Coming Events

une

SCRA Club Meeting 7.30pm - Hewlett Packard 1400 Fountain Grove Parkway

MARC VE Exam Kaiser Hospital Building 2 San Rafael Talk-In 147.330

SCRA Board Meeting 5.30pm - Bank Of The West Community Room, Marlow Shopping Center, Santa Rosa

SCRA Fox Hunt 9.00am - Piner High School, Fulton Rd, Santa Rosa

SCRA Field day setup - Youth Park, Santa Rosa

26th & 27th ** Field Day **

Sonoma County Radio Amateurs, Inc. PO Box 116 Santa Rosa CA 95402-0116

ADDRESS SERVICE REQUESTED

BULK RATE U.S. POSTAGE PAID SANTA ROSA CA

PERMIT NO. 658

574 WILD OAK DR WINDSOR, CA 95492

JOHN BRECKENRIDGE WB6FRZ



Club Station W6LFJ

Short Skip



Sonoma County Radio Amateurs, Inc.

PO Box 116, Santa Rosa, CA 95402-0116

Repeater Station W6SON

146.730 MHz • 224.48 MHz • 441.375 MHz

Volume 24 Number V

May 1999

ARRL TO CELEBRATE 85TH ANNIVERSARY ON THE AIR

The ARRL celebrates its 85th anniversary May 18, 1999. To mark the event, Maxim Memorial Station W1AW will operate as special event station W1AW/85 during the week of May 17-23. Some W1AW/85 operation will include PSK31. The American Radio Relay League was founded in 1914 by Hiram Percy Maxim, later 1AW, and Clarence Tuska, later 1AY.

It was Maxim's desire to send an inquiry about a hard-to-get receiving tube--a deForest audion--from Hartford, Connecticut, to Springfield, Massachusetts, that served as the catalyst for the League's birth in 1914. After conditions prevented him from working Springfield directly, he arranged with a station between the two cities to relay his message. Initially working with Tuska through the Radio Club of Hartford--which had voted to take over development of a national "relay" organization--Maxim's vision for the League became reality in May of that year. Initial dues were free. By late summer, more than 200 "relay stations" had been appointed across the US, although the first edition of OST--16 pages in all--did not appear until December 1915.

"Our celebration of the League's 85th anniversary would please our founders in two ways," said ARRL Executive Vice President David Sumner, K1ZZ. "First, we are celebrating with on-the-air activity--the organization, promotion, and protection of which was why they went to the trouble of creating the League in the first place. Second, just as they did in the exciting early years, we are looking forward by emphasizing new methods of radio communication."

By coincidence, the League's anniversary celebration begins on World Telecommunication Day, May 17.

ARRL President Rod Stafford, W6ROD, encouraged participation from all segments of the Amateur Radio community. "We hope everyone, member and nonmember alike, will join in celebrating the League's first 85 years and the beginning of the next 85," he said.

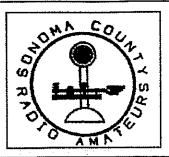
Volunteer staff members will handle on-the-air duties at W1AW/85, which will take place before and after regular daily W1AW transmissions. Plans call for W1AW/85 to operate 160-10 meters plus 6 and 2 meters and 70 cm, 25 kHz inside subbands on CW, plus SSB, RTTY, PSK31, SSTV, satellite, Novice bands, etc. Additionally, W1AW/85 will transmit bulletins using PSK31 as a secondary digital mode (time permitting) for the last digital bulletin of each day that week.

A special QSL will be available. Make ARRL's 85th anniversary special by working W1AW/85!-thanks to Joe Carcia, NJ10

Reprinted with permission from The ARRL Letter and The American Radio Relay League.

SHORT SKIP

	1999 Club Off	icers	
PRESIDENT	Larry Gustafson	KD6VUM	523-0266
VICE-PRESIDENT	Stephen Brinck	KF6RCH	415-693-7095
SECRETARY	Bill Hillendal	KH6GJV	538-0331
TREASURER	Joel Nadler	KJ6LF	545-1782
MEMBERS-AT-LARGE	Brian Torr	N6IIY	575-5871
	Jim Cardillo-Lee	KE6VGV	
REPEATER CHAIRMAN	Kelly Cureton	KD6CJQ	837-9434
ACTIVITIES	Greg Gordon	AC6VJ	523-7077
PUBLIC SERVICE	John Mullen	KD2LQ	575-9176
PAST PRESIDENT	Dave New	AA6YX	820-6608
SI	HORT SKIP STAFF		
EDITOR	Wesley Chapman	K7DXG	206-0669
CIRCULATION	Ken Harrison	N6MHG	539-2701
AUDIO TAPING	John Breckenridge	WB6FRZ	
	Laurel Meyer	KC6FKX	
	Bob Phillips	N6RMW	
	Ken Harrison	N6MHG	
SWAP SHOP EDITOR	Ken Harrison	N6MHG	
SCRA Webmaster	Ken Harrison	N6MHG	and a second second
Assistant Webmaster	Claude Jones	AB6OL	•



CLUB MEETINGS

7:30pm on the first Wednesday of each month at the Hewlett-Packard plant in SANTA ROSA. See map below.

ALL ARE WELCOME!!

We invite you to attend our next monthly meeting. Membership in SCRA is open to anyone interested in Amateur Radio. If you would like to join, there is a membership application in this issue.

SCRA HOTLINE: 707-579-9608
Web Address: http://cds1.net/scra

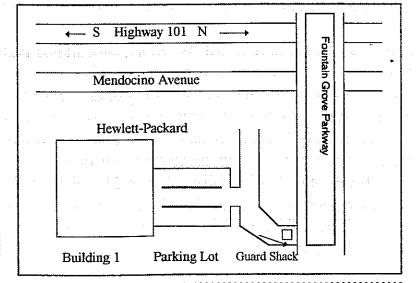
Short Skip On-line: http://cds1.net/shortskip

Next Meeting: June 2nd
7:30pm
Prep for Field Day!

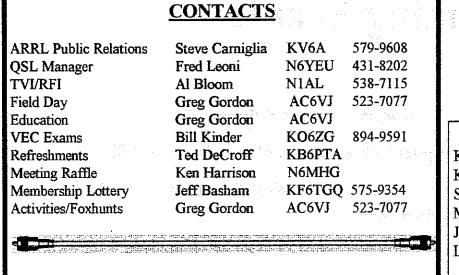
Tuesday Night Net

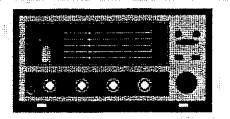
Check into the Tuesday Night SCRA net on the 146.73 repeater at 7:00pm. Announcements of upcoming SCRA activities, a Swap Shop, and the latest Amateur Radio News line broadcasts can be heard.

Short Skip Advertising Rates				
Business Cards:	\$10			
First Quarter Column:	\$11			
Each Additional Quarter Column	\$3			
Full Page, one side	\$32			
Pre-printed inserts	\$32/sheet			
Guaranteed Circulation of 200 p				



Short Skip is published monthly by the Sonoma County Radio Amateurs, Inc. Permission to reprint articles is granted, provided the source is properly credited. Items printed do not necessarily represent the views of the SCRA and/or its editors. Letters, photos, and articles sent to the editor are subject to editing, publication, or rejection at the discretion of the editor.





Repeater Control OP's Kelly KD6CJQ 837-9434 N6MHG 539-2701 Ken Steve KV6A 579-9608 N6VUC 584-3898 Merl KJ6LF 545-1782 Joel KD6VUM 523-0266 Larry

	Application	for Membership in S	CRA
Name		Call sign	License Class
		,	Date
City	Zip	E-mail	
New Renewal			
\$2/25 per month for families s	tarting at renewal ti 8/year for seniors w	me. vith proof of age. (Und	er 21 rates require application form.)
I WOULD LIKE MORE INFO Public Service Events Emergency Services Taking a Novice or To Teaching a Novice or Taking an upgrade cla	echnician class Technician class	Helping with SActing as NetHelping with SField Day andHelping with S	Control Station
BADGE (New Mer ill in this section exactly as you our badge. Call sign	want it to appear	entitled to a report to apply and sen Rosa CA 95402 Name: Call sign:	

JUNE 26-27,1999

By, Steve Ford WB8IMY, Managing Editor, OST When most hams think of Field Day, they automatically envision a stampede of activity on the HF bands. While this may be true, there is a potential gold mine of contact points on the bands above 30 MHz. Let's take a brief look at the various modes and hands:

You will find the greatest amount of CW and SSB activity on the 6 and 2 meter bands. On 6 meters, CW/SSB stations tend to gather around 50.125 MHz and above. The popular hangout on 2 meters is centered around 144,200 MHz. If propagation is especially good, 6 meters can burst wide open and yield contacts spanning several thousand miles. During Field Day weekend, you can usually count on average conditions with a range of up to 200 miles on 2 meters and 400 to 500 miles on the 6 meter band. However, be on the look-out for propagation enhancements such as sporadic E. During a good sporadic E opening, you'll work stations 1500 miles away, if not farther. You'll also find some CW and SSB activity on the higher bands such as 222 and 420 MHz. If you are strapped for equipment, however, concentrate your resources on 6 and 2 meters. For CW/SSB operating, beam antennas are your best bet the more elements the better. Make sure your antennas are horizontally polarized (the antenna elements must be parallel to the ground.) Horizontal polarization is the CW/SSB custom. The penalty for using the wrong polarization is a tremendous loss of received signal

For Field Day operating, FM is probably the easiest VHF mode to implement. You'll have little trouble finding FM rigs to use; even an H-T can make a fine Field Day rig. FM doesn't have the range of CW or SSB, but it is the most popular communications mode one the VHF and UHF bands. You'll find the greatest amount of FM simplex activity on the 2 meter band, although 6 meter FM may be worth a try as well. Remember that Field Day rules prohibit the use of repeaters. This means you'll have to hunt for contacts on the recognized simplex frequencies. Unlike CW and SSB, most FM operators use vertically polarized antennas. To maximize your signal coverage, you'll want to use vertical polarization, too. A small beam antenna mounted in the vertical-polarity position (elements perpendicular to the ground) is one suggestion. An alternative is a simple omni-directional antenna such as a ground plane. Since most of your contacts will be local, an omni-directional antenna may be nearly as effective as a

Field day this year to be at **Youth Park in Santa Rosa**

Public awareness to be this years theme

This year the whole idea of field day will be to let the general public know who we are and what we do. In addition Field day will also be a club social event and the ever-important CONTEST.

First, lets discuss the contest, We will be a 4A with a vhf/uhf station this will be mainly on 6M, but will operate on the other bands also, but not at the same time. In addition we will also have a novice station. Then of course there will be the 4 HF stations operating from 80 to 10M as conditions warrant. 160M may also be used, if an antenna can be setup.

Last, but certainly not least, ATV will be operating from our field day site. Ed ab6yv will be here on field day and will be running an ATV demo, I don't know what this will be worth in contest points if any, but it should be a great demo. We hope to have an aeronautical mobile in the air sending ATV broadcasts our way.

If we can get enough people out on field day (June 26,27) we should be able to do a good job in the contest. What we need are operators, loggers, and people to set up and tear down. It doesn't matter what class license you have you can get on the air and work stations from all over the country and the world. To make this work we (the SCRA) need you!

I am not a contester, but I do enjoy field day, it is the one contest that I do participate in. I get to work stations from all over, its easy to do, its different from the type of operating That I normally do, and that makes it fun. Also I get to rub elbows with my fellow Hams, hob-knob and shoot the breeze About any number of subjects. Generally just having a good time. So please come one come all and have a great time at this years field day.

SHORT SKIP

Sonoma County Radio Amateurs, Inc. Board of Directors Meeting 5-12-99 **MINUTES**

Board Members Present: Larry Gustafson KD6VUM, Steve Brink KF6RCH, Bill Hillendahl KH6GJV, Joel Nadler KJ6LF, Jim Cardillo-Lee KE6VGV and John Mullan KD2LO.

Board Members Excused: Brian Torr N6IIY

Board Members Absent: Greg Gordon AC6VJ, Kelly Cureton KD6CJO, Wes Chapman K7DXG and Dave New AA6YX.

Guests Present: Sue Mullan.

- Call to Order, Verification of Quorum, Introductions The meeting was called to order by President Larry KD6VUM at 5:54 PM. The meeting was held at the Bank of the West meeting room at Guerneville and Marlow Roads. A quorum was present in that six of the ten voting board members were present.
- 2. Approval of Minutes Joel KJ6LF moved that the minutes of the Board meeting of April 4, 1999, be approved as submitted. The motion passed unanimously.
- Officer & Director Reports
- a. Treasurer
- i. Current Financial There being no objection, the review of the club financial status was deferred to the next meeting. Joel KJ6LF moved that receipts presented by John Shappell KM6XO for film and processing of club pictures be approved. The motion passed.

b. Officers - Bill KH6GJV reported on the Northern Amateur Relay Council of California (NARCC) meeting. There was no representative from SCRA at the semi-annual meeting at which five of the ten NARCC directors were elected. By not having an authorized representative present, the club lost its ability to vote at the meeting. Bill picked up the club's repeater co-ordination certificates. One of the listed callsigns is still the old PVS call. Bill also noted that NARCC correspondence was not going to the corporate address for the club. Concern was expressed by several members about the repeater chairman's lack of attendance at BoD meetings. The repeater chairman has missed three of the five meetings. Larry KD6VUM will speak to him about attendance issues. Jim KE6VGV expressed his concern about the club's relationship with the county regarding repeater issues. Steve KF6RCH stated that is too much to expect of the repeater chairman to deal with the political entities at the county on his own. It was generally felt that a subcommittee of the BoD be established that would include Lee Dibble KE6EAO as ARRL Volunteer Legal Counsel to assist in relations with the county. Bill KH6GJV moved that a subcommittee of the BoD consisting of interested BoD Members, including Lee Dibble, be established to work with the county on repeater issues. The motion passed. Bill KH6GJV moved that as club Secretary, he notify NARCC to change the mailing address for the club to the corporate post office box address. The motion passed

Larry KD6VUM moved that the club spend approximately \$25 to produce the artwork masters for T-shirts. The motion passed. He will also be contacting D&S Awards to have a Life Member plaque made by June 23rd. Larry moved that the Past President and Life Member badges be made available to those who qualify and apply for the badge, the cost of which to be paid by the club. The motion passed.

Directors - None.

4/16//99 - 5/20/99 ASSETS AS OF APRIL 16, 1999 CASH AND BANK ACCOUNTS

SCRA INCOME AND EXPENSES

SCRA CHECKING 3362.78 SCRA PETTY CASH 92.40 SCRA SAVINGS 1543.14

TOTAL CASH AND BANK ACCOUNTS

INFLOWS

ARRL INC	147.00
DUES	337.50
INITIATION	30.00
MONTHLY RAFFLE	19.00
REFRESHMENT INC	11.22
REPLACEMENT BADGES	6.00

TOTAL INFLOWS

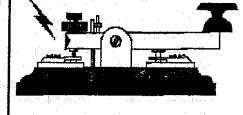
OUTFLOWS

	ACTIVITIES:	-	
	MINI-DXPEDITION	112.2	:0
	ARRL MEMBERSHIP	127.0	0
	BADGES, NEW MEM	25.1	8
i	REFRESHMENTS	11.9	7
٠	REPEATER PHONE	20.2	ź
	SHORTSKIP EXP	278.7	7

TOTAL OUTFLOWS

ASSETS AS OF MAY 20, 1999

CASH AND BANK ACCOUNTS SCRA CHECKING 3333.91 SCRA PETTY CASH 96.62 SCRA SAVINGS 1543,14 TOTAL CASH AND BANK ACCOUNTS 4973.67



Committee Reports

- a. Activities Committee
- Spring Bud Break Mini-DXpedition Wrap up Larry KD6VUM reported that there were 188 contacts. Larry showed the in process design for the QSL cards. He expects the printing will cost about \$25.
- ii. Field Day 6/25-27 Larry KD6VUM said that Pete Sourek KC6UXM gave him a tri-band beam. Larry said that the club could use it for Field Day. Larry said that in transporting the club's TH6 beam to his house, it was damaged. Larry and others from the club are in the process of repairing it. Larry offered to pay for the damage. Bill KH6GJV moved that the club pay for the cost to repair the beam. The motion passed unanimously.
- iii. Swap Meet Jim KE6VGV reported that he had been in contact with the property manager for the Petaluma Marina office building. She is getting in touch with the building owner to see if it is alright for the club to use the parking lot and building for the swap meet. Bill KH6GJV suggested that the club consider a joint swap meet with other Sonoma County clubs in future years. The general consensus was that it was a good idea.
- b. Newsletter Wes Chapman K7DXG Wes was not present to make a report. Several members noted that the font used to print the BoD minutes was too difficult to read. The editor is to be asked to use a readable font in the future.
- Public Service Committee John KD2LQ reported the following events:
 June 20th Mini-Vineman John has coverage for this event.
 June 26th Terrible Two This event conflicts with Field Day. John is looking for members who will help out with this important event.

 July 31st Full Vineman

September 26/27th - Waves to Wine

- d. Repeater Committee No one was present to make a report.
- Net Control Operators for the Weekly Net 5/18 RMW, 5/25 CJQ, 6/1 VJ, 6/8 GJV, 6/15 RMW, 6/22 IIY, 6/29 LF

5. Unfinished Business

- a. Meeting Programs June Field Day preparations; July Dayton Hamvention;
 - August Repeater Resources. Future program ideas Member Shacks and Use of the Club's Spectrum Analyzers.
- b. Club Calendar No changes.
- Storage of Club Property
- Storage Facilities Larry has most of the property at his home at this time.
 He has not had the opportunity to explore the offer of free storage made by a
 club member. He will continue working on this issue.
- d. Club Property Inventory Steve KF6RCH will start updating the inventory at Field Day.
- e. Club Bank Accounts Joel KJ6LF reported that he had checked into consolidating the accounts at one bank. Currently, the checking account is at Exchange Bank and the savings account is at Bank of the West. The club enjoys free use of the Bank of the West meeting room because of the account, however, the branch is closing (see below) in the near future. Also, Bank of the West would charge a monthly fee and check fee for the checking account. The Exchange Bank account is free. Joel moved that he be authorized to move the savings account to Exchange Bank so that he would only have to deal with one bank. The motion passed.
- f. New Member Packets Not much has been done to update the new member information packets. Joel KJ6LF has made an updated repeater information insert for the packet. Steve KF6RCH was to have been working on the packet. Michele Weeks has offered to type the text into a computer since none of the original computer files have been surrendered by previous members. John KD2LQ will also try to scan the old packet to simplify the job. The new member packet is a work in process.

- 6. New Business
- a. Club Stationary Joel KJ6LF said that the club needed more stationary including envelopes. The current supply is only copies of old stock and the design has the old PVS callsign on it. Bill KH6GJV and Joel will work together to find out the cost of designing and printing new letterhead and envelopes. They will report back at the next BoD meeting.
- b. Dipole Antenna Purchase For several years, the club has borrowed Joel KJ6LF's dipole multiband antenna for its events. Joel was going to permanently install the dipole at his home. Joel presented a brochure on the W9INN antennas that are available. Joel moved that the club purchase a SSD-6-71 multiband dipole for \$146 plus shipping. The motion passed.
- c. BoD Meeting Room Joel KJ6LF reported that the Bank of the West branch where the BoD meetings are held will be closing. The last time the club is able to use the room will be for the June BoD meeting. All BoD members are to look for a new meeting room.
- 7. Announcements None.
- 8. Adjournment The meeting was adjourned at 7:33 PM

PSK31 record: As a relatively new Amateur Radio mode, PSK31 "records" now are being established-to be broken. no doubt, as well. Here's one of the latest-the first PSK31 QSO between the US (W4WHN) and Cuba (CO2OJ) and on 2 meters to boot! "I don't know if there have been any other international QSOs on VHF-PSK31, but at least we are sure this one is the first between W4 and CO lands," said Oscar Morales, CO2OJ, who also worked K9KNW. He said he and W4WHN were running QRP--less than 3 W--and copy was "perfect." Both contacts took place on 144.190 MHz. Morales reports that he and others plan to be on 144,190 mornings seeking additional PSK31 contacts.--VHF Reflector

FOR SALE:

5-11-99 Listing

- Swan Astro 102BX SSB/CW transceiver. 160-10 meters (no WARC). Can do split operation, 100 watts output, all factory updates, with matching PSU-6 power supply/speaker unit. 110/220 vac. \$500.
- INDEX LABS QRP+ SSB/CW transceiver, 5
 watts (adj.) QRP rig. All band receiver with
 transmit on all bands, internal keyer, digital
 display, memories, w/mic. \$420.
- DENTON 160-40V Vertical Antenna for 160 through 40 meters. Unused. \$30.
- ICOM IC-735 SSB/CW transceiver, 100
 watts, general coverage receiver, 160-10
 meters including WARC bands, narrow CW
 filter, w/matching PS-55 power supply. \$725.

Contact Ken, N6KM @ 707-938-2626 or email:kmct@vom.com

- HyGain 153 BAS 3 element, 15 meter mono band yagi. \$25.
- ICOM IC-751A HF transceiver. \$500.
 Contact John, W6TLK @ 707-833-1873 or email: jwallack@jps.net
- TRI-EX Tower Model LM-470D. Weight 1148 lbs. Height extended 70'. Height nested 23'6". Self supporting Ham and Industrial Crankup with 40:1 ratio winch. Top section can accommodate Ham-IV or prop pitch motors. Can support 16 sq ft @ 60 MPH. Includes Ham-IV rotor. Down and ready to move. \$2000

Contact Bill, N6GHG @ 707-431-8636

WANTED:

No wants at this time.

SCRAPS Events

(Sonoma County Radio Amateurs Public Service)

June 20th Mini Vineman

June 26th Terrible Two bike race

This is one of the toughest double century bicycle rides in the world. We provide radio operators from 7:00 AM til 10:00 PM. We man 6 rest stops (in Calistoga, the Geysers, Warm Springs, Gualala, Ft. Ross, and Monte Rio.) In addition we staff several roving vehicles and Sag Wagons. This event tracks the progress of all the riders, so it gets pretty radio intensive. The Terrible Two is on the same

Saturday as Field Day, however, the event staff count on the SCRA to handle communications. Your Short Skip editor Wes (K7DXG) will be there. I participated with the SCRA at the Wine Country Century and had a blast! SCRAPS events are not only fun and a great way to meet folks but good practice for radio procedures. For sign up or further information contact:

John Mullan, KD2LQ 575-9176 jmullan@pacbell.net

HSC ELECTRONIC SUPPLY

* NEW LOCATION! *

5681 Redwood Drive, Rohnert Park

RAMSEY KITS

- VHF power amplifiers
- All-mode HF receivers
- QRP CW Transmitters
- Etc...

ARRL BOOKS

- ARRL Handbook
- License Manuals
- Antenna Books
- Etc...

OAK HILLS QRP KITS

- Transceivers: 80, 40, 30 & 20M
- Wattmeters
- SCAF Filters
- MFJ accessories
- Code keys
- Van Gorden Antennas
- Surplus Electronics
- Tools, parts, etc...

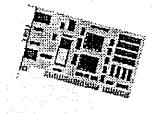
YOUR IBM CLONE HEADQUARTERS

FROM PC-AT'S TO STATE-OF-THE-ART PENTIUM SYSTEMS,









- Complete systems
- Cases, Supplies, Motherboards
- Hard/Floppy Discs, Monitors
- I/O Cards, Memory Chips
- Software, etc...



Electronics · Prototyping Supplies · Computers · Lasers

Ed Jacobson "ABGOL"

Store Manager

5681 REDWOOD DRIVE ROHNERT PARK, CA 94928 PH: (707) 585-7344 FAX: (707) 585-7597 ANAHEIM, CA (Near Disneyland)

933 N. Euclid St., 92801 (714) 533-7373 (800) 854-6046 Janet, WØMF, Mor.

WORLD STREET, STREET,

BURBANK, CA 2492 W. Victory Bl., 91506 (818) 842-1786

(800) 854-6046 Marv, K6VIV, Mgr. Victory Blvd, at Buena Vista 1 mi. west I-5

OAKLAND, CA

2210 Livingston St., 94606 (510) 534-5757 (800) 854-6046 Mark, WI7YN, Mgr. I-880 at 23rd Ave. ramp

SAN DIEGO, CA

5375 Kearrry Villa Rd., 92123 (619) 560-4900 (800) 854-6046 Tom, KM6K, Mgr. Hwy. 163 & Claremont Mesa

SUNNYVALE, CA

510 Lawrence Exp. #102 94086 (408) 736-9496 (800) 854-6046 Ken, K1ZKM, Mgr. So. from Hwy. 101

NEW CASTLE, DE

(Near Philadelphia) 1509 N. Dupont Hwy., 19720 (302) 322-7092 (800) 644-4476 Bob, N9GG, Mgr. RT.13 1/4 mi., So. 1-295

PORTLAND, OR

11705 S.W. Pacific Hwy. 97223 (503) 598-0555 (800) 854-6046 Ray, KI7TN, Mgr. Tigard-99W exit from Hwy. 5 & 217

DENVER, CO

8400 E. Ilitt Ave. #9, 80231 (303) 745-7373 (800) 444-9476 Joe, KDUGA, Mgr.

PHOENIX, AZ 😽

1939 W. Dunlap Ave., 85021 (602) 242-3515 (800) 444-9476 Gary, N7GJ, Mgr. 1 mi. east of I-17

ATLANTA, GA

6071 Buford Hwy., 30340 (770) 263-0700 (800) 444-7927 Phil. N4DAO, Mar. Doraville, 1 mi. no. of 1-285

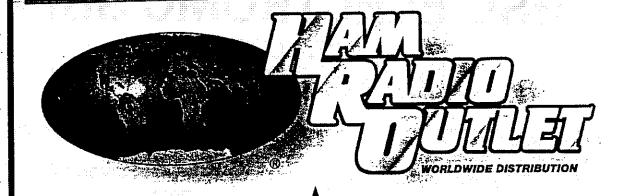
WOODBRIDGE, VA

(Near Washington D.C.) 14803 Build America Dr. 14803 Build America Dr.
22191
(703) 643-1063
(800) 444-4799
Mike, KA3TMO, Mgr. LF:
Exit 161, 1-95, So. to US 1
SALEM, NH
(Near Boston) (3)
224 N. Broadway, 03079
(603) 898-3750

(603) 898-3750 (800) 444-0047 Chuck, KM4NZ, Mgr. sales@hamradio.com add ... Exit 1, 1-93; at 5 28 mi, No. of Boston

Self Cole

ower Buying







FT-840

Dual RX

• 100W • 12V DC • DDS Gen. Cov. Rx. 100 mem.

 Optional Ext. Auto • Tuners Available Call Now For Our Low Pricing!

FT-1000MP HF Transceiver

Enhanced Digital Signal Processing

Call Now For Low Pricing!

· Compact HF Trans., 100W, Collins Filter

· Remotable front panel, optional kit req.

• Collins SSB tilter built-in

FT-900CAT

OMM-Glow display

· Optional built-in auto tuner

OSK, 100 Mem. Gen Cov. Rx.

Call Now For Low Price!

-100W. Power supply built-in



Watch For New FT-100 Soon!

Call For Possible Extensions

Caupen Expiration June 30th

FT-11R/41R

- 150 Mem. Channels 1.5W standard
- 5W option
- Alpha-numeric display · Compact & back lit keypad

Call For Low Price!



2M/440 Sup-Mini HT

- 290 Memory Channels
- .5W output
- Receives 76-999mHz plus AM BCB (Celf Band Blocked)
- · Lithium Ion Battery

Call Now For Your Low Price!





FT-50RD

2M/440mHz Compact HT

- DVA. Decode, Paging Built-in
- · Alpha numeric display · Wide Band receive
- Battery Saver
- 112 Memories
- Mil-Spec
- · HiSpeed scanning

Call For Your Low Pricing!



FT-847

Ultimate Base Station, HF, VHF, UHF

- 100w HF/6M, 50w 2M/430 mHz
- . CSP . Full Duplex Cross-band
- 1200,9600 Baud Packet Ready

Call for Low Intro. Price!



- 2M 70W Mobile Wide Band RX
- . AM Aircraft RX . Dual Watch
- 9500 Baud Compatible Alpha Numeric Display

Call For Low Pricing!



- 100w 160-6M 12VDC
- · Built-in DVR, CW Memory Keyer
- DSP Auto-Notch 99 Memories · Computer controllable, CAT System

Call For Intro. Low Pricing!





FT-8100R 2M/440 Mobile

• Ultra Compact • 50w/35w 2m/440 • 110 memories • Wide Band RX

*Backlit mic *Remotable front panel w/opt. YSK-8100 Call Now For Special Pricing

Look for the **HRO Home Page** on the

http://www.hamradia.com

COAST TO COAST Trad Marriella

UPS - Most flems Over \$100



World Wide Web

XF-110C

and the second second second second

Rapid Deliveries From The Store Nearest To You!