

story by bs levy • photos by david s. wallens

This flyweight roadster looks like some kind of low-slung mutant robot praying mantis from outer space, the kind of thing that chases you in a very bad dream. It's practically a see-through cutaway drawing, with exoskeleton, cockpit interior, mechanical guts and the scenery on the opposite side of the road all readily visible.

You'll also note that the bare-essentials Atom stands barely waist-high at the air intake and isn't encumbered with such road-going niceties as doors, windows or a top. It makes a traditional sports car look positively watertight and sumptuous by comparison.

But this isn't some rude, crude, back-alley creation. The Atom is state-of-the-art, elegant and gorgeous in both concept and intimate detail, and the engineering and fine craftsmanship that have gone into it are obvious wherever you look.

You can't help wanting to drive it—maybe even own one?—but the obvious, elephant-in-the-room question lingers: What the hell is an Ariel Atom good for?

Ariel Atom good for?

But then some rich, happy bastard with bugs in his smile wanders up, jumps in, fires

in his smile wanders up, jumps in, fires it up with a noise that pierces like a wasp's sting and

toward the horizon in a squealing haze of hot rubber smoke, emission-legal combustion fumes and utter disbelief. It goes like stink, by the way.

Which makes the Ariel Atom at once fascinating, confusing, amusing, audacious, great fun, scary fast, utterly frivolous, a wee bit antisocial, patently ridiculous, totally captivating and desperately desirable. Throw in a pinch of irresistible, too.

As a practical matter (not that the words "practical" and "Ariel Atom" necessarily belong in the same sentence), it's like a couple of crotch-rocket superbikes hitched in tandem.

The driving experience is much the same—call it a "butt rocket," perhaps?





A Little History

The Ariel name goes way back to 1898 and attaches itself to one of the oldest and proudest histories in the annals of British automobile and motorcycle manufacture. Who can forget the famous Ariel Square Four two-wheeler of 1931-'59 (especially if you ever heard one with straight pipes!)?

The amazing Atom fits perfectly into the Ariel tradition, as it more or less bridges the gap between four-wheeler security and berserker two-wheeled fun. Or, as avid Atom owner Jay Leno puts it, "The Atom is the safest high-performance motorcycle you can buy."

The Atom story starts with a talented, creative and obviously hardworking Englishman named Simon Saunders, who dreamed up the Atom as a minimalist, yet thoroughly up-to-the-minute, modern sports car. And he had the drive, talent, skills and entrepreneurial flair to pull it off-not just as a one-off piece of dazzling mechanical sculpture, but as an actual, successful, low-volume production car.

Saunders started out with a compact, but terrifically stout-looking, tubular space frame—a bit reminiscent of an old Cooper skeleton with its large-diameter, gently curving top side rails—and added state-ofthe-art, Formula 1-style pushrod suspension with graceful, elegantly fabricated A-arms, nifty aluminum bellcranks and inboard, fully adjustable coil-over springs. He then hung big, fat tires on wide alloy wheels out on the far corners, covered by snug little fiberglass fenders that can be upgraded to carbon fiber if you really need to shave those last few ounces.

For power, Saunders selected a 220-horsepower Honda iVTEC engine and six-speed, front-wheel-drive transaxle unit and packaged everything neatly into the back end. Finally, he added just enough in the way of lights, horn, dashboard and not much else to make it street legal.

Advertised all-up weight was right at 1000 pounds, so performance figured to be somewhat beyond scintillating. In spite of the Atom's tiny size, the molded, one-piece seat/center console assembly had sufficient room for two full-sized (or even slightly more than full-sized) adultsalthough they would be rather chummy.

Not too many people knew how to take the Ariel Atom when it first appeared in 2001. It was strange, beautifully built, Spartan to the core and totally impractical. It was also fairly expensive at roughly \$40,000 at the time.

Then gonzo Brit motoring journalist Jeremy Clarkson did a TV drive report for the BBC's popular "Top Gear" television show—howling with maniacal glee as he squirted the Atom around corners and blasted it up through the gears, the wind and acceleration fairly peeling the cheeks off his face—and pronounced it both the fastest and most entertaining motorcar he'd ever experienced.

A line began to form at Saunders's door. Then an Atom won Track and Race Cars magazine's 0-100-0 face-off at 10.88 seconds (ahead of a Caterham CSR260, Ford GT and Porsche 911 Carrera S), and another copped Autocar's 0-100 contest at an arresting (in more ways than one?) 6.86 seconds. As you can well imagine, the line got even longer.

Coming to America

At that point, Saunders and his staff were building three Atoms at a time in a shop so

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small they could barely walk around the cars in progress. They've since moved to larger quarters (they can now build six at a time), but demand still far exceeds supply.

So a deal was struck with Brammo Motorsports in Ashland, Ore., to build U.S.-spec Atoms under license. The U.S. cars differ from the original British Atom in that they're two inches longer to accommodate an oh-so-practical supercharged GM Ecotec four-banger/four-speed gearbox package that's available in a couple of different versions with varying horsepower. The American-market car also uses individual seats rather than a molded, one-piece interior.

Leno bought the very first Brammo Atom, and he absolutely loves it: "I drive it just about every week, and it's fantastic fun, especially whipping around corners on a canyon road. It's so small that there's always plenty of room to maneuver without going over the centerline. A lot of my cars—like my Ford GT—are so good that they feel like they're doing 60 when they're actually going 100. The Atom is just the opposite. It feels like it's going 100 when it's only doing 60!"

And right there is the magic. Plus, as Jay notes through a wide grin, "If you need a belt or an alternator or something, you can go down to your local auto parts store and buy it right over the counter for 50 bucks. Hey, it's a Chevy."

A Test Drive

There are more than 350 Ariel Atoms running around the world these days and, thanks to enthusiastic Atom owner Randy Lamp of Rogers, Ark., we had two of them to test drive at the brand new Eagles Canyon Raceway near Dallas.

Randy fairly bubbles over when explaining the joys of Atom ownership: "I've put over 4000 miles on mine, and it's just so much fun to drive, like every mile is something you're getting away with. And the way people look at you! Come into a gas station for a fill-up and jaws drop, eyes bug out and grown men walk

into lamp posts.'

Randy's become borderline evangelical about Atom ownership, and he almost single-handedly put together the upcoming AtomFest planned for Hallett Raceway near Tulsa on Oct. 18-20. Then again, he's in his mid-50s and has spent many years riding fast motorcycles, so the Atom represents Randy's very first Track Car Affair. One has to wonder how much of it is the Atom and how much of it is just the delicious freedom and release of a wide-open ribbon of snaking asphalt with no cops, no speed limits and no dangers—except the edge of the laws of physics and your own personal skill, judgment and desire.

Unfortunately, his own Atom was out of action before we even started. Seems his brother was out for a bit of a joy ride the day before, swerved to miss a critter scampering across a gravel road (or that's his story, anyway), hooked a rut all funny and took out about 40 feet of five-line barbed wire fence. Fortunately he emerged without injury thanks to the Atom's sturdy construction and a full-face racing helmet, but the excursion didn't do the Atom much good at all. This was a shame, since Randy has been hard at work with ace driver and school-of-hard-knocks racing engineer Tim Webb getting his Atom properly dialed in for serious track work. More on that later.

Dallas's Newest Race Track: Eagles Canyon

It always gives us a charge when somebody fronts up with a new race track. Especially when it's as nifty and nice as the new Eagles Canyon Raceway outside of Dallas promises to be.

Owners Dave and Linda Cook have been around speed and motorsports for a long time (Linda used to be a competitive skier, raced quite a bit in her native Canada, did the Ferrari Challenge series and has driven a Corvette in Grand-Am Cup) and they've really done a fabulous job with the location, design and construction of their new circuit.

They started off with a wonderfully swoopy chunk of real estate just a little north of Dallas, then carved, molded and paved it to a design by experienced racer, track designer and Formula 1 driving coach Rob Wilson (no relation to

well known track designer Alan Wilson). We were lucky to be the first outsiders ever to try the track, but it was still very much a "work in progress" when we arrived. Although the base layers of asphalt were already down and cured, the top, "racing surface" layer was yet to come. Not to mention there were bulldozers, graders and dump trucks running around all over the place.

We had to be a little careful since the raw concrete pit wall was just going up, the pits themselves were still on the drawing board (so we had to pretty much pit at the side of the track), construction dust and debris were everywhere (the final, double-apex complex through the last two corners was particularly slippery) and none of the curbings or berms were in yet. Which meant you were in for a particularly nasty and

destructive

ride if you

dropped a

. wheel

off the black part. It also meant that we couldn't technically run at 10-tenths.

All that said, the place is fantastic. You start out with hard braking at the end of the pit straight (after a deceptive blind crest, of course) into a tricky rightleft chicane, chase up a shallow hill into the first of several double left-hander combinations that challenge you to turn them into one big, smooth sweeper.

Then comes a blind, scary fast downhill right with two distinct elevation changes, a tightening-radius uphill right that flattens out at the top, and a short straight into another double-left that launches you onto a decent straight-away. Finally, time to check the gauges!

Next, go hard on the brakes and flick down a gear or two for a climbing left that flows immediately into a difficult, hard-to-judge, falling-away right, another short burst of acceleration and a tough, fast, plummeting left followed by an absolutely lovely drift through another left at the bottom. But there's little time to savor it since you're almost immediately into a nifty, steeply climbing carousel that flattens out deceptively at the end, another straightaway burst and then that final, double-left complex leading onto the pit straight.

Linda Cook was nice enough to show us around in her Porsche GT3, and I'd have to say we spent the whole day pounding around the 2.5-mile Eagles' Canyon layout without coming close to mastering it. The layout and elevation changes make it a true driver's track with great flow and rhythm and a nice balance between technical stuff and gut hollowers. No question it's going to be a wonderful place to go racing once the paving job is finished and the rest of

> are put in. First race weekends are scheduled for June of this year, and I expect Eagles Canyon to develop into a real racers' favorite.

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consistency proved to be a genuine challenge—even for the experienced Atom folks on hand—and I think we can ship the whole business off to that great trash bin in the sky labeled "Cumbersome, Intrusive and Counterintuitive Electronic Wizardry." Although that bin is already packed pretty full of early BMW iDrive hardware.

Let 'Er Rip

With avid Atom owners Jim and Randy and designated development hotshoe Tim Webb hovering over me, we finally got the stinger in the tail fired up (it buzzes right through your spine) and I carefully selected first gear, let out the surprisingly gentle clutch and fairly leaped out onto the race track.

And a whole new world rapidly unfolded. A raw, excited, on-the-edge world where everything feels sudden, explosive and hair-trigger instantaneous. And hilariously, even maniacally entertaining.

The Atom doesn't so much carve up a race track as devour it in a wild feeding frenzy. But maybe the best part is that, if you really wanted to, you could brake hard and turn sharp right onto the gravel access road, pull out the gate onto the highway and head for the corner grocery store. Or off to Portland, Peoria or Poughkeepsie if you felt like it. Not that it would be the most comfortable or weather-protected of journeys—at least by car standards—but it would be one hell of a luxurious motorcycle ride.

Tim Webb and I hopped back and forth from car to car all day, and it was interesting to note the differences between the two Atoms. Surprisingly, the British-built one—which was supposed to have less power—felt

seat-of-the-pants stronger, particularly in the low and mid-range. But in spite of its six-speed gearbox (and here the pendulum swings the other way), many of the corners fell right smack-dab between gears, while the gearing in the Brammo Atom's five-speed was ideal for the Eagles Canyon layout.

The gear linkage in the U.S.-spec car felt better, too, but it was hard to be really smooth in either Atom. I kept telling myself—like you do in a good formula car—to drive less. Less steering. Less sudden on the gas and brakes. Smooth it out. Tim said that they'd lowered the ride height on Randy's car (you remember, the no-show that took out the barbed wire fence?) and fooled with the shocks and alignment to make it a better track day weapon, and the results were highly promising.

In passing, I noted that the two Atoms on hand both had red "helper coils" (a second, soft coil spring that stays fully compressed at normal load and ride height, but gently extends to keep the tire in contact with the road on full droop) on one end of the car, but the Brammo car had them in front while the British-built Atom had them in back. Go figure.

The Low-Buck Alternative

That's where it all would have ended, spending a glorious day thrashing two tiny, willing, brilliantly nimble and thoroughly outrageous Ariel Atoms at Eagles Canyon, followed by a nice dinner (at Randy's expense, of course) and a few hours at the computer. Only it was Editor David's idea to include a comparison vehicle—let's call it a "control car"—in the test. And the vehicle selected was Keith Tanner's well-used/oft-abused, Mazda Miata-based home-built Locost.

sources

Ariel Motor Company Ltd.: 01460 78817, arielmotor.co.uk

AtomFest: atomfest.org

CheapSportsCar.net: www.CheapSportsCar.net

Brammo Motorsports: (541) 482-9555, www.arielatom.com
Eagles Canyon Raceway: (817) 424-2419, www.eaglescanyon.com



I must admit I was intrigued with the idea of comparing a state-of-the-art, "store bought" and expensive automotive toy—the Brammo Atom starts in the \$55,000 range these days if you want the Ecotec engine and goes up from there as you add all the bells and whistles—against a junkyard-dog home-built that the owner swears up and down cost less than 10 grand to build.

And here we arrive at what became, all by itself, the core essence of the whole experience: the difference between perception and performance. It can also be described as the difference between joy on the road (which is all about fun and feel) and joy on the race track (which all comes down to lap times). Did I mention our "junkyard dog" turned out to be a bit of a ringer?

You have to understand that Locost owner/builder/driver Keith Tanner is hardly your average, back-alley torch wielder. First off, he works at Flyin' Miata, which gives him unfair advantage access to a fully equipped shop and all sorts of mechanical skills, hardware, experience, contacts and expertise that might not be available to John Q. or Fred Average.

Second, he wrote the book on building Locosts. No, really. It's titled "How to Build a Cheap Sports Car," and it traces the entire, frame-out build process of the very car we had on hand at Eagles Canyon. Keith's book is available for \$29.95 from motorbooks.com, and it's an absolutely brilliant read for anyone even remotely interested in cars, engineering, high-performance track machinery, engine and suspension tuning or garage projects in general.

Turns out Keith's a fine, often funny writer with a wonderful, practical, nuts-and-bolts grasp of things like spring rates, anti-roll bars, suspension geometry, bumpsteer, brake balance, dash wiring, engine hop-up modifications and on and on. Better yet, he puts it into words and phrases that an average Joe can understand. And enjoy. Go online and buy yourself a copy right now.

Although licensed and more or less street legal, Keith's Locost was built specifically as an autocross/track day car (he calls it his "track bitch") and is a little stiff and under-trimmed for road duty. And, in spite of that seductive "I built it for 10 grand out of a trashed Miata" come-on, Keith's Locost evidences a tremendous amount of thoughtful, sharp engineering and countless build and development hours that don't exactly show on the bottom line. But they sure showed up on the race track!

After the explosive, even edgy nervous energy of the Atom, Keith's car felt incredibly smooth, well balanced, predictable and easy to drive. And fast, too.

Tim Webb and I drove all three cars all day long, and several facts became apparent. First off, neither of the Atoms on hand were as well dialed-in for track work as the one Tim had been working on with Randy. Although they were great fun to drive and hysterically entertaining from both the outside and behind the wheel, neither Atom was as easy to drive near the limit as Keith's Locost. Sure, the Atoms felt faster, but it was hard not to be darty, the throttle felt like a toggle switch that went from Nobody Home to W.F.O. at the slightest provocation, and we couldn't get either car to trim out in a nice, stable drift through the faster corners.

We could get them to change direction in half a heartbeat, but it was like we were always negotiating with either one end of the car or the other. To their credit, the Atoms responded perfectly to every input or correction and were terrifically controllable, but we were working them all the time.







Entertaining? For sure. The hot setup for a track day burner? Umm, let me get back to you on that.

Suffice to say that, with Tim the Ace in the Locost and me in the Brammo Atom, I couldn't chase him down. And when we swapped cars, he couldn't chase me down, either. And believe me, given the "construction site" condition of the track, we wuz *TRYIN*!

This brought the claimed "300 horsepower" of the Brammo car into question, since the hopped-up 1600cc Miata engine in Keith's Locost had run over the dyno rollers at precisely 148 horsepower at the rear wheels. The Atom wasn't exactly leaving the Locost behind on the straightaways, and both cars were hitting around 112 (at least according to their speedos) at the crest on the back straight.

A few days later, Jim Sharp ran the Brammo Atom over the rollers and it churned out a rather disappointing 212 at the wheels—and had a weaker torque curve than the 230-horsepower version in Randy's car. As I write this, Jim's car is on its way back to Brammo to see what's up with the engine, but no question it was down on power from what it should have had.

To be fair to the Atom, Keith's Locost was set up specifically as a track car and was quite a bit stiffer than you would ever want on the street. And one of the problems on any car with adjustable suspension and shocks and so forth is that you can adjust yourself out of the ballpark just as easily as you can dial your way in. It takes shrewd track-side engineering, a methodical approach and plenty of seat time to get the best out of such a machine, but no question the hardware and potential are there.

So, with Jim's enthusiastic permission, toward the end of the day we started fooling around with some very basic settings to see if we couldn't improve the Brammo car's feel. We didn't have the time or equipment to experiment with things like ride height, alignment or geometry, but after discovering the shocks were set at Full Limp on both jounce and rebound at both ends, we bumped them up to half-hard, fiddled with the brake bias a little and put on a set of slicks.

What an enormous improvement! All of a sudden the Brammo Atom came alive, and became even more fun to drive in the process. Makes you wonder what you could do with all the advertised horsepower on tap, a more progressive throttle linkage and a few days of track-side setup tuning.

What Did We Learn?

In the end, we all loved the Ariel Atoms dearly (even though none of us were exactly sure what they were good for) and felt convinced that, with a little development work and no changes whatsoever to the essential design, they could be turned into devastatingly quick and enjoyable track day cars. As it was, they were very fast, beautiful to behold and enormously entertaining from both the outside and behind the wheel.

But the surprise star this particular day had to be Keith Tanner's Locost. It was simple, well thought out, nicely if not extravagantly built, marvelously well developed and unbelievably sweet to drive. When a car feels that good, it almost seems to disappear. Then it's just you and the race track, Bub. Just you and the race track....







Locost might not be as flashy as the Atom, but it still has muscle where it counts thanks to a high-revving Miata engine. The interior has everything needed for a day at the track: tachometer, roll bar, safety belts, fire bottle and a great view of the track.



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