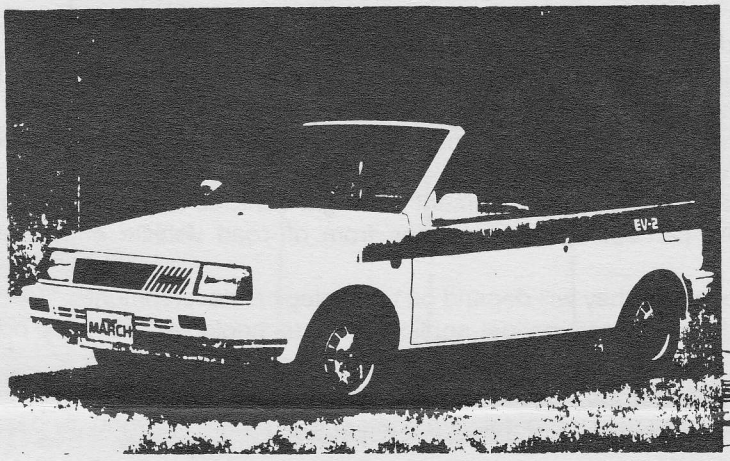
ELECTRIC AUTO ASSOCIATION NEWS

EAA

OCT. 1989

Vol. XXI No. 9

明日の都市はEV

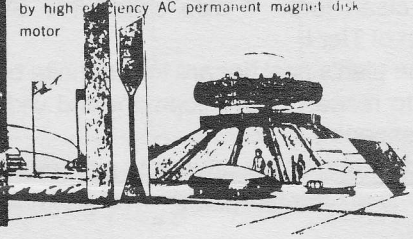


ニッサン・マーチ EV-II

■日産自動車株式会社
NISSAN MOTOR CO., LTD.

高効率のACマクネットディスクモータを搭載し、性能向上をはかりました。

Nissan March EV-II has achieved longer range by high efficiency AC permanent magnet disk motor

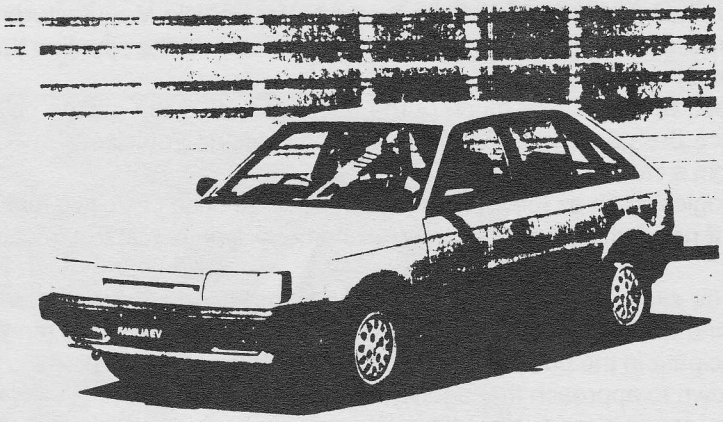


E42型

■電気自動車技術研究組合
ELECTRIC VEHICLE ENGINEERING RESEARCH ASSOCIATION

マツダファミリアをベースに開発した、ニッケル－亜鉛電池搭載の高性能電気自動車

High performance passenger car powered by nickel zinc batteries -based on Mazda Familia.



EV技研 E32型

■電気自動車技術研究組合
ELECTRIC VEHICLE ENGINEERING RESEARCH ASSOCIATION

ダイハツシャルマンをベースに、新種電池(Ni-Zn)を搭載した高性能乗用電気自動車

This model is the High-performance electric passenger car with new battery(Ni-Zn), based on the DAIHATSU CHARMANT.

So. California 20-Year Plan: Clean Fuels, Electric Vehicles EL MONTE, Calif. — The California Air Resources Board (CARB) has adopted a plan for southern California that calls for more use of clean fuels and electric vehicles over the next 20 years.

The plan, which also proposes new rules for everything from charcoal lighter fluid to industrial plants, ultimately envisions the virtual ex-tinction of today's automobiles from the roads in Los Angeles, Orange, Riverside and San Bernardino counties, the smoggiest in the nation.

"With respect to low-emitting vehicles, recent progress in fuel cells, solar cells, storage batteries and superconductors offer the promise of eliminating combustion processes from motor vehicles almost entirely," said a South Coast Air Quality Management District (AQMD) report that made up much of CARB's plan.

The AQMD and the Southern California Association of Governments jointly developed the plan. Now that CARB has endorsed it, the U.S. Environmental
Protection Agency (EPA) will review it, and each of the 123 proposed rules will be subject to public hearings.

Cleaning the air in the region will be achieved under a three-tier plan, according
to the AQMD report. Half of the overall improvement in air quality will be the result of new controls on vehicles and commuting.

The first phase calls for full implementation of known control technologies and management practices, a process already under way. Nineteen vehicular measures are proposed, dealing mainly with stricter emission control standards on new vehicles, controls on diesel trucks and
buses, clean fuels for fleet vehicles and improved inspection and maintenance programs.

The second phase calls for further development and use of technologies that have been demonstrated but not yet perfected for consumer use. Those include batteries for electric vehicles, fuel cells, electric commuter railroads and heavy vehicles that operate on clean fuels. With help from various government agencies, all of the projects would be ready by the turn of the century, according to the AQMD report.

The Tier II plan calls for 40 percent of passenger vehicles, 70 percent of freight vehicles and all transit buses to be operating on clean fuels. It also calls for a SO percent cut in emissions from off-road vehicle emissions after full implementation of Tier I.

Goals for the plan's final tier are less definite because they will depend on technological developments. "Tier III requires commitments to research, development and widespread commercial application of technologies that may not exist yet, but may be reasonably expected
given the rapid technological advances experienced over the past 20 years," according to the AQMD report.

The plan defines near term as the next 5 years, and it said more detailed goals will be published annually based on R&D developments.

The plan will be a challenge for automakers, but the industry expects to be able to meet the guidelines, said Fred Bowditch, vice-president of technical affairs for the Motor Vehicle Manufacturers Association in Detroit.

"We're not surprised," Mr. Bowdilch said. "When one looks at the situation that California is in, California has little choice but to do some really dramatic things."

He pointed out, however, that much of the technology that the outline calls for either does not exist or is not mature enough to replace the gasoline-burning automobile. Electric vehicles, for example, still lack the range and speed that drivers expect from a car.

Other technologies, such as fuel systems capable of handling corrosive methanol or mixtures of methanol and gasoline, will be available if needed, he said, but they will come at a high cost to the consumer — an issue that is not addressed in the CARB plan.

"It's going to be expensive, and we need enough time to develop the control equipment," Mr. Bowditch said.

The MVMA and its members have no master plan now for coming to terms with the report, but Mr. Bowditch said the industry will participate in the public hearings and the EPA's review of the plan.

"We've been known to approach that agency," he said. "I think we know their address."

Some of the programs already have been imposed under the existing powers of CARB and AQMD. In March, CARB set the first emissions standards for methanol-powered vehicles. The limits on hydrocarbon, nitrogen oxide and carbon monoxide are the same as those for gasoline vehicles, but a cap on formaldehyde emissions also was set.

In June, CARB set a new standard for gasoline-engine hydrocarbons and carbon monoxide, and demanded that the standards be met for 100,000 miles of vehicle life instead of the previous 50,000. The new standards, which take effect in 1993, allow 0.25 grams of hydrocarbon per mile and 3.4 g of carbon monoxide per mile. The previous limits were 0.39 g of hydrocarbon and 7 g of carbon monoxide. After 100 000 miles, an engine can emit no more than 0.31 g of hydrocarbon and 4.1 g of carbon monoxide.

The board also has imposed limits on heavyduty diesel buses and trucks that will cut allowable particulate emissions by 90 percent by 1994.

A spokesman for CARB in Sacramento said the board's next target will be new limits on nitrogen oxide, which will mirror the cuts in the gasoline-engine hydrocarbon standard. The current NOx standard is 0.4 g per mile.

CAR WEIGHT 2450 LBS
2 PASSENGERS 360
TOTAL 2810

TIRE TESTS – 1968 VW – 72V – China Motor – PMC 21 Controller.

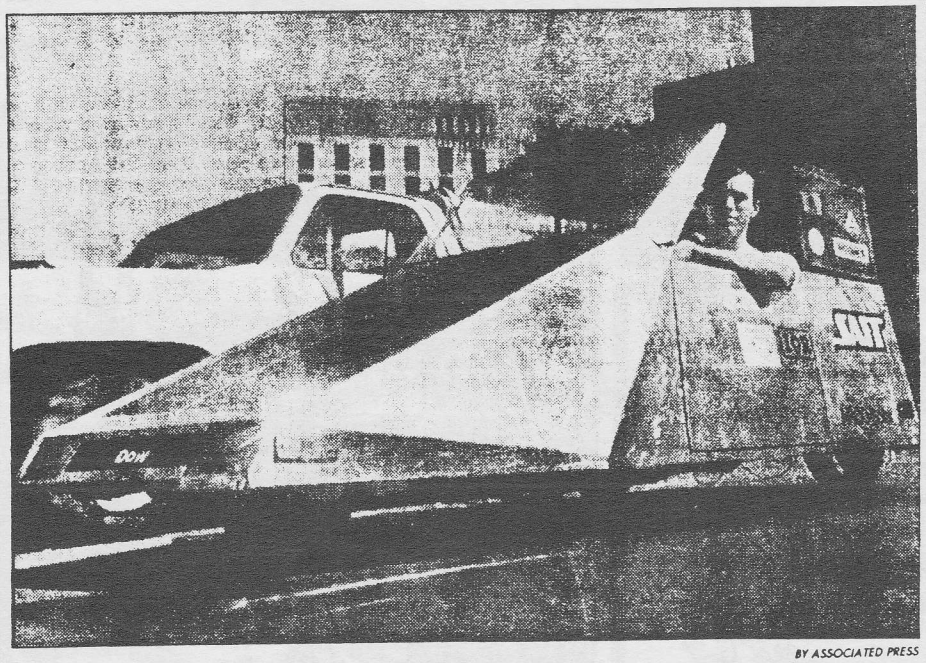
DESCRIPTION	SPEEDOMETER CALIBRATION				@ 30 MPH TRUE:			NOTES
	Indicated MPH	Time	Distance	True MPH	E [Volts]	I [Amps RMS]	Power	
Metzler 165/15	50.0	2m 30.77s	2 miles	47.75	72	82	6615	3rd gear.
	31.4	—	—	30.0	75	98		
30 PSI front. 35 PSI rear. Circumference = 79.875					74.1	108	7875	4th gear
					73.8	105		
Pirelli P8: 185/65R 15	50.0	3m 57.53s	3 miles	45.46	72.7	69	5616	3rd gear.
	33.0	—	—	30.0	75.1	83		
30 PSI front 35 PSI rear Circumference = 77.0								
Wards Grappler II: 205/75 R15	45.0	2m 35.69s	2 miles	46.26	72.5	67	4837	3rd gear.
	29.2	—	—	30.0	71.9	67		
30 PSI front. 35 PSI rear. Circumference = 83.								

Metzler: Tread - 2 Rayon - 2 steel; Sidewalls: 2 Rayon; Max Load: 1200 pounds

Pirelli: Tread: 2 Nylon - 2 steel; Sidewalls: 1 Nylon: Max Load: 1250 pounds

Grappler II: Tread: 2 Aramid - 1 Polyester Sidewall: 1 Polyester: Max Load: 1598 pounds.

Lee Hemstreet 8/16/89
Bob Wheeler



BY ASSOCIATED PRESS

Commute by Solar Car

James Worden drove his solar-powered car through the streets of Cambridge, Mass., earlier this month. Worden, a graduate of Massachusetts Institute of Technology, designed the 350-pound car, which he uses in his daily 13-mile commute.

. VANCOUVER. Ballard Technologies Corp. has received $7.5 M from an international consortium to commence commercial production of the Corporation's outstanding solid polymer fuel cell. The unit, which takes hydrogen from methanol at normal temperatures and produces electricity and water, will be manufactured under the new name BALLARD POWER SYSTEMS. The company is also building a 4 kw unit for test by Canada's Dept. of National Defence. VEVA Newsletter, Aug.'89.

A RENTAL COMMUTER SYSTEM

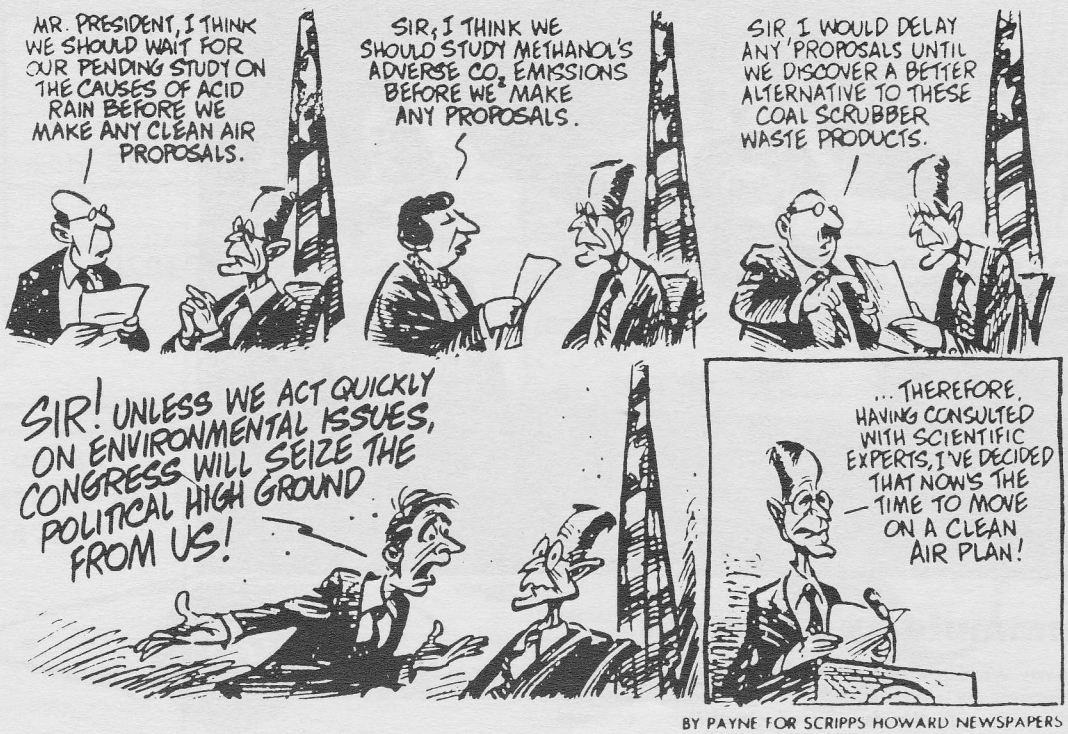
Back in 1980, while attending the International EV Symposium in St.Louis, MO I met Professor G. Maggetto of the University of Brussels. At that time Prof. Maggetto told of an automatic rent and drive electric taxi system they had set up.

At first it utilized two of 9 Italian PGE 3 and 5-passenger EVs which were capable of 50 km range in the city at speeds up to 60 km/hr. Initially the two were parked at charging pillars at the University of Brussels. Each could be engaged by a sort of plastic card which, when inserted into a slot on the charging box, released the charging cable and recorded the driver's identity. He would then be free to drive to his destination into the city and return, again connecting the charging cable. The rental was 6,5 BEF/km.

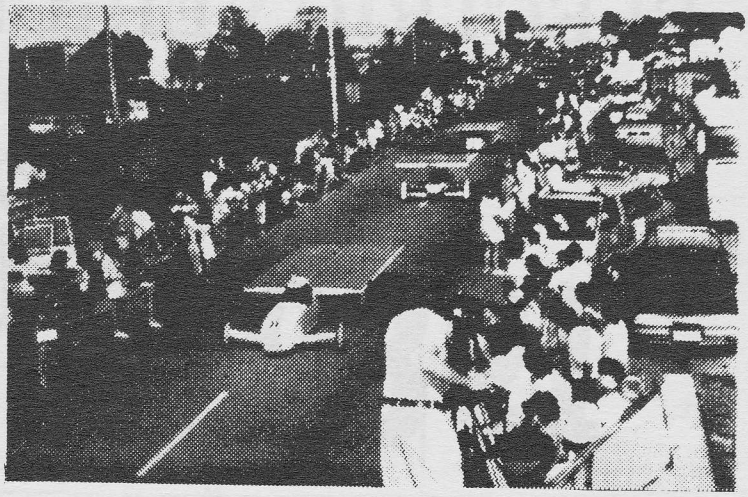
Later, all the cars were put into service and since 1985, usage of the EVs has been extended to all members of the University communinity.

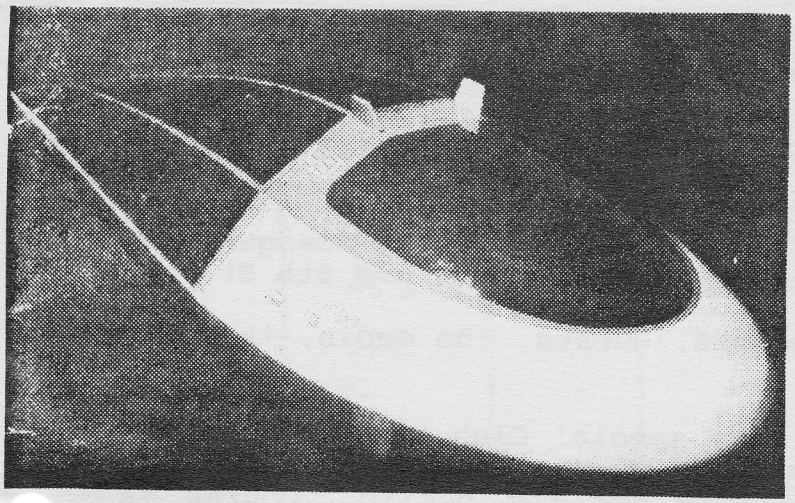
The cars are still in use, and the venture has been so successful that the service has been extended to other clientele from the general public. The cars have now been fitted with on-board chargers so the EVs can be charged from any 220V 15A outlet. Some of the clients take an EV home at night, using their taxi commuter card of course, and pay for the use according to the time the EV is away from the regular charging point. By using opportunity charging, the range can be extended by about 40 km. Some clients go as far as 60 km round trip.

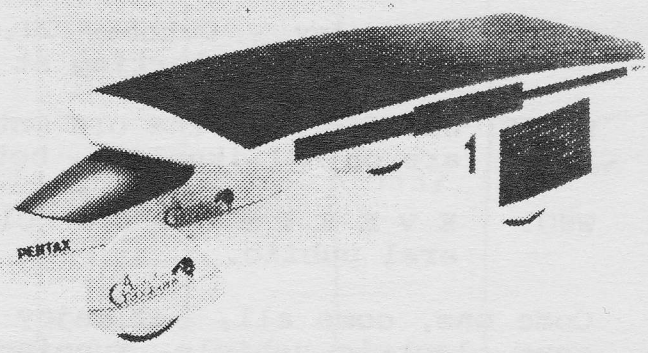
Since 1980 the Brussels University EVs have covered more than 100,000 km together, most after 1985 when fleet exploitation was introduced. The larger number of trips are less than 10 km, but some daily coverages of 100 km, using opportunity charging are common.

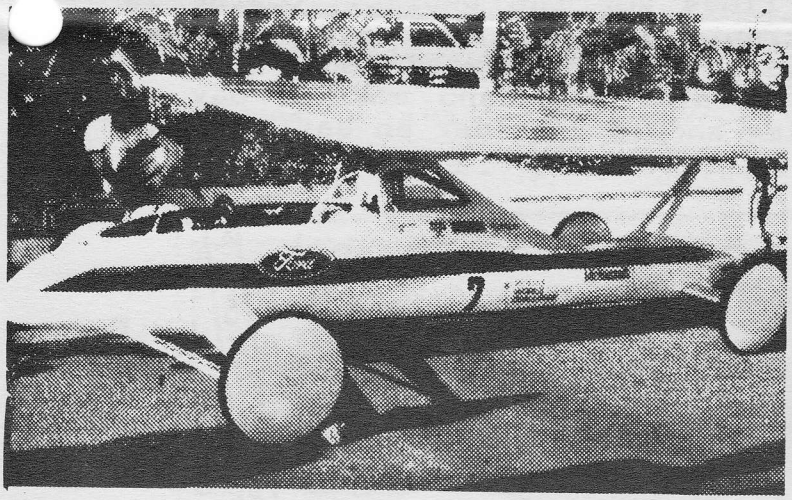


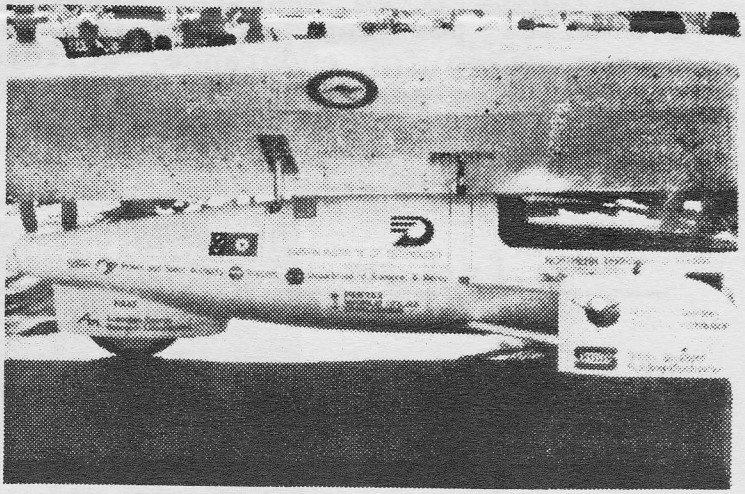
THE 1990 WORLD SOLAR CHALLENGE

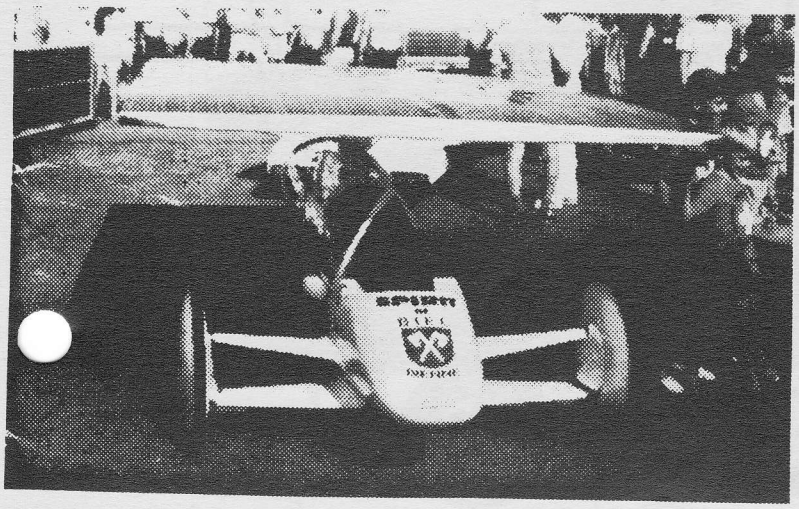












Further details may be obtained by contacting:
ENERGY PROMOTIONS Ph: 075-48 9155
P.O. Box 290 Ph Inter.: 6175-48 9155
Bribie Island, Qld. 4507 Fax: 075-48 9251

ELECTRIC VEHICLE ASSOCIATION

of Southern California

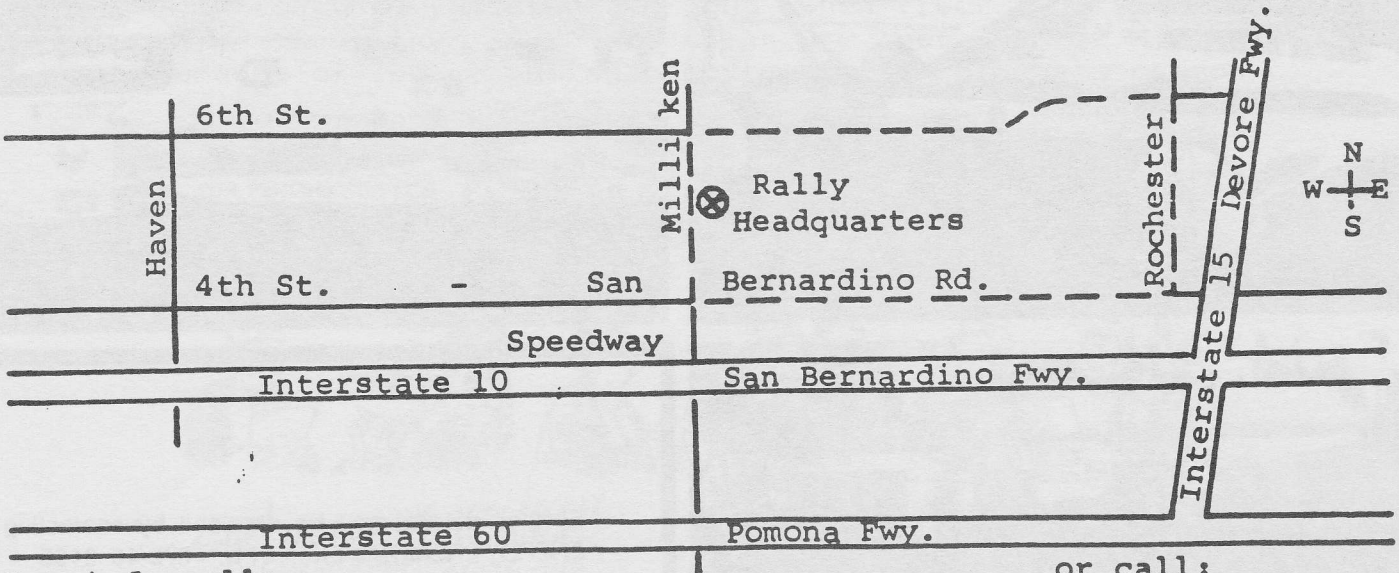
1989 Rally

WHEN: Saturday - October 21, 1989 - 8:00 AM 'til?? with one hour lunch break starting at noon.

WHERE: Ontario near the old Ontario Motor Speedway. Rally Headquarters are on Milliken Ave. between San Bernardino Rd. and 6th St.

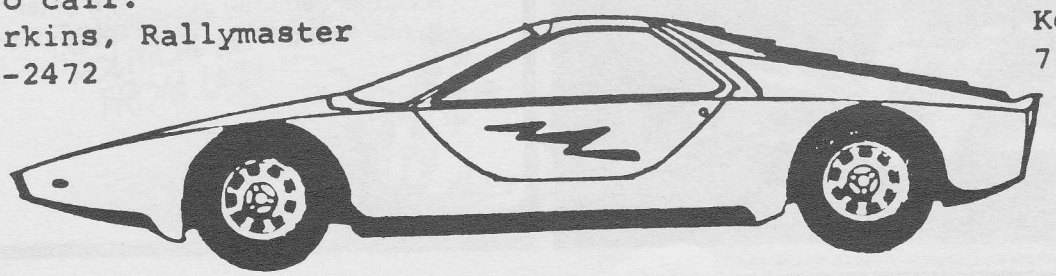
WHO: E V E R Y B O D Y ! Club members, guests, the media, the general public.

Come one, come all, and enjoy this very special Club activity...Bring your electric vehicle, running or not, so that all may share in your experience...Free electric vehicle rides for the public...Course is 2.6 miles per lap...All Rally entrants receive an award...Special awards given for endurance, efficiency, most innovated, most practical, plus class winners...Bring a picnic lunch and make a day of it...Those who plan to run a long time should consider an early start.



For info call:
Stew Perkins, Rallymaster
714/986-2472

or call:
Ken Koch
714/639-9799



(This is a paid advertisement)
Fellowship Foundation School
P.O. Box LOVE
Boyes Hot Springs, CA 95416-1300
(707) 938-8642

August 14, 1989

To whom it may concern:

We "Humans" have been falsely taught to believe that there are no *free rides!* Yet we "Humans" are a perfect example of a *free ride!* Hold your breath for five minutes, if you can, and you are dead? Stop and think, why is air so important to sustain life? The reason is that air is pregnant with FREE ATOMIC ENERGY, which supplies the LIFEFORCE *that motivates the human body,* through the billions of atoms taken into the body's blood stream, which is the driving force that *motivates the physical body,* when the "atoms" are commanded by thought.

Now the, ELECTRIC CARS, in combination with the forces of nature, is *the key to free rides,* or transportation? Let us make another point for your consideration. Oxygen and Hydrogen by themselves are only gases. However, when they are combined in the right proportions they make *liquid gold or pure water.* The other point this humble recorder wants you to consider is: we must utilize the forces of nature rather than fight them or we and our future loved ones are all going down the drain, so to speak.

Your humble recorder was a successful businessman for 40 years, but after many, many years of research, financial and unusual physical and mental experiences, has attuned himself to the *cosmic atomic loving thought force* - which is the source of all wisdom!

Please read with an open mind the attached letter on the **Dove Car**! Details which will work are *free* for the asking. Tax free donations are acceptable to the school, so that we may continue to work for humanities benefit and *enlightenment.*

Our love and peace to you and yours,
I.M. Montalto/Chancellor

(A non-profit publicly supported foundation)

(This is a paid advertisement)
Fellowship Foundation School
P.O. Box LOVE
Boyes Hot Springs, CA 95416-1300
(707) 938-8642

RECORDED:
March 1, 1989

REFERENCE: A DOVE CAR with unlimited migration range, FUEL and POLLUTION FREE!

To whom it may concern:

Its concept is as simple and as ancient as a "Windmill", that pumped water out of the ground, before electricity was invented:

Stop breathing and you are dead in less than 10 minutes? That is **NOT** quite true, however that is **NOT** the point of this message!

You are a "living" example of a free ride? If you would use your "PINEAL GLAND" to think with!

What you call God, "WE" call the COSMIC "LOVING" THOUGHT FORCE, or "ATOM-IC" energy, which is constantly re-cycling your kindergarten "class room" you call earth!

ADAM (wo-man), you are "mandated" to learn your most important lesson in "school", YOU MUST GIVE FREELY, WHAT HAS BEEN GIVEN TO YOU FREELY!

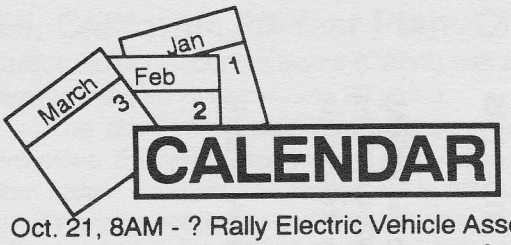
Your recorder, has been favored with a "preview" on his PINEAL GLAND (mind) "computer" screen, in detail, of the **DOVE CAR**! The principle is so simple, that "our" other recorders have refused to believe it.

Details are available to any group or individuals, who's wish is to SAVE your ENVIRONMENT and LIFE!

Our LOVE and PEACE to YOU and YOURS,

I.M. MONTALTO/Recorder

(A non-profit publicly supported foundation)



Oct. 21, 8AM - ? Rally Electric Vehicle Association Ontario of Southern Ca. On Millikan Ave. between San Bernardino Rd. and 6th St. (near old Ontario Motor Speedway). Public invited Free rides. Stew Perkins (714)986-2472

1989 IEEE Nuclear Science Symposium - NSS '89 (NPS); Oct. 21 - 28; Hyatt Regency Burlingame, San Francisco; Paul L. Phelps, Lawrence Livermore Laboratory, MS l-130, Box 5504, Livermore, Ca. 94550; (415)422-8934.

Nov. 6 Symposium for Solar Car Builders in Boston at Wentworth Institute. Contact James Worden

Western Electric Show and Convention - Wescon '89 (Los Angeles, San Francisco Bay Area Concils); Nov. 14-16; Moscone Center, Brooks Hall, Civic Auditorium, San Francisco; Electronic Conventions Management, 8110 Airport Blvd. Los Angeles, Ca. 90045; 213-772-2965 or 800-421-6816

Conference on Magnetism and Magnetic Materials (MAG); Nov. 28-Dec. 1; Sheraton Boston Hotel, Boston; Courtesy Associates Inc., 655 15th St., N.W., Suite 300, Washington, D.C. 20005; 202-639-5088

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From Jet 600 Van: 20 H P.GE Motor GE,SCR, Controller-84/102 VDC & Accelerator Automatic Charger 12/102VDC,115/230 VAC

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Send your chapter news, coming events, articles to the address below

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EAA

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