

Sierra Foothills Amateur Radio Club

Newsletter



http://www.sf-arc.org
August 2003
P.O. Box 1005, Newcastle, CA 95658

At the Key of S.F.A.R.C.



2003 Calendar of Events

(Operating Events in Italics)

PRESIDENT

Richard Kuepper, WA6RWS
530.878.6220
rkuepper@juno.com

VICE PRESIDENT

Rob Carpenter, WW6G
916.984.1892
ww6g@arrl.net

SECRETARY

Joe Sylvia, KF6OQY
916-797-3149
jsylvia@vfr.net

TREASURER

Mike Hudson, KG6EFK
916.624.4714
mihudson@firstam.com

DIRECTORS

Debbie Cunningham, KF6LXN
916.663.4143
dmc@midtown.net
Bob Boeckman, WA6ULL
916.987.9910
wa6ull@aol.com
Casey McPartland, W7IB
916.660.9680
w7ib@arrl.net

REPORTERS

Satellites: Greg, KO6TH
History: Gary, KQ6RT
Digital: Rob, WW6G

REPEATERS

145.430 (-0.6 MHz/PL 162.2)
440.575 (+5.0 MHz/PL 94.8)
223.860 (-1.6 MHz/PL 100.0)

CLUB NET

All welcome to check in
Thursdays, 7:30PM, K6ARR/R
145.430

CLUB MEETINGS

Second Friday of the month,
7:30PM at the Auburn
Library, 350 Nevada St,
Auburn

CLUB BREAKFAST

Last Sat of the month at
Susie's Café, Cirby at
Riverside, Roseville - 8:00 AM

NET CONTROL OPS

Dave Jenkins, WB6RBE
Gary Cunningham, KQ6RT
Joe Sylvia, KF6OQY
Casey McPartland, W7IB

WEBMASTER

Justin Carpenter, KG6NYD
rancourt@houserancourt.org

NEWSLETTER EDITOR

Fred Jensen, K6DGW
VOX: 530.885.8251
FAX: 530.745.9622
k6dgm@arrl.net

<i>Aug 2-3</i>	<i>ARRL UHF Contest</i>
<i>Aug 2</i>	<i>N.Am. QSO Party (CW)</i>
<i>Aug 8</i>	<i>Regular Meeting</i>
<i>Aug 16</i>	<i>N.Am. QSO Party (SSB)</i>
<i>Aug 30</i>	<i>Club Breakfast</i>
<i>Sep 12</i>	<i>Regular Meeting</i>
<i>Sep 27</i>	<i>Club Breakfast</i>
<i>Oct 4-5</i>	<i>Cal QSO Party (CQP)</i>

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*From the
President's
Shack*

**Richard
WA6RWS**



Greetings Everyone,

August has arrived to another busy month. The Club Board meeting will be on the 1st followed by the General meeting on the 8th. Thanks to all club members that worked the Western States Run in July. Hopefully next year I will have the time to work that event. The events are a lot of fun.

The Placer County ARES group met last week. Birton, N6UG, heads up this group. The meeting was very informative and we all learned a lot. Please contact Birton if you would like to get involved in our emergency services group.

There is going to be a Hamfest up in Anderson on Saturday August the 9th. Anderson is not far away and I plan on attending. There will be a swap meet starting at 7:30am. Our own Jettie Hill, W6RFF, will be the first guest speaker along with Dave Thorne, K6SOJ. There will also be presentations on satellite, antennas and DX-peditions. Talk-in will be on 146.64 with a - offset and a PL of 88.5. I hope to see a good showing from our club at this event.

At the August board meeting the directors will be going over the names that were submitted to give our newsletter a name. There is still time to get your favorite name in for a chance to win a free year's membership.

Wishing everyone a great month and hope to see each of you at the upcoming meetings.

73,

Richard, WA6RWS

The July meetings were held on the same day due to the July 4 holiday.

Board Meeting:

President Richard opened the meeting at 1845 hours. Officers present: Vice President Rob, WW6G, and Secretary Joe, KF6OQY. Board members Casey, W7IB, Bob, WA6ULL, and Debbie, KF6LXN, were also present. It was announced that Treasurer Mike, KG6EFK, will be away on business and is scheduled to return in September. Mike stopped by to leave his documents with President Richard, WA6RWS, and was unable to stay for the meeting because he was feeling bad with the bug and looked ill.

Discussion on the Christmas Party Grand Prize followed and we agreed with a motion by Rob, WW6G, that Gary, KQ6RT, look into the cost of a dual band mobile radio and report back to the board with the information. This was seconded by Bob, WA6ULL. Motion carried.

A target date of September 6 was chosen for the club picnic with a location to be determined at a later date. The sum of \$51.96 was reimbursed to Rob, WW6G, as was the sum of \$30.00 to Bob, WA6ULL, for field day food expenses. It was agreed that we invite the Army Reserve personnel who furnished the power for field day to the club Christmas party. This invitation will also include their families. Rob, WW6G, made a motion to adjourn and seconded by Debbie, KF6LXN. Meeting adjourned at 1907 hours.

General Meeting:

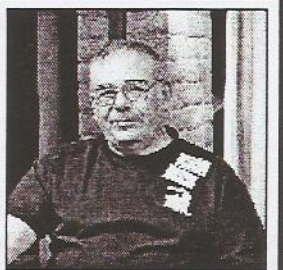
President Richard, WA6RWS, opened the meeting at 1934 hours followed by the Pledge of Allegiance, then introduction of officers and membership in attendance. Secretary Joe, KF6OQY, read the minutes of the June 13 General Meeting. Motion to accept as read was made by Rob, WW6G, and seconded by Casey, W7IB. Motion carried. Rob, WW6G, described some of the events that occurred at the Field Day event followed by a VE report. President Richard then presented Rob, WW6G, with a certificate of appreciation for his efforts in the field day event.

Gary, KQ6RT, then described the prizes that were available for the evening raffle. President Richard, WA6RWS, announced to the membership in attendance of the target date for the club picnic and that the location would be announced at a later date. He also told them of the Board decision to invite the Army Reserve personnel and their families to our club Christmas party. Casey, W7IB, reminded the ARES members of the scheduled Sunday night meeting in Auburn. Burton, N6UG, reminded everyone of the current IARU meetings and how the outcome will effect us. Mary Ann, KE6EST, announced the running of the Western States 100 mile run on the weekend of July 12 and 13 starting at 0400 Saturday.

A presentation by Don Tollefson of Batteries Plus in Citrus Heights was the main event of the evening. A comparison of different batteries was discussed with lots of comments and questions from the membership. Don mentioned that his store does give a discount to all hams and for battery rebuilds to check with him personally. This was indeed an informative and

*Secretary's
Report*

**Joe
KF6OQY**

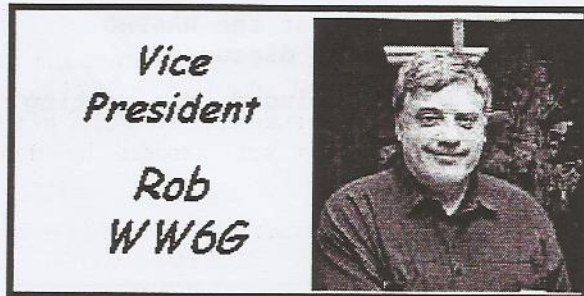


**Board/General Meeting
July 11, 2003**

interesting presentation. Thank you Don for a great evening. Thanks again to Gary, KQ6RT, for getting those great raffle prizes and for doing the raffle every month and to Debbie, KF6LXN, for the ice cream which was enjoyed by all. Meeting adjourned at 2120 hours. There were 23 people who signed in.

Respectfully submitted,

Joe Sylvia, KF6OQY
Secretary



Well, July's presentation from Don of Batteries Plus was a winner and everyone enjoyed it and learned a lot – I know I did. In August we will look at some of the operating issues we experienced at Field Day, model some of the antenna configurations and talk about the effectiveness of different modes. It should be fun.

This Saturday, July 26th we had a very nice breakfast at Suzie's Café. We had 17 at the breakfast and it really seems to have caught on. If you have not been there in a while, please plan to attend next month. Everyone has a really good time.

73,

Rob, WW6G
Vice President

Sacramento Valley Section Nets

The Sacramento Valley Section Nets are held on the 2nd Wednesday of each month at 1900 on 146.085 [+600/127.3] (Yuba Sutter ARC repeater), and at 1930 on 3.987 MHz. NCS is usually Jettie, W6RFF, our Section Manager.

The Section ARES net meets on the 1st, 3rd, and 4th Wednesday of each month at 1930 on 3.987 MHz. Dave, K6SOJ, is the Section Emergency Manager, and he and others will be NCS.

For Sale

Ranger RCI 5054DX 6 meter radio, FM, AM, USB, LSB, CW, PA, /with Comm. Specialists PL box wired in.

3 Element M2 Sq. 6m beam, FM Vertical Comet 6m antenna, Rotor and control box. \$300.00

40' Crank-up Tower \$175.00

Craftsman 5.0 2400 Watt Generator \$250.00

Contact Patrick...N6PBM 916.525.1957 or n6pbm@arri.net for all of them.

VE Report

The VE team held a session at the Auburn Public Library on July 5th and despite being a holiday weekend, we have two test takers. One members passed element 3 and promises to come back in August to take the CW piece to finish the upgrade to General. Additionally, we had another individual take and pass element 2 becoming a new Technician. All in all, pretty successful for a holiday weekend.

Our next session will be on August 2nd at 8AM at the Auburn public library, 350 Nevada Street, in Auburn. Thereafter, the plan is to return to Folsom Lake College in the fall. We look forward to seeing everyone at the test session. More information is available at:

[http://www.sf-](http://www.sf-arc.org/html/modules.php?name=Content&pa=showpage&pid=4)

[arc.org/html/modules.php?name=Content&pa=showpage&pid=4](http://www.sf-arc.org/html/modules.php?name=Content&pa=showpage&pid=4)



Twenty Years Ago at SFARC

August 12, 1983

The meeting was called to order at 1935 hours by President N6HJA who announced that, unfortunately, our planned speaker Lou Tristao was unable to appear due to eye surgery. Jim Carman, K6ARR, would appear in his place.

K6ARR gave a short talk on the local cable TV system and showed a video tape illustrating the 300' tower and equipment used by that facility which is located on Boulder Ridge. He showed samples of the coaxial cables and fittings and one of the line amplifiers used in their cable distribution system.

WA6EMU asked that K6ARR run off a video tape he had made in the north country which purported to show WB6HGS (alias Isaac Walton) with a huge fish he had reportedly caught. Due to technical difficulties, we were unable to identify either the fish or the fisher.

K6ARR played a color video tape which he had made at the club field day site at the Blue Canyon airport. The meeting was treated to a good coverage of the field day setup and the operation including an excellent audio pickup of the generator in operation. A close up was shown of the serious method which NS6Y roused from his deep slumbers.

The evening raffle wound up with a neat bit of slight of hand which enabled Len, WB6HGS, to draw his own winning ticket and take home a handy "Helping Hands" gripper followed by a modulation percentage meter which went to W6ODN and the OM of our treasurer (WB6ZJB) who won a stick-on digital clock.

There was no report from the secretary since he was absent. W6YHI was "volunteered" into taking the minutes for him for this meeting. President N6HJA suggested that the club should buy a current call book in order that everyone might know where to reach one when such data was needed. Motion made by W6YHI to buy one was seconded by WB7DRL and the motion was approved. Discussion was held concerning the coming Xmas party and funds for purchase of prizes to be given away during that party. It was suggested that the sum of \$150 be authorized by the members, to be spent only should there not be enough money raised by raffles, donations, etc., in the meantime. A motion to authorize \$150 for the purpose, at the judgment of the President, was made by WB6HGS and seconded by N6DFL; the motion was approved without dissent.

There was a discussion of the interference problem with regard to the AD6D repeater at Livermore which had been in an automatic ID keyer mode in which it sounded off every few moments day and night with ID keying although there was no one using that

repeater. President N6HJA announced that she had, in the name of the club, sent a letter to the Northern Amateur Relay Council of California asking that it formally request that the AD6D trustee act to prevent such needless keying, to adopt a Council policy that such ID keying was both not required and of no value and that the Council encourage the AD6D group to relocate that repeater and its antenna to a lower site which has been approved for that purpose by their employers.

The upcoming club picnic at the WA6PHO location at Iowa Hill was discussed.

Business having been concluded, the meeting adjourned at 9:45 pm.

Respectfully

Jack, W6YHI



As the bands have begun to cool off, there have been opportunities for some interesting contacts. On July 25th I heard JM7OLW doing PSK31 on 15 meters. I have worked him many times and it was nice to see his signal clear, strong and 100% readable. For PSK31, you can always find activity on 20 meters at 14.070 to about 14.073. Just set your receiver on 14.070 upper sideband, and let your passband do the rest. There are lots of opportunities to work some QSO's.

This month provides some good opportunities to work a lot of contacts in contest mode. Probably the best is the **TARA "Grid Dip" Contest**--PSK and RTTY--sponsored by Troy ARA from 0000Z-2400Z Aug 2. You can get details at http://www.n2ty.org/seasons/tara_grid_rules.html.

Later in the month, there are a number of European contests. **SARTG WW RTTY Contest**, sponsored by the Scandinavian Amateur Radio Teleprinter Society, 0000Z-0800Z and 1600Z-2400Z Aug 16 and 0800Z-1600Z Aug 17. Frequencies: 80-10 meters. For more information--<http://www.sartg.com/> Later in the month check out **SCC RTTY Championship**, sponsored by the Slovenian Contest Club, 1200Z Aug 24-1159Z Aug 25. Frequencies: 80-10 meters. You can get details at <http://lea.hamradio.si/~scc/rtty/htmlrules.htm>.

The reason that I include contests in my column is that these contests provide one of your better chances to work these regions. During the contest there are more stations on the air and your chances are better for working them. It is always fun to go DX hunting and I enjoy listening as much as working them.

I am frequently asked where to listen, so here is a list of frequencies most often used.

10 Meters

28.070-28.150	RTTY
28.120	PSK31, Hellschreiber
28.680	SSTV
28.690	SSTV (some SSTV repeaters too)
28.700	SSTV

6 Meters

50.680	SSTV
--------	------

2 Meters

145.500	SSTV (Nat'l SSTV Simplex FM Freq)
145.550	PSK31, Hellschreiber
145.600	Limited SSTV
145.650	Limited Digital Apps

For those of you who can not get enough digital, I will be giving the PSK31 presentation to the North Hills Amateur Radio Club on August 19th. You can get details and directions at <http://www.k6is.org/meet.html-ssi>

73,
Rob, WW6G

160 Meters

1.838.150	PSK31
1.890	SSTV

80 Meters

3.580 -3.620	RTTY, PSK31, Hellschreiber
3.620-3.635	Packet
3.845	SSTV

40 Meters

7.035	PSK31
7.037	Hellschreiber
7.080	RTTY
7.171	SSTV

30 Meters

10.130	PSK31
10.130-10.140	RTTY
10.137	Hellschreiber
10.140-10.150	Packet

20 Meters

14.063	Hellschreiber
14.070	PSK31
14.080-14.095	RTTY
14.100-14.112	Packet
14.230	SSTV
14.233	High Def. SSTV

17 Meters

18.100-18.105	RTTY
18.103	Hellschreiber
18.105-18.110	Packet

15 Meters

21.063	Hellschreiber
21.070-21.100	RTTY
21.080	PSK31
21.100-21.110	Packet
21.340	SSTV

12 Meters

24.920-24.925	RTTY
24.925-24.930	Packet

*Amateur
Satellites*

**Greg
KO6TH**



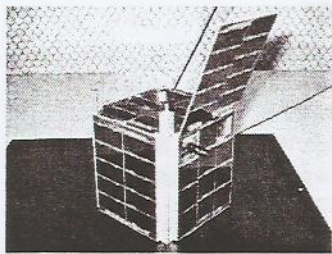
The Launch of the CubeSats

No, this isn't the title of a 1950's-era horror movie. Rather, I'm talking about the launch of a whole bunch of very small satellites late last month.

On June 30th, eight satellites were launched by a 5-stage "Rockot", a converted Russian ICBM, from a launch site at Plesetsk in Northern Russia. Two of the satellites are commercial payloads; one is a space telescope from Canada, and the other an atmospheric density observation satellite from Czechoslovakia. The remaining six are the CubeSats.

The CubeSat program is led by the space sciences departments in Stanford University and Cal Poly. The idea is to create a standard deployment platform that can be fitted into a variety of launch rockets. With this standardization and launch flexibility, access to space is increased, and costs and development time are lowered. There are currently more than 30 high schools, colleges, and universities developing CubeSats around the world.

The name "CubeSats" comes from their form – each satellite must fit in a 4x4x4 inch cube – and weigh no more than 2.2 pounds.



Even though covered with the latest in high-tech solar cells, the satellites have only about 2 watts worth of power to spend on their control electronics, sensors, and radios.

That's not much! Their

designs make extensive use of small, low power electronics; the transmitters put out a few tenths of a watt on 70cm.

Two of the six CubeSats are from universities in Japan. CUTE-I, from the Tokyo Institute of Technology, has a CW beacon and an FM packet system. XI-IV, from the University of Tokyo, has a 1200 baud packet system. Both have been heard with strong signals, and are still being tested.

Another two CubeSats are from Denmark. DTUSat, from the Technical University of Denmark (DTU) unfortunately has not been heard from. It contains a unique "yo-yo"-like tether system, and a calibrated test transmitter. AAUSat, from the University of Aalborg, has an attitude control system and a camera from which they will take pictures of their home country. Signals from AAUSat have been detected, but they are too weak to decode. The command team's ground station is being moved to OZ9AAR's Ham station, where they will have access to his 8 meter (24 foot) diameter EME dish, in hopes that they will be able to get a good enough signal to figure out what is going on.

CanX-1 is a CubeSat from the University of Toronto, Canada. It has a two-tone beacon, 3-axis magnetic stabilization, and also has a camera. Its mission is to demonstrate these key components in space, as a foundation for future missions.

The final CubeSat of this launch is QuakeSat, from Stanford University. This is actually three CubeSats in size, in order to house a foot-long magnetometer and telescoping boom. The satellite is a proof-of-concept in detecting the Extremely Low Frequency waves that are thought to precede earthquakes.

Unfortunately, I haven't found a single Internet website with links to all of these satellites, but the usual Internet search engines seem to find them individually. Once the ham-related packages are turned on, I'll pass on the news and frequencies to listen in on the fun.

73

Greg KO6TH

National and International News

(Courtesy ARRL News Services)

W5YI Report to QRT

The W5YI Report, dubbed "America's Oldest Ham Radio Newsletter," has announced that it's ceasing publication with its July 15 issue. Begun some 25 years ago by Fred Maia, W5YI, as a service to the Richardson (Texas) Wireless Club, *The W5YI Report* evolved into a twice-monthly paid-subscription compilation of ham radio and--more recently--electronics industry and Internet-related news printed on distinctive pink paper. Maia, 68, sold his company, W5YI Group <http://www.w5yi.org>, which included *The W5YI Report* and the W5YI-VEC, to Larry Pollock, NB5X, in 2000. Maia agreed to continue editing the newsletter for another three years, but now he wants to give it up, although he will continue his monthly column in CQ. Current subscriptions to *The W5YI Report* will be fulfilled with CQ subscriptions starting with the August issue.

"Harmonics" Web Pages Debut

An eight-year-old kid's first crystal set, built with the help of his grandfather. Hearing radio signals without electricity. That was how many veteran Amateur Radio operators were introduced to the magic of radio in past eras.

The new century offers many avenues--including the Internet--through which youngsters can experience the same magic. With that in mind, ARRL Field and Educational Services introduces the Harmonics Web pages <http://www.arrl.org/FandES/ead/youth/>. "The mission of the new Harmonics kids' pages is to expose children to the possibilities of Amateur Radio, not clobber them over the head with a pile of technical information," said Educational Programs Coordinator Jean Wolfgang, WB3IOS.

The Web pages currently feature the first of a number of age-appropriate activities for kids. Web visitors can play games, download informative printouts to color, read news articles about other kids involved with ham radio, work puzzles, click on live links, listen to audio samples of Morse code and space station contacts and much more. Throughout the site, kids are greeted by colorful cartoon "ham-sters" who explore the world of Amateur Radio along with the young people visiting the site.

The pages target kids aged 5 to 15. Harmonics invites them to get acquainted with the basic concepts of Amateur Radio through immediate personal interaction and by discovering how other kids are using ham radio for personal communication and to expand their exploration of science and technology. Wolfgang says Harmonics will include more games and a QSL card template with drag-and-drop interactive design in the near future.



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AMATEUR RADIO CONVENTION

October 17-19, 2003

San Ramon Marriott Hotel

San Ramon, CA

www.pacificon.org

Worked 60 Meters Yet?

Well, OK, it's more like 55.5 meters, but it appears we're going to call our newest allocation "Sixty Meters." This one is very different, so, in the usual SFARC News quest to inform and enlighten, here are the rules and some ideas for getting on the air ... if you hold a General class license or above. If you don't, you can still listen, of course.

First off, it is not a "band" in the usual sense. It consists of five discrete, 2.8 KHz "channels." That's exactly enough space for one single sideband signal at a time per channel. Thus, you can have a 2-station QSO, or a round table, but everyone is on the same frequency so they're all in the same conversation.

And, don't fall for the urban legend that you can cram several CW or PSK31 signals into one of those channels. Technically, you can of course, but it's illegal. You must operate SSB (the only amateur allocation that does not permit CW throughout), and in fact, it must be USB only.

Now, say you have a spare Sterba Curtain array out in the backyard, and you plan to fire up the linear into it. Well, that would be an "oops" ... you are restricted to a maximum PEP of 50 watts, effective radiated power. This is yet another first for hams since every other allocation (except 420 - 450 MHz in some places) where the power limit is ERP and not watts-into-the-coax.

And, assuming you've actually made it onto 60 Meters, your first try might be to call "CQ DX." Unfortunately, it will be awhile before there's a 60 Meter DXCC endorsement since it's a US Domestic allocation only.

Why all the limitations? Well, we share this spectrum with the Feds, and the federal users are regulated by the NTIA. It turns out that everything in this HF region is channelized. Trying to move existing users to carve out a real band proved to be too hard, at least right now,

however the NTIA did work diligently to get us the five channels. If we use them, and do so wisely, it is quite likely we can get the intervening space in the future. Here's how to use them wisely:

Frequency: You will need to modify your transceiver so it will transmit on this band. They are very likely to be simply "remove this diode," or "clip that jumper" type mods, and we should see them on the Internet soon.

Nearly all modern transceivers indicate the frequency of the suppressed carrier in the display, but the channel allocations are center frequencies. So, you need to set your display 1.5 KHz below the allocated frequency and your upper sideband will then be centered in the channel.

CHANNEL CENTER	DIAL FREQUENCY
5332	5330.5
5348	5346.5
5368	5366.5
5373	5371.5
5405	5303.5

The ARRL and others highly recommend you program the five dial frequencies, sideband choice, and other settings into the memories of your transceiver to assure you are "in the channel" at all times.

Power: ERP Wattmeters are very hard to find ☺. The FCC has helpfully told us that a half-wave dipole will be considered to have zero dBi gain. Thus, if you put 50 watts into the center of the dipole, your ERP will (legally at least) be 50 watts. If your coax has 1 dB loss at 5 MHz, then you can legally feed 62.9 watts into the coax. If it has 3 dB of loss at 5 MHz, you could feed 100 watts into it, but you'd be much better off replacing it since it's probably more of a water hose than coax!

If your antenna is not a half wave dipole, they you are required to calculate it's gain (using antenna modeling software or other recognized sources), adjust your power accordingly so the ERP is 50 watts or less, and keep all the calculations in your "station records."

Operation: Operation will be more like VHF/UHF repeaters than 40 meters. Good operating practice (and Part 97 as well) require that we all share the spectrum, so long QSO's between 2 stations are not going to work unless the stations are willing to let others use the channel if desired. Pauses before transmitting will be a must.

This range is ideal for many emergency uses (less skip problems than 40, better ground wave propagation than 75), and a few stations have been heard during the recent weather emergencies in the southwest.

We can all receive these frequencies, so program your radio's memory channels for them and listen occasionally. A 40 or 75 meter antenna will probably work well, and you may find that just the center conductor in the antenna connector will help as well. Let the SFARC News know of what you hear (and do).

SIERRA FOOTHILLS AMATEUR RADIO CLUB
P.O. Box 1005
Newcastle, CA 95658



**SIERRA FOOTHILLS AMATEUR RADIO CLUB
3 MEMBERSHIP APPLICATION**

Name: _____ Call: _____ Class: _____ e-mail: _____

Address: _____ City: _____ State: _____ Zip: _____

Associate Name: _____ Call: _____ Class: _____

Phone Number: _____ Application: (Circle One) New Renewal

Member Dues: Circle Amounts That Apply.

Applications received in the middle of the year will be pro rated. Contact the President or Treasurer for exact rate.

Membership:	\$22.00	Name Badge:	\$6.50
Associate:	\$ 7.00	Repeater Donation:	\$ _____
Auto Patch Donation:	\$ _____	Newsletter Booster:	\$ _____
Miscellaneous Donation:	\$ _____	Christmas Donation:	\$ _____
Worldradio Renewal:	\$ _____	TOTAL:	\$ _____

OFFICE USE ONLY:

DO NOT WRITE BELOW THIS LINE

Date: _____ Treasurer: _____ Secretary: _____ Roster: _____

Payment: _____ Check Number: _____ Cash: _____