THE STEVE POTTS BIKE,, 1987

This year I am making a limited number of hand made bicycles. There will only be about one hundred bicycles made by Steve Potts this year. There will be four frame sizes.

The frame geometry is a very delicate part of the design. Any one change in geometry can drastically change the ;handling characteristics of a bike. TKhe bikes design has to have a balance in every aspect of the geometry to have precise handling in all situations. My geometry has proven to be precise and reliable in all situations.

The rear dropout spacing is 136 mm. I am able to have a better chain line and am also able to build a dishless rear wheel. Since all spokes are tensioned the same on both sides you will have a stronger and longer lived rear wheel.

FRAME SIZE *	16"	19"	20.5"	22.5"
wheel base	41 5/8	41 5/8	42	42
chain stays	17 3/8	17 3/8	17 1/2	17 1/2
B.B. height	11 1/2	11 1/2	11 3/4	11 3/4
seat tube angle	71	71	72	72
head tube angle	69.5	69.5	70	70
top tube height +	28 5/8	30	31 3/4	33 3/4
slope of top tube	8	0	0	0
fork offset	2	2	2	2

* Center of bottom bracket to center of top tube at the center of the seat tube

\+ Top tube clearance from the ground with 1.95 tires

The critical measurements for measuring your body size are :

(1) Overalll height

(2) Inseam to ground, with feet at about 12" stance in the shoes you intend to ride in.

(3) Length of arms, measured from center of back to center of palm, with arms straight out from side and parallel to the ground.

With these measurments we can determine the proper frame and stem sizes to recomend.

Frame materials are Tange Mountain Bike Tubing sets. The top tube is double butted. The seat tube is a single butted tube with special seat tube reinforcing lug made out of American made 4130 chrome moly tubing. The reinforcing is French Cut to reduce any straight line stress on the seat tube and seat post. It also reinforces the seat tube pinch area where the quick release is used for saddle adjustment. This is important when using a Hite-Rite. Seat stays and chain stays are round, tapered stays made by Tange.

The headtube is made of 1 3/8" 4130 cromemoly, an 1/8" of an inche larger diameter than the standard. I then silver solder a small tapered sleave on each end where the bearing race is going to be pressed in. I make the headtube this way to eliminate any fracture of the headtube itself when reaming for the bearing races.

The bottom bracket shell is made out of 4130 chrome moly so I can use large sealed cassette bearings with the WTB Grease Guard tm System. The larger bearings have a load capacity about 5 times higher than a standard type bottom bracket assembly. The WTB Grease Guard tm System allows one to selectivly purge water and dirt out of the bearing and replace the old grease with new grease, all in one easy step with the WTB Grease Gun. All of the grease entering the bottom bracket bearings is contained in the bearings only, there is absolutly no extra grease anywhere else in the bottom bracket shell.

I use Shimano forged verticle drop outs. Shimano drop outs are one of the finest drop outs made, their design is perfect for use in mountain bike construction. All the material is in the right place to make a strong dropout. The finish is superb on these drop outs. I like verticle drop outs because of the higher torque loading encountered on Mountain Bikes. Verticle drop outs do not allow any forward movement in the drop out due to high torque peddling loads.

On occasion when I have EXTREMELY heavy or hard riders, I have an internal tapered pressed in lug for the down tube and top tube at the head tube joint. These lugs help reinforce a highly stressed area on the bike. An in depth study and testing was done on my internal lugs and was published in Bike Tech in the August, 1983 issue.

All of my assembly is done with low fuming bronze, and easy flow 45% silver solder. The advantages of low temperatue brass and silver work is that the heat treated tubing remains stronger when the minimal amount of heat is used to assemble the tube members of the frame set. To give an idea of temperatures used with different welding techniques:

Silver Soldering,	1000 'F
Brazing with Low Temp. Bronze,	1650 'F
TIG (tungsten inert gas)	2650 'F

I prefer the low temperature brazing and silver solder methods as compared to TIG welding because of the higher temperatures (1000 'F higher) involved with TIG.

All of the finish work is done with perfect radiused fillets without undercutting the actual chrome moly tube material. The finish work takes alot of extra time to do the perfect job.

The Type II fork I make is the finest fork available. The crown is painstakingly made out of 4130 cromemoly tubing that is annealed, then bent to a 2 3/8" radius with an inside and outside mandrel tube bender and then re-heatreated. The annealing process softens the metal to insure a distortion-free bend and we heat treat it after to insure the strength of the metal again. The fork blade is a large diameter, 1" tube that is internally tapered to insure an even flow of stress throughout the fork. The blades are a precise fit into the crown for a silver solder joint, it is the strongest and most reliable way to assemble these parts. The inside, outside bending mandrel insures a consistant wall thickness and uniformity of the tube throughout the entrire bend.

The frame, fork, stem, and all of the WTB components are designed to be balanced as a whole, in strength and function. It is my goal to build a COMPLETE BICYLE SYSTEM that is STRONG, FUNCTIONAL, LIGHT, VERSATILE, INOVATIVE, AND BEAUTIFUL. I consider my bicycle one of my best friends !! (Sort of like Frankenstein's Bride)

The crown is brazed on to the steerer tube, and nicely finished. After the brazing is completely done on the fork, a tapered reinforcing sleave is pressed into the bottom of the steerer tube to strengthen the bearing seat area. This is done after the brazing so the reinforcing sleave is unaffected by heat and it retains all of its orinional strength. The fork has great lateral and torsional strength, and great dampening quality because of the large diameter blades.

The Type II fork has a very solid feel, there is very little reasonance from braking loads or highspeed bumps. This gives the rider a real feel of the terrain they are on. You would call this a precise feel of bike handling !

All of the Steve Potts bicycles are painted with an epoxy base primer and the final color coats are Imron polyurethane enamel, and the last clear coat is Imron polyurethane enamel. All of the Steve Potts Bicycles are built and painted by Steve Potts. All designs and manufacturing of WTB components are done by Steve Potts, Mark Slate, and Charlie Cunningham.

Steve Potts Products Price List

FRAME	734.00
TYPE II FORK	320.00
STEM AND STEM HARDWARE	148.00
DROP BARS	45.00
FLAT BARS chromo	27.00
CABLE HANGER	10.50
WTB SPEEDMASTER BRAKES (front&rear)	285.00
WTB GREASE GUARD HUBS (W/GUN)	185.00
WTB GREASE GUARD BOTTOM BRACKET	75.00
WTB TOE FLIPS	9.95
WTB TOE FLIP SPACERS	1.50
WTB SEAT POST PUMP	15.75

STEVE POTTS STANDARD COMPONENTS

Component	Type	Custom	Price	Price
Bottom Bracket	WTB grease guard w/gun		75.00	
Headset	Chris King			67.50
Wheels				
Hubs	WTB grease guard		185.00	
Rims	Specialized X-26			59.90
Spokes	D.T. 15ga.frnt 14/15ga.			25.00
Labor	wheel building labor			50.00
Tires	Ground Control			35.90
Tubes	Reg. weight			7.90
Rim tape	Reg. weight			1.50
Crankset	Specialized			70.00
Chainrings	26-36-46			
Pedals	Suntour X-C Comp			45.00
Freewheel	Shimano 600ex SIS			26.00
Chain	Shimano Uniglide			7.95
Front derailleur	Shimano New Deore XT			19.95
Rear derailleur	Shimano New Deore XT			36.95
Shifters	Shimano New Deore XT			39.95
Front brake	WTB roller cam			
Rear brake	WTB roller cam		285.00	
Brake levers	Magura			27.95
Brake cables	#1 Double Braided			9.95
Handlebars	WTB flat-bars (cromo)		27.00	
Shims	WTB		10.50	
Stem	WTB (with taper hardware)		148.00	
Grips	Magura Ergo			7.95
Saddle	Specialized Lambda S			28.95
Seatpost	WTB fixed angle		112.50	
Seatpost binder				
HiteRite	not standard			
Bottle cage(s)	Specialized 6.2 ga.			15.90
Toe clips&hardw.	Cateye nylon,spacers		6.00	5.95
Toe straps	Specialized double lam.			14.95
Pedle Flips	WTB toe-flips			9.95
C/stay protector	yes			1.95
Pump	WTB seat-post pump		15.75	
Frame	Steve Potts			734.00
Fork	Steve Potts Type II			320.00