

The Man Behind The Torch

A Portrait of the Artist

By Jacquie Phelan



Custom bicycle frame builders often enjoy the same fierce loyalty that hairdressers, heart surgeons and regional hot dogs have long known. If you've ever heard a heated argument over the merits of the Chicago-style frankfurter as opposed to Nathan's Coney Island hot dog, you'll know what I'm talking about.

But who of us, after riding around on an off-the-shelf machine for a certain length of time, doesn't begin to wonder how much better he could do if only he were on a bike created "just for me"? Aren't we all convinced of our own uniqueness to the degree that our budget can prove it? The ever-increasing inter-

est in custom bikes is reflected in the shift in emphasis from "bike as toy" to "bike as status symbol." A couple of grand to spend on a toy is a bit much, but it's downright cheap for a possession that, depending on the taste of the buyer, whispers "prestige" or shouts "beaucoup de bucks."

We at CYCLIST know that the savvy reader wants to understand just what goes into and comes out of buying a hand-built machine before plunking down a month's salary to obtain one. What kind of people build bikes? And for that matter, who buys them, and why?

Before we barge into garage workshops ankle-deep in metal



The frame builder's life may sound glamorous, but they say it is also dirty, exhausting and sometimes dangerous.

would be doing something different, but I guess there's some satisfaction to the whole mess. Often it's hard, physical work, and you're never in a clean environment. I mean, you've got the fumes, the filings and the abrasives that you're breathing, and naturally you're indoors."

When asked about the trends in custom bikes these days, he pointed to a brilliantly-painted frame and remarked that tastes are "running toward what's flashy. Years ago, 'subtle' was what people wanted; now, people are making statements about themselves through their bikes. Used to be, I mostly saw people with special sizing problems—short men and women, people with long torsos and so on. They're still coming, but now there are those who, regardless of their size, just want something special, something to distinguish themselves in a unique way."

What about his previous job as an aircraft technician? Does he ever regret switching from the high pay of his former job to the freedom and creativity of his present one?

"Not really. Being my own boss means too much to me. And there's the fact that I'm doing something I believe in: contributing to the evolution of the racing bicycle."

Ross Schafer, builder of Salsa bicycles, cultivates the saucy, irreverent image projected by his "corporate logo," a chili pepper riding a clunker, bearing the message, "If it ain't moto, it's worthless!" This is a Santa Cruz regional dialect meaning: "If you're not riding a fat-tire bike, move to the back of the bus." His round, pink eye-glasses betray the pres-

turnings to pester the builders into getting a complete tour of "the plant," before we accidentally bump a fork off the workbench and irrevocably mar the paint, and before we black-list ourselves forever with these victims of our worship by rupturing their concentration with our perceptive, relevant questions, let's listen to *them* for a minute.

(By the way, the following interviews express only the beliefs of these particular craftsmen, and only in a general way exemplify the plight of the custom builder. In no way is this small sampling of craftsmen intended to be a complete rundown of this country's finest builders. If symptoms of outrage persist, call your doctor. Enough said?)

Santa Barbara's Mike Celmins, a former National Champion, came into bike building as a natural offshoot of his familiarity with metal technology and math as an aeronautical technician. His road and track frames have helped riders like Rory O'Reilly win medals in the Pan Am

Games, and he regularly builds frames for top teams and individual riders.

It was this soft-spoken, suntanned man once known for his lethal road sprints who first alerted me to the bummers that go along with the high points of being a builder of custom frames.

"The end results are what's most obvious to anyone walking into the shop: finished frames. People want to know what all the fixtures are for. They think to themselves, 'Gee, this looks like fun, making frames!' But that's just the final product. I think if you gave 'em a file for a few hours, they'd probably get disgusted with the whole thing and hang it up right there.

"I'd say that many more people take up building for the mystique of it than for financial gain. Of them, only a few survive, and if they can remain in business for four years, I'd say they've been through the worst part. Just making a living at this is considered a success. Obviously, if I were into making money, I

ence of a perennial trickster, and the tag on his jacket announces his rank: "Casual Labor."

Together with builders Jeff Lindsay and Steve Potts, and component whiz-kid Mark Slate, Schafer recounted his initiation to the torch-and-rod set, all the while negotiating an overloaded, droopy slice of pizza.

"I got started building bikes because I couldn't afford a Wizard frameset. So I bought my little Proteus Kit, complete with brass rod, tubing, lugs and a great little cartooned 'Idiot's Guide' to frame building. Then I went up to see Jeff (Lindsay) and asked if I could 'just watch him in his shop.' Of course he said, 'Get outta here!' and now I can really understand why, since it's happened a number of times to me since then."

At this point Jeff Lindsay cut in to remind us that the number-one cause of accidents and screw-ups in the shop is distraction from the task at hand. He had been building frames for four years when that kid knocked on his shop door, and like most builders then and now, he was too busy eking out a living to take on an apprentice, let alone an untrained spectator.

Lindsay's silver-gray hair belies his youth. At 33 years, he, like 29-year-old Tom Ritchey, is one of the "old men" of the building trade. This simply means that he has been building for more than the four-year cutoff mentioned by Celmins as "the point at which you start to make a living at this." His bike, the Mountain Goat, was one of the first of its kind, a custom-built mountain machine with an option that would soon make him famous, the camouflage paint job. Originally he was an intermediate racer, but Lindsay's passion for bikes evolved into a fascination with metals and design. He was self-taught in this as well as in blacksmithing and glass-blowing. "Bikes are neat, beautiful machines, but by no stretch of the imagination do I live, eat, and sleep for them. If I were independently wealthy, I'd probably be into much faster things: cars, planes and stuff."

At this point a peeve of his rears its head. "Do you realize that for the work we do, we're vastly underpaid?" Whereupon he began to describe, word for word, the same situation that Celmins recalled.

Both are familiar with the fact that, because aircraft play such a big role in trans-

A Buyer's Guide:

• Shopping for a custom frame? We asked a number of frame builders what you should know first, what you can expect of them. Their answers:

On selecting a builder: Some are artists, some are plumbers, and both can look and talk the same. Ask yours how many frames he's built; many have built hundreds and a few have built thousands, but your builder should have made 20 or so frames before he builds one for you. Ask him for references; if he has satisfied customers he shouldn't mind you talking to them. But don't ask for degrees, certificates or licenses; in frame building, there aren't any.

On telling him what you want: Most frame builders think that, instead of specifying angles and dimensions and so on, you will be better off if you tell the builder what kind of riding you will do with the bike, or what general type of bike you want—say, road racing or fully loaded touring—and then let him design the bike. Odds are, they say, you don't know as much about frame design as you think you do. You are paying for their knowledge and experience as well as for their skill with a torch, so get your money's worth.

However, you should specify long-reach or short-reach brakes; what braze-ons you want and, if possible, what drive train you will use. Some, like the Shimano Dynadrive crankset, require a change in frame dimensions. And, of course, color. It's best to specify color by the serial number of a chip on a color chart; what's dark blue to one person may be purple to another.

Get it in writing: Look for a written order form that lists the specifications you've agreed on, the price and at least a ball-park delivery date. Expect to be asked to sign the order and to pay a deposit of something like one-third in advance. Expect to be given a copy of the order.

If you are dissatisfied: The most common complaint is late delivery, so if you are counting on the bike by a specific date (like for a once-in-a-lifetime tour) say so clearly to your builder in advance, put it in writing, underline it, maybe tattoo it on his forehead. Whatever the problem, most frame builders will try to make you happy, since they depend on "word of mouth" advertising. But try to be flexible and remember you are dealing with a struggling entrepreneur, not General Motors.



Power tools help, but finishing a frame takes many hours of tedious, exacting hand work.

Book Review

Designing and Building Your Own Frameset, Second Edition

An Illustrated Guide For The Amateur Bicycle Builder

By Richard Talbot

The Manet Guild

Box 73, Babson Park, MA 02157

161 pages, \$26.00

• Do-it-yourself books all too frequently assume that the reader already has some knowledge of what he is doing. Unclear sentences like "Using your widget file, cast the bullring from the palpend, being careful not to squash the tweeit" can quickly bring the would-be craftsman to his knees in frustration. And being too sparing with information is only one of many traps an author of such books must avoid.

Fortunately for first time framebuilders, Richard Talbot makes no assumptions about his reader other than his eagerness and enthusiasm. Instead, Talbot understands the reader's need for as much information as he can get and provides him with lots of detailed diagrams, charts, and material spec sheets.

But far from being merely a refer-

ence book, *Designing and Building Your Own Frameset* gives the novice step-by-step detailed instructions for the construction from scratch of a complete frameset (frame and fork). Although he acknowledges that you can't learn to braze from a book, Talbot does give extensive information on brazing materials and techniques, recommending that the reader look for formal instruction in the handling of a torch if he isn't already an experienced brazer. The book does cover design principles (how to develop a design), preparation for construction and actual construction and finishing.

Even if you aren't planning on doing your own work, reading Talbot's book can save you and your framebuilder a lot of time (and perhaps grief) over the design. It will give you a thorough understanding of the task and enable you to communicate better with your framebuilder.

Not unintentionally, the point that seems to keep cropping up is that frame building is a time-consuming, painstaking undertaking and most people are probably better off having the job done by a competent professional. But for the courageous and confident, here's a cookbook as complete as they come. —Mike Fuller

portation and defense of this country, the inherent value of the labor needed to maintain them and build them is much, much greater than similar welding done by the lowly bike builder. The result? A lot of well-off aircraft technicians and a few guys working for a pittance at something they deeply love.

All of these men have been immersed in the bike world as racers, builders, and finally as struggling businessmen. It is in this last role that they have run into a dilemma: should they welcome every visitor and friend and lose their concentration, or risk hurting the feelings of a potential customer by politely tuning him or her out? In fact, there are respected builders who have somehow trained their customers to push a small list of dimensions and a \$600 check under the door and to consider themselves *lucky* if they get their frame in six months! Average delivery times of the builders in this article range from six weeks to three months, usually depending on component availability more than frame backlog.

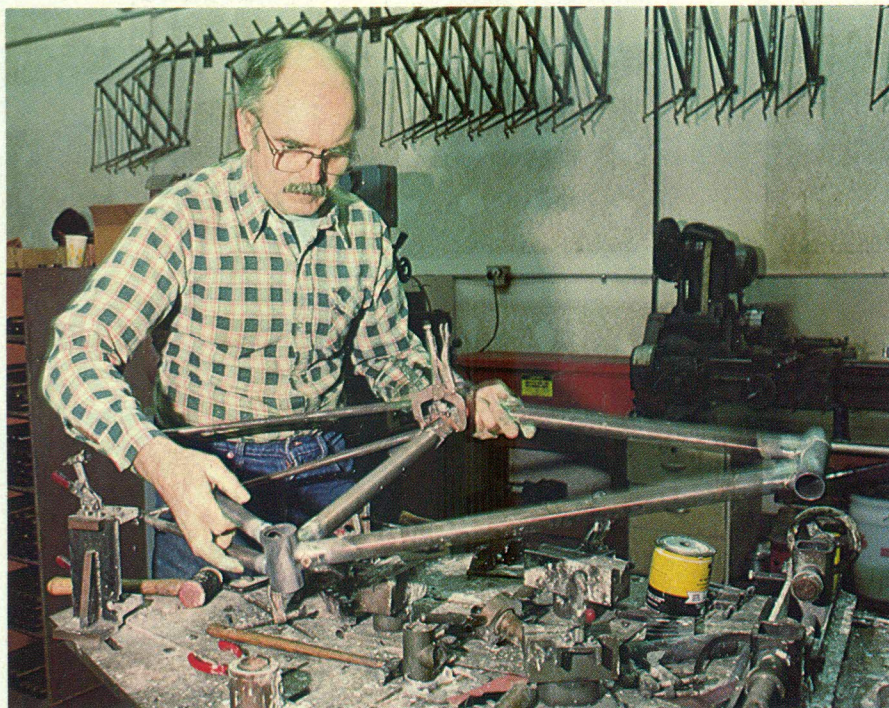
Steve Potts, a newcomer to the off-road world, taught by the master—Ritchey—pipes up that it is the relationship between the builder and the customer that draws people to him in the first place. "You've gotta spend time with them, because that's the service you're providing: personal attention. It gets a little crazy, though, when they're breathing down your neck, appreciating your fine craftsmanship, while you're singeing their armhairs! I've seen 'em get so close to the grinder that I'm afraid I'll end up cleaning off their face as well as the joint!"

When asked to what limit he takes this "personal attention," he remembered a guy who spent 15 hours in the shop, deciding on gearing, and of all things, *color*.

This sets the entire group off into spasms of laughter, and horror stories are traded about "color-choice paralysis." "It's always the smallest, most meaningless things that get the most attention in this business. It would be so refreshing to have a guy come in with a good idea of the geometry he wants, who knows exactly what he will do with the bike, and can convey it in less than 15 hours. But that's just a fantasy. There are very few such people out there."

Whereupon the discussion dwindled into a dream sequence about ideal customers, ideal work settings, and ideal...er...other stuff.

Which inspired a call to a man living in what has been called a frame builder's



Many frame builders are garage hobbyists. Some are dedicated craftsmen. Only a few, including Dave Moulton, have become successful businessmen.



Frame builders complain their customers don't realize how much work is underneath the smooth finish.

paradise: a spare-no-expense combination of lab and workshop, built to accommodate an innovator's lofty ideas.

Mike Melton didn't start out like any of the West Coast boys. As we spoke on the phone one day in mid-December, I detected a few wisps of his native south clinging to the edges of his vowels.

"I was into helium-neon lasers when I was in high school and college. Then I got drafted, sent to Viet Nam, and finally ended up in Japan for three years. I studied the language—nearly became Japanese—and was lucky enough to spend a lot of the time in port on my bicycle, which I bought in Hong Kong. Which led me to a couple of Japanese master builders, who took me on as an apprentice.

"When I came back, I'd decided to try to make it as a custom builder, and got pretty successful, but with six employees things got a little out of hand, with building inspectors, and codes to be met, and all. So along comes this guy who said he'd take over the business stuff, and leave the fun stuff to me. And then came the bouncing checks. We'd moved our operation away from Carolina to Ohio to work with this guy, and my wife Debbie had left a good job, too. Suddenly we were unemployed! But then Huffy, here in Ohio, asked me to help out on the John Marino transcontinental record-attempt bikes, and then came a gig out in Califor-

nia for Santana, setting up their tooling, and things looked better.

"When Raleigh wanted a one-of-a-kind, \$3000-bike for some *Playboy* article, I built it. From then on, it's been Cinderella City! Any number of guys could've gotten the job, and I ended up being the lucky one.

"I set up their Tech Center in a matter of a few short but intense months, and since '82 have worked in an ideal creative environment, with all the latest tools and a free rein as far as designs go. Every morning I jump out of bed and can't wait to get to the shop. Let me say here that I didn't look forward to the dirty work in building as a lifetime vocation. Now I get to relegate that kinda stuff, and concentrate on the designs, the stuff I *really* love."

Here he was cut off by the unmistakable clamor of a crowd of perhaps 20 of his co-workers singing, "Santa Claus is coming."

Meanwhile, somewhere back in northern California, a solitary craftsman leans into the file, working fast to keep from freezing in the chill of his cement-floored workshop. Behind him, a telephone nags itself off the hook, a little girl with a broken trike shuffles her feet and a UPS man stands waiting for his money. Beyond the shop door, the blue sky of a short winter's day beckons. ■

The Finished Product

• A frame alone doth not a bicycle make. It's obvious, but easy to forget in the excitement of getting your own custom frame built, that you've still got to put a lot of parts (and money) on the thing before you can ride it.

At this point, it's tempting to try saving some money. Just buy a bunch of components, maybe from a mail order house, bolt 'em on yourself and roll, right?

Well, it's not as simple as it sounds. You have to consider not only frame-to-component compatibility problems (see accompanying sidebar, "A Buyer's Guide"), but also component-to-component compatibility. Mistakes in buying and installing parts are easy to make.

The drive train is the most usual source of problems, since chainwheels, chain, rear cogs and derailleur all inter-connect and have to

work together. Some chains, for example, won't work well with some freewheels and derailleurs. And a wide-range freewheel requires a wide-range rear derailleur.

Then there are the special tools you'll need to install bottom brackets and headsets. There are even four mutually incompatible threading systems to deal with: English, French, Italian and Swiss.

What all this means is that the first time you build up a bike, you should expect frustrating and potentially expensive problems. If you enjoy that sort of thing, charge ahead; it will be educational.

If you don't, there are options. Most frame builders will complete the bike for you, and they can often buy parts at attractive prices, so the cost of this option can be relatively low. This puts the responsibility for the complete

bike on one person—the frame builder—so your chance of satisfaction is highest.

Another option is to find a good bike shop to sell you the parts and install them. Look for a shop that caters to an adult customer; one that sells framesets and expensive bikes, for example. The shop should be able to give you a reasonable package price for parts and installation and will take responsibility for doing the job right.

One tip, though: don't think you'll save money by buying parts mail order and taking everything to the bike shop for assembly. The dealer will charge you his full labor rate instead of perhaps something less if you buy a package deal; he will not take responsibility for component choice; and he won't like doing the job any more than your auto dealer would if you showed up with an armload of parts from Pep Boys. This is not the way to develop a long-term relationship with a quality shop. ■