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A NEW SUMMIT

Exclusive UK Traxxas review inside

SPEC: 2WD CARBON FIBRE CHASSIS **CLASS:** ON-ROAD COMPETITION **COST:** £209.99

XII for MMIX

With many of Xray's own team drivers competing at the highest level in 1:12 on-road together with customers petitioning for Xray to develop a 1:12 chassis, Juraj Hudy created the XII. The new car was first seen in public at the 2008 World Championships in Thailand, appearing on the surface at least to be a fairly conventional T-bar design. The car was orange anodised like the T2 '009, and was in what looked like asphalt-spec with a fairly flexible chassis.

The car performed well and ran towards the top of the event until the super special tyres from the manufacturers more familiar with 1:12 in this environment made an appearance. In the end a single car in the A final probably didn't reflect the true potential of the car and drivers. The UK racing scene has witnessed the true potential of the car in the hands of Elliott Harper who has been virtually unbeatable on carpet in the UK with the XII.

BACK TO NATURAL

The XII comes in a small but perfectly formed box containing all the parts needed to build the rolling chassis. There is also a very comprehensive set-up guide aimed to help those new to 1:12 pick up the black art of car tuning in this most delicate of classes.

The most immediate change from the cars debuted at the 2008 World Championships is that the car comes in the more familiar Xray silver and black colours, with the bright orange colour gone. This gives the car a very clean and purposeful look. The build starts with one of my least favourite tasks, which is sanding and sealing the carbon fibre parts in the kit. Although not totally necessary, the parts both look better and are less likely to delaminate in an accident. The kit comes with a 2mm thick chassis and lower pod plate, which are possibly more suited to low grip and tarmac tracks. Remember not to take too much material away from the battery slots as this will mean the cells hang out of the chassis, and also to round off the area the battery tape passes through to avoid the tape tearing or the sharp carbon corners.

Xray are competing in almost every class of competitive RC racing at the highest level. Up until now the oldest electric class, 1:12 on-road, has been one of the few exceptions

FRONT SUSPENSION

The front suspension is the Xray's interpretation of the incredibly popular reactive caster double wishbone suspension. The lower wishbone is fixed, with the top wishbone pivoting. The front suspension is infinitely adjustable, with static caster (the amount of angle on the king pin) being adjusted via spacers on the top wishbone, and reactive caster (the amount the angle of the king pin changes as the suspension is compressed) being adjusted by eccentric spacers on the inside of the front suspension mount. It may all sound complicated, but is actually incredibly simple to build. The set-up book informs that more static caster is smoother in high traction and less caster is better on lower traction and bumpier tracks. More reactive caster will allow the car to react more quickly and less will smooth the car out. The front end of the car is built with the ride height set for medium-sized tyres. Ride height adjustments can be made via the king pin by inserting spacers or by adding spacers below the suspension assembly. One tip worth bearing in mind when building the front suspension is to ensure you thread both camber links into the wishbone straight, this will ensure the same camber from side to side. The suspension is attached to the car via four screws and held rigid by a carbon brace, with an optional aluminium brace being available for lower traction tracks (probably not needed in the UK).

T-TIME

The side-to-side roll of 1:12 cars has traditionally been controlled by a fibreglass plate known as a T-bar - this solution is well proven and has been winning for many decades. The fibreglass is actually used as a spring to control the roll movement of the chassis and is damped by a friction pad damper that is covered in diff grease - a well proven and reliable arrangement. The fibreglass T-bar pivots on the chassis via two pivot balls and has tweak screws

THRASH TEST // XRAY XII

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ON TEST

XII TRACK TEST

We took out XII to the fabulous indoor Maritime Raceway facility to give the car a shakedown. With the 1:12 winter series finished and only the Chesterfield Shootout meetings in the summer, there were limited options to race the car in anger.

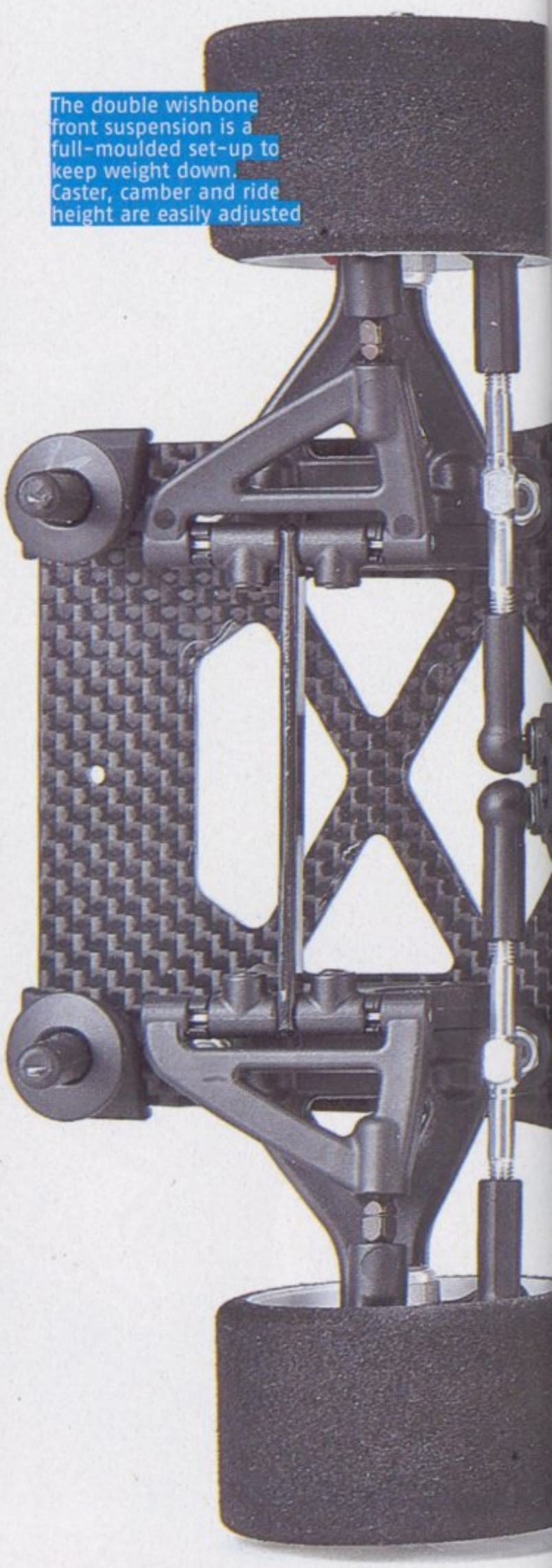
The Maritime track hosted a round of the BRCA Nationals for 1:12 in 2008/9 and has been newly re-laid to get a totally flat racing surface - ideal for 1:12 cars. The layout was fairly fast and open to accommodate for touring cars as well, but still had tricky sections to test the cars handling.

Having not raced a T-bar car for many years, I carefully set the tweak so the screws just touched on each side and set the ride height to 3.5mm before running the car. For the first run I fitted the car with GRP Pink rear tyres and GRP Purple fronts, a combination that had worked well at the venue before. From the off the car felt enormously stable and tracked straight with all responses feeling very linear and I could place the car accurately. A head on collision soon tested the strength of the car with a touring car in the straight. The car survived unscathed, other than a bent body mount and it still even tracked straight.

For the second run we went to a softer front tyre (GRP Magenta) and left the rest of the car unchanged. This resulted in more steering, but still with an incredibly safe feeling car. What I did begin to notice was that the car was unsettled in the fast sweeper at the end of the straight, looking to bob up and down mid-corner so for the third run I changed the damper grease from the relatively thin Hudy diff grease to a slightly thicker Associated diff grease. This had the effect of calming the car down and adding a little more rear end grip. The following runs saw experimentation with Jaco tyres. Now we had fitted Pink rears and Double Pink fronts, the car became very easy to drive albeit it with a little understeer. Jaco Pink rears and Magenta fonts gave more steering but with a very locked in feel. Jaco Grey rears and Double Pink fronts gave more corner speed and slightly less grip, but ultimately a faster lap time.

What impressed me most with the XII was the fact that from the first run I felt totally at home with the car. Each time I went out the car was consistent which gave me the ability to test things and really feel the small changes I made on the track. The standard ride height adjusters and shims allowed easy fine-tuning with no extra parts needed. One word of caution is that many of the screws that go into the metal parts of the car can come lose, so it may be worth building the car with thread lock in these areas.

We are also looking to test the new thicker 2.5mm graphite chassis that's on its way to use. Apart from front springs and some other small tweaks, we feel that the car will be competitive straight out of the box and you only have to look at the results of Elliott Harper to see the potential in the X11 package.



The double wishbone front suspension is a full-moulded set-up to keep weight down. Caster, camber and ride height are easily adjusted

"We would recommend that the optional thicker 2.5mm chassis would

that ensure that there is equal pressure on each tyre. The T-bar provided in the kit is a 1.5mm wide carpet spec item and has two points for the tweak screws to allow for more or less steering. There is also the option to use a fixed front pivot for club racers. This will stop the issue of the car tweaking, and not driving straight. The whole assembly went together easily without any variation from the instructions, but just make sure the pivot balls move smoothly and nothing binds.

REAR OPTIMISATION

The rear of the car is constructed around a brushless-optimised rear pod, the side plates are made out of black anodised CNC-machined extra-hard Swiss 7075 T6 aluminium. These are mounted onto a carbon fibre plate and locked together with an aluminium tube at the rear of the pod. This box section is rigid whist still giving room for instant access to the motor. The pod is mounted to the T-bar from below and to the damper assembly at the front.

At the front of the damper assembly is the shock absorber that controls the front to back (up and down) movement of the pod. This damper is based on a smaller version of Xray's well-proven touring car aluminium shock. It comes supplied with 350wt oil in the kit and is a real pleasure to build and has a smooth and air-free action. The shock comes supplied with a spring of undisclosed strength so it is difficult to know how this related to anything else on the market.

We fitted some Jaco foam tyres for photos and testing

The axle mounts through the rear of the pod and the kit comes with five ride height adjusting spacers to keep your car running at the correct height no matter the size of tyre you are using. The differential builds onto the axle with a 64dp spur gear that contains 12 diff balls that make for an incredibly smooth differential action.

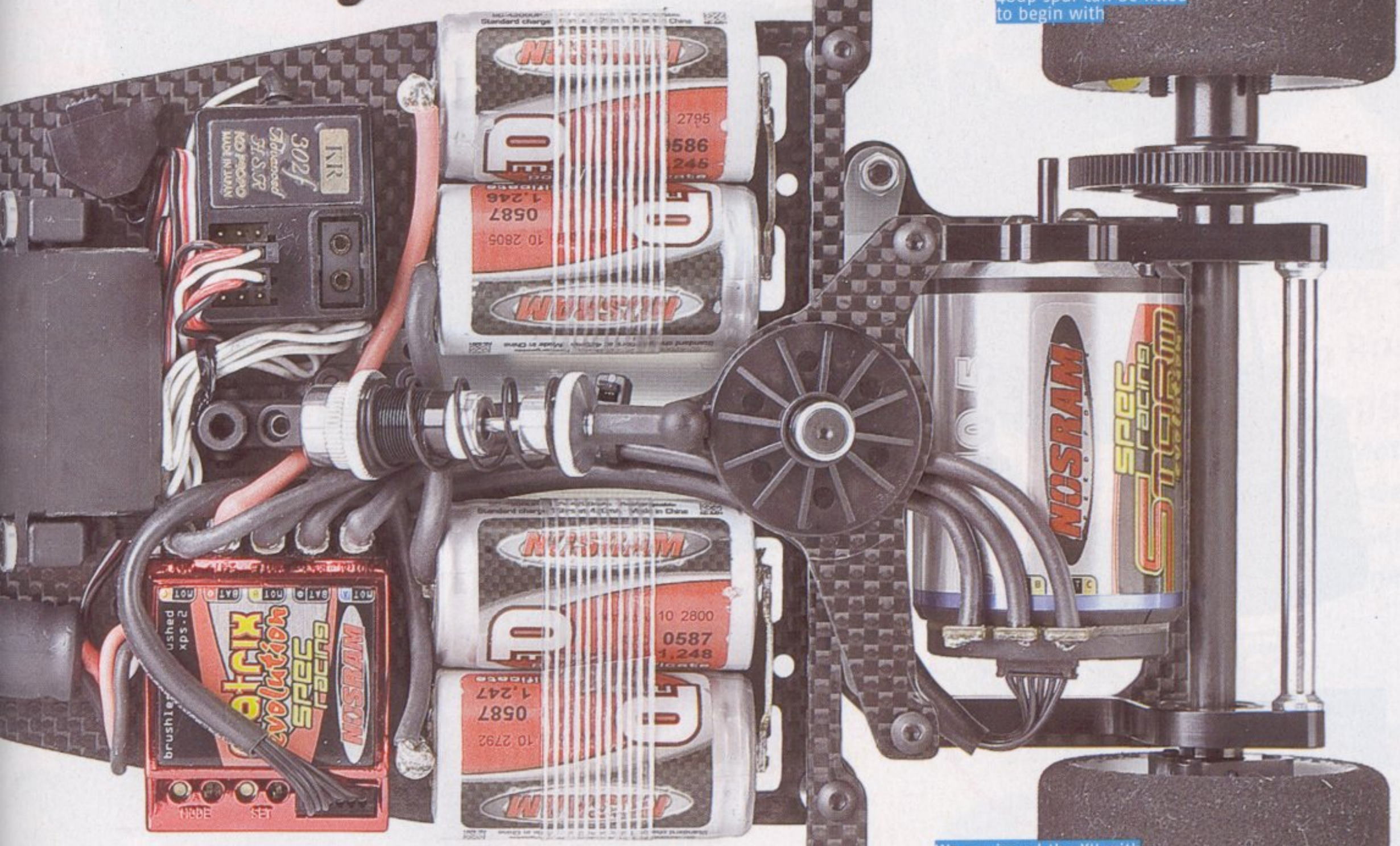
A STORMING STOCK WINNER

Wiring a 1:12 car is always a task that requires thought as the cars are small and the room is limited. We chose to use a Futaba 9650 digital mini servo, which fitted perfectly onto the chassis and thanks to the multiple inserts included in the kit, the servo saver also fitted perfectly.

OPTION PARTS

- 371101 2.5mm Graphite Chassis
- 371200 Fibreglass T-Bar 1.5mm Narrow
- 372080 Front Aluminium Active Brace - Set
- 372181 Front Coil Spring c=4.0 Silver
- 372182 Front Coil Spring c=5.0 Black
- 372183 Front Coil Spring c=6.0 Grey
- 376215/6 Centre Graphite Servo Mount with Alloy Stands

Left: Optional thicker chassis and lower pod plate



The spur gear is a 64dp item and the preferred choice of 1:12 racers. A 48dp spur can be fitted to begin with

We equipped the XII with a Nosram package that included a 10.5T motor

Xray's super smooth diff features a proper thrust bearing at the end

"be better suited to the UK's high-grip carpet"

POWER PACKAGE

At the same time as testing the new XII 1:12 car we also got to test the latest variation of the Nosram Matrix Evolution Spec Racing speed controller. This version still has the modified profiles, but in addition has four stock spec profiles for the new stock brushless classes. We started our test with the speedo on setting five for punch (the softest and most linear of the stock programs). With fresh batteries the car was massively quick with a very linear feel. Typically 10.5T brushless motors feel a little flat from low to mid-range, but the new speedo helps that. Over the following runs we gradually moved up through the power profiles, with each new profile the car became punchier, but used the voltage of the Nosram P-Max VTEC 4600 Fat Cobra cells more quickly. With the enormous grip of a 1:12 car it is very easy to overdrive and heat the motor up which I felt I was doing on the higher profiles. I ended up returning to setting five, which gave great punch, but maintained the speed for the entire run.

As stock racing becomes more and more popular this speedo allows driver to control the throttle more and brings back the finesse normally seen in modified racing. All the programs are easy to set and do give a noticeable difference. Which one you choose will largely depend on how you want to pace your race!

Despite this being classed as a Spec Racing speed controller, we would be more than happy to tune the settings for running with a modified motor installed like a 5.5T unit as there is the flexibility in the set-up to allow for its use with a range of brushless motors.

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VERDICT

⊕ Quality and adjustability of the kit
Included ride height adjusters
Set-up book
⊖ Thin chassis

Racer Rating ★★★★★

WHAT WE USED

Electric Kit

Transmitter: KO Propo Esprit III Universe
Receiver: KO Propo KR-302F 40MHz
Servo: Futaba S9650
Speedo: Nosram Matrix Evolution Spec Racing
Motor: Nosram Storm Evolution Spec Racing 10.5T
Battery: Nosram P-Max VTEC 4600 Fat Cobra
Bodyshell: Hot Bodies Reynard 02S
Tyres: JACO Magenta/Yellow (front/rear)

The speedo was the new Nosram Matrix Evolution Spec Racing speedo that has higher punch settings for stock racing together with being able to handle anything a modified may throw at it. We removed the standard wire as this is too thick for 1:12 use and fitted 16-gauge wire which is easily enough to cope with four-cell running and flexes more easily, allowing the motor pod to move freely. We were also lucky enough to be able to get access to one of Nosram's Storm Evolution Spec Racing 10.5T, which would let us taste the same power that helped Elliott to take the National title. The car was topped off with a Hot Bodies Reynard 02S shell sprayed by Graham Smith at Custom Blitz, who is now creating masterpieces for the likes of Olly Jefferies and Elliott Harper to race. Although from my experience 1:12 shells don't last long! ■

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SPECIFICATION

MODEL:	XRAY XII
SCALE:	1:12
CLASS:	ON-ROAD
APPLICATION:	COMPETITION
FORMAT:	KIT
POWER:	ELECTRIC
CHASSIS:	CARBON FIBRE
DRIVETRAIN:	2WD
TRANSMISSION:	DIRECT DRIVE
DIFFERENTIAL:	BALL
SHOCK:	OIL-FILLED
BEARINGS/BUSHES:	BEARINGS

TECHNICAL DATA

LENGTH	328MM
WIDTH	170MM
HEIGHT	46MM
WHEELBASE	195MM
FRONT TRACK	165MM
REAR TRACK	170MM
WEIGHT	825G

SUMMARY

Xray have as always taken a sensible and considered approach to entering a new class. They have looked at the market and what works, designed a car that takes what is best from everything available and then ups the anti in quality and design. It would be foolish to think Xray could re-invent the wheel so what they have done is created a user-friendly car that is fast and reliable, which could prove accessible to more than just traditional 1:12 racers.