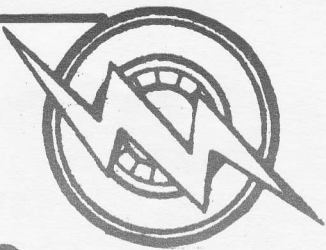


Electric Auto



NEWS

AUGUST 1984

Association

VOL. XVI

NO. 8

OAKLAND Rally

Call Chuck Huntley After 6 415-431-8179

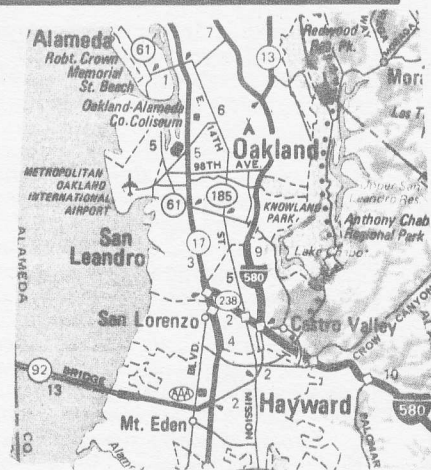
AUGUST 11

EASTBAY CHAPTER RALLY

START 9:30 LUNCH BREAK END 3:30

OAKLAND HYATT PARKING LOT

AWARDS PRESENTED AT SEPT. MEETING



INTERNATIONAL Rally SEPTEMBER SYMPOSIUM 1984

COMPLETE PROGRAM INSIDE/DON'T MISS IT !!!!!

EPRI

WORKSHOP

OPPORTUNITY KNOCKS

Here's a chance to put what you know about electric car design to work. EAA and EPRI (The Electric Power Research Institute) are planning a one-day workshop to be held at EPRI in Palo Alto, CA sometime this Fall. The purpose of the workshop will be to exchange ideas on electric car design among: EAA members, some of EPRI's electric vehicle consultant contractors and a few representatives of EPRI's associate EVDC (The Electric Vehicle Development Corporation). EPRI, its consultants and EVDC have been observing and testing what commercial electric vehicle manufacturers have been making with the objective of finding a design suitable for electric power company fleet use. Of course, whatever design works for power companies will be good for many other fleet users.

This is a chance for 20 to 30 EAA members, who have "hands-on" experience in designing, building and operating electric cars, to participate in what can be the beginning of a new era in electric car history. We envision EAA members contributing first-hand, hard-learned knowledge for the good of the electric vehicle industry in the same way IEEE members help all aspects of the electrical and electronics industry.

So, if you have knowledge of electric car design and are willing to share it please contact John Newell, 1249 Lane Street, Belmont, Ca 94002, phone 415 591-6698. Tell him briefly what experience and knowledge you have so we can select the 20 to 30 EAA members who have the most to offer to participate in this opportunity to further the design and, we hope, widespread use of electric cars. Thanks! Bill Palmer, coordinator

ELECTRIC CAR TO JOLT OPEC?

BY HARISHAN KRISHNAN

RICHARDSON, TEXAS—As long as there's still a bit of seawater around, George Thiess figures his prototype electric car will never run out of fuel.

In a small laboratory in this Dallas suburb, Thiess and Jack Hooker, his partner in the Electric Motor Cars venture, work relentlessly on their invention. They are close to testing an electric car that will operate on magnesium made from processed sea water. Magnesium—the seventh most abundant element on Earth—will charge a regular battery using a chemical solution called electrolene.

Thiess says the magnesium-powered battery will eliminate the limited-range problem plaguing other electric cars. Today's batteries won't take an electric car more than 50 miles without a recharge.

"But we've solved that problem through electrolene, and by replacing the battery's magnesium rod every 400 to 500 miles," Thiess says. "The electrolene is pumped into the gasoline tank. Replacing the magnesium rod is as easy as filling your radiator or adding oil.

"No, don't mention oil; there will be no motor oil of any kind in our car. Maybe a little bit of grease for the transmission, but that's about it."

PLANTS GROW

Thiess doesn't buy the theory that the development of the electric car will hurt the automobile industry.

"You can convert any automobile plant into an electric car plant without much trouble," Thiess says. "You don't even have to make drastic changes in battery production. It will even cost less to operate an electric car because our electrolene uses ordinary chemicals—though I

can't reveal what they are."

The project, which Thiess says takes advantage of the abundant supply of electricity, is under contract with the U.S. Department of Energy. He says his company has been asked by the department to collect data on the car, and assess its feasibility for commercial production.

The inventors claim that a cubic mile of seawater converted into magnesium will power every new car built in the country in 1982 for a full year. That translates into 72 billion miles of driving on "a drop out of the ocean.

"At the present time, something like 95 percent of all electricity generated in the United States is through non-petroleum sources, whereas transportation is 65 percent petroleum-based," Thiess says. "The

latter figure is climbing at a rapid rate. So the key is making transportation electricity-dependent. The electric car is the car of the future. It's that simple."

Thiess thinks his electric car has the greatest potential for success in countries where gasoline is already selling for \$4 to \$5 a gallon, noting that, "I've already had visits from parties in Singapore and India and some European countries."

FORD HAD BETTER IDEA

Last year, General Motors Corp. announced that the development of the electric car had "gone the way of \$2-a-gallon gasoline," and that until fuel prices rose significantly, the company would devote little effort to developing such a device. Thiess and Hooker deplore that attitude.

"If Henry Ford and other car pioneers could do it over again, and they had today's technology," says Hooker, a former Mercedes dealer and banker, "they wouldn't use the combustion engine. This is a new technological breakthrough."

"But I don't think OPEC wants to talk to us about it," adds Thiess.

CALIFORNIA ENERGY COMMISSION

Ninth St. Sacramento CA 95814

May 9, 1984

Dear Interested Party:

The California Energy Commission has been asked to evaluate how future energy-related funds coming into the state should be expended. The expected funds are available as a result of settlements of alleged pricing violations for petroleum products. They are usually referred to as Petroleum Violation Escrow Account (PVEA) funds.

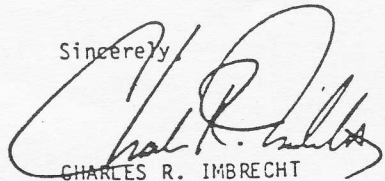
Estimates vary on the amount of money that may be involved in future settlements. Initial estimates provide that California may receive between \$100,000,000 and \$200,000,000 during the period 1985 through 1988.

The Energy Commission is cooperating with other state agencies to develop a set of proposals to benefit users of petroleum products. These proposals will be presented at public workshops (tentatively scheduled for next August) at which time additional proposals may be added. The proposals will go to the Governor and Legislature for determination of final funding allocation as part of the state's 1985/86 budget process.

If your organization has suggestions for the design of new energy programs, the CEC would be interested in learning of your ideas. PVEA funded programs must be energy-related, benefit those citizens who are likely to have borne the impact of overcharges, and must not supplant state or federal funds already budgeted. Residential, commercial, industrial, agricultural, transportation and government energy-related projects are eligible for funding. Further, debate within the Congress and the state Legislature has indicated a high level of interest in serving low-income populations.

I would like to emphasize that the Commission is interested in your ideas. If your organization would like to contribute to developing new energy programs, please submit your suggestions to the Executive Director, California Energy Commission at the above address.

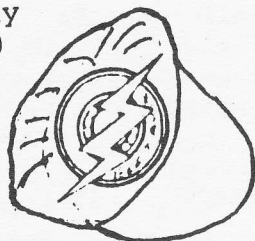
Sincerely,


CHARLES R. IMBRECHT
Chairman

FLASH!! RALLY PRIZE
LESTER DUAL VOLTAGE
CHARGER

Patch
only
\$10

HELP !!



EAA BASEBALL CAP
\$25 "RALLY" DONATION
787 Florales Dr.
Palo Alto, CA 94306

3

Schedule

SAT

8

Rally

7:30 Registration
9:15 Drivers Meeting
9:30 Rally starts
12:00 Lunch Break

FLASH!!
PRIZE
LESTER
DUAL
VOLTS
CHARGER

1:00 Resume Rally
3:30 End Run

SUN 9 SYMPOSIUM

SHERATON HOTEL RODEO ROOM
Mathilda & Moffett Park Dr.

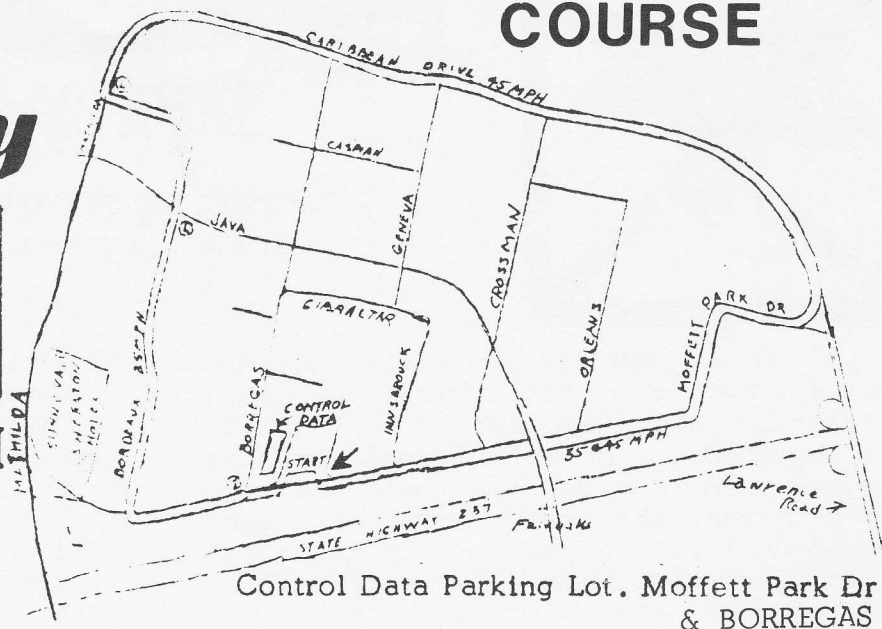
9:00 AM START PROGRAM

11 to 12:45 Board of Directors Meeting.

11:45 Social Hour Rodeo Room
12:45 AWARDS BRUNCH

BRUNCH INFO: Patricia Hardage (408) 734-8385
RALLY Clarence Ellers (408) 248-2588

COURSE

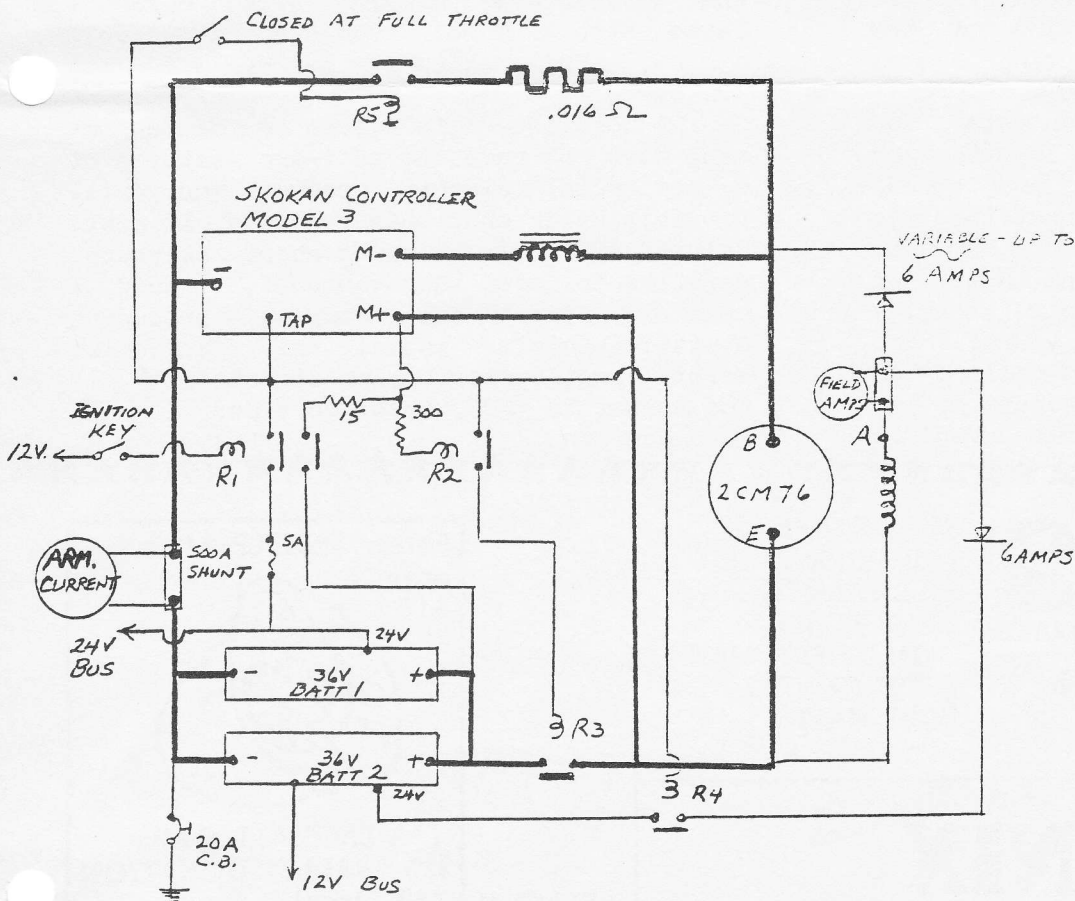


Control Data Parking Lot. Moffett Park Dr.
& BORREGAS

SPEAKERS: Erv Ulbrick, 21st. Century
Vehicles

JOHN ANDERSON ALCO BATTERIES

FROM EPRI & LAWRENCE LAB.



36 VOLT CIRCUIT WITH PROPORTIONAL
FIELD AND CONTROLLER BYPASS

LEE HEMSTREET 6/30/84

See

WORLDS DISTANCE RE-
CORD

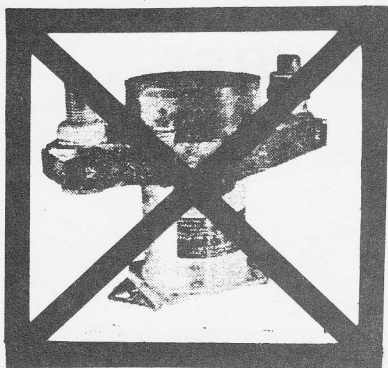
WORKING MODEL OF
INDUCTION ROADWAY
CHARGER

VIDEO PRESENTATION
ROGER HEDLUND's
WORLD SPEED RECORD

WORLDS FIRST PRACT-
ical parr. HYBRID

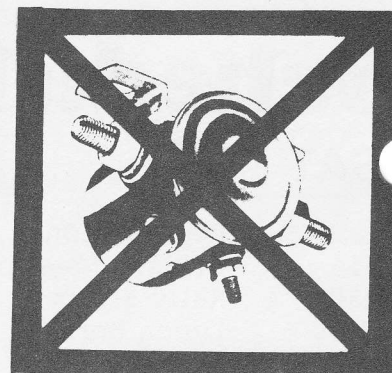
CONVERSION
HARDWARE &
CONTROLLER
DISPLAYS

EV EXPO FAIR


RUSSCO ELECTRO-MECHANICAL ENGINEERING

SAFETY

ELECTRIC VEHICLE SAFETY
BY RUSS KAUFMAN



Electric vehicle propulsion system safety involves not only the Controller, but the complete Electric Vehicle system. The safety items in the system include a commercial Semi-Conductor Fuse, commercial Power Contactor, and commercial Circuit Breaker. If a fault condition should occur, the safety Fuse will automatically open the propulsion system in 1/1000 second. The safety Power Contactor will interrupt a 1500 Amp. D.C. current flowing in a 96 Volt system. The safety Circuit Breaker will automatically interrupt a fault current up to 10,000 Amps and provide complete isolation of the propulsion batteries in the event of system malfunction. The circuit Breaker also provides a manual disconnection of the propulsion batteries for routine system servicing.

The safety Fuse, safety Contactor, and safety Circuit Breaker are as important as safe vehicle brakes, steering, and tires. Absolutely do not delete or substitute the proper Fuse, Contactor, or Circuit Breaker in the system. You have spent a lot of money converting your Electric Vehicle. Do not sacrifice the safety of yourself and others by trying to save a few dollars on improper safeties. In the event of an accident involving an Electric Vehicle

without the proper System Safeties, the Electric Vehicle driver can be proved negligent.

WHAT SAFETIES NOT TO USE

Wire type fuses will not provide reliable quick interruption of fault currents. The price of a proper commercial fuse is under \$15. Don't leave your garage without it.

Aircraft 30 V., 200 or 400 Amp contactors will not clear 72 V. or higher voltage systems due to the close spacing of the contacts. Don't use them.

Automotive starter solenoids are even worse. They are rated at 36 V. maximum by the manufacturer at 100 Amps maximum. These units will not even clear a 42 volt system. This solenoid belongs in the trash.

A homemade knife switch or disconnect plug does not have the anti-arc features of a commercial circuit breaker and will probably stick shut when you need it most. Get rid of it. If in doubt about the proper safeties to use, ask yourself, "Would a reliable commercial company producing electric vehicles install this particular safety fuse, contactor, or disconnect?" If the answer is "NO", then don't use it.

Russ Kaufman

THANKS

TO THE CONTRIBUTORS WHO MAKE
OUR NEWSLETTER GREAT, SORRY IF
I MISSED ANYONE. KEEP THOSE
CARDS & LETTERS COMING.

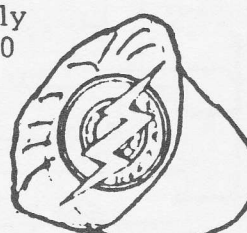
RUSS KAUFMAN
BRUCE McCASKIE
BILL PALMER
HANS KOSKI
DON CHEESEMAN
JOHN NEWELL
IVAN MARTS

PHOENIX

Phoenix Chapters' ROGER SMITH Winner
in the membership contest with 5 new
members. THANKS to Roger and every one for
helping, we have a turnaround membership is
increasing!!!

Patch only \$10

HELP !!



EAA BASEBALL CAP
\$25 "RALLY" DONATION
787 Florales Dr.
Palo Alto, CA 94306

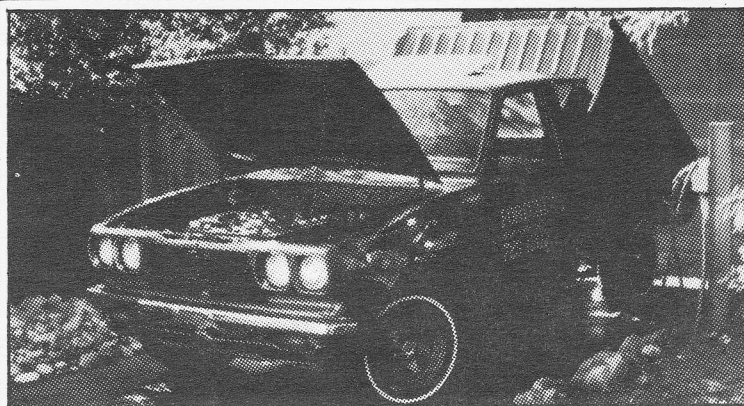
FLASH!
PRIZE
LESTER
DUAL VOLTAGE
CHARGER

EV Marketplace

The Complete Book of **ELECTRIC VEHICLES** by Sheldon R. Shacket
Revised & Expanded 2nd. Edition, Pictures & Discription of almost every Electric ever
built including many by EAA members, Basic Technical section covering Electricity, Motors
Batteries, Controls and history back to the year 1600 Legislation and Future Energy needs.
PLEASE SEND \$10.00 DONATION TO HELP COVER COST OF RALLY TO Clarence Ellers 2892 Mesquite Dr.
Santa Clara, Ca. 95051. Be sure to include your name and address so we can mail your book.

FOR SALE: J & H G-23 400 A Motor in good
shape \$175/offer. O. Telstad (408)
252-7818, 1633 Lyle Dr. San Jose, Ca 95129

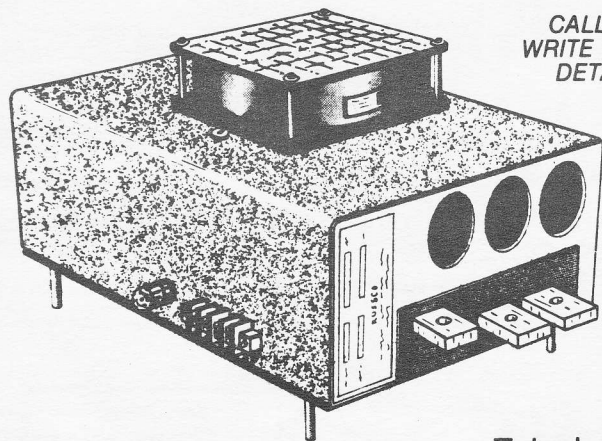
FOR SALE: Completely Automatic Battery
Charger, Lester Dual 12/96 V.D.C. out,
115/230 in, \$375, Bob King, Portland, Or.
(503) 777-2385 Evenings before 9:00pm



ELECTRIC VEHICLE CONTROLLER

\$495

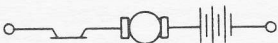
- 400 AMP
- 24 - 120 VOLT
- 4000 Hz EFFICIENCY
- FULLY PROTECTED
- FULL LINE OF ACCESSORIES AVAILABLE



CALL OR
WRITE FOR
DETAILS

P.O. Box 3761
Santa Rosa, CA 95402

Telephone:
(707) 542-4151

RUSSCO 
ELECTRO-MECHANICAL ENGINEERING

ELECTRIC EXPRESS FOR SALE • 1974 • TOYOTA PICKUP

- ENGINEERED/CONSTRUCTED BY RIC BARLINE - SES
 - 2800 MILES SINCE 11/82 GROUND-UP CONVERSION
 - PRESTO 21HP MOTOR w/CUSTOM ADAPTOR TO REBUILT STOCK 4-SPEED RUNNING GEAR
 - 108 VOLT (18 ALCO 2200 6 VOLT DEEP CYCLE BATTERIES)
 - SES 500 AMP TRANSISTOR CONTROLLER
 - ONBOARD, DIRECT AC-DC CONVERTER CHARGER
 - MASTER IN-CAB CIRCUIT BREAKER AND COMPLETE GAUGES
 - HEAVY DUTY SUSPENSION WITH COIL-SPRING OVERLOADS
 - TILT-UP CARGO BED FOR BATTERY ACCESS
 - NEW PAINT 12/82 (STOCK TOYOTA DARK SILVER) WITH MATCHING STEEL 'SPOKER' RIMS
 - NEW STRATTON STEEL RADIALS 3/83
 - INCLUDES: 30 FT., 30 AMP (30 AMP HEAD) & 50 FT., 30 AMP (15 AMP HEAD) EXT. CORDS; SES MANUAL & COMPLETE HISTORY
- THIS LITTLE TRUCK IS DRIVEN DAILY AND OPERATES FLAWLESSLY. ITS RANGE IS 45-50 MILES IN THE CITY, WILL CRUISE COMFORTABLY AT FREEWAY SPEEDS AND WILL SMOOTHLY ACCELERATE TO 70MPH IN STARTLING QUIETNESS.**
- \$6500 • FRED FORTUNE • (408) 723-1202**

FOR SALE: PMC controller 96v/350A \$450, EVC controller 12-96v/500A \$300, HB Elec. SCR controller 48-96v/450A \$100, GE motor 21HP, series \$300, 0-100VDC meter \$5, 0-150 VDC meter \$5, Simpson 0-300 DCA with shunt \$20, 500 A shunt \$5. Roger (619 277-3163 or 453-2231.

For Sale: 1970 Renault R10, 4 dr. sedan 72 volt, 250 Amp EVC solid state controller, Baldor Motor, Charger w/automatic controls. \$1,250/best offer by 9/1/84 M.G. Parks (916) 924-8730.

ADS must be received with payment by the 10th. of the month, for the following month's issue. AD rate is min. 1 to 5 lines \$5.00, 1/4 Pg. \$15.00, full Pg. \$50.00, full Pg. 2 sides \$80.00. Wanted, Trade, For Sale, etc. Mail to EAA 1249 Lane St. Belmont, CA. 94002

Peninsula

AVERE

paris versailles

PENINSULA CHAPTER regular meeting Saturday
August 4, 10-12 San Bruno Library. Join
Lydia and John on the trip to Versailles
France, and the Electric Car Exhibit of
Europe!

SACRAMENTO Chapter Changes

The Sacramento Chapter phone number is in
the home of Cliff Voiles
(916) 996-9281

Treasurer: Herb Anderson,
102 Danielle Way,
Folsom, Ca 95630
(916) 988-4075

President: Dick Hall,
5016 Olive Oak Way,
Carmichael, Ca 95608
(916)484-6688

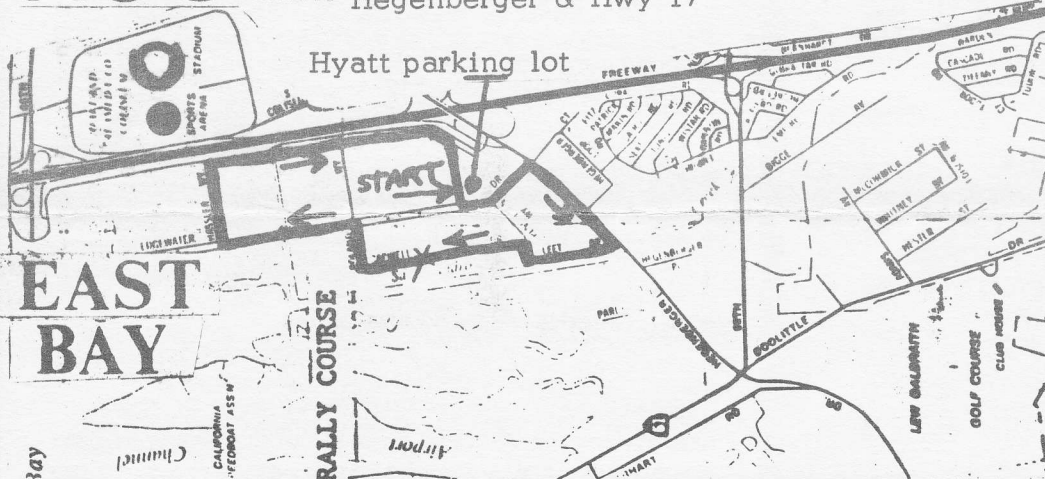
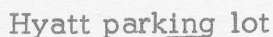
Secretary: Donny McDonald
3617 Thornwood Drive,
Sacramento, Ca 95821
(916) 489-0851

Rally

AUG 11

Fair Oaks-Orangevale Public Library.
9:00a.m. Saturdays July 21, August 18,
September 22, Oct. 27, November 17,
December 15.

Hegenberger & Hwy 17



EDITORS: - Walter Laski - John Newell - Bill Palmer - Paul Brasch - COMPILED AND
PUBLISHED By Clarence Ellers. SEND IN YOUR PERSONAL AND CLUB NEWS AND COMING
EVENTS. ARTICLES COMMENTS etc. all correspondence to address below.

Electric

Auto



Association

August 1984

1249 Lane St.
Belmont, Ca.
94002

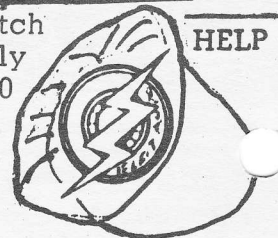
NEWS

NON-PROFIT
ORGANIZATION
U.S. POSTAGE

PAID

SAN JOSE, CALIF.
PERMIT NO. 3021

Patch
only
\$10



HELP !!!

**EAA BASEBALL CAP
\$25 "RALLY" DONATION
787 Florales Dr.
Palo Alto, CA 94306**

TIME DATED MATERIAL - DO NOT HOLD