

# CORVETTE

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# NEWS

FOR CORVETTE ENTHUSIASTS



# CORVETTE NEWS



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**COVER—**'65 Corvette cruising down Colorado highway enroute to Glenwood Springs during 250-mile rally. Color photo by Don Sudnik.



# The town that belongs to a rally— GLENWOOD SPRINGS, COLORADO

*Editors' Note: Much of the Glenwood Springs Rally was filmed for a motion picture on automobile rallying, as discussed in Corvette News, Vol. 8, No. 4. This filming was in addition to the Great Canyon Rally and Virginia Reel Rally previously scheduled.*

Glenwood Springs, Colorado, is a town with a count of inhabitants something less than 4,000. Situated in Colorado's picturesque Rocky Mountain country, it's typically quiet, lacking the hustle of larger cities . . . most of the time. But, once every year the balloon goes up and the entire town does an about face. It clamors, yells, and boasts of one thing—the Rallye Glenwood Springs.

Few other events in the amateur sports car world are as high in enthusiasm as the Rallye Glenwood Springs weekend. Not only the contestants competing in the various events, but the townspeople themselves become part of a weekend full of sports car competition and festivities which make up this annual affair. May 22 and 23 was the big weekend this year, and the Rallye Glenwood Springs was a complete success for the dozzenth time.

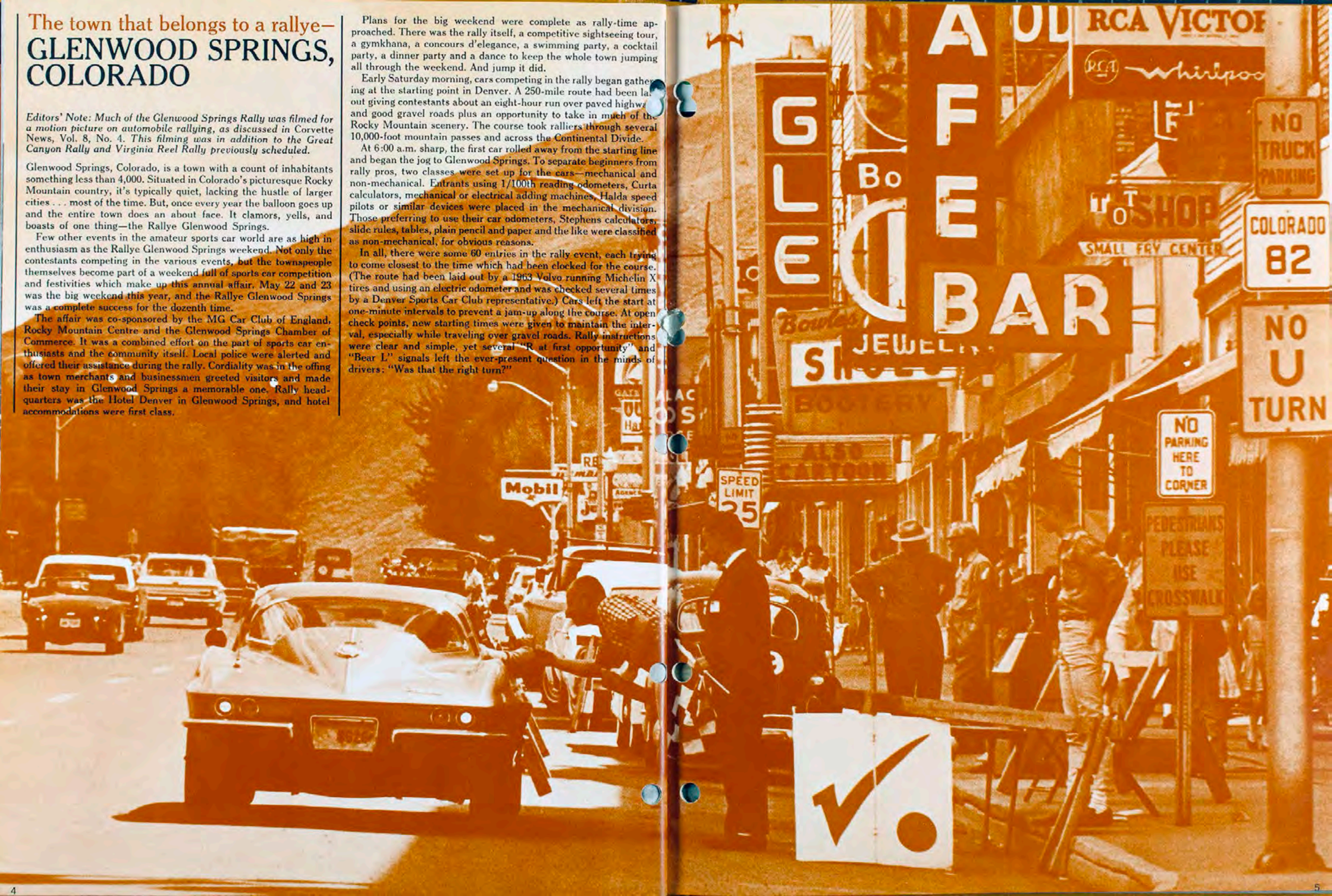
The affair was co-sponsored by the MG Car Club of England, Rocky Mountain Centre and the Glenwood Springs Chamber of Commerce. It was a combined effort on the part of sports car enthusiasts and the community itself. Local police were alerted and offered their assistance during the rally. Cordiality was in the offing as town merchants and businessmen greeted visitors and made their stay in Glenwood Springs a memorable one. Rally headquarters was the Hotel Denver in Glenwood Springs, and hotel accommodations were first class.

Plans for the big weekend were complete as rally-time approached. There was the rally itself, a competitive sightseeing tour, a gymkhana, a concours d'elegance, a swimming party, a cocktail party, a dinner party and a dance to keep the whole town jumping all through the weekend. And jump it did.

Early Saturday morning, cars competing in the rally began gathering at the starting point in Denver. A 250-mile route had been laid out giving contestants about an eight-hour run over paved highways and good gravel roads plus an opportunity to take in much of the Rocky Mountain scenery. The course took ralliers through several 10,000-foot mountain passes and across the Continental Divide.

At 6:00 a.m. sharp, the first car rolled away from the starting line and began the jog to Glenwood Springs. To separate beginners from rally pros, two classes were set up for the cars—mechanical and non-mechanical. Entrants using 1/100th reading odometers, Curta calculators, mechanical or electrical adding machines, Halda speed pilots or similar devices were placed in the mechanical division. Those preferring to use their car odometers, Stephens calculators, slide rules, tables, plain pencil and paper and the like were classified as non-mechanical, for obvious reasons.

In all, there were some 60 entries in the rally event, each trying to come closest to the time which had been clocked for the course. (The route had been laid out by a 1963 Volvo running Michelin X tires and using an electric odometer and was checked several times by a Denver Sports Car Club representative.) Cars left the start at one-minute intervals to prevent a jam-up along the course. At open check points, new starting times were given to maintain the interval, especially while traveling over gravel roads. Rally instructions were clear and simple, yet several "R at first opportunity" and "Bear L" signals left the ever-present question in the minds of drivers: "Was that the right turn?"



Over the 250 miles, there were the usual frustrating mistakes and miscalculations, but the cars all made it to the finish line just outside Glenwood Springs. The finish was a passage-type check point on the outskirts of town, but in order to be scored the cars had to continue into the city where the official finish line was located.

The car to tour the course with the fewest miscues was a Mercedes, piloted and navigated by Don and Judy Hall. They accumulated a mere 51 points on their way to victory. Coming in second was Chet and Florence Schneider's Porsche, totaling 71. Tops in the non-mechanical bracket were Al and Nel Samson in their Alpine, running up only 163 points and a sixth place overall finish.

Leaving directly behind the rally cars from Denver were the tour contestants. Following a different and shorter route of 160 miles, the tour provided a scenic yet less nerve-racking jaunt to Glenwood Springs. Each team was given a questionnaire to fill out as the tour progressed. If they were observant, tour goers learned in what year Estelle Philleo was born (1881), who founded the kingdom of Gilpin County (of course it was John H. Gregory), and what trade name is advertised on the thermometer on the front of the post office in Wolcott, Colorado (who else but the Dr. Pepper Bottling Company). If their eyes were wandering slightly at the scenic beauty along the tour route, many a question was to go unanswered.

Twenty-one cars took part in the sightseeing tour. Keen eyes were the order of the day in this event and Charles and Katherine Johnson's proved keenest, missing only 3 of the 30 tour questions.

While the cars in the rally and tour were en route, preparations were underway to give them a warm reception as they arrived in Glenwood Springs. The inflow started about 2:00 p.m. Each car entered was entitled to tickets to a swimming party at the Hot Springs Pool . . . the largest pool in Colorado and the largest mineral water pool in the world. Later in the afternoon, a no-host cocktail party took place at the Hotel Denver.

Crowded and noisy, the rally headquarters was full of stories about the day's events and how many-a-driver could have come much closer if only he had done this or that. Following the cocktail party, there was dinner at the hotel. Dancing was on the agenda after dinner with music for everyone from the "Glenn Miller" types to the wild "Watusiers." About midnight, everyone retired after a day of fun and excitement. But the Glenwood Springs weekend was only half over.

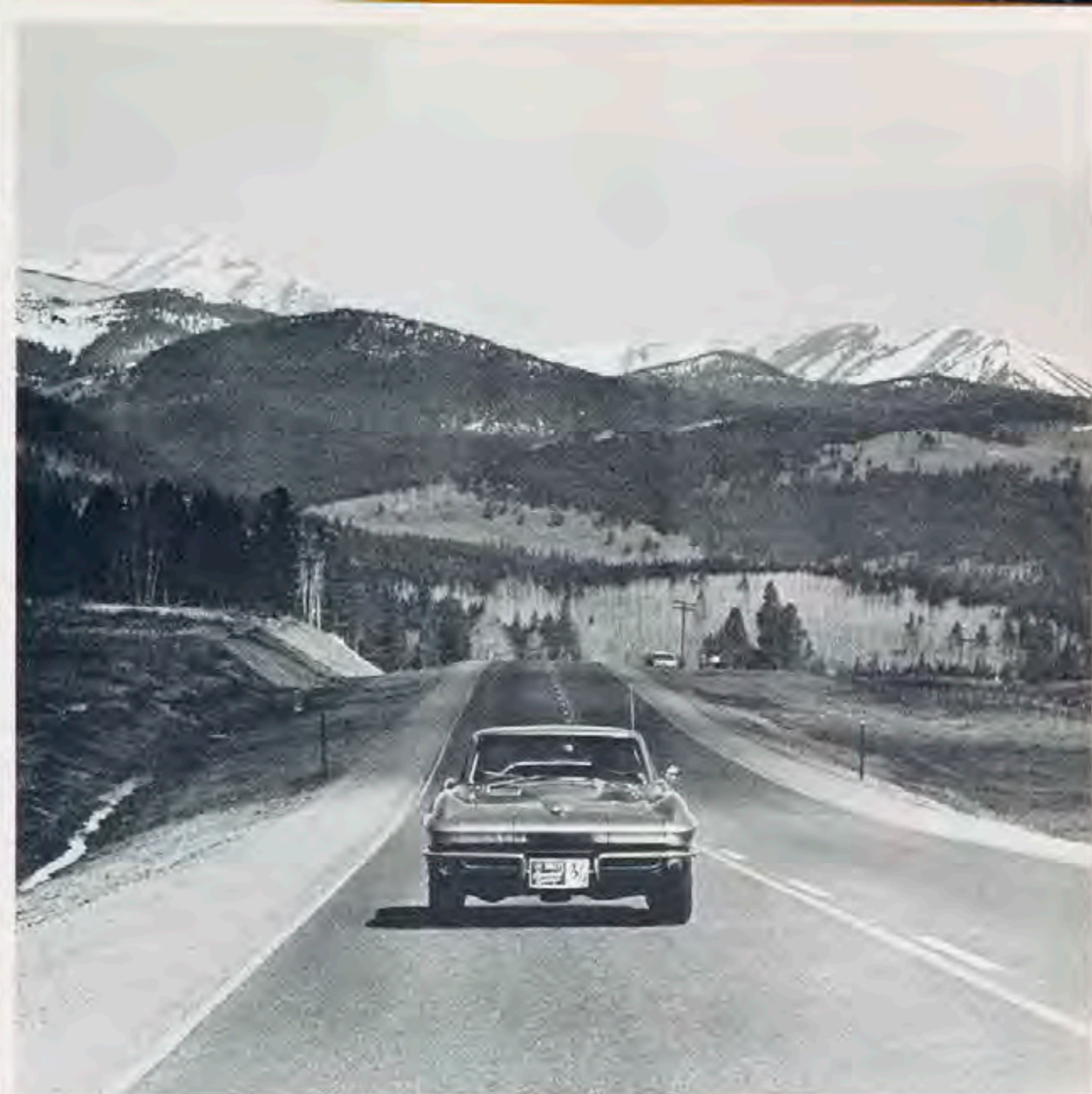
The town was awake early on Sunday, as contestants participating in the concours d'elegance were busy putting the finishing touches on their entries in the weekend's "fashion show." A section of the main street in the city had been blocked off for the competition. Concours contestants had their cars looking immaculate which made for some sticky judging. In the rally class (naturally, these were cars which had participated in the rally event), Dub Smith's MG-TD took top honors. His car was also awarded the Fred Hurst Memorial Trophy as "Best in Show." Robert McDonald had his 1940 Mercury spruced up enough to win in the show car competition. Awarded top prize in the street sport car class was Natalie Toll's Corvette Sting Ray. A seldom-seen 1931 Alfa Romeo owned by Onno VanVeen took high rung in the classic car class while Chad Hunt's Model A Ford was victor in the antiques.

In the gymkhana event, some tricky corners, a long straight and a few slick maneuvering tests challenged the ability of competitors. Vernon Clark lead-footed his Porsche to the fastest time of the day and a win in the under 2 liter class. Bill McDonough piloted his Cobra to victory in the over 2 liters while the gals were gaining recognition in the sedan class as Helga McMahan toured the pylons and parking spots with the quickest time.

Sunday afternoon the big weekend was over. Each event and activity had come off with the precision of clockwork. Much of the credit for the success must go to the cooperation among the sponsors, the City of Glenwood Springs and the local officials.

Sunday night, the town that belongs to a rallye was asleep again . . . with an eye cast toward next year's Rallye Glenwood Springs.

TOP: Contestant and numerous assistants busily apply the finishing touches to their concours d'elegance entry. Center: A Corvette rallyist awaits new starting time at check point. Center left: Master of Ceremonies, Bill Barker, presents trophies to winners in various events. Center right: Rally Corvair off to next check point, wherever it may be. Bottom: Navigator hopefully directs blindfolded driver to next obstacle during gymkhana.



Left, top and bottom: Corvettes pass through some of the scenery along the Glenwood Springs rally route. Mountain passes, snow capped peaks and some of the area's old mining towns made it a bit difficult for ralliers to keep their eyes on the instructions.



**Pssstttt... Spray your way to peak appearance**



Is your Corvette looking a little splotchy? Scratches and scrapes marring its sheen? Wondering what to do about it? Wishing you could touch up the paint yourself and get a good-looking job? Then read on. Here's some information to help guide you to a top-appearing Corvette without trying to make a professional painter out of you. It's possible with aerosol spray paint in cans available from your Chevrolet dealer or a local auto parts supplier.

Good appearance, besides satisfying your pride of ownership, translates itself into these two major benefits: first, periodic touch-up can save costly major repaint jobs later on; second, good appearance always is a boon to resale value. The better looking a car's finish, the more desirable it is at trade-in time. Experts know this; most amateurs who sell their cars privately do too.

The procedures outlined on these pages aren't intended to make you into a professional painter. Nor can you do the kind of a job on your entire car that an expert can. But you can, with care, touch up those minor scrapes, scratches and stone nicks to a degree that will pass most critical judgments. We know; we did it ourselves at a photographic studio. The pictures on the next page show our step-by-step results. Before starting, however, we consulted two Chevrolet dealers, an independent Corvette body shop and two of Chevrolet's major original paint suppliers—for advice and instructions. For the most part, they said to be very, very careful when attempting to paint with an aerosol can. All sources advised emphatically, "Don't do it at all except under ideal conditions—inside an enclosed area, with proper temperature and adequate preparation." Otherwise, as Bob Clements at the Ditzler Paint Company said, "Your owners will be running around with cars looking like so many leopards."

To keep your car from taking on an unwanted spotted look, you need the proper tools. You also need an enclosed windfree area such as a garage, and the correct paint (compatible with acrylic lacquer). You will, of course, have predetermined just how much painting you'll be doing.

**Proper tools.** These include sandpaper, a sanding block, a small bottle of inexpensive alcohol or naphtha, masking tape, newspaper, a piece of thin cotton cloth, a tack rag, a heat lamp (or a 150-watt light bulb with a reflector), rubbing compound and paste or liquid wax. In addition, you'll want to first wash the area to remove all normal dirt and use a good tar remover to take off any specks of road tar

that might be on the paint. A tack rag may be purchased at any automotive paint store and usually costs between 39¢ and 89¢. Purchase #100 sandpaper for rough sanding and either #400 or #600 paper for finish sanding. The latter can be used either wet or dry, depending on the individual's preference.

**Windfree area.** Inside a well ventilated garage is preferred. For this article, we took a 1957 Corvette (repainted with acrylic lacquer) inside a roomy photographic studio. In general, any place that has adequate ventilation, good lighting and is free from strong drafts and dust is acceptable.

**Correct paint.** All Corvettes since 1958 have been factory-painted with acrylic lacquer (trade name: "Magic-Mirror"). Use paint from the aerosol cans that specifically state, "For use with acrylic lacquer," or similar language. Most Chevrolet dealers have paints in spray cans that are exact matches for all Corvette finishes. If not in stock, your dealer can order the paint for you. Some independent paint jobbers are now stocking aerosol cans with propellant in them but no paint. This enables Corvette owners to purchase paint the same color as their car when special paint mixes other than stock colors have been applied to the car. The jobber then fills the aerosol can with the correct paint for the job. But the important point to remember is to get the correct type of paint. Use acrylic lacquer or conventional lacquer over factory acrylic lacquer. Do NOT use enamel or the new acrylic enamel over ANY lacquer. If you do, you can be sure the paint will lift and bubble probably within 24 hours. Test your paint (if you bought a used Corvette and are uncertain of the paint type) by spraying a very small section on the underside of either door with acrylic lacquer. If the paint doesn't lift within 24 to 36 hours, your car has acrylic lacquer finish. If it lifts, you'll have to use enamel spray.

**Proper technique.** On door edges, use a camel hair brush and paint from a small can or bottle. Touch up very carefully so as not to lap the new paint over previously painted surfaces. On badly chipped spots, gently sanding to smooth the chipped edge into the good paint (called "feathering") aids in appearance. After the paint has dried, buff with rubbing compound and polish with a good wax.

On panels that require spraying, sand carefully with #100 and #600 paper to feather old paint into work area. If the body requires patching, use any good body putty OVER BLACK OR GRAY PRIMER PAINT. If no patching is required, finish sand. Use



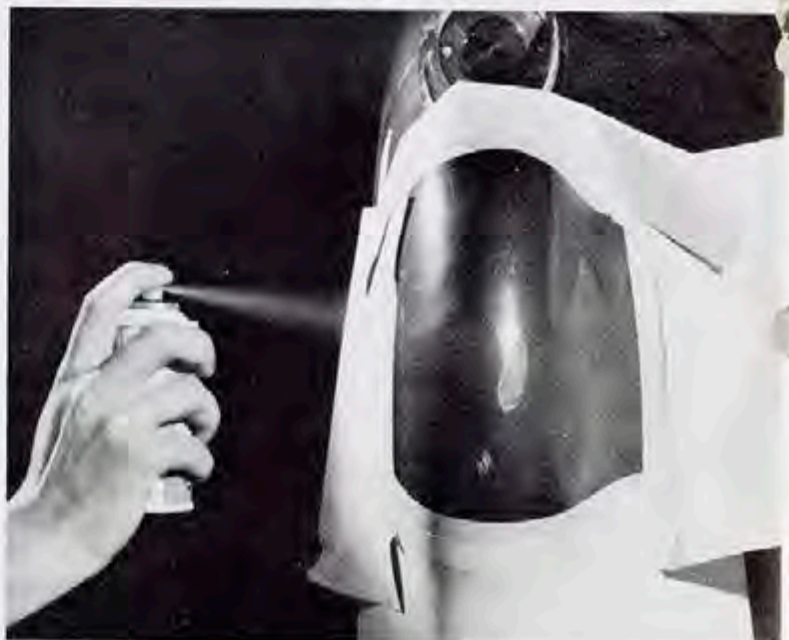
Above left: Take care of door-edge nicks with a fine camel hair brush as shown. Sand the chipped edges lightly with #400 sandpaper and brush paint on lightly.

Above right: On large scraped areas, sand panel surface with #100 paper and feather into existing paint. Then finish sanding with #400 or #600 paper, wet or dry. Spray primer coat first.

At right: Hold can of finish paint 8 to 12 inches from your work and spray with even pressure on the button.

Below right: After paint has dried (per instructions on paint can) rub the painted area with rubbing compound to match surrounding surfaces.

Below left: Minor scratches and surface scrapes can be buffed with rubbing compound if blemish isn't all the way through to body. Rub carefully and just enough to remove scratch.



the thin cotton cloth and wipe the work areas carefully. If the work is ready for priming and finish painting, the surface will feel absolutely smooth through the cloth. Any roughness felt through the cloth should be resanded. Remember: paint will only accentuate improperly sanded areas, not hide them. For body patching, spray with black or gray primer paint (compatible with acrylic lacquer) and then smooth on body putty with your fingers. Resand and wipe with the cloth. Then use a tack rag and a cloth soaked in alcohol or naphtha to clean the work. Mask off surrounding areas with newspaper and masking tape.

**Spraying.** Vigorously shake the can again, again and again. Then before you spray, shake the can some more. This is one of the key points, say experienced paint men. Correct temperature range is equally important. The paint is manufactured between 75 and 82 degrees F. Painting in this same general — or warmer — temperature range assures you of best results. On cold days, a light on a drop cord can be used to warm the surface to the ideal temperature. Setting the paint can in a pan of warm water will bring the paint up to temperature. However, be sure both paint and the surface are as close to the same temperature as possible before painting.

Before spraying the car, shake the can and test spray on a piece of cardboard to check the consistency of the paint. If the paint comes out with small lumps, reshake. Check for correct paint temperature and test again. If the can won't spray evenly, get another can.

Spray the primer first, and after the primer coat dries, apply several light coats of finish paint rather than one heavy one. Too much paint will run or "sag." Then work carefully and lay up successive layers until the surrounding paint and new paint match perfectly. Allow to dry (usually an hour is sufficient) and buff with rubbing compound and wax after about a week to blend in with original paint. If you notice edges from improper sanding, resand with #400 or #600 paper and respray. If you accidentally spray too heavily and the paint does sag, wipe it off immediately with an alcohol- or naphtha-soaked rag. Wait for the surface to dry, resand lightly with #600 and respray.

Rub the area with compound to match old and new surfaces. Too much rubbing with compound should be avoided. The new paint will come off quickly and too much or too vigorous rubbing will take you right back to bare fiber glass. Finish the job by waxing the surface.

Besides painting, there's lots to be done elsewhere for good appearance.

Now that you've completed your painting, you'll most likely want to pay some particular attention to other areas—chrome, convertible top, windows and general interior items. For exterior and interior chrome and bright metal trim, use GM Chrome Cleaner, Part #105173. To clear scratched convertible top rear windows, use Convertible Window Cleaner, Part #105171. (For windshields scratched by worn wiper blades, use a good jeweler's rouge. Be sure to replace the worn blades.)

Buy a good weatherstrip cement and glue up any loose rubber weatherstripping. Also, there are several good products that clean and restore original brilliance to the convertible top available either at a Chevrolet dealer's or many auto supply stores.

Door, hood, trunk (on earlier Corvettes) and folding top hinges deserve lubrication from time to time. Use any good stick lubricant about twice a year in these areas.

Sometimes the window regulators run dry and bind from lack of lubrication. Remove door trim panel. You probably should use a special tool to remove the snap clips holding door hardware in place. Coat the sector gear inside the door (reached by removing an access plate on the door's inside) with a molybdenum-impregnated grease for long life. While you're at it, smear some grease on the door locking linkages.

Carpets and seats come back alive with applications of G.M. Upholstery Cleaner, Part #105401, or Kar Kleen, Part #105176. On genuine leather seats, be sure to saddle-soap them well to restore natural oils for softness and long life.

Then, take a final look-see at the inside and outside of your Corvette. All of the lights working? If any are out, jot down the proper bulb numbers (found in the *Owners Guide*) and replace them forthwith. If your carpet is ragged, a new one works wonders for a vastly improved appearance. Clear vinyl floor mats allow the natural beauty of your original carpet to show while protecting it.

With mar-free paint, free-working hinges and latches, cleaned carpet and upholstery, you'll think you're right back into a new Corvette—and what's more important, your car will probably last longer.

Our special thanks for information in this article go to Jerry McCarthy Chevrolet and Dawson-Taylor Chevrolet in Detroit . . . to Don Bailey of the Vette Shop, also in Detroit . . . and to Bob Clements of the Ditzler Paint Company.

# DAVID E. DAVIS, JR.

GAZETTEER WITH A PEN THAT SWINGS—SOMETIMES STINGS

Meet David E. Davis, Jr., ebullient editor of CAR and DRIVER, ex-auto maker, ex-race driver, ex-ad man and excellent writer on the automotive scene. He is a big man (6' 2", 210) with a neatly turned mustache and a general bearing that makes you wonder fleetingly if he hasn't stepped out of the last century.

About his enthusiasm for cars he says, "I started noticing them as soon as I started to talk." And the fascination persisted . . . "This initial exposure led me to a kind of intellectual involvement with them as an adolescent. When I say intellectual, I don't mean that I was some kind of an egg-head kid sitting around worrying about what it all meant and why they were put here. I went to midjet races. I dreamed of running in one some day and I attached all kinds of 'superman' fantasies to that great day in the future when I could drive whenever and whatever I wanted."

As with all purposeful men, Dave's fantasies hardened into fact. His dream of racing did come true but unfortunately skidded off into a nightmare. "I started racing—in MGs—in 1953. I was pretty active in amateur production-car competition until I went on my head and destroyed my then-boyish beauty in October, 1955, at an SCCA National in Sacramento." He still carries his *die narbe der ehre* as do so many of the speed fraternity. But racing's loss has been the readers' gain, because by this time Dave was running a pretty fast circuit with his typewriter, and thinking less and less of his prowess on the track.

"After my accident, I mooned around and dreamed about getting back into racing. But—at my very best—I was no better than a competent amateur and the accident had scared me a bit anyway. I finally realized that I could write better than I could ever hope to drive." Note that Dave turns his editorial frankness on himself as well as others, a refreshing quality in the journalistic world, one that

doesn't always bring roses, F.T.D., but keeps a lot of motordom's sacred cows out of the corn. But let Dave tell it:

"So I started trying to do some freelance writing. At the time, I was an officer in the Los Angeles Region SCCA and I came to know John Bond, publisher of ROAD & TRACK. John and his wife, Elaine, took me off the streets and made me their advertising manager. This was in April of 1957. In October of '58 they put me in charge of their New York office and shipped me and mine eastward from California. In October of 1959 they transferred me back to sunny Southern California and made me director of advertising and sales promotion. In April of 1960 they fired me for disloyalty and incompetence." (Oh, that fearless frankness.)

"During this three-year period, I began to develop some notions about the automotive publishing business. I was never able to understand why the car magazines came off second-best when the class magazines, or the literary magazines, or the news magazines, or the men's magazines decided to get serious about cars or car racing with a feature article. I remained sceptical about enthusiast dogma like 'all little cars are better than any big cars', or 'foreign cars are designed by geniuses, built by selfless, old-world craftsmen, and represent the epitome of the automotive arts, while American cars are conceived by Karl Marx-type fat capitalists with dollar signs on their vests and larceny in their souls, and built by thieves and rascals.'

"Although the Europeans definitely build a wider range of car-personalities and types, they have no corner on quality—they build just as many lousy cars as do their American counterparts. Similarly, the Americans with the figurative dollar-signs on their vests are philanthropic visionaries compared to some of the crooked-but-oh-so-charming Continentals who make their bread in the car-building business.



"Talk about one world! This is it, man. We have American charlatans who can't be told from the overseas variety—except for the cut of their suits, and their accents. We have real honest-to-God geniuses, dedicated to better automobiles, on both sides of the pond. And we have little men—tasteless and eternally reluctant to rock the boat—everywhere. It's the same in the stove business, the napkin business, the religion business, or any other business. Our advantage is that cars—our business—are good for the private citizen, good for the economy, good for state and federal tax revenues, good for status, good for masculinity-advertisement, and great to drive, play around with, lie about, look at, buy, sell, and race. Try that with a stove.

"With all these far-reaching automotive implications kicking around, I knew I had to do something about it. I had to try to involve myself in that scene. I had to try to have some effect on all that, using my enthusiasm and sense of humor and experience as tools. That's why I write about cars.

"What's more, I love the act of writing. I hope that the 300,000 readers of CAR and DRIVER will read all my stuff and enjoy it, but the truth is that my greatest pleasure and greatest thrill come when I sit down at one of my four typewriters—scattered more or less indiscriminately around my life—and start cranking out the words. MY words, sweetheart, mine and nobody else's. That's ME I'm getting down on paper at that moment, and that may be the only time I ever get a good look at who I am."

Even Dave's closest friends say that if you want to know what he really thinks about an automotive subject, read what he writes. He keeps his editorship out of his conversations. No matter, he never runs out of stories, delightful bits and pieces picked up through his many travels, around the pits and paddocks, and through his constant exposure to the world of wheels. Dave's love of writing, his automotive opinion and his desire to uncork these opinions took one more detour, one that proved highly beneficial.

"In the panic that followed my discharge from ROAD & TRACK, I couldn't get another job in Southern California, and I couldn't seem to make a connection in the automotive publishing business, so I took advantage of generous friends at an advertising agency and spent the next almost-three years in that business, writing performance-type ads mainly, but also functioning without portfolio as a kind of enthusiast-in-residence. It was my good fortune to do a

little professional-level rallying in Canada as part of my agency work, and I learned a lot about the logistics of racing, rallying, and general performance activity at the high corporate level. I guess also I learned a bit about politics.

"Interestingly enough, my advertising experience has proved to be my most valuable training as a writer and editor. It taught me to try to write fast-moving, punchy stuff, and it taught me to start fast and close hard. It provided me with the foundation for a style that has continued to work for me and for my magazine. I think advertising and poetry are very similar writing problems. Both have to say a lot with very few words, and both have to choose and use words, not just for their dictionary meanings, but for the emotions they evoke and the visual impressions they create in the reader's mind. I'd recommend a stint as an advertising copy writer to any young person who plans to try serious writing or journalism as a career. It breeds something I like to call 'terse eloquence.'

"Meanwhile, I managed to maintain my contacts with the people in the automotive magazines as a dispenser of free advice, a critic-at-large, and as an occasional free-lancer.

"This led to the Ziff-Davis people offering me the editorship of CAR and DRIVER. It was hard to leave the agency business, because it was fun, and a good life, but I was still frustrated and full of ideas about car magazines."

So Dave went to CAR and DRIVER in December, 1962—apprehensively. Not for himself. "I really didn't think that the Ziff-Davis publishing company would be able to stomach the upheaval I intended to cause in CAR and DRIVER and—hopefully—in the entire magazine field." So apprehensive was he that he deliberately kept his house in Detroit and left his wife and children therein for five months. However: "As it turned out, I was wrong about my bosses; they liked the upheaval just fine and they even made me publisher—an act of unbelievable corporate courage—after my sixth month."

Dave sums up his job this way: "As editor and publisher of CAR and DRIVER, I'm sort of a high-class sharecropper. I function as general manager of all operations connected with the magazine short of the actual printing and distribution. I'm the overall creative head of the editorial department as well, the single most time-consuming part of my job."

There is, Dave admits, much more to the job than that. Like reporting, catching the color, sights, smells and sounds of speedways . . . and trying to put this excitement into print.

One such reporting assignment has been etched grimly in Dave's mind, one in which his love of writing faltered momentarily. The assignment: the 1964 Indianapolis 500. "This would have to be the most memorable race I ever reported," says Dave.

"Blithely over-confident, I had pretty well determined what kind of story it was going to be before the race ever started. When it started, and when Dave MacDonald and Eddie Sachs were killed almost immediately, it was a completely different story. It was a moving, soul-felt experience that left me shaken and confused and hard-pressed to write anything at all. From that point onward, everything else was anti-climactic, and the steady attrition that saw all of the road-racers and their rear-engined cars—my 'new hopes', as it were—eliminated, just seemed to underline the emptiness that fell over everybody and everything like a blanket after that second lap. I never worked so hard on a story in my life, and I may never do so again. Maybe it wasn't my best story, but it was a pure expression of my self and my involvement—and that's what I think my kind of writing is supposed to be."

What makes a writer like Dave? One who hep on cars and so articulate in print? No doubt a rare combination of materials and experiences. Dave's reminiscences offer a clue.

"I didn't get much college, but what I got was made possible by night-shift work in Detroit's automobile factories. I spent a lot of time in press rooms and on assembly lines actually building cars, so that I feel an additional—and perhaps even more fundamental—involvement with cars from that experience.

"My first car, bought at age twenty, was a 1936 Mercedes Benz roadster which I miss sorely today. It was silver with twin side-mounted spares, five speeds, wooden dash, and German-silver trim throughout the interior. It was a gas, and I hope I run across it again someday. I'd like it back if it hasn't been mutilated beyond recognition.

"After that I owned a succession of MGs, Porsches, Triumphs, Volvos, Peugeots, a Jaguar, a Ford, two Chevrolets, and for too long, a Maserati. I've never owned a Corvette, but I'd like nothing better than to have a GS Sting Ray, converted to street use, perhaps fitted with the 396 engine. That kind of hairy beast has always torn me up something terrible. The noise, the purposeful look, the brutality of big, tough racing cars is, to me, the ultimate statement of what the hell cars are all about. I prefer comfortable, smooth, no-sweat cars for personal



Top left: David E. being pushed off in the W196, 2.5 liter Mercedes GP car—similar to the Moss-Kling-Fangio cars of 1955—at Mercedes Proving Ground in Stuttgart. Above: Good shot of Dave pressing on a tight turn at Cumberland, back in his MG racing days. Above right: Ye editor chatting with some of racing's elite, Phil Hill, Richie Ginther and Jo Siffert. Below right: Leaning longingly on Dan Gurney's car at U.S. Grand Prix.

transportation, but my romantic instincts require something fierce and unforgiving for fun. And, let's face it, fun is important too."

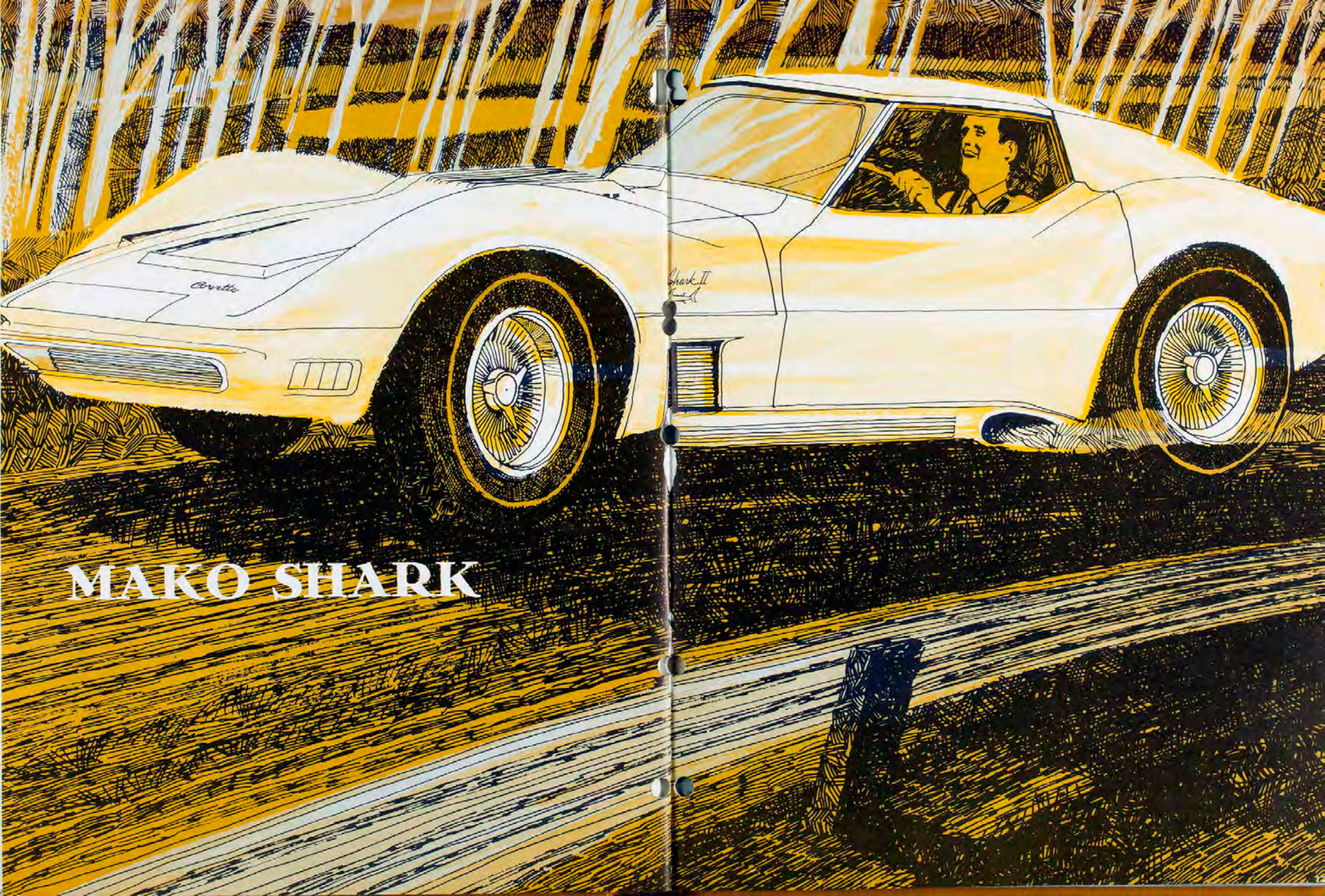
Dave might have added there are many other things that are important to him. He's an insatiable reader, continually exploring social comment, satire, humor in all forms, history, biography, politics and current affairs. Likes music, particularly baroque (Bach and Vivaldi) and like that—also romantics like Beethoven, Schubert, Tchaikovsky, etc., and, as he expresses it, "the 'cool-school' jazz (circa '55) and Rock and Roll. The Beatles and the Dave Clark Five destroy me."

Hobbies . . . only Dave can explain, "eating, drinking, exaggerating, admiring ladies, a little photography, driving too fast, writing outrageous letters, telling interminable stories, wishing I was a race driver and being fascinated by my complicated friends."

But most important, last on this page first in Dave's life, his family: "I have a great-looking blonde wife named Norma, a daughter named Peggy who's eight, a son named David who's six and a son named Matthew who's four. Peggy is a swinger, David's a genius and Matthew is just plain too much."







MAKO SHARK

CUMBERLAND '65

*A Review from the Top of the Hill*



There were three ways to spectate at the Cumberland National Championship and Regional Races. You could be somebody or know somebody and that got you into the pit area. You could pay extra for a paddock ticket that let you peek over one fence into the pit area and over another fence onto the track where you had a side view of the cars making their rounds. The other way was to perch on the side of the hill along with 25,000 dedicated fans. It was inexpensive; it was socially unimpressive. But what a fascinating way to watch the 13th Annual Cumberland meet sponsored in May by the Steel Cities Region Sports Car Club of America and the Cumberland Lions Foundation.

The hill is dominant and prominent for miles. For the weekend, it was covered with color, each shirt-size swatch in a constant state of movement. From a distance your eyes first became aware of this anthill of activity because your ears couldn't pick up the commotion until you were relatively close. Then you heard the drone of the multitude.

Up close, you saw the hill wasn't the grassy knoll you had imagined. As you peered up, searching for a path, you saw tents and canvas shelters complete with barbecue stands and deck chairs. More modest settlements consisted of cushions precariously nestled on the slope and conveniently arranged around a cooler or half-barrel. The fair-haired set hid under umbrellas because there was no shade on the sun-side of the hill. And standard equipment for spectators included binoculars and the ubiquitous transistor radio. The latter was invaluable because the PA system didn't quite cut it and you could pick up a local radio station broadcasting interviews and a report of the races. The radio also provided music to listen to in between events while you watched other people watching you.

The only way to get to the top of the hill was to climb, so you grabbed a handful of pitons, hooked the safety line to your partner and began scaling. The direct route was straight up, but the most feasible way was to traverse the slope from foothold to foothold, maneuvering

between sleeping bodies and closed private parties. At the top you wondered if it was worth the ordeal. Then, when you turned from the mass of humanity, you saw what they saw and understood why they were there.

Below was a good-size airport with all the runways visible. Smooth tar marked the racing course around the runways and every corner, every curve, every straight was within sight. A beautiful view! A clear view, too, for if anyone stood up in front of you, chances were he'd fall down the steep decline.

The track has a lap distance of 1.6 miles. It is 50 feet wide and the longest straightaway is 2200 feet. Seven turns plus a chicane and the finish line right in front of the hill make it challenging to the drivers and thrilling for the spectators.

The perspective is so spectacular that many cliff dwellers staked out a real estate claim for Friday, Saturday and Sunday. Thousands more camped in the paddock area which was policed and provisioned with firewood, water and sanitary facilities. There's no telling where all the visitors came from as Cumberland is situated in the northwest part of Maryland not too far from West Virginia, Virginia and Pennsylvania. This strategic location and the town's proximity to the Pennsylvania Turnpike make it easily accessible to sports car devotees from the East, Midwest and Southeast. A search of the official list turned up entrants from 17 states and D.C.—from South Carolina to New Hampshire; from Illinois to Tennessee.

The citizens of Cumberland made every effort to accommodate those who wished to stay overnight. The garages in town stayed open late, or even all night. Their facilities were available to the race crews; their mechanics ready to serve stranded motorists.

The weekend got an early start with registration for regional race entrants and their crews on Thursday night at the Fort Cumberland Hotel. Friday morning, headquarters moved to the Cumberland Municipal Airport about 2.5 miles south of town on West Virginia Route 28. Registration and safety inspection continued



ABOVE: How to maneuver through a chicane in six easy steps is demonstrated by A and B production entries at the Cumberland National Races.

BELOW: How not to enter a chicane is shown by Frank Dominiani and Bob Johnson as they shake fenders and part company after a dash to the finish.

throughout the day. There was practice on the course for all cars, with preference for sedans and those racing Friday afternoon. At 3:45, events were held for regional and novice license holders.

Saturday, contenders for the national events continued to sign up, make their safety checks and get in some practice time. It was an easygoing day and that evening SCCA members and their guests met and mingled over a beef buffet at the Cumberland Country Club. Dancing followed the dining but it didn't compare with the blast at the airport hangar where the hill people merged to do a mass Watusi at a dollar a head. After the dance, a torch was put to several of the temporary wooden "sanitary facilities" to the amusement of some and discomfort of many, many more.

All told, 191 cars showed up for the nine races scheduled on Sunday. The weather seemed to be excellent—clear and warm with a temperature of 90° during the afternoon. The crowd was looking forward to a good show and they got it. The large field assured that each race would have more than enough entries to make it interesting.

A minor mishap was recorded in the first race when Donna Mae Mims and Dave Heeschen stepped on each other's toes, sending his Sprite Mark II into a double somersault. Dave was able to walk away and Donna Mae vindicated herself when she came back in the second race to drive a TR3 to second place.

The seventh race of the day, for A and B production cars, featured some fender clashing and a spinout just past the finish line. Hal Keck took first overall in his 427 Cobra Ap entry. Being the leader made it a nice drive for Hal and kept him out of a hotly contested duel for second overall.

Bob Johnson (driving one of the two new Bp GT Mustangs flown to Cumberland from Carroll Shelby's breeding stable) was chased down the home stretch by Frank Dominiani's bright red Bp Corvette. Apparently, Bob thought he had locked up second overall and first in class and he eased a little as he approached the flag. Frank kicked his Corvette in an attempt to overtake John-

son on the inside. However, he was still back by half a car length at the finish line and was going too fast then to negotiate the chicane. Frank went into the infield, spun around a couple of times and jumped out with thumbs up.

Bob decided to forget the turn, too, after his fender took on some of the Corvette red. He chose the easy way out and kept going straight on the escape route.

In the Ap class, other front runners included Jim Mederer who came in second in a Cobra; Bob Fryer in a Sting Ray; and Donald Blatchley in a Sting Ray. Behind Johnson and Dominiani in the Bp class were Ben Moore, Corvette; Bob Mouat, Corvette; Tom Yeager, Mustang; and Steve Effenbein, Corvette.

Dominiani, national Bp champion in '64, expected his big Cumberland competition to come from Don Yenke's '57 Corvette. However, Don had trouble with his distributor and retired early. Several weeks before at Marlboro, Yenke was first in class B. And at the Vineland national races, Yenke passed Dominiani late in the event and was on his way to victory when he, too, was beat out at the finish line by Bob Tullius.

The last race of the day was the Edgar D. Vandegriff Memorial Trophy event for C, D, E, and F modified cars. It was heralded as a return match between Sherm Decker and Ed Lowther. They had battled it out in the President's Cup race at Marlboro and Lowther had come out ahead. But here at Cumberland, hill folk may have been disappointed because Ed and his Genie Mustang dropped out in the seventh lap while Sherm walked away with the win in his Cooper-Ford.

By the end of the last race, the crowd on the upgrade had started coming down. The perchers abandoned their nests—out of food, refreshment and suntan oil with no chance to emulate their heroes because of a county-wide traffic jam. And those who didn't scurry were in danger of being swept down as a late-afternoon thunderstorm washed away all traces of the weekend migration to the hill at Cumberland.



# SPACE AGE RALLY NAVIGATION

by Dick Joslin

*Editor's Note: Like many a rally enthusiast with a determination to beat the mathematics game involved in today's championship rallies, author Dick Joslin tackled the complex navigation challenge in a logical manner. He merely built a completely automatic computer of his original design. You might say it was something of a busman's holiday for Dick and his driver, Slim Larned. Dick regularly navigates United Airlines DC-8 jets between Los Angeles and Honolulu; Slim is United's manager of flight operations and top senior pilot. Both have been rallying together for four years, and during the past two, Joslin put his experience as an amateur radio operator (W6LFA since 1935) to work and devised his learned machine.*

*While some readers might get the idea that a Ph.D. in electronics would be a prerequisite to reading this story, such really isn't the case. Author Joslin details his cause for accuracy, explains his machine and espouses emancipation for, in his terms, "the navigator who never knows where he has been when the rally is over."*

*Further questions about the rally computer may be addressed directly to: Dick Joslin, 21917 De La Osa Street, Woodland Hills, California 91364.*



There once was a time when the navigator on a sports car rally could enjoy the drive. He read route instructions to the driver, helped watch for signs along the course and just gazed at the scenery. In those days, leg errors were scored in minutes. Navigating a rally was a pleasure, for the driver did most of the work. But it was too good to last. Soon, some malevolent rallymasters began specifying precise problems of time and distance to occupy the navigator. Ever since, the navigator's side of the cockpit has been a veritable snowstorm of log sheets, tables and instructions, not to mention the sliderules, Curtas, counters and stop-watches. Now, the navigator rides with his head down, rarely sees the scenery and usually never even knows where he has been when the rally is over.

But rally navigation is, basically, a progressive mathematical problem in real time. And since computers solve this problem for rockets, why couldn't a computer be built to solve the sports car navigation problems and rescue the overburdened navigator from his drudgery? The idea and attendant problems intrigued me. Such a computer would have to be small enough to fit into a sports car, provide real assistance to the navigator, and, hopefully, should not cost more than the sports car itself.

Maximum assistance to the navigator was set as the main goal, and the following design requirements were established:

1. The computer should be adjustable to measure exactly the same as the "rallymaster's mile."
2. Speed inputs to the computer should be identical with those contained in the instructions, and should not require conversion or adjustment.
3. A clock within the computer should provide *elapsed leg* time as well as a comparison with *computed leg* time.
4. Read-out counters should show actual rally miles traveled, computed leg time and actual elapsed time.
5. There should be a provision for making "off-course" corrections.
6. A driver's indicator that would provide continuous "early or late" information.
7. Controls that would be simple to operate, requiring minimum attention from the navigator once they were set.

After much cogitation the final design has two sets of controls. (See drawing on next page.) The first consists of four dials mounted across the bottom of the computer. They are adjusted only once during the rally, at the end of the

odometer leg. These dials calibrate the computer to the rallymaster's mile within .00004738 miles (which works out to plus or minus three inches per mile tolerance). From then on, no matter how often the speeds change, the correction factor is automatically taken into account and the computer always reads-out in corrected miles.

Just above these, in the top center of the computer, is set number two. Three dials enter the instructed driving speed (given in rally instructions) into the computer. Each dial is indexed from zero to nine and the speed range covered is from 00.1 mph to 99.9 mph. If the speed called for in a rally problem exceeds 99.9 mph a simple switching procedure can be used to extend the speed range of the computer as high as necessary. We have thus provided the computer with the ability to cope with any speed-hungry rallymaster with visions of a LeMans-type event.

The input connection between the car and the computer is made by a take-off from the car odometer cable or other wheel-driven shaft. This shaft turns a "chopper" wheel which interrupts a light beam. The light flashes are converted to electrical pulses by a photo cell. One pulse is generated for each 1/2-inch of car travel. During the odometer run, the set of dials used to calibrate the computer to the rallymaster's mile is adjusted so that only about half of the electrical pulses are passed from the photo cell to the computer brain. Here the "computer mile" is compared with the mileage given by the rallymaster and an adjustment is made to add or subtract pulses so the "computer mile" will exactly equal the rallymaster's mile. No further adjustment of these dials is required during the rally. The mileage output of the computer will now read directly in rallymaster's miles, and appears on the upper right-hand counter. The now-corrected mileage reading is used for locating measured turns, reading total leg length, or it may be used as the odometer of a "phantom car" when this type of problem is encountered.

Another portion of the computer brain converts the rally miles traveled into "computed time." This output reads on the upper left-hand counter. The "computed time" output is the time that should have been used over the traveled distance at the desired speed. As an example, when the speed dials are set to 60.0 mph this counter will read 1.00 minutes for each rally mile traveled. If, at the end of one mile the speed dials are changed to 30.0 mph, the computer will show 2.00 minutes for each mile traveled. At the end



of the second mile the counter will read 3.00 minutes. (One mile at 60.0 and one at 30.0 is one minute plus two minutes.) The actual speed of the car does *not* affect this computation. If the two miles had actually been traveled at 9 mph or 90 mph the output counter reading would have been the same 3.00 minutes. Of course, the *actual* time used to travel the distance would have been much different.

Since it is this difference between the computed time and the actual time that determines the score, a continuous comparison must be made to keep this difference as small as possible. The computer makes these comparisons.

To do this, a clock counter is located just below the computed time counter. Both counters are switched on and off by the navigator. The computed time counter is switched on at the start marker of the rally leg. It operates over all of the "live" mileage of the course. Exactly at the assigned starting time (time of day), the clock counter is switched on. Whenever the two counter readings are exactly equal, the car is "on time." As speed changes are encountered along the route the speed input dials are switched on to the new speed. The accuracy of the computation is not affected if the car does not happen to be "on time" at the speed

change point. The computer continues to indicate the difference between the elapsed and computed time.

The indicator for the driver is an "add-subtract" counter mounted above the instruction sheet holder. The subtract side of this counter is connected to the clock time counter and the add side to the computed time counter. A reading on this counter of 0001 or greater tells the driver that he is early or fast. A reading of 9999 or less means he is late or slow. A 0000 reading means the driver is exactly on time. And, as long as the driver can maintain the 0000 reading, he should "zero" every checkpoint. The computer also has a special circuit which eliminates the first alternate add or subtract pulses from the driver's indicator counter. This means that when the car is being driven at exactly the programmed speed, no pulses reach the counter. Because the counter clicks are quite audible, both driver and navigator receive aural as well as visual information about car speed. The driver can also devote more attention to the road and course. The navigator can devote more time to rally instructions (and enjoying the scenery). The computer makes a time-distance-speed computation at least 100 times each minute (again, freeing the navigator from this little chore) and the driver's counter tells him his error, if any, within 1/100th minute.

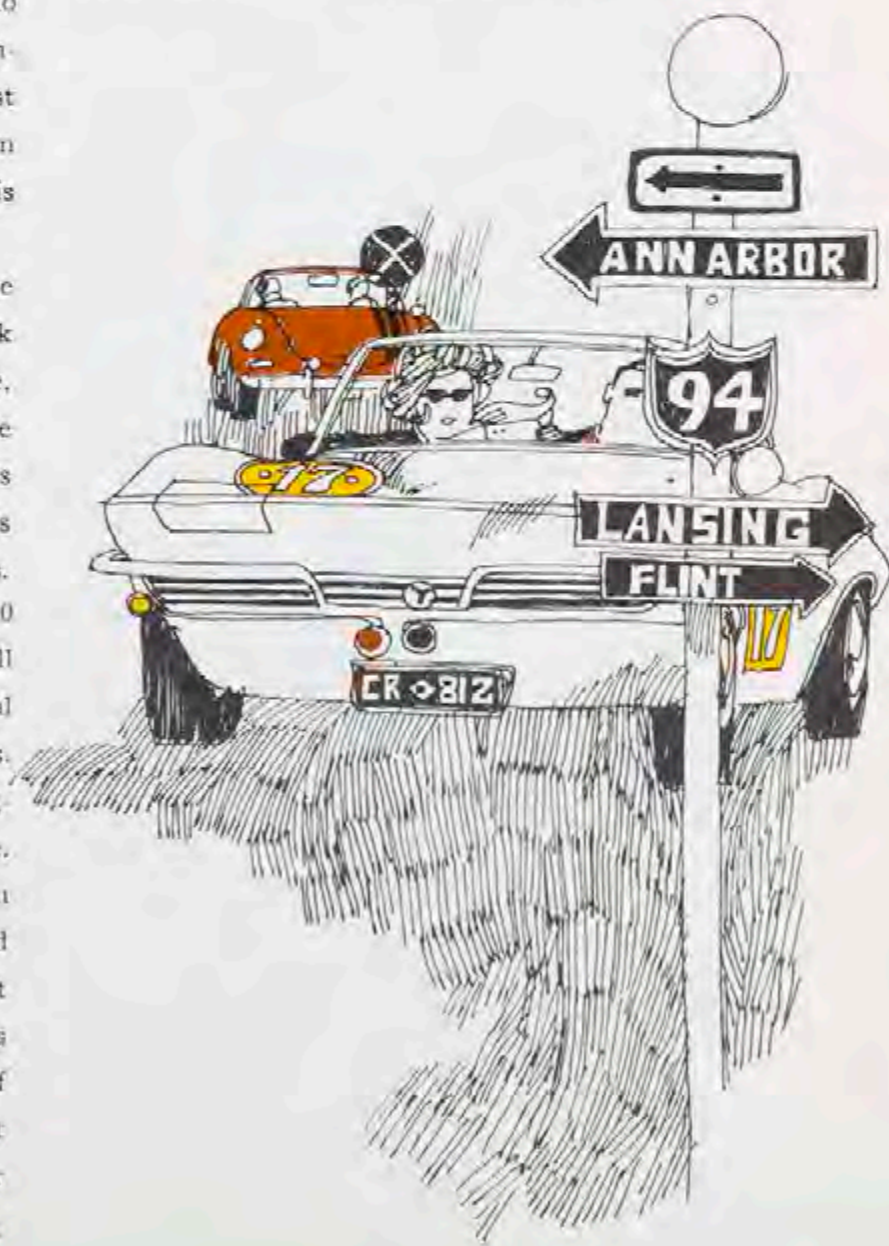
As the car crosses the checkpoint "in" marker the navigator turns both the computer counter and the clock counter off. The clock counter will read the elapsed leg time, which should agree with the checkpoint lapsed time. The computed time counter reads the leg "true time" and this should agree with the rallymaster's time. The driver's counter reads the error score in minutes and hundredths.

On the more technical side, the computer contains 680 solid state devices—184 transistors and 496 diodes. All computation, including calibration, is performed in digital mode and all answers are given in actual working numbers. A special self-contained power converter filters and regulates battery power which is used as the primary source. There are 16 printed circuit cards. All are constructed on fiberglass panels containing necessary components tied together by printed circuitry called modules. Printed circuit techniques, modular construction and plug-in connectors enable easy servicing if it becomes necessary. The frame of circuit board sockets forms an interface between the input switches and the computer circuits. The complete computer unit, except for the photo cell unit and the driver's read-out

counter, is housed in a 4" x 11" x 17" case. Panel illumination makes the computer a 24-hour instrument. A quick release suspends the unit just below the glove compartment. A plexiglass top on the case permits visual inspection of the computer without exposing it to dust hazards. Power consumption is approximately 15 watts, or only 1.25 amps.

Design, construction and testing required eleven months. Cost (including research but not labor) was approximately \$2,000.00. Duplication cost today would be about \$900.00 if ten or more units were built.

Operating the computer is a delight for the navigator. No log need be kept. The navigator merely switches in speed changes as the course markers are passed. He is again free to assist the driver, reading instructions or watching for course markers. The only need of a pencil is to cross off the completed instructions. Once again, as in the "good old days," navigation becomes a pleasure and the rally becomes a truly fun ride... so long as rallyists stay on course.



These were the words of Jim Hall after he and driving partner Hap Sharp had streaked their #3 Chaparral to an unprecedented victory in the 1965 Sebring International 12-Hour Grand Prix of Endurance on Saturday, March 27. But, Jim must have been in a slightly modest mood, for his Chaparral had actually out-distanced all comers by more than four laps over the 12 hours of driving. It marked the first time in 12 years of trying that an all-American car—designed, built and driven by Americans—had finished on top of the field in this exciting and grueling event.

By now, most racing enthusiasts are aware that Hall and Sharp drove to a win. But, driving was only half the story. What went on

**"We  
didn't  
go  
any  
further  
than  
anyone  
else."**



in the pits as all attention was focused on the cars flashing around the course at Sebring? Here is the other half of the tale as gleaned from comments of racing experts . . . Roger Penske . . . Donna Mae Mims.

Penske was chosen as Chaparral Team Manager because he knew the cars. Late in 1964, he had driven one to wins in the Governor's Trophy and Nassau Trophy events during Bahama Speed Week. His crew of mechanics was made up of six seasoned vets—Maurice Robertson, Wesley Sweet, Karl Schmid, Troy Rogers, Franz Weis and Randy Gilbert, plus all-around pit area leader extraordinaire Bill Fritts. Donna Mae, a top female driver,

was putting the stop watch on the cars. Their talents combined with the know-how and guidance of Roger did as much to bring the Chaparral home a winner as the driving of Hall and Sharp.

In a lengthy race of endurance like the 12-Hour, the difference between winning and losing often comes when the cars are standing still . . . in the shop where final preparations are made and in the pits during the race. And this one was no different. Apart from the tremendous performances turned in by the two Chaparral driving teams—Hall/Sharp in the #3 car and Jennings/Hissom in #4—much credit for the Chaparral showing must go to the men who are taken for granted . . . the pit crew. They put

together and held together one of the finest racing machines ever to hit the concrete runways at Sebring.

As race day approached, the two Chevy-powered Chaparral entries were no more than afterthoughts as pre-race experts were forecasting a showdown between Ford and Ferrari. All knew that Jim Hall's creations had the speed, but only a few buffs thought they had the stamina to stand under the severe pounding of the one-time airport course surface. Among the few were the Chaparral crew and their handful of loyal supporters. They knew the cars were in perfect shape; only the race would prove them right.

The pit area was something unusual in itself. Former Corvette driver Bill Fritts of Florida, the team's mother hen, had spent many long hours primping and preparing to make sure that all of the Chaparral personnel had a smooth-working weekend. Donna Mae gave Fritts a well-deserved pat on the back. "Bill knew when and where to find the ice man; where to snatch the only spare light bulb on the course; and he occasionally catered to the temperaments of the drivers and crew. He had whatever they wanted practically before they knew they needed it."

The team had rented an old grandstand to serve as the pit area for the race. Roger explained how it was set up: "There were two levels. On the top we had our timers. Several of the team members' wives were timing and keeping score on the cars. The second level

was open to anyone who had a Chaparral badge . . . friends of the team and invited guests. By setting it up this way we kept any extra people out of the pit area which was located at ground level. The upper and lower levels were connected by two-way radio. We were always in contact with our timers. It made it a lot easier for us to do our job."

We went on to ask Roger some questions concerning events and strategy in the pit area. When asked about pre-race preparations, he replied: "We practiced the day before changing tires, brake pads and making fuel stops. Then, we took the cars to the shop to get them ready for the race. The crew worked until about four o'clock in the morning on Saturday and got the cars to the pits before they went to bed. They had two or three hours sleep and were right back at the track. Really, there's not a better group of mechanics anywhere."

Throughout the race, Penske and his crew performed their tasks with precision and exactness. What was his secret? He commented: "Each man had the same job to do on both cars. The same man on fuel, on the jack, changing tires and pads, and so on. And it's not like an Indy stop where you're allowed six men working on a car at the same time. Three at a time at Sebring, and that's all! When we were using both fuel lines, it left only one man to do everything else. He had to clean the windshield, change brake pads, oil and anything that had to be done.

"Thanks to all the practicing we had done, we knew exactly what time the cars would be coming in and what we were going to need. We wrote down on a blackboard exactly what had to be done on the next stop. So, we were always about 15 minutes ahead in case a car came in early or in case of emergency. In this way, we kept ourselves well prepared and were able to get the cars in and out very fast.

"Pit action was terrific on the cars! The team did a superior job. There wasn't anything they slipped up on. They were smooth and quick all the way. When the cars came in for fuel, they were consistently out in less than one minute. Two and three minutes for oil and pads . . . so, you can see they did a real good job."

During the race, the sky opened with one of the heaviest downpours in Sebring history. In short order, the old airport took on the look of a bustling boat harbor. And, it put a damper on race strategy and pit action as Penske told us: "Rain like that was something we never expected. The wide tires we were using made the cars hard to control at high speeds. On top of that, the low-down air scoops underneath the cars had a tendency to scoop in water. In some of the deeper spots, the Chaparrals were actually floating. We could hold back a little, though, because at one point we had quite a large lead and we weren't pressed. We deliberately held the #4 car in the pits for a while during the rain to see if other cars were stalling out around the course. This wasn't the case, but when we tried to start, it wouldn't go. With all the rain, our carburetion wasn't functioning correctly. So, we held a board over the eight stacks on the carburetors to keep the rain out and

get it started. When the #3 car came in during the rain (it was leading), we did the same thing and didn't have any problems.

"One more thing about the rain. All of our equipment in the pits was electric. That presented quite a hazard. We were up to our knees in water so we had to rely on manual equipment. Changing over to rain tires in all that water was quite a chore. The rain made things very difficult for all of us in the pit area."

Donna Mae gave some first hand information on how the rain affected the driving. "I was caught in the downpour with a watch on the #4 car and couldn't run for shelter or rain gear. I thought surely I had missed the car which I'd been clocking at 3:06 laps. The first rain lap was 14:59."

For a while during the race, the Chaparrals were one-two and running away from the early "sprinters." Suddenly, the unexpected happened. Electrical system troubles on the #4 Chaparral. Roger tells what the trouble was and how the crew remedied the situation: "We had electrical problems on the #4 car first. The voltage regulator was not charging properly, so we took it out and replaced it with an old one that had run probably 20,000 miles or so. It was one of the spare items we carry with us. We lost about 15 minutes and dropped to 15th place. When the #3 car came in with the same trouble about an hour before the end of the race, we knew exactly what to do.

"There were other electrical problems with the #4 car. After the rain, #4 came in for fuel and we couldn't get it started. At first, we thought the battery had run down, but actually it was a bad starter button. The rain had gotten to the contacts so they had to be cleaned and the battery had to be changed. We lost another 40 minutes on that.

"The advantage of running two cars was that when a problem developed on one and then came up on the other one, we knew what had to be done and were very quick on it. Our strategy was that if we got one car in the lead, we would sacrifice anything to keep it there, even if it meant pulling the other car out of the race."

The team never had to use this last bit of strategy, for the end of the race found both Chaparrals running smoothly. And, Jim Hall and Hap Sharp in #3 had won it. There was picture taking, champagne, congratulations and jubilation on the part of the Chaparral team . . . for they were certain from the start that they were going to win it. Most astounding to those in the racing circle was that this same Chaparral was almost totally wrecked at Mosport last fall.

Finally, we asked Penske the never-to-be-answered question: "If the #4 Chaparral hadn't been plagued by electrical problems would it have been a one-two Chaparral finish?" He candidly quipped: "Definitely! Without a doubt."

