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Type 1/8-scale Nitro 4WD buggy

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Requires radio, engine, servos, receiver, receiver pack, fuel

teamxray.com

XRAY XB808

XRAY's XB808 Is
Leaner, Longer ...
and Faster?

WORDS & PHOTOS JASON SAMS » jasons@airage.com

When XRAY designed its latest racer, the XB808, it clearly looked to create the Lamborghini of 1/8-scale buggies. Its over-the-top quality and craftsmanship are instantly visible. The XB808 follows current design trends with a narrow chassis configuration, but you won't have to pore over the buggy long to see the intricate machine work and top-shelf components. A closer look, however, reveals clever details and features that set this machine apart from anything it might be compared with. The XB808 is lighter, narrower, longer, has a more centralized weight bias and is more adjustable than its predecessor. Is it faster? To find out, we put in the laps, and to get right to the point: we were stoked with our times.

DRIVE TIME

TEST SPOT

RESCUE MINI RC SPEEDWAY, RESCUE, CA » RESCUER.COM

NEW GENERATION ACCELERATION

Today's lighter 1/8-scale buggies accelerate much quicker than the heavier buggies of yesteryear. The 808 is no exception! The car moves out quickly and lights up the tires in an instant. The 3-shoe aluminum clutch is sprung with XRAY's hardest springs, which are fine for high-bite conditions, but it's quite aggressive. Although you'll have fun flinging gnarly roosts, I think one hard spring and two medium springs would be the hot setup, as several pros who run 3-shoe clutches use two 1.0 (medium) springs with one 1.1 (hard spring). This setup gives you good acceleration, but it

isn't as abrupt and doesn't spin the tires as much.

AGILE IN FLIGHT

A buggy's weight/balance is evident the first couple of times you hit some jumps. After I had hit a few, I noticed the XB808 pops off jump faces and gets a noticeable amount of air without much effort. It feels light and takes to the air exceptionally well. While in the air, the 808 stays nice and flat. Takeoffs on uneven lips or bumpy jumps aren't a problem because they don't unsettle the buggy as much as you might expect. Large drops from

bigger jumps cause the suspension to bottom out, but the 808 can be on the gas as soon as you touch down. For smoother tracks with larger jumps, you can get away with running slightly thicker oil in the front and rear, especially in mid-summer; 650 to 700 weight in the front and 400 weight in the rear would be my starting point for a track with larger jumps that isn't too rough.

SOLID COMPOSURE

Big-bore shocks like the 15.3mm units on the 808 are the new thing on just about every 1/8-scale buggy—because they work. The bigger shocks provide better damping in the bumps and are more consistent during longer driving sessions. The 808 was plush and plowed



**ACTION VIDEO
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through track imperfections without any hiccups. The suspension was a little soft on jump landings, but the buggy never lost its stride. Although the buggy felt a little soft in the heat of the day, it was easy to drive hard and push. When you can haul ass through rough terrain, you start to click off fast lap times, and that's what I was able to do.

AGGRESSIVE CORNERING

To go fast you've got to get in out of the corners in a hurry. The corners are where you make up all your time in off-road racing. The XB808's aggressive characteristics promote a ride that whips through turns. The kit setup puts an emphasis on steering, of which there is plenty. You can easily loop out in tight

corners with too much steering input. If you like a car with considerable push or numb steering, you'll want to play with the front end's setup. The buggy coasts well when you're off the gas in tight corners. On-power steering is much better than average, as you can hold your line while nailing the throttle. Surprisingly, the buggy gets bucked around in bumpy corners, but it doesn't catch edges often or traction roll. To help prevent my buggies from tripping up, I always set my rear camber at negative 2.5 degrees.

EXCELLENT TENDENCIES

When the buggy gets out of shape and starts to roll, it has a knack for finding its wheels. The weight centralization and balance of the

car must have a lot to do with its cat-like reflexes. If you're new to racing, you'll notice the number of times you think the car needs to be marshaled but somehow pulls out of it. Most 1/8-scale buggies these days are durable, and the 808 seems to be just as tough as any buggy that hits the track. During testing we didn't break anything, and the wear of the parts, or lack thereof, is impressive. The outdrives, suspension arms and chassis will endure seasons of abuse. The team drivers I've spoken to say that the 808 will last a long time without having to replace parts, and that's also evident by the quality of the components used.

XRAY supplies a clear body and slotted dish wheels but leaves the tire choice to you. I sent my body to Andy Waddell of W-Designs for paint and installed GRP Atomic tires for testing.



UNDER THE HOOD

Quick Repairs and Maintenance

XRAY reduced the screw count of the servo tray to speed up the disassembly time of the 808. The compact radio box has just enough room towards the inside of the chassis for a flat 5-cell or LiPo pack. The lighter receiver sits towards the outside of the box. There is plenty of room for you to tuck your servo, switch and transponder leads. The lids of the radio box are held in place with body clips for quick access to your battery's charge lead, if you choose not to route it outside the radio box. A personal transponder mount is incorporated into the carbon-fiber servo plate.



It's easy to remove the carbon-fiber radio tray for maintenance, and the two empty holes are spaced for a personal transponder.

SPECIFICATIONS

XRAY XB808

teamxray.com

Scale 1/8

Price \$600 (varies with dealer)

DIMENSIONS

Length overall 19.29 in. (490mm)

Wheelbase 12.56-12.99 in. (319-330mm)

Width 12.13 in. (308mm)

Weight, as tested 7 lb. 2.6 oz. (3,250g)

CHASSIS

3mm 7075 hard-coated aluminum main chassis with radiused sides. One-piece molded chassis braces.

SUSPENSION

Type F/R Zero kingpin design/lower H-arm

Inboard camber-link positions F/R 4/5

Outboard camber-link positions F/R 1/3

Upper shock positions F/R 6/6

Lower shock positions F/R 2/2

SHOCKS

Threaded-aluminum body with knurled adjuster. Bladder volume compensation. 3.5mm shock shafts with nutted pistons.

STEERING

Type Dual bellcrank

Servo saver Adjustable cam-type

Tie rods Spring steel adjustable turnbuckle

Ackerman settings (inboard/outboard) 3/1

DRIVETRAIN

Type Full-time, shaft-driven 4WD

Transmission 3 sealed differentials

Differentials Bevel gear with steel ring gear and sealed plastic housing. Hardened steel outdrives.

Spur gear Hardened steel

Brake Front and rear machined, ventilated disc with Ferodo padded calipers. Adjustable bias.

Driveshafts Spring steel CV-type with captured drive pins

Bearings 22 rubber-shielded ball

Gear ratios 4.3:1 primary; 11.29:1 final

BODY, WHEELS & TIRES

Body XRAY XB808 .060 Lexan,

Wing Injection-molded plastic, bi-level

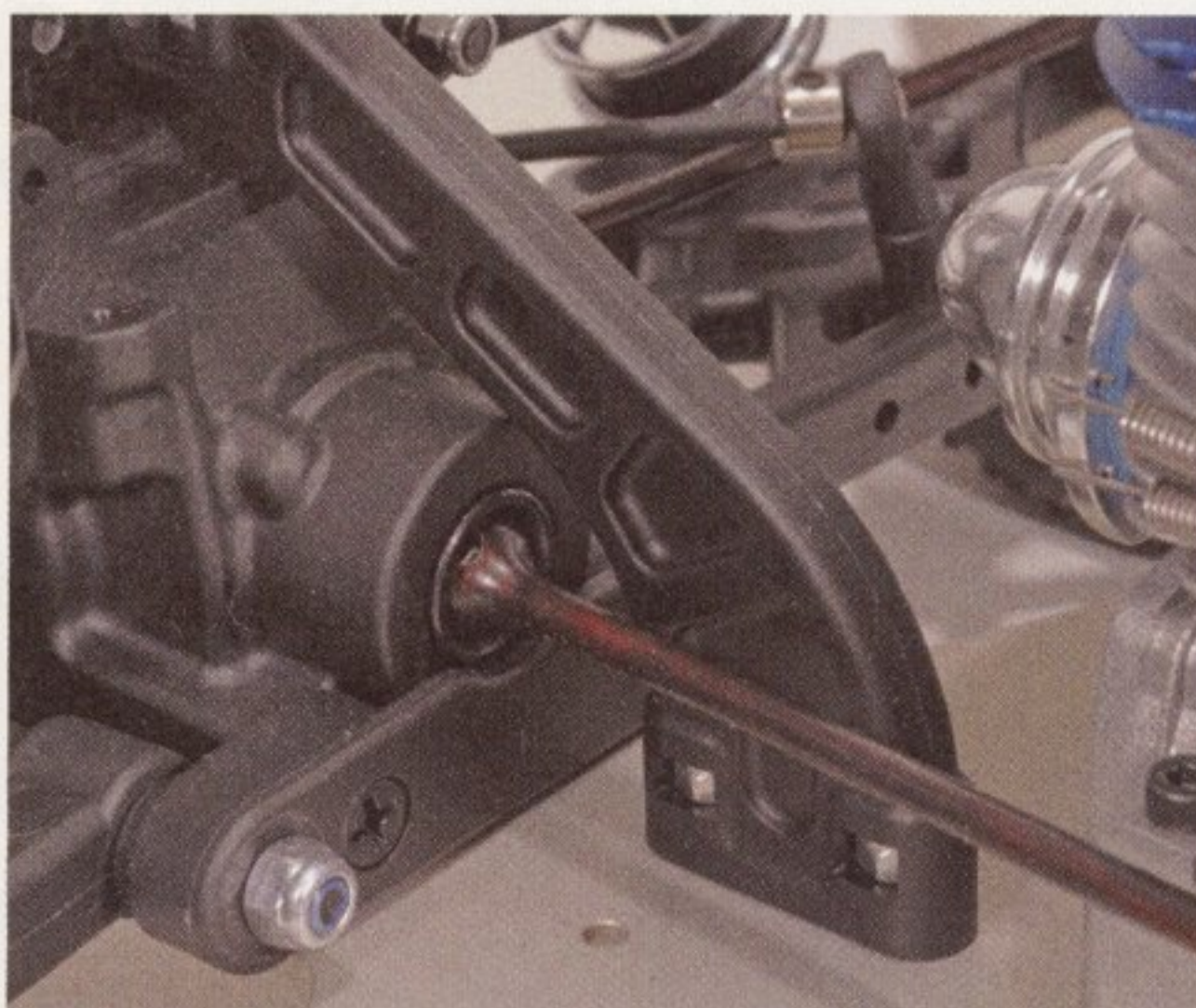
Wheels Not included (use 17mm hex)

Tires Not included

Inserts Not included

ADDITIONAL ACCESSORIES

Turnbuckle wrench, spare shock pistons, spare screws and nuts, decal sheet



Instead of attaching a drive cup to a shaft that protrudes from the gearbox, the 808's bevel pinion is integrated directly into the CV joint for a wobble-free connection with no cup to loosen. Note that the CV's crosspin is captured by the gearbox housing.

Direct Drive

The front and rear center driveshafts are directly connected to the ring gear, which is said to reduce kinetic (energy) loss and increase acceleration. The driveshaft bearings, which are housed inside the gearbox, capture the drive pins, so there is no chance of the pins working loose. Since the bearings aren't exposed to nitro-racing grime and dust, they should last much longer than exposed bearings. All of the XB808's driveshafts are made out of XRAY's signature bronze-colored spring steel. Spring steel is extremely tough, and it looks trick.

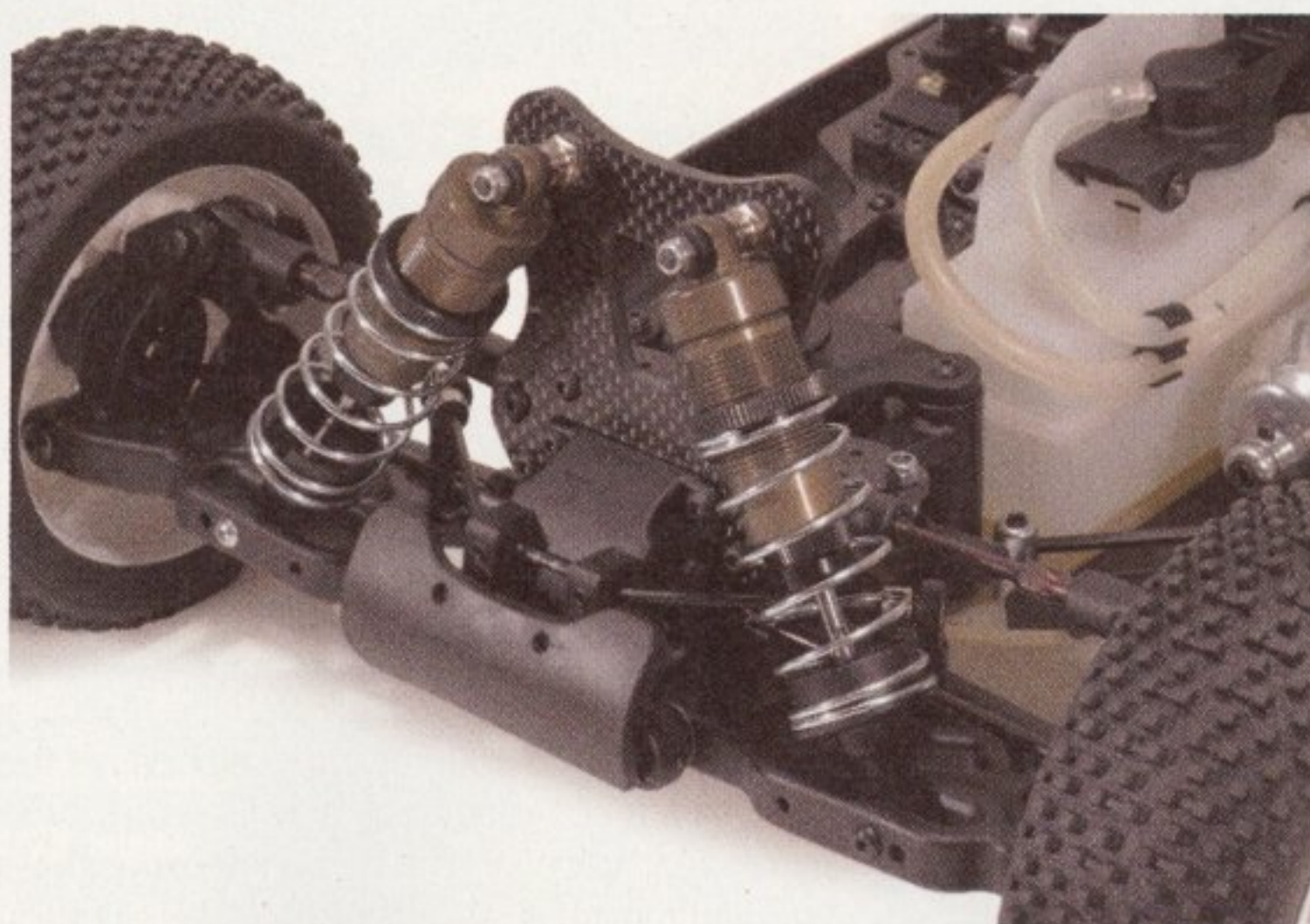
New Suspension Package

The XB808's zero kingpin front suspension does an excellent job of soaking up bumps. The suspension uses 20-degree caster blocks and has 10 degrees of kick-up built into the front of the chassis; 8 degrees is standard on most buggies. The screws that pass through the caster blocks thread into steel bushings that are molded into the steering blocks, so you should never have one vibrate loose. The camber-link height is adjustable on the front tower for altering roll center, but there aren't any alternate length options in the caster blocks. XRAY designed the front and rear suspension arms so they aren't side specific, so you don't have to carry as many parts to the track. The arms do flex a little to increase durability and the buggy's bump handling. The big-bore shocks that sit at all four corners of the 808 have a 15.3mm bore. The larger shocks are more consistent in rough sections and shouldn't change much during long Main events. The threaded-body shocks use six-hole pistons and a bladder for volume compensation. An aluminum cap is threaded to the bottom of the shocks for securing the O-rings and shock bushings. With this setup you shouldn't have any "blowouts."



Above: XRAY's "zero Kingpin" suspension might also be described as "zero hingepin"; note that the caster block is not pierced by a hingepin, but instead uses two pivot screws for articulation.

Left: large-capacity big-bore shocks with a 15.3mm bore sit at all four corners of the XB808. The silky smooth shocks use a lower aluminum cap to secure the shock seals to prevent leaking.



Left: you'll notice additional holes on the front side of the rear suspension arms to add optional Lexan mudguards. Mudguards protect your suspension and drivetrain from binding in wet conditions.



New Layout, and it's Lighter and Longer Too

The 808's entire chassis layout has been reconfigured. The chassis is now longer to increase stability and has 10 degrees of front kick-up to improve rough track handling. The engine has been moved a significant distance forward, which is evident by how far the engine's cooling head is from the rear shock tower. With the engine moved forward and the electronics and fuel tank inward towards the chassis centerline, XRAY claims the buggy is much more balanced. Because the layout is more centralized, the chassis is narrower, and that significantly reduces the buggy's overall weight. With the engine's new placement the buggy is much more aggressive in the corners and carries more off-power speed.



The engine is mounted closer to the chassis' center than the previous XRAY buggy, as evidenced by the big gap between the engine and the rear shock tower.

FACTORY OPTIONS

- » Aluminum rear hubs—no. 353356
- » Aluminum caster blocks—352226 (left), 352216 (right),
- » Graphite front upper plate—351341
- » Graphite center diff plate—354051
- Matched spring sets—various part numbers

YOU'LL NEED | WE USED

Radio	Spektrum DX3R spektrumrc.com
Receiver	Spektrum
Engine	Novarossi 367 novarossiusa.com
Steering servo	Airtronics 94773M airtronics.net
Throttle servo	Airtronics 94771M
Tires	GRP Atomic (A-compound) grpgandini.com
Fuel	Sidewinder 30% morganfuel.com
Receiver pack	Team Orion Marathon 1600mAh hump pack teamorion.com
Paint for body	Andy Waddell W-Designs

ON THE BENCH

Building the XRAY XB808 is a breeze, especially when you have the detailed, color instruction manual on your pit bench during the build. The car almost falls together, and you won't find any slop or binding anywhere. The quality of the components is the best I've ever used to build a buggy. Here are "what to watch for" tips I jotted down during the build that will help make your wrenching even more enjoyable.

PAGE 23 FRONT CHASSIS BRACE

When installing the front chassis brace, make sure the center driveshaft is to the right of the brace looking towards the front of the car. The illustration in the manual is misleading.

**PAGE 33 & 34
SHOCK ANCHORING**
Use silver button-head screws to anchor the front right and rear left shocks. These screws have left-hand

threads that are required for these two shock locations.

PAGE 10 & 11 RING GEAR BEARINGS

Do not overtighten the three 3x5mm button-head screws that secure the inner ring gear bearings in the gear-boxes. The screws should just touch the bearing, and if tightened past snug, they may cause the bearing to bind.

EXHAUST PIPE HANGER

The wire pipe hanger that is included with the XB 808 is robust. Because the wire is thicker than on standard pipe hangers, you may need to drill out your pipe's mounting hole. The Novarossi 9901 needed to be drilled; I used an 1/8-inch drill bit to increase the size of the hole.

Rating The XRAY XB808

When you hear racers talk about XRAY machines, they usually say words such as jewelry, luxury, quality and candy to describe the Slovakian company's craftsmanship. The XB808 is worthy of all of those terms, as it's easily one of the nicest—if not the nicest—buggies I've ever worked on. Thankfully the XB808 isn't all show and no go. The buggy is agile in the air and soaks up jump landings without getting out of balance. It accelerates hard and carries excellent corner speed, whether you're on the gas on exit or coasting as you enter a 180. With the XB808 you'll only be limited by your driving skill because this buggy carves up an off-road track as well as any other race machine. The buggy is a bit on the expensive side, and you may need to order spare parts online. On the upside, you'll never have to worry about buggy envy when you're at the track, as all of your buddies will be talking about how dope your rig is. **E**



- » Quality of craftsmanship is second to none!
- » Excellent handling
- » Easy to work on
- » Durable and reliable



- » Wheels and tires not included
- » Parts support not as strong as other brands

BEST FOR

Expert racers