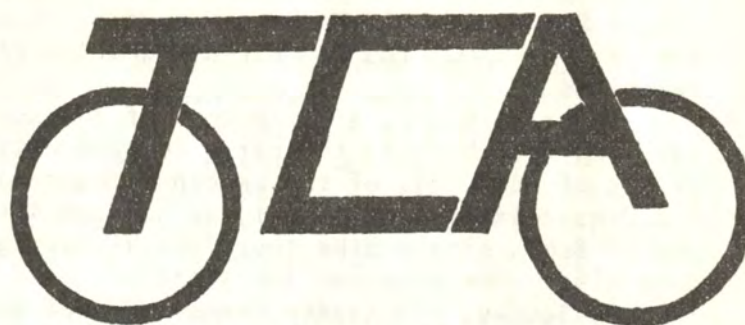


DOUBLETALK

BULLETIN OF THE

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NOVEMBER - DECEMBER
1979



TANDEM CLUB OF AMERICA

FROM THE STEERER'S VIEW

By Dwight Kitchens

Well, this is the third issue with the Kitchens' team at work. We would like to have great ideas for the future, but it appears as if we should now limit our editorship to another three issues. The U. S. Army has notified me that we will be spending three years in Europe, and considering the cost of telephone calls, we don't think we can continue calling Malcolm and Peter to coordinate issues of the bulletin.

To facilitate a smooth transition, we would like to hear from some of you now, since we know a number of you would be willing to be the first to read the articles. You would also have a grand opportunity to try your hidden talents at writing. Lining up a successor now would be helpful to insure that no issues are dropped when we take off in July.

Also, having a stock of articles for future issues is desperately needed. With winter upon us, sit down and write about your last tour and your shop's most recent discovery.

Planning any organized rides for the spring? Get details in by the 31st of January for publication in February.

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First Southern Tandem Rally - 1979

By Jack Goertz and Martha Bell
Birmingham, Alabama

A new event, one the organizers hope will grow into a true classic, was held Labor Day Weekend! The First Annual Southern Tandem Rally drew tandem cyclists from all over the southeast (states represented were Alabama, Georgia, Florida, Kentucky, and South Carolina) to Georgia's beautiful Hard Labor Creek State Park, near Rutledge, Georgia.

Billed by the rally's organizers, (Phil Winter and Jack Goertz), as "not your typical full service tour," the weekend was "one hell of a lot of fun!" Participants left their motorized vehicles at the Stone Mountain, Georgia, train station and pedalled from there to Hard Labor Creek, 50 miles away! Once at the park, everyone selected their campsites and set up the tents (gear was sagged to the park). Surprise #1 - Phil Wanet Winter, and Jack Goertz and his stoker, Susan Benton, had rented a cabin for the weekend. No tent for them! -- They were nearly lynched. The cabin became headquarters for the weekend. Especially when everyone discovered the 'fridge full of beer.

continued

First Southern Tandem Rally - 1979 (Continued)

Surprise #2 - No food at the park! Supper Saturday, and breakfast, dinner and supper Sunday were in Madison, Georgia, 15 miles east of the park. Morrison's cafeteria rolled out the red carpet, and the ride to the food just whetted everyone's appetites.

Saturday night, after a tour of Madison's antebellum homes, supper, and a spirited ride back to the park, Bob and Betty Meader, of Mobile, Alabama, showed slides of GEAR '79, of the Camden Campout (joint venture of the Mobile, Birmingham, and Pensacola Bicycle Clubs), of Bob and Betty's tandem tour of Martha's Vineyard, and of Bob's single bike tour from Vicksburg, Mississippi, to Mobile, Alabama. Only complaint - the show was too short!

On Sunday, all tandem teams pedalled to breakfast, then took off on a half-century through the Georgia countryside. Halfway through the ride, Jack and Susan started a water fight. All teams took up the challenge, and everyone joined in the fun. It's amazing how much water can be carried on a tandem! Later that night, Bob and Ruth Husky departed for their home in Lake Worth, Florida, to check on damage done by hurricane David. Also on Sunday, Barry and Linda Spivey, Sarasota, Florida, celebrated their 12th wedding anniversary, with appropriate surprises, etc., presented to them at supper.

Monday saw the end of the rally. The ride back to Stone Mountain followed a different route, and went through such places as Social Circle, Georgia. Back at the train station, the teams exchanged addresses, said good-bye and began the long drives home. The First Southern Tandem Rally is history. Over maybe, but not forgotten. The organizers started that day making plans for the Second Annual Southern Tandem Rally, to be held sometime in September 1980. See you and your tandem there!

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FEEDBACK FROM A TANDEM TEAM WITH ONE YEAR'S EXPERIENCE

By Bob and Marcia Egge
Alexandria, Virginia

Those of you just getting interested in tandeming or getting ready to move up to a custom-made bike may be interested in yet another set of opinions from two who've recently gone that route.

Frame: By all means have the builder make the rear top tube as long as possible. Our FASTAB MUIRA is sized 22"/19" with the rear top tube at 24". Everyone who's ridden on the back of the bike raves about the view. Don't believe that a long rear top tube will hinder stiffness. Our frame is guaranteed to be the stiffest in North America. An absolutely inflexible frame is obtainable with Reynolds DB 531, two sets of twin laterals, two down tubes (one for the stoker's section), and two tubes running between the bottom brackets. Seven-eighths inch seat stays, round track chain stays, and blades make for a bicycle that won't flex under any circumstance (all this stiffness means lots of efficiency in sprinting and hill climbing, but little comfort on the occasional bad road).

Front End Geometry: Tandems need more trail than single bikes. At low speeds increased trail makes the steering more negative (easier to deflect from dead center); which is helpful when shepherding all that extra mass through traffic. At high speeds other factors (inertia and drag) come into play and increased trail gives the steering a greater self-centering tendency. These last two sentences will probably spark lots of controversy; but the physics involved has been well documented by the motorcycle industry in numerous technical papers. In our case a 73° front end with only 1 1/4" rake on the fork gives effortless steering at low speeds and incredible directional stability in 18th gear.

Brakes: You can't have too many or too much on a tandem; especially when loaded for touring or riding in the city. We use a caliper on the front, two calipers and
continued

Feedback From A Tandem Team With One Year's Experience (Continued)

a Phil disk on the rear. Actuation is distributed among all four hands. The redundancy of four independent brake systems is a real safety factor in the event of a broken cable or a lapse of attention on the captain's part.

Gearing: Average the high gear on the single bikes and add ten inches for the tandem. Average the low gear on the singles and subtract five inches (don't subtract anything if your frame is stiff and your cranks are out of phase). Even though not essential use a 15 or 18 speed set-up as close ratios allow you to accelerate a tandem to top speed with much less effort.

Stoker Handlebars: Marcia bicycled throughout her pregnancy up to and including the day before delivery. In the last four months flat or tourist style bars were necessary in order to prevent interference between knees and abdomen. The upright seating afforded an even better view for the stoker and I've therefore been advised not to change back to dropped bars.

Cables: For really crisp shifting and solid braking Hi-E Engineering of Nashville will make up any length cable out of nine strand stainless steel wire rope.

Seating: Most everyone agrees that the heavier member of the team should be on the front of the bike. Most tandem teams are male/female. In almost all cases these two factors combine to keep the woman out of the driver's seat. Tandem frame builders exacerbate the situation by rarely making a front seat tube shorter than 22". FASTAB is currently building a second tandem for us, sized 19"x19", that Marcia will captain with other women and/or awfully short guys. The point is that we already have a long list of female stokers who would love to ride with another woman. It seems like there is a potential market out there for tandems sized 19"x19", 20"x19", or even 21" x 20".

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TOURING BY TANDEM THROUGH TEXAS AND OKLAHOMA

By Jack Goertz and Martha Bell

Two years of talking and two weeks of planning and "The Trip" was here. We had talked about it, planned it, cancelled it, rescheduled it, changed our mind about tandem touring (after all, tandems break down, don't they?), cancelled it, rescheduled it, and finally said, "Let's leave Sunday." We constructed a box for the bike along lines of the one designed for Dwight and Phyllis Kitchens' tandem, only not quite so fancy. Our box only had to last one way, and wasn't going to be used again, so we had to keep it cheap -- total cost of box was less than \$5.00. Packing the tandem was the first challenge we faced. After dismantling handlebars, pedals, seats, and removing the front wheel, we found that everything wouldn't fit our carefully designed box. There was no room for the seats or the front wheel -- very necessary items for comfortable touring. Not a comforting discovery at 10:30 p.m., Saturday. (Rule #1 - Always pack at least one week in advance.) Finally, after putting the tent, sleeping bag, and 15 lbs. of tools (after all, tandems break down, don't they?) into the area originally intended for the front wheel, we decided to put a garbage bag over the front wheel and just carry it on, along with the seats, the panniers, the handlebar bag, and the camera.

Once everything was packed or stored, we grabbed about 4 hours sleep before departing for the Birmingham Airport and a 6 a.m. flight. We made quite a show, with the box and all our gear, but the attendants at Delta had been forewarned, and were expecting us. We had absolutely no trouble checking the bike through to Dallas. (Rule #2 - Notify the airport/airlines in advance that you have an oversize box. Some smaller planes may not have room for something eight feet long in the baggage hold.)

We arrived in Dallas at 9:30 a.m., Sunday. The bike appeared quickly, and by 10:30 a.m. we had reassembled it, discarded our box, packed our 60+ pounds of gear

continued

Touring By Tandem Through Texas and Oklahoma (Continued)

on the bike and were nearly ready to leave. Airports are strange places, though. Until Martha and I changed into matching clothes, everybody acted like it was an everyday occurrence to build a tandem in the baggage area. Once we were in proper attire, everybody was interested in our departure. Leaving the terminal at Dallas/Fort Worth Regional Airport proved to be no problem, although the bike was a bit unwieldy. (Rule #3 - Ride the bike with a load prior to the trip. Sixty pounds of gear changes the handling.) Traffic in the airport was very light, roads were well marked, and we quickly mastered the handling characteristics.

Leaving the airport proved to be a bit of a challenge. The ticket takers had never been faced with a bicycle leaving the airport that had not been pedalled into the grounds. A phone call to the head cashier, and a ten minute wait, and then they let us leave -- without paying any toll.

The route we selected to follow to our first night's destination, Lake Texoma on the Texas/Oklahoma border, took us around the Dallas metropolitan area and kept us out of any heavy traffic. It also took us through some of the flattest countryside we had every cycled through -- not a hill or tree in sight for miles in any direction. Lunch the first day was at the "Four Corners Gas Station & Grocery," about 30 miles north of Dallas. There the lady proprietor fixed us some Texas-size sandwiches, then brought us two folding chairs to sit on under the lone shade tree while we ate. Later, we found out this was the only place for food in 20 miles in any direction.

Crossing the bridge into Oklahoma was exciting! I had moved from Oklahoma in 1974, and had wanted to bicycle back ever since. Doing it by tandem was twice as much fun. Our first order of business was to find the closest campgrounds. We stopped at the first motel we came to, where the proprietor directed us to a campsite "just a little way" down the last gravel road we'd passed. Have you ever pushed 100 lbs of bicycle and gear for a mile over marble-sized gravel? The campgrounds, though, were definitely worth it. Nestled on the shores of the lake were about 30 campsites, complete with picnic tables, clean areas for tents, and hot showers. There were absolutely no people in sight, either! Mileage for the first day -- 105 miles.

Watching the sun set Sunday night, then watching the sun rise over the lake on Monday were two of the memorable experiences we had on the trip. Shangri-La couldn't have been more beautiful. Even the walk back to the main road wasn't too unpleasant. A brisk 15 mile ride from Lake Texoma to Madill, Oklahoma, whetted our appetites for breakfast. Over breakfast we were told that the Arbuckle Mountains lay on our route, and we'd have some steep climbs to make. Evidently these folks had never been to Birmingham, because the Arbuckles came and went before we found anything to compare with the terrain around Birmingham.

We arrived in Oklahoma City, our destination for the second day, at 7:00 p.m. Unfortunately, we were on the southside of Oklahoma City, and our lodging for the night was on the north side of the city, some 40 miles away. Oklahoma City is big! In fact, only Jacksonville, Florida, covers a larger land area. Were we ever glad to see a Datsun pickup come by with its lights flashing and horn honking. Our hosts for the second night, Gene and Laura Reynolds, became worried when we hadn't arrived by 7:00 p.m. and they had come looking for us. Martha and I needed no coaxing to lift the bike into the back and be chauffeured the remaining 20 miles to Gene and Laura's home. Laura had supper ready for us, and even fixed breakfast for us the next morning. This type of hospitality is typical of what you find from the League of American Wheelmen's hospitality homes network. Distance pedalled the second day -- 140 miles.

Tuesday, our third and final day of the tour, started slowly. Neither Martha nor I really wanted to leave our friends and pedal on. Finally, we left about 9:30 a.m., after packing about 24 lbs of gear we no longer needed for Gene to ship back to our Birmingham address.

continued

Touring By Tandem Through Texas and Oklahoma (Continued)

North of Oklahoma City the terrain changed character again. Wide expanses of farmland and ranchland stretched in all directions as far as you could see. Oil wells dotted the countryside, pumping the crude necessary to run all the nation's industry. Roads were nearly perfectly straight, stretching over the horizon without a turn. People in the small towns we passed through were even friendlier, or so it seemed.

Arriving at our final destination, Medford, Oklahoma, where I had grown up, was almost anticlimatic. Coming down off the natural high we had been on for three days and realizing the bicycling portion of our vacation was over was a real downer. Packing the bike for the drive back to Birmingham was not nearly as fun as pedalling! Distance pedalled the third day - 115 miles.

Afterthoughts and comments about the trip --

Would we recommend touring by tandem? Absolutely! If the tandem is designed for touring. Our tandem was built for us by Jim Bradford, Atlanta, Georgia, and was designed for touring from the beginning. It's 66" wheelbase, 3" fork rake, and 48 spoke, 5X wheels, and 21 speeds (3x7) gave us a very comfortable ride, the right gear combination for every situation, and absolutely no trouble (who says tandems break down?). The only maintenance we did on the trip was to tighten the front chain after day two. Martha and I are convinced touring by tandem is the only way to go!

Would we recommend touring the Southern Great Plains states? --

Only during certain times of the year, preferably spring or late fall. Avoid the summer months. There is precious little shade anywhere, and summertime temperatures often exceed 100° F. Headwinds, too, can be a problem. Usually there is a prevailing southwind from mid-April to late October of 10-15 mph. However, when we were there in September, we faced a northwind of about 8 mph.

What suggestions would we make to others? --

Pack as light as possible. It is very easy to overpack a tandem. Do take everything you will use, plus all the tools you think you may use. Spare parts -- cables, tubes, and tires -- are a necessity. Know how to fix your tandem, should it break. We did not pass a single bicycle shop all week. It is not necessary to carry food other than energy snacks. Restaurants and food stores were no more than 20 miles apart, and they were open Sundays, even in small towns. Travel no more than 80 miles per day, if possible. This allows enough time for loafing, resting, setting up camp, taking pictures, visiting that quaint little shop, etc. Above all, quit talking about it and go out and do it!!

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CHILDBACK STOKER CONVERSION By Arthur Kneisel

Being a touring cyclist with little children, I felt it was time to move my wife back to her single and convert the tandem to childback for our seven year old. Our Southern Cross (double gents) had a TA triple crossover drive. I felt that the frame design prevented simple addition of the child's B.B. and connection to the existing system. The following was done in order to clear the twin tube laterals: move the Phil B.B. to the front, move the derailleur to the front, plug the existing rear B.B. with old cups and plastic cutouts for dust covers. The next step involved finding a wrecked frame with a good B.B. I found a chromoly tubing frame and proceeded to cut out the B.B. In doing this I left about four inches of rear stays intact. I then brazed closed all openings and added a support clamp, fig. 1.

continued

Childback Stoker Conversion (Continued)

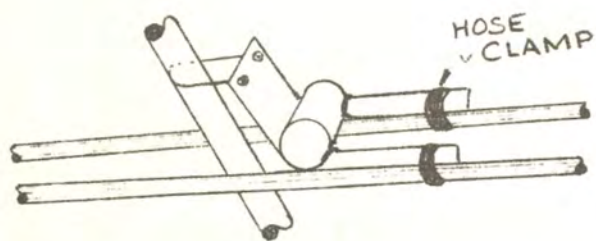


FIG. 1

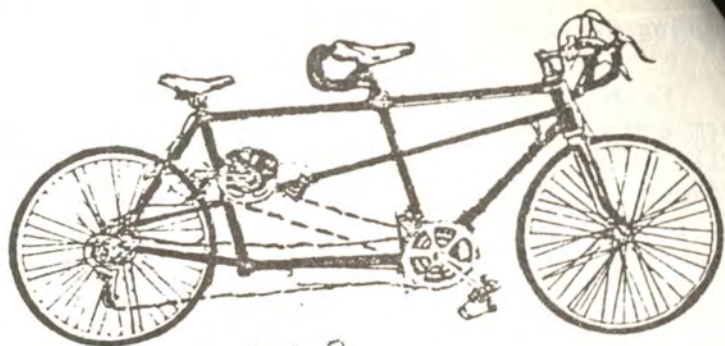


FIG. 2

I then assembled the cups of this new B.B. slightly off center to accommodate the chain clearance, using loctite. The unit was then clamped to the tandem and the chain run to the front chainwheel. To date we have put about 400 miles on this without problems. I must keep close attention on the unit as it is rotating in a reverse direction. The entire assembly is illustrated in fig. 2.

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Editorial Comment: Not to be outdone, the midwest organizers sent in this description of a great rally. Wonder what has happened to the east and west this year? Maybe we'll know in subsequent issues.

The organizers are also sending the TCA all excess funds so that memberships may be initiated for all non-TCA attendees. What a great way to introduce tandemists to our ranks.

MIDWEST TANDEM RALLY - 1979

By David Ringland

Chatham, Illinois

Springfield, Illinois, was the site of this year's Midwest Tandem Rally. The rally drew 80 participants from 13 different states for a weekend of riding and visiting the many historic places which surround the capitol city of Illinois.

The headquarters for the three day event, Regal 8 Inn, was located on the outskirts of the city and provided easy access to the countryside. The terrain in this part of Illinois is flat with a few gentle hills to break up the monotonous corn and soybean fields which are abundant. Due to increasing food needs and the price of land, trees are a scarce item. Farmers take out trees and hedge rows to plant more corn and beans to help pay for their higher costs of living. Another thing that has been in abundance the last couple of years has been the grasshopper. This little creature was noted by all who attended as being the most unusual companion on a ride and voted to have it represented on the patch commemorating the rally.

The weather for the whole weekend was very good. A few people were overheard talking about a little rain they received while at the food stop located at Lake Sangchris. Those who remained dry watched the few black clouds go overhead with the anticipation of a downpour. But as luck had it the dampness was caused by nervous perspiration.

The routes for the weekend covered various lengths from 15 miles to 70 miles. Saturday brought forth two rides, one 35 miles long which went to Lake Springfield and Lake Sangchris. The second route was 25 miles long and included Sangamon County's last covered bridge. Sunday the group went to New Salem State Park which is a restored village of the mid-1800's. After returning to Springfield the riders were treated to a cookout at my house in Chatham, Illinois. After consuming everything in sight, except one watermelon, we had a short, informal business meeting. On

continued

Midwest Tandem Rally (Continued)

Monday after a breakfast of homemade rolls, donuts, cookies, and other delights, we toured the city of Springfield. Highlights included the Old State Capitol, Lincoln's Home, Lincoln's Tomb, and the state building complex.

One of the things covered by the business meeting is the location of next year's rally. It will be held in St. Charles, Missouri. For information you can contact Steve and Karolyn Reker, 1636 Christy Ct., St. Charles, Mo. 63301. Steve and Karolyn had a close vote with Leon and Avonnelle Moss of Des Moines, Iowa, for the rally and it was decided to go with St. Charles with the possibility of Des Moines in 1981.

On a personal note I would like to thank all of those who attended and making it such a wonderful success. I would like to thank all of those people who requested information not only on the rally but on the Tandem Club of America. It is my hope that you have received the information you needed and your copy of Doubletalk with the hope that you will join the T.C.A. and send in an article about any interesting experience you have had on a ride with your favorite partner.

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FORMAT FOR DOUBLETALK ARTICLES

Any and all literary efforts are welcome -- and any format will be received gladly. However, you will made the job of editing much easier if you can TYPE (DOUBLE-SPACED) your article. If you can't hack typing, we will take NEATLY hand-written manuscripts, or even cassette recordings! It may take a little longer to prepare your article if it's not typed, but it will be edited and published eventually.

* * * * *

THE WHO, WHAT & WHERE OF TANDEM SHOPPING

By Bruce E. Ricard

East Brunswick, New Jersey

Buying one's first tandem can really be a difficult undertaking without advice from experienced tandemers. I thought that others, about to update an old or buy their first tandem, would find the following experiences helpful, or at least interesting. Others may be stimulated to send in their comments.

Since I am consumer minded, the decision-making process was long and exhaustive. Certain questions had to be fully answered and options weighed. Questions on type: Used? New? Mass-produced or custom? Frame geometry? Questions as to where to find Tire size? Spoking pattern? Brake types? Options? Brake shoes? Options?

My first step was to familiarize myself with tandems, which was a real task since the only tandem that I had ridden was a beach rental. Over several years I had collected articles on tandems and researched them in the library. I read Fred DeLong's chapter on tandems in his book, *Guide to Bicycles & Bicycling*. I examined every tandem I saw in shops, although actual finds were few and far between. The only other resource, advice of tandem owners, was not obtained. I personally did not know anyone who owned a tandem. Also, I tried in vain to locate the Tandem Club of America, (wrong or former addresses), in hopes that technical articles or local members could be found for help. Luckily, the articles that I had collected from *Bicycling*, "Tandem Topics," supplied the much needed tandem owner comment, albeit only one opinion.

continued

The Who, What & Where of Tandem Shopping (Continued)

I might have considered buying a used tandem if one could have been found. The League of American Wheelmen and Cyclists' Touring Club advertisements were perused to no avail. Not having the T.C.A.'s *Doubletalk* and no knowledge of the *Tandem Club Journal* from England, also did not help.

Faced with a fait accompli, I began to save towards a purchase of a new tandem. With a basic idea of what I wanted and a "rough" idea of the cost, the awful question of what make and where to buy had to be faced.

Having seen some beautiful work by Bill Boston at GEAR '78, I attempted to contact him for a price quote. Even with a S.A.S.E. enclosed I never got a reply. Not aware of other custom tandem builders locally, the next step was to consult local shops which sold mass-produced tandems.

Gitane and Motobecane models were ruled out as possibly inferior in construction design and virtually unavailable anyway. The Schwinn Paramount tandem was sound and in the running. At that time about \$1400, it would still need alterations, such as extra brakes, if future long distance touring was planned.

The price and availability of Bob Jacksons and Jack Taylors were studied. The idea of ordering one of these from a mail order catalog was sound from an economic standpoint. However, one would still be left with a possibility of improperly faced headsets and bottom brackets, a huge assembly and adjustment process, and possible equipment incompatibility. One purchase option remained, nationally known tandem shops.

Bill McCready at Bud's Bike Shop, Claremont, California, had been the author of "Tandem Topics" in *Bicycling*. A call there produced the information that there was a 20 $\frac{1}{2}$ /19 Taylor frameset available. (I had been looking for a 21/21.) Although the resulting price quote was higher than for the Schwinn with alterations or a model ordered by catalog, certain advantages prevailed. The tandem would arrive correctly assembled, properly faced, compatibly equipped, and in need of no further alterations for touring. Bill was able to lend his experiences when I was unsure whether to go with component A or B, noting how different setups would perform in tandem (pun not intended). I was also able to obtain items or services not available just anywhere, eg., a 6 cog Suntour Tandem Pro Compe freewheel or Campy cranks tapped for a 31-tooth Stronglight chainring. Indeed, the shop's experience in tandem work was worth the extra expense.

The result of my efforts was a dream come true. I remember drifting off to sleep each night thinking about the first cruise that my wife and I would take. It was to take only about 10-14 days before shipment, but I was to have many more nights for dreaming before it actually arrived.

Problems in locating the exact components desired were partially responsible for a delay. But the real culprit was summer gas lines. While Easterners were scurrying about in autos, in California, long noted for starting trends which sweep the country, long queues were in vogue. Bud's Bike Shop, like other California shops, was deluged with rusty steeds in need of immediate repair. However impatient, I somewhat understood additional delays, not to mention problems, finding an employee gas-able to take the shipment to the airport.

At long last the tandem was shipped airfreight and arrived at Newark within 24 hours. I rushed with open arms to receive it, literally! The stereotypic "baggage brute" retrieved the crate with a forklift. Therefore, when it was deposited at the loading dock I was thankful that I was there to play catcher as it pitched off the lift. Luckily, there was only a real minimum of chipped paint.

I do not suggest that everyone needs to, or would want to, pursue this route. Those with a vast knowledge of tandems and in possession of necessary tools for complete assembly might take a different course. Those who might benefit from my experiences are cyclists having had limited contact with tandems and likely as blind as I was with respect to locating the who, what, and where of tandem shopping.

continued

The Who, What & Where of Tandem Shopping (Continued)

I think it is also important to note the lack of visibility of the T.C.A., a needed authority on tandems. It perhaps suggests an area in which all tandem owners could be of assistance by disseminating information on the T.C.A to the general cycling public.

Editorial Comment: Notices have just been sent to Bicycling and Bike World about the T.C.A. Why not write them and ask that they include information about the T.C.A. in a soon to be published issue? Your assistance may just make the difference.

FOR THE STOKER'S VIEW
By Lee Ellars
Glendale, Arizona

In response to your editorial in the last issue of Doubletalk, I am submitting our approach to a rear mount speedometer installation made on a Paramount tandem (mans/mixte).

Prior to the tandem purchase the wife kept a record of her mileages via a front mount odometer, and with the beginning of tandem rides further than the initial getting together rides, the captain was always being questioned about the mileage completed upon our return. The captain's mileage appraisals would not do, the stoker wanted more precise measurements; an odometer was installed, one of the Lucas variety. After a hundred or so miles of incessant clicking, the odometer was removed and the stoker told a more accurate estimate of the mileage would be attempted. The new mileage computations worked for a couple of months and then the stoker's questions about speed started after a few fast sprints with the wind at our backs and the riders on singles left behind for a while.

An IKU tire drive speedo was purchased to satisfy the stoker's knowledge of our speed and mileage accumulations; the IKU seemed like the best choice after talking to owners of the different makes. The rear location was chosen to give the stoker more involvement in the riding as I was informed my back didn't offer all that much visibility. The standard handlebar location for the speedo head was out, due to the need for a super long cable run to either wheel. The handlebar clamp of IKU head was modified so just enough metal remained to be slipped under the front derailleur clamp.

Mounting the drive wheel proved to be a little more involved. The position had to be close enough for the cable to reach from the head to the drive wheel, revolve in the proper direction, be out of the way of the stoker's legs while riding, and be mounted in such a manner that the cable could be wound through the maze of tubes, and clear the crossover drive chainwheels while not having any sharp bends that would bind the cable. I was able to mount the wheel on the left chain stay with the cable connection on the top. From there, the cable makes a 180° bend to between the stays and under the rear bottom bracket, another 180° bend to the left of the tube connecting the two bottom brackets and then between the twin laterals running from the rear bracket to the head tube, then up to the speedo head mounted on the stoker's seat tube. Prior to final assembly, the cable received a generous application of light oil. In over 700 miles the unit has been trouble free.

See illustration on following page. Fig. 1

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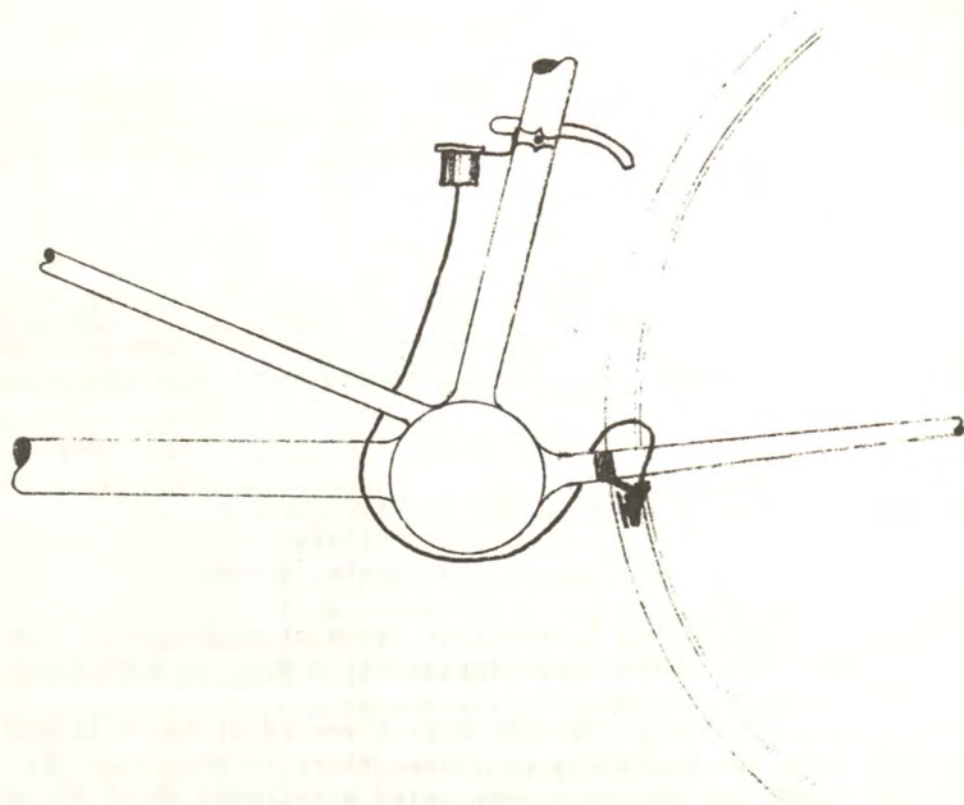


Fig. 1

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FOUR REASONS WHY THE STOKER SHOULD HAVE BRAKE CONTROL

By Phil Fisher

We use our tandem mostly for touring and we travel very slowly because we love the unpopulated country where we can meditate and dream. Our average speed on a week's tour will be thirty-five miles a day. We find ourselves at times in very hilly country. This is four-wheel-drive land with ascents and descents of 150' to 250' per mile on winding dirt roads. When we approach an unknown downhill I ask Louise to hold back the bike with the rear disc. If she cannot we stop the bike and walk. We reason that the bike should be stopable with a broken cable. We also stop periodically on a long down-hill and check the rims for heat. If I can't hold my hands on the rims we again walk. (Hot rims=blown tires.) Obviously if Louise can hold the bike with the rear disc we don't have to walk. We also have ridden where there is ten miles or more of continuous down-hill. If the stoker can spell the pilot on the brakes both riders can have rested hands. A strange stoker usually feels insecure on a first ride with the pilot or a new bike. If I sense this I ask the stoker to stop the bike at the first opportunity. The assurance that they have some control makes the ride more enjoyable and we always have a supply of stokers. I don't own a car (Louise does) and use the bike for city commuting. We often find ourselves in the left hand land in fast traffic (30-40 mph). This requires braking power to fit the traffic pattern. The rear disc may end up smoking on a fast morning run. You may notice that the stoker brake has been used in extreme conditions: extra slow, extra fast, extra bad roads, extra steep hills, etc. The Sunday morning rider should not need the extra braking. I would advise borrowing a friend's tandem with stoker brakes before spending big money. We make no appologies for our "Daisy picking tours" and we can wheel if we must. We have done nine miles in 17 minutes under pressure. To anticipate any replies -- Yes, that is 56 by 13 and well over 120 cadence.

REPLY BACK TO THE REPLY TO "OUR FIRST TANDEM"

By Phil Fisher

I hope that tandem owners will:

1. Still worry about the condition of their tires and examine bead and sidewalls periodically.
2. Check wheels (no matter what size) for flaws: especially in the rim joint.
3. Always have three working brakes should you break a cable on a fast down-hill.
4. Check the frame for cracks and/or other damage any time you feel that you can't steer the bike precisely.

This is NOT a rebuttal to "Replies" which are valid; but a hope that, because of those replies, no owner will feel too complacent about the condition of his/her bike.

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TANDEMING ABROAD

For those of you planning a trip to England, whether a fantasy or for real, you might be interested in the Tandem Club of England. They put out a nice bulletin which will provide lots of information. They also publish a parts listing yearly for those who require specialized parts which they might have available. The bulletin is about 30 pages six times per year, and is available for £2 per year, £8 per five years (\$4.50 and \$20 respectively). Contact the Membership Secretary, 25 Hendred Way, Abingdon, Oxon. OX14 2AN, England. It is a good buy, but not a substitute for the TCA bulletin. I mean, what would you do if you didn't know what was going on here either before or after your overseas jaunt?

* * * * *

NEW PRODUCTS

Cykleline Limited, 10 Conigar Crescent, USK, Gwent NP5 1RX, England, has a new monowheeled trailer for sale. For those familiar with the Jack Taylor trailer, it is very similar. They have both an aluminum alloy model and a steel framed model. It is designed for carrying camping equipment of up to 45 lbs. A two wheeled unit carries loads of up to 90 lbs. The trailer is 36" long and 18" wide, with a small wooden box shown on the prototype photograph. It attaches with a short tow bar and has a universal joint for movement. The current price quoted for export is £60, which equates to about \$145 today. Possible of interest to some taking off for England this coming summer and unable to fit two suitcases and the Queen's jewels all in their saddlebags.

* * * * *

Touring Service

Ever thought of writing a touring book of your local area? I've given it some thought and it seems quite feasible. Take one area, concentrate on things to see, and how to get there. Then put it all together with small maps on one page with descriptions of the sights on the other side.

An example would be a tour of the Williamsburg, Virginia, area. Now one would need to include both Williamsburg, Yorktown, and Jamestown, in the text, as well as local favorites, such as Surrey and Gloucester. There would be descriptions of all the sights at the Yorktown Battlefield, Jamestown's first settlement, Williamsburg's restored area, Lightfoot's pottery factory, Surrey's nuclear plant, as well as the

continued

Touring Service (Continued)

local restaurants, interesting stores, cycle shops, areas of photographic interest, and camping areas. This would be designed for the cyclist and this means of transportation. Not quite a Michelin Guide, but a similar idea for the local cycle tourist. Possible connections with the area, whether by air, rail, or car could be mentioned.

Why don't we get together and make one where each of us lives. There would be 250 booklets of trips which each tandem couple could take here in the USA. They could be made available through the TCA for use by members interested in touring within a certain area. Rather like a touring information service. Anyone want to give it a try? The first one received will earn its team a free year's TCA membership. Why not cuddle up with a hot drink, sit before the fireplace, and start your winter's contribution to tandeming. We need your copy before the snow melts and we schedule all our spring weekend trips.

* * * * *

FOR SALE

Gitane Tandem 24½ by 22½ inch mens/mens frame, all Reynolds 531 db tubing, 21½ by 24½ inch toptubes, 63½ inch wheelbase, TA fifteen spd crossover drive, Mavic/Normandy 40 spoke wheels, Mafac cantilevers, Lambertini leather covered saddles, Belleri bars, Suntour & Cyclone derailleurs and barcons. Silver gray, new condition ridden less than 150 miles, \$850. Contact Sid Russack, 5800 S. Kearney, Englewood, Co. 80111, phone (303) 773-3434.

Schwinn Paramount Tandem - black paint, double men's frame, 24" front and rear cantilever brakes and custom rear drum brake. \$800 firm, excellent condition. Write Dave Whatenbe at 5622 Maxwell Ave., St. Louis, Mo. 63123 or call days (314) 739-1444, nights (314) 832-2147.

* * * * *

PARTS

Tandem parts hard to find? Seems that no local shop has what you need. Well, possibly some of your parts were not designed for the lightweight single but for the sturdy tandem. Only problem is that few sources are found for such items. One nicely stocked source is an ocean away, but at least it does exist. The Tandem Club of Great Britain has a spares service. Each year they publish a spares list for members. Specific parts are available from Mr. R. H. Tinley, 66 Craven Ave., Binley Woods, Coventry, CV3 2JT, Great Britain. Numerous parts for older tandems are available, to include oversize headsets, column liners for solo handlebar stems, and many other items.

For those interested in specific items which are tandem peculiar, why not send an international air letter at 22¢ each and ask about the part you need. Bob is most helpful and will surely respond, especially if you send a regular letter with an international reply coupon. For those with older tandems, this might be just what you are looking for after screaming outside the tenth shop without the part you need.

The following is an attempt to publish what parts are stocked by the TCGB. No guarantee as to availability, but, they do attempt to help with older models.

THE CLUB SHOP

Subject to availability, the following items may be purchased through the Club by members. Except where indicated, prices include U.K. postage. All prices are subject to variation without notice. In all instances, cheques, etc. should be made payable to "The Tandem Club".

SPARES - available from Mr. R.H. Tinley, 134 Stanway Road, Shirley, Solihull, West Midlands B90 3JH.
66, CRAVEN AVE, BLOLEY WOODS, COVENTRY CV3 2JT
THIS LIST CANCELS ALL PREVIOUS LISTS.

N.B. - Please allow adequate time for postage; many packages are heavy and may spend 10 days in transit.

1. Headset and Handlebar Fittings

D12

E13

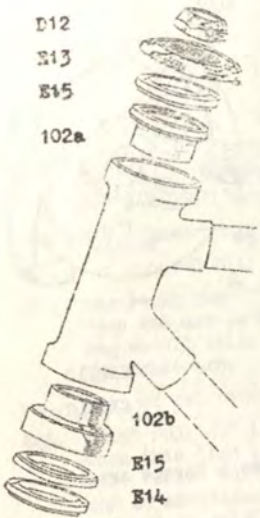
E15

102a

102b

E15

E14



101. "E" series carrier headset. £1.78

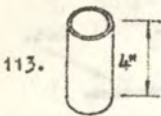
A heavy duty headset for 1" x 24 tpi. fork columns (solo) with 22 No. 3/16" balls (not supplied) in both upper and lower bearings. Comprises

- E13 screwed race
- E14 crown race
- 2 x E15 lug race

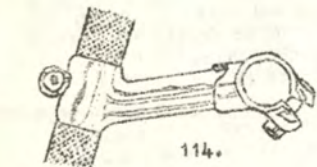
102. Pair of headset sleeves. £4.25

A pair of these sleeves used in conjunction with an "E" series headset, enable a solo fork to be fitted into a tandem head-tube. Lug races E15 are a press fit in the sleeves; the upper (102a) and lower (102b) sleeves have the same external dimensions as Brampton lug races 107 and 108 respectively.

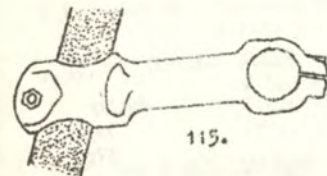
113. Column liner to fit a solo handlebar stem into a tandem fork column. The liner is locked inside the fork column with the head clamp, the handlebar stem is then locked into the column liner with the stem's expander bolt.



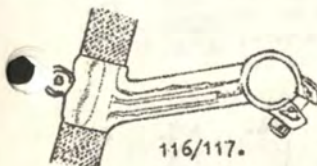
Rear Handlebar Extensions



114.



115.



116/117.

118.



All handlebar clips fit 27.2 dia. seat pins and are 100 mm long. Non-standard extensions are available to special order.

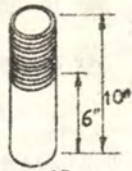
114. Andrew Hague chromed steel clip for alloy handlebars. £11.00

115. Alloy clip for alloy bars. £6.25

116. Steel clip painted, for steel bars. £5.00

117. As item 116 but chromium plated. £5.30

118. Bush to reduce seat pin clip for fitting extension to 26mm dia. seat stems. (This is the usual size for pre-war tandems). 18p



103.

103. Replacement fork column for brazing into tandem fork crown. 1 1/8" outside diameter (tandem) and 7/8" inside diameter to receive standard solo handlebar stem. The threaded portion is extra long to accommodate frame sizes 20" to 23". £5.20

104.

105.

106.

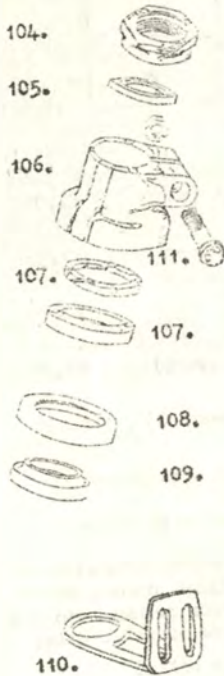
107.

107.

108.

109.

110.



Brampton Headset

for 1 1/8" o.d. fork columns using 24 No. 3/16" dia. balls in the upper bearing and 26 No. 3/16" dia. balls in the lower bearing.

104. Head locking nut (chromium plated) £1.80

105. Spacer 1/2" thick (chromium plated) 30p

106. Head clamp only (chromium plated) £2.75

107. Upper race each 90p

A press fit in the head clamp and a press fit in the upper head tube lug.

108. Lower lug race 90p

A press fit in the lower head tube lug.

109. Crown race 90p

110. Lamp bracket 25p

111. Pinch bolt for head clamp. Stainless steel 1 3/8" long x 3/8" dia. £2.40

112. Pinch bolt for seat lug. Stainless steel 1 3/8" long x 3/8" dia. £2.40

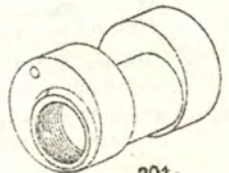
119. Milremo "Arresta" handlebar rest. Provides the stoker with the handlebar positions normally afforded by the brake hoods. each 30p



119.

2. Bottom Bracket Fittings

201. Alloy eccentric by Ken Rogers. Uses standard solo cups and standard solo cottered or cotterless axles (not supplied). £4.40

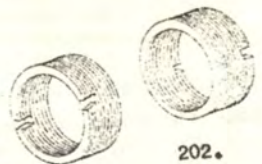


201.

202. Bottom bracket sleeves. £5.40

A pair of threaded sleeves to enable solo cups to be fitted into "oversize" bottom bracket shells.

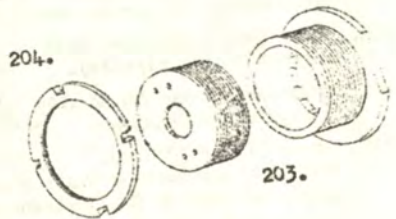
N.B. - These sleeves do not change the width of the bottom bracket shell.



202.

203. Pair of oversize bottom bracket cups. £1.80

204. Lock ring for adjusting cup. 37p

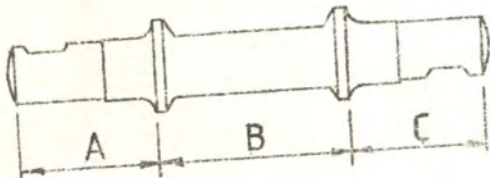


204.

203.

- 26.
205. 5/16" steel balls per 18 40p
 9 No. required each side of bracket.
206. 7.5 mm steel balls per 20 45p
 10 No. required each side of bracket.

Cottered bottom bracket axles
 Dimensions are in inches.



Code	A	B	C		
207.	1 1/4	1 5/8	1 5/16	Brampton front	£1.05
208.	1 13/16	2 1/4	1 13/16	Brampton rear	£1.95
209.	1 11/32	1 21/32	1 5/8	Front	£1.20
210.	1 11/32	2 3/16	1 7/16	Rear (5-speed)	£1.20
211.	1 11/32	2 3/16	1 13/16	Rear (10-speed)	£1.20

- N.B. - (a) 5/16" balls should be used with axles 207 and 208.
 (b) 7.5 mm balls should be used with axles 209, 210 and 211.
 (c) 207 is an original front bottom bracket axle designed for use with Williams cranks, which were more slender than modern cranks - to fit modern cranks, 209 is a more suitable axle.
212. Clamp nut and bolt for eccentric bottom bracket. each 50p

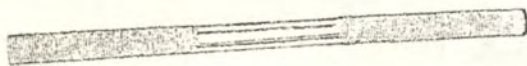


304

- 28.
304. Two piece restraining clip for hub brake torque arm. 75p

305. Relined 3 1/2" SA hub brake shoes in exchange for old shoes (one or two spring types). £1.65
306. Relined 4 3/8" SA "K" series hub brake shoes in exchange for old shoes. £1.90

N.B. - Stocks of other shoes are not held, but relining can be arranged - prices on application.



307. Wheel spindle 3/8" dia., 7 1/2" long. £1.60
 each 42p
308. 13g spokes and nipples any length up to 12" long. Any quantity in excess of 10 No. 65p

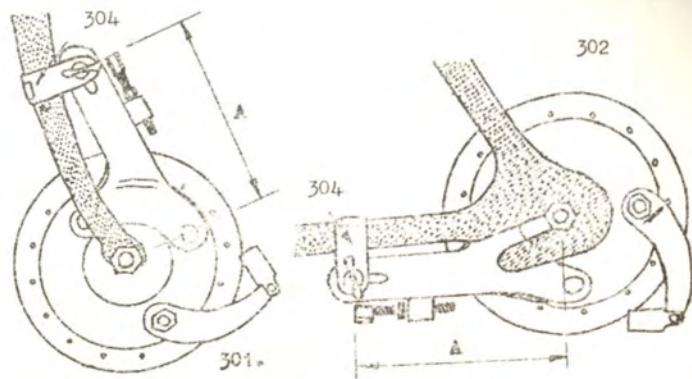
N.B. - Most rims need to be drilled out to accommodate 13g nipples. This is not recommended on sprint rims.

309. 3 mm long gear inner wire (Huret/Campag nipples). 65p
310. 3 mm long brake inner wire (pear/barrel nipples). 65p
311. Brake blocks 3" long. Modern cross section which requires minor cutting to fit Resilion shoes. each 40p

3. Wheel and Brake Spares

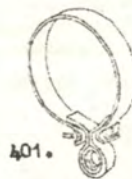
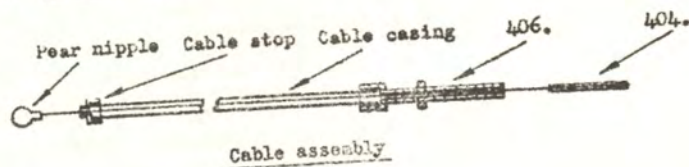
"Exceltoo" front and rear hub brakes incorporate 3 3/4" dia. drum, are drilled for 36 spokes (maximum 12 on each side) and the rear hub is threaded for imperial 5- and 6-speed freewheels. The distance 'A' from the spindle to the torque arm restraining point is variable between 3 1/2" and 4 1/2".

	width across cones	spindle length	spindle dia.	weight
front	3 3/4"	5 1/2"	3/8"	21b. 6 oz.
rear	5 1/4"	7 1/2"	11 mm	31b. 0 oz.



301. "Exceltoo" front brake hub attaches to right fork blade. £10.10
302. "Exceltoo" rear brake hub attaches to left chainstay. £10.60
- N.B. Items 301 and 302 do not include a torque arm clip (item 304).
303. "Exceltoo" small flange front hub with 3/8" dia. spindle (no hub brake). £ 2.30

4. Rod Brake Parts



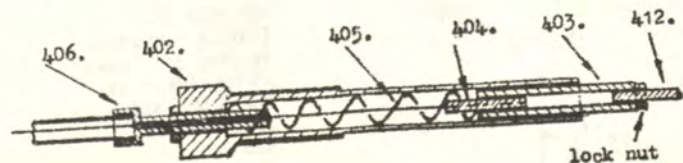
401.

401. Sleeve lug and clip to fit 402 under front bottom bracket where brazed on eye is not present. £2.50

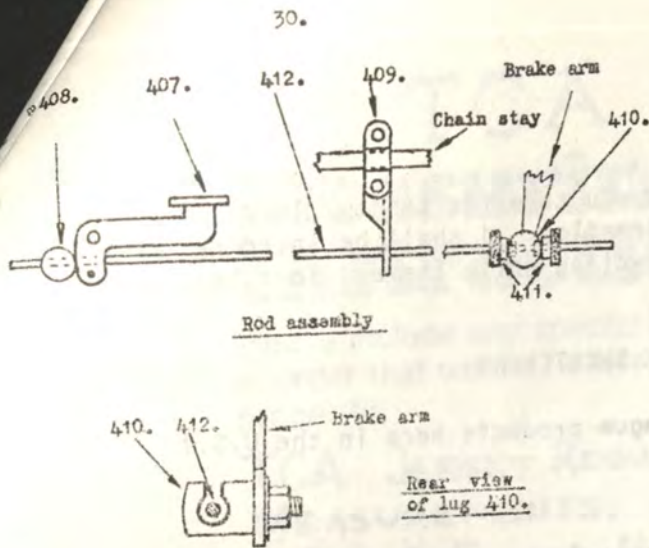
Cable/rod connection assembly.

402. Sleeve £2.20
 72p
403. Rod/cable connector 37p
404. Threaded cable nipple for soldering to cable end 17p
405. Spring 25p
406. Cable adjuster

N.B. - Rod fittings are threaded 2BA



lock nut



Rod assembly

Rear view
of lug 410.

407. Footbrake pedal and clip for circular "drainpipe". £6.50
408. Rod actuating lug 47p
409. Rod guiding clip £1.17
410. Brake arm lug 57p
When the nut is fully tightened, the lug should still be able to rotate in the brake arm.
411. Pair of rod clamping nuts 67p
412. 3/16" rod, 40" long 75p
When this item is to be posted, it will be cut into two equal lengths, and an additional item 403 should be ordered to enable the rod to be rejoined.

ADDENDA TO THE 1979 HANDBOOK.

Please make the following amendments to the text.

- P.7. Change of address:
Technical adviser - Bob Tinley, 66, Craven Avenue,
Binley Woods, Coventry CV3 2JT.
- P.22. Line 7. Spares available from Mr. R.H. Tinley,
66, Craven Avenue, Binley Woods, Coventry,
CV3 2JT
- P.23. Item 106. Head clamp (chromium plated) £4.50
inclusive of upper race 107,
but exclusive of pinch bolt.
- P.25. Item 201. Delete 'by Ken Rogers'.
- P.28. Item 309. Replace 'mm' by 'm'.
Item 310. Replace 'mm' by 'm'.
Item 311. Replace 'each' by 'pair'.
- P.31. Item 501. Delete '48t and'
Add Item 503. Grease nipples threaded 2BA each 25p.
& Item 504. Grease nipples threaded 1/2BSF each 17p.
- P.31. Line 14. T-shirts and Binders - for revised
prices see the back cover of the Journal.
- P.37. Substitute: Rough Stuff Fellowship,
F.E. Goatcher, 65, Stoneleigh Avenue,
Worcester Park, Surrey KT4 8XY.
Tel. 01-337 0522.
- P.39. Add Cambridgeshire- C.W. French, 64, Peterborough
Road, Eye, Peterborough PE6 7TB
Add Coventry- see W. Midlands.
Add Essex- Peter Bird, 30, Sunray Avenue, Hutton,
Essex. Tel. 0277 224110
- P.42. Add Warwickshire- Ian Roberts, 205A Rugby Road,
Milverton, Leamington Spa.
Add W. Midlands- A.R. Dowson, 6, Moreton Road,
Shirley, Solihull, Tel. 021-744 7515
change - Bob & Audrey Tinley, 66, Craven Ave.
Binley Woods, Coventry. Tel. 0203
542676

continued....

5. Miscellaneous

501. Chater Lea 1/8" chainrings £3.50
48t and 50t
502. Reprint of Technical Articles 14p
from Journals 23 to 36 inc.

Club badges are available from Pete Hallowell, 25 Hendred Way, Abingdon, Oxon OX14 2AN at the following prices inclusive of p. & p.: - Cloth (3/2" dia.) 85p; Metal brooch (1" dia.) 65p; Plastic transfer for your machine (2" dia.) 10p.

Tandem Club T-Shirts White, with the Club badge in dark blue, are available from Pam Hasted, 54 Penhurst Road, Bedhampton, Havant, Hants. PO9 3NX as follows (all sizes approx.): - 26", 28", 30" - £1.60; Adult 'small', 'medium' and 'large' - £1.90. Post and packing 22p for one shirt, 27p for two.

Tandem Club Journal Binders - rich blue with gold lettering (for 2 years Journals and Yearbooks) - £2.50, plus 30p post and packing per binder, are available from Pam Hasted at the above address.

T.C. Racing Shirts may be obtained from LHM Sport, 21 Exwick Road, St. Thomas, Exeter, from around £9.50 (don't forget to send your measurements). We are also negotiating with an alternative supplier whose delivery will, we hope, be shorter, but whose price is likely to be appreciably 'longer' - watch the Journal for details.

2.

- P.42. Amend 'Worcester' to read 'Worcestershire' and add Robert and Sheila Jones, 6, Camel Cottages, Holy Cross Green, Clent, Stourbridge, Belbroughton 730498.
- Add Wales - Dave Tudor, 1, Lodge Wood, New Inn, Pontypool, Gwent.
- Add Scotland - Andrew & Helen Turnbull, The Cottage, South Street, Fife.

REVISED PRICE LIST - applicable from October 1st 1979
This list cancels all previous lists.

Item No.	Price £.	Item No.	Price £.
101	1.85	211	1.30
102	4.50	212	.55
103	6.90	301	10.25
104	2.50	302	10.75
105	.35	303	2.40
106	4.50	304	.80
107	1.45	305	1.90
108	1.45	306	2.20
109	1.45	307	1.70
110	.30	308	.05 1/2
111	2.50	309	.70
112	2.50	310	.70
113	.63	311	.45
114	11.00	401	2.55
115	6.30	402	2.30
116	5.10	403	.79
117	6.10	404	.41
118	.18	405	.20
119	.33	406	.28
201	4.80	407	6.90
202	5.40	408	.52
203	1.90	409	1.21
204	.40	410	.61
205	.42	411	.73
206	.47	412	1.10
207	1.15	501	4.00
208	2.10	502	.16
209	1.30	503	.25
210	1.30	504	.17

WANTED

1. EUROPEAN TOURING INFORMATION

Anyone been to Europe recently? Did you take the tandem along? I would be most interested in your impressions and information. I shall be spending three years in Europe and would like to do a lot of cycling while there. Your help now will be greatly appreciated.

2. INFORMATION ON AVAILABILITY OF CRANK SHORTENERS

Anyone know anyone selling Andrew Hague products here in the U.S.?

3. INFORMATION ABOUT INSURANCE

Anyone have information about insurance for a tandem which is not just the 10% clause of a homeowner's policy. Anyone know of a company who will insure the tandem itself for a reasonable fee?

Send all responses to the editor for publications.

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TCA JERSEY

Measuring Instructions

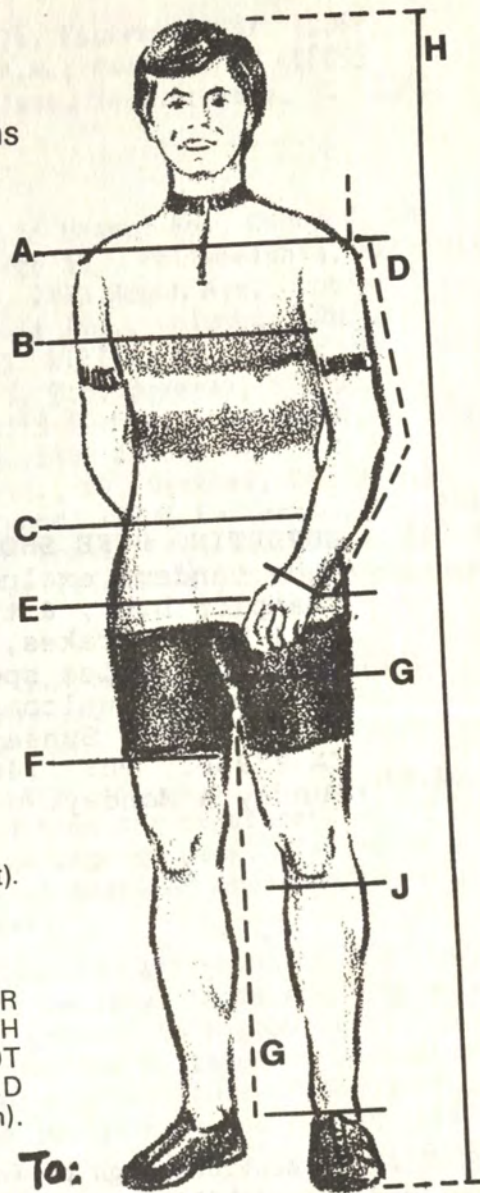
Please include any special instructions in order that we may assure you of a proper fit.

TCA JERSEY REQUIRES MEASUREMENTS: A, B, C, D, E, AND H

- (A) SHOULDERS - from seam to seam across back.
- (B) CHEST - under arms, around body.
- (C) WAIST - at natural waistline.
- (D) SLEEVE - (for long sleeve) bend arm, measure around elbow from shoulder seam to wrist bone.
- (E) HIPS - at widest point - approximately 8" below waist.
- (F) THIGH - measure at mid thigh.
- (G) INSEAM - from crotch to anklebone.
- (H) HEIGHT - (Please specify actual height).
- (J) KNICKER - from crotch to below knee (19" standard).

JERSEY LENGTH: IF YOU DESIRE OTHER THAN STANDARD LENGTH, 27", FURNISH MEASUREMENT FROM NECK SEAM, NOT INCLUDING RIBBING, TO THE DESIRED LENGTH (taken bent in riding position).

SEND ORDER DIRECTLY To:



JONES CYCLEWEAR
24 Brown Ave.
Lunenburg, Mass. 01462
TEL. 617-342-7439

TANDEM CLUB PRICES			
Wool will include screen printed logo			\$32.00
Qiana Road	"	"	24.75
Cotton/poly or Acrylic	"	"	22.00
Acrylic/Wool Blend	"	"	29.00
Script names @ \$.35 per letter			

All the above are for short sleeves. For Long Sleeves add \$3.00.
 Postage & handling charge \$1.50 for club individual address orders. Six or more to same address, and we pay shipping.

TANDEM TRIPLE CRANKSETS with special T
"renforcée" middle chainring for larger sizes
\$143.80 Up, plus mailing. The following long
cage front derailleurs in stock: Duopar,
Challenger, Cyclone, and Simplex Super
LJ 500 (adjustable width cage optional).
Rear derailleurs in stock: Simplex SX400 and
and 500GT. Sumner White Touring Components,
40 Perkins Street, New Haven, CT 06513.

CUPERTINO BIKE SHOP, Spence Wolf prop., custom
made tandems exclusively, T.A. drives, Super
Champion h.p., & tubular rims in 48 spoking,
Phil hubs, brakes, etc. Components. T.D.,
& Trois Etoiles spokes. Wheel building,
Mail orders welcomed. Use your M/C or Visa
cards. 2098 Sunset Drive, Pacific Grove,
CA 93950. Ph: (408) 313 6003. Closed
Sunday & Monday.

WHEEL SPECIALIST provides high performance, lasting
trueness, and dependability. Tubulars or light alloy
clinchers are carefully designed to suit individual
objectives. Structural improvement innovations.
Super-strong types GUARANTEED AGAINST SPOKE BREAKAGE!

Extensive stock of the best spokes. Precise lengths
for specific hub and rim sets. Light alloy nipples.
Loctiting. Super Champion rims, 24 to 48 spoke hole.

QUALITY COMPONENTS, tires and tools, at reasonable
prices. Campagnolo, Cinelli, Phil Wood, Regina, DT,
Robergel, TTT. Quantity discounts. Phone or mail
order. Sturdy shipping box for wheel or rims. For
our detailed Price List, send 30¢ stamps or coin to

CUSTOM SPECIALTIES
11100 Pangborn Ave.

Downey, CA 90241 (or phone
Ray Blum at 213 923-4038)

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 Treasurer: Malcolm Boyd, 10 Lakeside Dr., N.W., Medford, NJ 08055
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 Los Angeles: Cliff Coffey, 2404 E. Nutwood, #G27, Fullerton, CA 92631
 San Diego: John & Donna Goodloe, 8084 Donzee Ct., San Diego, CA 92123
 New Mexico: Jeri & David Strip, 800 Carlisle Blvd., SE, Albuquerque, NM 87106

DUES: \$5.00 for individual or tandem team membership (6 issues).
 Doubletalk is published bimonthly and a subscription is included with membership in the TCA.

TCA PATCHES: 4" x 4½", \$2.25 each; TCA T-SHIRTS: XS, S, M, L, XL, \$4.50
 both available tax and postpaid from the treasurer.
 T-Shirts are Light Blue with TCA Logo on back, Tandem on breast with words "Tandem Club of America" underneath. All writing in Dark Blue. No pockets.

MEMBERSHIP: Next issue we will attempt to publish a listing of all TCA members as of January 31, 1980. This will be as up to date a list as we have. Why not renew now, and help us get off to a good start? Below is a membership application form, good for 6 issues of Doubletalk, at a cost of \$5.00. Please fill one out for yourself and another for any friend who you believe would enjoy joining you during this upcoming cycling season. You could not give a nicer Christmas present.

TCA MEMBERSHIP APPLICATION

NAME(S) _____

ADDRESS _____

CITY & STATE _____ ZIP _____

Checks may be made payable to TCA and should be sent to the treasurer.