

MANITOU MANITOU PRODUCTION RACER PRODUCTION RACER

Workmanship to last a century



There are frame builders who are famous for their fillet brazing. Designers who have built their reputation with innovation. Craftsmen who produce marvelous off-road works of art. Legends who charge three times the going rate for their bikes. Then there is Doug Bradbury's Manitou! The Manitou is the most carefully constructed, painstakingly built and artfully crafted mountain bike made. This isn't the kind of bike you glance at to see what's sano on it . . . you spend hours ogling a Manitou to see if anything on it *isn't* exceptional.

Clean machine: From its gleaming tubes to its asymmetrical rear triangle, the Manitou asks to be ridden hard. At \$2500 the Manitou is expensive, but it's built to last a lifetime.

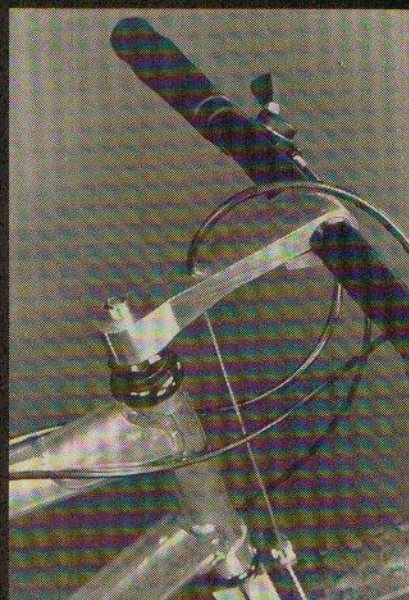
HOW TRICK IS THE MANITOU?

From a construction point of view the Manitou is a high-tech, oversize-tubed, Helix-welded aluminum mountain bike that is polished to a gleaming sheen. Its comparison with other oversize aluminum bikes ends right there, because Doug Bradbury doesn't build his bikes the easy way. He doesn't copy anyone. No other frame comes close to the

care and concern that a Manitou frame shows. This bike is to other bikes what the Sistine Chapel ceiling is to a velvet painting of Elvis. Let's take a guided tour from stem to stern and see the Manitou touches.

FORKS: WIDE & STRONG

The forks are built by Manitou using the triple clamp design popularized by motorcycles and Keith Bontrager. By using a machined triple crown that houses thin-walled 1.125-inch tubes that have been swedged down to accept the dropouts, the Manitou has achieved strength, replaceability and re-



Solid billet: A block of aluminum billet is machined to build a finely crafted solid stem. The complete system is very similar to the successful designs used in BMX racing for the last ten years. Excellent workmanship and lots of extra work for Manitou.

silience. Unique features on the forks are the extra-wide stance (a Manitou hub is 15mm wider than a standard-issue front hub) and inboard cantilever bosses that place the brakes in the perfect position for maximum pucker power and rake that is determined by the angle in which the triple clamps are bored.

HEAD TUBE: EXTRA EFFORT

Rarely does the *MBA* test crew spend a lot of time looking at a head tube, but the Manitou span attracted our attention. The tall head tube, which is extended to provide structure for the sloping top tube, is made

SPECIFICATIONS

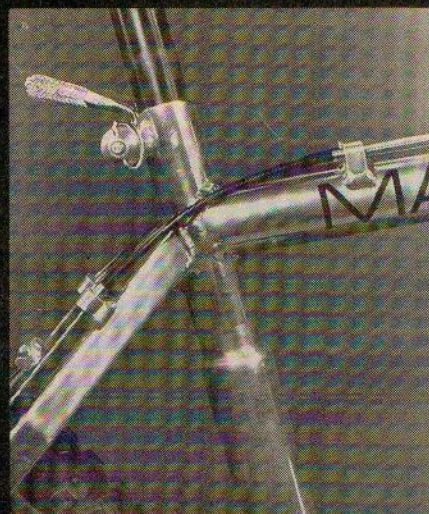
Model: Manitou Mountain Bike.
Manufacturer: Manitou Mountain Bikes, 4560 Canon Rd., Colorado Springs, CO 80906.
Sizes available: 18", 19", 20.5"; special sizes on request.
Finishes available: Polished, painting on request.
Suggested retail price: \$2450.
COMPONENTS
Front derailleur: Shimano Deore XT II.
Rear derailleur: Shimano Deore XT II.
Front brake: Shimano Deore XT II.
Rear brake: Shimano Deore XT II.
Cranks: Cook Brothers.
Freewheel: Shimano Deore XT II.
Frame: 6061 T-6.
Tubing: Alcoa, TIG-welded.
Head angle: 70.5°.
Seat angle: 73°.
Top tube O.D./W.T.: 1-1/2"/.058".
Seat tube O.D./W.T.: 1-1/4", 1-1/2"/.049", .065".
Down tube O.D./W.T.: 1.37"/.058".
Braze-ons: 2 water, other braze-ons on request.



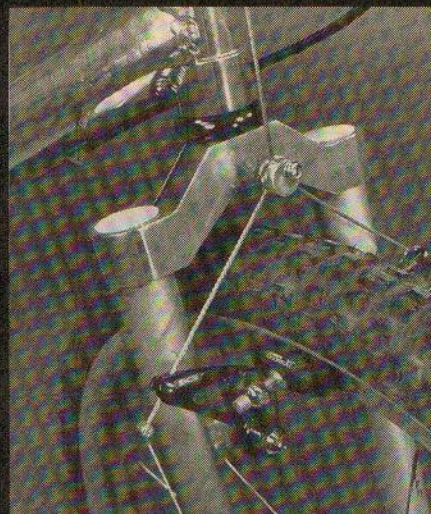
NOTE: The MOUNTAIN BIKE ACTION test crew rides its test bikes under controlled circumstances, on private property and with respect for the environment. No wilderness or environmentally sensitive areas are used.



Midas touch: There are no shortcuts on a Manitou. The bottom bracket is 90mm wide with cartridge bearings. An overlapping aluminum tube reinforces the down tube and the square chainstays have been cut and re-welded to clear the rear wheel.



Doppelganger: Manitou has a seat tube that uses two different-diameter aluminum tubes. From the bottom bracket up, a 1.50" tube is welded to a 1.25" tube. The advantages are tight clearances for the seatpost and extra beef for the bottom bracket.



Wide footprint: Machined aluminum triple clamps embrace the Manitou's 1.125" fork blades. The aluminum triple clamp gives tremendous tire clearance, phenomenal strength and cost-effective interchangeability.

out of thick-walled aluminum tubing that is milled down in the center to provide light weight in the middle and one-inch reinforcing rings top and bottom. Bradbury, however, doesn't stop with just beefing up the head tube. The head tube has formed gussets at the stress points. The extra work around the head tube produces strength beyond normal aluminum limits.

SEAT TUBE: EXTERNAL BUTTING THE HARD WAY

A standard 26.8mm IRD seatpost slips down into the Manitou's seat tube, but five inches down the 1.25-inch tube flares out to

1.50 inches in diameter. Doug Bradbury's concern for strength had him weld two tubes together and turn them down on the mill into one flared tube. The advantage is that the larger-diameter (thin-walled) tube provides meat to weld to the bottom bracket, while the thick-walled top of the seat tube accepts a normal-sized seatpost. Awesome engineering!

CHAINSTAYS:

SQUARE & ASYMMETRICAL

Manitou offsets the rear triangle 15mm to the right side. The asymmetrical rear end allows Manitou to have a perfectly straight chain line and dishless rear wheel. This is

the way the rear subsection of bicycles should be built, but only Manitou does it. Moving the right chainstay farther away from the centerline of the bike is simple in theory, but hard to put into practice. Bravo, Manitou! This is award-winning thinking!

The Manitou has a very wide bottom bracket which aids in offsetting the rear triangle, adds some strength and provides additional welding area for the aluminum chainstays. The one-inch square tubing chainstays are only 16.3 inches long. That's short for aluminum because of the extra-large tubing sizes. There are trade-offs in every design

MANITOU

FINE, HANDCRAFTED,
CUSTOM, ALUMINUM
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and while the Manitou has a strong rear triangle, good chainring clearance and short chainstays, tire clearance really suffers. This is a Catch-22 on all aluminum frames. Short chainstays will kill tire clearance every time!

BOTTOM BRACKET: WHAT'S GOING ON DOWN THERE?

First off, the Manitou's bottom bracket is 90mm wide. That is approximately 20mm wider than a typical mountain bike lower tube. The extra width gives Doug Bradbury more room to weld and better spacing for his chainstays. Additionally, the bottom bracket has been machined down in the middle of its span to lessen weight and to provide reinforcing collars on the outer edges to insert the cartridge bearings into. The spindle is a Phil Wood unit and the bearings are equipped with WTB Grease Guards fittings. Very clean thinking.

A close look under the down tube (where it attaches to the bottom bracket) will reveal an overlapping gusset that runs up the tube. This is overkill gusseting because we have rarely seen an aluminum bike break at this spot.

SPACINGS: GOING FOR JUMBO SIZE

A Manitou buyer is tied by the umbilical cord to Doug Bradbury because of the

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uniqueness of the design. The hubs are wider than normal bikes (115mm front and 145mm rear). The front derailleur has a special band to make it fit around the 1.50-inch seat tube. The bottom bracket spindle is over 145mm long. The forks and blades are handmade Manitou items. The net result is an innovative set of specs and parts to provide strength, stability and durability, but not replaceable down at the local Schwinn shop.

GEOMETRY: THE MANITOU TOUCH

Right off the bat we want to confess that we believe if you are a tall rider you should be on a Manitou. Doug Bradbury is a gentle giant and has this knack for building bikes to suit big people. Manitou's 24-inch top tube length is among the longest top tubes on the market today. Our test frame had a radically sloping top tube that measured 17.5 inches (center of cranks to top of top tube) on what was effectively a 20-inch frame. But ignore those numbers! Our Manitou had the length and size to fit a rider who would normally ride a 21- or 22-inch frame.

The head tube is 71 degrees and the seat is 73 degrees. The only number to change over the past two years on the Manitou frame is the slightly shorter wheelbase and taller (11.9-inch) ground clearance.

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HANDLING: THRILLS & CHILLS

Forget all about the beefy look of the over-size tubing! This is a light bike. It's agile, quick and aggressive. The rather tall-feeling head tube is the only disconcerting thing, but the front end tallness is metered out by the long top tube. Descending is a joy on the Manitou because the rider can hang off the back and work the short, stiff rear end with weight shifts. There is a little push to the front end, but cornering is excellent in berms and single track.

Climbing is what the Manitou does best. The short chainstays, controllable steep front end and tall front end place the rider perfectly over the bike. No wag, no wheelie and no stopping the Manitou.

What Doug Bradbury has wrought no rider can wreck asunder. This is a strong, durable and long-lasting aluminum bicycle. It's overbuilt! So overbuilt that there is no way that Manitou can be making any money handcrafting every piece of the bike (hubs, cable guides, tubing, gussets, dropouts, forks, stem, derailleur band and swedging). Forget about those builders who sell their bikes for \$4000—buy a Manitou! It's got twice the thought and workmanship of a \$4000 bike for only \$2450. It's that good! □