It's obvious from the very first look that a Slingshot isn't your everyday frame. But what's not so obvious is that it offers a much better ride than you might expect. It definitely surprised us.

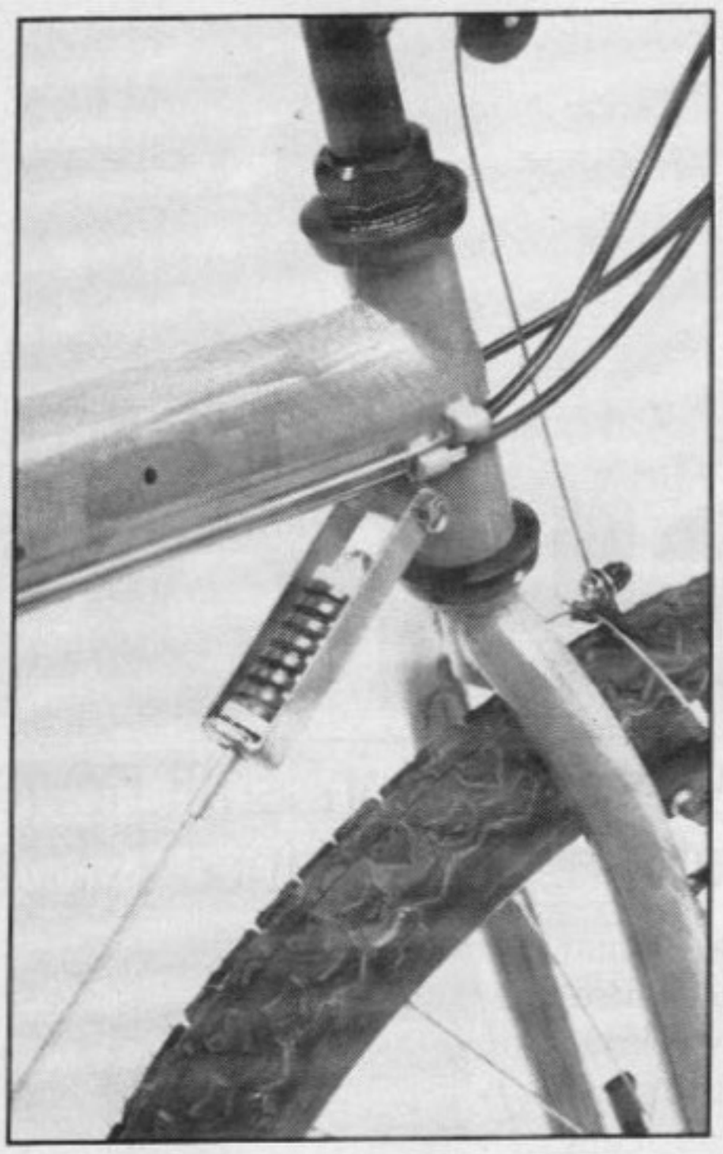
SLINGSHOT

Who says suspension is all new? These guys have been refining theirs since 1980!

Part of what we love best about the sport of mountain biking (after the riding itself, of course) is that the spectrum of possibilities, whether in frames, forks, or components, isn't narrowly limited. In fact, judging by what we've seen coming from the designers over the last few years, the sport is about as wide open to creativity as the human imagnation will allow. We've seen products with all the class and intricacy of a Shakespearean sonnet, while others appear more like something that crawled out of a post-pepperoni pizza Stephen King dream.

Then comes the next best part: looking over the products, testing them, and debating their merits and pitfalls among our various staffers, much like you can find riders doing anywhere where, whether at a bike shop, during a break on a ride, or at the starting line of a race. And while looking over a particular product for the first time, like any group of highly opinionated individuals, we might draw completely polar conclusions. It's all in the perceptions. Sometimes they prove correct, and other times, the reality of a test ride proves them completely wrong. Either way, we love finding out.

The piggyback water bottle arrangement is a great way to make up for the loss of the down tube mounting position. Keep an eye on the frame mounting bolts, though. The ones on our bike loosened up repeatedly. If you're really eagle-eyed, you'll notice the small dots of bead on the seat tube, which are for a gusset that's inside the seat tube.



"Like any group of highly opinionated individuals, we might draw completely polar conclusions."

While onboard the bike, resting a finger alongside the cable where it enters the spring housing quickly shows how much the suspension is working. By the way, there are three spring rates available for fine-tuning. The large bi-ovalized "boom tube" does much to keep flex and weight at a minimum.

While it does have some side-to-side flex in it, the Slingshot's mid-frame style suspension is surprisingly capable of reducing shocks that would normally reach the rider — without robbing power.

POCKET ROCKET

The designers and riders over at the Greendale Bicycle Company have been dealing with perception vs. reality battles since 1980, bringing to market their own particularly unique vision of the "perfect" mountain bike frame, the Slingshot.

A truly suitable description for this frame is an elusive item, since there's nothing out there to compare it to. For example, a stainless steel cable and chrome vanadium coil spring arrangement reside where the down tube should be, and at the rear end of the top tube, a flexible 3M Scotchply fiberglass spring (similar to leaf springs sometimes used on race cars) allows the bike to independently absorb bumps. It's obviously suspension, but what do you call this style of shock absorption? It certainly isn't rear suspension, at least not as we've come to recognize it from any motorcycle derivative, and it certainly doesn't fall into the front suspension realm. How about mid-sprung? That looks and sounds about right. (Or at least as close as we can come.)

The intent of all this, of course, is the same as with any other suspended bike — reducing fatigue, and maintaining the best possible traction to both wheels for improved climbing, braking, cornering, and control.

NON-FLEXIBLE DETAILS

Over the years, this frame has gone through seven generations of designs and upgrades, along with small detail changes that are too numerous to mention. But one of the most recent, and maybe the most important, changes has come in the form of the huge bi-ovalized top tube. This jumbo-sized "boom tube" has helped to both increase strength and stiffness, and reduce weight.

A visual tour over the rest of the frame shows details like SunTour rear dropouts, and the square/diamond-shaped brace between the rear chainstays. There are also nice additional touches like the bracket for the rear brake cable routing, and tapered single-bend seatstays. A roller is set up for the front derailleur, though our bike used a top-pull style. Along the seat tube you'll find three rosette welds on each side, which show where an internal gusset has been added. The designers at Slingshot claim that this is a big aid to bilateral stiffness. Material for the frame is True Tem-

per's OX Ultra II heat-treated chromoly tubes. Claimed weight is 4.5 pounds.

Up front, a Slingshot fork is in place, with its straight gauge True Temper legs, and one-inch steerer diameter. A pure silver head tube badge also resides up front.

While not sold as a complete bike (and the frame/fork sets go for about $1200), it is designed to be a performance machine, and our test bike was set up like one. While this test is less about parts, and more about the frame, a brief overview of the onboard equipment is in order, since they add a lot of the color to ride impressions.

The Slingshot was delivered in "Team spec" configuration, with a full complement of SunTour's XC Pro MicroDrive Grease Guard components. Wheels were built using Sun's very narrow M14-A rims (complete with their "For Race Use Only" stickers), and a set of Matrix Z-Axis Comp folding tires, individual front and rear position designations. Brakes at each end were a set of impeccably dialed Dia-Compe 986s, with Dia-Compe SS-5 levers for activation. The handlebar was a very narrow True Temper chromoly bar, and the stem was a Salsa Pro-Moto unit.

RIDING: PERCEPTION VS. REALITY

Okay, let's have a little fun here, and

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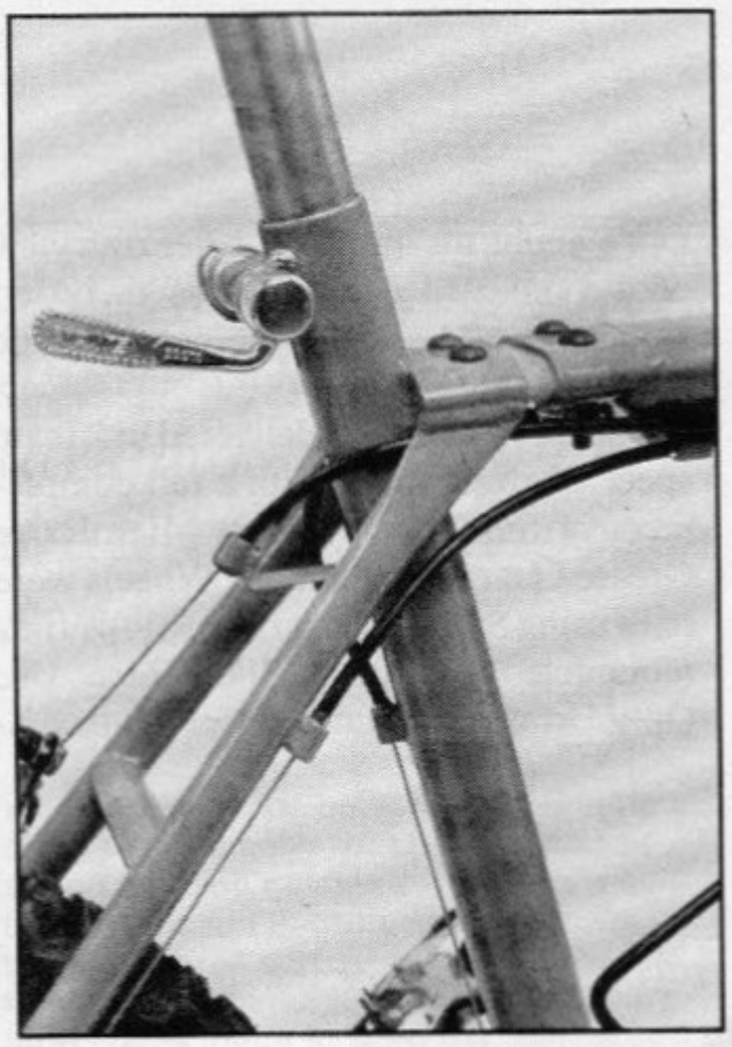
give you both views — namely our pre-ride perceptions, along with the realities that we uncovered.

PERCEPTION: Before slinging a leg over the bike, one of the things we wondered was how well the suspension would actually work while seated. Looking at how the suspension would be most affected by the rider's weight, it didn't look like it would be very effective unless you were standing on the pedals.

REALITY: If you want an easy way to see whether the suspension is working, just rest your finger alongside the upper end of the cable where it enters the bracket that houses the spring. (This is also a very effective way of pinching your finger if you're not careful.) We were surprised at the amount of action in the suspension, even over fairly smooth terrain. It was fairly busy, and working much more than we anticipated. But at the same time, there was no feeling of loss in the pedaling energy. The honchos at Slingshot claim that energy *isn't* lost, but stored in the spring, and returned toward the bottom of the stroke. That brings us to another bit of info about the design, specifically *why* it doesn't look like motorcycle-style suspension. *This* one was designed specifically to be powered by humans. That's something other manufacturers would do well to remember.



A Scotchply fiberglass spring is housed inside the top tube just ahead of the seat tube. This provides the pivot, and the action is controlled by the spring and cable that replace the down tube. Strange, but effective.

PERCEPTION: When it gets right down to it, this is a difficult frame to produce. Considering the design itself, along with the complexity of the frame joints around the Scotchply spring, we thought it might track like a bike that's been left on the roof rack while trying to pull into the garage one too many times.

REALITY: Wrong. Using the decidedly low-tech (but ever-effective) no-hands-on-the-bars-while-riding test, we discovered that our bike tracked straighter than some very expensive *standard* frames that we've ridden. This is no doubt due in large part to a jig used while the glue is curing. (Besides the four bolts used for mounting, the Scotchply joint is glued into the frame.)

PERCEPTION: With the no-down tube design, and the Scotchply middle, we

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MFG. OR DIST.: Greendale Bicycle Co.
5610 South Division Ave.
Grand Rapids, MI 49548
(616) 530-5556

APPROXIMATE SUGGESTED RETAIL PRICE
(Frameset only): $1200
Rock Shox-compatible frame (without fork): $1095

COLORS AVAILABLE: Purple, red (or a front/rear combination of the two, at additional cost)

SIZES AVAILABLE: 14", 16", 18", 20"

SIZE TESTED: 18"

FRAMESET:

Head Angle	71 degrees
Seat Angle	73 degrees
Top Tube Length	23" (18")
Chainstay Length	16.5"
Bottom Bracket Height	11.75"
Frame Material(s)	True Temper OX Ultra II heat-treated chromoly
Frame Construction	TIG welded
Fork Offset	1.5"
Fork Material(s)/Construction	True Temper chromoly, TIG welded
Frameset Weight	4.5 pounds (claimed)

DRIVETRAIN:

Front Derailleur	SunTour XC Pro MicroDrive
Rear Derailleur	SunTour XC Pro MicroDrive
Shifters	SunTour XC Pro
Cranks	SunTour XC Pro MicroDrive
Chainrings	SunTour MicroDrive PoweRings
Freewheel/Freehub	SunTour freehub
Gearing	20/32/42-teeth front, 11-24-teeth seven-speed rear
Chain	SunTour
Pedals	SunTour XC Pro with Grease Guard

STEERING:

Handlebar	True Temper, chromoly, three-degree bend
Stem	Salsa Pro-Moto, 130mm extension
Headset	SunTour XC Pro with Grease Guard
Grips	Grab-On foam

BRAKES:

Front Brake	Dia-Compe 986 cantilevers
Rear Brake	Dia-Compe 986 cantilevers
Levers	Dia-Compe SS-5

SEATING:

Saddle	Avocet Racing II
Seatpost	SunTour
Seatpost Binder	SunTour

WHEELS:

Rims	Sun Mistral M14-A
Hubs	SunTour XC Pro with Grease Guard
Spokes	DT, 14-gauge
Tires	Matrix Z-Axis Comp F