

Calendar of Events

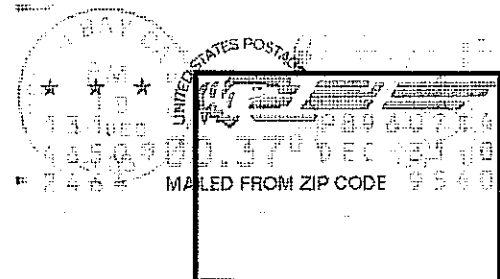
Jan 2	Fri	7:30 PM	Marin ARC Meeting, Alto Clubhouse, 27 Shell Road, Mill Valley
Jan 3	Sat	10:00 AM	Red Oak Victory ARC Meeting, Point Richmond
Jan 7	Wed	5:30 PM 7:30 PM	Dinner at Marie Callenders, 2460 Mendocino Ave, Santa Rosa SCRA Meeting, Luther Burbank Art & Garden Center, 2050 Yulupa Avenue, Santa Rosa
Jan 14	Wed	6:30 PM	SCRA Board of Directors Meeting
Jan 17	Sat	9:00 AM	VE Test Session - SCRA Location to be announced. For more information contact: John KD2L (707) 575-9176
Jan 20	Tues	7:30 PM	Hamilton Wireless Assoc., Bldg 549, Hamilton Field, Novato
Jan 21	Wed	7:00 PM Wed 7:30 PM	REDXA Meeting, Carrow's, Petaluma Valley of the Moon ARC Meeting, McDougall Hall, Sonoma Developmental Center, Glen Ellen.

Sonoma County Radio Amateurs, Inc.

P. O. Box 116
Santa Rosa, CA 95402-0116

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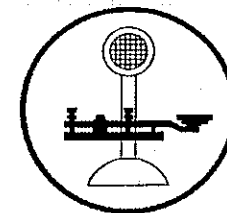
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WB6FRZ



Club Station
W6LFJ

Short Skip

newsletter of the

Sonoma County Radio Amateurs, Inc.

P. O. Box 116, Santa Rosa, CA 95402-0116

(707) 579-9608

<http://www.sonomacountyradioamateurs.com>

Repeaters

146.985- • 146.73- • 224.48- • 441.375+

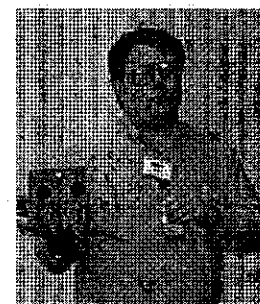


Repeater Station
W6SON

Volume 29 Number 1

January 2004

Happy New Year



Brian's Brain Dump

by

Brian Torr N6IIV
SCRA President

Wow! 2003 is behind us and 2004 is upon us. It's a new year and we are meeting at a new location. This will be an interesting year for me. Of all the positions I've held since joining SCRA back in 1982, I never imagined that president would be one of them. I think I'm up to the challenge. I am fortunate to have a very capable (and full!) board to back me up. John, KD2L, Walter, KG6OXW, and Randy, KE6VMZ are new to the board this year and I am sure they will all do a fine job. Gregory, AC6VJ, Jim, KE6VGV, and Bill, KH6GJV, will be with us again, albeit in new positions. The transition should be smooth.

We will be making many appointments at our January Board of Director's meeting. If you are interested in an appointment, or would like to submit someone's name for an appointment, please let me know.

I believe we can count on Josh, W6XU, being our Field Day Chairman this year. He did a great job last year, and has many ideas for making Field Day 2004 even better. In 2003, we made just six, yes, SIX, fewer contacts than REDXA. And SCRA did it with a 2A classification, while REDXA was 3A. If each operator would have made just one more contact, we would have beat REDXA. I think we can do it. Please give Josh

(continued on page 3)

FEMA SAYS BPL WILL "SEVERELY IMPAIR" ESSENTIAL HF OPERATIONS

A proverbial monkey wrench in the works for BPL? Expressing "grave concerns" about likely interference from unlicensed Broadband over Power Line (BPL) systems, the Federal Emergency Management Agency (FEMA) told the FCC that BPL could "severely impair FEMA's mission-essential HF radio operations in areas serviced by BPL technology." FEMA responded December 4 to last April's FCC BPL Notice of Inquiry, ET Docket 03-104. Now part of the Department of Homeland Security--the agency said its primary worry is BPL's potential impact on the FEMA National Radio System (FNARS) on HF. FNARS is FEMA's primary command and control backup medium under the Federal Response Plan.

"FEMA has concluded that introduction of unwanted interference from the implementation of BPL technology into the high frequency radio spectrum will result in significant detriment to the operation of FEMA radio systems such as FNARS," FEMA asserted. "FNARS radio operators normally conduct communications with signals that are barely above the ambient noise levels." FNARS HF stations, FEMA said, typically are in residential areas of the sort that BPL might serve.

As part of the Department of Homeland Security, FEMA's perspectives on BPL could carry substantial weight at the FCC, which may issue a Notice of Proposed Rule Making as early as February. The FCC's BPL Notice of Inquiry has attracted more than 5100 comments--many of them from the amateur community.

(continued on page 4)

2004 Club Officials

President	Brian Torr	N6IYY	707 575-5871
Vice President	John Mullan	KD2L	707 575-9176
Secretary	Walter Masten	KG6OXW	707 577-0711
Treasurer	Jim Lee	KE6VGV	415 892-0317
Director	Randy Black	KE6VMZ	707 546-0723
Director	Greg Gordon	AC6VJ	707 523-7077
Past President	Bill Hillendahl	KH6GJV	707 544-4944

Activities Chairman
Public Service Chairman
Repeater Chairman

Short Skip & Web Staff

Editor	Bill Hillendahl	KH6GJV	707 544-4944
Hank's Swap Shop	Jeff Basham	KK6JAB	707 542-3860
Web Master	Jeff Basham	KK6JAB	707 542-3860

Contacts

Antenna Ordinance/Legal	Lee Dibble	KE6EAQ	707 544-1675
Public Relations	Bill McCall	W6WDM	707 538-2844
Raffles	Karl Johnston	K6QMT	
Refreshments	Ted DeCroff	KB6PTA	707 542-4008
Volunteer Exam Liaison	John Mullan	KD2L	707 575-9176

SCRA Hotline 707 579-9608

SCRA E-Mail scra@sonomacountyradioamateurs.com

SCRA Web Site <http://www.sonomacountyradioamateurs.com>

Tuesday Night Net

Check in to the SCRA net each **Tuesday** evening on the **146.985-(PL 88.5)** repeater at **7:00 PM**. Announcements are made of upcoming SCRA and other amateur radio activities in the area and what is listed in Hank's Swap Shop. You will also hear the weekly *Amateur Radio Newslite* broadcast.

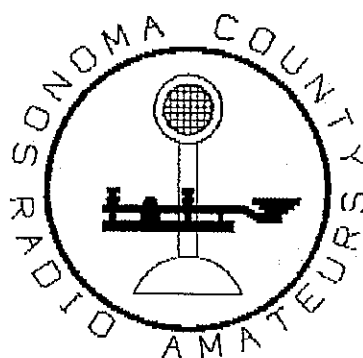
Short Skip Advertising Rates

Business Cards	\$ 12
1st Quarter Column	\$ 13
Each Addn'l Quarter Column	\$ 4
Full page (one side)	\$ 35
Pre-printed inserts (each)	\$ 35

Guaranteed circulation of 150 per month!
For more information, contact the Editor.

HUNGRY BEFORE
THE MEETING?

JOIN US FOR DINNER! We meet at Marie Callenders restaurant, 2460 Mendocino Avenue (corner of Mendocino & Chanate), Santa Rosa. People start showing up at 5:30 PM. No RSVP is required! See you there! (Except December!)

NEXT MEETING
January 7th
7:30 PM

Program:

"The Secret Wireless War:
Black Propaganda"
Video

(see article)

CLUB MEETINGS

The club normally meets the first Wednesday of each month. This month's meeting will be at:

Luther Burbank Art
& Garden Center
2050 Yulupa Avenue
Santa Rosa, CA

The meeting starts at 7:30 PM

ALL ARE WELCOME!

Please join us at our next meeting. Anyone interested in Amateur Radio may be eligible for membership. A membership application is included in this newsletter.

For more information, contact any SCRA officer, director or member.

CONTEST CORNER by Kevin Alt, K6BSG

Hello testers. I hope that everyone had an enjoyable holiday, and that you were able to have some fun on 160 meters in December. If not, then check out the CQWW 160 meter CW contest Jan 24-25, which is the big contest for this month. Happy 2004!

Dec 31 - Jan 1 - **ARRL Straight-Key Night** - See: <http://www.arrl.org/contests/rules/2004/skn.html>.

Jan 1 - Dec 31, 2004 - **UBA-SWRL 365 Day Contest** - All modes, all HF bands. See: <http://www.uba.be/>.

Jan 1 (midnight to 0100 UTC) - **New Years Snowball Contest** - SSB/CW 80 meters. See: http://www.qsl.net/eu1eu/agb_nysb.htm.

Jan 1 - **HA Happy New Year Contest** - All modes, all bands See: <http://radioklub.puskas.hu/ha5khc/web/> but only if you can read Hungarian.

Jan 1 (0800 to 1100 UTC) - **SARTG New Year RTTY Contest** - 80 and

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40 meters. See: <http://www.sartg.com/contest/nyrules.htm>.

Jan 3-4 - **ARRL RTTY Roundup** - 80 - 10 meters. See: <http://www.sartg.com/contest/nyrules.htm>.

Jan 4 - **Kid's Day** - Phone 10, 15, 20 and 2 meters. See: <http://www.arrl.org/FandES/ead/kd-rules.html>.

Jan 10-11 - **North American QSO Party** - CW, 160-10 meters. See: <http://www.ncjweb.com/naqprules.php>.

Jan 10-11 - **Hunting Lions in the Air** - CW/Phone, 160-10 meters. See: <http://www.sarl.org.za/public/contests/lionita.asp>.

Jan 10-11 - **UK DX Contest** - CW, 160 - 10-meters. See: <http://www.srars.org/ukdxcruleseng.pdf>.

Jan 11 - **DARC 10-meter Contest** - CW/SSB. See: <http://www.darc.de/referate/dx/fedcz.htm>.

Jan 17 - **LZ Open Championship** - CW, 80 and 40 meters. See: <http://www.qsl.net/lz1fw/lzopen/index.html>.

Jan 17-18 - **North American QSO Party** - Phone, 160-10 meters. See: <http://www.ncjweb.com/naqprules.php>.

Jan 17-18 - **HA DX Contest** - CW, 160-10-meter bands. See: <http://www.mrasz.hu/engver/mraszen.html>. (English this time!)

Jan 18-19 - **MI QRP Club January CW Sprint** - 160-6 meters. See: <http://www.qsl.net/miqrclub>.

Jan 18 - **070 PSKFest** - 80-10 meters. See: <http://www.podxs.com/html/pskfest.html>.

Jan 24-25 - **CQ WW 160-Meter Contest** - CW, See: <http://www.cq-amateur-radio.com/infoc.html>.

Jan 24-25 - **REF French Contest** - CW, 80-10 meters. See: <http://www.ref.tm.fr/>.

Jan 24-25 - **BARTG RTTY Sprint** - 80-10 meters. See: <http://www.bartg.demon.co.uk/>.

Jan 24-26 - **ARRL January VHF Sweepstakes** - 6 meters and above. See: <http://www.arrl.org/contests/rules/2004/jan-vhf-ss.html>.

Jan 31 - Feb 1 - **UBA Contest** - Phone, 80-10 meters. See: <http://www.uba.be/>.

Sonoma County Radio Amateurs, Inc.

Please Print Clearly

Membership Application

New ☐ Renewal ☐

Name _____ Call Sign _____ License Class _____ Date _____

Address _____ Hm Phone _____ Wk Phone _____

City/State _____ Zip _____ E-Mail _____

ARRL Member? ☐ Yes ☐ No

Dues & Fees: (SCRA dues year is from 3/1 to 2/28)

Individual/Associate Member	\$ 20 (\$5.00/qtr)
Family Membership	\$ 30 (\$7.50/qtr)
Under 18 Membership	\$ 10 (\$2.50/qtr)
Badge	\$ 7

Badge Information

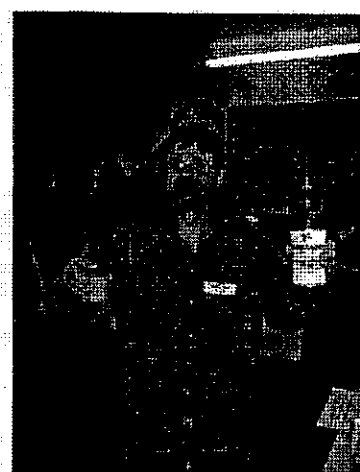
Call Sign _____
First Name _____
City _____

Payment Calculations:

Make checks payable to SCRA

Dues - Full Year (3/1 to 2/28)	\$ _____
Dues -	
Prorated _____ Qtrs. X \$ _____ /qtr	\$ _____
Badge	\$ _____
Other - _____	\$ _____
Donation	\$ _____
Total	\$ _____

Mail to: SCRA, P. O. Box 116, Santa Rosa, CA 95402



JANUARY PROGRAM

Join us on **Wednesday, January 7th at 7:30 PM** for "The Secret Wireless War: Black Propaganda" This is the second half of the video shown earlier. The film follows the development and content of the WW@ secret British black radio broadcasts against the Germans. There are fascinating tales both from SCU 1 transmitter engineer Phil Luck and Ingram Murray, son of one of the important Foreign Office officials that shaped the operations. There are visits to the remarkable remains at Potsgrove and Milton Bryan studios. New secret papers are unearthed from the propaganda station manager's truck.

This year's Holiday Party was another smashing success. About 60 members and their guests attended the party. The food was plentiful and sumptuous. Ted DeCroff KB6PTA entertained the crowd with holiday music and lead the sing-along. The singing appeared to be especially energetic by some due to the presence of wine and other beverages. Josh W6XU was spreading cheer with his rum and eggnog. And, the gavel was formally passed to incoming President Brian Torr N6IYY. Photos of the festivities are in this edition of *Short Skip*.

Brian's Brain Dump (continued from page 1)

your fullest support this year. In my opinion, Field Day is the highlight of the ham year. Let's make it a great one!

We had some good programs at our meetings in 2003. I am hoping we can put together some more good programs in 2004. Be thinking about what you would like to see for a program in 2004. I will be passing around a sheet at the January meeting for you to jot down your ideas. If you cannot make it to the meeting, call or e-mail me with your ideas.

My favorite program is Home Brew Night at the April meeting. If you have some gizmo or doodad that you cobbled together, whether it was two weeks ago or two decades ago, bring

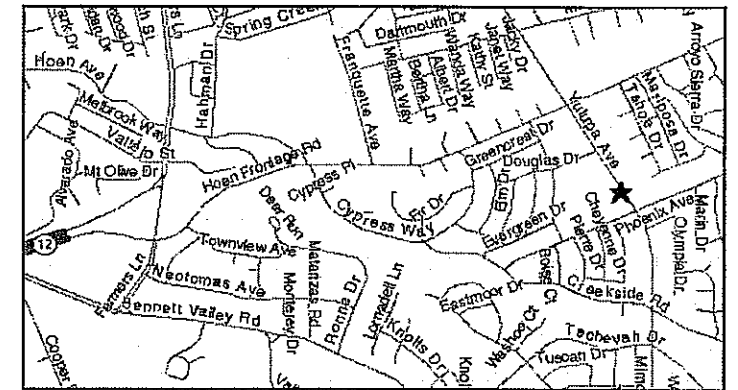
Are you a budding author? Write an article for *Short Skip* on a Ham radio-related subject, technical or non-technical. E-mail the article to kh6gjv@arri.net. We'd love to see YOU in print!



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FAX: (707) 576-7955
www.rivkinradler.com

MEETING LOCATION



Luther Burbank Art & Garden, 2050 Yulupa Ave, Santa Rosa (Bennett Valley)

it and tell us about it. You just might have the "missing link" some other ham's been looking for.

The Christmas Pot Luck Dinner was a success! The food was great, even though practicality (and my doctor) dictated that I not eat one of everything. The desserts were wonderful. We'll have to get larger dessert plates next year. Thanks to Vicki, KF6ZCT, and Toni, KF6ZCW for the decorations and to Ted, KB6PTA for the coffee, drinks, and of course, the music.

For those of you that helped cleaning up, you know I was worried that we were missing one of the caterer's dishes. I am pleased to report that the dish was found. The next morning, in my car. On the front passenger seat. Under my coat. Still full with turkey! I had forgotten to bring it in!

Oh well, as long as that's the worst of my mistakes, 2004 will be a great year!

73, Brian, N6IYY

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ARES Comm Log

by Rich Freitas KF6SZA
Sonoma County District
Emergency Coordinator

Portable Radio Batteries

Several of these articles have dealt with items of personal equipment that hams should keep handy and ready for use in emergency or disaster response operations. Even a number of our faced-to-face meetings have centered around items that should be included in your "Go-Kit" should emergency deployment become necessary. For example, clothing suitable for likely conditions, flashlights, non-perishable food items, water, and, obvious for communicators, radio gear suitable for the specific job at hand.

The necessary radio gear often includes hand held radios, used for everything from talk-in to a specific assignment to the primary communications devices needed to carry out individual duties. Modern walkie-talkies (HTs) are wonderful devices capable of easy programming to many different frequencies that may be called for and coverage over very wide areas. They are flexible, rugged, and just about indispensable in emergency communications. Unfortunately, as normally equipped when first received, almost all of them rely on rechargeable NiCad batteries.

Anyone who has experience in disaster response operations is familiar with the truism that communications will fail, either through overload, equipment failure, or both. Indeed, that is precisely the reason why well-trained and equipped Radio Amateurs are often needed to supplement or even replace inadequate communications systems in emergencies. If hams are to be part of the solution – and not part of the communications problem – it is obvious that their communications gear must always be as ready as they are to work.

This brings us back to those NiCad batteries with which hand-held radios are usually supplied. NiCads are great for many, even most, purposes. They are relatively inexpensive and can be recharged many times. But, they are much like the big communications failures that can be expected in emergencies – THEY WILL QUIT EXACTLY WHEN NEEDED THE MOST!

The solution, of course, is the alkaline battery case normally available as an inexpensive accessory to

your hand-held radio. And, a supply of alkaline batteries can keep you going indefinitely, with minimum off-the-air time, and without a/c power sources for NiCad chargers that probably aren't available.

Disaster response agencies would do well to keep a supply of fresh AA size alkaline batteries on hand for their Amateur Radio auxiliary resources.

The weekly ARES net for the greater Santa Rosa area is conducted on Mondays at 7:30 PM on 146.835 MHz, - offset, 88.5 PL; it is currently linked to 444.900 MHz, + offset, 88.5 PL. You may use either of these frequencies. All ARES members and guests are invited to check-in. Please join us.

FEMA (continued from page 1)

FEMA said BPL also could render useless such "essential communications services" as the Radio Amateur Civil Emergency Service (RACES), the Military Affiliate Radio System (MARS) and the Civil Air Patrol. FEMA and ARRL last year signed a Memorandum of Understanding that focuses on how Amateur Radio may coordinate with the agency in disasters and emergencies.

Calling the HF spectrum "an invaluable and irreplaceable public safety resource," FEMA said there's no current alternative to HF in terms of meeting national security and emergency preparedness requirements at the national, state and local levels. The agency advised the FCC to beef up its Part 15 rules to ensure no increase in interference levels to existing FCC or NTIA-licensed communication systems. Otherwise, FEMA predicted, "any noise increase inevitably would diminish the ability to maintain essential communications" and would "directly impair the safety of life and property."

Likewise, FEMA pointed out, amateur HF transmitters could possibly interfere with and interrupt BPL service, leading consumers not familiar with Part 15 to blame licensed radio services.

Concluded FEMA: "The purported benefits of BPL in terms of expanded services in certain communications sectors do not appear to outweigh the benefit to the overall public of HF radio capability as presently used by government, broadcasting and public safety users."

Additional information about BPL and Amateur Radio is on the ARRL Web site, www.arrl.org/tis/info/html/plc/. To support the League's efforts in this area, visit the ARRL's secure BPL Web site, <https://www.arrl.org/forms/development/donations/bpl/>.

From ARRL Letter

Sonoma County Radio Amateurs, Inc.
Membership Meeting 12-3-2003
MINUTES

As this was the annual Holiday Party and no formal business was conducted, no minutes were taken.

Sonoma County Radio Amateurs, Inc.
Board of Directors Meeting 12-10-2003
MINUTES

2003 Board Members Present: Bill Hillendahl KH6GJV, Brian Torr N6IY, Jeff Basham KK6JAB, Josh Fiden W6XU, Jim Lee KE6VGV and Greg Gordon AC6VJ.

2004 Board Members Present: John Mullan KD2L, Walter Masten KG6OXW and Randy Black KE6VMZ.

Guests Present: Rich Freitas KF6SZA and Sue Mullan K8SUE.

1. Call to Order, Verification of Quorum, Introductions - The meeting was called to order by President Bill Hillendahl KH6GJV at 6:35PM. The meeting was held at Marie Callendar's, 2460 Mendocino Avenue, Santa Rosa. A quorum was present in that six of the seven voting board members were present.
2. Approval of Minutes - Brian N6IY moved that the minutes of the 11-12-03 meeting be approved as amended. The motion passed.
3. Officer & Director Reports
 - a. President - Bill KH6GJV - Nothing to report.
 - b. Vice President - Brian N6IY - Brian said that he is distributing the roster.
 - c. Secretary - office vacant
 - d. Treasurer - Jeff KK6JAB - The account balances were reported.
 - e. Directors
 - ii Josh W6XU - Nothing to report.
 - ii Jim KE6VGV - Nothing to report.
 - f. Past President - Greg AC6VJ - Nothing to report.
4. Committee Reports
 - a. ARES - Rich KF6SZA - Next in-person meeting will be on January 12th. The program will be on packet radio.
 - b. Mobile Comm Van - Greg AC6VJ - ComVan is at John WB6FRZ's for the antenna supports. Still working on the paint job.
 - c. Activities Committee - Josh W6XU - Review of club Christmas party.
 - d. Newsletter - Bill KH6GJV - Trying to convert the newsletter to .pdf file was discussed.
 - e. Public Service & VE - John KD2L - There will be a new event, a marathon on January 1st in Healdsburg. The next VE session will be on January 17th. Time and location to be announced.
 - f. Repeaters - Greg AC6VJ
 - ii Status of Repeaters - All up and running.
 - ii Weekly Net Control - 1/6 - KG6OXW; 1/13 - AC6VJ; 1/20 - KD2L or K8SUE; 1/27 - N6IY
5. Unfinished Business
 - a. Meeting Programs 2004

January - Secret Wireless War video	July -
February -	August -
March -	September -
April - "Homebrew Night"	October -
May -	November - Elections and ?
June - "Field Day" & Contesting	December - "Christmas Party" & Photos
 - b. Programs Ideas - 911 Services; Blood Bank
 - c. Club Calendar - No changes
 - d. Meeting Place - There was continued discussion on offered meeting places.
6. New Business
 - a. CommVan Insurance - Jeff KK6JAB moved that \$290.09 be paid from the CommVan fund to cover the insurance for the next six months. The motion passed.
7. Executive Session - None
8. Announcements - None.
9. Adjournment - The meeting was adjourned at ended at 7:25 PM.

GPS Inventor Dies

Dr. Ivan A. Gettling, president emeritus of The Aerospace Corporation and the company's founding president, died October 11th at his home in Coronado, CA.

Gettling, who was 91, served as president of the Aerospace Corp. from 1960 through 1977. During most of his professional career, which spanned more than 60 years, Gettling focused his scientific, technical, and organizational energies in support of the United States defense effort.

Under Gettings direction, The Aerospace Corp. developed into one of nation's principal technical resources, working as an independent partner of the Air Force in the research, planning, and systems engineering of military space and ballistic missile reentry systems.

Among the many complex projects undertaken at Aerospace under Gettling's direction were planning for new ballistic missile systems, oversight of space launch systems with major contributions to NASA's Mercury and Gemini space programs. The development of high-power chemical lasers, and the creation of the worldwide Navstar Global Positioning System (GPS), the most significant advance in navigation in the 20th century.

Born in New York City, January 18, 1912, Gettling attended grade and high school in Pittsburgh.

He was an Edison scholar at Massachusetts Institute of Technology from 1929 to 1933.

He attended Oxford University as a Rhodes scholar and earned his D.Phil. degree in astrophysics from Oxford in 1935.

During the following five years he conducted research in nuclear instrumentation and cosmic rays as a junior fellow at Harvard University and developed the first high speed flip flop circuit, a fundamental component of the original digital computers developed in the 1940s.

Gettling was director of the Division of Fire Control and Army Radar at MIT's Radiation Laboratory from 1940 through 1945.

His group developed the first automatic microwave tracking gunfire control radar, the SCR-584. This radar was credited with destroying 95 % of the V-1 bombs flown against England during WWII and represented the largest radar procurement of the war.

His group also developed an automatic antiaircraft radar gun direction system for the Navy, the MK-56, which was the most efficient system of its kind at that time, and remained in use decades later as the Navy's primary gun control system.

Concurrently, he was head of the naval Fire Control Section of the Office of Scientific Research and Development and a member of the Combined Chiefs of Staff panel on Searchlight and Fire Control.

Gettling was a special consultant o the use of radar by the Army to Secretary of War Henry L. Stimson during the war.

From Mobile Radio Technology, 11/2003

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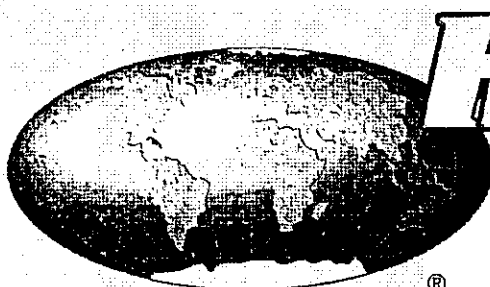
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SALEM, NH
(Near Boston)
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(603) 898-3750
(800) 444-0047
Chuck, N1UC, Mgr.
sales@hamradio.com
Exit 1, I-93,
28 mi. No. of Boston
salem@hamradio.com

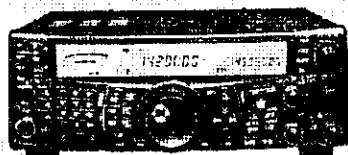
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HAM RADIO OUTLET

WORLDWIDE DISTRIBUTION

KENWOOD



TS-2000 HF/VHF/UHF TCVR

- 100W HF, 6M, 2M • 50W 70CM
- 10W 1.2 GHz w/optional UT-20 module
- IF Stage DSP • Built-in TNC, DX packet cluster
- Backlit Front Key Panel

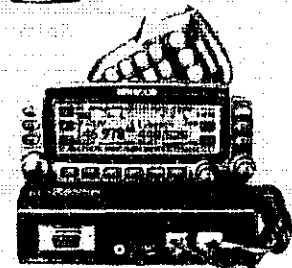
Low Intro Price!



TH-D7A(G) 2M/440

- 2M/440 Dual Band
- Built-in 1200/9600 Baud TNC
- APRS Compatible
- DX Packet Cluster Monitor
- 200 Mems., CTCSS
- VC-HI Messaging Control

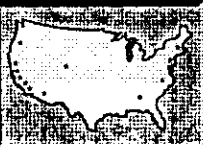
Low Pricing!



TM-D700A 2M/440 Dualband

- 50w VHF 35w UHF • Opt. Voice Synthesizer
- Receives 118-1300 mHz (cell blocked)
- Remote Head Inst. only (kit included)
- 200 Memories • Built in 1200/9600 baud TNC
- Advanced APRS Features
- DX Packet Cluster
- Tone Scan • GPS/VC-HI/PC Ports

**COAST TO COAST
FREE SHIPPING**
UPS - Most Items Over \$100



**Rapid Deliveries From
The Store Nearest To You!**

YAESU



VX-7R

- 50/2M/220/440 HT
- Wideband RX
- 900 Memories
- SW TX (300mw 220Mhz)
- Li-Ion Battery
- Fully Submersible to 3 ft.
- Built-in CTCSS/DCS
- Internet WIRESS compatible

Great Price!



FT-100D HF/6M/2M/70CM Trans.

- Compact Transceiver w/detachable front panel
- Rx 100kHz to 970MHz (cell blocked)
- Tx 100W 160-6M, 50w 2M, 20W 70CM
- Built-in DSP, Vox, CW keyer
- 300 Memories

Low Pricing!



FT-1000MP MKV HF Trans.

- Enhanced Digital Signal Processing
- Dual RX
- Collins SSB filter built-in
- 200W, External power supply

Low Pricing!

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94085
(408) 736-9496
(800) 854-6046
Howard, KE6PWH, Mgr.
So. from Hwy. 101
sunnyvale@hamradio.com



IC-706MKIIG HF/VHF Transceiver

- All mode HF/6M/2M/70CM
- 100W HF/6M, 50W/2M, 20W/440 MHz
- AF-DSP • Plug and Play Filters • No Soldering
- Easy-to-Navigate menus

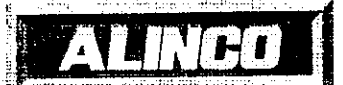
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IC-756 PRO II All mode Transceiver

- 160-6M @ 100W • Enhanced Rx performance
- 32 bit IF DSP • SSB/CW Synchronous tuning
- Enhanced 5 inch color TFT w/spectrum scope
- Selectable IF filter shapes for SSB & CW
- Multiple DSP controlled AGC loops
- Advanced CW functions
- 101 alphanumeric memories

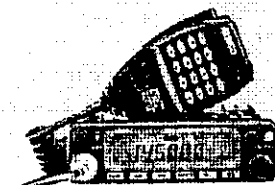
The Ultimate Radio!



DJ-196T 2M/HT

- 5 Watt out
- 40 memories
- Alphanumeric display
- CTCSS • DCS built in
- "S" meter
- Auto Dialer

Low Pricing!



DR-135TP 2M mobile

- 50 Watt out • Alpha numeric display
- 100 mems • Built-in TNC 1200 & 9600 Baud
- Front Panel GPS in • Rear DB-9 port
- CTCSS/DCS Encode/Decode built in

Low Pricing!

HSC Web Specials!

The items below can be found in the "Specials" area of our on-line shopping pages at www.halted.com...check them out and use our secure site to place your order for the holidays!

Fujitsu FPG-310 Color Pen Plotter GPIO (IEEE-488) interface Boxed, w/ manual, cord, 90-day warranty HSC# 19131	Computer Power Supply, ATX, 145W HSC# 18350
Rechargeable 12VDC Battery 40 AH, lead/acid, Yuasa NPX-150R HSC# 18917	Network card, ISA bus, 10-Base T HSC# 18943
Server Cabinet, ATX rack mount, with Power Supply, White color HSC# 80541 New Price!	Computer Speakers, powered HSC# 18662
Battery charger, NiMH HSC# 19151	Game-pad, Microsoft "Sidewinder" HSC# 80486
SCSI Controller, Initio, PCI Bus HSC# 18218 New Price!	Compact AC Inverter for the car, 100W HSC# 19021 New Price!
SCSI Controller, Adaptec 1505, ISA Bus HSC# 17895 New Price!	Motherboard, 486DX4 AT HSC# 18529 New Price!
Mouse, 2-button HSC# 18731	Motherboard, Baby AT, 486VLB HSC# 19003
Mouse, w/ numeric keypad HSC# 80539	Multimeter, analog, VOM HSC# 18290
Scrolling mouse, translucent body HSC# 18829	Multimeter, DMM, with transistor check HSC# 80370
Computer Power Supply, ATX 200W "Mini-Tower" style HSC# 18665 New Price!	Multimeter, DMM, tilt-up display, nice! HSC# 80604
	Computer Joystick, "FX2000" HSC# 18772 New Price!
	Tower Chassis, 7-Bay "RAID" HSC# 80544

VHS Video To Go!



- Videotronics Model No. VHS-105 player deck
- Dual power option - 110VAC or 12VDC!
- Perfect for entertainment, the kids in the yard!
- Many other uses, home, business, camping...
- Standard NTSC VHS format, full front-panel controls, soft-touch buttons with LEDs
- Remote control sensor on front panel - remote NOT included, may work with generic remotes!
- Returned from working service, 90-day HSC warranty

HSC# 19048 \$19.95!

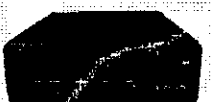
External CD-R/W!



- Hewlett-Packard Model T200 Series CD-RW
- Use just like a floppy! Shares printer port!
- Drag & drop up to 650MB on a single CD!
- 2X write on CD-RW, up to 6X read on CD-R
- 1X RAW 150KB/sec, 2X RAW 300KB/sec
- 6X Read 900KB/sec - drives any atHP website
- EIDE (ATAPI) interface w/AMC, front tray load
- 74 min. on 120min disk, 21 min. with 60min disk
- Power supply not included (pinout provided)
- Rebuilt, 90-day HSC warranty

HSC# 19036 \$49.50

VHS for even less!



- Magnavox Model No. VR9100AT01 video player
- Standard F-type connectors for cable connection
- Four preset switch selects Ch. 3 or Ch. 4 output
- HSC jacks for line level video/audio connect
- Puffed from working service! Units have slight markings from removed internal transmit element covering front panel infrared detector. Remote NOT included.
- For 110VAC, 60Hz operation
- Removed from working service, 90-day HSC warranty

HSC# 19152 \$17.50!

Lab Bench Supply!

- Model No. AEEC-350, 0-50VDC @ 3 Amp
- 110VAC, 50Hz - 150VA - small footprint!
- Dual digital meters for voltage and current
- Short-circuit protected, grounded - in a cord
- New, IEC power cord, manual, 90-day warranty

HSC# 80606 \$139.00

Variable Transformers!

- One of the most useful instruments on your bench!
- Always wanted one, but they were too expensive?
- Two sizes to choose from, now they're affordable!

Both new in box, made in China
Model AEEC-560VR
0 - 120 VAC output 500 VA
Measures 6.5" x 6" x 7" tall
Features meter, illuminated switch, line cord, fuse
HSC# 80474 \$45.00

Our most popular model!
Model AEEC-800VR
0 - 120 VAC output 2KVA
Measures 8" x 10" x 9" tall
Features meter, illuminated switch, line cord, fuse
HSC# 80461 \$95.00

Solder Pots!

Finally, we found a source for solder pots! New, 90-day HSC warranty, very handy for the workbench!
AEEC-10P, handy compact desktop unit
110VAC, 110 Watts - perfect for small jobs
Adjustable temp. levels - 300 to 430 deg. C
Both dimensions: 36mm dia x 30mm deep
HSC# 80610 \$32.00

Disk Drive Deals!

- Seagate ST15150N 4.3 GB "Barracuda" SCSI
- 7200 RPM, 5.09 sec the avg. seek time
- 21.1Mbs, 11 Dens, 3.711 Cyl
- Standard 50-pin SCSI
- 3.5" size, half-height (1.5" tall)
- Returns 90-day warranty

HSC# 18412 \$32.50

- Seagate ST10171WC, Ultra SCSI Wide AS2
- Formatted capacity: 9.1GB
- Spindle speed: 7200 RPM, 3.5" size, half-height (1.5" tall)
- 80-124 mb/sec internal transfer rate
- Average Access (read/write): 9.7-10.7 ms

HSC# 18753 \$39.95

Special: buy the drive & get a 50-pin (HSCA23700) or 68-pin (HSCA23700) Adapter for \$10.00! Normally a \$20 - 30 value!

PCMCIA Goodies!

- EPSON Ethernet PCMCIA interface card
- Both 10Base2 and 10BaseT cables included!
- Compatible with notebooks/PCs with Type II slots
- Hot exit insertion and removal - no power down
- No jumpers or switches - Two LED status lights
- New boxed, disassembled manual, 90-day warranty

HSC# 19125 \$9.95

- Intel "PRO100" PCMCIA Network Adaptor Card
- MBLA1600 LAN card supports 10BaseT/100BaseTX
- For PC Card Type II sockets, 32KB packet buffer
- Full duplex support (10Mbps networks only)
- Ethernet Specs IEEE 802.3 & 802.3u spec
- With RJ45 cable, OEM packed, 90-day warranty

HSC# 19190 \$39.50

- Epson/Adaptec APM460B PCMCIA SCSI Card
- Up to 2 MB/sec PC Card bus rate
- New, OEM pack with DB25 cable, 90-day warranty

HSC# 19160 \$49.50

EASY NETWORK!

Multi-PC Web Access...
Save Money!
Up to 4 PC's on one phone line!

- Perfect for homes/small businesses
- Share printers, send taxes, backup files
- Proxy server for multi-PC internet access!
- Only one phone line needed for ISP connection
- Includes 4-port hub/56K modem & 1 network card
- If you want more than two PC's networked, you will need more network cards (HSC# 18493 \$4.95)
- 50 ft network cable, driver/installation manual CD
- OEM package, new, 90-day warranty

HSC# 80599 \$29.95

- or, you can just buy the modem/hub card!
- Comes with installation software CD
- You can connect your own 10BaseT network PCs (up to three) to its hub and save!
- OEM package, new, 90-day warranty

HSC# 18942 \$17.50

HSC Electronic Supply

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