MG Midget, 1976

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I COULD BLAME MY GODMOTHER for introducing me to the feel of blasting down a country road in a British sports car at age 8, but that may be going back a little too far. This adventure started just days after I was laid off from my job. I had received a nice severance check and had already secured a new job that started the next Monday, so I had money to spend! I found a little orange MG Midget for sale on the side of the road and called the owner. I looked it over and took it out for a drive where it promptly broke down and I had to have it towed back. Despite the less than perfect test drive, I bought the car.

For the next few months I cleaned polished and rebuilt most of the car as a rolling restoration until driving home one day where I was rear-ended by a driver too busy playing with their radio and not seeing me stopped to make a left turn. I got a trip to the hospital and the Midget was totaled since the rear bumper was pushed up almost to the door. A few weeks later I decided to rebuild the car, but this time it would be built the way I wanted it to be.

The first part of this transformation was finding a more modern power plant with a 5-speed transmission to replace the fragile 1500cc four banger motor and 4-speed transmission. After doing some research, I found that the Mazda rotary motor should be a good fit. Small, light, high revving and it came matted to a 5 speed transmission. After looking at a friend and coworkers '93 R1 RX-7, I decided that I would try to find a core motor and transmission to see if I could get it to fit and use during the build process. I ended up finding an '86 motor and transmission at the junk yard and

bought it not knowing what I would have to do to make it fit.

To fit the 13B into the Midget, I had to remove the front cover, oil pan, and oil pickup to swap them for '84-85 GSL-SE parts. This allowed me to make a front mount that fit nicely in the Midget's engine bay. The 13B looked like it would fit well, except for one area that was hitting the intake manifold. That area of the unibody was cut out and a boxed section welded inward to keep strength and give plenty of clearance. I also had to make a new transmission mount to center it in the very small tunnel. The fuel injection system was scrapped because the Mazda intake sat too high and would not allow the hood to close. An intake from Racing Beat was bought and matted to a Weber 48DCO carburetor that I had traded with my friend Jake for. Now it all fit under the hood.

At this point my co-worker Francis suggested that I look at how I was going to apply this new found rotary power to the ground. The stock Midget ran 13" x 4" wheels and 165 size tires. Not exactly what you want to use to put power down with. So the shopping list now included wider wheels, fender flares and possibly a better suspension if I could find one. Oh, and he asked how was I going to stop this beast since I had stressed the stock front disk rear drum setup several times on the road and the drilled rotors I had made were only slightly helping matters. Scratch wider wheels from the shopping list. Add wider and larger diameter wheels to clear larger disk brakes that I had to use.

Well, I got lucky with two items on my list. The first was at the Import Carlisle show. I found Spridgetech, a business that specialized in making composite body parts for racing MG Midgets and Austin-Healy Sprites (the sister car to the Midget). They happened to carry a set of light weight fiberglass fenders and hoods that would give me the room I would need for wider wheels, and also converted the look of the rear fender from a square wheel arch to a round arch that just looks better and allows easier wheel removal. After test fitting the fender I found that 15" x 8" wheels would fit very tightly in the wheel wells, and by calculations a 225/50/15 tire would work.

The second lucky find was the wheels. I made many phone calls looking for wheels with the proper offset and bolt pattern to work on the Midget. I finally found a set in a distributor's warehouse that were special ordered but the buyer had backed out of the deal. The owner made me a good deal on the wheels and they were on the way. Wheels—done!

The remaining items could not be bought outright, so I had to make them myself. After spending several days researching different designs and using CAD software to design a rear suspension, I had something I liked and got rid of the heavy stock leaf springs. I purchased a used GSL-SE rear and took it to Jim Robinson Racing in Lutherville, MD to have the axle housing narrowed to fit under the Midget. The axles were sent out to Moser Engineering to be cut down and re-splined. Add a few more days to fabricate and weld the pieces together and I ended up with a 4-link suspension that uses aluminum coil-over shocks to located the narrowed Mazda RX-7 GSL-SE rear axle.

The brakes I used are Wildwood 4-piston Dynalite calipers that bite down on 11.75" diameter, 1.25" thick Ultralight curved vane rotors. These parts were carefully chosen to give the proper brake pedal feel when using the stock Midget brake master cylinder. To make these parts work on the Midget, I had to design and fabricate caliper mounts and modify a set of rotor hats to position the rotors so they would clear suspension parts and keep the caliper from hitting the wheel. Sounds simple, but it took a lot of measuring and research of manufactures specs to get it all to fit.

The front suspension is not quite a custom as the rear, but it uses a lot of racing components sourced from The Winners Circle. Negative camber bushings, larger sway bar with rod end links, 1" lowered springs, 1" spring pan lowering kit, and very hard Nylatron bushings throughout to get rid of any compliance found in rubber or urethane bushings. I also re-valved the stock lever-style shocks to give more bump and rebound control.

I built the roll cage as the car was being built so that I could connect important suspension parts to it to keep the car stiff and the unibody from flexing. The cage uses a front roll bar under the dash and a larger rear roll bar over the driver and passenger. The roll bars are connected to each other with door bars that triangulate and brace the structure and the loads from the suspension. Front and rear braces were added to aid in the event of an impact and to hopefully keep the structure secure if anyone should rear end me again!

After the major parts of the car were assembled, I tested the car for about a year and a half with its current RP Performance street-ported 13B. The lit-

tle Midget went from about 39lbs/hp in its stock MG state to 7.8lbs/hp weight ratio really made the performance of the car shine. The acceleration from 0-60mph in stock form was 15.5 seconds (Road & Track 1976), and after the transformation to the RX-Midget those times dropped to 4.2 seconds using my GTech. During this time the car was in primer and was a bit rough looking, but it made it easier for me to work on and make modifications and tweaks to the car and suspension without worrying about messing up a nice new paint job. During this time the car allowed me to win the MWCSCC 2001 Autocross series Championship and also take 2nd place in the Washington DC region SCCA Autocross series in the E Modified class. I was also able to win several Fastest Time of the Day awards at other events and a 2nd place overall in a NASA Time Trial at Summit Point Raceway. All this took place the first season the car was running.

During the time I was running the car in primer, I was tuning the Weber carburetor. One night I was in a hurry to get done and I hopped in and went out for a test drive to see if the jet changes I made were working. Once I got out of my neighborhood and up to about 50mph, I saw a huge grey object lift off the car and disappear. I though "What was that! Hey I can see the motor now, that was the hood that flew off!!" In my haste to go out for a test drive, I forgot to put in the four pins that hold the hood in place. So after carefully pulling off the road and running back to get the cracked hood before someone hit it, I sheepishly installed the hood and this time installed the four pins that were left sitting in the passenger's seat.

The last step in the transformation started with the complete teardown of the car for the second time. Everything was removed, cleaned and painted. After going to several street rod shows and looking at the beautiful custom cars, I decided to apply a few tricks I had seen to the Midget. The result of these efforts are shaved door and trunk handles, recessed front driving lights with turn signals incorporated in the same housing, and a completely flush LED third brake light. The backup lights, fuel filler and bumper mounts were removed and smoothed. After about a year worth of work, the car was ready for paint.

The final body work and painting was done by The Winning Finish in Littlestown, PA. PPG DMC905 Bright Yellow was used with PPG 4833 Performance White used for the stripes. The car was painted inside and out to give it a clean look while running without heavy interior carpet and accessories. The dash was made from 2 layers of fiberglass and covered in Carbon Fiber by Mark at Carbonfiberparts.net. My goal was to get the car ready so that we could make it to Carlisle for the Import Car Show. The car was reassembled in three very hectic days from a bare painted body shell to the car you now see with the help of my good friend John. The car started on the first try and we were off in the "new" RX-Midget. We were a little late getting there, but we made it.

The first event that the RX-Midget competed in was the National Road Autocross in Cumberland, MD. The RX-Midget earned the Competition Car Award for looking good and running in the top 10 all weekend. We managed to beat all the Corvettes and most of the modified AWD Turbo Porsches that cost 10 times what I have in the RX-Midget. Not a bad way to start the year!

Since the car has been finished, I've been asked several times if I would sell the RX-Midget. My answer is always, "She isn't for sale." Everything is just the way I want it on the car, from the position of the controls to fit me, to the design and style of many of the fabricated parts I made. Once you spend 7 years off and on working on every part on a car, you tend to get a bit attached.

MODIFICATIONS

- '86 Mazda RX-7 13B Rotary: Streeported by RP Performance
- Header: custom-made long primary system, Jet-HOT 2000 coated.
- Fuel Cell: ATL 12gal cell with Holley Red fuel pump and regulator
- Intake: Weber 48DCO side draft matted to a Racing Beat manifold
- Transmission: '86 Mazda RX-7 5 speed, 84 B2000 tail shaft housing and shift rod ends
- Rear Axle: '84/85 Mazda RX-7 GSLE, narrowed to fit Midget.
- Front Suspension: Nylatron bushings, 30% stiffer shocks, lowered 2", 1/2" sway bar, 340 lb springs
- Rear Suspension: Custom 4-link with coil over shocks
- Brakes: Front 11.75 x 1.25" Wildwood Ultralite rotors, modified rotor hats, Wildwood Dynalite II calipers, Rear 10" X .8" vented Mazda rotors, stock Mazda rear calipers, Hawk brake pads
- Chassis: slight modification for rear suspension, full roll cage to connect all suspension points
- Wheels: 15x8" Superlite wheel
- Tires: 225/45/15 Kumho V700 R compound tires
- Body: Fiberglass fenders and hood from Spridgetech, Inc.
- Dash: Custom-built and covered in C/F by Mark at Carbonfiber.net
- Gauges: Autometer Ultralite. Tach is an Autometer Sport-Comp Silver 5" tach.
- Shift Light: Sequential LED shift light from DKS Electronics
- Battery: Sealed Gell Cell from motorcycle
- Wiring Harness: EZ Wiring universal Streetrod Harness
- All fabrication and welding work was done by me. The motor re-build, rear axle narrowing, paint, and carbon fiber dash were done by other shops.

Special thanks

I'd like to say a special thanks to my wife Denise for putting up with the long nights in the garage, my parents for letting me use their garage for the first couple years until we bought a house with a garage, my friends John, Jake, Francis, Alex, Mike, and Mark for their help and ideas over the years, MG's of Baltimore and to my father for working hard to help me with the first stage of body work.