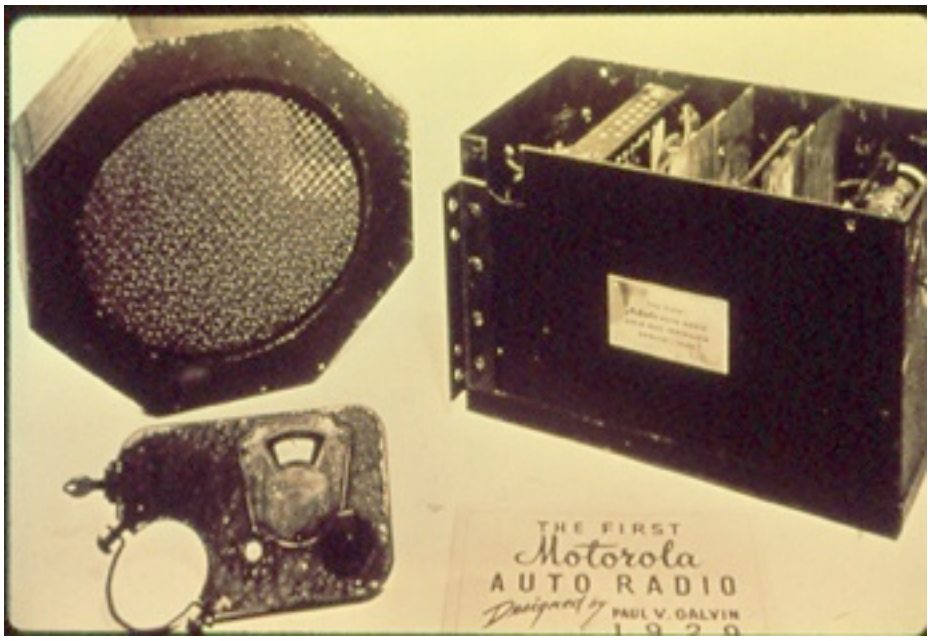
CRRC Flight-Log
http://www.charlesriverrc.org
AMA Charter 339
March 2013

History of the Car Radio

Seems like cars have always had radios, but they didn't. Here's the true story:

One evening, in 1929, two young men named William Lear and Elmer Wavering drove their girlfriends to a lookout point high above the Mississippi River town of Quincy , Illinois , to watch the sunset. It was a romantic night to be sure, but one of the women observed that it would be even nicer if they could listen to music in the car.



Lear and Wavering liked the idea. Both men had tinkered with radios (Lear had served as a radio operator in the U.S. Navy during World War I) and it wasn't long before they were taking apart a home radio and trying to get it to work in a car.

But it wasn't as easy as it sounds:

Automobiles have ignition switches, generators, spark plugs, and other electrical equipment that generate noisy static interference, making it nearly impossible to listen to the radio when the engine was running. One by one, Lear and Wavering identified and eliminated each source of electrical interference. When they finally got their radio to work, they took it to a radio convention in Chicago. There they met Paul Galvin, owner of Galvin Manufacturing Corporation.

He made a product called a "battery eliminator" a device that allowed battery-powered radios to run on household AC current. But as more homes were wired for electricity more radio manufacturers made AC-powered radios.

Galvin needed a new product to manufacture. When he met Lear and Wavering at the radio convention, he found it. He believed that mass-produced, affordable car radios had the potential to become a huge business.

Lear and Wavering set up shop in Galvin's factory, and when they perfected their first radio, they installed it in his Studebaker. Then Galvin went to a local banker to apply for a loan. Thinking it might sweeten the deal, he had his men install a radio in the banker's Packard. Good idea, but it didn't work -- Half an hour after the installation, the banker's Packard caught on fire. (They didn't get the loan.) Galvin didn't give up. He drove his Studebaker nearly 800 miles to Atlantic City to show off the radio at the 1930 Radio Manufacturers Association convention. Too broke to afford a booth, he parked the car outside the convention hall and cranked up the radio so that passing conventioneers could hear it. That idea worked -- He got enough orders to put the radio into production.

What is in a name

That first production model was called the 5T71. Galvin decided he needed to come up with something a little catchier. In those days many companies in the phonograph and radio businesses used the suffix "ola" for their names - Radiola, Columbiola, and Victrola were three of the biggest. Galvin decided to do the same thing, and since his radio was intended for use in a motor vehicle, he decided to call it the Motorola.

But even with the name change, the radio still had problems: When Motorola went on sale in 1930, it cost about $110 uninstalled, at a time when you could buy a brand-new car for $650, and the country was sliding into the Great Depression. (By that measure, a radio for a new car would cost about $3,000 today.) In 1930 it took two men several days to put in a car radio. The dashboard had to be taken apart so that the receiver and a single speaker could be installed, and the ceiling had to be cut open to install the antenna. These early radios ran on their own batteries, not on the car battery, so holes had to be cut into the floorboard to accommodate them. The installation manual had eight complete diagrams and 28 pages of instructions. Selling complicated car radios that cost 20 percent of the price of a brand-new car wouldn't have been easy in the best of times, let alone during the Great Depression --

Galvin lost money in 1930 and struggled for a couple of years after that. But things picked up in 1933 when Ford began offering Motorola's pre-installed at the factory. In 1934 they got another boost when Galvin struck a deal with B.F. Goodrich tire company to sell and install them in its chain of tire stores. By then the price of the radio, installation included, had dropped to $55. The Motorola car radio was off and running. (The name of the company would be officially changed from Galvin Manufacturing to "Motorola" in 1947.) In the meantime, Galvin continued to develop new uses for car radios.



In 1936, the same year that it introduced push-button tuning, it also introduced the Motorola Police Cruiser, a standard car radio that was factory preset to a single frequency to pick up police broadcasts.

In 1940 he developed with the first handheld two-way radio -- The Handie-Talkie -- for the U. S. Army.



A lot of the communications technologies that we take for granted today were born in Motorola labs in the years that followed World War II. In 1947 they came out with the first television to sell under $200. In 1956 the company introduced the world's first pager; in 1969 it supplied the radio and television equipment that was used to televise Neil Armstrong's first steps on the Moon.

In 1973 it invented the world's first handheld cellular phone.



Today Motorola is one of the largest cell phone manufacturer in the world -- And it all started with the car radio.

Whatever happened to the two men who installed the first radio in Paul Galvin's car? Elmer Wavering and William Lear, ended up taking very different paths in life.

Wavering stayed with Motorola. In 1934, Galvin and Wavering worked together to lead Motorola's car radio and police two-way communications business. Following the World War II, Wavering became vice president of Motorola's automotive products division and went on to pioneer many other significant inventions, including his concept car of the future. Unveiled in the mid-1950s, the vision included a car with an alternator instead of a generator, a 12-volt battery supply instead of six volts, electronic ignition and computerized controls. The invention lead to such luxuries as power windows, power seats, and,eventually, air-conditioning.

Wavering would go on to become president of Motorola and achieve many other things before retiring in 1972. He later led the effort to produce the radio used by the Apollo astronauts when they communicated from the moon. He was selected as a member of the Automotive Hall of Fame in 1989.



Lear also continued inventing. He holds more than 150 patents. Remember eight-track tape players? Lear invented that.



But he's really famous for his contributions to the field of aviation. He invented radio direction finders for planes, aided in the invention of the autopilot, designed the first fully automatic aircraft landing system, and in 1963 introduced his most famous invention of all, the Lear Jet, the world's first mass-produced, affordable business jet.



Not bad for a guy who dropped out of school after the eighth grade.

Sometimes it is fun to find out how some of the many things that we take for granted actually came into being!

Note: prior to the Motorola radio there was a cottage industry where household radios were converted for use in an automobile.



March Presidents letter

The Joke was on us. Punxsutawney Phil really meant 6 more weeks of winter. We are finally beginning to see the first signs of spring. Snow is melting on Davis field, the dog walkers are out and I saw some green peaking out from beneath the snow.

For those of you new to Charles River RC, Davis field in Sudbury is our electric and glider-flying site. It has beautiful rolling grounds trimmed by spruce trees and surrounded by farmland and rural properties. It's plainly a wonderful setting for quiet flying. The field is rented every Sunday during the spring. Flying starts at 9:00 and lasts as long as batteries and weather permits. Show up on Sunday morning and you are guaranteed to find a host of friendly fliers. One of the club or private winches and retrievers are there most Sunday mornings.

Our power field, named for its founder Bill Martin, located in Medfield is a gated field shared with the Millis Model Aircraft club. This field is located in a setting more appropriate to glow and gas engines. You'll find a well-maintained grass runway, pilot's stations, pits area and a covered shelter. Bill Martin field is available all week long and offers an area where you can fly pattern and stunt in a more traditional setting. The site is large enough for heli guys to share the site with fixed wing pilots.

As members of Charles River RC you can join us at either or all fields. Both fields are mowed by services, so there is very little yard work we have to do. There is one time of year we need everyone's help with the fields. That time is coming up at the end of March and mid April. Please join us cleaning up Davis field on March 30th and Bill Martin field on April 20th.

Now for a little safety reminder; With all the fun comes a responsibility to fly safely and responsibly. As good citizens and members of the AMA and CRRC we are expected to follow the published safety guidelines. Take a few minutes and review the guidelines at http://modelaircraft.org and http://charlesriverrc.org You'll notice a few changes for FPV aircraft that make it easier for us to use them. It's important to follow these rules to help ensure public acceptance and our further ability to enjoy the sport of flying model aircraft. The AMA is here to support us and safety is one way they do it.

Happy Flying,
David Spielman



February Club Meeting



General Meeting Minutes for February 20, 2013

Business Meeting:
Dave Spielman opened the business meeting at 7:30 PM at the Goodnow Library.

Meeting minutes from last month's meeting were approved as written in the February newsletter.

Field Reports:
Medfield: No report.
Davis: Not much flying last month due to snow.

Davis Field Status Report:
Dick Williamson gave an update on Town of Subury's plans or Davis field. They are considering options to improve and develop the field and some of the proposals (baseball/softball fields) will be incompatible with RC plane flying, especially gliders, which require clear space for the launching system.

There are some factors at the Davis field that do not favor adding baseball/softball fields. The field has poor drainage and gets muddy at times. In addition, the parking lot is small and may need improvements if the field is to be used for baseball/softball. This is good news for CRRC since it may drive development to other fields more suited for use as ball fields.

The town is planning to perform a study of possible options for recreational field developments that will take approximately 6 months. After the study is complete there will more defined options for the town to consider.

Millford Club Meeting Report:
Rick Spillman and Tom Bauer attended the latest Millford club meeting. They reported that the club was pleased with the new rules but they had some concerns with FPV pilots not flying from the flight stations, which could lead to communications problems concerning flight intentions.

New Business:
Club approved $340 for mowing of the Medfield field.
Next meeting will be at Goodnow library and will be winter projects night.
Medfield clean up date has been changed to April 20, 2012.
Davis Field clean up date is now set for March 30, 2013.
Float fly dates are scheduled for May 18-19 and September 21-22.
The business meeting was closed at 8:00 PM.

Guests

Tony Davids' brother, Dan.

Steve Liscrowski with three smaller Liscrowskis

Raffle



First Prize: Bert Cohen Quadcopter.

Bob Sisson: Ornithopter

Neil Kaufman: Dave Aircraft Works EPP foam electric park flyer kit.





Show and Tell



Tom Bauer showed his depron flat foam biplane. It has been flown a few times but its CG and control setup is not yet optimized. Despite a few hard landings during flight tests it looks great.



Lee Arnold showed a small balsa high wing Merur-E built from Mountain Models kit. It weighs around 12 ounces and is covered in Solite film. It has Hs55 servos and a 1500 KV, 15 gram motor.

Tony Davids showed his conversion of a 72 MHz JR XP783 transmitter that allows plugging 2.4 Ghz modules for Spectrum systems and alternately plugging in a module for a Tower Hobbies Tactic 2.4 GHz systems. He also showed a Go Pro camera, which is a small, rugged camera that is designed to capture HD video of sports activities. It's ideal for making model videos either from the ground or from the model aircraft.



Guest Speakers

Tony Davids and Dick Williamson gave a talk and demonstration of current small quadcopter technology. Quadcopters are mechanically simpler than conventional helicopters (no servos, tail rotors or complex rotor heads) but require sophisticated software to allow maneuvering in any direction by adjusting the rotational speeds of the four rotors.

Dick Williamson demonstrated his Parrot AR drone in the meeting room. The Parrot AR was able to hover unattended in the middle of the room and returned to its original position even if pushed by hand. This level of control is made possible by 3-axis rate gyro, accelerometers, an ultrasonic altimeter, and a downward looking camera that senses the position of the quadcopter over the ground. The flight control software system integrates all of the sensor information and controls the four rotor speeds to achieve the desired movement of the quadcopter.

Dan Sullivan



March Raffle

The first raffle prize for March will be a Syma X1 with the winner's choice of a bumble bee body or with a space ship body. The Syma X1 comes with a 2.4 Ghz transmitter and one 350mah lipo battery. The winner will also get an extra 350 mah battery.

The second prize raffle prize will be some items to replace all the stuff you used up working on your winter project!





Winter Projects

There is no Speaker this month. The meeting is devoted to your Winter projects. Bring what you are building or have built. Show and Tell us the process you went through, major problems, minor inconveniences. What would you have done differently? Have you added any “must have” tools.



Officers

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Chief Instructor
Dick Williamson
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Raffle Chairman
John Epping
xofficio@charlesriverrc.org

Treasurers Report

February Activity Report

Starting Balances	
Checking	$5,888.22
Cash Box	$25.00
PayPal Account	$278.03
CD Accounts	$6,904.87
Total Starting Balance	$13,096.12
Income CDs	
Interest	$1.72
Total Interest	$1.72
Income Checking	
Membership	$110.00
Raffle	$54.00
Auction	
Total Income	$164.00
PayPal Activity	
Membership	$20.00
Less PayPal Fee	-$4.38
Total PayPal Activity	$195.62
Expenses Checking	
Town of Sudbury	
AMA Club Charter & Ins.	
Millis Model Aeronautics	
Total Checking Expense	$0.00
Ending Balances	
Checking	$6,052.22
Cash Box	$25.00
PayPal Account	$473.65
CD Accounts	$6,906.59
Grand Total	$13457.46

David Marshall, CRRC Treasurer

Calendar

March 20, 2013
General Meeting
at Springhouse Pond
Clubhouse

April 6, 2013
Bill Martin Field Clean-Up

April 13, 2013
Davis Field Clean-Up

April 17, 2013
General Meeting

May 15, 2013
General Meeting

May 19, 2013
Davis Field is
reserved for rockets

May 18 & 19, 2013
Spring Float Fly

June 6, 2013
Davis Field is
reserved for rockets

June 19, 2013
General Meeting at Davis

July 4, 2013
CRRC Flying Demo

July 6 & 7, 2013
Hand Launch Classic

July 17, 2013
General Meeting at Davis

August 21, 2013
General Meeting at Davis

September 18, 2013
General Meeting at Goodnow

October 16, 2013
General Meeting

General Information

Indoor Flying at the Auburn SportsPlex

Every Friday from 10A to 2P
$10 per pilot, spectators free

Keys to the Bill Martin Field

To get a key for Bill Martin Field in Medfield please email Ken Antonellis at kxa@verizon.net. Ken is the key-master. The key for the 2012 season is key #27. Ken may have keys at the meeting. A $5 deposit is required the first time you receive a key.

New Wings

No new Wings this month.

Flying Sites

Go to the CRRC Website and select the Flying Sites tab to see the various sites. The site page will give current weather and site information.

Building and Flight Instructors

To start your your instruction please call the Chief Instructor, Dick Williamson. You will be match with one of the Instructors. All Instructors are qualified AMA pilots and willing to give assistance to fellow club members.

Types of instruction - B = Building, G = Glider, E = Electric, F = Fuel, H = Helicopter

Dick Willamson - B, G, E
978-618-5475 - Sudbury

Fritz Bien - B,G, E
978-369-1720 - Concord

Tom Bauer - B,G, E
781-235-7344 - Wellesley

Brian Rickman - B, E
774-249-2494 - Marlborough

Derick Veliz - B, E
978-337-7867 - Acton

John Weigel - B
508-655-2138 - Natick

Richard Gammon - B, G, E, F
508-835-2049 - West Boylston

Ken Antonellis - G, E, F
508-653-8369 - Natick

Bruce Schneider - G, E
978-460-0305 - Hudson

Lincoln Ross - G, E
781-891-0332 - Waltham

John Nilsson - G
978-368-7136 - Clinton

Dave Walter - G
978-562-5400 - Hudson

Jon Leehey - F
508-358-5721 - Wayland

Tony Davids - H
978-568-9598 - Stow

Tree Climbers

LloydKeyes(Wayland)
508-358-9197 or
508-341-0110

Michael Lynch
(Wayland/Sudbury)

Paul Harrington (Medfield)
508-376-2573

Monkey Man (Marlboro)
508-215-4290

Scott (Sudbury)
508-203-3845

Tony Morais
A1 Tree Services
(Framingham)
508-626-0088 or
800-657-7788

Stephen Canessa
The Tree Guy
978-460-1000

Hartney Greymont (Medfield)
Sean Comer
781-444-1227
thescomer@gmail.com

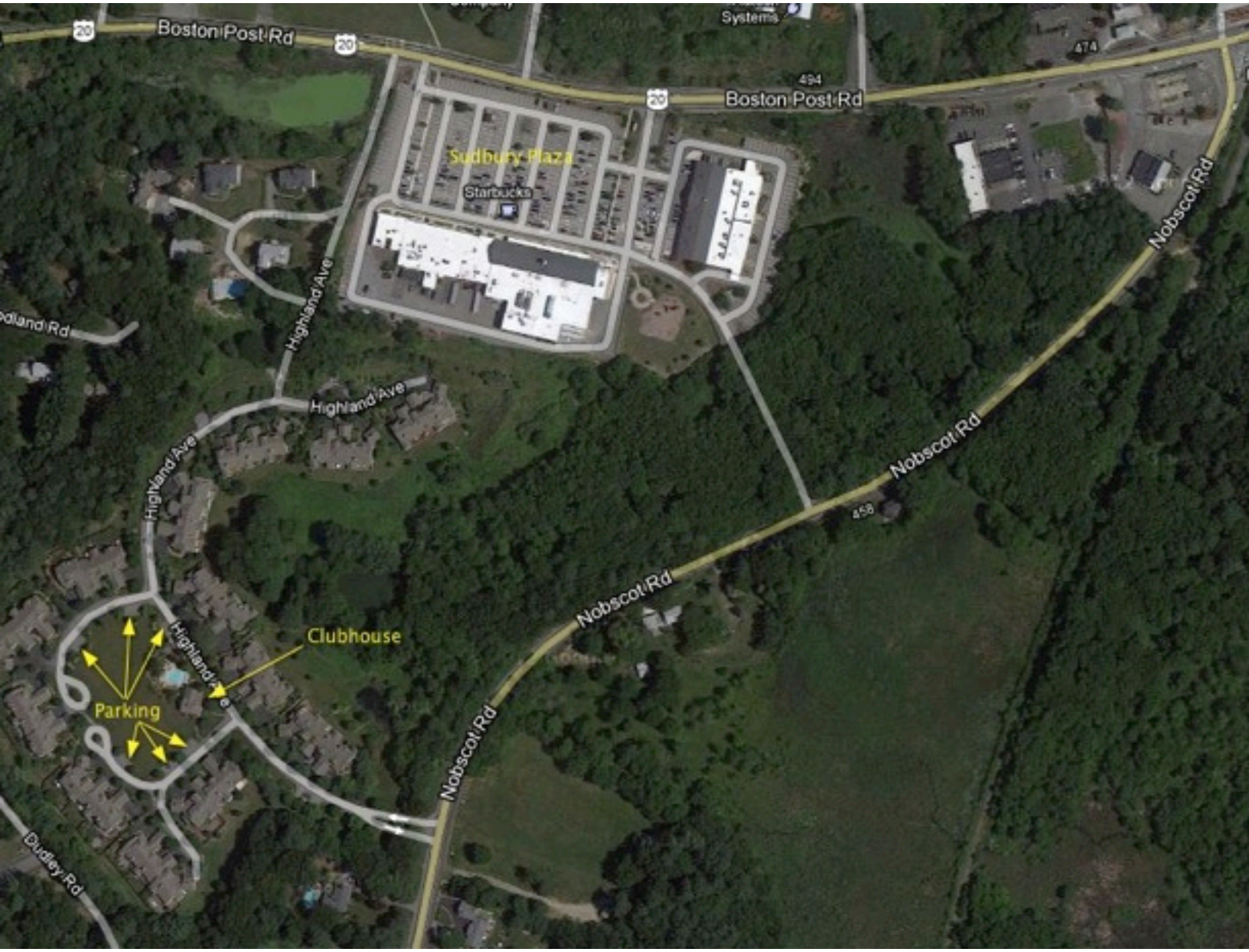
Jason (Davis Field)
978-460-0477

Editors note: If you know of any tree climbers or tree services please send contact information to the Newsletter Editor

March Club Meeting

Guests are Welcome

Wednesday March 20, 2013
7:30PM at the Springhouse Pond Clubhouse
159 Nobscot Rd, Sudbury, MA 01776



2013 MEMBERSHIP APPLICATION

Name
Street
Town State Zip
Telephone
E-mail

IMPORTANT: You must be an AMA member in order to receive your CRRC membership card.
AMA No.
Birth Date (AMA req'd)

To receive membership card and field pass, bring this application to a club meeting, or mail to the membership secretary (address below).

Ray Harlan
Membership Secretary CRRC
15 Happy Hollow Road Wayland, MA 01778
508-358-4013
Email: membership@charlesriverrc.org

Please make check payable to: **Charles River RC**

You can pay by check or use PayPal.
(PayPal to membership@charlesriverrc.org)

SAVE $5 - EARLY BIRD DUES RATES ARE LISTED

	MEMBERSHIP CATAGORY	On or before Mar 1, 2013	After Mar 1, 2013
☐	OPEN Member	$40.00	$45.00
☐	JUNIOR member, (Under 19 before Jul. 1)	$10.00	$10.00
☐	SENIOR member, (If age 60 before Jul. 1)	$30.00	$35.00
☐	SENIOR member, (If age 75 before Jul. 1)	Free if AMA member	Free if AMA member
☐	Full time STUDENT	$20.00	$25.00
☐	Family member additional to OPEN membership	$20.00	$25.00

Please chose from the options below:

☐ DO NOT include my personal contact information in the club phone book

Help reduce operating costs by downloading the newsletter from the CRRC website.

☐ I DO NOT have access to a computer or the Internet - Please send me the Newsletter via US Mail.