

Big air! In the hands of one of G1's own test pilots this is what the RTS-1 is capable of. The finely-tuned suspension makes landings from on high feasible, if you've got the skill. Oh, and unfortunately this isn't the Quantocks or Stevenson.



# The best SUSPENSION BIKE YET?

**GT have waited two years before getting on the suspension bike bandwagon with the RTS-1 and RTS-2. JOHN STEVENSON took a sneak preview at the top bike and reckons this might just be the best suspension bike you can buy**

**T**im Flocks, marketing hunch for UK GT importers Caratti Sport, had been dropping hints all year that GT were about to launch a really hot suspension bike. Now, when we hear this stuff from marketing men we usually take the good old Mandy Rice-Davies attitude: "Well, they would say that wouldn't they." But when a former motocrosser and one-time nationally ranked Expert MTB racer raves about a bike, you know something is up, especially since Tim has always been honest with us about the pros and cons of GT's bikes.

The bike that Tim was getting so excited about is the *RTS-1*, GT's first full suspension bike. The initials stand for Rocker Tuned Suspension, presumably because the more grammatical

Tuned Rocker Suspension abbreviates to a Tandy/Radio Shack trademark. At the *RTS-1*'s heart is a unique way of attaching a shock to a bike that circumvents many of the problems

that previous suspended bikes have suffered.

Just what is so special about the *RTS-1*, then? Well, it's without doubt the best integrated full suspension bike that we've ridden so far. Let's look at the details that set it apart from previous boingy bikes.

## Frame and fork

The really new part of the *RTS-1* is the main frame and rear sub-frame arrangement. The heat-treated 6061 aluminium frame is built around an oil-damped steel spring shock made for GT by Noleen. A range of springs will be available and the pre-load is

easily adjusted by hand; just turn the threaded adjuster. GT went for a steel spring for the simple reason that it is reliable; even if disaster strikes and all the oil leaks out of the damper, the spring will still work and it'll get you home (albeit bouncily!).

Unlike every other suspension bike out there, the *RTS-1* doesn't use the shock as a structural part of the frame. Instead, the rear sub-frame pivots halfway down the seat tube and is attached to a rocker behind the bottom bracket. The rocker is attached to the frame and the shock is attached to the other end of the rocker. This means

**LEFT:** The business end of the *RTS* design is this ingenious rocker which takes the shock out of the frame's structure and makes for a more rigid rear end.

**RIGHT:** The *RTS-1* is immaculately welded at GT's own US facility out of 6061 aluminium. The cheaper *RTS-2* is made in Taiwan from 7005 tubing because "that's what they have out there".

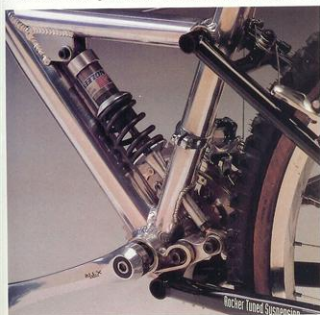
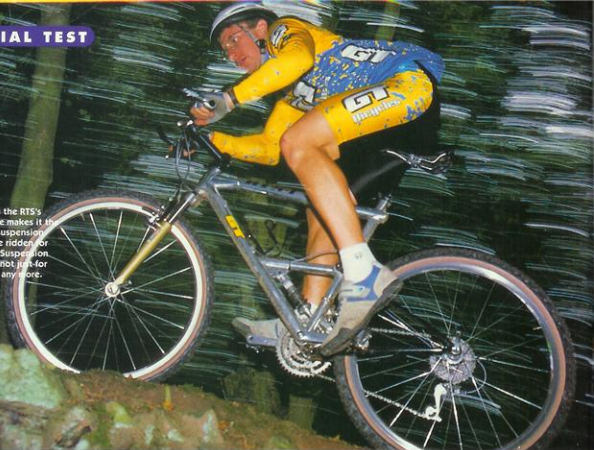


Photo: Steve Behr

Going up: the RTS's rigid frame makes it the best full suspension bike we've ridden for climbing. Suspension bikes are not just for downhill any more.



that the rear subframe is attached firmly and cannot move sideways, only up and down, avoiding the problems with lateral flex and subsequent dodgy handling that has plagued previous rear suspension bikes.

Importantly, the pivots and bearings in the RTS-1 subframe are all easily and cheaply available from bearing shops – no special parts have been used. When they do wear, as they inevitably will, they can be replaced without difficulty and

the rear suspension restored to as-new performance.

The shock provides 55mm of plush, well-damped travel, and the configuration of the rear subframe and pivot positions mean that the bike actually feels almost like a rigid bike when climbing and sprinting.

Up front, the RTS-1 uses the 1993 Rock Shox Mag 21, which is 130g lighter than the current Mag 20 and also has better absorption of small bumps than the previous design.

## Groupset

What else but XTR? Shimano's top-line groupset gives sure, accurate shifting through the Rapidfire Plus shifters, a huge eight-speed gear range and powerful braking. In fact, the combination of the fork and XTR front brake gives the easiest endo capability of any bike we've ridden. It's not the lightest group in existence, though, and weight freaks will want to add some titanium to allow this bike to reach its full potential. It is, however, probably the best-functioning group made, to the point where there's not a great deal more you can say about it, except gripe, as we will probably do a lot in 1993, about the choice of a 26t inner ring over a 24t.

## Other bits

The control centre of the RTS-1 consists of GT's 150g lightweight handlebar, onZa bar ends, comfy new GT grips and a Dia-Compe Aheadset system, with rather neat Tioga stem. The whole assembly is light, since the Aheadset removes the need for the stem to have a quill inside the steerer. Aheadset also lends itself well to GT's FlipFlop concept and production RTS bikes will have this feature.

Our brace of test bikes had

different wheel set-ups, but production bikes will have **Mavic 231s**, **Panaracer Smoke** and **Dart** tyres, and double-butted spokes, a reliable assembly with tyres that are famous for their grip. Weight freaks will probably trade them in for **Ritchey Z-Max WCS**, though.

## Can't afford it?

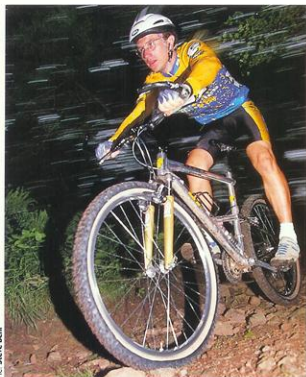
A cheaper version, the RTS-2, will be available. Using a Taiwanese-built 7005 frame, LX group and non-heat-treated rear triangle, we suspect it will be among the best 'affordable' full suspension bikes of 1993. Interestingly, GT are honest about the choice of materials on the two versions. They freely told us that the Taiwanese bike uses 7005 aluminium because that's what is available in the Far East, while the US-built RTS-1 uses American 6061 and the necessary heat-treating technology.

## The ride

Previous suspension bikes have excelled as straight-line downhill machines, but have been weak on the climbs and had handling problems in corners resulting from rear end flex. Plus, most such bikes have been distinctly squidgy in sprint situations; getting a suspension bike



Rocks? Ruts? Trail hassle? The RTS laughs at these trivial obstacles. But it still can't stop you bouncing off each other for the photographer...



Pic: Steve Behr

Steep, rocky downhill is the place to extract maximum grin-per-minute factor from the RTS. It just soaks up big stuff like this.

up to speed is usually a gradual process – hard-charging efforts just sink into the rear end of most other suspension bikes.

The *RTS-1* gets over these problems. The combination of the well-damped Noleen shock and the laterally rigid rear sub-frame mounting removes both the handling problems associated with previous suspension bikes and their tendency to squish under hard pedalling force. In short, the *RTS-1* feels like a rigid bike until you realise that you're going downhill 10mph faster than you usually do. Let's look at each handling area and see how the *RTS-1* holds up.

### Downhill

Not surprisingly, the *RTS-1*'s strongest area is high-speed descending. In fact it's the best downhill bike this writer has ever had the pleasure to sling a leg over, and I was extremely reluctant to give it back after floating down a rocky Quantocks dirt road at wild, silly speeds, leaving a rigid bike-equipped Tim Flook in my dust. Needless to say, Tim is known and feared as a downhiller. The *RTS-1* just soaks up the bumps and does it

in a controlled and, most importantly, balanced way. The feel of the front *Mag 21* and rear shock are similar; the front and rear suspension units don't react differently to the same bump. In fact the suspension is so smooth that it's easy to forget you're riding a full suspension bike – until you realise just how damn fast you're going.

It's an indication of this bike's downhill capabilities that GT team member Jake Elliott was able to take the downhill bronze in the UK Nationals a few weeks later after riding it just once. Bikes like the *RTS-1* are going to make '93 the year of full suspension in downhill racing.

GT's vast experience, gleaned from the millions of mountain bikes they've sold over the years as well as their race team, really shows in the *RTS-1*'s handling. At speed it corners like it's on rails, and the suspension allows you to pick a line almost regardless of the state of the surface.

It's also the only bike I've ever felt comfortable getting air on. I'm not the world's most gifted trick rider (and the sea is not dry!) but the *RTS-1* absorbs my inept landings so smoothly that I

was soon flying off every bump with reckless abandon.

### Climbing

Traditionally this has been a weak area for suspension bikes; either the rear suspension 'inchworms', shortening the bike, raising the saddle and absorbing effort, or the back end flexes sideways under hammer. The *RTS-1* exhibits neither of these faults. In fact, uphill, it feels like a rigid bike. The chain tension partially locks out the rear suspension, but it retains enough movement to absorb the bumps, and the laterally rigid attachment keeps everything in line.

### Hammering

The *RTS-1* is a joy on rocky, flat trails. The suspension simply keeps the wheels glued to the ground, improving power transfer, and as we've said before it feels like a rigid bike when you hammer it. The bottom line is that the *RTS-1* is the first full suspension bike I've ridden that I would be prepared to use as a cross-country bike, for recreational riding and for the low-grade racing I occasionally venture forth to do. It's an impressive machine.

### Problems

The one thing that worries me about the *RTS-1* is the lack of tyre clearance round the bottom bracket area. In very claggy conditions I can see mud build-up in the linkage being a problem, and I'd like to see just how well this bike stands up to the crud a British winter will throw at it.

### The verdict

The *RTS-1* is without a doubt the best full suspension bike your humble scribe has yet ridden. It heralds a wave of 'second generation' suspension bikes.

Expect to see radically improved designs from Cannondale and Specialized for 1993, as well as others yet to be announced. These bikes will finally make a full suspension machine a viable option for cross-country use and the *RTS-1* is right in the vanguard of the new full-suspension movement.

### WIN AN RTS

Like the sound of it? Turn to page 43 for details of how to win an *RTS-2*, the *LX*-equipped version of the *RTS-1*. ○

## Spec

Manufacturer	GT
Model name	RTS-1
Frame material	6061 aluminium/chromoly
Forks	Rock Shox Mag 21
Headset	Tioga Aheadset
Crankset	Shimano XTR 26/36/46
Derailleurs	Shimano XTR
Shifters	Shimano XTR Rapidfire Plus
Freewheel	Shimano Hyperglide 12-28
Chain	Shimano Hyperglide XTR
Pedals	Shimano M-737 Spuds
Bottom bracket	Shimano XTR
Hubs	Shimano XTR 32-hole
Rims	Mavic M23
Spokes	DT stainless 15-16-15 DB
Tyres	Panaracer Smoke Dart
Brakes	Shimano XTR
Brake levers	Shimano XTR
Handlebars	GT superlight, onZA bar ends
Grips	GT kraton rubber
Stem	GT aluminium US-made
Saddle	ATB racing leather, T1 rails
Seatpost	GT aluminium, 350mm
Weight	N/A

GEOMETRY	For 11in frame
Head angle	70.5°
Seat angle	73.5°
Top tube length	22.6in/575mm
Wheelbase	41in/106.7cm
Rear end	16.75in/42.5cm
Bottom bracket height	11.3in/28.8cm
Price	£2,345

## Ratings

Chassis design	●●●●○
Quality and finish	N/A
(our bikes were prototypes)	
Gear performance	●●●●●
Brake performance	●●●●○
Wheels	●●●●●
Handling	●●●●●
Value for money	●●●●○
Overall rating	●●●●●

● Excellent performing full-suspension bike; superb XTR groupset; simple rear suspension design with easily adjusted and replaced parts; great downhill bike and good XC machine

○ Question mark over rear triangle mud clearance