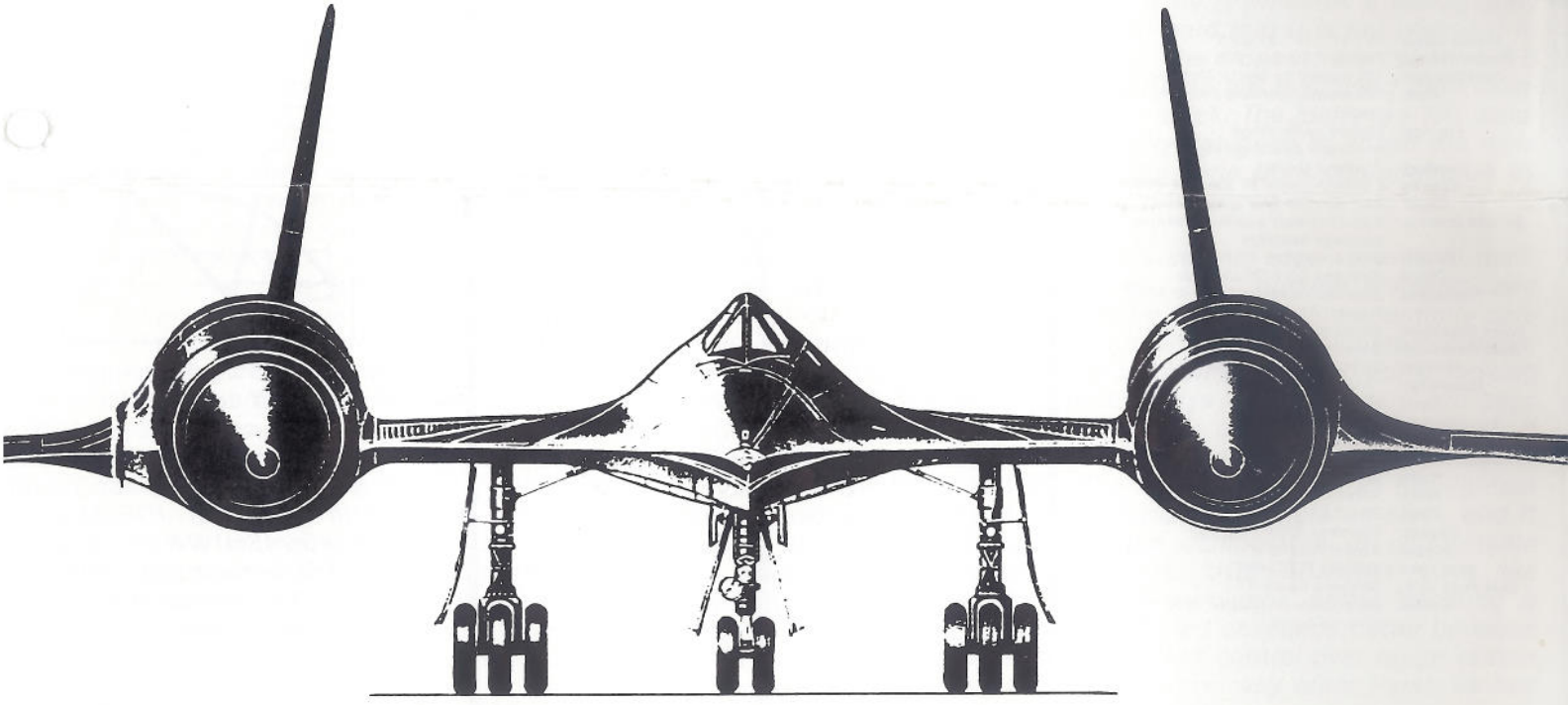
STRATEGIC METAL

The Bicycle group

MERLIN
TITANIUM



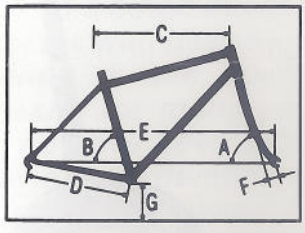
MOUNTAIN BIKES

TITANIUM

Frame Sizes:	15", 17", 19", 21, 22.5"
Frame Tubing:	Titanium Alloy 3 · 2½
Construction:	TIG welded by Merlin Metalworks
Fork:	TIG welded Ishiwata Cromoly oversize blade
Fittings:	Slotted cable stops, two water bottle bosses
Headset:	Shimano Deore
Cranks:	Shimano Deore XT Biopace 46/36/26
Chain:	Shimano CN 6120 Uniglide
lottom Bracket:	Kajita cromoly axle/Koyo sealed cartridge bearings
Pedals:	Shimano Deore XT Racing
Chain:	Shimano CN 6120 Uniglide
Freewheel:	Shimano Cassette CS 1000 12-28 6 spd.
:ront Derailleur:	Shimano Deore XT
Rear Derailleur:	Shimano Deore XT SIS
Shifters:	Shimano Deore XT SIS
Handlebar:	Tange Prestige
Stem:	Brodie ICR by Nitto
Brakes:	Shimano Deore XT
Grips:	Grab-on MTN-1
Brake Levers:	Shimano Deore XT
Hubs:	Shimano Deore XT QR Cassette
Rims:	Araya RM 20 Hard Anodized
Tires:	26 x 2.0
Spokes:	Stainless Steel 14 guage
Saddle:	Avocet Racing II
Seat Post:	Suntour XC Comp
Seat Post Q.R.:	Shimano Deore XT
Colors:	Bare Titanium, Matte Finish Frame, Chrome Forks

This is the bike that has brought excitement back to the vanguard of mountain bike design and construction. It has been acclaimed as the most innovative mountain bike made today. Mountain Bike Action called it "The Best Racing Mountain Bike". Bicycle Guide called it "A Metallurigical Masterpiece". It is a machine that truly transcends the state of the art, creating a challenge to the most skilled riders to find any limitations in it's creation. Carefully crafted by MERLIN METALWORKS of Somerville, Massachusetts, the acknowledged specialist in the field of titanium bicycle frame construction, it uses the most suitable material known to man for the use of off-road racing. The titanium alloy used by MERLIN is extremely light, completely corrosion resistant, of exceptional tensile strength, yet offers the most comfortable and efficient ride for the most extreme conditons. Most important, it has been race proven by JOE MURRAY and DAVID TURNER during two seasons of NORBA competition, with great success, and without any failures. Combined with a special JOE MURRAY designed ISHIWATA oversize blade, TIG welded fork, SHIMANO DEORE XT component group, ARAYA hard anodized rims, and TANGE PRESTIGE handlebars (with an option of titanium), it is truly the ultimate off-road machine of today and tomorrow.

Frame Size (Nominal)	A	B	C	D	E	F	G
(15) 13	70°	75°	20	16.7	40.7	1.7	11.4
(17) 15	70.5°	74°	21.5	16.7	41.2	1.7	11.5
(19) 17	71°	73°	22.5	16.7	42.2	1.7	11.9
(21) 19	71.5°	72°	23.2	16.7	42.5	1.7	11.9
(22.5) 21	72°	71°	24	16.7	43.3	1.7	11.9



TITANIUM

Our alloy is: 43% lighter than steel. 38% stronger than steel in a common chromoly used for high quality bicycles. 300% stronger than aluminum in a common weldable alloy used for bicycles. Which is why we say "use titanium when you want the best".

Of all the new material appearing in bicycles, MERLIN METALWORKS has made a committment to one of the most expensive, difficult to obtain, and difficult to work. Why choose titanium?

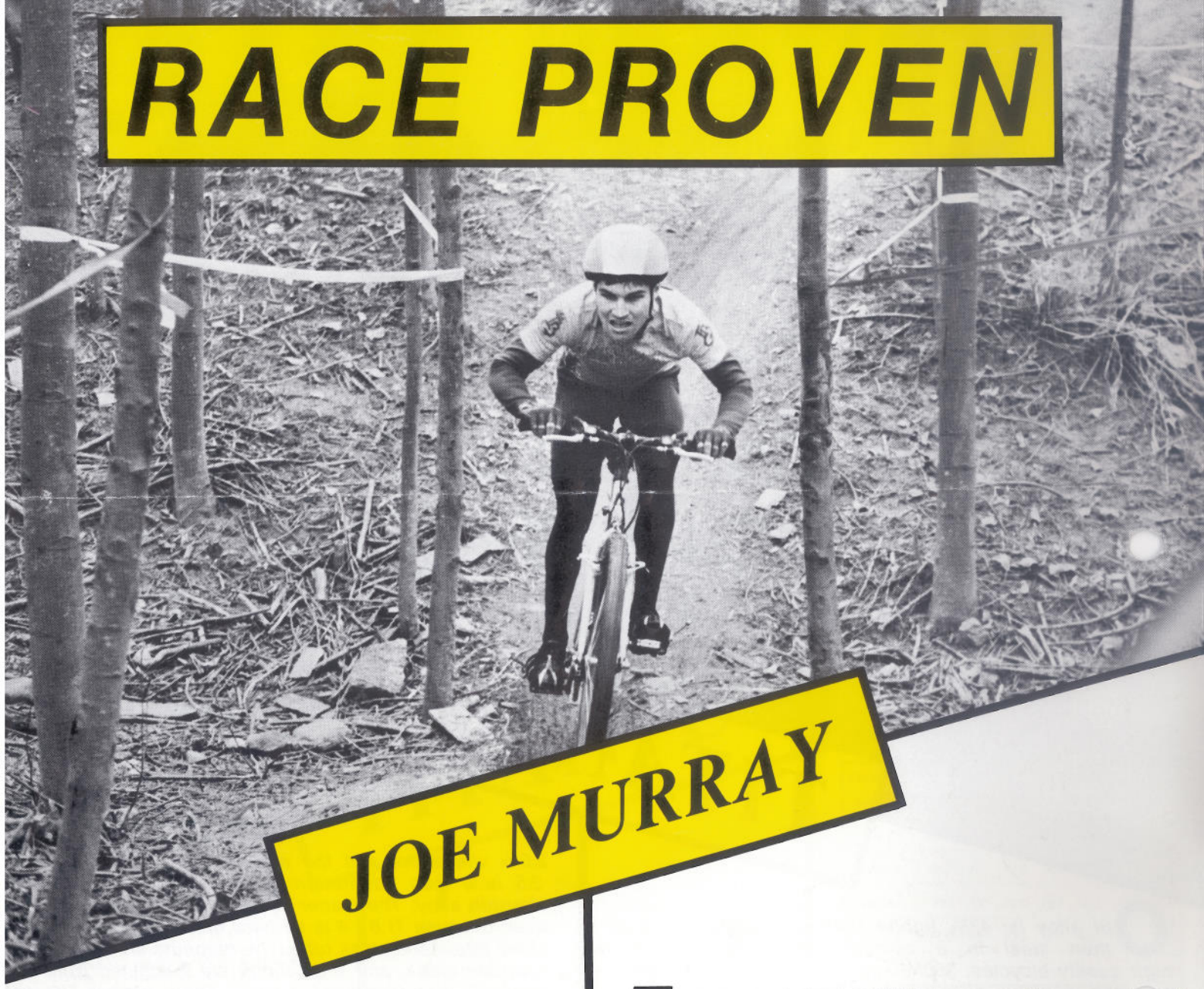
The short answer is performance. Among metals, titanium offers a unique strength to weight ratio. Although strength is a complex set of characteristics which cannot be directly compared between dissimilar materials, a rough analogy can be drawn to the effect that in the alloys and tempers used in bike frames, a piece of titanium of a given dimension is as strong as the same dimension in steel and as lighter as the same dimension as aluminum.

The seamless tubing currently used in the MERLIN TITANIUM mountain bike is made for aircraft hydraulic lines and nuclear plant heat exchangers. Although there are, and have been other titanium bike frames, this is the only production frame made from aircraft certified high strength alloys.

The alloy used is called Ti 3 - 2.5 and is 3% aluminum, 2.5% vanadium, and the rest titanium. Historically Ti 3 -2.5 is a lean adaptation of Ti 6 - 4, a common high strength alloy. The leaner alloy is primarily a tubing alloy used because Ti 6 - 4 is so hard that it is not practical to make into a seamless tube. The dropouts are cut from Ti 6 - 4 plate stock, and the fittings are machined from commercially pure titanium bar stock. The joints are TIG welded using fixtures specifically designed to shield the weld itself and the heat effective zone from contaminaton by air. This involves purging the air out of the inside of the tubes with an inert gas.

Since titanium is not as stiff as steel, oversized main tubes have been selected - 1.25" outside diameter, and .75" untapered stays. Merlin feels that this is entirely consistent with the performance based development criteria, although it results in a somewhat non-traditional looking frame. Straight diameter stays help maintain stiffness and eliminate an unnecessary and costly step which if anything degrades performance. The result is revolutionary performance. The frame is as light as the lightest frames made of any material, as reliable as steel, and it provides an unprecedented combinaton of comfortable ride and tortional stiffness. JOE MURRAY says his MERLIN titanium frame bike climbs better because it weighs several pounds less and descends better because it absorbs shock and promotes control over rough terrain - a true leap in performance over any other frame he has ridden.

RACE PROVEN



JOE MURRAY

Since his first race at the 1983 Rockhopper Classic, JOE MURRAY has been a dominant force in mountain bike racing. He has won over 60 races during his 5 year career, more than any other competitor in the history of the sport. He has won the ROCKHOPPER CLASSIC three times, the WHISKEYTOWN DOWNHILL two times, and the NORBA NATIONAL CHAMPIONSHIPS twice, in 1984 and 1985. In 1984 he won 19 races, 8 of them consecutively, a feat which is yet to be duplicated. Joe is also recognized for his talents as a bicycle and tire designer. He heads up the design team for THE BICYCLE GROUP, working closely with MERLIN METALWORKS, PAUL BRODIE, and overseas manufacturers of bicycles, tires, tubing, and other components. His main concentration for 1988 is racing, with the goal of retaining the NORBA National Championships, and winning the NORBA World Championships.

THE BICYCLE GROUP is a small company of partners and associates who have an extensive range of experience in the sport and business of cycling. Based for many years in the Pacific Northwest, we have been serving a demanding clientele who has demanded the right cycling products for extreme weather conditions. As specialists in mountain bikes, we have a working understanding of the development of fat-tire bikes at all levels. THE BICYCLE GROUP was formed to offer our skills as reliable and intelligent suppliers of the finest in quality mountain bikes at a national level. In addition to MERLIN MOUNTAIN BIKES, we are also distributors of the BRODIE MOUNTAIN BIKE, and CASCADE MOUNTAIN BIKES designed by JOE MURRAY.

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