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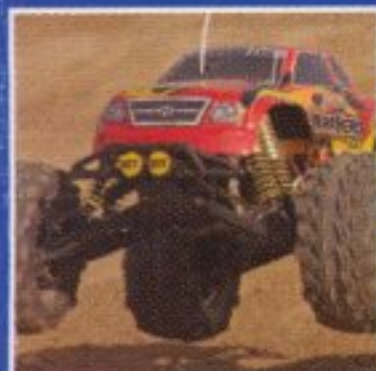
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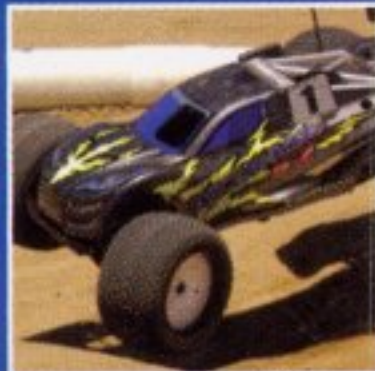
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**EURO-
CHAMP
IN A BOX**
XRAY
XB8 EC

STYLING

BEHIND THE WHEEL

XRAY XB8 EC

1/8-SCALE COMPETITION NITRO 4WD BUGGY

The European champ is ready to take on the U.S.

WORDS & PHOTOS GEORGE M. GONZALEZ

XRAY's new XB8 EC ("EC" stands for "European Champion") features many of the tweaks and mods that helped Team XRAY driver Yannic Aigoïn to win the prestigious European Championships in the later part of 2006. Although its name might make it seem like a standard XB8 with a few hop-ups, in reality, the new buggy has undergone extensive re-engineering to make it more formidable in the hands of experienced racers and sportsman drivers alike. The XB8 EC has a new chassis that positions the components closer to the centerline to improve balance, and the engine has been moved a little farther back to improve its front-to-rear weight ratio. An all-new front suspension provides increased downtravel and a greater range of steering throw to make it more maneuverable. New big-bore shocks hold more oil for improved bump control, and the front shocks are longer to extend the range of suspension travel. These are only a few of the new features found on the XRAY XB8 EC, so you'll have to read on to get the complete story. The big question is does it have the goods to win championships in the U.S. Let's find out.



VIDEO ONLINE

Go to rccaraction.com
to see the XB8 EC in
action



TESTING: ROUND 1

I headed to Full Throttle Hobby in Bakersfield, CA, to break the engine in and test the XB8 EC. The off-road track is big, but it's extremely technical with tight corners, a washboard section and doubles, triples and tabletop jumps strategically located around every corner. The track was dry and dusty, but the Pro-Line M3-compound Crime Fighters provided enough traction to run the buggy at full clip. After a few warmup laps, I started to push the XB8 EC harder and harder on each lap; it didn't take long for me to be comfortable with how it was handling.

Steering was sharp, and the XB8 EC was extremely responsive to my commands. I was able to toss it around the tight corners, and it turned in faithfully with only a hint of under-steer. Steering was even sharper on the switchback turns where slower speeds were



necessary to avoid driving off the track. I was able to put the buggy just about anywhere I wanted, but I had to be careful when I got back on the throttle to prevent it from swapping ends. The buggy felt loose, but that was caused by the overly dusty conditions.

The EX8 EC bucked around going through the washboard section, but it remained on all four tires even when I got on the throttle too early. The XB8 EC was a rocket down the front straightaway, and it continued to build speed, so I had to let off a few feet before entering the 90-degree turn at the end of the straightaway. I took the time to set the brakes up to my liking while I was breaking the engine in, and the stopping power remained consistent and linear throughout testing.

ROUND 2

The XB8 EC handled the dry and dusty conditions very well, but I wanted to test it on a groomed surface, so I took the time to

give the track a good watering, and I filled in a few potholes around its perimeter. The XB8 EC felt locked in on the freshly groomed surface. Traction was greatly increased, and that allowed me to drive the XB8 EC like a getaway driver in a bank robbery. The XB8 EC was even more responsive to my commands, and the rear end didn't wash out when I got back on the gas while exiting the corners as it had previously.

The XB8 EC handled the jumps like a dream. The Werks engine produces an abundance of low-end power, so I was able to clear the jumps with little runway. It took only a blip of the throttle to get over the larger obstacles, and the buggy's flight attitude was nice and level no matter how I approached the jumps. The XB8 EC was responsive to my throttle and brake inputs while sailing through the air; I was able to stand it on its nose by tapping the brakes, and then I leveled it off by feeding it some throttle. Getting into a rhythm was easy, and I was able to clear the three consecutive double jumps in the middle of the track with perfect timing on each lap.

Bump handling was superb; I was able to drive through the blown-out sections of

the track with little difficulty. All I had to do was let off the throttle momentarily if the buggy lost its composure, and the chassis settled quickly every time. The only obstacles that gave me trouble were the double-double jumps on the right rear of the track and the large tabletop in the rear center. Visibility was a problem on the double-double jumps, so I can't blame the buggy's handling on that one, and the tabletop jump had a large lip that was not perfectly level, so it was hard to keep the XB8 EC between the lanes during the landings. I quickly learned to drive conservatively through those sections because I was getting tired of walking down from the drivers' stand to turn-marshal the buggy.

The XB8 EC felt surefooted and composed throughout testing. It was responsive, agile and never once felt as if it was out of control. In fact, the XB8 EC felt like a dialed-in racing machine that I've been driving all season even though it was my first experience with it. After I had burned through all the fuel I brought, it was time to go home. Before I left, I inspected the XB8 EC for signs of damage and wear. Other than a slight squeak when I compressed the suspension, it was in perfect shape and ready for another thrashing session.



The XB8 CE body is 30 percent lighter than the previous TQ body and it has been tweaked to allow more cooling air to reach the engine.

TUNING TIPS

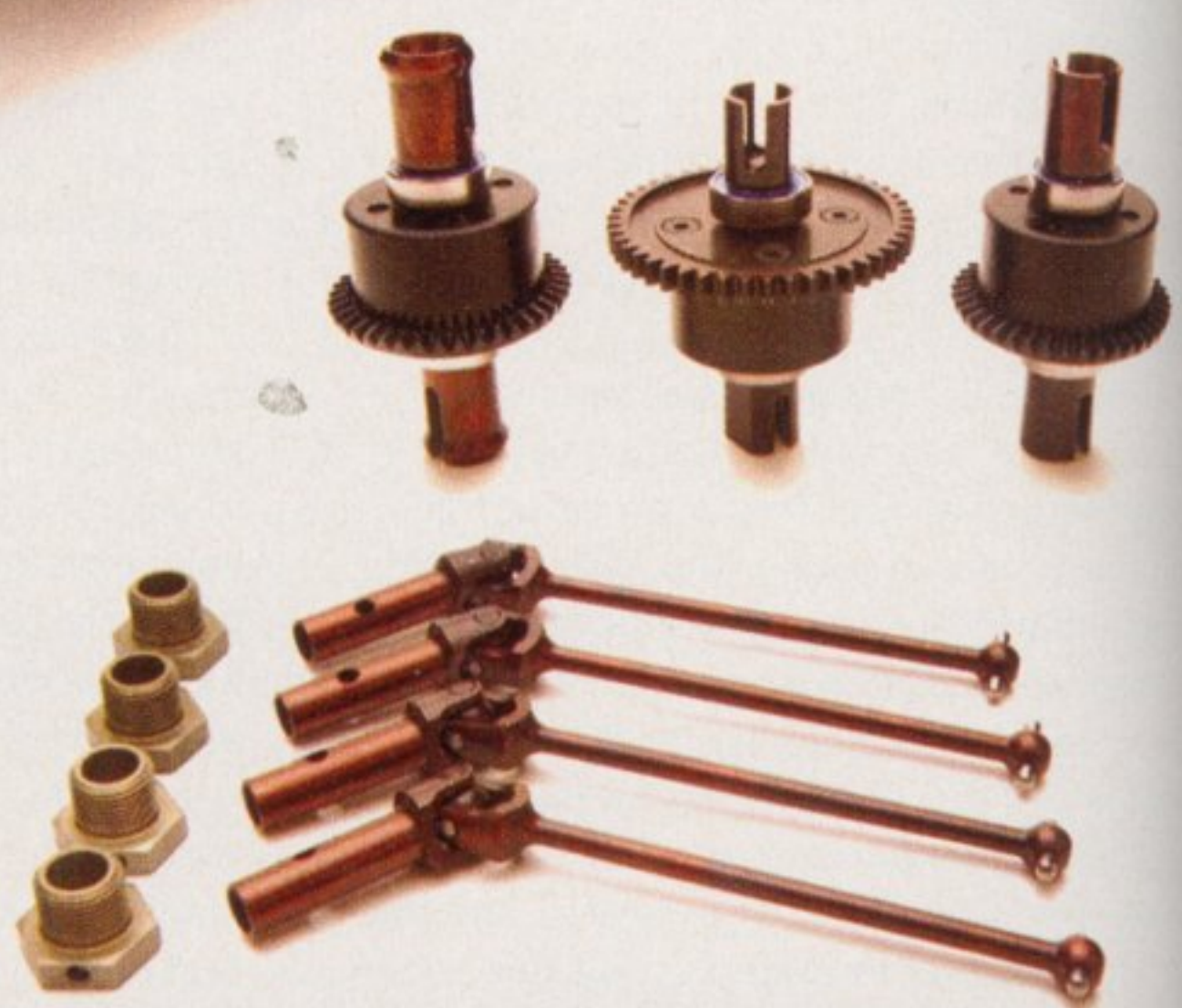
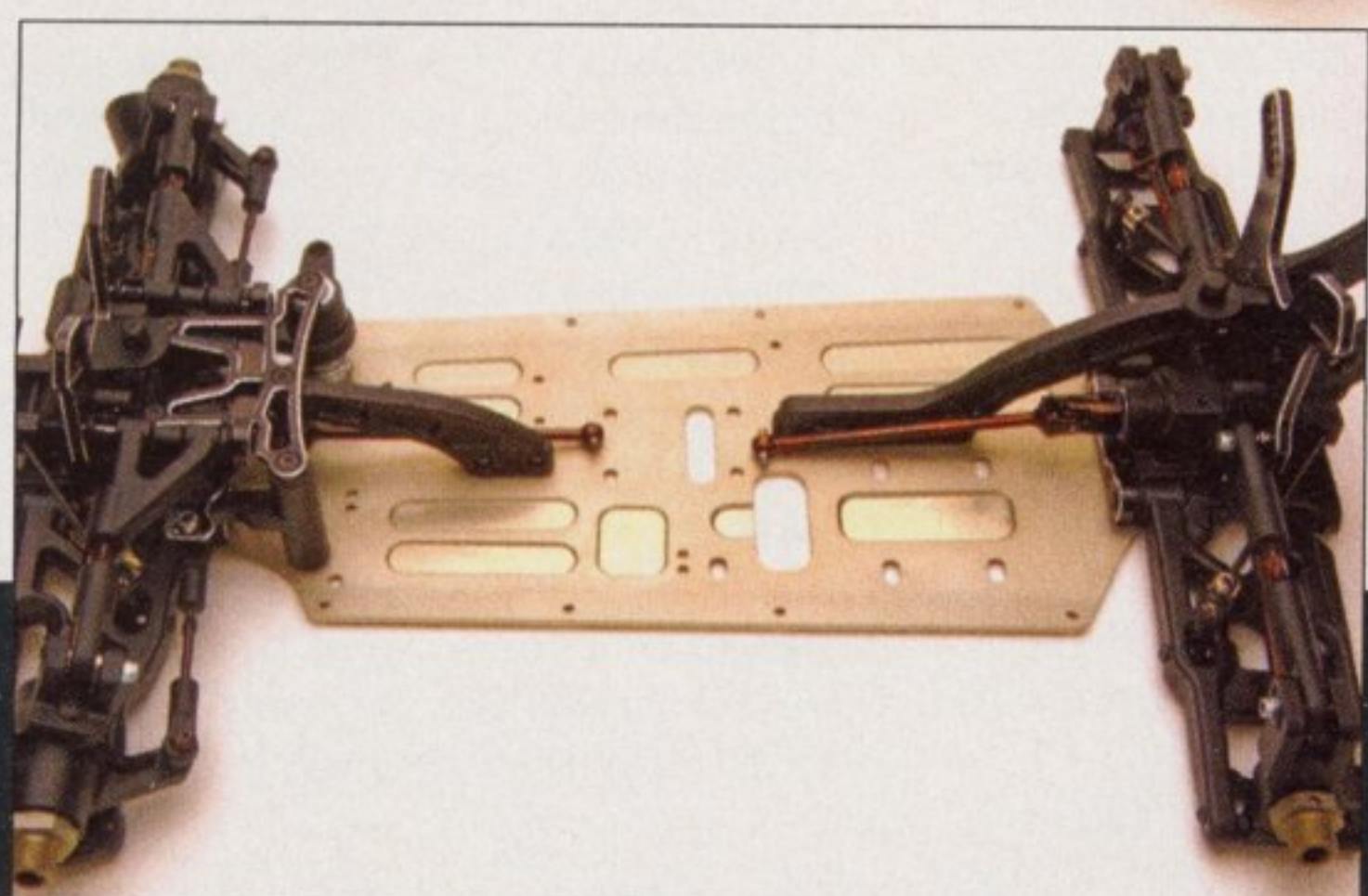
DIFF FLUID

The kit comes with a small bottle of 7,000WT silicone diff fluid that's used to fill all three diffs. To prevent the center diff from unloading and to increase rear traction, fill the front diff with 3,000WT, the center diff with 7,000WT and the rear diff with 1,000WT. It's a good idea to pick up diff fluid in a variety of viscosities to aid track tuning.

SHOCK FLUID

The kit also includes a bottle of 350 CST shock fluid, which is equivalent to 25WT in SAE standards. I used Team Losi 40WT fluid in the front shocks and 35WT in the rear shocks. This turned out to be a great starting point for the supercross-style track that I race on. You'll want to pick up shock oils in a variety of viscosities to help you dial the buggy in to different track conditions.

The diff gears are heat-treated and machined for a precise, long-lasting gear mesh. The front outdrives are longer to ensure that the dogbones don't fall out during extreme driving, and they're reinforced on the ends for longer life.



Above: the universal driveshafts are made of Hudy spring-steel, and the hex hubs are 7075 aluminum for improved wear characteristics. **Left:** the chassis is machined out of Swiss 7075 aluminum and machined in all the low-stress areas to reduce weight. Plastic braces allow the chassis to flex slightly to make the buggy more forgiving on rough tracks. The center drive shafts are the same length and are made of Hudy spring-steel for extra durability.

CHASSIS

- » Swiss 7075 machined-aluminum
- » 7075 machined-aluminum servo tray, steering plate and center diff plate
- » Plastic chassis braces

The XB8 EC's new chassis is fine piece of engineering. It has been machined in all of the low-stress areas to reduce weight, and material has been removed from under the diffs, engine and fuel tank to keep these components as low as possible to reduce the CG. The chassis plate is hard-anodized to increase strength and rigidity, and all of the components are installed close to the centerline to improve weight distribution. The servo tray, steering plate and center diff plate are black-anodized and have natural silver beveled edges for spectacular looks. The battery box has separate compartments and lids for the receiver and battery pack, and the flat 6V battery pack (not included) is mounted standing up and close to the centerline for better balance.

DRIVETRAIN

- » Sealed bevel-gear diffs with Hudy spring-steel outdrives » Hudy spring-steel driveshafts » Rubber-sealed ball bearings
- » Dual disc brakes with Ferodo brake pads » Hardened-steel spur gear

The completed drivetrain spins with hardly any resistance to ensure that every ounce of torque that the engine produces will be transferred to the wheels. The differentials have rubber O-rings and paper gaskets to keep them leak-free, and the composite diff cases are precision-ground after the molding process to ensure a perfect fit with no vibration. New hardened-steel and machine-cut gears are designed to provide long-lasting performance. New, equal-length center universal driveshafts link the diffs and provide full-time 4WD.

ENGINE ACCESSORIES

- » 7075 aluminum engine mounts
- » Hardened-steel clutch bell
- » 7075 aluminum flywheel and clutch shoes » 120cc fuel tank with stone filter and splash-guard

The XB8 EC does not include an engine, but it does include all the clutch parts required to install one. A 3-pin flywheel, tapered split washer, clutch shoes and springs, ball bearings, clutch bell, spacers, engine mounts and all of the necessary fasteners are included. You also get a nice dual-element air filter, air-filter elbow, air-filter lube, fuel line, fuel-line clips, cable ties and an in-line fuel filter.

SUSPENSION & STEERING

- » 4mm 7075 aluminum shock towers
- » Hudy spring-steel turnbuckles
- » 7075 aluminum arm mounts

The XB8 EC is one the most adjustable buggies available, but the best part is that no extra parts are required to adjust camber, caster, front and rear toe, anti-squat, kick-up, dive/anti-dive, droop, wheelbase, front and rear roll center and Ackerman. The 4mm suspension pins are heat-treated for extra strength and captured by 7075 aluminum arm mounts (also black-anodized with natural silver beveled edges). Setting bushings inside the arm mounts and front shock tower allows suspension-pin angle adjustment, and the kit includes many different bushings for an abundance of tuning possibilities.

Eccentric steel bushings installed in the C-hubs allow five caster options (13 to 17 degrees in 1-degree increments). The new front suspension arms have been redesigned to allow more downtravel and more steering throw, and the hard-coated aluminum shock bodies have larger, 13.5mm, inner diameters. The front shock bodies and shafts are longer to provide a greater range of suspension

XRAY XB8 EC

RC America rcamerica.com

Price \$700 (varies with dealer)

SPECIFICATIONS

Overall length 18.97 in. (482mm)

Wheelbase 12.63 to 12.87 in.
(321 to 327mm)

Width 12.04 in. (306mm)

Weight as tested 118.16 oz. (3,350g)

Chassis Machined 7075 aluminum-plate

Drivetrain Shaft-driven 4WD w/3
differentials

Clutch 3-shoe aluminum

Transmission ratio 3.33:1

Final drive ratio 12.76:1

Differentials Sealed bevel gear

Drive axles (F, center, R) Hudy spring-steel
universal axles

Brake Dual disc w/precision-ground vented-
steel rotors and padded-steel calipers

Suspension type (F/R) C-Hub w/upper and
lower suspension arms/H-arms
w/turnbuckle upper links

Inboard camber-link positions (F/R) 2/7

Outboard camber-link positions (F/R) 2/3

Shocks Hard-anodized aluminum w/13.5mm
bores, 3.5mm shock shafts & short shock
boots w/felt pads

Upper shock positions (F/R) 8/10

Lower shock positions (F/R) 3/3

Wheels Multi-spoke white w/17mm hexes

Tires Not included

Body Single-seat Lexan buggy

Engine Not included

Manifold Not included

Pipe Not included

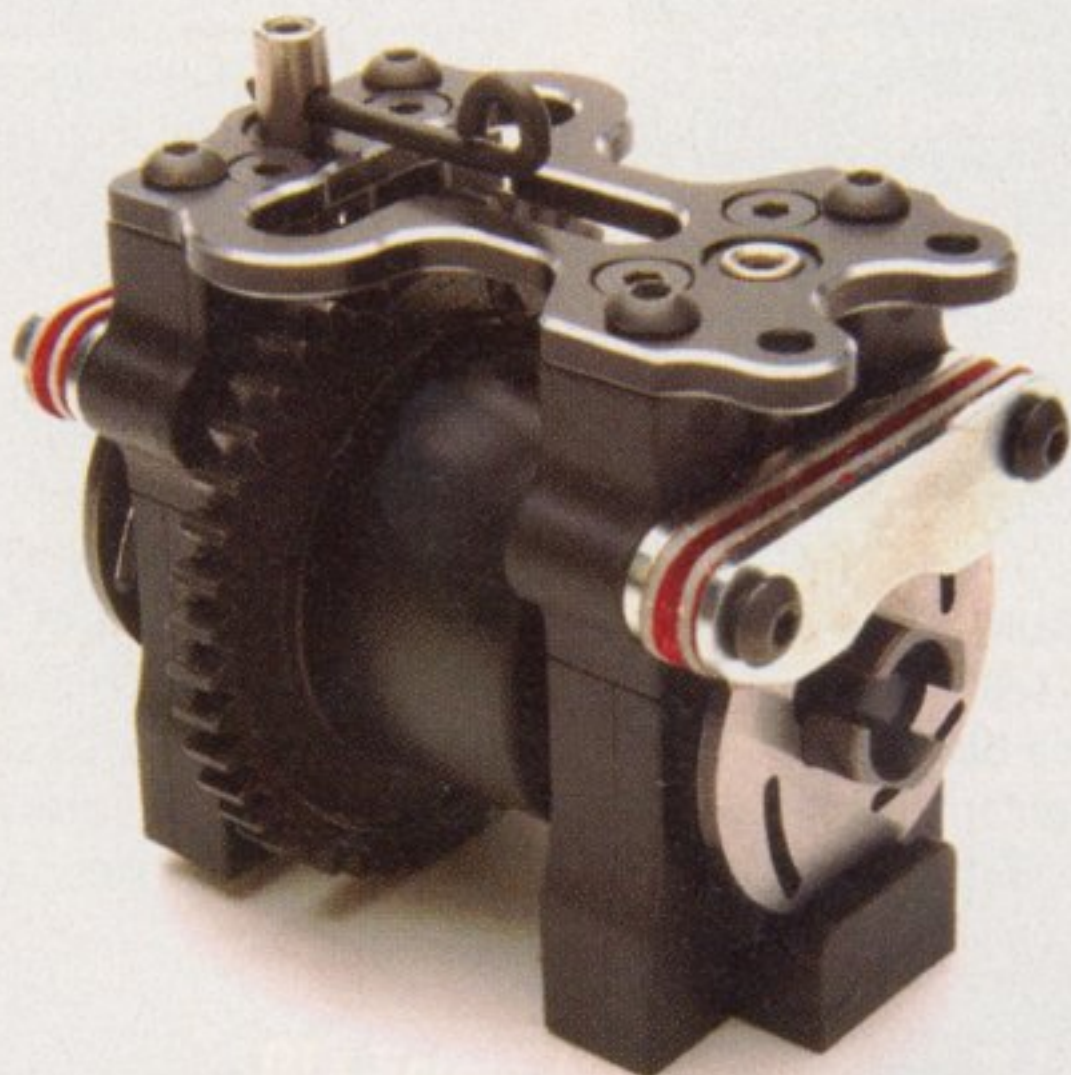
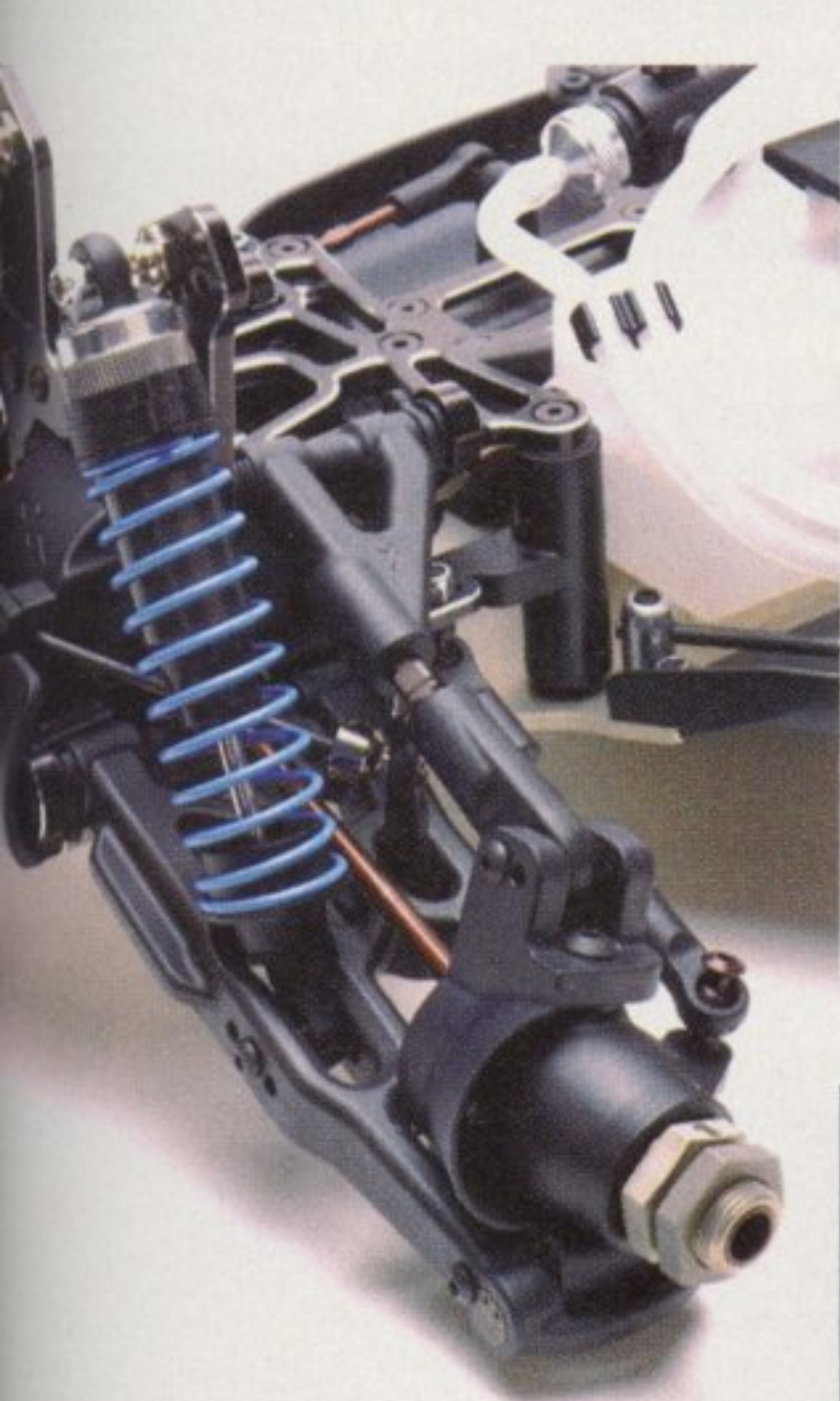
Electronics Not included

BONUS

- » High-quality materials throughout
- » Excellent instructions
- » Highly adjustable suspension
- » Superb handling
- » Durable

BOGUS

- » Not as common as other brands;
parts support may vary



Above: the split center diff mounts make accessing the center diff much easier. The diff mounts are taller to allow the use of larger spur gears. **Right:** the C-hubs have four built-in caster options—no need for extra parts to alter the kingpin angle. The molded steering knuckles have threaded-steel sleeves molded in preventing them from stripping. Hudy spring-steel turnbuckles are standard, as are front and rear adjustable swaybars. The new shocks have bigger bores, and they're longer, too, to provide increased downtravel.

travel; 3.5mm hardened shock shafts are standard, and they have newly designed shock pistons for a more precise fit. The seals are covered with short rubber boots with internal felt pads that clean the shock shafts on every stroke.

BODY, WHEELS & TIRES

» Clear Lexan body » Adjustable wing mounts with aluminum braces » Nylon wing » Split-spoke wheels » 7075 aluminum hex hubs and nuts

The new body is 30 percent lighter than the previous body, and it has been reinforced around the front nose section that fits through the front shock tower. The area around the cooling-head opening has been tweaked to allow more air to reach the engine.

ON THE BENCH

The XB8 EC instruction manual does not have a lot of supporting text, but it really isn't needed; just pay attention to illustrations and to the hardware identification sidebars and you shouldn't have any problems building the kit. Be sure to refer to the supplemental instruction booklet on each step because the EC has many features that have been added since the printing of the manual. Here are a few tips that will make building the XB8 EC even more of a pleasure.

Front, center and rear diff building; pages 6 through 9: the plastic diff cases are extremely hard, and threading the machine screws can be very difficult. To make threading the screws a little easier, use a 3mm tap to pre-thread the diff cases.

Arm mounts; pages 12, 15, 17: pay close attention when installing the setting bushings in the arm mounts and front shock tower. It's all too easy to install one backwards, and that will make the left and right sides of the suspension uneven. Refer to the supplementary instructions because the baseline settings are different from those on the main instruction manual.

Installing the brake pads; page 22: you are instructed to use CA to glue the brake pads to the calipers. CA dries very fast and gives you very little time to align the brake pads on the calipers properly. I used Shoe-Goo instead to allow more time to get it right.

Shock building; pages 28, 29: the kit comes with two sets of shock pistons that look identical, but one set has a small circle across from the piston number. As instructed in the supplementary instructions, make sure that you use the pistons that do not have the circles. Install the bladders inside the shock caps behind the composite pivot-ball holders before you thread the caps onto the shocks. Also pull the composite pivot-ball holders outwards when you thread the caps on to ensure that they go on straight.

YOU'LL NEED	WE USED
Radio system	Nomadio Sensor
Steering servo	Airtronics 94358
Throttle servo	Airtronics 94357
Engine	Werks Racing TL21B7-Pro
Pipe	Werks 2013
Starter box	OFNA True Start multi-starter box
Receiver pack	OFNA/MD Planes 1400mAh
Fuel	Werks Racing Race Blend 30%
Tires	Pro-Line Crime Fighter M3 compound
Tire glue	Pro-Line Premium Blend
Lexan paint	Parma Faskolor

FACTORY OPTIONS

- » Adjustable aluminum engine mount—358712 (NovaRossi, Sirio, R&B, Max, JP), 358713 (Picco, O.S., Team Orion, Mega, LRP)
- » Aluminum center-diff mounts—354015
- » Aluminum rear hub carriers (L/R)—35365/353355
- » Springs—358094 (white, soft), 358095 (light blue, medium), 358096 (dark blue, hard)
- » Aluminum wheel-nut covers—355265

THE COMP*

VEHICLE » PRICE** » REVIEWED

- Jammin' X1-CR Factory Team » \$560 » 11/06
- Kyosho MP 777 WC » \$760 » 05/07
- Mugen MBX-5 ProSpec » \$730
- HoBao Hyper 8 Pro » \$550 » 06/06
- Team Associated RC8 » "First Look" 06/06
- Team Magic M1 » \$675 » 05/07
- Team Losi 8IGHT » \$600 » 12/06

*Partial list, category is too large to include all competitive vehicles
 **Price varies with dealer

KIT RATINGS

INSTRUCTIONS	10
Excellent building instructions with high-quality illustrations, tuning advice and setup sheet; great online support as well.	
PARTS FIT & FINISH	10
All the parts fit perfectly; high-quality materials; no hand-finishing required.	
ADJUSTABILITY & MAINTENANCE	10
Highly adjustable and very easy to work on.	

PERFORMANCE RATINGS

ACCELERATION	10
Accelerates like a bat out of hell, thanks to its freely spinning drivetrain.	
TURN-IN	9
Transitions well and has more steering than you can handle off power or at lower speeds.	
CORNER SPEED	9
Rotates well through the corners, and the rear end feels locked in at all times.	
ON-POWER STEERING	9
Slight on-power push, which is customary with every 4WD machine.	
BRAKING	10
Smooth, consistent and easy to modulate; I didn't even notice a hint of fading during extended running.	
BUMP HANDLING	9.5
Handles the blown-out sections of the track like a champ, and the chassis never bottomed out, even when landing squarely after big jumps.	
JUMPING	9.5
Jumps nice and level, and it's responsive to midair corrections.	

THE VERDICT

In my opinion, XRAY has succeeded in designing a buggy that racers of all levels can benefit from. It can be tuned for razor-sharp steering and quick response or toned down to make it easier to drive and more forgiving in the hands of sportsman racers. Building the car is an absolute joy because of the excellent instructions, perfect parts fit and abundance of 7075 anodized aluminum and Hudy spring-steel components. The quality of this kit makes you feel privileged, and there's no doubt in my mind that owning an XB8 EC will make you the envy of your track. **T**

SOURCES

- Airtronics** distributed by Global Hobby; airtronics.net
- McDaniel** distributed by Sonic-Tronics, sonictronics.com
- Nomadio** nomadio.net
- OFNA Racing** ofna.com
- Parma** parmapse.com
- Pro-Line Racing** prolineracing.com
- Werks Racing** werksracing.com
- XRAY** distributed by RC America; rcamerica.com