amateur Radio Communications in the future.

“QRP” as defined by the International Telecommunications Union, means “Shall I decrease transmitter power?” or “Decrease transmitter power.” In Amateur Radio Communications, “QRP Power” has widely been accepted worldwide, and by most radio clubs and organizations the last 10 to 15 years, as 3 watts RF output or less, leaving your antenna. The International Telecommunications Union has never adopted or defined a low power limit, in regards to their definition of “QRP.” It has basically been Amateurs, themselves, who have adopted the power limitations to qualify as a QRP operation.

Do you think 5 watts is pretty low in RF output power? Well think again. There are quite a few Amateurs in the United States today who are regularly operating on power levels in the MILLIWATT range! I have personally worked one amateur who was using only 60 milliwatts and a three element beam. He sounded like a 100 watt station on CW, but the 5 meter on my rig told another story. As remarkable as it was, this amateur was able to work the band with only 60 milliwatts of RF output. I have also worked others who were operating Milliwatt in power, but at higher levels of 300 to 800 Milliwatts. That’s still well under one watt of power, folks. In the past, I have successfully worked the United States on two watts PEP USB on 10 meters using a little AE A DX Handy 28S handheld 10 meter receiver. It is even possible to work RTTY on 5 watts of power on 10 meters, if the band is open. A few years ago, I worked an AE2E near Cabo San Lucas on 40 meters using RTTY, and I was using 10 to 12 watts of RF output from my transmitter. Though this power level wouldn’t be considered QRP, it still is considered rather low for RTTY operation on 40 meters with QSB and QRB on the band, as I experienced that day. The QSO went very smoothly considering all that was going on that day.

Over the years, I have successfully worked Japan, Easter Island, Canada, Uruguay, Argentina, Mexico, and last October, 1990 Kigali Rwanda in the heart of Africa (booga booga), on QRP power. Yes, indeed, you certainly don’t need much power to work the world when propagation is with you and the QRN is low. Of this writing, I have successfully completed QSO and confirmed 46 states out of the 50, all on less than 5 watts RF output! Like many of you, I was very skeptical at first about what you could do on QRP power. Over a period of time however, I realized that I had quite a few QSL cards in my hands, from all those operators I had worked. When cards started coming in from the Bureau from DX stations I had worked QRP, I was convinced totally.

Have I sparked an interest in QRP for some of you yet? A lot of you might wonder, how much does this QRP business going to cost me, if I decide to get into it? The simple truth is, very little to as much as $1000 or more. The price of a new Ten Tec Argonaut II transceiver these days is $1500. It’s all band digital readout transceiver, field serviceable, light and portable, operational on 12 to 16 volts DC, and American Made. On the other hand, you could build your own QRP CW Transceiver, for any band from 80 meters to 10 meters for less than $75 for a fairly decent home-brewed unit, if you’re good at shopping around for parts.

The schematics and pictorial of a circuit called a “TWO-FER II” QRP CW Transmitter are available. Some of you may remember me talking about this circuit on the 15 and 2 meter nets over the past three months. It is available in kit form from:

OAK HILLS RESEARCH, 20879 MADISON STREET, BIG RAPIDS, MI 49307

The TWO-FER II is very small, measuring only 3 by 2 inches in size. The transmitter is capable of producing from less than 1 watt to 5 watts RF output. The technical description of this transmitter’s circuit would go something like this: “An electronically switched, VXO/Crystal controlled Pierce oscillator fed into a two stage broad band RF amplifier, fed into a low pass filter stage in the final output.”

A lot of fancy wording for a simple QRP transmitter, isn’t it, hi hi. Since the TWO-FER II can produce up to 5 watts RF output from the RF power transistor Q5, (Motorola 2N3553) it can as well generate a lot of heat, even though the transistor is heat staked. It still has the capabilities of burning your fingers, if it gets too hot, and you come into contact with it in handling the exposed board, so be very careful when handling it immediately after use. It is not recommended that you run the transmitter that high in RF output anyway, because it puts a strain on the transistor, and the life of the device is greatly reduced. RF output control is accomplished by several means. Either reduce C6 to 10pF, or increase R7 to 100 ohms or more, or install a 500 ohm variable potentiometer between ground and the R7 33 ohm resistor.

In regards to the VXO. Depending on what type crystals are used, will determine how far the VXO capacitor will shift the frequency. FT-243’s will usually shift 1 to 2 kHz or so, don’t expect a great deal of shift with them. I discovered that small 33pF transistor radio tuners make nice variable capacitor controls for this function, though compression trimmers can also be used as well in the 50 to 100 pF range. Too much capacitance causes the oscillator to quit functioning I found out. Because of space limitations in RF, I will not get into coil and choke winding data for the various bands for this unit, but the information is readily available through myself (NG7D) or Oak Hills Research in their kits.

One of the interesting things about the TWO-FER II is the fact that no matter what band it’s designed for, the circuit basically remains the same, no big changes are required. To switch bands with the TWO-FER II, you change the Crystal, as well as the low pass filter stage of L1 and C11 and C12 capacitors, as well as change the L2 winding and C13 capacitor. It may not be necessary to change L2 and C13 if you are capturing sufficient signal from the transmit antenna into your receiver during non-transmit periods. Reception via the TWO-FER II is accomplished via QSK pick off circuit on the board at L2. I use the center connection of my coaxial connector on my TS-430S receiver to accomplish transceiver operation with the TWO-FER II, though it is designed to work with just about any communications receiver that can handle CW and SSB reception.

PART 2 NEXT MONTH
CLUB FUNCTIONS

MONTHLY MEETING: 3rd Friday of each month, 7:30PM at REPUBLIC FEDERAL SAVINGS BANK
August 16th
September 20th
October 18th

CLUB BREAKFAST: NEW LOCATION STARTED WITH THE APRIL, 1991 MEETING
September 7th
October 5th

CLUB NETS

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(Listen for W6ZE, net control) *Plus or minus QRM

ARES DISTRICT NETS

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</table>

1 - ARES Info net.
2 - ARES District: 3 net starts after info net is completed (Usually about 1915 hrs).
3 - City Nets: Orange - 146.535 WB6FCP; Tustin - 146.505 KK6QE; Santa Ana - 147.583 W6HHC

ORANGE COUNTY AMATEUR RADIO CLUB, INC.
P.O. Box 3454
TUSTIN, CA 92681

First Class Mail

Time-Dated Material.
Please Rush!!!