CALIFORNIA CRUISIN'

Bicycling Takes ATBs To Marin County for A Highland Showdown

By John Kukoda

Before 1981, the year Specialized Stumpjumpers first appeared in bike shops and pointed the way West for manufacturers, you had to go to a West Coast custom frame builder for an off-road bike that wasn't a geared-down version of a balloon-tire beach cruiser. Klunker riders who took the sport seriously either pedaled converted Schwinn Excelsiors or the meticulous, hand-built product of a Tom Ritchey, Joe Breeze, Erik Koski, or other West Coast builder.

The cost gap between the cheap, converted beach bikes and the four-figure customs was large. In comparison to the latter, Specialized's watershed Stumpjumper, at only \$750, was like a fire sale bargain—never mind that the "serious" Marin County (California) veterans on their \$1,500 hand-brazed beauties sneered derisively at the first "Skunkjunkers."

That's ancient history now. Literally dozens of bicycle manufacturers large and small have jumped on the off-road bandwagon, with the inevitable result being lower prices and more sophisticated construction. Specialized's latest ATB, the \$399 Rockhopper, offers spirited performance that consumers would have lined up for at twice the price a few years ago. For about the cost of the original Stumpjumper, one can also now afford the proven geometry of Gary Fisher's mass-market Mountainbike, the \$699 Montare, or its light, tight, Eastern cousin, the \$795 Fat Chance Kicker. Not to mention a matched pair of superb-shifting, \$369 Renegade II ATBs from the New Jersey-based G. Jaannou Cycle Co.

Still, the custom ATB market flourishes. Why?

"The perfect all-terrain bicycle hasn't been made yet. But it can be," explains the literature for Ibis Cycles.

Strictly a producer





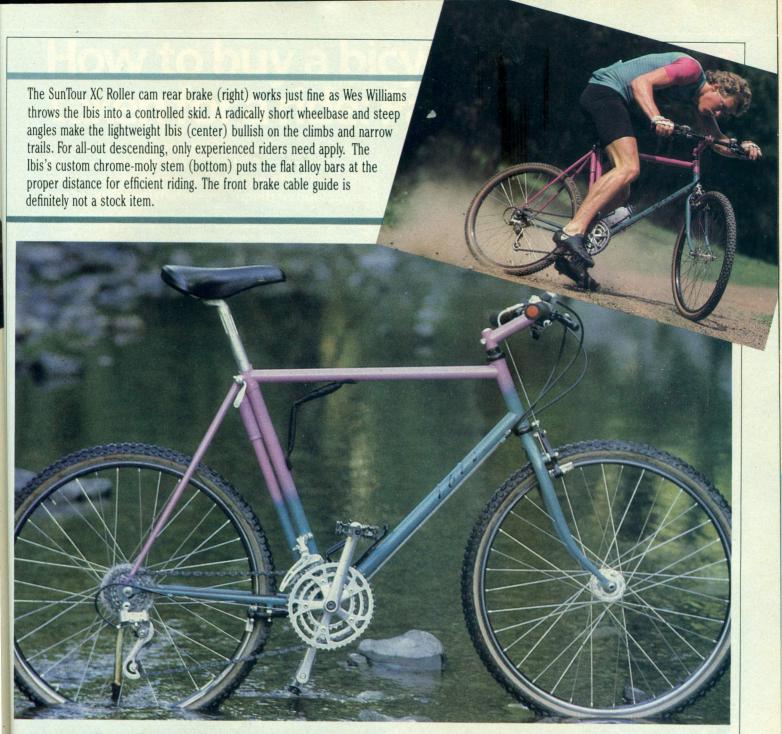
of custom, made-to-measure ATBs, Scot Nicol's company in Sebastopol, California, offers the real off-road aficionado a seemingly endless choice of frame geometry, construction, componentry, and Imron colors.

This month we give you an overview of the level of quality available in price ranges from sub-\$400 to \$1,000-plus.

To do it right, we hung up our cleats, stocked up on suntan lotion and Band-Aids, and headed for the heartland of all-terrain cycling — Marin County, California. (Sure it's a tough job, but somebody's got to do it!)

Rendezvousing each morning at Gary Fisher's shop in the shadow of Mt. Tamalpais, some of the country's premier off-road racers and I stoked up on whole







wheat muffins and thick espresso at a nearby cafe. Then we headed for the hills to put the bikes through their paces on Repack Road and other trails crisscrossing the hallowed hills north of San Francisco. Our test team consisted of:

Specialized team rider Gavin Chilcott, of Santa Rosa, California. A professional road racer with eight years of off-road racing experience, Chilcott won the Rockhopper in 1982 and 1983 and placed third overall in last year's Gant Challenge.

Also with Specialized, David McLaughlin, of Palo Alto, California. Now in his second full year of off-road competition, McLaughlin has consistently placed in the top five in off-road events. He was also a member



of the U.S. National Cyclocross Team and is a Category I roadie with G.S. Boyer.

From Team Ritchey, Roger Marquis, of Berkeley, California. Winner of the Northern California Prestige Road Trophy in 1984, Marquis has been a Category I racer since 1977. He won four races in 1984, his first year of off-road competition.

Also from Team Ritchey, Ramona d'Viola of Berke-

ley. A Category II roadie in her second year of off-road, she is a member of the western states team for the National Sports Festival in Baton Rouge.

From Team Fisher, John Loomis of Tiburon, California. He placed third in the 1983 and 1984 National Off-Road Bicycle Association Nationals and won the two-day Ross New England Stage Race last August.





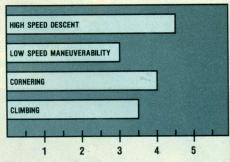
Then there are the slotted cable guide brazeons. More than just convenient for initially setting up the bike, they allow quick removal of the cables for the frequent lubrication required in dirt riding. And if you've ever bottomed out brake levers trying to slow down on a steep hill, you'll appreciate the oversized motorcycle brake cables Fisher uses.

Fisher's choice of Arava RM 25 rims for the Montare also reflects concern for flawless brake operation. The pads of well-adjusted

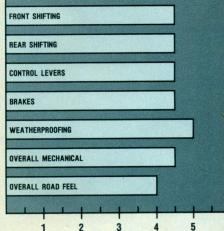
cantilever brakes, such as the Shimano Deore XT on the front wheel, contact the rim squarely. But since a hard squeeze on the brake lever can sometimes coax worn brake pads down past the rim's braking surface and into the spokes, Araya puts a raised ridge all along the lower edge of the rim's braking surface. That's a fine point that could literally make or break a bike!

Even Fisher's choice of grease goes the extra mile. His bottom brackets are packed

MONTARE ROAD TEST GRAPHIC EVALUATION FORM HANDLING



MECHANICS

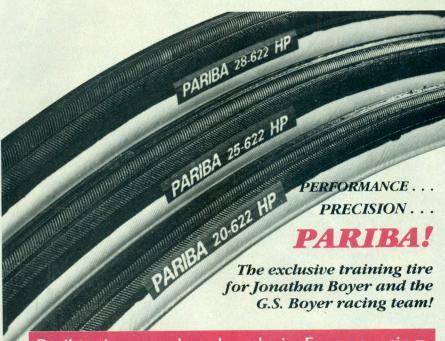


with a thick, blue, waterproof formula intended for the wheel bearings of boat trailers.

It's part of my job to discern often minor, subtle differences between bikes. So I hate to admit I was half-way up a good sized mountain on the Montare before I realized I was pedaling Shimano Biopace chainrings. Only when I dropped onto the inner ring did I become aware of the mash-rest-mash pedaling style inherent to the out-of-round rings. Apparently, the computer-designed shape is more pronounced in the smaller ring. I'd have preferred a traditional round granny for a smoother pedaling stroke. But I think the Biopace helped me keep up with the fast crowd on hills without resorting to the bail-out triple. The other riders were generally ambivalent about the Biopace, except most disliked the small ring.

"As I went up steep stuff on the small ring, my downstroke felt real hard. I didn't like it," said one rider, who went on to express pleasure with the Montare's handling, particularly downhill.

"I think it's worth \$700. It's a fairly responsive bike. I enjoyed it. I liked it coming down hills, but I would have preferred to have toe clips on it."



Pariba tires are handmade in Europe using resilient and durable all cotton threads, built in at a 45° angle to the direction of travel. A herringbone tread handles all road conditions. Result? Incredible response, optimum traction. And there's a profile for you: racer, commuter or tourist.

SPECIFICATIONS TOURING TRAINING **RACING** LIGHT TOURING COMMUTING 25 mm 20 mm PROFILE 28 mm 280 gr WEIGHT 340 gr 220 gr 110 psi 110 psi PRESSURE 100 psi

Available at finer bike shops. Distributed by Veltec-Boyer Sports. 1793 Catalina Sand City, CA 93955. Lack of toe clips and straps on most of our test bikes (with the exception of one Ibis) was bemoaned by most of the test riders, who like the security of toe clips on bouncing descents and their added power on climbs. Personally, I preferred the confidence of being able to instantly put my feet down when I got into trouble.

Another rider, used to his lightweight competition bike, found the Montare "a little stiff, a little heavier. Otherwise, it's very similar ... Handling was very good."

"The Montare is really well set up. Everything on it tends to work real well. The frame geometry is laid-back and sluggish in general, but it still handles real well. They're bombproof bikes. For someone who wants to step up from an inexpensive \$300 bike, the Montare is a good bike to buy, or if they want to buy a good bike for their first one and spend \$700, it is a good choice. The next step up from that is buying a custom."

Ibis

With 18 years of off-road cycling experience behind him, Scot Nicol can separate gimmickry from the real requirements of two-wheeled mountain travel. As a former apprentice to California builders Charlie Cunningham and Joe Breeze, he can translate his ideas into flawless Ibis custom ATBs.

"Most ATBs are based on the design of the old Schwinn Excelsior," says Nicol, "but there's no tradition set, so you can do weird things with design and not get scoffed at."

Any weirdness in the Ibis designs are genuine attempts to improve off-road performance, not just to be different.

For example, there are the wheelbases, which hover around 41 1/2 inches, about 1 1/2 inches shorter than usual. This is achieved by use of a minimum 70-degree head angle and chainstays often a full inch shorter than most stock designs. The tight rear triangle pulls the rear wheel under the rider's weight for better traction in climbs and transmits more pedaling energy to the rear wheel, Nicol explains. "Plus, you want that rear wheel to follow the front one fairly soon when you swerve around something. The 70-degree head angle performs adequately in every situation you might encounter." It's more responsive at slow speeds than shallower designs, while still maintaining adequate stability for rough rocky descents at 40 mph.

The upright design was once considered pretty avant-garde by the Repack "kamikrazies" who learned their craft on steel-rimmed Schwinns. But it's becoming more popular, especially in the East, where narrow, tricky woodland trails are far more common than eyeball-bouncing descents. Ibis

bikes designed for observed trials competition typically use 72-degree head angles for even more maneuverability at slow speeds.

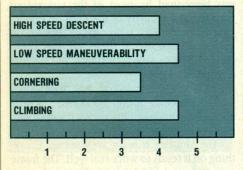
For our (off) road test, Nicol and partner Wes Williams brought two bikes: a striking pink and blue model with flat alloy handle-bars and Wes's more radical personal bike, a deep metallic green model with drop bars, bar-end shifters, and a straight "Type II" fork that relies on offset at the fork crown for its 1 3/4 inches of rake.

"They're real popular in Colorado," Nicol says of the drop bars. "You'll find that many of the fastest riders are using them." Their advantages include lighter weight than typical triangulated chrome-moly bars and the variety of hand positions possible on the tops, Modolo brake hoods, and drops. But the big advantage of drop bars, Nicol says, comes on rough descents, when a rider with upright bars takes a beating in the wrists. By riding in the drops, the jostling is better ab-

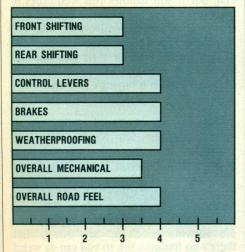


IBIS

ROAD TEST GRAPHIC EVALUATION FORM HANDLING



MECHANICS



sorbed through the elbows and arms, he says. For comfort, thin foam padding is applied only to the top surfaces of the bars before wrapping with cloth tape. This way, the bars don't feel squishy and unsure when the cyclist grips them. Nicol also flares the alloy bars down and out for a better hand position in the drops.

To complement the drop bars, Nicol designed his LD Model chrome-moly stem with four inches of height but only one inch of extension. Road-type stems, he says, reverse these dimensions, putting the bars too low and too far forward for comfort and control on a longer, lower ATB. In all, 20 sizes of chrome-moly LD and flat-bar stems are available, along with ten handlebar choices.

Nicol's selection of lightweight, quick-release Hi-E hubs amazed me until he explained their advantages. The Hi-E design was popular during the "lighter is better" craze of the mid-70s, but little has been heard of them since. They're more than light; they build stronger wheels, thanks to their wide hub flange spacing — about 20 percent wider than any others. This allows Nicol to build wheels with less dish, so they're inherently stronger, especially with the high-low flange rear hub he uses. The hubs are strong for off-road use, Nicol says, since they're fitted with massive 1/2-inch hollow chromemoly axles. Aluminum step-down adapters fit the axles to the dropouts. Ibis modifies the sealed bearing units to be user serviceable.

I enjoyed riding both Ibis bikes, but they were anything but two peas in a pod. Both climbed well, but they handled differently on descents and at slow speeds. I was surprised to find I preferred flat bars to the drops, since I'm used to drop bars on the road. For hard climbing on rough trails, I liked the security and sure grip provided by the mountain bars.

The lightweight Type II fork on the drop bar bike, formed from a Reynolds 531 top tube, was harsher riding than a more traditional fork. Smoothly raked fork blades on the more conventional bike flexed noticeably over bumps, spreading the jarring throughout the length. The unraked blades, however, seemed to pass along each jolt to the handlebars.

I preferred the blue and pink Ibis, with its additional quarter-inch of fork rake. Compared to more laid-back, mass-produced ATBs I've tried, it climbed with less effort and dodged rocks more nimbly. And I found I could keep up on the climbs after I got used to the Biopace chainrings. That didn't surprise me; on the road, I'm known more for power than finesse. Downhills were a different story, however. The Big Boys always had to wait at the bottom of the hill for the road weenie with the helmet.

The Ibis bikes won the racers' praise.

"I really liked (the flat bar model). It has a real short wheelbase and short chainstays, so it climbed really well ... It had skinny tires on it, but the tires didn't break loose much at all. There's no room for a fatter tire on the back, though."

Another rider who liked the bike was more critical.

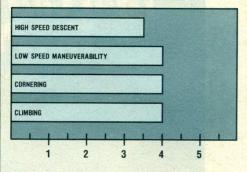
"I didn't like the (SunTour XC) front derailleur, and I wasn't as happy with the (SunTour XC) brakes as I am with cantilever brakes, although the XCs are adequate."

"All in all, it felt really good — a nice, maneuverable bike. I liked it."

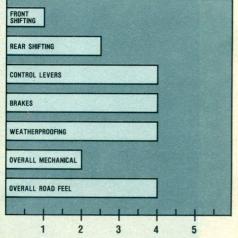
Specialized Rockhopper

Specialized's \$399 Rockhopper successfully blurs the distinction between beginners' ATBs with shallow angles and the previously costlier, more maneuverable high-performance bikes with their steeper angles. If you've enjoyed the typical entry-level ATB but wished for better traction on steep climbs and more slow-speed maneuverability on rocky trails, try the Rockhopper. It'll bring out any latent gonzo tendencies you might have. And don't worry—it's built to take the abuse

ROCKHOPPER ROAD TEST GRAPHIC EVALUATION FORM HANDLING



MECHANICS



Constructed of TIG-welded, oversized, straight-gauge chrome-moly tubing with the beefiest fork blades around, the frame is more than adequate for racing, both in strength and in its tight geometry. Instead of the industry standard 68-degree head angle, the Rockhopper uses a 70. The two degrees make a world of difference when dodging rocks and yet don't require the skill needed to descend on even steeper-angled competition bikes.

Our riders, who tested two bright red-orange models praised the frame.

"I really like the new angles they're using. The 70-degree head tube is real responsive, and the seat tube is efficient for the rider. The top tube seems shorter than what the chainstays would accommodate; in other words, it's longer in the rear end than it is in the front. The bike still seems to handle really well in the downhill, though. The welds look good — it's constructed pretty well. For \$400 it's a great buy."

"I thought it steered fast, and I liked that. It descended real good. The forks look really tough in the front — they're big and indestructible. The frame is fine as a beginner frame. A little further along you (could pay)

more money for less weight, but in terms of geometry I think it would be a good, responsive, competitive bike."

Several riders had problems with the SunTour AG Tech front derailleur. "It would either shift over too far or not shift up at all, and it bent easily."

The bikes came equipped with Specialized's 1 1/2-inch-wide Crossroads tires.

"I liked the tires pretty well. It depends on the course. There are a lot of courses where I'd want this kind of tire. On other courses, I'd want maybe a Tri-Cross 1.75."

Another rider termed the Crossroads tires "ineffective."

"You can get a better combination tire (than the Crossroads). I don't even like the raised center ridge on their road tires. It makes them handle so poorly, especially in the wet." The same rider also had harsh words for the AG Tech/MounTech derailleur combination. "They were the worst of any bike. I really disliked them."

What other changes would the Rockhopper need to become truly race-worthy?

"If someone got very far into competition, they'd maybe put on a better freewheel and cut down the handlebars a bit and just make sure everything's adjusted."

Fat Chance Kicker

If you live within pedaling distance of Repack Road, your ATB is probably a Marinstyle gonzo downhill bike with a shallow head angle and lots of stability. If you enjoy riding the narrow trails and trials courses of the East, a steep-angled ATB with lots of maneuverability would suit you better. But if you need one good all-around bike, that's exactly what Chris Chance designed his \$795 Fat Chance Kicker to be.

"Lots of people say there's a difference between the philosophies of East and West Coast builders. I don't know about that, but I try to make my bikes more adaptable to any conditions you're likely to encounter."

To accomplish this, a tight rear triangle for sure-footed climbing is combined with a long front center to give the bike adequate high-speed stability. To clear trail-side flora, the bars are narrower than some Western designs. The bottom bracket, at 12 1/4 inches, is higher than that of most ATBs, in deference to the Eastern trials style of riding.

The Kicker, built at Chance's shop in Somerville, Massachusetts, is a compromise of sorts. He admits the bike has "a little bit of wheel flop" at slow speeds, but the tendency to oversteer was not as troublesome as with other, more laid-back ATBs I've ridden. The narrower bars also help keep the rider from over-correcting.

One West Coast racer who tested the Kicker had mixed feelings about the bike. "It's not a downhill bike much at all. It climbs okay, except for the kind of heavy wheels. But it has a short wheelbase and weird handling. It's hard to slide. When you do, it wants to fall over. I think it's more of a street-type bike."

In contrast, a Pennsylvania trials rider who tested the bike liked the tight wheelbase and relatively narrow handlebars but would have preferred a steep head angle for slow-speed zigzagging around obstacles. "Hill climbing traction and power transfer are great," our Eastern rider reports. "The bike's steering is such that the faster you go, the better it feels."

I liked the Kicker a lot. On the uphills I felt even more efficient on it than I had on the Montare. Only on the worst rough-stuff descents would the Fisher's slight downhill edge become apparent.

Mechanically, we can't quarrel with Chance's component selection. The Deore XT derailleurs and cantilevers perform with precision. The brakes feel very solid, thanks to oversized cables similar to those on the Montare. The Chance and the Fisher also share the slotted braze-on cable guides for easy removal and servicing.



BEST OF BOTH WORLDS

Now you can have one all-terrain bike that combines the shallow head angle of a West Coast gonzo descender with the low-speed maneuverability of an Eastern trials bike. All you need is an allen wrench and the Montaneus, an adjustable head angle ATB produced by American Bicycle Manufacturing of St. Cloud, Minnesota.

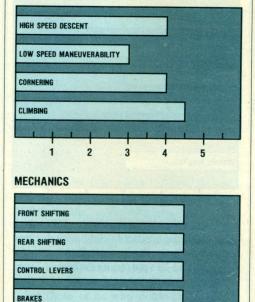
The secret is a pair of adjustable eccentric

rings that independently position the upper and lower headset halves forward or backward. With both headset halves aligned, the bike has a moderate 69- degree head angle. With the lower race forward and the upper one backward, the Montaneus sports a laid-back 66.4-degree head angle and long 43.9-inch wheelbase, ideal geometry for high-speed stability on rough descents. Reverse the eccentrics, and the resulting upright 71.6-degree head angle and tight 42.1-inch wheelbase are ideal for sensitive steering at slow speeds. A pair of allen bolts secures the eccentrics, once adjusted.

Even without the patented adjusters, the \$950 Montaneus is a superb ATB. The heattreated frame of oversized 6061 T6 aluminum keeps the bike's weight under 28 pounds, even with fat 26 x 2.125-inch Tri-Cross tires. SunTour XC derailleurs and a Sugino AT crank combine for a gear range of 23 to 96 inches. A SunTour roller cam brake, mounted under the chainstays, provides stopping power, with help from Shimano cantilevers up front.

The Montaneus, available in 17 1/2-, 19-, 21- and 23-inch sizes, comes in six colors, including a hard-anodized champagne. Framesets retail for \$547.

KICKER ROAD TEST GRAPHIC EVALUATION FORM HANDLING



The two bikes differ in their seat tube reinforcements. Instead of an attached sleeve like Fisher uses to beef up the seat binder area against constant adjustment, Chance uses a separate, slide-on BMX clamp. While cheap and easy to replace, the clamp tends to slip sideways when you operate the quick-release while riding. It also looks cheap and detracts from an otherwise immaculate bike with its TIG welding and fine paint job.

OVERALL MECHANICAL

OVERALL ROAD FEEL

Our test bike arrived with an optional red and yellow paint job and a Hite-Rite seat height spring. The standard Kicker, without the seat adjuster, is available in white, black, or orange powder epoxy.

Joannou Renegade II

Were it not for comfortable, affordable, easy-to-ride bikes like the Renegade II, there would be a much smaller market for the upscale Fishers, Chances, and Ibises of the world. That's because few off-road neophytes are likely to plop down \$700 or \$1,000 for a state-of-the-art ATB until they're sure the ballooner experience is for them. The G. Joannou Cycle Co.'s \$369 Renegade II offers the fun of doing it in the dirt at an affordable price, albeit with slightly less finesse and a little more weight than the

higher-priced models in this road test.

With its shallow 68-degree head angle and long 43 3/8-inch wheelbase, the Renegade is more stable and forgiving but less maneuverable than other bikes in this test. On or off dirt, the bike performs admirably in all but the most demanding conditions.

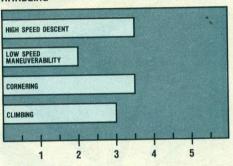
Shifting ease is right up there with the four-figure ATBs, thanks to the wise choice of Shimano Deore derailleurs. The Dia-Compe cantilever brakes also provided more than enough stopping power for even dangerous descending — I know. I used them often enough on The Big Skid, one aptlynamed trail down Mt. Tam. In fact, I think most of the component choices, save for the Cheng Shin combination tread tires, would prove adequate for competitive riding.

"The Renegade has really good componentry. I like the Deore XT derailleurs and thumb shifter setup, and I like the Shimano pedals, although they seem hard to put toe clips on. The Dia-Compe brakes are really good. If they're going to sell this bike for use in the dirt only, I think they should use different tires. They're good for city commuting, but not for much else."

It's the frame, not the fixtures, that limits the performance of the Renegade, but its shortcom-

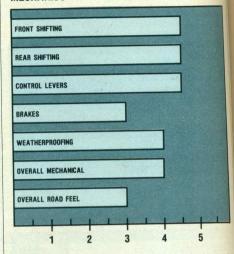
RENEGADE

ROAD TEST GRAPHIC EVALUATION FORM
HANDLING



ings become apparent only when trying to go wheel-to-wheel with a Gavin Chilcott or a John Loomis. On climbs, the long 18 1/2-inch wheel-base puts the rear wheel too far back, allowing it to slip and spin instead of digging for traction. Dodging obstructions is also more work than on a steeper-angled bike, although I liked the shallow head angle on descents. I'd also saw a couple of inches off each side of the 27-inch-wide handlebars. That's largely a personal preference, but I found the wider bars require more arm movement and exaggerate every steering correction. The bike's 31.8- pound weight gives up roughly

MECHANICS



5 pounds to the all-out competitive ATBs, which makes it all the tougher to climb with the pros. Conversely, it gives one an excellent excuse for falling behind. "It's not me, it's the bike..." Sure.

At least I wasn't the only one who felt slow on the Renegade.

"I didn't like the seat tube angle. It's way too shallow and made it a lot harder climbing hills. It puts the rear wheel too far behind you so you have to pull up on the handlebars to get traction on a steep hill. The bike sways a lot when you really step on it. I think it's because of the chainstay design, where it comes into the bottom bracket."

"It handled fairly well on descents. It has a nice shallow head tube angle, which is nice for high speed descents. But it's really hard to test it with those road tires — you slide all over . . . It shifted okay, though."

The Renegade is constructed of Ishiwata double-butted chrome-moly tubing, but the assembly leaves something to be desired.

"The welds ... undercut the tubing quite a bit. The weld should be on top, but it's too hot so it cuts into the tubing itself and the weld is set back a little bit. The frame's made in Taiwan, so that goes to show the Taiwanese still need some perfecting on their craftsmanship."

Are these criticisms by professional racers and frame builders valid when applied to an entry-level ATB like the Renegade? Yes, because an experienced rider would probably be unhappy with the bike's shortcomings.

For those of us who don't aspire to the death-defying riding style of this month's road test gang, the Renegade is an affordable, serviceable off-road bike that can provide much enjoyment for trail and dirt road riding. Most cyclists would never need anything better.

Montare

Imported by: Fisher MountainBikes 1421 E. Francisco Blvd. San Rafael, CA 94901

Suggested Retail Price: \$699

Sizes Available: 18, 19, 20.5 and 22 inches, center to center; size tested, 19-inch

Weight: 29.5 pounds (with optional Hite-Rite)

Frame: Tange Exp	edition double-butted chrome-moly,
TIG welded, Unicrov	vn chrome-moly fork
Wheelbase	42 5/8 inches
Seat tube	19 inches
Top tube	22 1/4 inches
Head angle	68 degrees
Seat angle	71.5 degrees
Chainstays	17 1/2 inches
Bottom bracket heigh	71.5 degrees — 71.5 degrees — 17 1/2 inches tht 11 5/8 inches with
2.125 tires	
Fork rake	2 inches
Whoole	
Hubs	Shimano Deore XT sealed bearing,
high-flange, (nutted	front and rear), 130 mm over locknut
Spokes	36. 4-cross front and rear
Rims	Araya RM 25 silver, 32 mm
Tires	_ Mitsuboshi Grippa 26 x 2.125-inch
Derailleurs	Shimano Deore XT
front and rear, Deor	
Crankset	DID Lannier, black Shimano 600 crankarms,
175 mm (size prope	ortional to frame), Shimano Biopace ings, Fisher sealed-bearing bottom
	Shimano 600 EX
Components	
Padale	CunTour VC II

Seatpost			Strong Mountain
Saddle	DO B	nima	Avocet Touring I
Bar/stem			Bullmoose TIG welded
chrome-moly, frame)	painted,	62 c	m (width proportional to
Brakes	A STATE	al me	_ front, Shimano Deore XT
cantilever: rea	r, under	chain	stay-mounted, SunTour XC

roller cam: Deore XT levers with oversized cables

Gearing in Gear Inches

Sues	8	38	48
13	56	76	96
15	49	66	83
18	40	- 55	69
21	35	47	59
25	29	40	50
30	24	33	42

Ibis

Built by: Ibis Cycles P.O. Box 275

Sebastopol, CA 95472

Suggested Retail Price: \$1,160 as tested; complete custom bicycles start at \$1,000; standard custom frameset,

Sizes available: 16, 18, 19, 20, 22, 23 and 25 inches, each with short or long top tube, plus custom sizes; size tested, 21.6-inch custom model

Weight: 27.8 lbs.

Frame: Straight gauge .9 mm chrome-moly main triangle, chrome-moly fork, both TIG welded; Tange .8 mm chrome-moly stays, brazed rear triangle; fillet brazing of

WheelbaseSeat tube	41 1/2 inches
Top tube	22 inches
Head angle	70 degrees
Seat angle	71 degrees
Chainstays	7 1/2 inches
Bottom bracket height	11 1/4 inches
with 1.75-inch tires	
Fork rake	2 inches
Wheels	
Wheels	Secretary distance and the

Hubs	Shimano Deore XT
nigh-flange, quick-re	lease front, nutted rear, 126 mm over
locknut	
Spokes	36, 3-cross front and rear,
alloy nipples	
Rims	Araya RM 20, 28 mm

IRC 26 x 1.75 inch Tires Drivetrain SunTour XC front and rear, Derailleurs

XC levers DID Lannier Chain Specialized 175 mm Crankset _ crankarms, Shimano Biopace 28/38/48 chainrings, Shimano 600 EX bottom bracket

Freewheel	SunTour New Winner
Components	
Pedals	SunTour XC II
Seatpost	SR Laprade 250 mm
Saddle	Specialized Bar/stem
SR MTB-200 flat alloy,	black handlebars, 23 1/2
inches wide: Ibis chrome-	

SunTour XC roller cams, Brakes rear brake mounted under chainstays

Gearing in Gear Inches

U	car mg m	ocal mich	CO
	28	38	48
13	56	76	96
17	43	58	73
20	36	49	62
24	30	41	52
28	26	35	45
32	23	31	- 39

Rockhopper

Imported by: Specialized Bicycle Components, Inc. 15130 Concord Circle Morgan Hill, CA 95037

Suggested Retail Price: \$399

Sizes Available: 17 1/2, 19 1/2 and 21 1/2 inches, center to center; size tested 21 1/2-inch

Weight: 29.0 pounds

welded, oversized chrome-moly	
Wheelbase	43 1/8 inche
Seat tube	21 1/2 inche
Top tube	22 1/2 inche
Head angle	70 degree
Seat angle	72 degree
Chainstays	18 inche
Bottom bracket height	11 5/8 inche
Fork rake	2 inche

Hubs Specialized sealed bearing, low-flange, nutted front and rear, 126 mm over locknut Spokes _ 36, 3-cross front and rear Saturae X-28, silver, 26 x 1.5 Rims inches, Schraeder valve hole

Tires Specialized 26 x

1.5-inch Crossroads

Drivetrain Derailleurs	SunTour: AG Tech front
MounTech rear, MounTech Chain	
Crankset	Specialized touring, 26/36/46
175 mm arms	
Freewheel	SunTour Perfec
Components	
Pedals	Shimano SX silver
Seatnost	SR Langade 250 mm

OR seat binder Saddle Avocet Touring I Bar/stem Triangulated chrome-moly TIG welded, 27-inch width (size proportional to frame) __ Shimano BR-AT 50 cantilevers, Brakes

BL-AT 50 levers

Gearing in Gear Inches

	26	36	46
14	48	67	85
18	38	52	66
22	31	43	54
26	26	36	46
30	23	31	40

Fat Chance Kicker

Built by: Fat City Cycles 331 Somerville Ave. Somerville, MA 02143

Suggested Retail Price: \$795

Sizes Available: 16 1/2, 18, 19 1/2, 21 and 23 inches; size tested, 19 1/2-inch

Weight: 30.2 pounds (with optional Hite-Rite)

Frame: Tange double-butted main triangle, straight-gauge chrome-moly stays and forks, all TIG welded

Wheelbase	42 inches
Seat tube	19 1/2 inches
Top tube	22 1/4 inches
Head angle	68 1/2 degrees
Seat angle	71 degrees
Chainstays	17 1/4 inches
Bottom bracket height	12 1/4 inches
Fork rake	2 1/4 inches

гогк таке	2 1/4 inches
Wheels	
Hubs	SunTour XC sealed bearing,
low-flange, nutted fro	nt and rear, 130 mm over locknut
Spokes	36, 4-cross front and rear
Rims *	Ukai, 26 x 1.5-inch, silver
Tires	26 x 2.125-inch Panaracer

Drivetrain Derailleurs Shimano Deore XT front. rear and thumb shifters Chain DID Lannier Crankset Sugino AT, 28/38/48, 175 mm

arms (size proportional to frame), Cook Bros. bottom bracket Freewheel Shimano black

Components Pedals Shimano SX black Seatpost. SR Laprade, 250 mm Saddle _ Avocet Touring I Bar/stem steel Bullmoose type, lugged assembly, 25-inch

Brakes _ Shimano Deore cantilevers, Nagura brake levers with oversized cables

Gearing in Gear Inches

	28	38	48
13	56	76	96
15	49	66	83
17	43	58	73
20	36	49	62
24	30	41	52
28	30 26	35	45

Renegade II

Imported by: G. Joannou Cycle Co. 151 Ludlow Ave. Northvale, NJ 07647

Suggested Retail Price: \$369

Sizes Available: 19 1/2, 21 and 23 inches, center to center; size tested, 19 1/2-inch

Weight: 31.8 pounds

Frame: Ishiwata double-butted chrome-moly tubing, TIG welded, chrome-moly fork with forged crown

Wheelbase _ 43 3/8 inches Seat tube . 19 1/2 inches Top tube 23 1/4 inches Head angle 68 degrees Seat angle. 70 degrees Chainstays 18 1/2 inches Bottom bracket height. 12 inches with 1.75-inch tires

2 1/4 inches Fork rake Wheels Suzue sealed bearing,

low-flange, nutted front and rear, 130 mm over locknut Spokes _ 36, 3-cross front and rear Sumo, 26 by 1.75 inches Rims Tires Cheng Shin dual-pressure,

40/65 psi Drivetrain

Derailleurs Shimano Deore M-700 series, Deore thumb shifters

Chain Izumi chrome Crankset . Sugino GT 26/36/46, 175 mm arms

Freewheel Components

Shimano twist-tooth Pedals SunTour XC II Seatpost _ Kalloy 220 mm Saddle . Viscount anatomic Bar/stem _ Bullmoose type steel, 27-inch width Brakes . Dia-Compe 980 cantilevers with forged MTB levers

Gearing in Gear Inches

	26	36	46
13	52	72	92
16	42	59	75
19	36	49	63
22	31	43	54
26	26	36	46
32	21	29	37