



GS RACING
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RC Driver

TRUCKS ■ CARS · NITRO · ELECTRIC & BOATS

10 PRO NITRO TIPS

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VEHICLE
TESTS

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HOT
PAINT
JOBS

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➤ **XRAY XT8**

2 EXCLUSIVE TESTS

▼ **HPI Wheely King 4WD**

HOW TOs

- Rebuild Shocks
- Refresh a Ball Diff
- Understanding Li-Poly Batteries
- Build a Monster Roto Start



40 mph
Brushless
Buggy Project

AUGUST 2007 ISSUE 44

\$4.99US \$6.99CAN



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Big-Time Performance In A Pint-Size Package



XRAY

M18

1/18 RACING SEDAN

AT A GLANCE

WHO MAKES IT:
XRAY

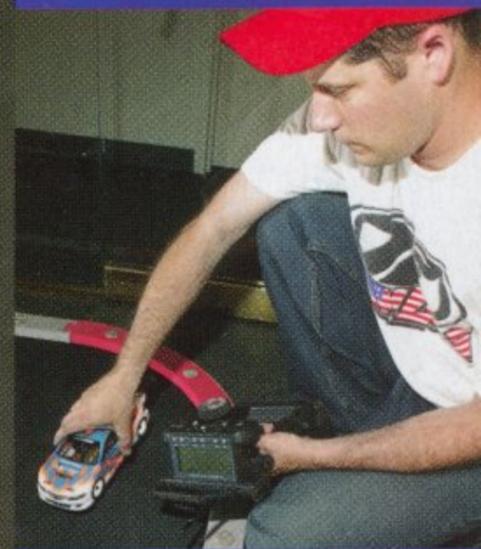
WHO IT'S FOR:
Micro racers and
enthusiasts

HOW FAST:
43.95mph

HOW MUCH: \$200

**WHAT ELSE IS
NEEDED:**
Transmitter, receiver,
motor, speed control,
steering servo, Lexan
paint, battery pack

The word pro is thrown around quite a bit in the RC world. From way back to the Losi JRX Pro and Pro SE to the current-day Pro Spec cars and trucks, the term is used to describe a vehicle of professional, race-worthy quality. The 1/18 4WD shaft drive XRAY M18 Pro clearly fits that bill and then goes a step farther. While its roots can be found in the ultra-successful M18, it adds unparalleled features more commonly seen in 1/10 racing sedans than in 1/18 vehicles. Just a quick glance at the M18 Pro will tell you that this is no ordinary micro.



WHAT WE LIKED

- Competition ready right out of the box
- Multi-flex chassis
- Very tunable
- Clean layout
- Really like the new wheel mounting system

WHAT COULD BE IMPROVED

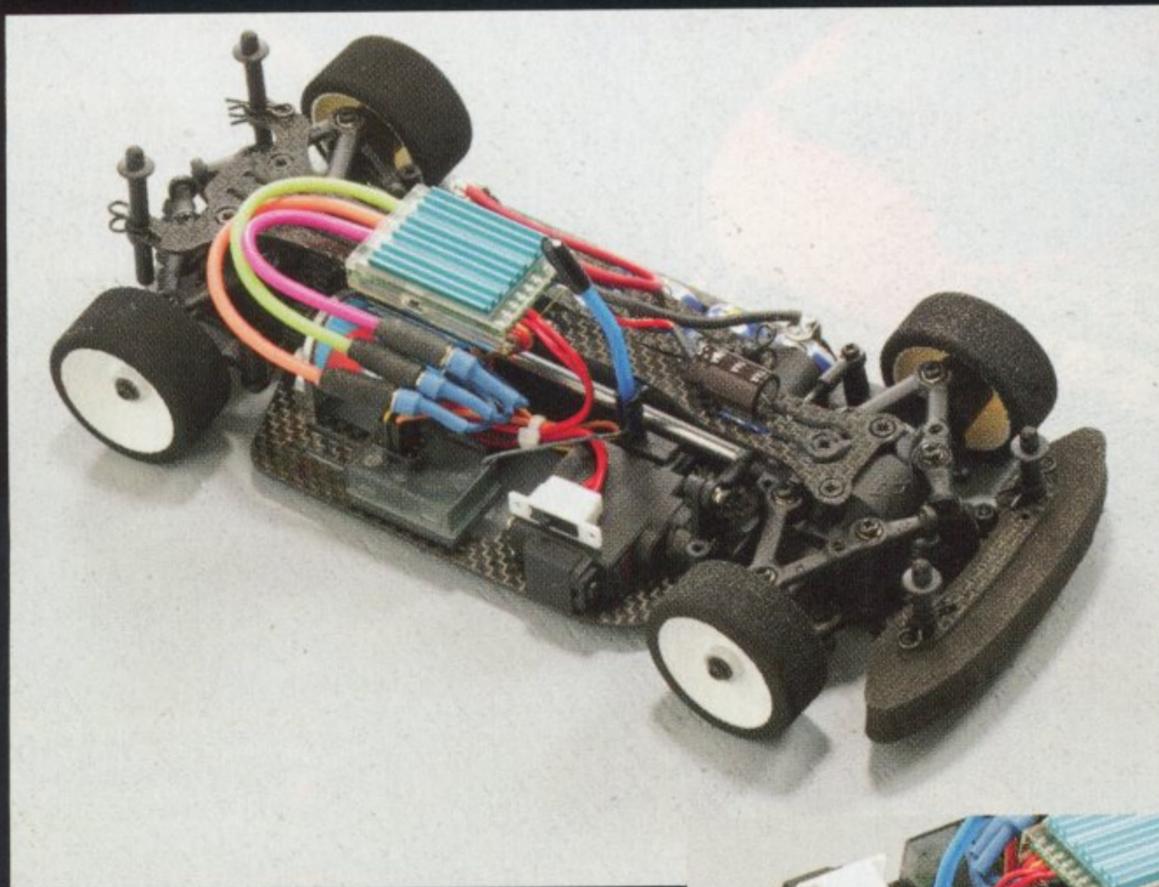
- Pain in the neck dealing with rear body clips
- Rear body mounts move around a bit
- Suspension feels a bit too springy

THE BOTTOM LINE

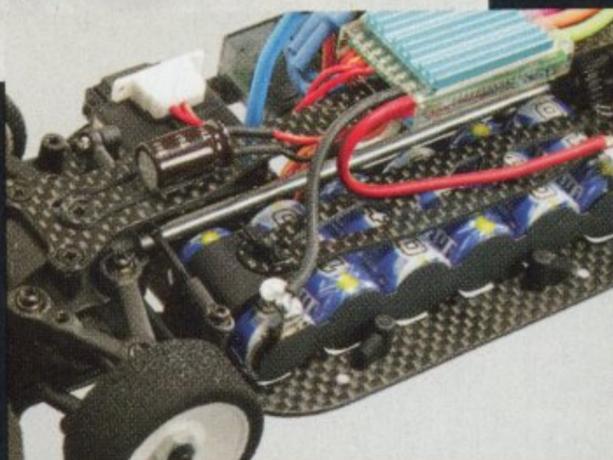
The M18 Pro packs a big wallop, all the options a racer wants are included in this kit and their benefits are translated into the car's performance.

WHAT YOU NEED TO KNOW

- The most obvious change from the original M18 to the M18 Pro is the chassis. The new 1.6-millimeter thick graphite chassis has cutouts to accommodate a side-by-side six-cell battery pack. The graphite multi-flex upper deck offers a wide variety of tuning options that a beginner may overlook. By loosening or tightening the top deck screws just a quarter turn you can give the chassis of the M18 Pro more or less flex. Need more traction? Set the front and rear loose. If you have too much traction, set the front and rear tighter. If you need to increase steering, run the front loose and the rear tight.
- While not as obvious of a change as the chassis, the new wheel-mounting system uses hex-type adapters similar to those used in $1/10$ touring cars. The wheels are now held on with a nut rather than being press fit. The included foam tires work well and are designed with racing in mind. The front tires are hard with a Shore rating of 50, while the rear tires are a touch softer with a rating of 35.



- Building differentials correctly can be a time-consuming task. Thank goodness the front and rear ball differentials come pre-built and ready to install. Just make sure that after you break them in you readjust them so they don't slip and wear out too fast
- The original M18 came with a plastic motor mount that would only accommodate 180-size motors.



The battery pack is secured with a carbon-fiber strap that clips to arched mounts. Pegs prevent the battery from sliding out of the chassis.



A strong servo-saver transfers motion to the steering knuckles. The two knuckles are linked by a long tie-rod. Ball bearings are seated in the hubs for the universal axles to spin on.

Knowing that most people don't run 180-size motors today, XRAY included an aluminum motor mount that allows you to run 280- and 370-size brushed and brushless motors.

- Along the lines of the new motor mount, XRAY included a 36-tooth spur gear for people running smaller motors and an optional 42-tooth spur gear for people, like me, who use brushless motors. They also made both gears out of a harder plastic for increased durability.
- Suspension-wise, the upper front arms are hardened and create six degrees of caster as opposed to 12 degrees on the original M18. The rear toe-in can be set to 2.5 degrees with the provided preset links, or can be adjusted with the included optional adjustable links. Likewise, there is a preset steering rod and an included adjustable rod.



NEEDED TO COMPLETE

- 2-Channel Radio and receiver
- Micro servo
- Speed control
- Motor
- Paint
- Batteries
- Charger

WHAT WE USED



- Spektrum SR3500 micro receiver

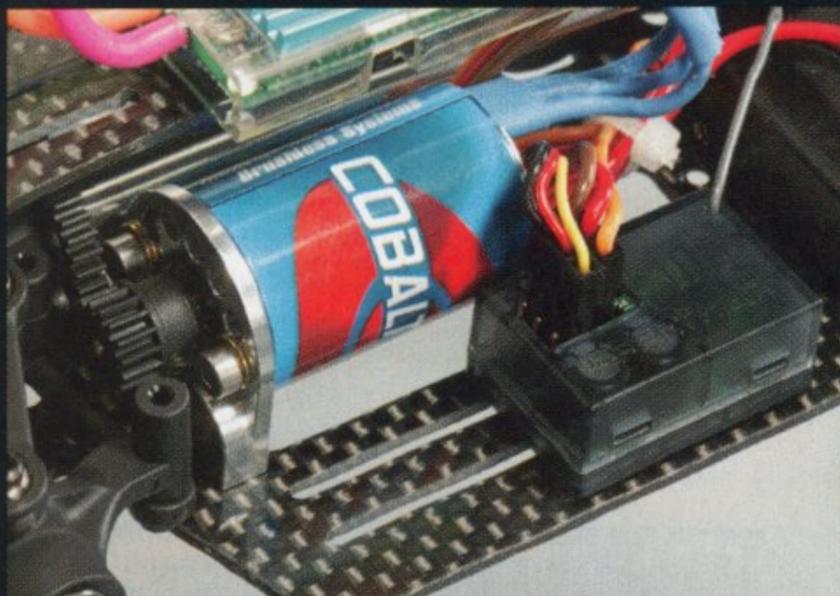


- Team Stream matched battery pack

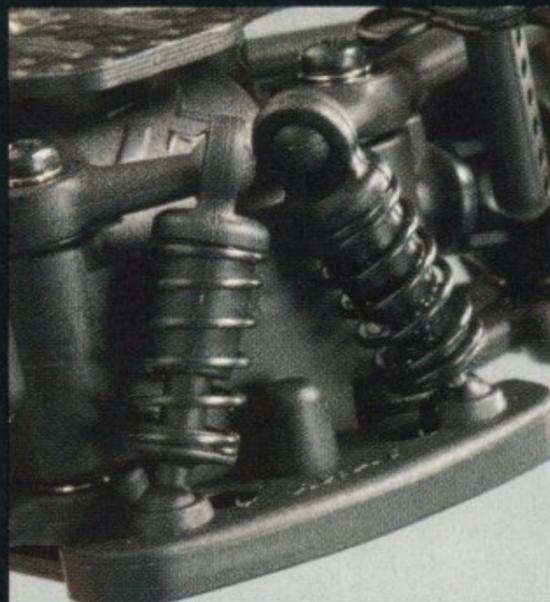
- Trinity Cobalt B motor



- Quark 33a Pro Car speed control
- Paint by Chewy Graphixs
- Paragon Ground Effects



The aluminum motor-mount plate has numerous holes that correspond to the pinion used. With an ultra-fast Trinity brushless motor in place, there was still plenty of room to mount the Spektrum micro receiver.



XRAY's micro coil-over shocks provide damping; two holes are provided on the lower plate to alter the shock position.



New hex-style adapters secure the wheels to the axles. These allow for quick wheel changes and prevent you from accidentally stripping out the axle by overtightening the retaining screw.

PERFORMANCE

Once I finished building the M18 Pro and received the body back from Chewy Graphixs, I headed down to the indoor Ozite carpet track at R/C Madness. Charged up and ready to go I first hit the track without the benefit of any tire traction compound and had the multi-flex upper deck set tight. Less than a full lap around the track I knew I was going to have to make some drastic changes as the car had very little traction and exhibited a massive push. I took the car off the track, loosened the front of the multi-flex upper deck and put just a touch of Paragon Ground Effects tire traction compound on the inside of the front tires and fully coated the rear tires. This did help out as the car was not as loose and the push as I entered corners was reduced, but I knew the car could be much better.

After talking to some of the local carpet racers and letting a few of them try the M18 Pro for a few laps, I took the car back to the pits. As I let the battery recharge I made a few more changes. This time I loosened both the front and rear of the multi-flex top deck a quarter turn and added a full coating of Paragon to the front and rear tires. When I hit the track this time the car was dialed. It had excellent traction and dove in, taking corners with sharp precision, and the more I drove it the better it seemed to get. After three or four packs through the car I noticed it started to feel a bit twitchy, so I backed off the Paragon, coating just the inside of the front tires. This helped the car push ever so slightly and make it easier to drive.

THE SPECIFICS

CHASSIS

LENGTH: 8.7 in. (220mm)

WIDTH: Front: 3.9 in. (100mm); Rear: 4.2 in. (107mm)

WHEELBASE: 5.9 in. (150mm)

WEIGHT: 13.8 oz. (391g)

MATERIAL: 1.6mm Graphite

TYPE: Lower plate with multi-flex top plate

AUTHOR'S OPINION: The new graphite chassis and multi-flex upper deck on the M18 Pro makes the car easy to work on and really helps in tuning it to driving conditions. The new upper deck also allows you to mount a speed control or receiver on it, something you could not do on the original M18.

SUSPENSION

MATERIAL: Molded plastic

TYPE: Independent front and rear suspension

SHOCKS: Plastic coil-over spring

WHEELS: White plastic dish wheels

TIRES: Foam

AUTHOR'S OPINION: The stock suspension on the M18 Pro is simple and has not changed too much from the original. There are still two locations to mount the shocks on the front and rear bumper, but the fact that they are just coil-over springs can make the car feel twitchy. While adding thick silicone diff grease to the inside of the shocks did help, optional springs or even oil-filled shocks, if they could be made that small, would be nice.

DRIVETRAIN

TYPE: 4WD

DIFFERENTIALS: Front and rear ball differentials

BEARINGS/BUSHINGS: Bearings

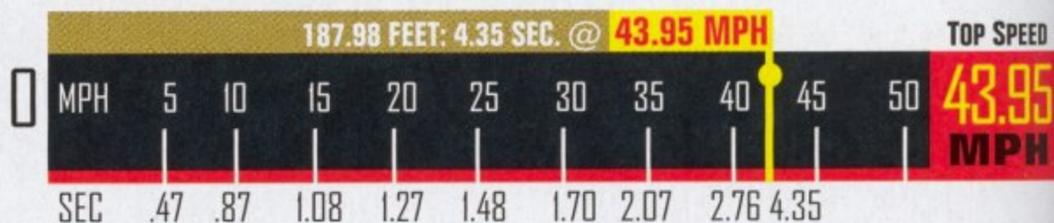
AUTHOR'S OPINION:

XRAY is known for making quality ball diffs and that held true here on the M18 Pro. The molded outrives, precision steel diff balls and machined diff rings can take the endless abuse from a micro basher or a racer who uses a brushless motor and an 11.1 volt Li-Poly battery.



ACCELERATION:

RADAR DATA



THE LAST WORD

¹/₁₈ on road racing has been gaining popularity in recent years, and the M18 Pro is sure to add racers to this class. Out of the box it is as tunable as any car, ¹/₁₀ or ¹/₁₈, on the market and with a wide variety of hop-ups already available from XRAY like aluminum hubs, aluminum universal driveshafts and knuckle-plated pillow balls, customizing it shouldn't be too hard either. Make no mistake: The M18 Pro is a serious racing machine ready to compete in the big leagues. ©

LINKS

Chewy Graphix,
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Hitec RCD USA, LLC.,
www.hitecrcd.com,
(858) 748-6948

Quark Brushless Systems,
www.quarkbrushless.com,
(310)527-0002

XRAY, distributed by RC America, www.teamxray.com, (800) 519-7221

Spektrum, distributed by Horizon Hobby, www.spektrumrc.com, (217) 352-1913

Trinity Products Inc.,
www.teamtrinity.com,
(732) 635-1600

Team Scream,
www.teamscreamcellmatching.com, (978) 337-0429

For more information, please see our source guide on page 201.

