

THE EAST BAY AMATEUR RADIO CLUB, INC.

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THE BLOWN FUSE

CLUB STATION W6CUS

VOLUME LXIV NUMBER 4

APRIL 2016

EBARC Meetings

April 8, 2016, 7:30 p.m.

"Meteor Scatter"

Martin Rothfield, W6MRR

The East Bay Amateur Radio Club meets this month at the
El Sobrante Library, 4191 Apian Way, El Sobrante.

The Executive Board meets monthly before each general meeting. For the date,
time, & location, contact President Jay Sparks, KJ6HSH, at 384-4233.



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THE EAST BAY AMATEUR RADIO CLUB, INC.
Post Office Box 1393
El Cerrito, CA 94530

The Blown Fuse is published monthly by the East Bay Amateur Radio Club, Inc. and is free to its members. *The Blown Fuse* welcomes articles of interest to its members and amateur radio in general. *The Blown Fuse* reserves the right to edit or reject any material submitted. Material submitted becomes the property of *The Blown Fuse*. Permission is hereby granted to reproduce material printed herein provided proper acknowledgment is given. Editor: Sharon Primbsch, AA6XZ

Deadline for May issue: Tues., Apr. 26th

[Articles may be submitted by "snail" mail, by dictation over the 'phone 510-741-8227, or by e-mail to aa6xz@earthlink.net]

April 8th EBARC Meeting

Peter Hoffman, W6DEI

We'll meet in the community meeting room at the El Sobrante Library, 4191 Appian Way. Enter through the back door.

Our April speaker is Martin Rothfield, W6MRR. One of the more esoteric forms of propagation, meteor scatter, can be surprisingly effective. We'll hear how a company Martin worked for used the ionized trails of meteor showers to provide reliable communication for trucking companies on 6 meters.

President's Message

Jay Sparks, KJ6HSH

Greetings! Spring is here. It's a time of new beginnings and for thinking out of the box. The club continues to be source of pride and inspiration. We'd like to dig deep and find a new clubhouse. Any thoughts? We at least a place to store our Field Day gear.

Treasurer's Report

January 2016

Randy Jenkins, KA6BQF, Treasurer

JANUARY GENERAL FUND¹

Beginning Balance\$6,683.70

Income:

Member Renewal: KK6UPI, KK6BKS,
and KJ6DYX\$90.00

Refreshment Kitty17.00

Total General Income:\$107.00

Disbursements

Total General Expenditures.....\$0.00

Ending Balance\$6,790.70
(portion as petty cash..... \$50.00)

¹\$100 earmarked for youth scholarships.

JANUARY STATION FUND

Beginning Balance:\$2,112.50

Income:

Bank Interest (quarterly)\$0.14

Disbursements:

Storage Costs\$80.00

Ending Balance\$2,032.64

Many thanks to Michael McMillan, K6MCM, for preafrooding this month's *Blown Fuse*.

Grizzly Peak Century

We are recruiting amateurs to work at the Grizzly Peak Century bike ride on Sunday, May 1st. Please let us know if you are interested, and include your availability, preferred assignment, and tee shirt size. We welcome new amateurs to join us. Details are at <https://www.grizz.org/century/home/index.php>. To sign up, contact Randy Jenkins, KA6BQF, at ka6bqf@arrrl.net. We especially need hams to talk at Net Control.

Treasurer's Report

February 2016

Randy Jenkins, KA6BQF, Treasurer

FEBRUARY GENERAL FUND¹

Beginning Balance \$6,790.70

Income:

Member Renewal: KK6TLB, KJ6RHF,
 KJ6DBZ, and WB6VEX \$120.00
 Donations (KK6ZPN) 30.00
 Refreshment Kitty 29.00
 Total General Income: \$179.00

Disbursements

Liability Insurance \$300.00
 Equipment Insurance \$164.00
 Post Office Box Rent..... \$134.00
 Total General Expenditures \$598.00
 Ending Balance..... \$6,371.70
 (portion as petty cash \$40.00)

¹\$100 earmarked for youth scholarships.

FEBRUARY STATION FUND

Beginning Balance: \$2,032.64

Disbursements:

Storage Costs \$80.00
 Ending Balance..... \$1,952.64

UC Berkeley Trains Hundreds of New Hams

(It takes an annual "VE Mega-Session" to
 get them licensed)

Michael Fischer, K6MLF

This March, for the third year in a row, scores of Electrical Engineering and Computer Science students crowded into a hall on the UC Berkeley campus to take their exams to become licensed amateur radio operators. To the quiet amusement of each group, the young students were met by almost twenty much older hams, some quite grizzled, in what is billed as the San Francisco Bay Area's "Annual VE Mega-Session."



UC Berkeley professor Michael (Miki) Lustig KK6MRI, teaches two ham-related courses for Electrical Engineering/Computer Science undergrads--one lower division titled "hands-on ham" (for sophomores) and one upper division titled "Digital Signal Processing" (for juniors and seniors.) These popular courses are filled quickly on registration day. In addition to the EE/CS students, upper division class members include those majoring in mechanical, biological and nuclear engineering, as well.

The "hands-on ham" course objectives are to expose new students to ham radio and to give them an early start in hacking and "making," while the DSP course objectives are "to develop skills for analyzing and synthesizing algorithms and systems that process discrete time signals, with emphasis on realization and implementation." Roger, roger, copy that. I guess.

The courses delve into the theoretical applications of digital signal processing, filter design, modulation/demodulation, decoding subcarriers, APRS audio interface techniques, and antenna design. But they also feature hands-on, practical projects that require them to transmit radio frequencies--so the students are motivated, as part of their courses, to become licensed amateur radio operators.

The lower-division students are given Baofeng radios to keep, and are coached in radio protocols. The upper division students are issued higher-end HTs which they may keep if they succeed in passing their General or Extra exams. They make satellite contacts,

Miki is quick to point out that the two courses would not be possible without the active support of the UC Berkeley W6BB club members including the trustee, Friedrich (Fritz) Sommer K6EE & DL4TT, Club President Jack Burris K6JEB, Jay Sparks KJ6HSH, Chris Harwood KJ6GLR, and Mathison Ott KJ6DZB as well as support from the EECS department staff Anita Flynn KI6LO and Winthrop Williams KK6KKV.

THE BLOWN FUSE

Mega VE Session Overview

March 6, 2016

Some details omitted

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graph TD
    TrafficCop["Traffic Cop  
[alphafile1]"] -- "candidate, packet (all ans)" --> Greeter
    Greeter -- "license or CSCE problem" --> Fixer["Fixer/monitor  
(forms, laptop, index cards)"]
    Greeter -- "candidate, packet (all ans)" --> Moneybags["Moneybags  
[moneybox]"]
    Greeter -- "candidate, packet (all ans)" --> Booklet["Booklet VE  
(text booklets)"]
    Fixer -- "bio break or leave early, all belongings and test materials" --> Candidate((Candidate))
    Moneybags -- "all answer sheets" --> Candidate
    Booklet -- "candidate booklet1" --> TestRover["Test Rover  
(blank ans. sheet)"]
    Booklet -- "booklet_2,3" --> TestRover
    TestRover -- "new booklet" --> Candidate
    TestRover -- "finished booklet & ans" --> Candidate
    Booklet -- "packet" --> Filer["Filer  
[alpha file2]"]
    Filer -- "too late for next, unused ans sheets" --> TestRover
    TestRover -- "ungraded ans" --> Graders
    Graders -- "graded ans sheet" --> Filer
    Filer -- "packet & all ans 1,2,3" --> Signers
    Signers -- "signed packet" --> WrapUp["Wrap-Up  
[ARRL offer]"]
    WrapUp -- "unsigned CSCE, ARRL offer" --> Candidate
    WrapUp -- "signed CSCE" --> Candidate
    WrapUp -- "finished packet" --> Portfolio((black portfolio))
```

The flowchart illustrates the Mega VE Session Overview, showing the sequence of events and the flow of materials between various participants and stations. The process begins with the Traffic Cop (alphafile1) distributing candidate packets to the Greeter. The Greeter then distributes these packets to the Moneybags (moneybox), the Booklet VE (text booklets), and the Fixer/monitor (forms, laptop, index cards). The Fixer/monitor handles license or CSCE problems and manages bio breaks or early departures. The Moneybags provide all answer sheets to the Candidate. The Booklet VE provides candidate booklets to the Test Rover (blank answer sheet). The Test Rover provides new booklets and finished booklets and answers to the Candidate. The Booklet VE also provides packets to the Filer (alpha file2). The Filer provides packets and all answers 1, 2, 3 to the Signers. The Signers provide signed packets to the Wrap-Up (ARRL offer). The Wrap-Up provides unsigned CSCE and ARRL offers to the Candidate and signed CSCE to the Candidate. The Wrap-Up also provides finished packets to the black portfolio.

PAGE 4

The lower-division students are primarily candidates for their Technician license, and virtually all of them pass. Those students are in and out of the room within a half-hour or so. Most of the upper-division students, on the other hand, take at least both Technician and General exams, and a few opt to go all the way to Extra. Those candidates stay in the exam room for two or (in some cases) three hours.

In the latest VE session, given on March 16th, there were 63 candidates, who took a total of 78 exams in 2 hours and 15 minutes-- 1.7 minutes per exam element. The success rate was, as usual, quite high: as a result of the evening's work, there are now 50 new Technicians, 3 new Generals, and 5 new Amateur Extras in six-land. Only one candidate left without a license.

All in all, the excellent courses, and the enthusiasm evident in the students' conversations with each other as they left the room, signed ARRL/ FCC Certificates of

Successful Completion of Examination in hand, are demonstrations of the vitality and relevance of amateur radio--now and for the future.

[Photos are from the 2015 session – Editor]

Future Bay Area Events

- Current Bay Area Public Service Events: See www.ebarc.org, click on "Current Events", then scroll to "Public Service."
- EBARC, ORCA, and ARCA sponsor joint ARRL VEC Amateur Radio Test Sessions quarterly at 9 a.m. in the Media Room, 1605 Martin Luther King Jr. Way (at 16th St.), Oakland. The remaining test dates for 2016 are; Apr. 24th, Jul. 24th, and Oct. 23rd. The fee for 2016 is \$15. Info: 510-918-4627 or 510-741-8227.
- CoCoCo RACES Training: Details from mcmillan50y@yahoo.com or via RACES net, 6:45 p.m., Thursdays on 145.11 MHz.

The East Bay Amateur Radio Club, founded in 1947, is a California non-profit organization of amateur radio operators in Contra Costa and Alameda counties. The club is open to anyone interested in amateur radio. Annual dues are \$30 for individual membership, \$35 for a family membership, and \$10 for students K-12. For information, contact any EBARC officer, see Web page www.ebarc.org, or write EBARC, P.O. Box 1393, El Cerrito, CA 94530. You can also follow us on Twitter using @w6cus.

2016 East Bay Amateur Radio Club Executive Committee

Jay Sparks, KJ6HSH, President.....	384-4233
Peter Hoffman, W6DEI, 1 st VP - Program Chair / Webmaster.....	525-0694
Stanton Gleason, KD6SWU, 2 nd VP - Hospitality / Club Station Mgr.....	385-4044
Sharon Primbsch, AA6XZ, 3 rd VP - Membership / <i>Blown Fuse</i> Editor.....	741-8227
Ron Antaki, KK6NDJ, Secretary.....	375-3756
Randy Jenkins, KA6BQF, Treasurer / Finance Committee Chair.....	526-4089
Robin Spalding, N6RLS, Member-at-Large.....	528-1144
Member-at-Large	

2016 EBARC's Other Committee Heads and Contacts

Jack Burris, K6JEB, W6CUS Trustee.....	415-305-2547
Field Day Chair, KO6NO, Ken Fowler	222-0830
Silent Key Chair	
Awards Chair.....	
Social & Digital Committees Chair	
RFI Committee Chair.....	
Historian	

AMATEUR RADIO NETS

NET	DAYS	LOCAL TIME	FREQ, MHZ
West Contra Costa EMCOMM Net	Thurs	1845 (PL 82.5-)	145.110
KARO/ECHO ARES/RACES Net	Thurs	~1900 simplex	146.415
EBARC "Explore Net" (HF)	Mon	1930 (USB)	28.425
NALCO RACES/ARES Net	Thurs	1915 (PL 131.8+)	440.900
Oakland ARES Emergency Communications Net	Thurs	1930 (PL 77-)	146.880
Contra Costa Communications Club Net	Thurs	1930 (PL 82.5-)	145.110
Tech Net	Thurs	2000 (PL 82.5-)	145.110
"Over the Hill Gang" Breakfast/Commute Net	Mo-Fr	0710 (PL 82.5-)	145.110
Northern Calif. Net VHF Session (traffic)	Daily	1930 (PL 107.2-)	145.410
"QRM Net"	Tues	1930 (PL 82.5-)	224.300
9 a.m. Talk Net	Mo-Fr	0900 (PL 100.0-)	145.230
Youth Net	Sat	1400 (PL 100.0-)	145.230

RACES, West CoCoCo: Mike McMillan, K6MCM, mcmillan50y@yahoo.com, phone 510 223-3052.
Frequencies: #1=145.110-, #2=147.570s.

HAM RADIO OUTLET

14 STORE BUYING POWER!

ICOM



IC-7600 | All Mode Transceiver

- 100W HF/6m Transceiver, gen cov. receiver • Dual DSP 32 bit • Three roofing filters- 3, 6, 15kHz • 5.8 in WQVGA TFT display • Hi-res real time spectrum scope



IC-7200 | HF Transceiver

- 160-10M • 100W • Simple & tough with IF DSP • AGC Loop Management • Digital IF Filter • Digital Twin PBT • Digital Noise Reduction • Digital Noise Blanker • USB Port for PC Control



IC-7100 | All Mode Transceiver

- HF/50/144/430/440 MHz Multi-band, Multi-mode, IF DSP • D-STAR DV Mode (Digital Voice + Data) • Intuitive Touch Screen Interface • Built-in RTTY Functions



ID-5100A | VHF/UHF Dual Band Digital Transceiver

- Analog FM/D-Star DV Mode • SD Card Slot for Voice & Data Storage • 50W Output on VHF/UHF Bands • Integrated GPS Receiver • AM Airband Dualwatch • FM Analog/DV Repeater List Function

ID-51A | VHF/UHF Dual Band Transceiver

- 5/2.5/1.0/0.5/0.1W Output • RX: 0.52-1.71, 88-174, 380-479 MHz** • AM/FM/FM-N/WFM/DV • 1304 Alphanumeric Memory Chls • Integrated GPS • D-STAR Repeater Directory • IPX7 Submersible



KENWOOD



TS-590SG | HF/50MHz Transceiver

- Equipped with 500 Hz/2.7 kHz roofing filter as standard • ALC derived from TS-990S eliminating spike issues • Antenna output function (shared with DRV connector) • CW - morse code decoder function



TM-D710G | 2M/440 Dualband

- V+V/V+U/U+U operation • Built-in GPS • Built-in TNC for APRS & DX-Cluster operation • 50W 2M & UHF • 1,000 memories • Dual receive • Green or amber backlight colors • Latest APRS firmware w/new features • Sky Command II remote functions



TM-V71A | 2M/440 Dualband

- High RF output (50W) • Multiple Scan • Dual receive on same band (VxV, UxU) • Echolink® memory (auto dialer) • Echolink® Sysop mode for node terminal ops • Invertible front panel • Choice of green/amber for LCD panel • 104 code digital code squelch



TM-281A | 2 Mtr Mobile

- 65 Watt • 200 Memories • CTCSS/DCS • Mil-Std specs • Hi-quality audio

TH-F6A | 2M/220/440

- Dual channel receive • .1 - 1300 MHz (cell blocked) RX • FM, AM, SSB • 5W 2M/220/440 TX, FM • 435 Memories • Li-Ion Battery



YAesu
The radio



FT-991 | HF/50MHz/2M/440 Transceiver

- 160 M-440MHz • SSB/CW/FM/C4FM Digital/AM/RTTY/PSK • 100 W (2M/4440: 50 Watts) • 3.5" TFT full-color touch panel operation • High speed spectrum scope • Roofing filters: 3kHz & 15kHz • 32-bit high speed floating point IF DSP



FTDX1200 | 100W HF + 6M Transceiver

- Triple Conversion Receiver With 32-bit Floating Point DSP • 40 MHz 1st IF with selectable 3 kHz, 6kHz & 15 kHz Roofing Filters • Optional FFT-1 Supports AF-FFT Scope, RTTY/PSK31 Encode/Decode, CW Decode/Auto Zero-In • Full Color 4.3" TFT Display



FT-450D | A100W HF + 6M Transceiver

- 100W HF/6M • Auto tuner built-in • DSP built-in • 500 memories • DNR, IF Notch, IF Shift



FTM-400DR | 2M/440 Mobile

- Color display-green, blue, orange, purple, gray • GPS/APRS • Packet 1200/9600 bd ready • Spectrum scope • Bluetooth • MicroSD slot • 500 memory per band

FT-60R | 2M/440 5W HT

- Wide receiver coverage • AM air band receive • 1000 memory channels w/alpha labels • Huge LCD display • Rugged die-cast, water resistant case • NOAA severe weather alert with alert scan



5 Ways to Shop!

- RETAIL LOCATIONS - Store hours 10:00AM - 5:30PM - Closed Sunday
- PHONE - Toll-free phone hours 9:30AM - 5:30PM
- FAX - All store locations
- ONLINE - WWW.HAMRADIO.COM
- MAIL - All store locations

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