



P.O. Box 6421 Auburn, CA 95604

August 2015

<http://w6ek.org> [info@w6ek.org](mailto:info@w6ek.org)

**At The Key of SFARC:**

**PRESIDENT**

Tyghé Richardson, KD6MLH  
[tyghe@tjrauctions.com](mailto:tyghe@tjrauctions.com)

**VICE PRESIDENT**

Bob Brodovsky, K6UDA  
[k6uda@att.net](mailto:k6uda@att.net)

**SECRETARY**

Bruce Anderson, K6BAA  
[anderson51@wavecable.com](mailto:anderson51@wavecable.com)

**TREASURER**

Richard Kuepper, WA6RWS  
[rkuepper@surewest.net](mailto:rkuepper@surewest.net)

**DIRECTORS**

Birton Gilbert, N6UG  
 Robert Bell, W6RBL  
 Jim Jupin, WA8MPA

**FIELD DAY CHAIRMAN**

Mark Graybill, W8BIT

**REPORTERS**

Satellites: Greg, KO6TH  
 History: Gary, KQ6RT  
 Misc Radio: Fred, K6DGW  
 Sunshine: Richard, WA6RWS

**WEBMASTER:**

Birton Gilbert, N6UG

**REPEATERS**

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

**CLUB NET**

Thursdays, 7:30PM, W6EK/R  
 145.430

**CLUB MEETINGS**

Second Friday of the month,  
 7:30PM at the Auburn City Hall,  
 1215 Lincoln Way, Auburn CA

**CLUB BREAKFAST**

Last Sat of the month at Mel's Diner  
 1730 Grass Valley Hwy, Auburn 7:30AM

**NET CONTROL OPS**

Dave Jenkins, WB6RBE  
 Norm Medland, W6AFR  
 Bob Brodovsky, K6UDA  
 Al Martin, N12U

**NEWSLETTER EDITOR**

Barbara Anderson, W6EVA  
[anderson51@wavecable.com](mailto:anderson51@wavecable.com)

**ARRL PIO:**

Carl A Schultz, WF6J

**VOLUNTEER EXAMINER**

Al Martin, N12U

**Calendar of Events**

**August 14<sup>th</sup>:  
 Club Meeting**

**August 29<sup>th</sup>:  
 Club Breakfast**

**September 12<sup>th</sup> & 13<sup>th</sup>  
 Summits-on-the-Air**

**October 3<sup>rd</sup> & 4<sup>th</sup>  
 California QSO Party**

**Inside this issue:**

- *My All Time Worst TVI Case*
- *50<sup>th</sup> Running California QSO Party details*
- *"Summits on the Air" details*
- *Miscellaneous Radio – Survival Communications*
- *Board & General Minutes*



**We encourage members to receive Sierra Signals via email to save the Club the cost of reproduction and mailing**

Sierra Signals is published monthly by the Sierra Foothills Amateur Radio Club for the information of its members and friends, and is distributed via E-mail and USPS mail. Opinions expressed are those of the authors. Newsletter exchanges with other clubs via E-mail are welcomed. Contact the editor to be placed on the E-mailing list. The contents of Sierra Signals are copyrighted by the Sierra Foothills Amateur Radio Club, and all rights are reserved. That said, we will gladly permit republications for non-profit uses of all text material. Photos require the consent of all persons pictured in them, and some of our material is copyrighted by others and published by permission. You'll need to contact them for permission.

*A note from the President, Tyghe Richardson KD6MLH:*

*The Election will be here before you know it, so it's time to think about how you can help!*

*We need to fill the seats for next year, so if you are ready to take on more responsibility let's get you elected to one of the soon to be vacant club officer positions! We are also looking for suggestions from the club membership, so please let Dennis WU6X know. Any and all suggestions are welcome!*

## **My All Time Worst TVI Case**

**Submitted by Bob, WE6C**

My Ham radio interest started with my Uncle Elmer who repaired radios and TVs back in the day. He let me play with some of his old short wave radios and it was no time before I had the bug. I took Novice license classes at the old Allied radio store in Glendale Wisconsin. That was a great store with a basement full of ham and ham related items.

A year later I upgraded to General and became the proud owner of a NC 183 and a Heathkit DX 100. Man, I was in tall cotton.

I was operating mostly on 80 and 40 and was very proud of myself as I had no TVI of any kind with any of our neighbors, except for getting into the phone system at the house. Good old Ma Bell took care of that problem.

Of course that is when the problem started. Mom came home one day from shopping at Bay Shore shopping center just 200 yards from my 80 meter dipole and announced that she could understand everything I said on the 40 TVs that were turned on at the Sears and Roebuck store. I knew this was going to be a problem.

Later that afternoon I got on my bike and rode over to the store to try and fix the problem before it got out of hand. I asked to talk to the manager of the TV department and was introduced to a gentleman named Mr. Miller. I explained to Mr. Miller what my Mother had heard as she walked by the store display, and that I was there to help cure HIS TVI problem. Now to say he did not take what I said well, from a 13 year old wise ass is putting it gently, and he told me he was going to put a stop to my interference and the FCC was going to take my ticket away.

War was the first thing that came to mind but I bit my tongue and asked if it would be OK if a few members of the Milwaukee Radio Club could help identify where the problem may be. That question was answered with a loud HELL NO and things went downhill from there. So I left the store and jumped on my bike and back to the house I went. I fired up that DX 100 and gave them hell. Called CQ in the middle of the day on 80 until I thought they had enough, I got back on my bike and rode by the store windows in front of the TV department and all the TV's were off. Sometimes I was a bad boy!!!

A week later while I was at school, a Ham from the Milwaukee Radio Club called my Mom and he explained that Sears had called them for help after the Sears technicians could not solve the problem much less find it. The club did a

**ADMIT ONE**

*50th Running*  
**California**  
**QSO Party**

**Here's Your Ticket To**  
**The Most Popular**  
**State QSO Party On**  
**The Planet!**

**October 3-4, 2015**  
1600 UTC Oct 4 to 2200 UTC Oct 5



**Grab a CA QSO or County**  
**For That New Certificate!**

LoTW Triple Play  
USA Counties Award  
Worked All States  
Worked All California Counties

**Special GOLDRUSH**  
**Prizes & Awards!**

Complete Rules & Info:  
[\*\*www.cqp.org\*\*](http://www.cqp.org)  
Northern California Contest Club

**NCCC**

*Excellence in Amateur Radio Contesting*

site survey and found all the TVs were feeding off one yagi antenna through an amplifier and twin lead to each TV. Sears would not change a thing until the FCC was called and my station inspected.

It took the FCC Chicago about 2 weeks to show up with a few of the Ham's from the Milwaukee club. They came down into the basement and looked everything over real good. I made sure everything was right with grounding, coax fittings tight, Hi pass and low pass filters on my parents TV and the DX 100. I had double grounds on everything. They found everything up to snuff. However, the news for Sears was not so good. I later found out the FCC mobile unit could take out all the TVs radios and the intercom system at the Sears store with less than 10 watts.

Sears finally got rid of the TVI with filters on everything, coax instead of twin lead, and a new roof mounted antenna that pointed at the TV towers instead of my dipole. Yes the antenna was pointed the wrong way.

The whole episode did teach me to stick to my guns if I thought the fight was worth it, but make damn sure everything is right on my end. To this day every time I pass a Sears store I think of those days and the TVI from hell.

Dennis, W5DPK

---

Submitted by Fred, K6DGW

### **September 12th & 13th is the annual "Summits-on-the-Air" Activity Weekend**

North America SOTA Activity Weekend 2015 is a casual event involving tiny battery powered radios on mountain summits. It is not a contest, but is intended to introduce "Summits on the Air" to newcomers with home stations who try to work summit operators during one or two days.

There are no rules regarding power levels, modes or number of bands worked, BUT please be courteous when more than one station is trying to talk to a SOTA operator on a summit. The SOTA operators have just climbed mountains as high as 14,000 feet; they use low power and they don't receive on split frequencies.

Check [SOTAWATCH.org](http://SOTAWATCH.org) to spot who is on which mountain. Summits are numbered, and you can hover your cursor over the number to see the name and point value for each summit. Expect the website to show activity near 7.032, 7.185, 10.110, 14.342, 18.095, 18.155, 21.350, 24.905, 24.955, 28.420, 146.52, 446.00, and 61 Khz up from the bottom of 20, 15 and 10 meters CW.

Participants are invited to collect points toward certificates and trophies offered by the thirteen-year-old international SOTA group ([SOTA.org.UK](http://SOTA.org.UK)). As we learned in past years, this is a barrel of fun for both hill climbers and home operators. See you then!

# MISCELLANEOUS RADIO

## Survival Communications

Emergency communications [EMCOMM] is a major part of ham radio, and is typically one of the primary activities of many clubs, including the Sierra Foothills ARC. We tend to think of EMMCOMM as two-way communications supporting emergency centers, hospitals, law enforcement, search and rescue, fire, and other such needs. There is another form however, which goes back to World War 2, and is far closer to "SURVIVALCOMM." It is generally one-way and the "message" is pretty simple: "I'm here, please come find me before I die."

Several years ago, a news item appeared in the newspaper and on TV about a cruise ship that hit a reef off the coast of an Italian island, and partially sank. Even though it was very close to shore and did not completely disappear into the sea, it listed nearly ninety degrees and rested on the bottom. Several passengers died, and more were injured. Coincidentally, I had just unearthed a military-looking bag in the flotsam under my workbench out in our shed, filled with light fiberglass poles that connected to make a mast, originally intended to hold up camouflage nets.

I acquired it while visiting friends in N. Oregon [K6LQT and Marcie] several years ago. We were heading ... somewhat intermittently ... toward Astoria with stops at an amazing number of antique shops along the way. This was a lot of fun for the two wives, not so much for the two hams. Until, that is, we found one shop with the usual overpriced old stuff in front, and in back, a surprising collection of radio and radio-ish junk. One was a Hallicrafters S-38C which I still wonder if I should have bought, although it was missing a knob, another was the wrong one, and it didn't work. There also was a WW2 "Gibson Girl" emergency locator. The ship, and the bag of fiberglass poles, reminded me of the Girl.

Before, during, and well after WW2 ... into the early 70's in fact ... Morse code was the communications method of choice for ships at sea, and 500 Kcs ["The Holy Frequency"] was the world-wide party line. All ships afloat monitored it 24/7, all coastal marine stations, and all Navy and Coast Guard stations of any nation did likewise, and twice an hour<sup>1</sup> every station on the planet went silent for three minutes to listen for tiny little distress calls. Consequently, it was the initial choice for a radio to locate someone in a rubber raft bobbing in the Pacific 1,000 miles from everywhere.

The photo at left is a front view. Officially a BC-778, and later AN/CRT-3, it got its nickname from the shape ... similar to the thin-waisted, hour-glass shaped drawings of women by Charles Dana Gibson around the beginning of the 20<sup>th</sup> Century. This is a picture from Wikipedia that shows the typical Gibson Girl shape from that era, they pretty much looked like bees. This shape allowed you, the aspiring survivor, to place it between your knees, necessary because to use it, you removed a crank from the back, inserted it into the top and cranked the crap out of it to generate the operating voltages.

It was just a transmitter, initially on 500 Kcs using A2 emission [MCW, the carrier modulated by a 1KHz tone], and later to include the HF emergency frequencies 8280/8364 KHz. There were various models

ranging from 2 to 5 watts, some a bit more, and several countries copied it, including Russia.<sup>2</sup> A switch allowed you to select one of two automatic messages or enable a button to send manual Morse code. Auto 1 was "SOS SOS ..." for 20 seconds followed by a constant carrier and tone for 20 seconds to allow ships to use their direction finding equipment. All you had to do was crank. Auto 2 sent "AA AA AA..." for 20 seconds followed by the 20 second carrier/tone. I have no idea what that one meant although I could likely Google it.

The inside was pretty simple. The transmitter was an oscillator, grid modulated by the audio tone produced by the second tube. The two automatic messages were created by a cam arrangement with appropriate indentations which keyed a

microswitch. The cam was rotated as you cranked. Like virtually all WW2 radio gear, the electronics and wiring were sprayed with MFP [Moisture and Fungus Proofing], a hard lacquer that is virtually impossible to get off without damaging



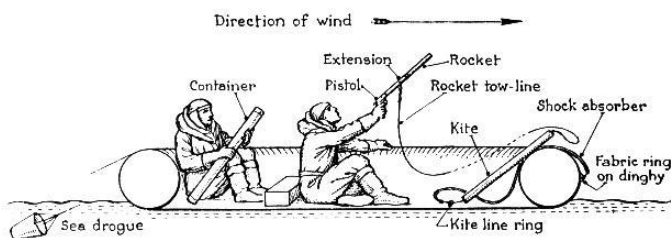
<sup>1</sup> :15 to :18 and :45 to :48

<sup>2</sup> Of course, we copied it from the Germans ...

something.

The 500 Kcs oscillator was not crystal controlled, just an electron coupled oscillator with an LC circuit. Precision on the Holy Frequency wasn't a problem in the late 50's. And ours had a rockbound 8 MHz frequency as well.

The case was waterproof, including immersion, and included stowage for the balloon antenna, a hydrogen generator, and a signal lamp you strapped on top of your head and connected to a receptacle. It flashed the same selected message. The ones I came in contact with in the mid-60's in SE Asia weighed about 35 lbs. We carried two of them on our airborne missions, and ours included the HF frequency and were crystal controlled. 500 Kcs propagates well over salt water – over land, where we were, not so much. In its storage bag, it would float if tossed overboard.



You fired the rocket ... from a rubber boat? ... it launched a line with the kite, when the line became tight, the kite unfurled. The line also carried the antenna conductor. The radio included a length of copper braid with a weight which was to be tossed overboard for the ground. I've never actually seen the kite antenna for the "Girl", I got this diagram off a web site.

The AN/CRT3's we had on missions had a balloon antenna that was contained in a can which fit into the cylindrical compartment visible in the lower part of the front view. It included a hydrogen generator which would inflate the balloon ...or explode ... I only did this once and all I could think of at the time was the Hindenberg. The photo isn't quite what I remember, but ours were manufactured in the 50's too.

We were on mountain tops so we had no salt water to toss a ground into, consequently our kits included a couple of 29 ft spools of wire [ $\sim 1/4$  wave at 8280 KHz] to use as a counterpoise. Anyone who has ever tried to raise a wire antenna with a balloon knows that, if there's much wind at all, the balloon leans severely downwind, and getting the balloon inflated and up without tangling in trees was a somewhat frustrating task, especially when we did it at night. Fortunately, we only used it once when we had run out of fuel and our TACAN was off the air before the Army CH-3's found us.

The Gibson Girl crank had a gear box that increased the RPM for the generator shaft, and it had some sort of mechanical governor to limit the maximum RPM, something in the vicinity of 70-80 RPM. Cranking it took some energy on the cranker's part and was good for some substantial upper-body exercise. I've occasionally had a vision of powering a QRP FD station using one of the generators ... provided enough young folk were available to crank. The one advantage is that there were no batteries to go dead, just people to poop out. Ours worked, the Army found us [they always did], and we burned the two of them down with the rest of the equipment.

Today, Emergency Locator Transmitters [ELT's] generally operate on the aeronautical VHF/UHF guard frequencies of 121.5 MHz [civilian] and 243.0 MHz [military] channels, are battery powered, don't weigh anything close to 35 lbs, and operate automatically [no cranking]. A story, maybe true – maybe not, circulates every now and then about a group of airport



The antenna was somewhat ingenious. The entire concept of the radio was descended from the German "Notsender NS2." The NS2 employed a box-kite to support the antenna with a handheld rocket launcher.



employees who stole an inflatable evacuation slide from an aircraft and attempted to use it as a raft. They apparently did not realize that inflation activated the ELT and were somewhat surprised when the law found them so quickly. I do remember listening to the air-ground chatter on Channel 1 on United flights where the crew occasionally reported an ELT as we were descending over the Sierra towards SMF.



I've been told that 8280 KHz was abandoned as the WW2 surplus began flooding the market because people couldn't resist cranking their toy, not realizing that that's all you had to do to transmit. I'm pretty sure I remember 8280 from the mid-60's so I don't know when the switch to 8364 KHz might have happened.

It's easy these days to forget that we haven't had hand-held radios forever. We sometimes hear the term, "shack on the belt." Up until the 70's, that would have been "shack on the back.," the AN/PRC-10, an FM radio, 15 or 16 tubes, about 25 lbs [photo on left]. We used them to talk to the aircrew after jump and before we got our equipment pulled out the back of the airplane. The battery lasted about 5 hours receive, a lot less if you actually talked 😊 The AN/PRC-25, a "lightweight transistorized" radio at 18 lbs replaced it and was half the size of the -10, but still on the back and not the belt, of the troop who had it.

You can find Gibson Girl sets on eBay, over a variety of prices, and a PRC-10 currently at \$150. I would be wary of all of them. And if you have one of the "Girls," just know ... Crank it, it transmits

73,

Fred K6DGW



## BOARD OF DIRECTORS MEETING MINUTES July 10, 2015

The SFARC Board meeting for July commenced at 1800 hours at the Sizzler restaurant in Auburn.

**Roll Call:** All officers and Directors were present with the exception of Director Robert-W6RBL. Also present were guests Al-NI2U, Orion-AI6JB, Dennis-WU6X, George-KG6LSB and Wendy-KK6HSK.

### REPORTS and DISCUSSIONS

**President's Report:** Tyghe-KD6MLH began discussion on the club picnic and advised the board that he would assume the duties of picnic chairman.

**Vice President's Report:** Bob-K6UDA led a discussion on maintaining club membership, suggesting repeater upgrades to attract members. Bob solicited for suggestions. Orion-AI6JB thought increased social activities could help, Dennis-WU6X suggested breakout secessions on specific subjects/projects at meetings, Tyghe-KD6MLH added longer breaks and Bruce-K6BAA suggested Tech-10 presentations should be included in email/Yahoo notifications.

**Secretary's Report:** Bruce-K6BAA advised the board that thank you letters to Grant Wells of Nyack and the Army Reserve were mailed.

**Treasurer's Report:** Richard-WA6RWS reported net cash on hand at the beginning of June of \$9269.82; deposits of \$1030.37, expenditures of \$1341.27 with an ending balance of \$8958.92. Richard added Club memberships now stand at 122. Richard also updated the board on Dave-NO6NO's ham radio estate which is to be sold and the proceeds to be donated to the club. He advised there are Field Day t-shirts available and will

be sold at the club general meeting.

Richard-WA6RWS and Birton-N6UG updated the board on the status of the repeaters. The controller will be replaced after the TEVIS, 220 repeater to be replaced and there will be three upgrade phases: 1- IRLP/Echo Link, 2 - D-Star 3 – VOIP

Meeting adjourned at 1845. Submitted by Bruce-K6BAA, Club Secretary

## GENERAL MEETING MINUTES

### July 10, 2015



The SFARC General meeting for July commenced at 1930 hours at the Auburn City Hall Rose Room, President Tyghe-KD6MLH presiding. All Officers and Directors were present with the exception of Director Robert-W6RBL. Tyghe led approximately 40 members and guests in a Pledge of Allegiance to the flag followed by a moment of silence for Dave-NO6NO/SK. An introduction of Officers, members and guests followed.

#### **REPORTS:**

**Past minutes:** Minutes were approved as posted in the Newsletter on motion.

**President's Report:** Tyghe briefly discussed the agenda and reviewed this evening's board meeting. Tyghe reminded members that TEVIS will be August 1<sup>st</sup> and to refrain from using the repeater. He reminded members of the White Elephant sale in October asking everyone to scour their shack for items.

**Vice President's Report:** Bob-K6UDA announced Orion-AI6JB will be taking the chair of the Ham Swap for 2016. Bob asked for volunteers and wants the swap to rival PACIFICON.

**Secretary's Report:** Bruce-K6BAA requested input for the club newsletter; advised a welcome letter was available for new members and guests, and a reminder to the membership to sign the attendance sheet.

**Treasurer's Report:** Richard-WA6RWS reported net cash on hand at the beginning of June of \$9269.82; \$1030.37 in deposits, expenditures of \$1341.27 and a balance of \$8958.92. Richard added Club memberships now stand at 122. Richard advised he had Field Day t-shirts, pins and patches available for sale. Richard also updated the membership on Dave-NO6NO/SK's ham radio estate which is to be sold and the proceeds to be donated to the club.

**VE's Report:** Al-NI2U, VE reported 9 candidates resulting in 7 new techs and 2 new extras. Burton-N6UG suggested rotating VE's to handle incoming candidates.

**Repeater Report:** Richard-WA6RWS reviewed the repeaters status and future upgrades.

**Sunshine Report:** Richard-WA6RWS told the membership Dave-NO6NO/SK Celebration of Life will be on Saturday July 11<sup>th</sup>. Richard also reported that Jim-KD6BKZ's mother passed away, Gene-KG6NYH is recovering from knee surgery and Gary-KQ6RT was in a motorcycle accident and received a serious ankle injury.

**Refreshments/Drawing:** Jason-KK6RXT reviewed items planned for the drawing. Scott-K6SVW reported on refreshments for the break.

**Activities:** George-KG6LSB asked for volunteers for the Cystic Fibrosis Bike Ride on October 10<sup>th</sup>.

**Yahoo:** Dennis-WU6X advised the membership that the 100<sup>th</sup> member joined the group. The group is a source of information, files and presentations. He reminded everyone non-members can read but cannot post. Dennis

also reminded members of the upcoming club elections in November and encouraged members to run.

**Field Day:** Mark-W8BIT reviewed Field Day and thanked everyone who participated.

**OLD BUSINESS:**

*None*

**NEW BUSINESS:**

Richard-WA6RWS advised the membership of donated QST magazines from Eldred-KD6ZSL on the back table.

**General Announcements:** The Club Net meets every Thursday at 7:30pm; Board and General Meetings occur on the 2nd Friday, Board meeting is held at **Sizzler Restaurant** in Auburn, and General meetings at 7:30pm at **Auburn City Hall**. The Club breakfast is held on the last Saturday at **Mel's Diner** in Auburn; an Elmer Net is held the first and third Wednesday night at 7:30pm on the 2m repeater. See [www.w6ek.org](http://www.w6ek.org) for more information.

**Tech-10 & Presentation:** Burton-N6UG, Dennis-WU6X and Bruce-K6BAA delivered a presentation on handy talkies.

The meeting adjourned at 2105. Submitted by Bruce-K6BAA, Club Secretary



DENNIS H. GREGORY  
Instructor/Technician

**MISSION CONTROL**

**Computer Repairs and Support**  
Reasonable rates, free consultation  
Placer County Business License #02311

Phone: 530-305-0180  
Auburn, CA

Email: WU6X@hotmail.com  
www.yourmissioncontrol.com

**Batteries + Bulbs.**

**Ryan Tollefson**  
District Manager

8025 Greenback Lane • Citrus Heights, CA 95610  
P 916-722-8800 • C 916-775-3030 • F 916-722-2489  
rtollefson@batteriesplus.net • www.BatteriesPlus.com

Independently owned and operated Franchise.





SIERRA FOOTHILLS AMATEUR RADIO CLUB  
P.O. Box 6421, Auburn, CA 95604

2015 MEMBERSHIP APPLICATION

SIERRA FOOTHILLS AMATEUR RADIO CLUB  
P.O. Box 6421, Auburn, CA 95604

Name: \_\_\_\_\_ Call: \_\_\_\_\_ Class: \_\_\_\_\_ e-mail: \_\_\_\_\_  
Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Associate Name: \_\_\_\_\_ Call: \_\_\_\_\_ Class: \_\_\_\_\_ email: \_\_\_\_\_  
Phone: \_\_\_\_\_ Cellphone: \_\_\_\_\_ Application is: (Circle) New Renewal

**Dues / Donations:**

Membership: yearly\* \$22.00 or 20x \_\_\_\_\_ Name Badge: \$ 7.00 Yes (special name) \_\_\_\_\_  
Associate: yearly\* \$ 7.00 Repeater Donation: \$ \_\_\_\_\_  
Auto Patch Donation: \$ \_\_\_\_\_ Newsletter Booster: \$ \_\_\_\_\_  
Misc. Donation: \$ \_\_\_\_\_ Christmas Donation: \$ \_\_\_\_\_ ARRL member? (circle) Yes No

**TOTAL:** \$ \_\_\_\_\_ **Please add \$1 if paying via PayPal**

\*Prorated dues for NEW Members/Associates Only

July	\$ 20 /6	October	\$ 14/3 + following year
August	\$ 18/5	November	\$ 12/2+ following year
September	\$ 16/4	December	\$ 10/1 + following year

**New---New---New---**  
**Multi-year DISCOUNT Membership**  
**\*\*\$20 per year for 2 or more years (new or renewal)**

<b>OFFICE USE ONLY:</b>		<b>DO NOT WRITE BELOW THIS LINE</b>	
Date: _____	Treasurer: _____	Secretary: _____	Roster: _____
Payment: _____	Check Number: _____	Cash: _____	PayPal: _____