Corvair Chatter

Quick Facts

NEXT MEETING: February 23, 2022. 6:00 p.m. Denny's Restaurant. Meeting starts 7:00 p.m. 8841 Greenback Lane, Orangevale, CA 95662 (Corner of Greenback & Hazel) If you have a Corvair, come on out to the meeting.

Membership Dues: Please pay your membership dues! $20.00 for the year. Please send checks or cash to Wes Nicholas. Checks made out to: "CCRC." For PayPal options, contact Wes Nicholas, CCRC Treasurer.

Features

Firing Order

President	John Heiser
Vice President	Carl Funk
Activities	**Position Open**
Secretary	Erin Sicard
Membership	Joseph Howard
Treasurer	Wes Nicholas
Editor	Ken Edwards
Historian	Christy Barden

Finding Us

Website;
www.northern-california-corvairs.com
Facebook; Classic Corvairs of River City

Message From the President:

Hello fellow Club Members: Happy February and happy Valentine's Day!

I hope everyone is enjoying this month so far, staying warm, keeping busy with Corvair projects or other household related projects!

I am glad to see Club members at the local Cars and Coffee events! This is a pretty nice venue to showcase our Corvairs and get out to meet new folks, talk about our Corvairs and learn about other cars that attend. Plus, I really enjoy the free home baked treats or donuts that folks bring.

For upcoming events, we are planning on a May Ice Cream Social and pre-planning another Club Picnic BBQ in July.

Cal Expo Autorama is on this year. April 29-May 1st, 2022. The Club has sent in our applications and fees for the club house. Fingers crossed that we can enter the clubhouse this year. Thank you all for sending in your registration forms and fees. Greatly appreciated!

Short newsletter this month. Reminders, Officer nominations will be taken up for officer positions and up for renewal. Two Corvair engine work parties are being scheduled. Dates and times are being worked on with a Club email blast when the work parties will be held.

Please start thinking of monthly meet up for breakfast and club Corvair outings.

See you at the February 2022 Club meeting.

Latest CCRC News

Ongoing Events:

Sacramento Hollywood Park Auto Club - Classic Cars: Meets every 3rd Sunday 10:00a.m. Meet at Leonardo Da Vinci School. CCRC Club Member has started this little gathering. Lets meet up and join this event.

Carmichael Bel Air Sunday Cars and Coffee. 4005 Manzanita Avenue at the intersection of Fair Oaks Blvd and Manzanita Avenue near the corner of Cypress. Time: 7:30 a.m. to 10:00 a.m.

Folsom Cars and Coffee: 1st & 2nd Saturdays -Town Center, El Dorado Hills, 3rd & 4th and occasional 5th Saturdays, 430 Palladio Parkway in Folsom at the Palladio. 7:00 am – 9:30 am.

In Planning stages is to have a monthly Sunday meet-up and a restaurant for breakfast or Brunch then select a tour or cruise.

Car Shows:

Cal Expo Autorama: April 29-May 1, 2022.

Meeting Minutes

By Erin Sicard

January 26, 2022 – Club Meeting Minutes

Meeting brought to order by John Heiser, President at 6:50 pm. Sixteen members in attendance, including new member, Jim Brown, owner of ***Santa Rosa RestoRods*** and currently owns a Corvair Rampside. **First Item of Business** was exploration of a club group entry in the Cal Autorama show at Cal Expo running 4/29-5/1. Though the show is currently booked as full, John Heiser offered to contact the show POC and see if it is possible to still get cars from the club entered without being assessed late fees. Interested members are to submit required paperwork to Wes Nicolas, Treasurer as soon as possible. The club will reimburse part of the registration fees for qualified entries. **Second Item of Business** was discussion of possibility of a club purchase of three late model corvairs in mixed condition which are available as a package deal. One car has potential to be salvaged, but offer is for the lot of three only and current asking price is $1,000. After discussion of pros and cons of the concept volunteered to further explore the cars for future club purchase. John Heiser also mentioned that he has been made aware of a 1967 Monza convertible with PG that the owner may be willing to donate to the club. It has the potential to be the club's next project car. Discussion of pros/cons of concept were discussed. John has researched the body tag for original specifications. Wes Nicholas also agreed to visit the owner to view and assess the vehicle. **Third Item of Business** was discussion of several possible summertime club activities, including an ice cream social in May, and a repeat of the Ssummer BBQ, probably in July. Various different locations from last years event were proposed and discussed. Discussion was table for a future meeting. Foiurth Item of Business was the discussion of various financial issues, include the club's donations to various non-profit organizations. Additionally, name tags for club officers were distributed and a tally of attendee's preference for pin or magnet badges was recorded. Wes Nicolas has the template and reports that cost is only $1.00 to make. Further details will be gathered and disseminated regarding availability to each club member.

The **Club Treasurer's Report** was given by Wes Nicolas, which included final cost for the Holiday party and a complete unaudited accounting for all of 2021. Two club members will be meeting with Wes to perform the accounts audit on February 20th. Moving the club's financial accounts to a different financial institution was discussed. Wes stated he will research and bring options to the membership for a vote at next meeting.

Under **Other Items of Interest** a demonstration of a "rotary thread" available from Amazon was given during the meeting, as well a discussion of various Android and Apple based GPS vehicle trackers which have been seen at several car events recently. Attendees were reminded of open officer positions and encouraged to submit nominations for positions.

Meeting adjourned at 8:15pm. Next meeting will be held at the Orangevale Denny's 8841 Greenback Ln. Orangevale on Wednesday, 02/23/22, with no "host dinner" at 6:00 and meeting at 7:00 PM.

Corvair Resources (Online)

Q&A - www.corvaircenter.com
www.corvairforum.com
Parts - www.corvair.com (Clark's)
www.californiacorvairparts.com
www.mikescorvairparts.com
www.rockauto.com
Sale - www.jaxed.com
www.corvairtrader.com (Parts & Sales)
Resources –
https://www.corvair.org/chapters/corvanatics
Car Building – http://autoexer.skiblack.com
Fun - www.youtube.com/user/davemotohead1
www.deansgarage.com

Birthdays

February 2: Tabitha Heiser
February 2: Kathy Hooker
February 5: Leo Scopesi
February 9: Barbara Miller
February 9: Steven Walker
February 10: Dawn Ann Johnson
February 11: Mary Lechner
February 18: Denis Schoen
February 21: Jon Larson
February 23: Bruce Brinka
February 24: Michelle Meyer

CCRC Club Member Assistance:

CLASSIC CORVAIRS of RIVER CITY CLUB MEMBERS

In the last year, our club has lost at least six members with cars that participated in club outings. It is getting more difficult to get a respectable number of cars at club-sanctioned events. Car shows, concourses, the Autorama and State Fair participation require strong showings. We may not be invited back to the State Fair this year due to our poor showing last year.

In order to get more cars on the road, the club leadership is offering assistance to members that have Corvairs that need help to get them running. This help will be in the form of technical expertise, mechanic labor and financial assistance.

If you have a Corvair that is in need of work, contact John Heiser and give him the details on what you require in the way of help. A committee will review the requests and select those we think are the best candidates. Remember the goal is to get more Corvairs at our club events. Those chosen will be expected to participate and help the club increase the number of cars that we put on display.

Your Comments

CORVAIR CHATTER Newsletter - Let us know if there is something that you'd like to see in our monthly newsletter. Email your thoughts to John, Johnh1@thegrid.net

Club Activities - You may have some great ideas for club activities. We want to hear them! Better yet, we'd like you to participate in the planning of your activity idea. Email your ideas to Carl Funk at: edieboopboop@yahoo.com

Classified Section

1961 Corvair 95 Rampside pickup for sale. $15,000 Bob Melvin. (916) 644-1965. Runs Great. New Clutch Differential, Pressure plate, flywheel, Disc, throw out bearings, and fork. New gas tank, New 2 tone vinyl and cloth seat with thick foam. New Alternator and battery. New automatic duel chokes. New tires. The owner has receipts for all of this and more over the last 6 months. I have put on about 300 miles since the above work was completed. It cruises at 70 MPH with no problem. Surface rust in spots one dent driver side. Body and "frame" are straight. It does need body work an a great paint job.

Jim Messick in Stockton has a '64 Spyder convertible for sale. May need engine parts, has a ding near left tail light, and upholstery needs replacement. Asking $1500. Contact Jim at 209-969-2069.

For Sale: Rampside, Greenbrier, corvair engines, transaxles, parts etc. Contact Larry Forman at (916) 216-9801

For Sale:1964 Corvair Convertible located in Elk Grove. Contact. James Koch: edselhusband@aol.com

If you would like to submit a Corvair or Corvair's including related items to the classified section of the newsletter. Please send me electronic pictures of the item, pictures of the Corvair(s), including engine, interior, description, such as the year, mileage, manual or automatic transmission, if possible, asking price and contact information. If you are placing a classified regarding "In Search Of" related to Corvairs, please email the information to me. Please provide these items prior to the next months publication. Which is about the first week of the month. If the car or item has sold, please let me know. My email: Johnh1@thegrid.net. Thank you.

December 1968 Road and Track Article
"The Great Electric Car Race"
By Ron Wakefield & Karl Ludvigsen
Drawings by: Jon Dahlstrom

ONE OF THE most interesting speed contests of the year was the Great Electric Car Race between Caltech and MIT. As in the classic Peking-to-Paris race in 1907, the purpose of the contest was to demonstrate the feasibility of a particular type of vehicle as practical transportation. And while the contestants in the 1968 event may not have had the glamor of Prince Borghese, who won the Peking-to-Paris in a 2-ton, 7½-liter Itala, they were indisputably pioneers in their own day.

The idea originated with 23-year-old Wally Rippel, a California Institute of Technology graduate in physics who tossed down the gauntlet last spring. The students at Massachusetts Institute of Technology accepted the challenge, *Machine Design* magazine offered to do the judging and timing, the *Pasadena Independent-Star News* offered financial help to the Caltech entry and the crews got down to work.

The rules were few and simple. The contestants had to start with a production-bodied vehicle that would be converted to electricity and the entrants were given the option of either taking along a portable recharging device or being towed if they ran out of power between scheduled recharging stops. Another rule, that the drivers must do all their sleeping in the cars, was discarded as the race progressed, as both teams agreed that it was putting more emphasis on the endurance of the personnel than of the vehicle.

At the same hour, and after numerous delays, the Caltech car left its Pasadena, Calif., campus bound for MIT and the MIT car left its Cambridge, Mass., campus bound for Caltech. The Great (whirr, zap) Electric Car race was on.

The Caltech Entry

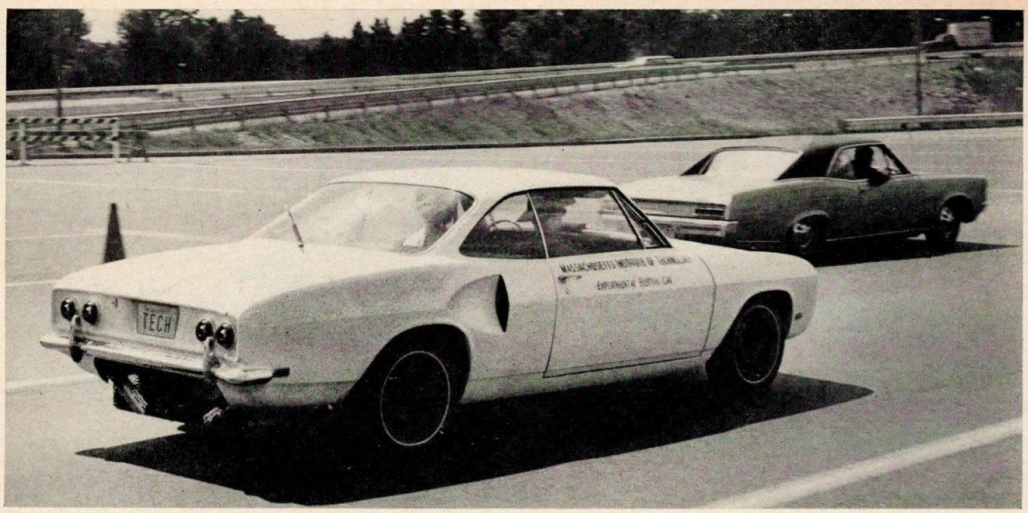
THE CALTECH TEAM—which consisted of Wally Rippel, undergrad engineering student Ron Gremban and University of Washington graduate George Schwartz—worked an incredible number of hours to get their entry ready for the race. The vehicle was Wally's own 1958 VW bus. Wally had first converted it to electricity in 1967 using two surplus aircraft service motors driving the rear wheels through chain drives but soon reverted to the use of the original transaxle and installed a Baker Electric series-wound DC traction motor. This motor, rated at 20 hp at 120 volts, is the same as used in the Mars II electric car (see July 1967 R&T) built by Robert Aronson's Electric Fuel Propulsion, Inc., in Ferndale, Mich.

The lead-cobalt batteries, which were made by Aronson's company, were closely related to the batteries used in conventional automobiles. Twenty-one batteries were required—20 at 6 volts each for the motor plus one to run the accessories, lights, etc.—and cost $600. The Caltech students were aware that their batteries would take longer to recharge than the more exotic and expensive ($18,500) Gulton batteries used by MIT but put their faith in proven performance and hoped for better reliability.

Although Wally had a sophisticated solid-state control system under development he chose to use a proven system of five contacters (rated at 400 amp, 30V) and one diode per contacter for connecting the original throttle pedal with the electric motor. Each contacter-diode set brought in a bank of four batteries so as the pedal was depressed the power increased in mild jerks. A solid-state system would have discharged the batteries evenly whereas the system used discharged them quite unevenly as some batteries were in use more often than others.

The motor, though rated nominally at 120V, can run for brief periods at higher voltage and thus develop more than its rated 20 hp. Because of the starting torque of the motor, which would draw 350 amp briefly, it was decided to retain the VW's clutch in the drive train as a safety valve to prevent damage to the gearbox or final drive gears. For recharging, they designed an inductor assembly to convert the 220V-3 phase power supply (which was what they would get at the charging stations) to DC for their batteries.

On the instrument panel there were charge and discharge ammeters, motor and batteries DC voltmeters, speedometer, ➳



MIT entry at speed. Cutout behind door was to extract air passing over batteries in luggage compartment and back seat.

ELECTRIC CAR RACE

clock and a great many switches. Most of them worked.

Though the electric motor weighed less than the original VW engine, the batteries came to 1900 lb; so the total curb weight was 4200 lb. Tires were 205-15 radials on the rear and 165-15 radials on the front, and as the bus had adjustable torsion bars it was not necessary to have new springs made up.

MIT's Electric Corvair

CALTECH'S CHALLENGE was taken up by a 9-man group of mechanical and electrical engineering students plus a business management major who said he was "just helping." Project head Leon Loeb and company decided on a Corvair because it was light, aerodynamically clean and nicely laid out for electric power. General Motors furnished one for their use.

One of their first actions after receiving the Corvair was to exchange the engine and Powerglide transmission for a 4-speed manual gearbox and sundry other parts at a local junk yard. Body modifications consisted of trimming off the rain gutters, making an ultra-smooth front end to reduce drag and cutting a concave air outlet in the right rear flank.

They counted heavily on the 75-amp-hr capacity and 15-minute recharge time of the nickel-cadmium batteries loaned by Gulton Industries. The 1.2-volt cells were designed with emphasis on fast discharge (for starting aircraft engines), which was not a requirement in the MIT car's use. A total of 320 of these cells (weighing 1800 lb) were packed into the rear of the interior and into the front trunk of the Corvair. As these cells have a short-circuit current of 7500 amp each, special nylon tools were essential to safety.

Working from General Electric data, Bill Carson designed the special charging equipment. This adjustable, 3-phase controller, which was stowed on the right side of the rear compartment, would allow them to handle an input of up to a half million watts from a 440V, 400-amp current source.

Original plans called for the use of an exotic experimental electric motor which had been developed by MIT under Department of Transportation sponsorship but, said one member of the team, "It never ran right at all." Thus they turned

MIT chiefs. From left: Jim Martin, Leon Loeb, Chuck Kaminski.

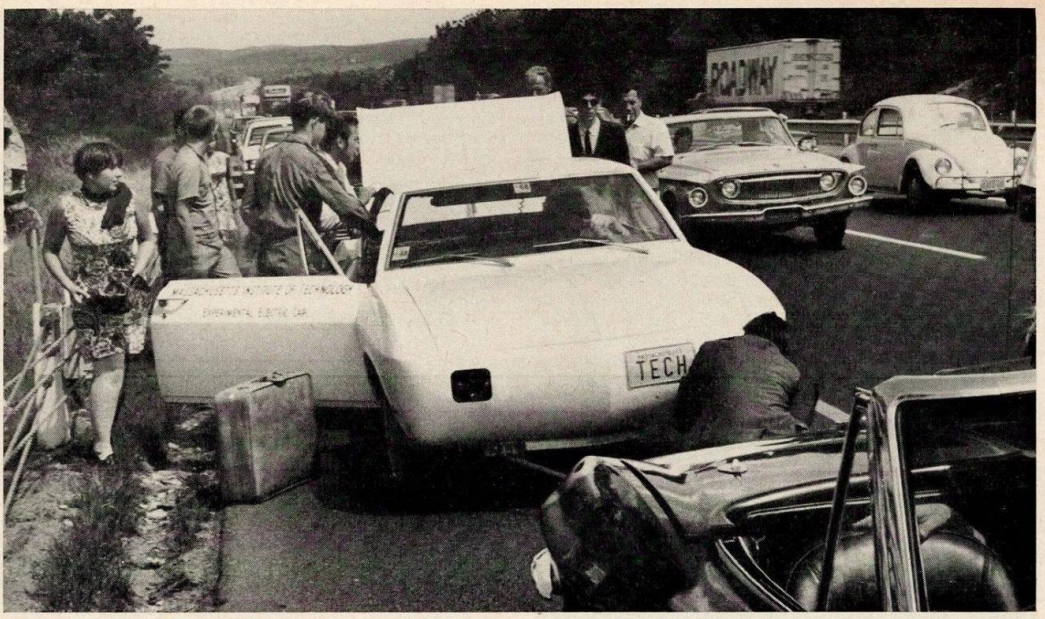
to the same simple DC series-wound Baker Electric motor used in Robert Aronson's Mars II and in the Caltech Electrowagen. This motor normally runs to 4500 rpm and has a peak torque of 100-lb-ft at stall on normal 120V power supply. It's much more on 220, as the students found out when they accidentally applied this and ruined first gear.

To get acceptable road performance, they decided to use all four speeds without a clutch, which would require some fancy "box work." The throttle pedal was linked to a floor-mounted controller which in turn activated two massive relays in the rear compartment.

Cooling was important, as both motor and batteries were heat-sensitive, so an evaporative cooling system consisting of coiled wire seat cushions, a water bath in the trunk and a supplemental electric fan was devised.

Instrumentation in the MIT Corvair consisted of a speedometer, ammeter, voltmeter, wattmeter and amp-hour meter, plus an array of warning lights that would signal trouble with fans, temperatures and electronics. For the navigator/engineer there was a digital-readout multimeter with some 50 input points selected by switch combinations.

The car wasn't weighed before the race but crew members estimated the weight at 5200 lb. Special coil springs were made up to support this weight, the tires were Firestone F100 185R-14 radials and the brakes were left stock.



Often-repeated scene as the MIT entry is hitched on behind 427 Corvette to be towed to next regular charging station.

The Caltech Journey

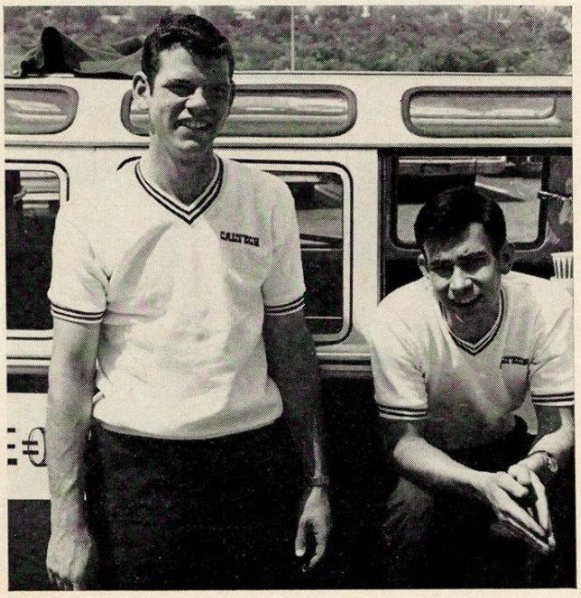
THE FIRST setback for the Caltech entry was personal, not mechanical, as undergraduate Pat Silverthorn, who had gone along as relief driver for judge Sam Barnes of *Machine Design*, came down with the mumps less than 24 hours after the start. He was left in a hospital in Flagstaff, Ariz., but was able to fly to Cleveland and rejoin the team six days later.

The first mechanical trouble happened near Seligman, Ariz. With the battery charge plummeting in hilly country, Wally Rippel, who was driving, flicked the switches that would convert the motor into a generator to recharge the batteries on the downgrade just ahead. The coasting speed in third gear wasn't turning the electric motor fast enough to create a worthwhile charge, so Wally downshifted to second—which was too much. The motor was overrevved, which expanded the wiring on the armature, and the motor locked up solid. This resulted in a delay of 23 hours while a new Mars II motor was flown from Michigan and it was late the third day before they were on their way again.

Very early in the race, Caltech found that its battery pack was heating up during charging. By the third day they were putting crushed ice on top of the batteries to keep them cool. The water from the ice collected in the bottom of the battery container and had to be removed by siphon.

Caltech bus used oversize tires, sat well down on suspension.

Caltech chief Wally Rippel (right) and Pat Silverthorn.



In the west, mainly in the mountains, they had to resort four times to the 70-amp charge from the Hertz diesel generator towed behind a chase car. For each such charge a 30-min penalty was assessed, as called for by the rules.

On through the fourth day, the bus rolled smoothly across Texas, no serious trouble except at Amarillo where mismatching of current phases blew the clips into the air, ruining the diodes. Three hours were lost in obtaining spares and refitting them.

At Weatherford, Okla., there was the historic confrontation between the teams. This was on the fifth day, the date both had set as their original goal for reaching the opposite coast. The undermanned Caltech crew proposed a 12-hr truce for rest but MIT rejected the appeal and the race continued.

From here eastward, the last 1200 miles, the trip was "run, charge and bite nails." The bus rolled on and by the seventh day, a week after the start, the Caltech entry was passing through Cleveland. There were two more delays yet to come. At Erie, Pa., the crew found a first aid room with cots set up and could not resist sleeping for an hour and a half. Then at the very last charging stop, Worcester, Mass., the New England Electric Co. failed to come up with any suitable current, so they took one last half-hour penalty and used the portable generator for the final charge.

A Caltech alumnus met them at Worcester, led them into Boston and over the quickest route to Cambridge. At the finish was MIT president Howard Johnson, an assortment of students and a few newsmen. The official finish for the Caltech entry was at 7:46 a.m. on the ninth day. At this time the judges had not yet computed all the penalties assessed against both teams—though it was of course known that the MIT entry had already arrived in Pasadena—but in any case Wally Rippel and his crew had scored an historic first, the first coast-to-coast trip made entirely under electric power.

The MIT Journey

THE FIRST surprise for the MIT Corvair came soon after the start. Expecting a dependable range of 100 miles between recharges, they had gone only 25 miles from Cambridge before the power dropped to such a low level that it was necessary to pull over and stop. Under the rule permitting towing, they hitched the Corvair to Fred Kern's 427 Corvette and were hauled to the first charging station at Worcester, Mass. By the time they reached Buffalo, the sixth charging stop, they realized the charging routine had to be improved. So they decided to overcharge the batteries drastically—double, in fact—and to pack ice around the batteries while charging. It worked and driver Jim Martin later managed to cover 85 miles on one charge, the distance record for the trip. With the new process, they could get a full double-charge in 25 min—or 45 min including hookup and unhooking.

Their troubles were not over, however. To cool the motor, an electric bilge pump was used to draw water from the front trunk back to the motor, where copper tubing was wrapped around the motor and arranged to drip water onto towels wrapped around it. This kept the motor cool but KOH (potassium hydroxide) from the batteries got into the water, which resulted in a motor casing bolt disappearing through electrolysis and the motor shorting out. At South Bend, Ind., the spare motor was installed—this time with watertight tape around the cooling coils so the KOH couldn't get in to set up the electrolytic action between the copper tubing and the motor.

The batteries also ran hot when in a low state of charge, which required more supplemental cooling. So crushed ice in plastic bags was carried up front and, as the firewall had been opened up for airflow in the first place, the cool air passing through the ventilator seat cushions would pass over the batteries in the rear of the car as well as those in the

Stay Tune for Part II