Electric Auto Association NEWS

September 1983

ELEVENTH ANNUAL INTERNATIONAL SYMPOSIUM Rallye Event

Schedule Pg 2

Go for it!

Alternate Energy

Quotes from Chairman Dr. Armand Hammer
Chairman Occidental Petro Corp.

The energy crisis that has plagued us in the past has not gone away, it's just been catching a second wind. Unfortunately, we seem to live in times during which world energy behaves like a pendulum, swinging back and forth between outright panic and complacency. Right now we seem to be complacent, and oil prices have come down. But as the world economy improves, I believe the demand for oil will increase, just as it has in the past. Oil prices have stabilized, and last year's forcasts of OPEC's demise have proved false. And should there be another crisis in the Persian Gulf, which seems to happen periodically, I can guarantee we would not be so complacent.

This is why I've continued to speak out for the development of alternate fuels in America, and particularly about shale oil. OPEC will continue to raise prices as long as we do not have an alternative.

Never before in my lifetime, and perhaps never in the history of the world, has there been such a need for efficient management of energy and food resources. The world's 4 billion men, women and children, regardless of the political, religious and geographic circumstances that bind them together or keep them apart, all share the common need for energy and food .

WE WILL PROMOTE **ALL EVENTS** EAA OR NOT

SEND INFO. AT LEAST 2 MONTHS AHEAD

MILWAUKEE ELECTRIC AUTO ASSOCIATION
ANNUAL PICNIC
August 27, 1983
Call dave parez 414-481-9655

Schedule

SAT 10 *Rally*

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

1:00 Resume Rally
3:30 End Run

SUN 11 SYMPOSIUM

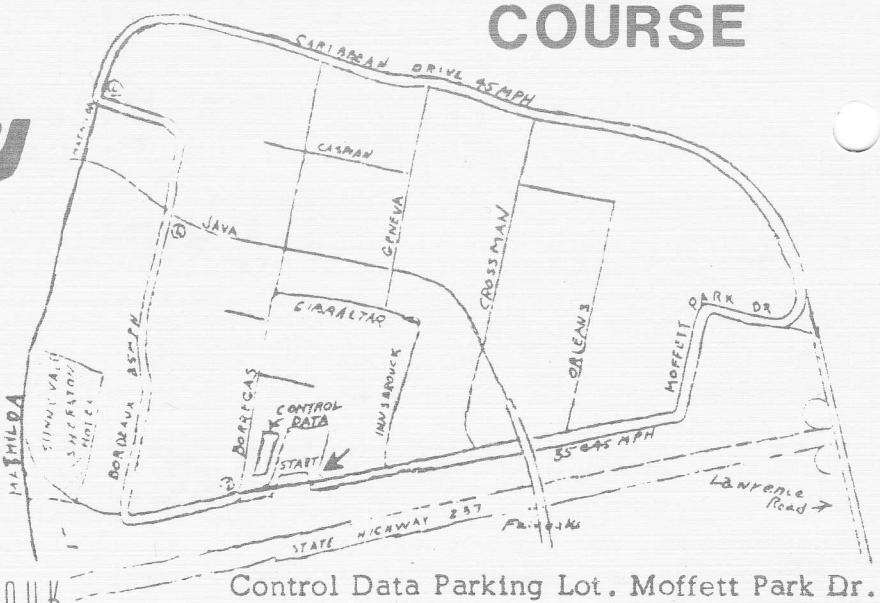
SHERATON HOTEL RODEO ROOM
Mathilda & Moffett Park Dr.
9:00 AM START PROGRAM VICTOR WOUK

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
Bill Williams; Driving Cost
Bill Palmer AND SOME SURPRISE GUEST

SUCCESS STORIES

SEATTLE

STEVEN LOUGH and the gang up north put on a very well organized program. I'm very glad I was there.

SEATTLE HAS 100 MILE + CAR. Thompson's Opel GT won @ 100.8 miles. I ran in this rally and their course is tougher than ours. We not only completed with cars on a mostly two lane street but also about 50 boats and trailers.
Nedreau's Fiat was 2nd @ 86 miles. Norris Saari's VW Bug 77.7 fantastic for a bug. Don Cheeseman was still going when I left. Included were 4 electric wheel chairs competing for about $300.00 of the nearly $1000 the chapter raised from merchants and suppliers. I won the poker hand 7 lap deal and took home $250.00 cash. THANKS
Sorry I did not get the complete info. in time for printing.
Reported by Clarence Ellers

OAKLAND

EAST BAY RALLY

This year the really big crowd was down the street one block from the rally starting point. Oakland was having an 8 KM Marathon. Our contestants had to be most careful as they drove their quiet cars thru the crowd. They were quieter & smother than a Rolls Royce.

1st Place	John Wasylina	81.5
2nd Place	LLoyd Wenzel	75.7
3rd Place	Charles Huntley	59.2
Most Practical	Charles Huntley	38
Best Looking	Lloyd Wenzel	
Most Efficient	Carl Schaeffer	

1st place 3 Wheeler Angus Mac Donald 28.9

The Eastbay is to be congratulated for their traditional annual rally which does much to promote electric cars in the Bay Area.
Reported by John Newell.

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

WE'VE CUT THE UMBILICAL CORD

By John Newell

Last month my wife and I got a glimps of the future. It is truly ELECTRIC. At the San Francisco Fair several exhibits provided some insights into the future of San Francisco. One of these exhibits attracted a large and interested crowd. This was a scale model illustrating the electric car on an induction freeway. Many of the crowd were able to comprehend immediately what such a system would mean for them and their cities. We have never before experienced such enthusiam for a new system.

The new system will need an electrical cable burried in the surface of the roadway. The cable carries the electric power which provide the electric energy by magnetic induction for electric cars as they travel along the road. Our member Jack Bolger constructed and exhibited this model. Jack can show you how such a combined system improves the performance of the electric cars and its range capabilities. Of course you know it will take a bit of doing and that is why we refer to it as the system of the future. Remember all the components are technologies are here and now. You will see many exhibited at the upcoming Rally/Fair. All we must do is sample what this would be like by installing a short prototype system as soon as practicable.

The users of this system can be expected to pay for the system by the use of watt-hour meters or similar devices.

At the Rally/Fair Jack intends to show the entire system and answer your or your friends questions. So do come to the Rally. It may be your only chance to take a peak into the Future. We are going to have fun...

REPORT FROM PHOENIX

The Phoenix Arizona Chapter was organized in 1982. This year in June they put on an exceptionally well attended five day Electric Car Show at their Tri-City Mall. They had Ten electrics on exhibit. Mighty good for a new chapter, don't you think? The Quincy-Lynn Urba Town Car prototype was a big plus and very popular. At this show the electrics were competing with gasoline cars. A show of Model A Fords were also at the same Mall. The news media enjoyed this and Greg Whitney the chapter president was interviewed on KTAR, Phoenix. The chapter members displayed their handicraft on a raised circular stage which allowed viewers to examine aircraft starter/generators, Baldor Motors, Willey Controllers, and a VW transaxle with an adapter/generator. It was a SMASHING SUCCESS.

G.E.'s Hybrid Test Car: Manager's Role Is Cited

One might suppose that the head of a team assigned to build a new type of complex experimental automobile-one that operates on gasoline as well as electricity-would need an extensive technical background. Mechanical or electrical engineering, perhaps.

Not so, says Michael F. Ciccarelli, 36, who received his undergraduate degree in biology at Siena College near Albany. Good management, Mr. Ciccarelli said, is the key to bringing off a project like the one just completed at General Electric's Research and Development Center in Schenectady, N.Y.

As the program manager for what G.E. calls its hybrid test automobile, which incorproatesboth an electric motor and a gasoline engine, Mr. Ciccarelli was responsible for controlling a 30-member team of engineers and technicians, as well as coordinating the project's various subcontracts.

"The main thing was keeping it on the track," he said in a telephone interview. " In a large project like this where you're trying to control costs, there's a lot of basic management activity." Last week, the first test model of the hybrid - a four-door, five-passenger sedan - was delivered to the Jet Propulsion Laboratory in Pasadena, Calif., for six months of further testing.

The hybrid project, which cost about $10 million, was financed by the Department of Energy as a contingency vehicle in the event of another oil shortage. The project took three years at G.E., and according to Mr. Ciccarelli, who left the study of biology to receive his master's degree in industrial management at Union College in Schenectady before joining G.E.in 1968, it also took "a lot of overtime and weekends."

"You can't forget about it, especially at the height of the program," he said. " Vacations, if any, are pushed to the end of the year."

Was there a letdown at the project's conclusion?

"Not really," said Mr. Ciccarelli, a tennis player and sports enthusiast. "We have another D.O.E sponsored program, an all-electric vehicle. That project has already started. There's no time for a letdown." **Eric Berg**

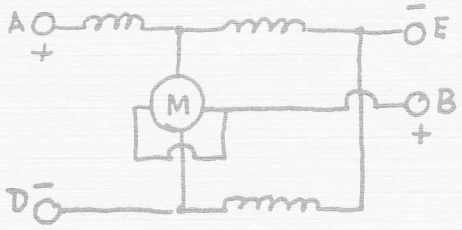
TECHNICAL NOTES

Jack & Heintz, Lear-Siegler Type G-29, GENERATOR

M. Fostar, P.E.

The J&H Type G-29 and other similar generators, are a family of like units used in aircraft to generate large quantities of 30 volt DC power-up to 400 amperes. These units are intended to be spun by aircraft engines to provide charging power for all the many electrical items used in a modern combat and passenger aircraft. These loads can and do exceed 25 kilowatts at times thus necessitating the use of several of these generally one per engine. These units were not intended to provide cranking power as were the types 2CM77 . However, due to their rugged construction, the G-29, and similar units, can provide up to 20 horsepower when properly powered and cooled by external blowers.

The figure, below, is the basic schematic diagram of this family of generators. There are many of this type in existence so the following technical discussion will do for this large family. This type of unit is a shunt-wound motor. (But you said it was a generator!!) It is both. A motor and a generator, in electrical work, are the same thing-one drives, the other is driven. To continue....



A is the shunt winding using not more than 30 v and will draw not more than 8 amperes.

E is the negative drive battery return (or ground if you wish).

B is the positive battery feed. (The "hot" side)

D is either not used or can be used for the shunt winding return. If used as the shunt return, this post may be grounded to the car chassis, if not, then the shunt return will be post E.

The two coils between E and A, and E and D are the interpole windings which aid the generator/motor commutation by reducing sparking and mak the unit more efficient when running under load.

A shunt-wound motor has the characteristic of being a "constant speed" unit which will come up to a certain speed quickly and remaining at that speed as long as the voltage remains at the same value. Changing voltage will change the speed of the motor to some extent but the current will vary depending on the load as the motor tries to achieve its speed and run at the rate set by the voltage. This type of unit does not have the torque of a series or compound wound motor but, when cruising, is the most efficient.

Don't expect to "burn rubber" with this motor. It will take a lot of abuse and not falter, but don't mistreat it. This is a fine piece of machinery and will last a long time if treated with respect.

One of the advantages of this type of motor is that, with a few relays and diodes, it will act as a generator of 36 volts DC when you are coasting up to a stop or going down hill. This "regeneration" will make your car act like a "normal" car in traffic. That is, it won't buck, coast, or make you use your brakes a lot as it feels like a real car. It will return some charge back to the battery !!! to 15%

evc Electric Vehicle Council
1111 19th. Street nw Washington, D.C. 20036
(202)828-7516
SYMPOSIUM & EXPO '83
Dearborn, MI Hyatt Regency Hotel
October 4-6, 1983

EV Marketplace

84-12,12, 96-12V auto. Lester chargers. Electronic controller (Skokan). Make offer.

Electric Gazelle (Replica 1929 Mercedes SSK Sports car). White convertible with burgundy interior and pin-striping. Mahogany dash, steering wheel and running boards. 108V system with Prestolite motor geared to use high RPM for maximum efficiency. Diesel Heater. A beautifully detailed eye-catcher! Serious inquiries Ph.(801) 621-2722 days, 782-5792 eves. & week-ends.

Wanted: 108-12VAuto Charger.

LEARN WHILE YOU SAVE

Willey Solid State Model 9 Controller Kits to 450A & 120v. Easy assembly, quality components, clear manual. Also blowers, contactors, meters, foot-pedal controls, fuses, etc. Write or phone for catalog.

******

SALE! 15% off on all orders which include a Controller Kit. Ends Sept. 30th.

BREWER ASSOCIATES 21511 Deerpath Ln.
213-456-6236 Malibu, CA 90265

Three nearly new General Electric 5BT1345B51, 18 HP equipped with adapter plates for Ford Courrier transmission housings. $250. (312) 394-8669 or (312) 399-2564

****

1973 Subaru 4 speed GE 2CM77 motor (8) gould 6v 220 batteries voltage switching. On board charger Gould 80 amp 12 v $2000 PAUL HATLEBERG (608)362-6752 Beloit Wis.

****

Digital S.O.C. GAUGES, new design. Have LED bar-graph display, alarm system, and more. Available for 12 to 120v in 6v increments. $99ea. (1-9) Write for info; KTA SVCS., P.O. BOX 1024, Tustin, Ca 92681

69 Toyota GE 2 CM77 Motor heavy duty Cutler Hammer Contactors 2 speed 36 v system (12 batteries) provision for 16 batteries if desired, regenerative braking. Batts-in trunk & under hood 48 v ferro resonant charger (on board) $750. (201) 741-4530

****

1/2 off new'80 ElectaVan 600 com'l built. Stored since purchase, $5,950. Also owner built '72 Subaru, Prestolite Motor S.S. controller, 15 Trojan J 250 batt. $2250. Bob Wing (415) 669-7402 Box 277 Inverness Ca. 94937

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Lectric Leopard - Like new 1980 De Luxe - Red - 1500 miles $6,000 Contact D. Fair, R.D.#5, Box 112 A, Greensburg, Pa. 15601

****

'72 Datson only 1700 miles as convertion, 20HP Prestolite, Willey 8 transistor controller, Lester charger 16 Globe Union #1000 battery,5 steel B. tires, tow assembly, Top cond., $5995. A. Beckman, Menlo Park ca. (415) 328-0418.

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1960 BMW 700, 60 v system, runs. Make offer (408) 268-5587 Ken Roberts

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Bendex P-2, 28.5 generator. GE starter generator type CM85 30v 400 amp. good condition. Both $550.00 plus freight. H.W.Peters RR 2, Hillbaro, Il. 62049

****

'68 VW Bug w/79 Kaylor conversion, 2CM76 motor, excellent, $1650 must sell (415)966-2858 day (408)252-2920 eve.

EV Marketplace CON'T

Sunbeam Imp 1965, 48 volt relay-resistive system using Baldor 3.2 HP Motor. All new interior, Michelin tires, brakes & EV1000 batteries. $1800 or best offer call 619-566-6013 or eves (619)-566-0328

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GE amp meter and 50 mv.shunt 400-0 - 400 amps, 3½scale, $45. Don Cheesman 205 W. 24th Ave. Olympia. Wash. 98501 (206) 352-0463.

****

Lestronics 11 36 v, 40 amp. charger with cables, J & H G 32 Generator w/VW transaxle adaptor and blower. $550/Best offer (817)939-2660, eve. 509 Pecos, Belton, Tx, 76513

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Bookshelf

" Guide to Electric Conversion" - Fourth Edition. A clearly written 76 page Conversion Manual with an emphasis on practical techniques, using latest technology. Plans include several Proven Diagrams and Schematics, as well as a comprehensive Parts Procurement Directory. Separate Chapters thoroughly cover Expected Conversion Cost/Performance, Electric Motors, Adaptor Plates, Controllers, Batteries, Chargers, Maintenance, System Test/Integration, Safety, and Wiring Capacity. A real bargain for only $19.95 from Bill Williams, Dept. EAAN, Box 1548, Cupertino, Ca. 95015

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STEP-BY-STEP CONVERSION MANUAL _ By Clarence Ellers. Complete instructions on conversion of gas cars to electric. Simple method saves hundreds of dollars. Also information on parts and where to get them. Send for summary to Clarence Ellers, P. O. Box 2781 , Santa Clara, Ca 95055

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INTERNATIONAL Rally SYMPOSIUM FAIR

SAT 10
SUN 11

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 NEWS

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