

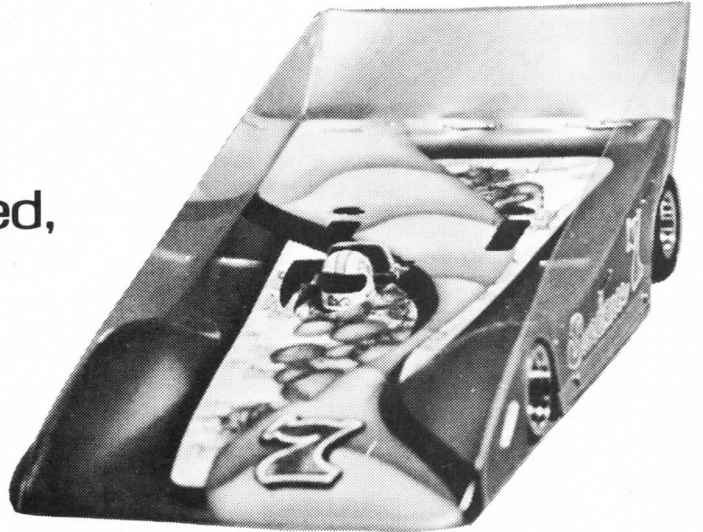
HERE IT IS. THE FINAL EPISODE OF ONE OF THE MOST UNIQUE AND COMPREHENSIVE HOW-TO ARTICLES EVER PUBLISHED (WE COULDN'T PUBLISH *THE* MOST UNIQUE ONE). WE AT CAR MODEL BELIEVE THAT THIS SERIES WILL BE ONE TO HANG ONTO FOR THE FUTURE AS WELL AS USE RIGHT NOW. MANY OF THE SPECIFICS AND MUCH OF THE THEORY DISCUSSED IN THE PAST FIVE MONTHS CAN BE HELPFUL IN BUILDING *ANY* SLOT RACE CAR. LEE GILBERT AND HIS FRIENDS (LET'S NOT FORGET HIS FRIENDS, NOW) HAVE SET THE FOUNDATION FOR YOU TO BUILD YOUR OWN CONCEPTS AND DESIGNS. THE GANG AT CM HOPES YOUR IMAGINATION AND ASPIRATIONS HAVE BEEN SPARKED AS MUCH AS OURS

# LEE GILBERT DOING HIS THING

## STAGE VI

OR

"Now that the body's arrived,  
let's go play with it."



by Lee Gilbert, Sundance Coates  
and Girl Friday . . . Dona



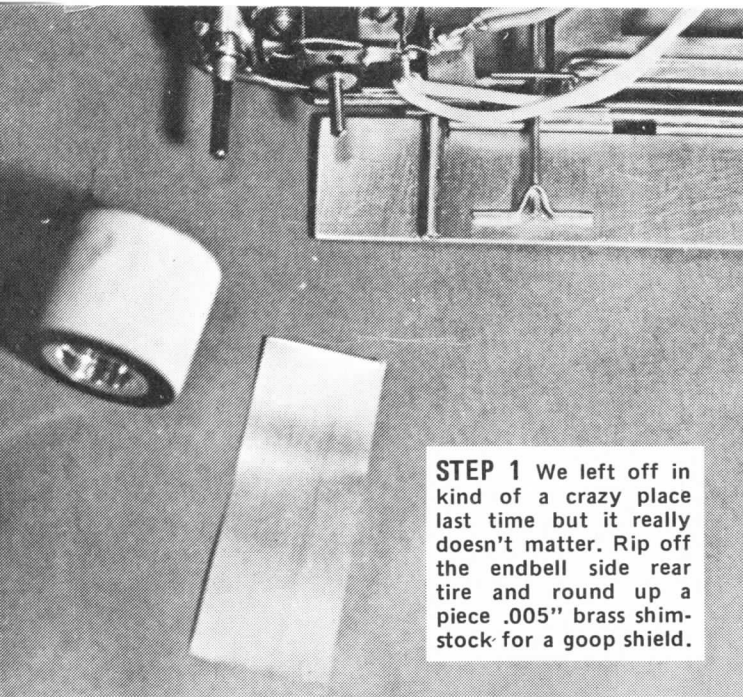
**T**HIS has to be the slowest I've ever built one car. Sundance keeps claiming that Dona has been getting in the way . . . and I assure you that both statements are true. Onward.

The goop shield has been scoffed at, praised and ho-hummed in the past but all that can be summed up by saying; use one. It doesn't matter if it's a lexan job from MAC or one of the brass creations I like to toss on a car. They are essential. Dirt, glue, or gremlins; it doesn't matter, all can hurt your motor. We can handle two with the shield, continue to pray for handling the last.

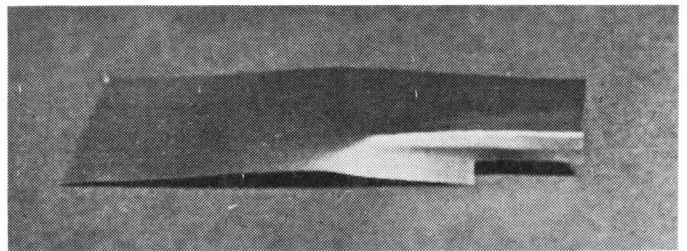
The body can be as hard and complicated to mount as it may be to select. Here's some theory to both. In selection of the right body for a particular track, it's always easiest to run what the majority does. It's crazy, but that usually works pretty good if the majority of the guys are fast and have been running a bod that has been out for a little while. That last thing shouldn't matter but it helps if you want to be a follower.

In truth, a body can affect handling nearly as much as the chassis itself. They affect top speed and smoothness too. The best way to find the right body

"If you think this is weird, you ought to see where Lee keeps his controller!"

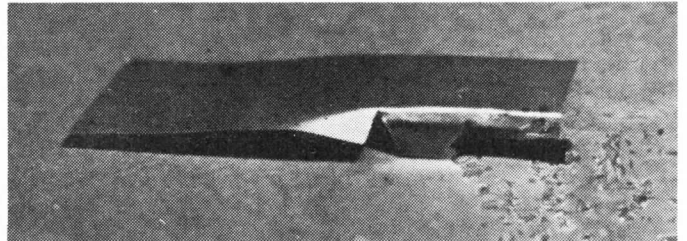


**STEP 1** We left off in kind of a crazy place last time but it really doesn't matter. Rip off the endbell side rear tire and round up a piece .005" brass shim-stock for a goop shield.



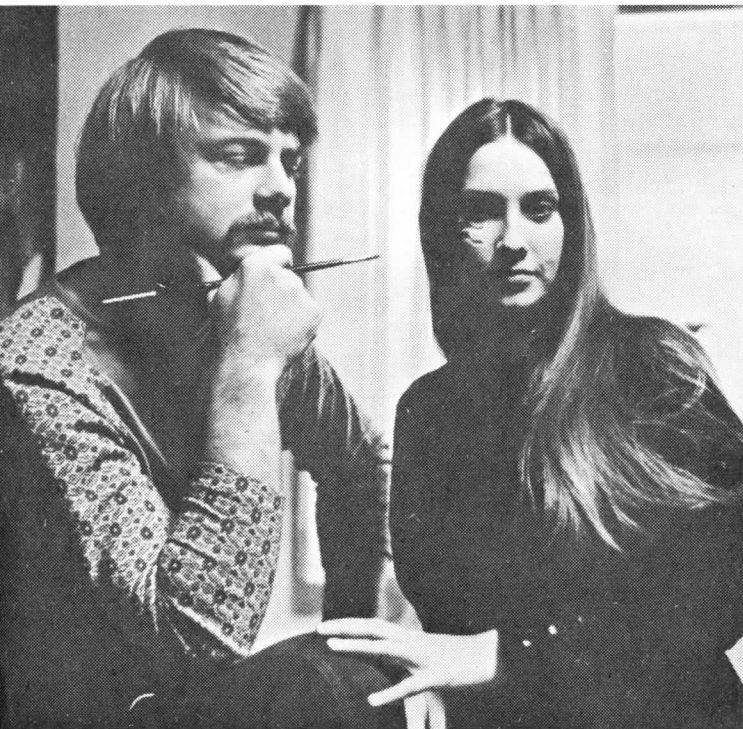
**STEP 2** Bend and notch the brass something like this to fit behind the endbell and in front of the axle tube.

**STEP 3** This slice shows where we will bend the brass over the top of the motor can.



is to know the track. You should know it pretty well if you just built a chassis for it so I don't think we'll have any problem with finding the right bod. For high speed tracks with glue use a bod that has good wedge shape and rounded features. Examples would be the MAC Ferrari, the Kirby 612, the new Associated Porsche, etc. for a well powered King or long Engleman track. This kind of bod has good frontal down force when mounted correctly and is known to

be slimey from the stand point of bite at the rear wheels. The opposite idea would be a no-glue track, low power and a lot of turns. Here we need more bite and don't really care about down-force on the front for high speed straightaways. Examples would be custom built powerpack tracks (flat) and the body could be a Kirby Nissan (old type), Lancer/MAC Porsche 917, the newer Kirby Nissan, etc. This type of bod is thought of as tilting and gives tremendous bite with its squared off lines. Just to give you an idea of what is in-between, look at the Kirby 312-P or the MAC Lola T-290. Kinda' squarish but good wedge shape. The Lola is the most slippery down the straights but the Ferrari is the body to use when in doubt.

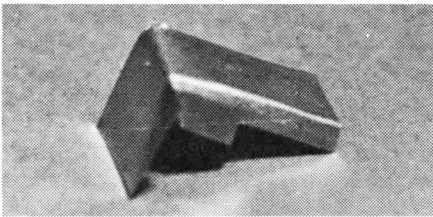


Lee: "Any time you're ready, Sundance. I need that body I paid you fifty cents for five months ago?"

Ted: "One body comin' up. Do you prefer Dona as a redhead or a brunette?"

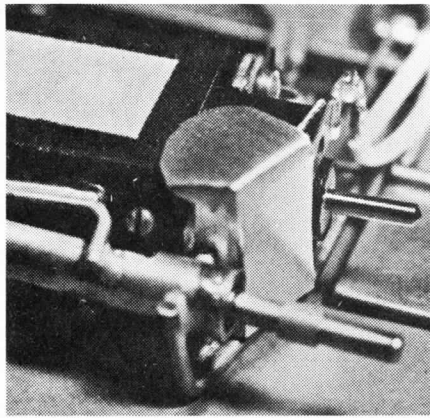
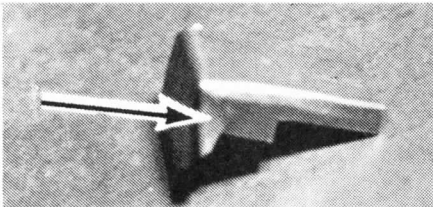
Now all of that info may be only slightly helpful but there is still a few more things we have to consider when selecting a body. Just as with the chassis itself, we have to consider our own personalities and abilities. One type of body may be easier for you to drive or have a certain handling quirk that could help you during a race or in qualifying. To find that special bod for your track you may have to search awhile, but don't fret; there's one around and you'll know when you find it. I'd recommend starting with the Kirby 312-P. It's the most consistent at most tracks no matter what their configuration or power. The 312-P is the body we used in this article, but remember the technique and mounting theory is important.

Now after you've spent months (it's taken me weeks, sometimes) finding that right bod, you're going to have to learn how to mount it correctly or everything you've done up to this point will be wasted. First of all mount the front low. Shove the body forward if you have to get more guide clearance. Chop the guide if you need even more. Make the front tires almost touch the tops of the front fenders. Mount the rear of the body up fairly high if your running a bumpy high speed track. Experiment with rear-end height for progressively



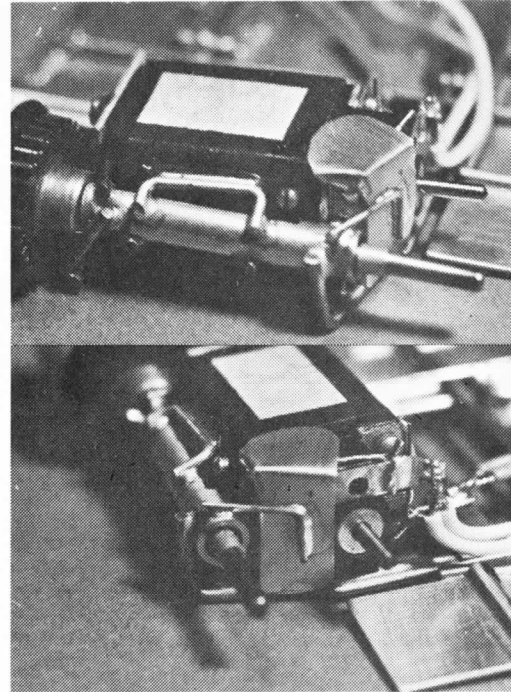
**STEP 4** Bend the unit at a right angle like this.

**STEP 5** Trim the shield up neat and bend that back little tab over against your first bend as shown. Make it look pretty and solder it up after you check the fit one more time.



**STEP 6** Here's what you'd better have so far.

**STEP 7** Bend a little brace to hold the shield in place. Use .032 wire and solder the thing to the back axle tube and the shield itself. Don't worry about a short, Mort. We just decided to defy electricity.



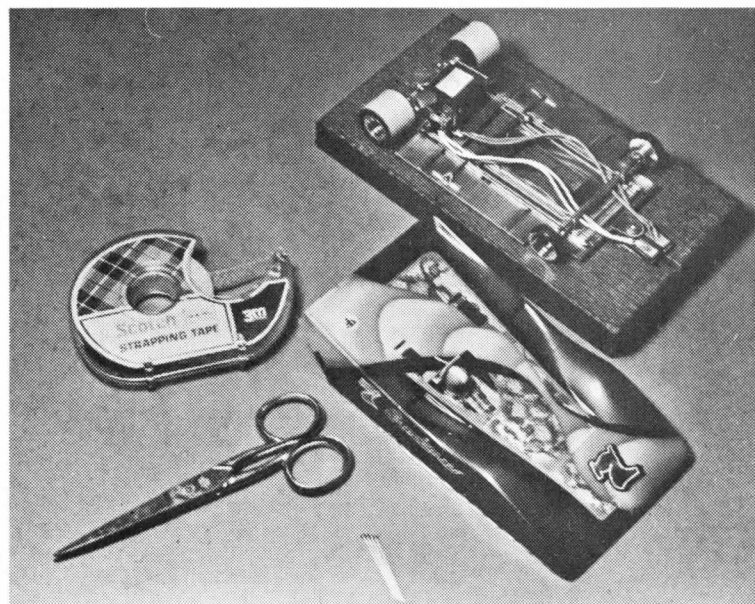
different tracks. What we're doing here is adjusting the built-in down-force of our selected body. One body that can't be used no matter how much fiddling is done is the Kirby TI 22. The real car was poorly designed and the slot car body is just as bad (the R/C copies deserve no comment . . . they're worse). This type of design is also found on the ever popular Lancer 917 and shouldn't be used on high speed tracks due to the built-in launching qualities. The very sexy troughs on either side of the cockpit create a mini-vacuum and can definitely cause launching. In spite of this, many so-called hot dogs in the East still use the thing. Don't you. On slower drivers courses they'll be fine.

Don't worry about the overall length of a bod. It seems that a myth is being tossed about that has to do with bod length. Short ones are popular: forget them. Short bodies will hurt you if you're not careful. The current built-in rear spoiler fad has restricted air control experimentation and effectively shortened nearly all bodies. Only the MAC Lola is long enough at present and may be used with or without the built in air device. The myth about long bodies sliming around tracks is just untrue. Try some experimenting yourself on this score.

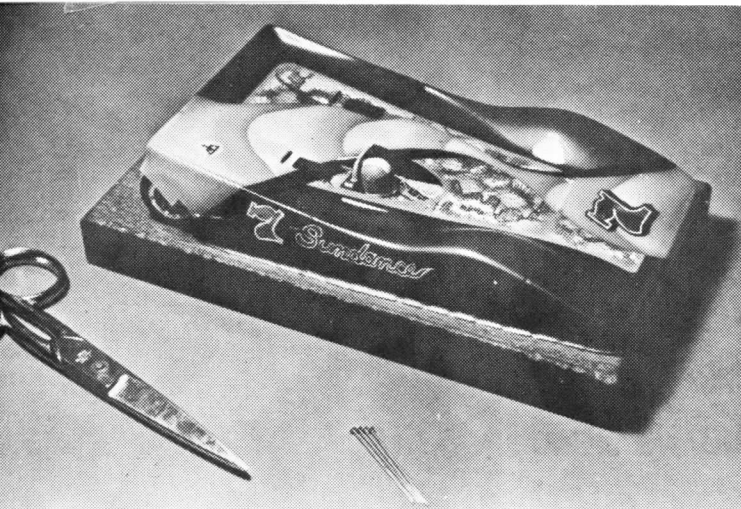
Air control can be one of the most gratifying methods of trimming and even changing your race car's handling characteristics. Unfortunately, way too many people go hog-wild and freak out on so many grotesque creations that they forget what they are trying to do. Probably the best advice at this point could come from our Girl Friday: "Keep it clean, folks". Keep it simple too. Ultra high dams aren't necessary for most tracks. Start out with a simple design and work on it. The length and height of the dams will keep the car more or less steady on straights while the angle of the rear spoiler will effect the down-force along the whole length of the car. To put more force at the nose, crank the angle of the spoiler up from 45 degrees off the ground. Watch it here, though, the more you move this up the more

you slow the car down. Take some construction paper to the track with you and play with airfoils until you get what you want. Heck, I've run races with chunks of light cardboard running up the back of my car just to get the bite I needed. Don't be afraid to chop up a few pieces of paper and spend an hour or so at the track fiddling to get what you want. It'll be worth it.

Fiddling is something I've talked about vaguely from time to time but never really explained. Now is a good time to set you straight. There is no substitute for the knowledge and the self-confidence gained from fiddling if you know what to do and how to do it. Here's how. At the track break out the bucks and



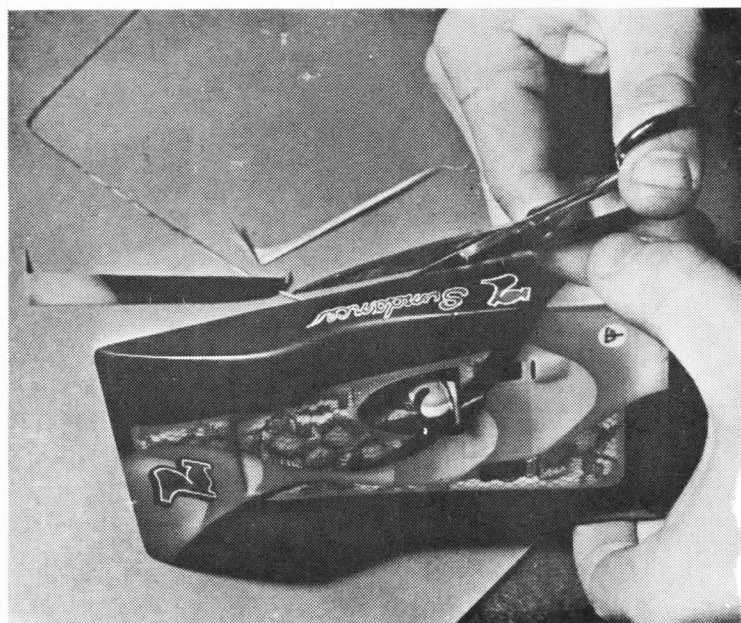
Now that our Sundance Body has arrived we can gather up some pins, strapping tape, scissors and X-Acto knife and get on to mounting the thing. If you think this design looks good on a 312-P, you should see the affect it had on Dona.



**STEP 8** Start the mounting procedures by setting the body over the chassis and checking how much trimming is needed.

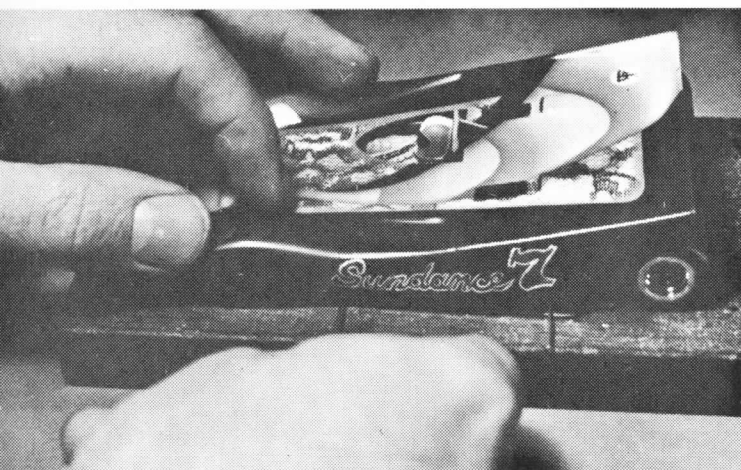
**STEP 9** Start the trimming slowly and check periodically to make certain that the guide and front tires clear.

buy at least an hour of track time and plan on at least one more. Forget about practicing. You may only run one fourth of that time. Plug in your iron and bring all of your tools. Plan on accomplishing something. As an example, say you want to set-up the right body. Bring two or three that you think will work all ready set-up. Now fiddle. Run each bod on the same car about ten consecutive hot laps. Notice straight-away speeds and compare. Check and remember the feel of each car through each corner, around the donut or whatever. Make mental notes. Jack the bodies up in the rear or lower them and take another ten laps with each. In other words, fiddling means making one change at a time and thoroughly evaluating and comparing each change as you go along. The second you make two changes at a time you destroy what you're trying to do and you won't know what you've done. It's through fiddling like this that I've been able to lay down the so-called Gilbert

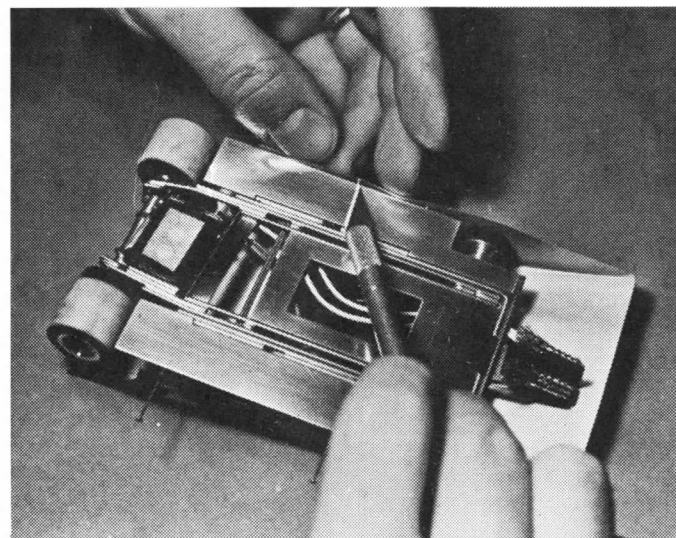


Chass Theory with complete confidence. Pretty soon, after doing your homework like this, you'll be able to walk into a track and just about know what will work. If not that, you'll at least know where to start.

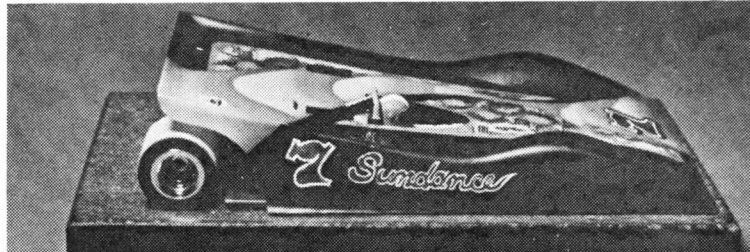
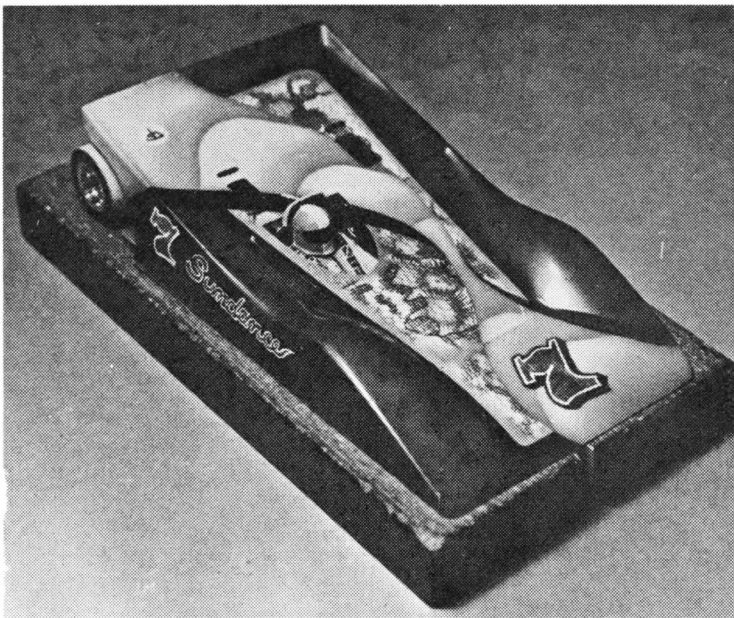
Man, did I ever ramble on. Send your Girl Friday into the kitchen to see how your kringle is doing. We kind of got pizza-ed out lately and a giant kringle really can hit the spot. The Dremel Manufacturing Co. in Racine, Wisconsin, you know . . . Moto-Tool, has a character for a V.P. and he sent us a Danish Kringle in the *mail* yet! They go pretty good with coffee but a week in the mail would make even the box taste good with Dona's coffee. Even a Dremel tool would taste good with Dona's coffee. Anyway, if you're interested, I have now in my possession an old family recipe for these weird Danish Kringles. Stop by and I'll lay a piece on ya'. They may not tease your tastebuds but they'll turn in the threes on a King track.



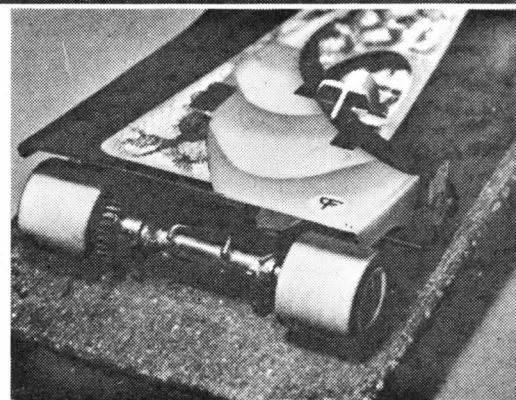
**STEP 11** Use four long pins to start the mounting holes. It might help to position the pinholes with the 1/16" tubing on the pans. Your body will stay on a little better that way. Check for squariness, you don't want the car to look like a crab going down the pike.



**STEP 12** Flip the entire unit over and gingerly mark the lower edge of the body with the back of an X-Acto knife.



**STEP 10** After getting the body down in front the way you like it (per text) hack out the rear wheel openings. After that job, trim the back off as shown.

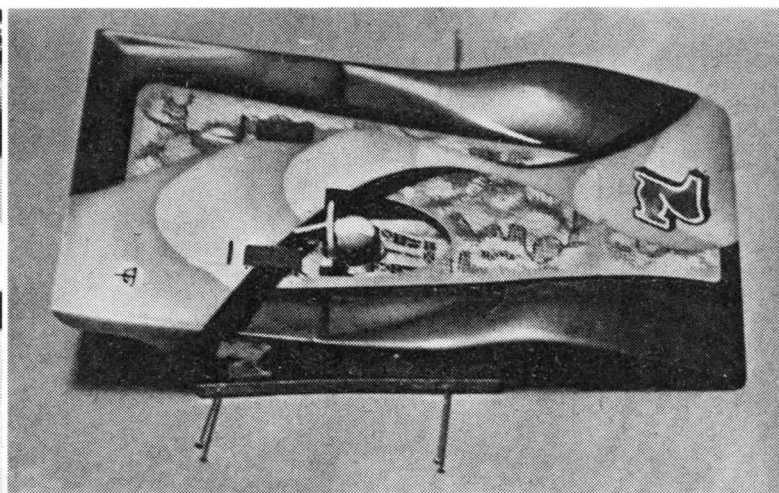


Now on to lead. Your Girl Friday may tell you that extra weight isn't good for a darn thing but don't you believe it. This is one easy way to trim the handling and, if all else fails, to get the car to handle in the first place. The theory behind lead is to pile it on the front of the pans for slime and on the rear for bite but usually not on the rear without the front. The best place to start laying lead is on the middle of the pans. This should smooth the car out a tad. Don't be afraid to pile lead double or triple high. The only thing weight will affect is brakes. If your motor is right, don't sweat it. Don't be afraid to pile lead more on one side of the car than the other. Sometimes a donut will need it. One last word on lead before you start to fiddle on your own. *Do* be afraid to pile it in the middle of your car. That is the one place that lead will not do one bit of good. Air control and body mount would be a much better substitute. Pans are made for lead so use them for that if you need to.

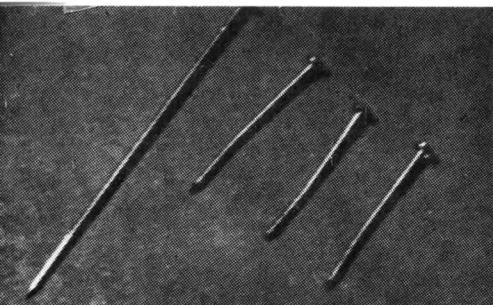
Since this article is intended to take you right up to actually racing the car I suppose I should drop in a word about breaking in the car (motor/tires). No more than a couple of laps should be needed to do the job if the tires are true and the motor is balanced. Try not to practice too much on your race motor, though. No sense in wearing the old girl out too fast.

One quick thing about glue. Use Stick-it and fiddle on your own after you follow this article's starting point. One important rule to remember is to NEVER use glue on the outside of a turn. Follow the article for brakes and turns. Experiment on how much and where.

Gee, I don't really know if this should be a happy or sad time for everybody concerned with this project. The gang at CM has really put up with a lot of strange happenings lately and Sundance's wife has consulted the Missing Persons Bureau more than twice. Dona's mom keeps calling up to make certain

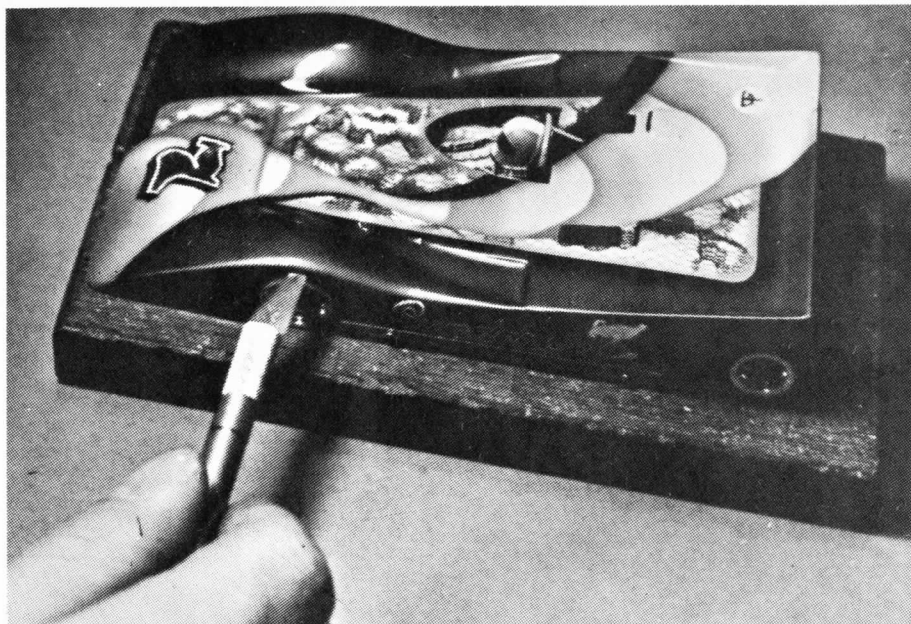


**STEP 13** Now that you've made a pin cushion out of your trick Sundance Bod, tape the thing up with some good heavy-duty strapping tape. Re-poke the mounting holes in the correct region.



**STEP 14** Whip out your Dremel Moto-Tool and carve a set of shortened pins for yourself. That's right, you're gonna' have to do the last one yourself. Slightly crook the pins. Helps them stay in a tad better.

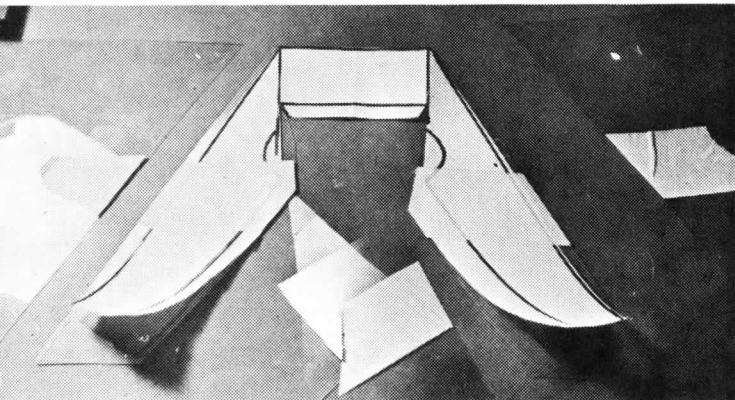
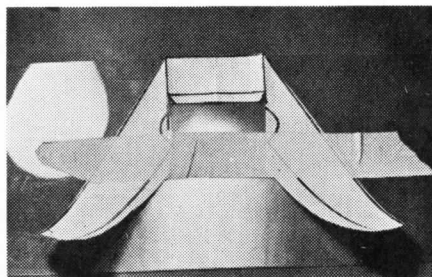
**STEP 15** Beat the bod back on the chass again and start looking for your sharpest X-Acto knife blade (No. 11). Carefully trim the front wheel well openings out to a size just a smiggen more than the front tire diameter. Watch the tires and paint.



that her daughter is not in the bathtub and is still wondering what all of her pictures have to do with slot cars. Hopefully, if you didn't get anything else out of this article maybe you were entertained. I know I was.

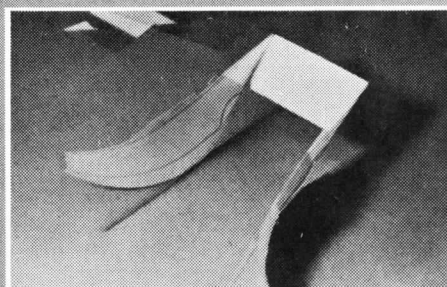
Thank you, Car Model, for letting me enlighten those in quest of truth, justice and a damn fast car. I expect to hear from some of you group advocates as well as the fast crew on this series of articles. Remember, if you want to go fast you'll have to understand what you're doing even if it isn't yet understandable . . . understand? In other words, hope your car turns out well even if it did take you six months to make.

**STEP 16** Whip out your handy-dandy pattern and nail it to a good chunk of .010" lexan.

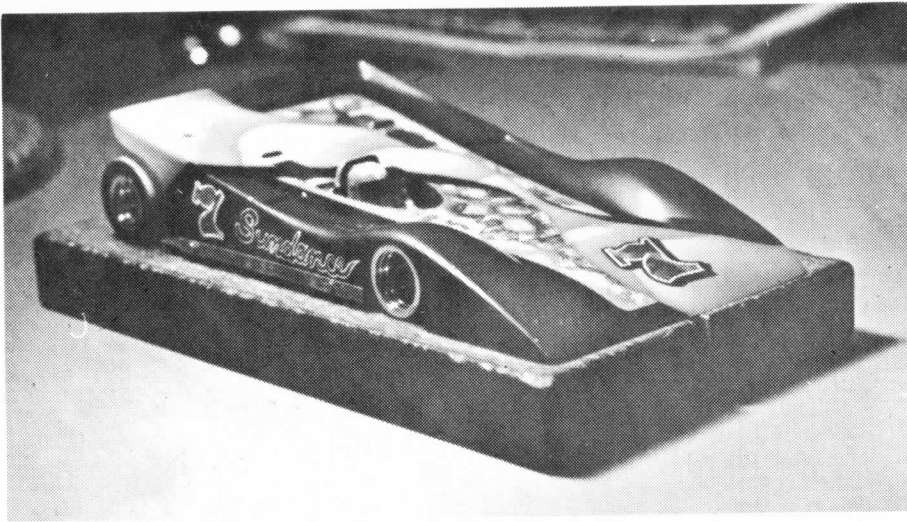


**STEP 17** Chop it out around the correct lines and be sure to leave a little extra.

## HANDY-DANDY PATTERN

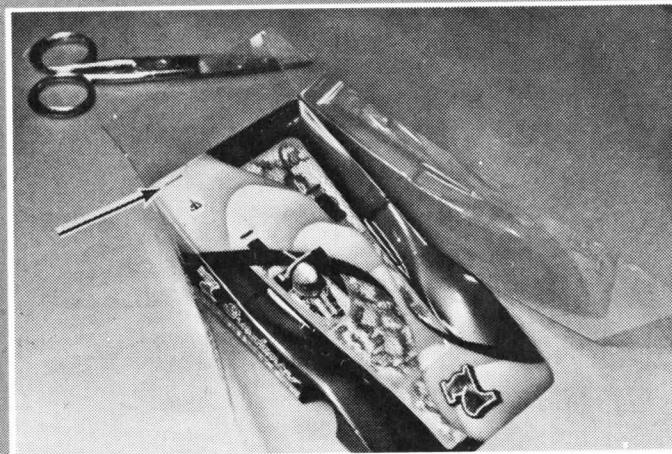
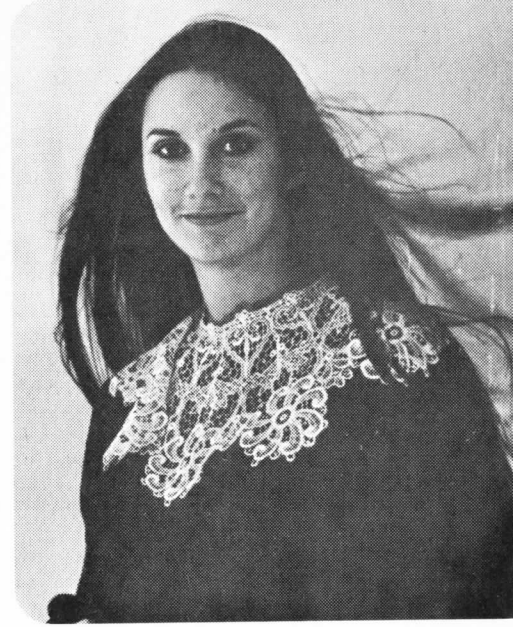


**STEP 18** Bend right angles at the spoiler/dam junction. Remove the pattern once the mess you've begun starts to look like something.

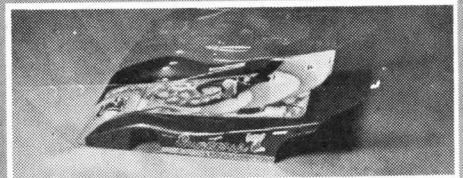
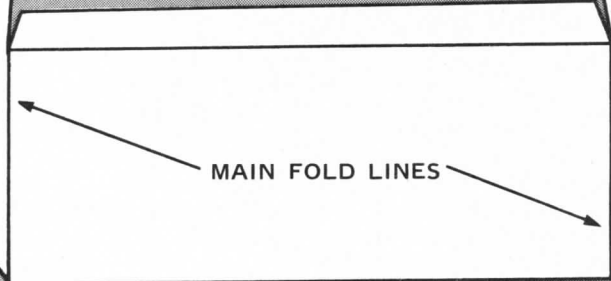


This is what you should have so far. Don't worry about that lamp. We'll show you how to make one next years. (What lamp, dum-dum? — Ed.)

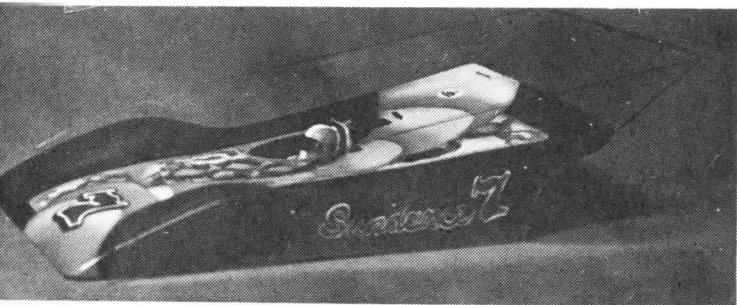
We used our Girl Friday to test out our wind tunnel. What do you think?



**STEP 19** Staple the spoiler portion of your unit air control thingie to the rear of your trimmed body.

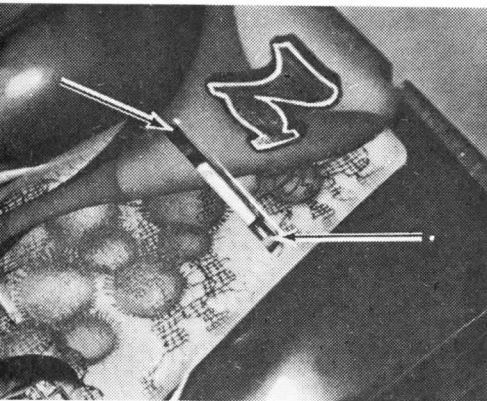
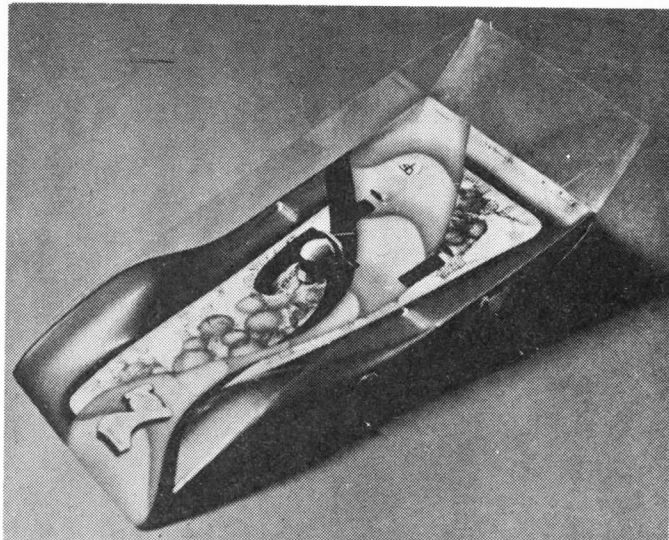


**STEP 20** I'm old fashioned and like to use staples for the side dams as well as the rear so staple the sides down. Make certain that you have the proper spoiler angle (per text) for your type of racing before you nail it. Save the front staples for last.



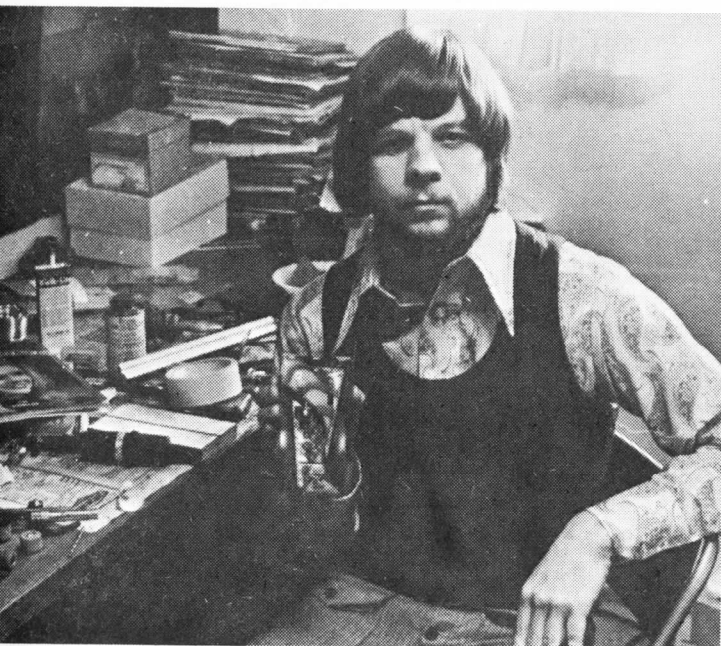
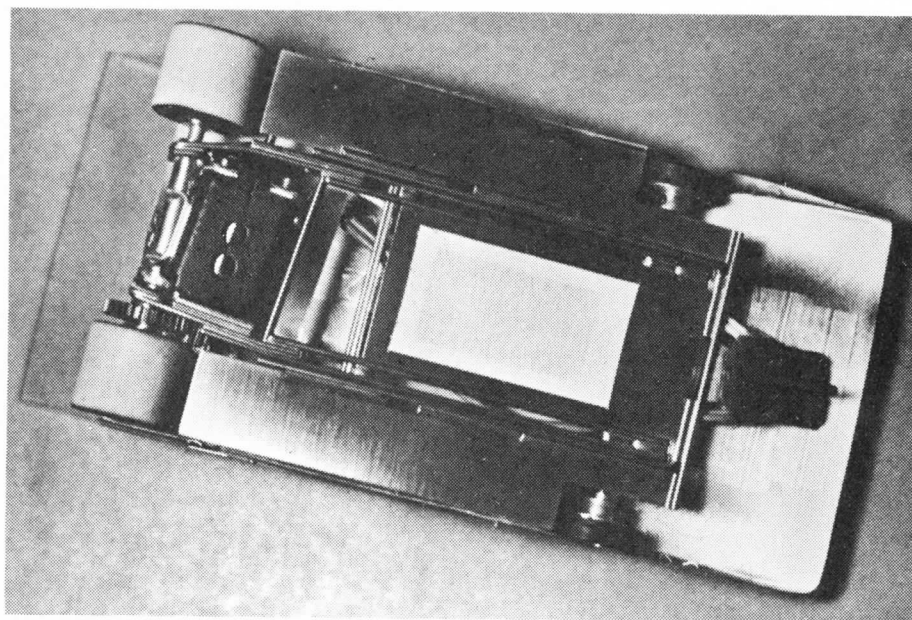
**STEP 21** When doing the front staples as shown, be very careful not to tweak the bod in so doing. Relax and go easy on this part. Trim the top and bottom of the side dams (per text). I did the dams all the way down to the bottom of the bod. It's neat for additional bullit-proofing.

**STEP 22** Trim the front wheel well openings and re-stab the pin mounting holes. Remount the bod and make certain that everything flip-flops neat. Tell your mom and dad that you made it yourself. ➤



**STEP 25** Hack a hole where one should be. This will let out a little of that nasty old air that may get under the schnozz.

**STEP 26** Tape the drop arm hole up with a healthy chunk of tape for any mythical reason you desire. I simply like to keep my lead wires off the track. ➤

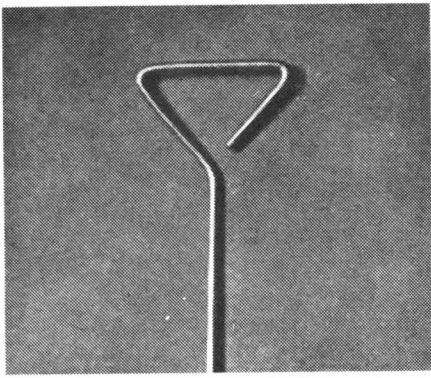


Would you believe that something this neat could come forth from such an outstanding developmental lab . . . I don't.

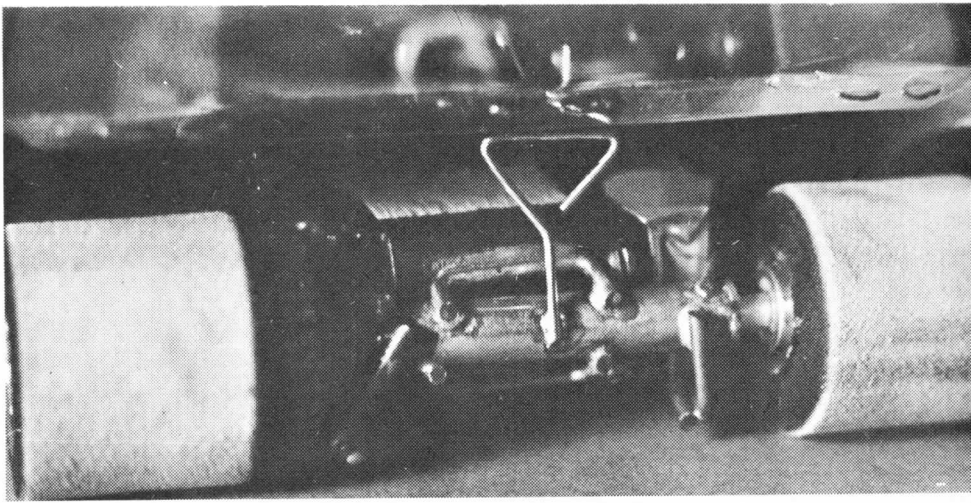


"Good heck, Gilbert, I thought you needed an extra painted bod for the track today. Besides, fifty cents is fifty cents!"

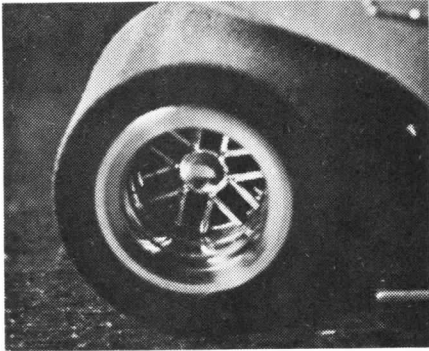





**STEP 23** Bend a body brace thingie like this out of .032 wire. You may want to try your car without one but it can help traction a nick and keep your bod off the tires if you're running wagon wheels.

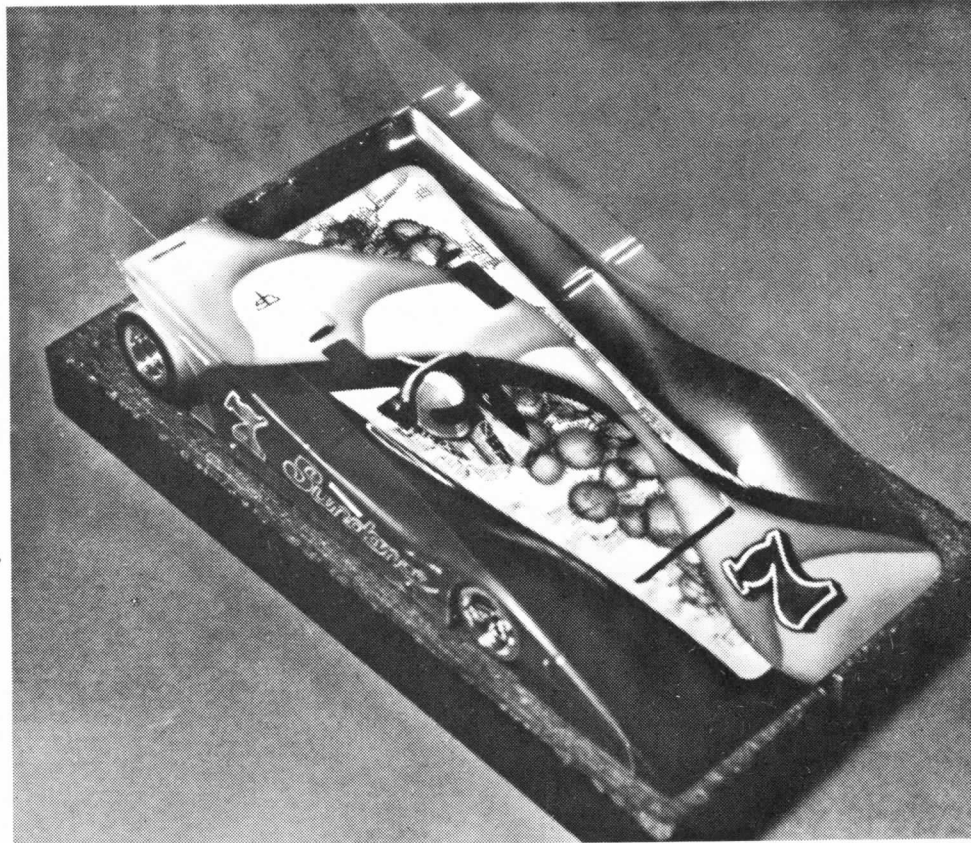


**STEP 24** Solder the brace in place, Grace. Set it as close as possible without touching. The body must float free.

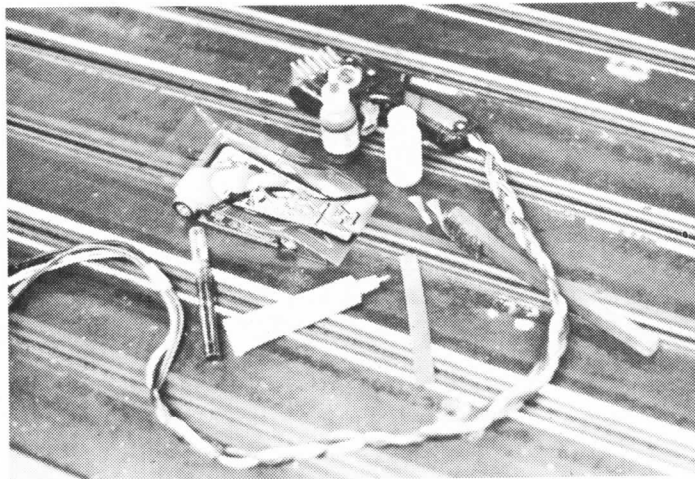


For you scale freaks (like Sundance) here's a neat thing to do for those ugly rims you're running. These may look like Lola rims but actually they're Associated with a touch of Sundance added.

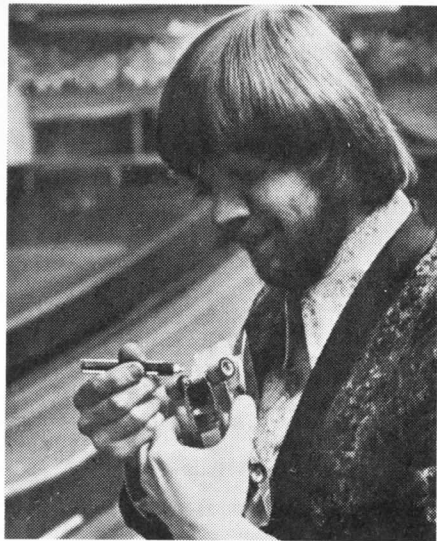
Well, here it is gang. The culmination of six short months and fifty pounds of pizza and Coke. 



"Ta-da! Where's the band?"

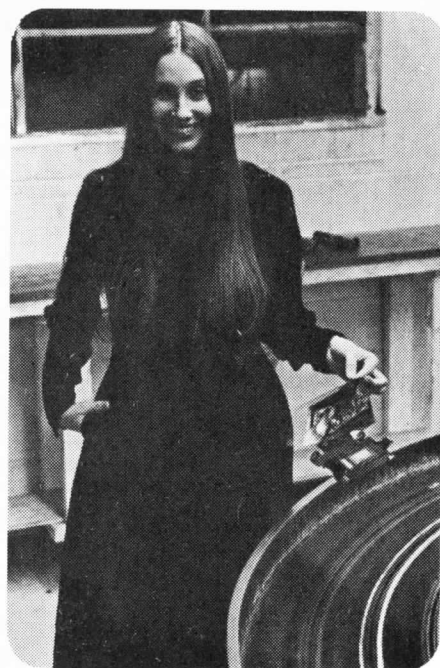


Here's what you should have brought to the track to test your new missile. Don't leave it on the track too long, however, the guy in the lane next to you might get bent. Remember, you're not Lee Gilbert and can't get away with meek stuff.



The first thing you do is have Wolfman here oil all of the wiggly and moving parts on your bomb. (Damn, dimples!)

One lap around the track and our typical turn marshal (girl Friday) a little too enthusiastically retrieves our stalled gem.



"I don't care if you do think it's funny, Dona, I'm gonna' knock your head cleean off!"

**DID YOU MISS ANY OF THE FIRST FIVE PARTS OF THIS GREAT ARTICLE?**

Stage 1: — BUILDING YOUR JIG

Stage 2: — BUILDING THE CHASSIS CENTER SECTION — CHASSIS THEORY

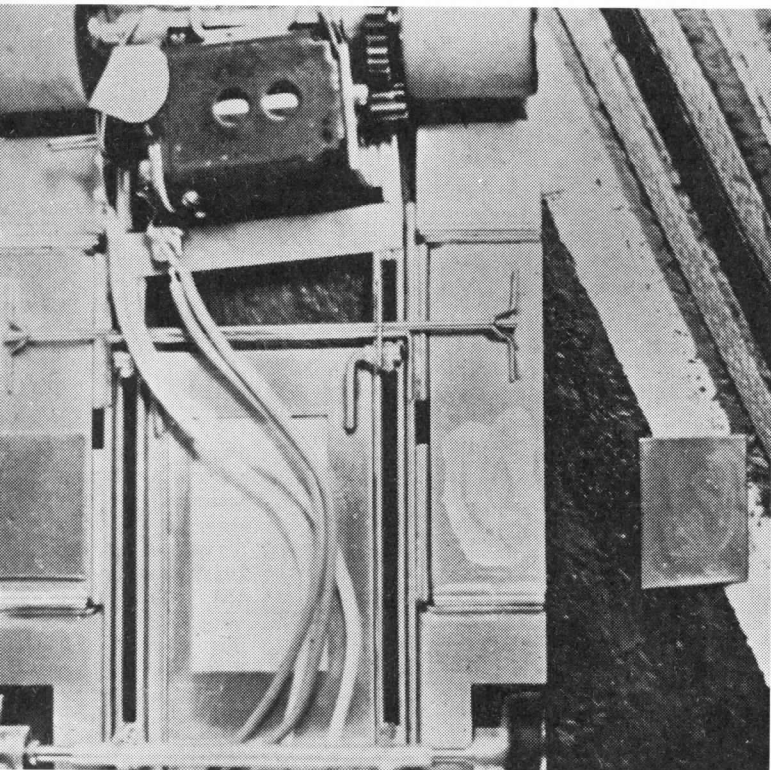
Stage 3: — COMPLETEING THE CHASSIS

Stage 4: — EVERYTHING YOU NEED TO KNOW TO BUILD A WINNING MOTOR

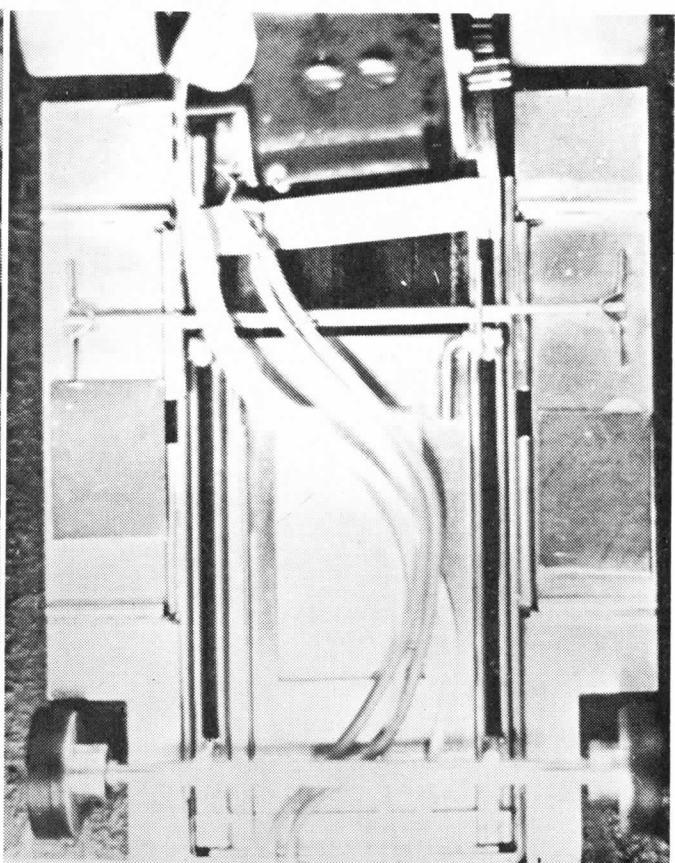
Stage 5: — HOW TO ASSEMBLE AND RACE TUNE YOUR CAR

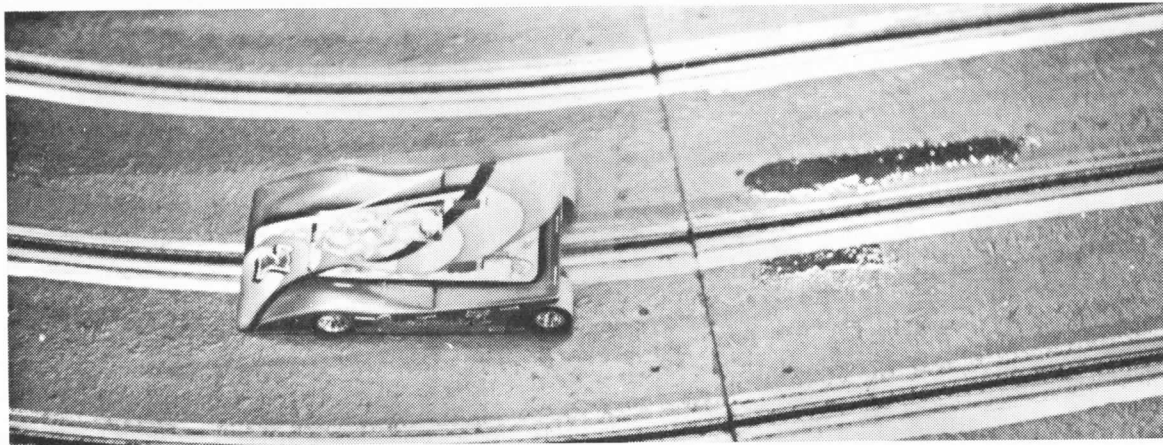
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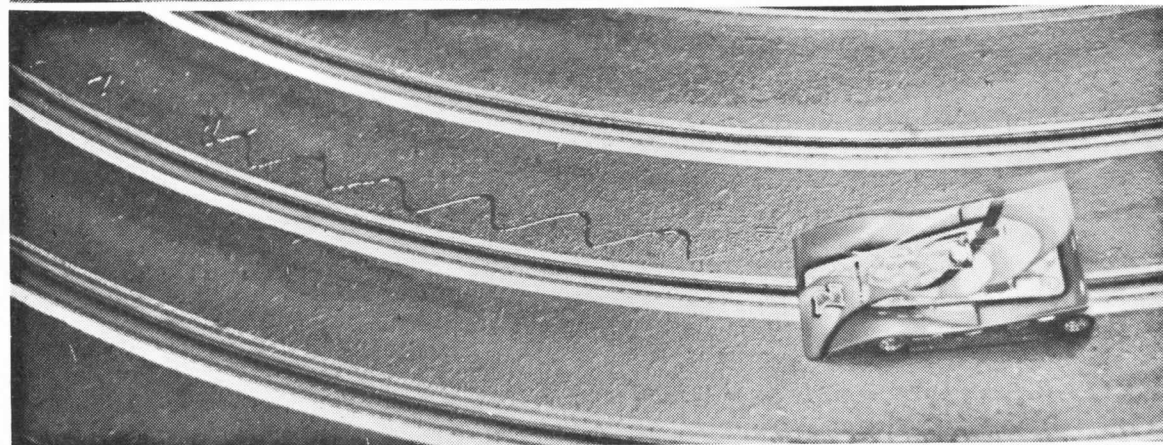


After a little fiddling we found that a tad of lead was needed on the pans in about this position. The right side slipped back here. Move it up and glue it like the left side.

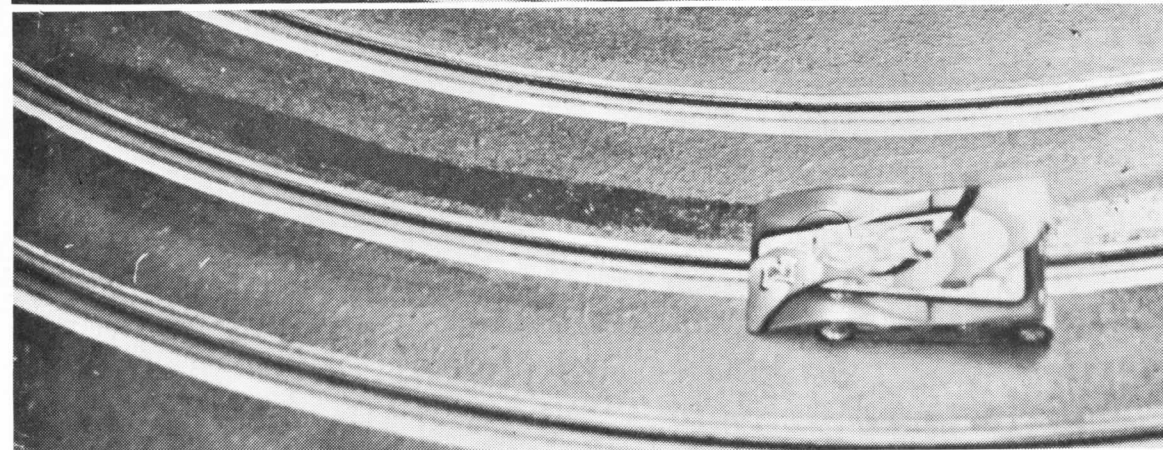




Now that the car is ready here's how to put it through a couple quick paces. Grab your Stick-it and let's glue. Here's the way brakes should be set up ahead of a turn.



This is the way to do the whole turn. Make a wiggly line all the way through the turn on the inside only.



Okay, just smear it in as shown. If you're close this is what you'll have. If you seem to be bogged, drive the turns a little deeper before braking and punch harder and quicker once in the glue. Most turns can be handled flat out with a quick brake in this manner. Use your head and some of that common sense I've taught you.



"You didn't really think that I'd get *my* hands all gooey, did ya'?"

"Pilot to Ground Control: how do I land?"

