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JANUARY 2005 • VOLUME 17, NO. 01

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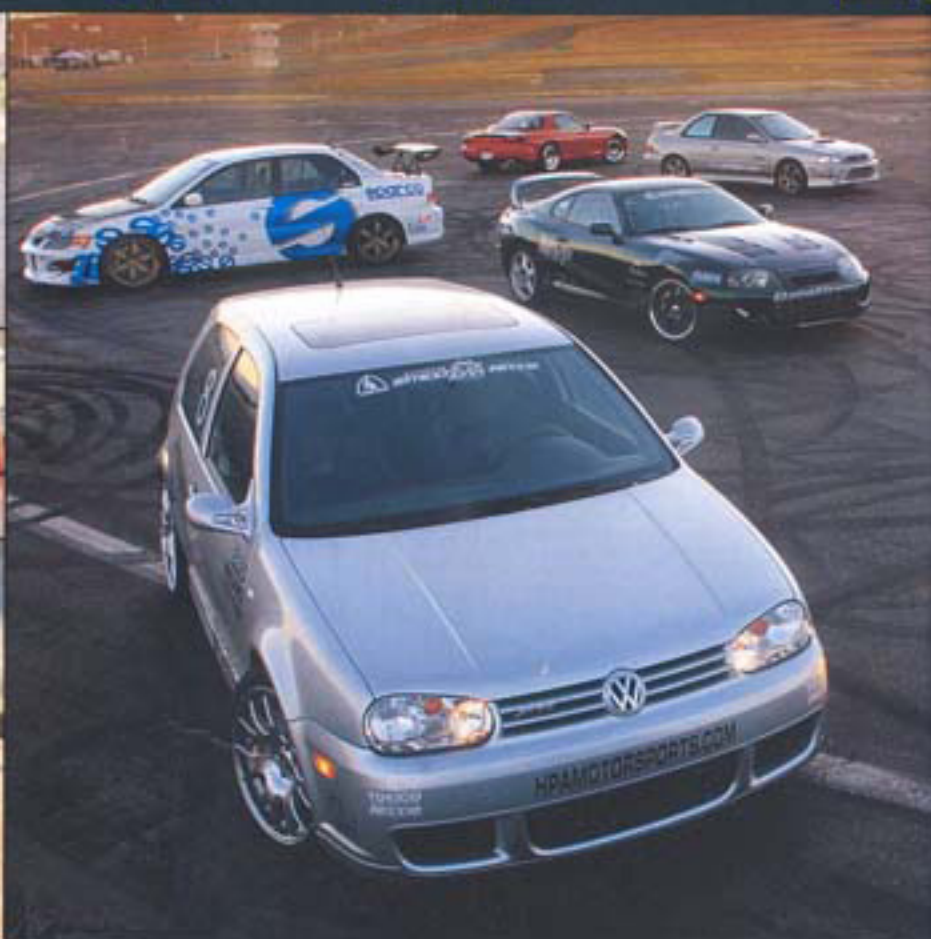
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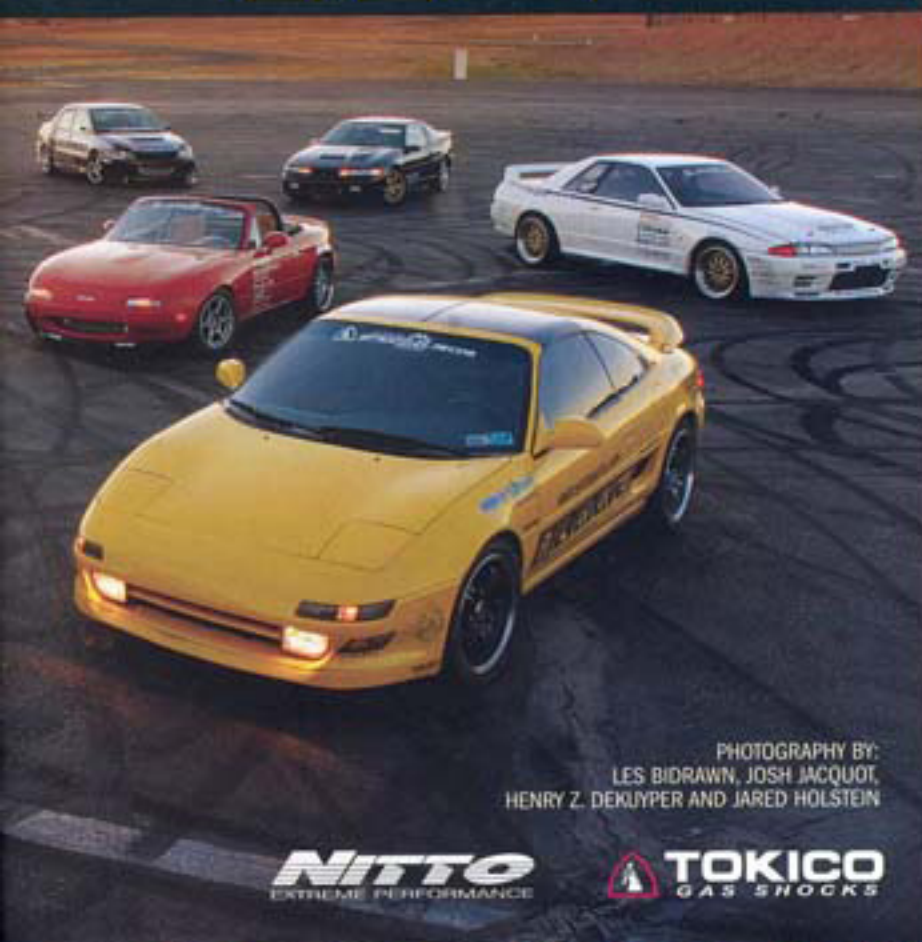
Fourteen of the 15 USCC tests are scored on a 110-point scale with the winner getting 110 points, the loser getting 10. Those who blow up so bad they can't cross the finish line get a zero. The scores for everyone but the best, worst and most blown-up are based on how the competitor finished relative to the best and worst car. If, for example, the most powerful car made 800 hp and the least powerful made 300 hp, there would be a 500-hp spread between them. A car making 700 hp would be 80 percent of the way from the loser to the winner, so it would get 90 points (that's 80 points, plus 10 points for not blowing up.)

Now the exceptions: The Gross Display of Horsepower is worth only 25 points and is scored by a panel of judges well versed in the art of the burnout. The gas mileage test is worth a total of 120 points since we offered an extra 10 bonus points for anyone willing to pour our 91-octane swill into their tank.

A perfect score for the USCC is 1,575 points. — Dave Coleman



ATE



PHOTOGRAPHY BY:
LES BIDRAWN, JOSH JACQUOT,
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Welcome to the Ultimate Street Car Challenge 2004. Or, as we like to call it, the best car test the world has ever seen.

The USCC is fiercely competitive. It's an intensive 48-hour test of man and machine. To win, a car must be fast, durable, powerful, usable, nice on the eyes and easy on the environment. For the victor, the rewards are a big glass trophy and immense satisfaction, while the losers get smaller glass trophies.

Regardless of the risk, for the fourth year in a row 10 crazies* took up the challenge and agreed to meet us in Los Angeles for the two days of absolute automotive bliss and abuse that is the USCC.

The first day was spent at the headquarters of K&N Filters in Riverside, Calif., where the cars competed in a car show, were put on the chassis dyno and judged by a team of experts for their engineering. We sampled their driveability, measured their fuel economy, checked their emissions and gave gassy Grandma a ride in each.

The next day we hit Los Angeles County Raceway in Palmdale, Calif., where the cars battled it out on the dragstrip, and Willow Springs Raceway in Rosamond, Calif., where they competed on the 200-foot skidpad and the 1.5-mile road course.

Fifteen grueling tests in all.

If you tuned in last month, you already know about the cars. We covered all 10 in serious detail. Who won? Who has the ultimate street car? Turn the page to find out. Enjoy the action. — Scott Oldham

* This year the 10 crazies are:

Machine	Man
1994 Mitsubishi Eclipse GSX	Scott Gray, Agoura Hills, Calif.
1992 Nissan Skyline GT-R	Nick Wang, Chicago, Ill.
1997 Toyota Supra Turbo	Matt Andrews, Irvine, Calif.
1995 Mazda Miata	Andrew Campbell, Garland, Texas
1991 Toyota MR2	Brad Bedell, Plano, Texas
1999 Subaru Impreza 2.5RS	William Koose, San Jose, Calif.
2004 Volkswagen R32	Marcel Horn, Surrey, BC, Canada
1994 Mazda RX-7	Jason Cameron, Irving, Texas
2003 Mitsubishi EVO VIII	Robert Fuller, Apple Valley, Calif.
2003 Mitsubishi EVO VIII	Scott Gladstone, Irvine, Calif.

We thank the sponsors of this year's USCC, Nitto Tires and Tokico. It couldn't go down without them.



Rank	Car	Base Price	Points
1	Mazda Miata	\$16,450	110
2	Toyota MR2	\$18,000	103
3	Mitsu Eclipse	\$19,029	99
4	Subaru 2.5RS	\$19,195	98
5	Buschur/RRE EVO	\$28,900	57
5	Sparco EVO	\$28,900	57
7	VW R32	\$29,100	56
8	Mazda RX-7	\$31,000	48
9	Nissan Skyline	\$31,800	45
10	Toyota Supra	\$39,000	10

Base price is based on year of manufacture.
Skyline price is domestic Japanese price converted to U.S. dollars.



Of all the tests in the challenge, the car show is the least quantitative and most subjective. Scoring is driven by personal opinion and nothing more. Therefore, this test can also be the most unpredictable. In this venue the judges' word is law, and if they take a personal set against you or your car, you can consider yourself pretty much screwed.

That's not to say point allocation is completely baseless. This year's judges have seen it all. Elton Lo returns for the second year in a row. He's a regular at such heavily promoted events as Import Showoff and Import Xtreme, in addition to running a custom tuning shop, so he's about as close to a professional car show judge as you'll find. Ditto for his buddy Phillip Phong.

Last in our panel of three is the legendary James Chen, he who entered the USCC three years in a row and made it his bitch on two of those occasions. Incidentally, his yellow 350Z won the car show in 2003 and his other

Rank	Car	Points	Peanut Gallery
1	Sparco EVO	110	A true show car from every angle
2	Toyota MR2	79	Ultracken DIY
3	VW R32	61	Big brakes, big turbos
4	Nissan Skyline	44	Getting older but still potent
5	Mazda Miata	36	Nice engine, original paint
6	Mazda RX-7	34	Messy engine, but hey ...
7	Toyota Supra	27	Bolt-ons don't win shows
8	Buschur/RRE EVO	24	Hacked-up vinyl
9	Subaru 2.5RS	11	Too much tech, no bling
10	Mitsu Eclipse	10	Too stock for comfort

two entries never scored worse than fourth place, so the guy knows how to build a good-looking sled.

Each entry was judged not only on the fit and finish of its various modifications, but also on the quality of the parts used. Every aspect was considered: overall appearance (first impression), engine bay, interior, suspension, stereo or ICE, exterior mods and paint.

Each judge was also allowed to allocate bonus points to a car that appealed directly to him.

The hands-down winner was Scott Gladstone's Sparco EVO VIII. While the rest of the field was judged with a cold sort of clinical detachment, the Sparco EVO reduced our panel to something like a group of enthusiastic nine-year-olds crowding around a salvaged nudie mag. It was the last car to be judged, and had drawn quite a crowd by the time the judges got to it. They were most impressed by the incredible full graphics wrap carried out on the exterior. It's so good you'd swear it was paint, even with your nose pressed up against the vinyl's surface.

Other areas were just as nice, particularly the interior. Ferrari Enzo seats didn't hurt, and the color-matched Design Craft roll cage is an absolute masterpiece, both in construction and fitment.

Brad Bedell's MR2 came in second. It's obvious this car was assembled with great care and sports a load of subtle custom tricks, including a blown V6 swap executed with the owner's own two hands. Elton described it as "pretty crazy ... a total sleeper."

HPA's R32 Golf finished a hair behind the MR2. The car



was clean, straight and largely stock looking as far as the interior and exterior, but the judges were taken by the gigantic Audi racing brakes fitted to all four hubs and by the overflowing engine bay with its two conspicuously mounted twin turbos and miles of custom plumbing.

Fourth place went to Nick Wong's R32 Skyline. Despite the fact that it's been driven with a heavy foot for more than 13 years, assembled and reassembled countless times and is the oldest entry of the lot, it's still a Skyline. It still cleans up nice.

Fifth and sixth place fell to the Mazda camp, Andrew Campbell's Miata and Jason Cameron's RX-7, respectively. The judges gave big props to the Miata's engine bay and its nice original paint. The RX-7 was criticized on the jumbles of wires and haphazardly placed heat shrouding within the engine bay.

Matt Andrews' turbo Supra placed seventh. Though it's got more go-fast stuff this year, it doesn't look like much more than, well, a green Supra. Robert Fuller's Buschur/RRE EVO VIII came next. "Hacked-up vinyl," one of the judges noted disapprovingly, scribbling furiously on his notepad.

Bill Knose's Subaru Impreza, though brimming with a host of go-fast equipment and technical upgrades, was slammed for retaining too much of its factory aesthetics. "Stock doesn't win car shows," said Elton.

Scott Gray's black Eclipse was criticized in much the same way. Though the judges liked his paint and the car's pristine condition, the DSM was relegated to last place. — Karl Funke



Guru Panel

Test
#3

IMMEDIATE STREET CAR CHALLENGE

They can be your best friends or your worst enemies. They're our geeks, and they know more than you do. The engineering judging is the hardest of our tests and it's the hardest to accept if you don't do well. Lose the quarter mile and it's because someone else's car is faster, but lose the engineering judging and it's because these geeks don't like your car. Harsh.

That's why we get really good geeks. John Concialdi has built more racecars than you've owned shirts and he founded this little company called Advanced Engine Management. Jay Kavanagh manages all the engineering stuff in Garrett's aftermarket division. James Yim runs K&N's R&D center. Mike Kent does stuff with lasers. And infrared stuff. You can't even see infrared!

Steve Ruiz started this little brake company called StopTech and knows as much about stopping as Concialdi knows about going. And then there's Jeff Cheechov. He founded Progress Suspension, so unless you founded AEM or StopTech, you should just bow down.

Of course, Marcel Horn also knows more than you. He started a little company called HPA, and his

pendant for stuffing a VR6, two turbos and all-wheel drive in anything with a VW or Audi badge on it puts him pretty high on the geek scale himself. Somehow, though, his understated brute of an R32 Golf didn't get along well with our geek panel.

The drivetrain scored well on the elaborate system used by the panel (except where it was docked for details like a stock cooling system and an inline fuel pump with questionable crash-worthiness), but the rest of the car got shredded. The geeks were irate about the stock anti-roll bars and suspension bushings, the brake parts from other cars that had been transplanted without addressing brake proportioning, and the stock safety equipment matched with a decidedly unstock penchant for speed.

In short, it was docked for focusing more on comfort and Autobahn-style point-to-point earth gobbling than the all-around performance it would need in the rest of the contest. Still, even the geeks themselves were surprised to see this one end up dead last.

Pleasing the fickle panel is a skill best honed with experience, and experience apparently told Sean Morris that geeks like porn. The bottom of the R32 Skyline

ENGINEERING			
Rank	Car	Points	Panel Gallery
1	Sparco EVO	110	Artistry, craftsmanship and engineering all coated in cash
2	Buschur/RRE EVO VIII	106	No artistry, tolerable fabrication, very little cash, but buckets of go-fast know-how
3	Nissan Skyline	89	He taped pine to the bottom of the car. No, really
4	Mitsu Eclipse	80	Nothing there that isn't there for a reason. Geeks like that
5	Toyota MR2	69	Build your own titanium headers and you'll make geek friends
6	Toyota Supra	51	Maybe the geeks think Supras are too easy
7	Mazda RX-7	45	Lots of nice details, but lots to nitpick too
8	Mazda Miata	36	If they lived their lives a quarter mile at a time, the geeks would have given more points
9	Subaru 2.5RS	19	Unique 2.5-liter powerplant, but ultimately a knife in a garfist
10	VW R32	10	Even the geeks themselves don't know how this happened



was littered with dirty pictures, but it's unclear whether the geeks were more excited by these or the Öhlins coil-overs, the trick bumpsteer-correcting trinkets, the Stack dash, the Accusump added to prevent a repeat of last year's catastrophic engine failure and the full complement of robust safety gear.

Even without naked chicks, the geeks were ecstatic about the Sparco EVO VIII. It wasn't just the meticulous construction, the trick custom fabrication or the cubic dollars spent on exotic hardware, it was the depth of knowledge the car's builders had. While our geeks can learn a lot looking at a car, they want to talk to the guys who built it. They don't just want to see what was done, they want to



know why it was done.

Do the right thing for the wrong reason and your score will suffer. If the geeks ask how much weight you saved, for example, and you say "220 pounds total, 60 pounds of which was unsprung," they'll be really happy. If you can regurgitate alignment specs and describe the track testing that led you to them, they might even give you a hug.

That's how the Sparco EVO, which looked like it just rolled out of Dan Gurney's garage, and the Buschur/RRE EVO, which

looked like it just got back from the National Association of Men Who Like Hammers Convention, nearly tied for the lead.

— Dave Coleman

There was an unusual calm in the dyno room this year. Previous years were dominated by massive power claims, chest pounding and untouchable pushrods. None of that happened this year.

Like every year, there were two scores up for grabs in the dyno cell. The obvious one is peak power—the biggest number wins here. The subtle one, and the one that rewards the true street cars, is the power delivery score. Power delivery is effectively a measure of the area under the torque curve. The dyno queen tuned for giant numbers above all else will be crushed by the mild-mannered, flexible powerplant. So sad.

Ultimately, it was a Supra on top, just as it was in 2002, but for once it was an underdog story. Matt Andrews is no dyno junkie. He's a track hound. He carefully selected a Garrett GT35R turbo, planning to sacrifice peak power for flexibility on the track and a strong power delivery score. It was a wise strategy, and one no Supra owner had done before.

Blazing a trail has its risks, though. It would have been nice if some other Supra owner had figured out the subtleties of mounting ball-bearing turbos. Andrews mounted his at an angle, which caused oil to back up in the center housing and blow through the turbine seal. The last thing you want at a track shakedown the week before USCC is oil smoke billowing out the tailpipe.

In retrospect, a restrictor in the oil line would have solved the problem, but spooked by the cloud of blue, Andrews reverted to his old T67 P-trim dyno queen turbo, which



PEAK POWER

Rank	Car	Hp	Points	Peanut Gallery
1	Toyota Supra	623	110	Why did we think this Supra was an underdog?
2	Nissan Skyline	552	85	Watch him, he's probably cheating.
3	VW R32	452	50	The most brutal sleeper since the 630-hp Hyundai.
4	Toyota MR2	442	46	The first guy in USCC history to turn down the power for this test.
5	Sparco EVO	430	42	How many Japanese engineers does it take to dyno an EVO?
6	Mazda Miata	417	37	Isn't that the same engine from my 1985 Mazda GLC?
7	Mitsu Eclipse	416	37	That's enough power to get you to work each day.
8	Buschur/RRE EVO	416	37	At least he didn't pull the wastegate line this time.
9	Mazda RX-7	397	30	This competition has never been kind to the rotary.
10	Sabaru 2.5RS	339	10	This is the hard way to build an STi.

mounted horizontally on a different exhaust manifold. Turns out that worked just fine. Andrews laid down 623 hp, 4 more hp than Mani Jayasinghe's winning pull two years ago, and still walked away with the power delivery score.

All eyes were on Sean Morris when he rolled Nick Wong's R32 Skyline into the dyno room for the second year in a row. It wasn't anticipation so much as suspicion that got him the attention.

Morris is a shrewd veteran competitor

eager to exploit any advantage, and he managed to slip one by us last year. He'd added an exhaust cutout that dumped the exhaust before it had to squeeze through the catalytic converter. It was no secret that he used this on the dyno last year, and the fireballs shooting out from under the car revealed that he was doing the same this year. His sneakiness came when he "forgot" to redirect the exhaust to the rear for last year's emissions test. While he dumped noxious fumes out the front of the exhaust,

POWER DELIVERY

Rank	Car Score	Points	Peanut Gallery
1	Toyota Supra	110	Who you callin' a dyno queen?
2	Toyota MR2	96	Hey, wouldn't it be funny if we let that MR2 in?
3	VW R32	94	Enough torque to wrinkle your driveway
4	Nissan Skyline	87	Every fireball out the exhaust is a fireball not making torque
5	Mitsu Eclipse	84	The master of flexible, daily-driven restraint
6	Sparco EVO	57	This sixth-place finisher has freight train thrust in the real world
7	Sabaru 2.5RS	50	Displacement saves the day
8	Nissan/RRE EVO	43	Dude, you got beat by an Eclipse
9	Mazda RX-7	33	Maybe he spent too much time polishing the turbo
10	Mazda Miata	10	It takes a big, laggy turbo to make a GLC this fast

our tailpipe probe saw nothing but rose water and belly dancers out the back.

We spotted nothing shifty this year, and he managed 552 hp under our watchful eye. The engine sounded off song, though, and the fourth-place power delivery score showed something wasn't quite right.

Taking that close second in power delivery was Brad Bedell's supercharged, nitrous-breathing V6-powered MR2.

The "MR6" made it into the competition as a lark. We thought it would be cool to see, but didn't really expect a top-half performance. However, Bedell was confident, well prepared and very strong from the beginning.

Despite being a first-timer, he showed a veteran's wisdom in his preparation. In testing, he made substantially more than the 442 hp he delivered here, but shrewdly turned down the nitrous for better durability. As a result the car ran

comfortably without misfires, hiccups, or any sags in the powerband, and despite being 181-hp down in peak power from Andrews' Supra, he was only 14 points behind in power delivery.



At the opposite end of the power delivery spectrum was Andrew Campbell's Miata.

Squeezing 417 hp from what is

essentially a warmed-over Mazda GLC engine takes some serious work. It also takes another dyno queen turbo. The lag monster was in a three-way tie for sixth place, but came in dead last on power delivery.

For the second year in a row, K&N let us take over its R&D center for this test, running its two-wheel-drive and all-wheel-drive Dynojets side by side so quickly and efficiently we almost forgot how chaotic and stressful this event is supposed to be. We paid back K&N's hospitality by not blowing up a single car on its dynos. — Dave Coleman



Emissions

Test #6

For the past three years, the USCC emissions test was based on hydrocarbon (HC) and carbon monoxide (CO) concentrations. Getting reasonable HC and CO levels was a simple matter of strapping on an el cheapo after-market catalytic converter, making sure that it gets good and hot, and idling the car in closed-loop operation. Any car with an oxygen sensor in the exhaust and a cat can score reasonably well on the emissions test.

This year we finally upped the ante on the emissions test to include nitrogen oxide (NO_x) concentrations. This required new hardware, a MTS 1000 five-gas analyzer on loan from Vetronix Corporation. NO_x emission is a real problem for high-output engines because its formation is highly dependent on elevated combustion temperatures and pressures. EGR is the convention for reducing NO_x formation, but you won't find that on any of these cars. All they can rely on is good tuning and a good cat.

We made the USCC emissions rules



easy on the big-power dyno junkies. We allowed the use of open-exhaust bypass valves on the dyno and gave them a few minutes to seal it

STREET

SPORT COMPACT

before being sampled. This way they didn't have to deal with power loss caused by exhaust restrictions and also take advantage of a cat for emissions. The drawback was that by running on the dyno with the exhaust bypassed around the cat, the converter doesn't get lit off to its operating temperature.

The smart contestant got his cat really hot prior to getting strapped onto the dyno and only opened the exhaust bypass immediately before the pull. This kept the cat hot enough to still be useful on the emissions test. Tuning changes to the engine management were prohibited during the emissions sampling. We checked the entire exhaust system for leaks prior to hooking up the gas analyzer to take unloaded steady state emissions measurements at idle and 2500 rpm. To be sure no significant leaks were present, we made sure exhaust oxygen concentration was within reasonable limits.

Since gas concentrations are measured on different scales: (parts per million (ppm) for NO_x and HCs, and in percentage for CO), each individual measurement was assigned an equivalent numeric value and totaled for each species. These were then totaled and converted into the appropriate point value on the overall points scale.



We were warned not to invite Grannie to the USCC again. It seems she was so excited after the last one it took her hemorrhoids three months to settle down. We called her anyway.

Who better to test the true civility of these street cars? The rest of us want big go-fast, but not grandma. The old girl likes cold A/C, comfy seats, quiet interiors and a smooth ride. Grandma needed to be back at the

Fading Daze Retirement Home and Bowling Center by dark, so one ride in each is all she got.

Grandma got into the Supra first and the old bird settled right in. She returned from the dollar store with her wig askew and her teeth in hand but she slid out looking none too worse for the trip.

Next was the Subaru 2.5RS. At nearly stock ride height, ingress/egress was easy for the old wench. She asked to be driven to the scooter store, as Mike Kojima had made a list of things to make Grandma's Lil' Rascal go faster. "I don't want to suck, dear!" On the way back, Grandma fell right to sleep in what turned out to be the second most comfortable car in the field.

Next was the RX-7. It has no radio or A/C and, as most rotaries are, it's loud. "That thing makes more noise out the rear end than your grandfather!" she said.

As soon as Grandma climbed into Marcel Horn's VW, her eyes lit up. "My hoo-hoo dilly is a little hot, dear. Can you turn up the A/C?" she asked as she settled into the comfy seat and began to fondle the fine mouse fur in the glove box. Grandma quickly settled into a nap. Grandma likey. — Tom Paule

Tuning for wide-open throttle is dang easy. After all, it's just a single throttle position. But tuning for all possible throttle positions, well, that's tough. Throw in the fact that it's more pleasant to have a car that's not spitting, farting and heaving every time it pulls up to a stoplight. Or shedding tread every time it encounters a pothole. Or creaking during a freeway cruise like an asthmatic iron lung.

Nick Wong's Skyline was hurting throughout the competition and that showed up on our 15-mile driveability course, which included freeway and city driving and two railroad crossings. The Skyline responded to most attempts at forward motion with sneering contempt. Beyond that it whacked up against bumps with harshness evocative of Barry Bonds swinging a 40-ounce Louisville Slugger at a petrified

EMISSIONS

Rank	Car	Points	Peanut Gallery
1	VW R32	110	More turbos do clean the car up
2	Toyota Supra	103	Gobs of power, and clean too
3	Nissan Skyline	101	There's a reason why O.E. cats cost \$700
4	Mitsu Eclipse	100	Not bad for a decade-old car
5	Toyota MR2	96	Which pipe is the real one?
6	Subaru 2.5RS	82	Hope that cat wasn't new
7	Buiche/BRE EVO	74	Cleaner at idle than at 2500
8	Mazda Miata	52	How does something so small make such a big mess?
9	Mazda RX-7	13	Idle? What's that?
10	Sparco EVO	10	But it looked clean on the outside

HPA's bi-turbo R32 Golf came out the cleanest of the bunch while, as expected, the highly tuned rotary was a gross polluter. No surprise there, but we were surprised by the cleanliness of the dyno king Supra and the Skyline, which could have easily passed California smog. — Jay Chen

GRANDMA

Rank	Car	Points	Peanut Gallery
1	VW R32	80	Knocked out Grandma for the best afternoon nap ever!
2	Subaru 2.5RS	79	A/C kept Granny's balls cold
3	Toyota Supra	74	Who knew dyno queens could be comfortable?
4	Toyota MR2	71	Next time tell Grandma it's on the bottle
5	Mitsu Eclipse	69	Seat belt cleavage a plus
6	Mazda Miata	65	Last her dentures due to wind?
7	Nissan Skyline	66	Remembered this car from last year
8	Buiche/BRE EVO	68	Seat belt flared up arthritis
9	Sparco EVO	67.5	A/C made Grandma think she was having hot flashes
10	Mazda RX-7	53	No A/C, stiff shift stopped Grandma's bowels—hard

DRIVEABILITY

Rank	Car	Points	Peanut Gallery
1	Subaru 2.5RS	110	Seemingly seamless and better than most new cars
2	VW R32	102	A brand-new car no one has bothered to screw up
3	Toyota MR2	93	How Toyota would have done it, if it had done it
4	Mazda Miata	92	A sweet engine even before the turbo hits
5	Toyota Supra	74	Slightly harsh ride and a turbo that hits hard
6	Buiche/BRE EVO	73	Throttle response keeps it ahead of the other EVO
7	Sparco EVO	71	Fit a racoon, a pretty good theft car
8	Mitsu Eclipse	66	Soft, hard and not always precise
9	Mazda RX-7	46	Built to be nasty and it shows
10	Nissan Skyline	10	It's not nice to pick on the sick

ham. And though it didn't overheat, it was rising toward that.

Jason Cameron's RX-7 needed a sledgehammer's touch to pound into gear and offered virtually no low-end torque—the turbo system added virtually no thrust at less than wide-open throttle. And when the boost arrived, it came on like it dropped out the back of a C-130. But the tough part was dealing with the heat sink the driver's feet were shoved into.

For a car with more than 112,000 beat-to-death miles on its clock, Scot Gray's Eclipse wasn't bad at all. But it loaded up at idle and surged annoyingly, the shift quality was Mitsu-lousy, torque was MIA until the turbo whacked in at about 2500 rpm, and there was some irritating wind noise from the rear hatch. There's no sliding scale for the odometer reading in this test.

Sparco's EVO VIII was a racecar cleverly disguised as a racecar and it behaved as such. The throttle doesn't need to move more than a few millimeters before the sudden onset of boost shoots the car forward. There are basically two throttle settings: off and kamikaze-on-meth. There's also an agonizing exhaust drone at freeway speed and the car bucks when attempting a cruise at lower velocities. Still, it rode surprisingly well.

The Buschur/RRE EVO VIII wasn't quite as hard-edged as the Sparco car and the engine was much more linear in its response to throttle inputs. But there was still a little sputtering at times.

Matt Andrews wisely didn't screw up most of his Supra. There was some turbo lag apparent but the shifter's action actually seemed better with nearly 80,000 miles worth of seasoning. Accelerating the exhaust

sounded spectacular, but at freeway speeds it set into a mesmerizing drone.

Somehow Andrew Campbell's Miata had an engine that was sweet even before the turbo cut in. Then the turbo would hit like a virus and the car mutated into a ravenous rodent.

Beyond that, the driver's foot roasted

mercilessly near the clutch. But, hey, roast foot is a delicacy in Nepal.

The most remarkable aspect of Brad Bedell's MR2 was how unremarkably it performed. Driving this car you'd swear Toyota built it with a blown V6 in the first place right down to the slightly sloppy action of the shifter. Particularly impressive was the engine's seamless midrange power and particularly irritating was the strange three-into-two exhaust note. (Install a crossover!)

It was almost impossible to distinguish Marcel Horn's dang-near brand-new R32 from a stock version of the car. In fact, except for the extra power, which was sweet and manageable, it was a new R32 with few additional modifications. Yeah, it was sweet, but they didn't really take any chances either.

Bill Knose's 2.5RS ruled the driveability roost thanks to its absolutely spotless manners despite being an assembly of disparate Suby parts. Everything worked with slick precision, and it just doesn't get any better.

— John Pearley Huffman



Fuel Economy

Test

#9

LENGE



These cars were built to turn as much fuel as possible into as much thrust as possible as quickly as possible. The dinosaurs are already dead, so let's have some fun.

Still, the "street" part of this challenge does bring with it some concern for hydrocarbon consumption. To assess the fuel economy we stuffed almost every vehicle full of 91 octane at a station just outside the gates of K&N Filters in Riverside and drove them over a 70.7-mile course roughly paralleling California's State Route 138 to the cruddy Mobil

FUEL ECONOMY

Rank	Car	MPG	Points	Peanut Gallery
1	Toyota MR2	43.8	120	Scully and Muller are investigating
2	Mazda Miata	34.4	85	Tiny engine
3	Buschur/RRE EVO	30.7	71	Every EVO should be so stingy
4	VW R32	28.7	64	The cushiest ride isn't too thirsty
5	Mitsu Eclipse	26.0	55	No surprise here
6	Subaru 2.5RS	25.1	50	AWD may inhibit effective gliding
7	Toyota Supra	23.1	38	Solid performance for its size
8	Mazda RX-7	18.5	26	Rotaries are notorious fuel hogs
9	Sparco EVO	20.2	22	Race gas meant forfeiting 10 points
10	Nissan Skyline	17.0	20	Big cat, big appetite

station at the corner of the Sierra and Pearblossom highways in Palmdale. How much fuel each car swallowed at that second stop determined our numbers. Competitors could use race fuel, but forfeited 10 points for doing so. With more than 5,000 feet of elevation changes, constant corners, our route was perfect for such an evaluation—though some of the results were otherworldly.

Nick Wong's Skyline slurped at a rate of 17.02 mpg and that put it at the bottom of this group, even though that was better mileage than what the stock

Toyota Tundra we had along as a support vehicle achieved. Jason Cameron's RX-7 came in next worst, with a not-bad 18.56 mpg that was bettered by the Sparco EVO (ingesting race fuel) at 20.17 mpg and Matt Andrews' Supra at 21.19 mpg. Those were all "real-world plausible" numbers for the course. But a lot of gliding and strategic drafting became apparent in the cars that did better.

Knose's Suby sucked down at a 25.12-mpg rate, which was good, but not as good as Gray's Eclipse or Horn's R32. But the Buschur/RRE EVO's big 30.71-mpg performance was absolutely startling. By virtue of staying out of the boost and having the smallest engine, Andrew Campbell's Miata returned a big 34.41 mpg. The stunner was Brad Bedell's MR2, which

turned in an absolutely ludicrous 43.89 mpg gallon on the loop, despite being fender bounced by a truck midway through the test. "I accelerated down the hills," explains Bedell. That's right—he accelerated when gravity was on his side and let the car's momentum carry him up the fuel sucking inclines. Smart. — **John Pearley Huffman**



the sun crested the eastern horizon on the morning of day two, the ambient temperature was already cresting the 100-degree mark. We spotted more than one intercooler packed snugly with ice, and considering not a single naturally aspirated car was present in this year's field, each entrant would have to find ways to deal with LACR's 2,710-foot elevation and searing heat.

Not many did, this year's e.t.s aren't that impressive. Not a single car made it into the 11s. Still, eight out of the 10 ran in the 12s, and to no one's surprise, six out of the top eight spots belonged to all-wheel-drive cars, which better dealt with the dusty track. Surprisingly, however, nobody suffered a catastrophic

Aside from the dyno, acceleration is the biggest pissing contest in the entire competition. It's also very important in the overall scheme of USCC scoring because, as with the dyno, it's really two tests in one. Each car scored points for its overall elapsed time as well as its performance from 20 to 100 mph.

For this test we made the drive to Los Angeles County Raceway in sunny Palmdale, Calif., known to some as the outer circle of Hell. As

mechanical failure at the dragstrip.

First place in the quarter mile fell to Scot Gray's Eclipse, which posted an even 12.40 seconds at 119 mph on his second run. He also had the second fastest time from 20-100 mph. With everyone else running at least .2 seconds off his pace, Gray elected to sit out his third run to save his car for the upcoming road course.



Second place went to Bill Knose's Impreza. Despite making the smallest peak power number the day before, the 2.5RS had the fastest hookup and cleanest exits of the day, speaking well for Subaru's AWD and Knose's drag racing skills. Scott Gladstone's Sparco EVO came next, just .03 seconds off the second-place time, running a 12.64.

Brad Bedell's hybrid MR2 was the fastest two-wheel-drive car, running a 12.69 at 122 mph in the quarter mile. The car was hellishly loud, and Bedell wasn't afraid of doing a couple of burnouts as he staged, smoking the tires before each run. Bedell also came away with 110 points for the quickest 20-100-mph time, further adding to his already considerable points lead in the overall competition.

Nick Wong's R32 Skyline, driven by the fearless Sean Morris, was easily the greatest spectacle on the 1320, roaring and snorting as

ACCELERATION				
Rank	Car	Time and Speed	Points	Peanut Gallery
1	Mitsu Eclipse	12.40 @ 120.11	110	Traction, speed and technique
2	Subaru 2.5RS	12.61 @ 113.19	97	Uber launches
3	Sparco EVO	12.64 @ 115.20	95	Nearly as uber
4	Toyota MR2	12.69 @ 122.20	92	Load as hell
5	Nissan Skyline	12.70 @ 119.00	91	Big smokes, belching fire
6	Mazda RX-7	12.80 @ 119.96	85	Had a close call
7	VW R32	12.81 @ 112.81	84	Good launch, petered out
8	Buschur/RRE EVO	12.83 @ 115.25	83	See above
9	Toyota Supra	13.87 @ 121.70	17	No traction, crappy launches
10	Mazda Miata	13.98 @ 124.17	10	Slipping clutch
20-100 MPH				
1	Toyota MR2	7.28 sec.	110	We see a pattern here
2	Mitsu Eclipse	7.84 sec.	77	At home on the strip
3	Mazda RX-7	7.87 sec.	75	Get boost
4	Toyota Supra	8.37 sec.	45	Also got boost
5	Sparco EVO	8.42 sec.	42	Solid overall performance
6	Nissan Skyline	8.61 sec.	31	Launches were much scarier
7	Subaru 2.5RS	8.68 sec.	27	A tad disappointing
8	Mazda Miata	8.72 sec.	24	Better than its launch
9	VW R32	8.88 sec.	15	A portly German
10	Buschur/RRE EVO	8.96 sec.	10	Must've hit the brakes early

Test #10

and Test #11

SPORT COMPACT

Morris executed burnout after disgusting burnout before each run. His 8000-rpm launches were equally disconcerting. The Skyline was dropping ice out of its nose and belching fire from below as it ripped down the strip, but in the end the impressive show was only good for a 12.7-second run at 119 mph.

Jason Cameron's RX-7, driven by aptly nicknamed Steve "Genghis" Khan, was the winner of the day's unofficial Heart Attack Award. On its last run the Seven's ass end got a little squirrely at the far side and the car lurched sideways at 100-plus mph. Khan was able to pull it straight, but not before several onlookers soiled their pants in horror. Besides managing not to crash, Khan secured sixth place in the quarter mile with a 12.8-second run at 120 mph, and third in the 20-to-100-mph jaunt.

HPA's twin-turbo Golf and Robert Fuller's Buschur/RRE EVO rounded out the all-wheel-drive entries, finishing .02 seconds apart. Despite furiously quick launches, these two cars had the two longest 20-to-100-mph times in the field.

Despite ruling the dyno the day before, Matt Andrews' late-model Supra wasn't a contender on the dragstrip. With more than 600 hp at the wheels, Andrews had considerable traction trouble on the dusty track. He decided to ease the Supra out of the hole and rely on the car's considerable boost to pull him through. The strategy wasn't enough to make him competitive in the quarter mile, but pulled the Supra to fourth in the 20-to-100 acceleration contest.

Though no car broke down outright, Andrew Campbell's Miata had a slipping clutch that softened the car's launches to the point of impotence. The little two-seater finished at the back of the pack.

— Karl Funke



Braking

Test
#12

CHALLENGE SPORT COMPACT CAR ULTIMATE STREET CAR CHALLENGE



Big cross-drilled rotors and multi-piston Brembo calipers were pervasive in this year's field, but in the end it came down to a mostly stock brake system that walked away with maximum points in the 60-to-Zero Braking test. As in the acceleration tests, each entrant got three chances to get its stop on.

Employing original factory equipment along with braided lines, a slightly larger master cylinder and EBC pads, Brad Bedell's MR2 came to a halt in less than 100 feet, scoring the maximum 110 points. Incidentally, Bedell's 99.23-foot score is the shortest stopping distance we've recorded in the USCC. When prepping the car for this test, Bedell's mantra was simple. "Anyone who puts aftermarket brakes on this car doesn't stop as well," he said.

Bill Knose's Impreza placed second. The Subaru used an amalgam of brake equipment: Prodrive rotors and four-piston calipers in front, Wilwood assemblies in the back. The system's balance was undeniable, however, enabling the Subaru to stop in 106.74 feet, enough to grab 95 points in the second-place slot.

HPA's R32 Golf was wearing some of the

most intimidating equipment in the field—Brembo hardware pieced together from various Porsche and Audi sources including 14-inch front rotors from an RS4 application, six-piston Cayenne Turbo calipers, 12.1-inch rear rotors with relocated R32 calipers and PBR metallic pads. It was enough for a 108.22-foot stop and third place.

Jason Cameron's RX-7 was next. It runs Brembo Gran Turismo binders at all corners, with 13.5-inch rotors and six-piston calipers in front and 11-inch discs in the rear. The heavy equipment hauled the Seven down from 60 mph in 109 feet even for fourth place.

Despite using radically different brake configurations, the two EVO VIIIs stopped within a single foot of each other. Like the Golf and the RX-7, Scott Gladstone's entry wore some serious-looking brakes at all corners that we later learned they were WRC tarmac assemblies. Fuller's Evolution only used StopTech big brakes up front and retained its O.E. equipment in the rear. Despite the huge wad of cash tied up in Gladstone's binders, the Sparco EVO stopped only about 4 inches shorter than Fuller's entry. While these competition Brembos are impressive as hell to the

naked eye, we suspect their forte is more suited to repeated heavy use and that they were more beneficial on the road course than in this braking test.

Matt Andrews' Supra came up about a foot short of Fuller's EVO, and

the final three contenders placed far behind the rest of the pack. Nick Wong's Skyline, which relied on big Brembos, stopped 18 feet behind the Supra and Andrew Campbell's Miata, which was the only car that relied on a completely O.E. brake setup, proved that ABS isn't everything. Scot Gray's black Eclipse placed dead last. — Karl Funke

BRAKING			
Rank	Car	Distance (ft)	Pts
1	Toyota MR2	99.23	110
2	Subaru Impreza	106.74	95
3	VW Golf R32	108.22	93
4	Mazda RX-7	109.00	91
5	Sparco EVO	110.55	88
6	Buschur/RRE EVO	111.22	87
7	Toyota Supra	112.31	85
8	Nissan Skyline	130.85	48
9	Mazda Miata	145.42	20
10	Mitsubishi Eclipse	150.41	10

Until this year, the USCC skidpad test was a 200-foot testimonial to the unrelenting stick of Hoosier tires. Just like the dyno numbers, the lateral grip generated during this contest is wildly out of step with the cars we test the rest of the year. In last year's contest, only one car—the one with three video screens—pulled less than 1.0g. In most cases, it wasn't stellar suspension setup that made these big numbers, but gooey Indiana rubber.

We're tired of Indiana.

The Hoosiers were stifling creativity, masking bad setup and costing a lot of money. This year we decided we'd had enough. Sure, they're technically street legal, but we once managed to cord a set in just three days of freeway commuting.

With Hoosiers banned, this year's competitors actually had to choose their tires carefully, dial in the suspension and fight for the big number. And that big number came from the only car that managed a good number last year without Hoosiers. Matt Andrews held his Supra off the ground with Michelin Pilot Sport Cup tires for two years in a row. Both times (on different skidpads) they were worth a little more than 1.07g. Last year that was good for third place. This year it was a decisive victory.

A distant second on the skidpad, circling at 1.035g, was Nick Wong's Skyline GT-R. Surprisingly, the Skyline's caretaker, Sean Morris, and driver, Steve Mitchell, both

insisted that we circle the pad with the car's sophisticated, computer-controlled all-wheel-drive system disabled. In rear-wheel drive, the GT-R felt strange.

As cornering loads increased, the car seemed to steer itself into the turn, making it hard to follow the line. During the engineering judging, we noticed this car was loaded with bumpsteer spacers, adjustable control arms and tie-rod relocating thingies. There's little doubt the roll centers, toe curves and all the geometric subtlety Nissan designed into the chassis were thoroughly whacked out by now. This setup probably worked brilliantly with all-wheel drive and the quicker corners on the track, but it felt unsettling going in rear-drive circles.

Before he even got to the pad, Brad Bedell's lead was so commanding he could have skipped the last three contests and we'd still have had to mail him a box of trophies. Instead, his mid-engine steamroller flattened



yet another competition. MR2s are known for having an evil side on the pad, and with the extra weight of a supercharged V6 over the rear axle, we

expected it to be even worse. The big engine's smooth, flexible power delivery, though, helped more than the weight hurt. Balancing a car on the edge of adhesion takes delicate throttle work, and the thoroughly sorted V6 did just what our right foot asked.

It's surprising that two EVOs can feel as different as the Buschur/RRE and Sparco cars. The Buschur/RRE EVO was eager to jump sideways at every opportunity, and willing to stay that way as its three limited-slip diffs put power to the ground. This plays well in tight corners like our skidpad. Sparco's car was dialed more toward high-speed stability, but that translates to "poosh" on the pad. As different as they felt, Buschur/RRE's 1.021g and Sparco's 1.018 g were nearly identical.

— Dave Coleman

SKIDPAD				
Rank	Car	Score (g)	Points	Peanut Gallery
1	Toyota Supra	1.071	110	He don't need no stinking Hoosiers
2	Nissan Skyline	1.035	84	The beauty of two-wheel drive
3 (tie)	Toyota MR2	1.021	74	And he didn't even need to show up
3 (tie)	Buschur/RRE EVO	1.021	74	Mr. Grungy Shorts knows how to make Mitsubishi's turn
5 (tie)	Mazda Miata	1.018	72	As a drag car, this is the first Miata to feel out of place on a skidpad
5 (tie)	Sparco EVO	1.018	72	What feels comforting entering a 120-mph sweeper feels like understeer on the pad
7	Mitsubishi Eclipse	0.953	54	It was 1.018g when Hoosiers were allowed
8	Mazda RX-7	0.971	38	The stock diff didn't like drag racing, but this light clutch diff doesn't like skidpads
9	Subaru 2.3RS	0.946	20	Yeah, but that stock Subaru suspension is really comfy
10	VW R32	0.932	10	Volkswagens are nose heavy





They call it the Streets of Willow for a reason. It's for street cars. The USCC Road Course competition returned to this 1.5-mile road course for the first time in three years for exactly that reason—racing street cars on a street course. The Streets' 120-foot elevation gain makes it a real test for any car. Combine that with a 1,000-foot straight, off-camber corners and every competitor's need to win the most prestigious test in the USCC, and this is one hotly contested race. Let the chest pounding commence.

And there was plenty of chest pounding. Even though, at this point, the contest was all but over. With only 125 points remaining between the Road Course and the Gross Display of Horsepower, there was little those who were behind could do but sit back and wait for the inevitable. Some, though, didn't see it that way. Those few were the guys who entered the contest for the road course. They didn't come here to see how well their car did on the emissions test or how happy it made Grandma Pauley. They came here to swing their metal around in mad fits of lateral acceleration.

It's no surprise then that Brad Bedell didn't drive the tires off his MR2 on the road course. Knowing he had the lead by almost 200 points he cruised around the track in air-conditioned comfort on his first session. The second outing was equally leisurely. Final time? A tie for ninth at 78.42 seconds.

Bill Knose, try as he might, wheeled his mighty STi-powered Impreza around the track in exactly the same time as Bedell's MR2. Perhaps it was the Impreza's relatively tame road manners and street-tuned P1 suspension, or maybe Bill wasn't really trying, we'll never know. Either way, it takes a group of cars this capable to make a machine as bad-ass as this Impreza look slow.

Marcel Horn in the HPA-enhanced R32 found himself in eighth place when the dust settled. To his credit, Horn didn't get as many chances at a clean track as some of the other competitors, thanks to a serious end-of-the-day time crunch. Even so, the VW probably is not as well suited to the road course as some of the more focused cars in the group. Horn ended with a 77.65-second run.

In the day's most spectacular demonstration

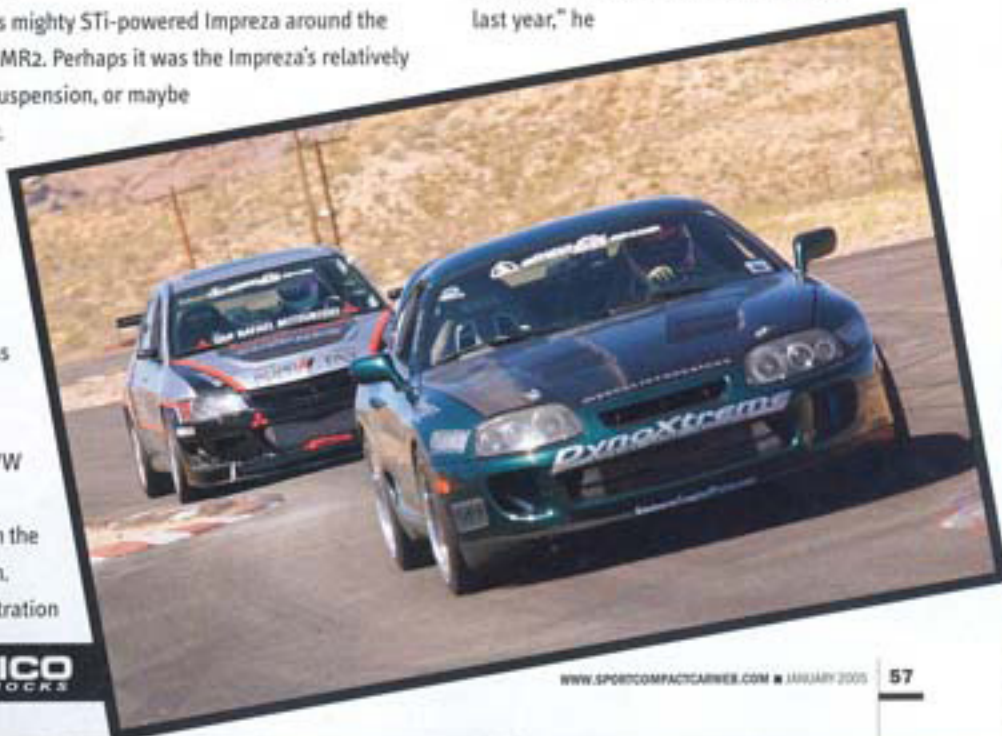
of car control, Steve "Genghis" Khan drove Jason Cameron's '94 RX-7 to a seventh-place finish on the road course. Overcooking the Turn Eight bend slightly, Khan slid the Seven halfway to Turn Nine before reeling it in and keeping all four tires on the road. Determined to have the

ROAD COURSE

Rank	Car	Lap Time	Points	Peasant Gallery
1	Bircher/RRE Evo	71.80	110	Best car, best driver. Again.
2	Toyota Supra	73.39	86	Pretty good for a dyno-diesel turbo
3	Sparco Evo	73.55	84	Mafie costs dearly
4	Mitsu Eclipse	73.70	81	The little Eclipse that could
5	Mazda Miata	75.08	60	Begging for a smaller turbo
6	Nissan Skyline	75.38	56	Not quite right
7	Mazda RX-7	75.66	52	Stop sliding!
8	VW R32	77.65	22	Lots of show, not as much go
9 (tie)	Subaru 2.5RS	78.42	10	Simply outgunned
9 (tie)	Toyota MR2	78.42	10	Who cares? It's already in the bag

first rotary-powered car to finish the USCC with all its apex seals intact, the crew from Texas turned the FD's boost way down before the road course. They survived and ran a 75.66 to prove it.

Everyone was nervous when Nick Wong's Skyline rolled onto the track. Until its untimely expiration it was easily the car to beat on the road course at last year's USCC. The crowd was surprised when the Skyline could only manage a 75.38-second run. Driver Steve Mitchell wasn't thrilled with the car's tuning as he went out for his second session. "This isn't the same car I drove last year," he



mumbled before the final few laps of the day.

It's a rare day in road racing when a Miata beats up on a Skyline. The USCC has lots of rare days. That's exactly what happened when Moti Almagor took the wheel of



Andrew Campbell's boosted MX-5. Almagor used massive restraint in harnessing the Miata's 400-plus hp as he steered and stomped his way to a run .30-seconds quicker than the big Nissan. A smaller turbo and more usable power delivery would have made his job easier. Still, bringing a Miata home fifth in this field requires a serious combination of car and driver.

As last year, John Mueller was put behind the wheel of Scot Gray's daily-driven 1994 Eclipse to do what

he does best—eke every last millisecond from the potent DSM. It paid off with a fourth fastest overall time in a decade old car.

Slowly but surely the big dogs worked their way to the line. With everyone thinking the win would come down to a serious battle between the two EVOs, it was refreshing to find Matt Andrews' Supra duking it out with the all-wheel-drive crowd. The Sparco EVO, driven by Emile Bouret, suffered a cracked intake manifold that kept it out of the hunt for the lead. In fact, its third overall performance is a testament to Bouret's talent and the car's spectacular chassis.

Andrews' Supra was also in the hunt with Erik Messley behind the wheel. When the glory laps were done, however, Messley turned in a 73.39-second lap time good for second place.

For the second year in a row, John Mueller found himself king of the USCC Road Course in a car that brought together the least likely group of sponsors from Road/Race Engineering and Buschur Racing. Mueller bested second place by almost 1.6 seconds with a 71.80 lap. EVO wins. — **Josh Jacquot**

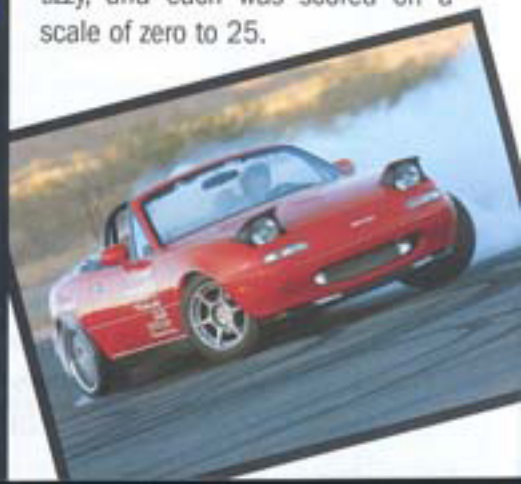


Gross Display of Horsepower

Test

15

Long, liquid, smoky burnouts, the kind of tire-frying goodness that leaves girls gooey and tires corded, while nice, just aren't enough to win this competition. Because this is a judged event, displaying horsepower at its grossest takes more than a heavy right foot and mega amounts of tire smoke. Our judges have seen it all, including all three Indiana Jones movies, so it takes style, creativity and a flair for the dramatic to win their hearts. Each contestant was given exactly 70 seconds to get the judges in a tizzy, and each was scored on a scale of zero to 25.





This year the top six cars, all of which scored more than 20 points, understood what the judges were looking for and they delivered. Things were so close, the judges, who must have been dazed by the inhalation of thick white smoke, scored the cars in a tie for all three top spots.

The MR2 gained points during its 70-second smoke show for the amount of smoke beautifully billowing from its engine compartment. It looked like a yellow smoke stack. The all-wheel-drive R32 scored high for its long, continuous big-radius drifts with all four of its sticky Michelins ablaze and the RX-7 actually spit flaming chunks of black rubber at the crowd, which was cool. The judges also like the way the Buschur/RRE EVO, after a slow start, spun for 30 seconds within its own wheelbase.

Tied for third are the stupidly powerful Sparco EVO, which lit up its four Michelins like it was driving on ice, and the stupidly powerful Miata, which executed one of the more graceful tire-blazing doughnuts in recorded history. In the final tally, the EVO lost a point or two for starting sluggishly until Emile Bouret, in the Sparco EVO, figured out

how to manipulate the Mitsu's all-wheel-drive system, and the Miata gained a point when its driver flicked its headlights on and off as the little Mazda spun. Now that's style. Both tied for third with 21 points.

Matt Andrews' Supra finished fourth in this

GROSS DISPLAY OF HORSEPOWER

Rank	Car	Points	Peanut Gallery
1	Toyota MR2	24	Burnout as art
1	VW R32	24	Drift king
2	Mazda RX-7	23	Spit flaming chunks of rubber
2	Buschur/RRE EVO	23	Spun like a top
3	Sparco EVO	21	Big, long doughnuts
3	Mazda Miata	21	Extra point for style
7	Toyota Supra	20	Big, but ordinary smokies
8	Nissan Skyline	16	Never really got going
9	Mitsu Eclipse	14	Gross display of understeer
10	Subaru 2.5RS	13	Grosser display of understeer

competition last year with 18 points. This year Matt scored a 20 and finished seventh. His performance was strong, but a barrage of ordinary big, long smokies, high-speed

powerslides and tire-tearing doughnuts just don't cut it anymore. — Scott Oldham

