

DRIVEN REVIEW

by Frank Masi

Photos by Walter Sidas

The 1/8 scale nitro truggy class is as hot as Hansel right now, and in particular, it's the RTR segment of this class that's seeing explosive growth. Designed by a trio of national champions—Jason Ashton, Gene Hickerson and Andy Smolnick—CEN Racing's new Matrix TR Arena looks to have the goods to make a huge splash. The TR Arena is more than just a stretched chassis and axle extensions—the truck has been thoroughly race tested over the past year, and although a competition kit is poised to hit the hobby-store shelves, it's the RTR version that made it out first, so that's what we're testing.

FAST FACTS	
MANUFACTURER:	CEN Racing
VEHICLE:	TR Arena
CLASS:	1/8-scale nitro truggy
DRIVER:	Nitro racer
SPEED (AS TESTED):	39.63 mph
PRICE:	\$500

EASY TO RUN, READY TO RACE



CEN MATRIX TR ARENA RTR

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PERFORMANCE

SURFACE—Wolcott Hobby & Raceway, Wolcott, CT. Large outdoor off-road track.

JUMPING AND HANDLING—Wolcott's track has a number of challenging—and extremely large—jump sections (the largest jump is a quad that measures about 16 feet), but with its long wheelbase, wide stance, and powerful TR .28 engine, the TR Arena was able to clear them all with ease. The truck lands solidly and retains its composure, ready to tackle the next obstacle. The stock clutch tends to engage too early, and because of this, it remains engaged for a time when you abruptly release the throttle, as when jumping. As a result, there's a tendency for the engine to "run on" during flight, which can cause the truck's nose to rise. Overall, the stock suspension settings are very good—not too stiff, but with enough damping to avoid excessive bottoming.

STEERING—The TR Arena's stock steering servo is rated at 144 in/oz of torque, which is very good for an RTR vehicle. I could feel the torque while driving; the servo holds well. The issue I had was that the servo is slow to center itself, which makes it more difficult to get the TR Arena headed straight when exiting a corner (and also makes it wander a bit on the straights, making it more challenging to align the truck with oncoming jumps). The TR Arena is very easy to drive on a track, and its steering properties lean towards the beginner, with a very mellow turn-in, aggressive mid-turn steering, and a bit of understeer on corner exit. The truck can be made to turn more tightly by grabbing a bit of brake just as you begin to initiate the turn. After that, just grab the throttle and hold on.

ACCELERATION AND BRAKING—The included TR .28 engine is a gem, with crisp throttle response, good low-end torque, and screaming high-end power. The Achilles heel of the powerplant package is the clutch, which needs stiffer springs to allow the engine to build more rpm before engaging. The stock setup works well, but bogs the otherwise potent engine unnecessarily. Still, the TR .28 popped the TR Arena over the track's imposing step-up double. I didn't think I'd be able to clear this particular jump, but with a head of steam and a bit of a barruummp, the TR Arena actually over-jumped this tricky obstacle. Braking is similarly impressive. I didn't need to touch the linkages at all; the brakes were set perfectly. They are super-strong, fade free, and easy to modulate.

OVERALL IMPRESSION—As I drove the TR Arena, I kept reminding myself that this is an RTR. It was all too easy to judge its performance against other racing truggies I've owned—many of which are kits priced at more than the entire TR Arena RTR package—and were it not for a steering servo that felt a bit unresponsive, I believe that the TR Arena could be competitive against racing truggies straight from the box.

INFO CENTER

CHASSIS—The TR Arena is more than merely a stretched Matrix buggy; its chassis is designed from the ground up for truggy duty. Stretched substantially over that of the buggy, the TR Arena's 3mm aluminum chassis keeps the engine far forward to provide more weight transfer and improved steering. Increased front-end kick-up provides better rough-track handling, and the design of the chassis keeps the truck's CG as low as possible. What really stands out is the TR Arena's arched, composite chassis brace. This system is lighter than comparable aluminum braces, and greatly inhibits fore/aft flex while allowing a bit of lateral flex to improve traction. The lightweight, composite radio tray lays the steering servo horizontally for a lower center of mass. **STEERING**—A traditional dual-bellcrank steering setup features an integrated, adjustable servo-saver and a 3mm aluminum steering bar with three Ackerman choices. This is all pushed and pulled by a Skyion 144 in/oz metal-geared, ball-bearing-supported servo. **SUSPENSION**—Like the chassis, the TR Arena's suspension is completely reworked for truggy action. Unbelievably long lower wishbones extend deeply into the low-off-set, five-spoke wheels, making for very little lateral wheel scrub as the suspension moves. The inner hinge-pins are captured, so there are no E-clips to lose. New Big Bore shocks features aluminum bodies a full 16.5mm in diameter, while burly 3.5mm shafts ward off even the roughest tumbles without bending. The shock towers are a beefy 4mm in thickness, and provide six mounting holes for each shock (the arms provide three shock-mounting positions). CEN's unique, tubular-steel upper camber-links are mated to oversized plastic rod-ends—these things will never break! Wheelbase is adjustable from either 365mm to 375mm. **DRIVETRAIN**—A mammoth, CNC-machined 66-tooth steel spur gear drives the TR Arena's center diff. Each of the three diffs (front, center, and rear) contain six internal metal-gears—two larger side gears and four smaller pinions—inside its aluminum case (a rarity, as most diff cases are plastic). The pinion gears are caged to improve their limited-slip capabilities. A 13-tooth clutchbell contains a three-shoe, racing-style clutch. CV-style, universal-joint driveshafts are found at each wheel (steel dogbones are used as center driveshafts), and everything spins on large-diameter ball-bearings. Stopping power comes from a quartet of vented-steel discs, each clamped by fiber-lined steel pads. The wheel hexes are a larger-than-normal 23mm. **ENGINE SYSTEM**—A powerful CEN TR .28 engine arrives nestled between aluminum mounts. A recoil starter is used to bring the big mill to life, and long run times are assured thanks to a large 150cc flip-top fuel tank. An aluminum in-line fuel filter comes already installed. **ELECTRONICS**—The TR Arena is one of a very few RTRs that comes with a computerized, multi-model-memory transmitter. Although AM, the Skyion radio also features EPA for both channels and digital trim levers. Steering and throttle are handled by a pair of Skyion G8-2122 servos, which have metal gears, ball bearings, and are rated at an impressive 144 in/oz of torque. **WHEELS, TIRES AND BODY**—Six-spoke, white-nylon wheels are shod with aggressive block-tread tires with foam inner liners for added support. The body comes pre-painted and trimmed from the factory. You won't really need to apply stickers, as the body comes with the "CEN" and "TR Arena" logos pre-painted on the inside, which is very unique. A white nylon rear wing finishes off the race-truggy look.

CEN MATRIX TR ARENA RTR



The RTR TR Arena includes the pre-assembled chassis with all electronics installed, a 10-model-memory Skyion radio, all necessary tools, an engine-tuning DVD, and a great-looking, pre-painted truggy body.



CEN's powerful new TR .28 engine ran flawlessly for our test. We installed an Outerwears filter skin to extend the time between filter cleanings.



A composite radio tray keeps weight down and provides a stable platform for the Skyion 2122 metal-gear servos. The plastic electronics box easily accommodates all sizes of receivers and different styles of batteries.



Large-diameter Big Bore shocks hold a lot of shock fluid, and have strong 3.5mm steel shafts for added durability.



Dual-bellcrank steering features an integrated, spring-loaded, adjustable servo-saver. The 3mm aluminum steering plate offers three Ackerman choices.



The beefy, aluminum-cased center diff is spun by a CNC-machined 66-tooth steel spur gear. Four vented-steel brake discs provide stopping force.



A three-shoe composite clutch grips the 13-tooth steel clutchbell. Firmer clutch springs would improve performance by delaying engagement until the engine built more revs.



All three diffs have hardened-steel bevel gears, aluminum cases, and six internal gears. The internal pinion gears are caged to improve the diff's limited-slip capabilities.

ITEMS USED

Team Orion Marathon Battery
12227, \$25.99



O'Donnell 30% Racing Quart
ODOP3330, \$10.99



Outerwears filter skin

TECH SPECS

SCALE: 1/8
DRIVE: 4WD
LENGTH: 22.05 in. (560mm)
WIDTH: 16.34 in. (415mm)
WEIGHT: 155.2 oz. (4400g)
WHEELBASE: 11.2in. (365mm) to (375mm) Track (F;R): 13.7 in. (348mm); 13.4 in. (340mm)

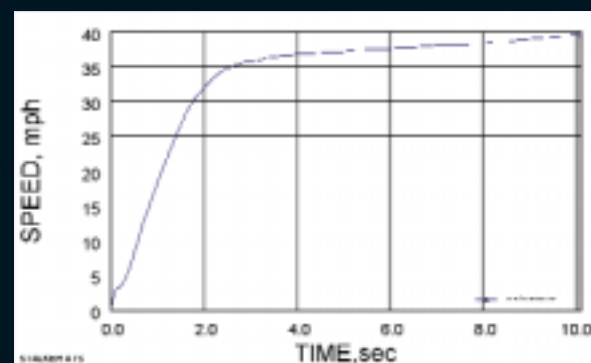
PINION/SPUR: 13/66
ENGINE: CEN TR .28
TIRES: Block tread
WHEELS: Six-spoke white plastic, 23mm hex drive
ACCELERATION: 0-10 mph: .59 sec.; 0-20 mph: 1.10 sec.; 0-30 mph: 1.75 sec.; 9.95 sec. @ 39.63 mph in 488.19 ft.

HELPFUL HINTS

RECOMMENDED UPGRADES: Faster steering servo, CEN MXS20 CNC aluminum clutch shoes (\$20), Steel vented clutch bell (13T, \$29)

GOT TO GET: Fuel (we used O'Donnell 30 percent), squeeze-type fuel bottle, twelve AA batteries, glow igniter

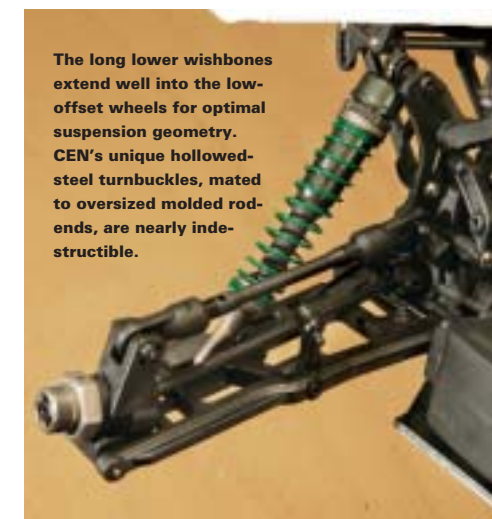
RADAR DATA



COMPETITORS INCLUDE: Thunder Tiger ST-1, Hot Bodies Lightning Stadium RTR, HPI Hellfire RTR, OFNA Mutilator, Jammin' X1-CRT RTR



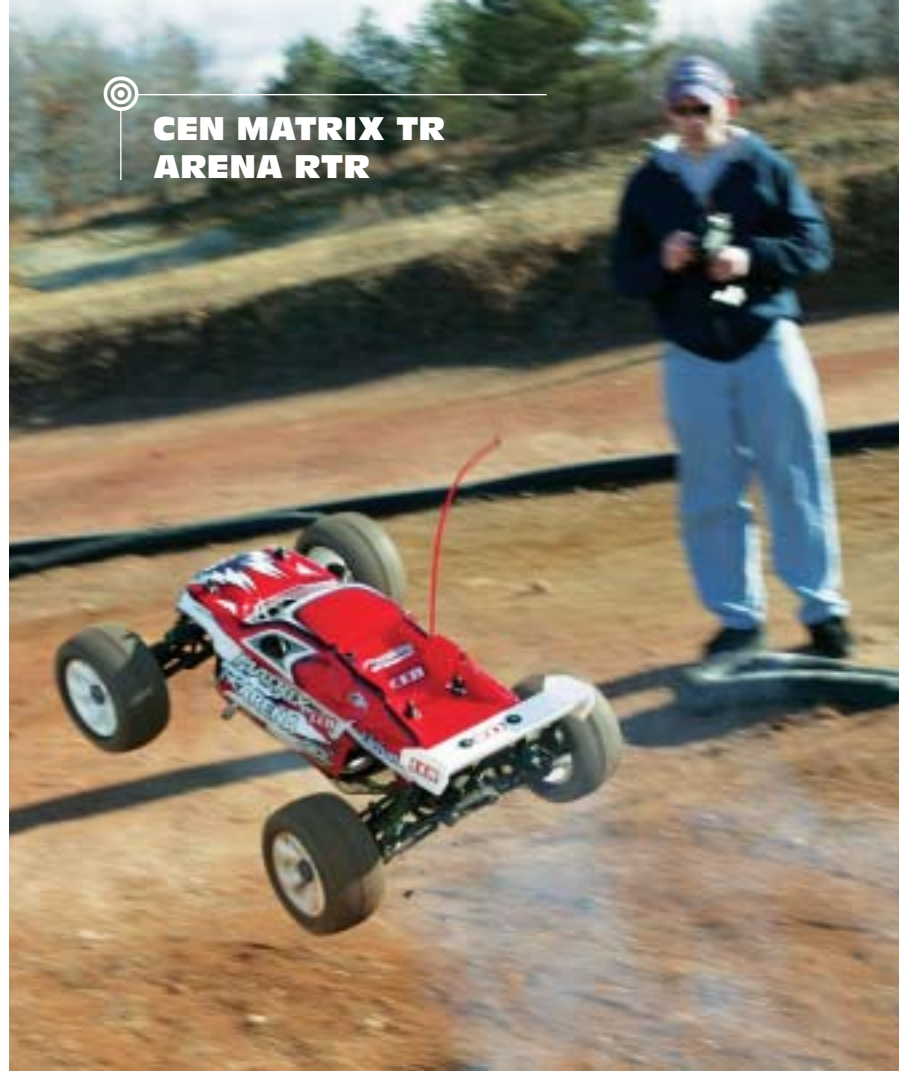
Ultra-long lower front wishbones provide handling that's plush—even over the roughest terrain. Added chassis kick-up further improves rough-track handling.



The long lower wishbones extend well into the low-offset wheels for optimal suspension geometry. CEN's unique hollowed-steel turnbuckles, mated to oversized molded rod-ends, are nearly indestructible.



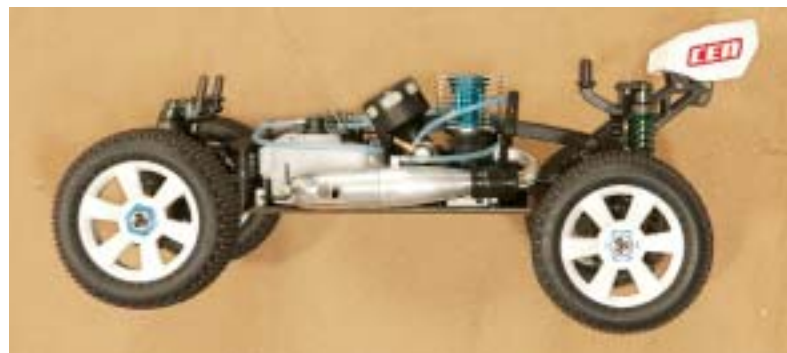
Lightweight six-spoke wheels are shod with effective block-tread rubber tires. 23mm hex drives are more durable than standard 17mm hexes, although it may be harder to find suitable replacement wheels.



◎ **CEN MATRIX TR
ARENA RTR**

CONCLUSION

CEN has delayed the release of its truggy for quite a while, but the end product is well worth the wait. CEN obviously didn't wish to rush the Matrix TR Arena to market before its in-house test staff was sure that the truck was a solid performer. I was really impressed when I pulled this truck from its box, but I was really blown away by how well the engine ran, how fast the truck went, and by how well it handled the rigors of a real off-road track. For an RTR, at this price, I'd be hard pressed to recommend a package that is better than the TR Arena. ◎



Links

CEN/Genka Trading Corp., www.cenracing.com, (714) 792-1923
 DuraTrax/O'Donnell, distributed by Great Planes Model Distributors, www.duratrax.com, (800) 682-8948
 Outerwears Racing Accessories, www.outerwears.com
 Team Orion Inc., www.team-orion.com, (714) 694-2812
 For more information, please see our source guide on page 201.



**AUTHOR'S OPINIONS
AND RATINGS**

Ratings: 1 to 10 (poor to excellent)
Rating Category: Beginner to casual racer

■ **CHASSIS**—Everyone who checked out the TR Arena had praise for its unique molded-composite upper brace system. It really works! The chassis is light, very stiff from front-to-back, and has a bit of lateral flex that helps the truck hook up on slippery tracks. The engine placement—far forward on the chassis—seems to really help transfer weight to the front wheels during cornering.

RATING - 9

■ **SUSPENSION**—CEN hit all the right notes with the TR Arena's suspension design. It has ultra-long lower arms for incredible stability in the rough, and is very adjustable. The shocks are larger in diameter than most, and come from the factory set perfectly for track use. The hollow, large-diameter turnbuckles and oversized rod-ends add to the truck's excellent durability.

RATING - 9.5

■ **DRIVETRAIN**—The TR Arena's drivetrain is, if anything, overbuilt. Everything is metal, from the diff cases to the hardened-steel ring-and-pinion gears. The CNC-machined steel spur gear looks like the timing-chain wheel from a Honda VTEC engine (it's roughly the same size, too). The diff cases are held together so well that we couldn't extract their screws to show you the diffs' internal organs (this is going to be an issue come rebuild time). The clutch requires stiffer springs to slow its engagement a bit.

RATING - 8.5

■ **BODY, WHEELS AND TIRES**—The TR Arena's pre-painted body drew massive praise from Driver's editors and from local racers. It has clear windows—a big plus for style-conscious racers—and all of the "CEN" and "TR Arena" logos are actually printed on the inside of the body, so they can't come off. I really liked the cool side windows. The stock wheels and tires are race-worthy. The block tread hooked up at Wolcott's track like nobody's business. CEN's 23mm hexes are certainly durable, but a lot of the industry still uses 17mm hexes, so finding replacement wheels might not be an easy job.

RATING - 9.5

■ **ELECTRONICS**—The included Skyion Digital Spec Xtreme AM computerized radio features all the stuff racers need, including 10-model memory and EPA (end-point adjustment) for both channels. The on-board servos work well, and have bearing-supported, metal-gear trains. The steering servo is a bit lackadaisical in returning to neutral.

RATING - 7.5

What we liked—

- ◎ Powerful and reliable engine
- ◎ Computer radio
- ◎ Superb handling and suspension
- ◎ Terrific looking pre-painted body

What could be improved—

- ◎ Body vents need to be cut
- ◎ Steering servo sluggish to center
- ◎ Clutch springs too soft

