

# Racing Lines

No. 124 DECEMBER 2006 \$12.95 (inc. GST)

AUSTRALASIA'S PREMIER RADIO CONTROL CAR MAGAZINE



## TAMIYA TNX 5.2R

5.2cc OF BIG BLOCK GRUNT!

- > XRAY T2R EP TOURING CAR
- > WINNING WITH HPI'S SAVAGE X



- > ASSOCIATED GT2 1:10 NITRO STADIUM TRUCK
- > THUNDER TIGER NITRO M.A.N. RACING TRUCK
- > TESTED AND RACED: LRP'S Z21 SPEC 2
- > ANDREW ABBOTT ON BODY AIR HOLES
- > MATT GRIFFIN > RACING WITH XRAY > INSIDE VRC



## XRAY T2R: ULTIMATE CLUB RACER?

What is a “club racer”? To **PHIL HUTCHINS**, it is a car that represents good value for money and combines performance, durability and upgradability. Has the XRAY T2R got what it takes to claim the title? Read on to find out what Phil discovered about XRAY’s latest EP touring car.

**X**RAY’S T2 EP touring car has spent most of 2006 tearing up tracks all over the world, winning many major events on offer.

The T2 is aimed at the highest end of the market, its parts manufactured from the highest quality materials available and made to the tightest tolerances which, unfortunately for many, add to the price tag, making it out of the reach of most newcomers and social racers.

XRAY have recognised this issue and acted.

Now those who can’t afford or can’t justify the expense of a T2—but still wish to drive one of the world’s premier EP touring cars—can look forward to a car that shares many of the features that makes the T2 so desirable, yet not break the bank.

Enter the T2R.

The T2R is an economical

version of the T2 but shares approximately 80% same parts and, amazingly, 99% of all the features.

How do XRAY manage this feat?

Well, instead of using expensive woven carbon graphite shocks towers and upper and lower chassis plates, you will find fibreglass versions instead.

All these parts are identical and share the revolutionary Mutli-Flex technology.

Next thing on the price cutting list was the diffs, instead of sexy CNC machined ball diff outdrives, plastic versions have been adopted.

While these are a lot cheaper to produce, they provide more than adequate performance as they spin very true and are also very light, adding to performance.

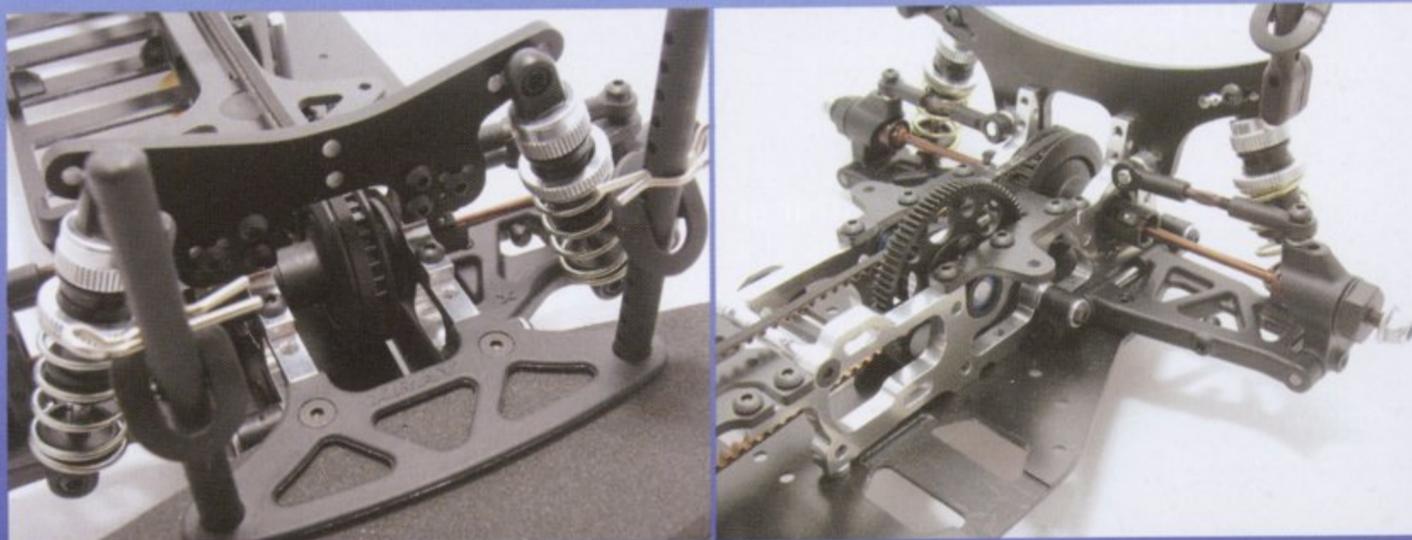
We should also keep in mind these units are the choice for many other manufacturers on their top shelf race cars

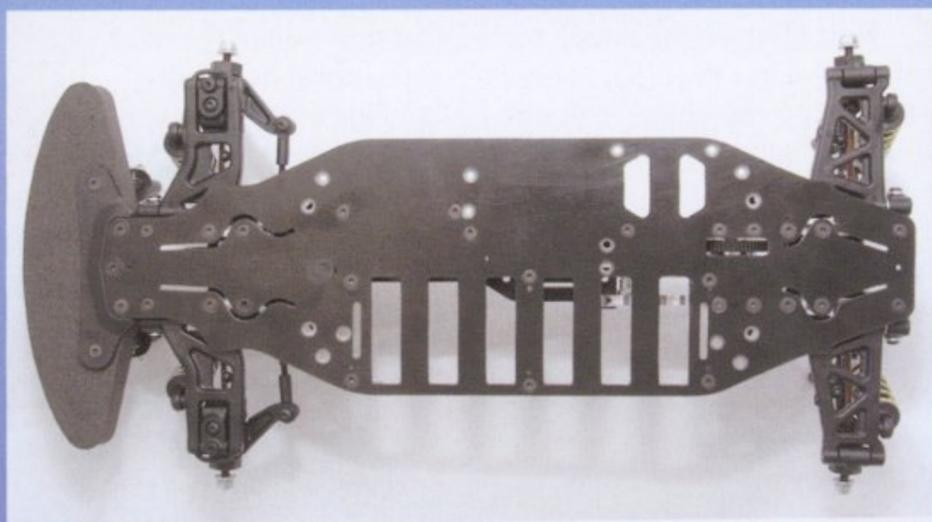
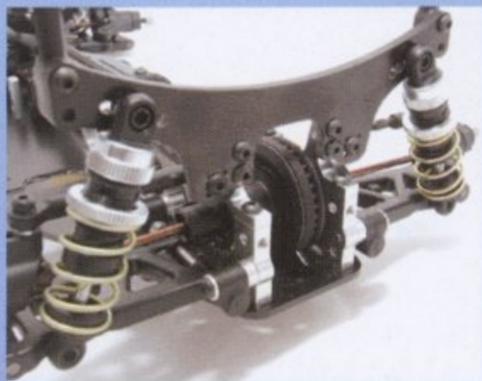
that don’t share the same economical price tag.

One of the hit features of the T2 was the front Mutli-Diff which had the option of one way, spool (locked diff) or a combination of one way spool.

This has also been dropped from the T2R features list, replaced by the same ball diff that is found in the rear end.

The front ball diff is probably a better choice for the intended market anyway as it allows for easy braking without





an aggressive feel turning into corners which the Multi Diff tended to provide.

Usually when other manufacturers release an economy version of their race production, they tend to cheapen the car a lot more.

For instance, where others

would normally release the kit with dogbone drive shafts or a set of composite CVD's, XRAY have included a full set of the patented Hudy spring steel CVD's—for not only front but the rear end as well!

Not stopping there, the bearings used in X-XRAY have always been the best you can get, being pre-rinsed of grease and then re-lubed with high temp high speed oil for maximum efficiency and are also rubber sealed for extended life.

To the suspension and once more there is no cost cutting in this area, the T2R uses the same lower suspension arms, steering knuckles, C-Hubs, rear hubs and the exclusive Hudy spring steel turn buckles for upper and steering arms.

Shocks are a vital part of

arms. Threaded plastic shocks with option of adjustable or fixed pistons .

#### Transmission

Twin belt with front and rear ball differentials, CVD driveshafts front and rear.

#### Requires

2 Channel radio system (transmitter, receiver and one servo), electronic speed control, motor, battery and charger, body shell and paint, wheels and tires.

## The Specs

**Manufacturer**  
XRAY

**Model**  
T2R

**Type**  
1:10 EP 4WD Touring Car kit

**Importer**  
Custom Model Cars

#### Dimensions

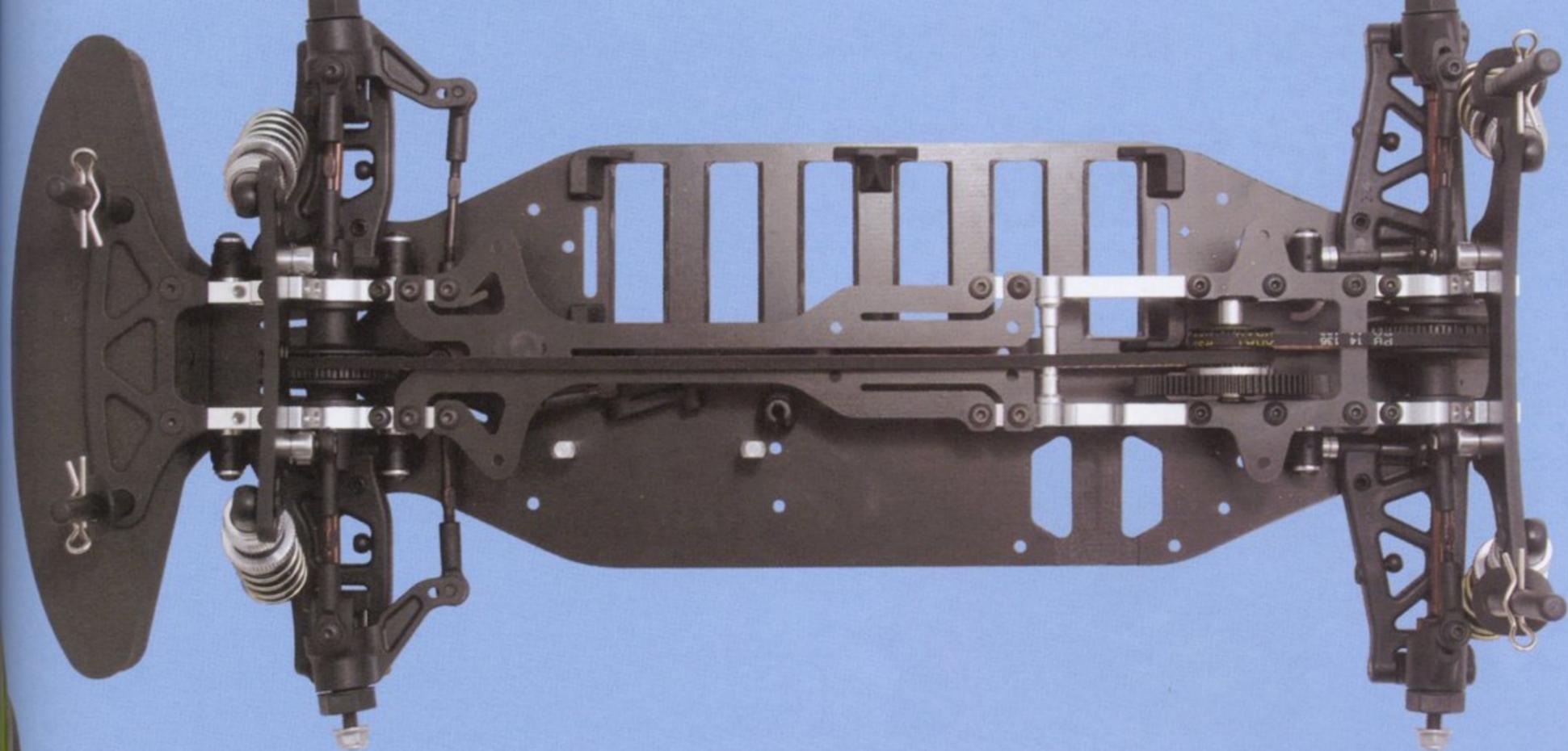
LOA .....418mm  
Wheelbase .....260mm  
Width rear .....189mm  
Width front .....187mm

#### Technical Chassis

Fibreglass upper and lower chassis plates with CNC alloy bulkheads.

#### Suspension

Molded lower suspension arm with C-hub steering, adjustable upper



any car and if they're not up to scratch, neither will the car's handling ability.

XRAY have elected to include the same set of shocks as the T2, with all the same building options.

It's your choice of externally adjustable pistons

(where all you need to do is extend the shock shaft all the way out and turn either left or right to open or close of holes in the shock piston).

If all this goes over your head, you can build them with your choice of 2, 3 or 4 hole pistons, then come back to

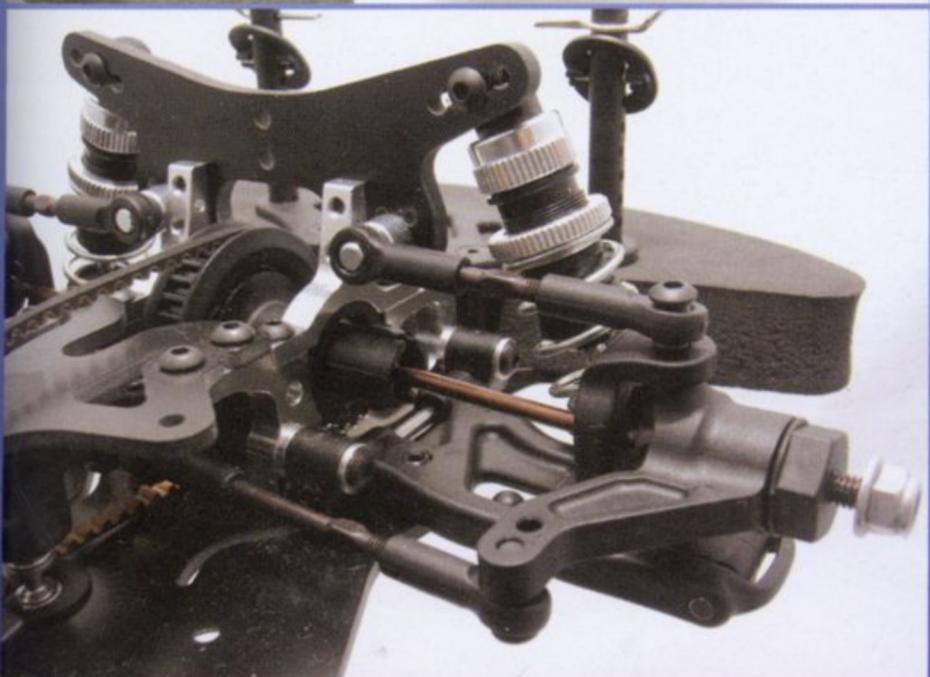
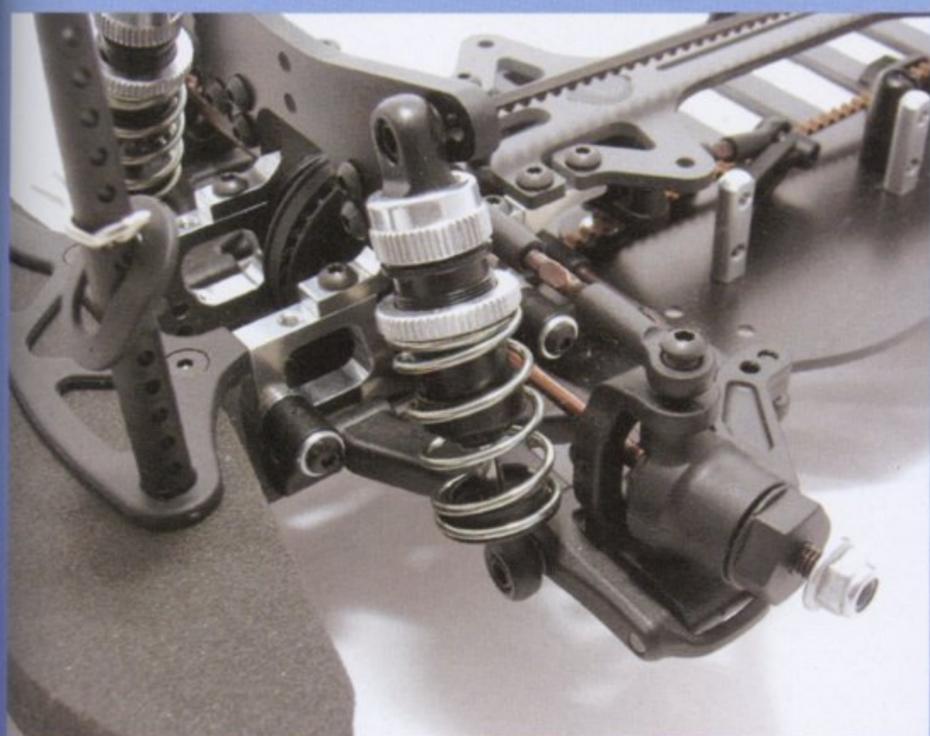
the more finer points of shock tuning as you become more experienced.

When it came time to bolt on the wheels, I did find one more area where XRAY cut some more of the cost.

The alloy clamp type hex drives have been exchanged for

standard plastic hexes.

This isn't much of a concern because, chances are, people buying this car will not be using super high power Modified motors but more than likely a 27 turn Stock or something along those lines.



## THE BUILD

When Peter Joyce first reviewed the T2 (Issue #117, May 2006), he commented that even a novice would be able to build one of XRAY's cars due to the very well laid out format of the instruction manual and that is what happened with this one.

I received the car in the post pre-built by one of Pete's new found friends from Coolah, a guy who has only been involved in the hobby for a very short time and has yet to build a kit.

So to get the car going, all I needed to do was install my radio equipment which consists of servo, receiver, electronic speed controller, a motor and some wheels and tires—all too easy.

But before I hit the track I did do what most of us racers do, a little set up.

To which I only set it up on the alignment gauge, to make sure it was all square and, surprisingly enough, it was pretty close with all

four corners only being fractionally off 2° degree camber.

The T2R had about 1.5° of toe out on the front, which was probably a bit more than the kit was intended to have on the box set up.

I thought that was pretty good considering the builder didn't construct it with a set of Vernier calipers but with only a ruler—not too bad really.

I did reduce it back to 0°, a point where I always start from.

Next step was to put the T2R up on the droop gauge to check that left and right suspension arm both fell to the same height as each other and, once again, they were fairly close and only took a small turn of the wrench to correct them.

Besides it being a little out of square, the build was very good.

The drive line spun very free and efficient, helped by having all the same parts as its big brother.

# ON THE TRACK



**T**ime to hit the track and I wasn't too sure what to expect. Would it handle like a full blown race ready T2 or is it going to be a slower, more docile, car that we would expect from a car with such a low price tag.

To put it to the test I strapped in a 19 turn motor for rubber, I went for Sorex 36R tires to meet the local rules for our Spec class at the local track (which is a bumpy and fairly low grip track).

For its first time out on the track, the T2R was very stable and easy to drive and had no issues with speed in a straight line.

Cornering was a different story all together.

It had a little bit too much push entering the corners but held on well through the mid part of the corners but then

started to push on the exit of the corner.

Be that as it may, this would be a pretty darn good car for drivers newer to the racing scene to get used to but, for me, it was costing crucial time around the track.

The rear end of the car was almost spot on but, coming off the end of the straight, into a 90° sweeper which is very

bumpy, the whole car was bottoming out.

The car had a ride height of 6mm, however this was making the car hard to handle going through at high speed.

Before the next heat, I made some set up changes to better suit my driving.

Firstly, I addressed my ride height issue (which is where I felt I was losing most of my time).

I raised it 1mm front and 1.5mm at the rear.

To compensate for this increase of ride height, I had to also reset the droop and I also decided to give it an extra 1mm in the rear to help keep the rear wheel contacting the ground over the bumps.

Also encouraging my decision for the additional droop was that it would also assist with turn in when the car decelerates as it will allow for more of the rear end weight transfer onto the front wheels.

## WHAT WE THINK

Pete's theory that anyone can build any XRAY kit is quite accurate.

The T2R held together for the whole day of practice and it took very little to make the car raceworthy, especially when the builder didn't have any flash tools but merely basic tools that were included in the kit and what ever was laying around the house.

It was a shame that there wasn't any racing in my area at the time I wrote this as I would have really enjoyed proving it is no longer necessary to spend big dollars to have a competitive ride at Club level.

I've left the best till last.

Being the same platform as the T2, there is no reason at all why you can't turn the T2R into a T2 as your wallet and experience allows and my first recommendation would have to be XRAY's brilliant front Multi Diff, followed by the extra four stand offs that connect the lower deck to the upper deck to make it a little more rigid.

The graphite parts can come later, maybe the alloy diff outdrives could be considered but as the plastic ones are very light and quite robust, I can't see much benefit for this mod to be high up on the to upgrade list.

For those simply wanting an easy-to-build and maintain, robust and competitive Club racer, then it is going to be difficult to go past the T2R.

To combat the front end push, I decided to tighten the front diff a further 1/8th of a turn.

This would increase drive to the outside wheel, to pull it out of the corner.

Next run the car was much more suited to my driving style and I was putting in some very fast lap times and getting close to the same laps I had put down with my own car (which is pretty well set up for this track).

There are many more set up changes available on the T2R and I've no doubt out of the box, this car would be more than capable of winning Club meets.

I suspect even more impressive potential though, if it was in the right hands could even take out the Stock class or 19 Turn class at major races meets.

### Our thanks

Our thanks to Custom Model Cars, Australia's XRAY agent, for our test review T2R.

I will have many hours of fun at the track with this kit and I recommend you get to your local hobby shop and check them out the price tag is really going to surprise you! If your local hobby shop isn't stocking XRAY, ask them to contact Custom Model Cars for more information.

