

BICYCLING

# Bicycling

MARCH 1984

\$2.00

**Special Issue**

## **Technology and the Olympics:**

**Bringing the Medals Home**

**Fitness:  
How You Will  
Benefit From  
Olympic  
Research**

**ROAD TEST:  
Ten Top  
Tandems**

**Meet the Minds  
& Machines  
That Will Give  
the U.S. the  
Competitive Edge**





## Motobecane

Continued from page 124

in normal riding. The frame did meet its rigidity limit in out-of-the-saddle sprinting, though. After conducting that test once, we decided we probably wouldn't want to sprint on that bike too often.

All in all, we were pleasantly surprised. In years past, I've ridden much more expensive tandems that were no more rigid, and this one finished higher in our eyes than we would have guessed by looking at it. Conventional "wisdom" is that any mixte-back tandem is hopelessly flexy, but Motobecane showed us that a mixte-back can be better than we thought.

The bike's weak point was its steering. The 69-degree head tube angle results in excess wheel flop for a bike this heavy, and the bike handles awkwardly in corners. It takes some muscle to get the handlebars turned to enter a corner, and then the bike invariably oversteers. Then you have to steer back the other way to correct your course. The upshot of this is that you must command a wide path through corners, since the bike won't let you pick your exact line.

(Motobecane's new U.S. importer, North American Tradimpex Corp., told us they would ask the factory to change the head tube angle to 73 degrees to give the bike improved handling.)

For a long-distance tourist, or for any other dedicated high-performance fanatic, this steering behavior would be an annoyance. But we'd happily put up with it for shorter distances and

low-key riding. This is all that most riders ever ask from a bike. For them, a tandem like the Interclub will be enjoyable, and not so expensive as to cause a family feud. ○

Thanks to Skip Merz of the Cycling Center in Allentown, Pennsylvania, for lending us both the Motobecane and the Kuwahara tandems.

### MOTOBECANE INTERCLUB

Imported by: North American Tradimpex Cycles, Inc.  
Five Park Drive  
Malville, NY 11747

SUGGESTED RETAIL PRICE: \$1,095

SIZES AVAILABLE: 22 1/2/20 1/2 only

#### WHEELS

Rims: Weinmann Concave, 27 x 1 1/4  
Hubs: Maillard medium-flange front, Alom rear  
Spoking: 36-spoke front, 40-rear, 13 gauge, cross-three  
Tires: Hutchinson 27 x 1 1/4, 90 psi, Presta

#### DRIVETRAIN

Derailleurs: SunTour Compe-V front, SunTour VX rear with lateral tube shift levers

Chain: Sedisport  
Crankset: T.A. Cyclotourist  
Crankarm length: 170 mm  
Freewheel: SunTour Perfect

#### COMPONENTS

Pedals: Alom 440 rat trap  
Seatpost: 25.4-mm diameter front and rear stem, 180-mm length  
Saddle: Sella Italia  
Handlebars: Motobecane engraved masts 41-cm with SR stem front, Motobecane engraved straight 54-cm with SR stem rear  
Brakes: Mafac cantilever with Mafac hooded levers front, Weinmann centerpull with Mafac hooded levers rear, Alom rear drum brake

#### GEARING IN GEAR INCHES

	40	52
14	77	100
17	64	83
22	49	64
28	39	50
32	34	44

## The Stiffest Tandem in Town

### It Takes Two to Tango on Heavy Metal

John Schubert with Tom Walz

From the moment its 200-pound, solid-wood shipping crate landed on our loading dock, the tandem named Tango caused quite a stir. Carefully secured inside that crate was a sensationally rigid tandem that ends all arguments about frame stiffness.

The brainchild of Rick Jorgenson, a touring tandem enthusiast who owned four other tandems before designing his own, the Tango has one aim: to be "ultimately stiff," Jorgenson says. "I like that feeling of stability and straight tracking, particularly when the bike is loaded for touring."

Like many "ultimate" products, the Tango is a rarity. Only a few have been built. While it's

not widely available, the Tango serves as a demonstration of what is possible in tandem design.

How is the Tango made so rigid? Let me count the ways! The bike sports an oval top tube and direct lateral tube, both made by Phil Wood; a round marathon tube with midstays; and heavy Santana/Ishiwata chainstays and fork blades. Within minutes of its arrival, the 47-pound Tango earned a popular and very appropriate nickname: Heavy Metal.

We mercilessly thrashed the Tango and it didn't budge. In climbing, sprinting, hard cornering, and quick slaloms, the Tango gave us new insight into how rigid a tandem can be.



Better  
Than  
Cycling

## NordicTrack

Jarless Total Body  
Cardiovascular Exerciser  
Duplicates X-C Skiing for the  
Best Motion in Fitness

The enjoyable sport of cross-country skiing is often cited by physiologists as the most perfect form of cardiovascular exercise available. Its smooth, fluid, total body motion uniformly exercises more muscles and higher heart rates seem easier to attain than when jogging or cycling. Nordic Track provides the same cardiovascular endurance-building benefits—right in the convenience of your home. Makes a year round, consistent exercise program easily attainable. Eliminates the usual barriers of time, weather, chance of injury, etc.

#### More Effective Than Cycling

Nordic Track's stand-up skiing motion more uniformly exercises large leg muscles and also adds important upper body exercise. Higher pulse rates, necessary for building fitness, seem easier to attain because the work is shared by more muscle mass. The Nordic Track also keeps more muscles in tone and does not cause knee joint trauma common to cycling.

#### Better Than Running

Nordic Track gives you a more complete workout—conditions both upper body and lower body muscles at the same time. Fluid, jarless motion will not cause joint or back pains as jogging or running often does.

#### Even Better Than Swimming

Nordic Track more effectively exercises the largest muscles in the body, those located in the legs and buttocks. When swimming, the body is supported by the water, thus preventing these major muscles from being effectively exercised. The stand up exercising position on the Nordic Track much more effectively exercises these muscles.

#### A Proven, High Quality Durable Product

Ruggedly constructed, Nordic Track is quiet, motorless and folds compactly for storage. Arm and leg resistances adjust separately. Nordic Track is in its 7th year of production and is used in thousands of homes and many institutions. We manufacture and sell direct. Two year warranty, 30 day trial period.

Call or Write for Free Brochure

TOLL FREE 1-800-328-5888

8 AM-5 PM MON.-FRI.

PSI 124Y Columbia Crt. Chaska, MN 55318  
Minnesota 612-448-6987



The better a tandem handles, the less allowance you have to make for the fact that it's a tandem and not a single bike. Generally, a less-rigid tandem will need to be handled more gently, and a more rigid tandem will respond more surely when you subject it to sudden, abusive maneuvers. Simply stated, the Tango takes this to an extreme.

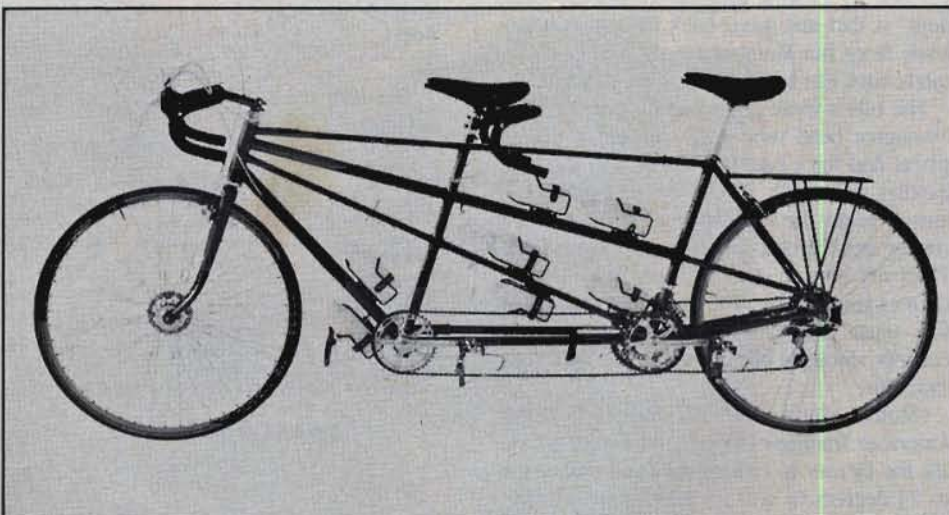
When we sprinted out of the saddle, an acid test for any tandem, the Tango didn't exhibit the flex we've come to regard as inevitable. On steep descents, your road testers ran out of nerve before the bike ran out of roadholding ability. If ever a tandem handled like a single bike, this one did.

When we tested the bike's handling with panniers (using slalom maneuvers and out-of-the-saddle climbing), we couldn't even notice any difference. The frame seemed to flex no more with the panniers than without them. Although the Tango is designed for touring, its rigidity makes it quite desirable for gung-ho speed riding. Suddenly, any other tandem seems limp by comparison!

Not surprisingly, there is a penalty in shock absorption. The Tango does transmit more of

**(Right) Oh, what a tubefest! Two round tubes and two oval tubes extend back from the head tube toward the riders. Note the chrome-moly handlebar stem, the Santana/Ishiwata fork blades, and the Shimano cantilever brakes.**

The Tango tandem.



CHRISTIE C. TITO

## Scared of the Dark?

Of course not. But at this time of year over half the day is dark and cold. And training in the dark can be a hair-raising experience. No matter what precautions you take. So bring the road indoors on Kreidler Rollers. The only sensible alternative.

Frankly, Kreidler Rollers are the finest available. They must be. Top-rated in an independent study conducted by Bicycling Magazine (2/82), they're also the most versatile. Attaching the optional Headwind™ unit provides the rollers with resistance that is micro-adjustable. Far more adjustable than TurboTrainer, Racer-Mate and Vetta. Nothing compares to Kreidler.

Ask your dealer for our brochure.

**«KREIDLER ROLLERS  
HEADWIND™ SYSTEM**

Quietly leaving the others standing still.

© Al Kreidler Custom Rollers, Inc., 5102 Bannister Rd., Kansas City, Mo 64137

**Only hydraulic water floatation ends the discomfort caused by pressure, friction, and road shock.**

**Only from Hydroseat.™**

Only Hydroseat™ brings the technology of hydraulic water floatation to every cycle seat. Only hydraulics channel water to key pressure points, eliminating painful friction discomfort. Only floatation prevents painful contact with the seat. And only water, acting as a shock absorber, ends painful vibration.

To order a Hydroseat™ simply measure the overall length and widest part of your seat. Specify grain leather or suede and sheepskin at \$19.95 or black vinyl at \$14.95 and head to your local bike shop. If sold out, send check or money order direct to the factory. Or call or write for additional information. Money back guarantee, too. Only from Hydroseat™.



Hydroseat™ with grain leather cover.

**hydroseat™**

International Aqua Products  
P.O. Box 7104 Rochester, MN 55903  
507-288-4847

Pat. Pending





the road's bumps to the riders than other tandems. Another of its handling qualities is nimble, light steering. These two factors combine to make the Tango a bike for hard-riding enthusiasts.

The Tango is truly a no-expense-spared bike. For example, most framebuilders other than Santana do not use the highly desirable Ishiwata chainstays or fork blades, because they're extremely expensive when you don't buy the whole Ishiwata tandem tubeset. But Tango does. Tango also uses a hand-brazed chrome-moly steel front handlebar stem, which is lighter and more rigid than the usual aluminum stem, but at a significant cost penalty.

A hand-brazed chrome-moly steel rear rack is similarly lighter and more rigid than an aluminum rack. This kind of workmanship appears in every nook and cranny of the frame, and the bike is priced accordingly. A bare frame costs \$2,750. Our test bike as equipped is about \$5,000. Tangos are built one at a time, and each one takes three weeks of framebuilder Michael Johnson's time.

The overkill approach to stiffness allows Jorgenson to stretch out the rear top tube (the

*Campagnolo*

GRUPPOS • FRAME SETS • BICYCLES

NUOVO RECORD GROUP - 369.00

COLNAGO SUPER - 379.00

DE ROSA	•	GIOS
PINARELLO	•	GRANDIS
TOMMASINI	•	MERCIAN
COLNAGO	•	PICCHIO
VINER	•	OLMO

OUR EXTRAORDINARY BUYING POWER—15 LOCATIONS—AFFORDS US THE OPPORTUNITY TO OFFER YOU UNBELIEVABLE PRICES.

CALL OR COME BY OUR AUSTIN LOCATION  
SEND FOR FREE PRICE LIST AND ORDER FORM

**The**  **Rainbow Jersey**

705-C W. 24th St. "B"  
AUSTIN, TEXAS 78705 512-477-2142

## NEW! CS-30 Slope Indicator

The Cortina CS-30... a simple yet brilliantly designed instrument which helps match the rider with the terrain. Properly mounted on the top tube of any bicycle, the CS-30 tells the rider the slope of any hill. Tourists, racers, and sport cyclists alike can now plan which gears will be needed to successfully complete a ride or race. Be prepared with the CS-30.

See your local dealer or write:  
**Mel Pinto Imports, Inc.**  
P.O. Box 2198  
Falls Church, Va. 22042





## The Stiffest Tandem

minimum length he uses is 27½ inches), giving the stoker more room (and psychological space) than most other tandems. Other custom builders do offer rear top tubes this long and longer, but few offer them as standard equipment.

Whether these assets justify the cost and weight penalties is up to you. They have already to several Tango customers.

Jorgenson's "real" job is to use a computer to design bridges for the California Department of Transportation, and he used computer-assisted design on the Tango. His computer modeling of the tandem enables him to predict how any given design change will affect frame rigidity.

Remember, this is a hard-core touring bike. It came equipped with no fewer than seven water bottles. Most people who saw all the water bottles laughed, but the experienced tourists, who know about cooking and cleaning at a dry campsite, didn't.

Next in the works for Tango is a three-seater, which will probably have a cross-shaped internal bracing pattern. "It looks kind of ugly," Jorgenson said. "But there sure are a lot of places to put water bottles."○

### TANGO

Manufactured by: Rick Jorgenson  
2437 Elendil Lane  
Davis, CA 95616

SUGGESTED RETAIL PRICE: bare frame, \$2,750

SIZES AVAILABLE: all custom

#### WHEELS

Rims \_\_\_\_\_ Super Champion Mod. 58, 27 x 1¼  
Hubs \_\_\_\_\_ Phil Wood medium-flange  
Spoking \_\_\_\_\_ 48 spokes, 14 gauge, cross-four  
Tires \_\_\_\_\_ Specialized Touring Turbo, 27 x 1¼, 95 psi, Presta

#### DRIVETRAIN

Derailleurs \_\_\_\_\_ SunTour Cyclone II front, Huret Duopar rear  
Chain \_\_\_\_\_ Sedit Sport  
Crankset \_\_\_\_\_ Campagnolo Record  
Crankarm length \_\_\_\_\_ 170 mm  
Freewheel \_\_\_\_\_ SunTour New Winner

#### COMPONENTS

Pedals \_\_\_\_\_ Campagnolo Super Leggera track  
Seatpost \_\_\_\_\_ Campagnolo Record front and rear, 26.6-mm diameter, 210-mm length, double-bolt microadjust  
Saddle \_\_\_\_\_ Cinelli  
Handlebars \_\_\_\_\_ Cinelli maes 40-cm front with chromo 100-mm stem; Specialized maes 44-cm rear with chromo 100-mm stem  
Brakes \_\_\_\_\_ Shimano cantilever with Campagnolo hooded levers front; Mafac centerpull with Mafac hooded levers rear; Phil Wood rear disc brake

#### GEARING IN GEAR INCHES

	32	48	53
13	66	100	110
15	58	86	95
18	48	72	80
22	39	59	65
28	31	46	51
34	25	38	42

## Enter The Pleasure Zone Protected By SkidLid



Escape to the road and the extraordinary world of bicycling. Indulge in the pleasures of bicycling wearing state of the art head protection...the SkidLid Helmet.

SkidLid is exclusively designed with your safety and comfort in mind. Excellent ventilation and reduced helmet weight are benefits of SkidLid's innovative design, blending comfort with protection. Enter the pleasure zone of bicycling with confidence...you're protected by SkidLid.

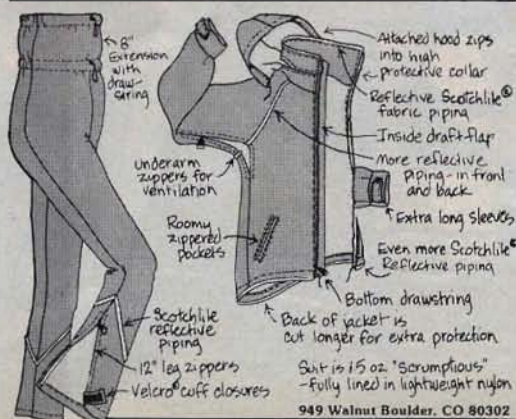
SkidLid represents the state of the art, but no helmet can prevent all injuries. Ride safely.



SkidLid Manufacturing Company

1560 California Street • San Diego, California 92101 • (619) 234-4244

© 1984 SkidLid Mfg. Co.



## GORETEX® CYCLING SUIT designed for cyclists by a cyclist!

Lightweight waterproof and breathable with reflective piping. Red. \$149.00

Call TOLL FREE (800) 525-7525 for our new free color catalog of innovative sports systems

