DOUBLETALK

BULLETIN OF THE

VOLUME 3, NO. 3 JANUARY - AUGUST 1979



CLUB BUSINESS
By Malcolm Boyd

Over the course of the past year, some of you have noted that <u>DOUBLETALK</u> has slid from printing bimonthly to printing occasionally and irregularly. The reasons for this are multiple, and I'd like to take a little time and space to explain them.

First, my personal time has disappeared. This is important only in, for better or worse, mostly worse, I am the Tandem Club. This past year I completed an aerodynamic fairing for a tandem for the 1978 Human Powered Speed Championships (and part of an article for DoubleTalk about it) as partial requirement for college, graduated, found two different jobs, moved from L.A. to Philly, and recently became involved on the working side of a "labor action" (read strike) which entailed working 12 hour days, 7 days per week for the past 17 weeks. So if you've been wondering where the January and March issues are, now you know.

As a result, we will issue two extra issues in the 1979 subscriptions which supposedly end in August, but will be extended to December. Thus, in 1980, our subscriptions will run the calendar year. In this way, our loyal dues-paying members will get at least five issues.

To compound our problems, in the past few months we have had two volunteers, one for secretary and one for editor (no names, I'm not that malicious!) resign after essentially no output other than to delay us by a month each. It is for this reason that the first two issues of the year (September and November 1978) arrived so close together and none have been printed since then. To those of you who have written requesting information, my apologies; these more pressing matters have precluded a reply.

Thirdly, the Tandem Club has grown so large that it is, or was, impossible for a few volunteers to prepare and mail <u>DoubleTalk</u>. We are attacking this problem in a twofold manner. The typing, reproduction, collating and mailing operations are being contracted out to a firm which specializes in this sort of operation. This will greatly reduce the workload on the editor and secretary. To assist the treasurer and secretary, the membership list is being committed to a computer. This will make it possible to sort bulk mail quickly, publish membership directories, and keep the club listing up to date. While these services will cost more, operation of the club will be expedited.

Club Business (continued)

In a way, it is ironic that our growth was nearly our demise. Although jected an organization of about 100 members, we are currently in the 350-400 sus scription range. To compare the workload, this is equal to a 700-800 person blke club, which would make us about the fourth largest in the US! The result has been that three volunteers - editor, secretary and treasurer just couldn't keep up with the workload. This and the fact that most (but not all) volunteers were not voluntary but rather subscripted lead to this situation.

The apathy of the membership contributes as well. Requests for nominations to an 800 member club resulted in zero offers. A band of my personal friends whose arms I twisted were press ganged, and placed on a ballot in 1978 with some procedural changes to the bylaws. Eight of 352 ballots were returned. So you get what you deserve....lousy service.

Now, a year later and hopefully wiser, I have recruited a band of fanatics who seem more sincere. Peter Hutchison of Esperence, New York is our secretary; Dwight Kitchens of Newport News, Virginia will assume the editorship with this issue. I realize that this is contrary to the bylaws, but tough luck. If you want to see the club continue, I'm sure you will see it my way.

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CALANDAR OF EVENTS

SEPTEMBER 1-3

SOUTHERN TANDEM RALLY '79, STONE MOUNTAIN, GEORGIA 3 days of rides/tour, 30-80 miles, camping only with full cooking facilities and sagged gear. \$6.00 Registration. Phil Winter, 6117 Peachtree Corners Circle, Norcross, Georgia 30092 (404) 448-7377.

OCTOBER 5-8

TANDEM '79, CAPE COD, MASSACHUSETTS Flat to rolling terrain along Cape Cod's National Seashore. Tandem Club of America. Send S.A.S.E. before August 10th to Emery & Anne Glass, 1 Dodge Road, Marblehead, Ma. 01945, 617-613-3239. TCA Members - because of late publication, call Emery & Anne to make sure you can register!

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FROM THE STEERER'S VIEW By Dwight Kitchens

Lack of interest caused this bulletin to be produced. From one potential editor to another, the drafts have made the circuit. The current editor has fallen into the same trap as the past two, a 16-hour job five days a week with possible duty on each weekend. Being that editor, I've been told that the long hours will only last for 18 months. Interested in seeing another issue of the Tandem Club Bulletin? Well, I'll certainly need your help. I'm too tired to write articles under fictitious names when I come home.

"How can I help?" is the question I hope you pose. Why not sit down and either write or type a few thoughts about your latest product review, the newest addition to your tandem, the ride which you and your stoker finally took, the best way to plan for next year's ride, how to find odd-sized parts, etc. It doesn't take an extraordinary amount of genius, just a little pity for the editor.

Why not make a pledge now, while reading this editorial, that you will write one article by Saturday and forward it to my address. You will receive two direct benefits, one being the pride in knowing that you have helped and another that you will have when you see your thoughts in print. Hope to hear from you shortly.

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FROM THE STOKER'S VIEW By Phyllis Kitchens

This issue began with high hopes--Dwight was going to massage the articles provided by Malcolm and the long-awaited next issue of DOUBLETALK would be in the hands of TCA members. As fate would have it, the same week Dwight assumed editorship of DOUBLETALK, he was transferred from his eight-hour-day, five days-a-week job to one requiring not less than 80 hours a week and any time of the night or day. The US Army never lets you get complacent.

Rather than call Malcolm back and beg off, we agreed that I would edit the first issue-for better or worse-- so that there would be a July/August issue. What you will be reading in this issue has not been edited by a "bikie", but rather by a "horsie" who occasionally leaves Wilhelm in the stable and functions as a stoker. Therefore, if there are some unusual interpretations of bikie terminology, please bear in mind that this editor knows more about hooves than wheels. Future issues--Yes, there will be!--will be published more or less on time, bi-monthly. What we need are more articles from our members (see the box elsewhere for format.) Or if you have some ideas for a regular (or irregular) column you would like to write, let us know. The success of DOUBLETALK depends on all of us.

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In this issue of DOUBLETALK, you will find two distinctly different methods of getting your tandem to its overseas destination. In the following article, the author chose to present an obviously vulnerable object to the baggage handlers—a tandem in a plastic bag—and rely on their perception that it is fragile and should be handled carefully.

TOURING THE TYROL ON A TANDEM By Diane Steele

When my husband Bob called home from work last spring suggesting a trip to Austria, I did not become enthusiastic until he said, "Let's take the tandem!" Although I had been to Europe several times before we were married, and even spoke German, I never really wanted to go back until Bob suggested Bicycling. Bob converted our Paramount ten-speed to a fifteen-speed with "honest-to-goodness" Alpine gearing. We ordered extra tires, inner tubes, panniers, wool cycling clothing, and we were ready for an eight-day bike tour.

Shipping the bike posed no problem. After checking with the tour operators, we decided to put the bike in a plastic bag and just take it up to the ticket counter. It weighed about 50 pounds, well within the 88 pounds allowed between the two of us. At the airport we purchased an American Airlines Bike Bag for \$3.50. It wasn't quite big enough for a 7'6" tandem, but Bob extended the bag with some more plastic and an iron. He also removed the pedals and protected the handlebar controls and derailleurs with packaging material. He reduced the pressure in the tires to about 40 psi and swiveled the stoker's handlebars so they didn't protrude. We selected the plastic bag method of packing because the handlers could see the bicycle through the plastic, and could load and unload it before or after the rest of the baggage. That way it didn't get tossed around as it might have if it were in a box.

Once overseas, Bob and I had the time of our lives! For the most part we tried to restrict ourselves to about sixty miles a day with the tandem so we would have plenty of time for picture-taking, shopping, visiting small towns, "Jause" (afternoon coffee), etc. One factor contributing to our enjoyment of the vacation was a very good map. In June I had written to the Austrian OAMTC (equivalent of AAA) and asked if I could buy a large map of the Tyrol. Then I made copies of several sections of it and brought them all along with us. Each night we would plan the next day's route and mark our copies with a yellow marker.

We did allow ourselves one extravagance. After several days of easy 60-mile rides, we decided to get up early (5:00), have breakfast in our room, and head for Berchtesgaden the next day. We left by 6:00 and by 11:00 we were headed up a mountain pass on a cobblestone highway still about 30 miles from Berchtesgaden! We had to decide whether to stay overnight near Berchtesgaden or turn around reasonably soon and head back to our hotel and warm showers at ltter, where we were staying.

I didn't mind skipping Berchtesgaden, but I sure didn't want to ride down that cobblestone highway! Bob looked at the map and discovered an alternate route (marked by a very thin line) over the mountains. After stopping for lunch (fruit, bread and dessert) in a charming Bavarian town called Ramsau, we headed for the Hintersee and the alternate route. What an adventure! As we rode I thought of Maria VonTrapp escaping from the Nazis over the mountains. For all I knew she took our route! About five miles from the Austrian border the road narrowed and we discovered a wooden gate with a guard who wouldn't let any cars through unless he knew the motorists. (Later, we discovered why cars were not allowed into this area. There were 30% grades, followed by sections of the road which clearly would become stream beds when the winter and spring snows melted.) On the Austrian side, the road become a bridle path. We were to descend a dirt road, uneven with plenty of rocks, a 30% grade, no guard rails, and a sheer 750 ft. drop on the right! It was so dangerous the wheels locked, and we had to walk the bike down the hill!

Touring The Tyrol On A Tandem (continued)

We finally returned to our hotel by 6:00 p.m. that day, having crossed seven mountain passes (most were mild!) and having bicycled 106 miles. I was so tired, I don't even remember whether I ate supper that night or not. But it was surely my most memorable day of bicycling ever.

I highly recommend the bicycling way to visit a small section of Europe. In fact, I would like to go back in a few years, taking two children and two tandems! Perhaps we could go to Holland--it's supposed to be a bicyclist's Paradise!

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This article describes a different approach to the shipping problem -- to fabricate a strong but lightweight box which would protect the tandem from abuse by the baggage handlers.

PACKING A TANDEM FOR ENGLAND By Dwight and Phyllis Kitchens

Ever since we assembled our Bob Jackson tandem, we have dreamed about riding it in England. We were understandably excited to have the opportunity to act out our fantasy when Phyl was invited to present a paper in London the first part of November, 1978.

We contacted a number of airlines about shipping the tandem as air freight or as baggage; however, the cost quickly excluded air freight. We found that Pan American and British Airways have somewhat different rules on baggage from other airlines operating between Washington's Dulles International Airport and Heathrow, outside London. These rules state that the combined length, width and girth (1/w/g) of both checked bags must not exceed 104 inches and neither bag can weigh more than 70 lbs. However, these airlines allow a passenger to check one small bag, not exceeding 44 inches 1/w/g, and a bicycle as part of the baggage.

After reading numerous articles in BIKE WORLD and BICYCLING which described damage to bikes shipped by air, we decided to build a box capable of withstanding the trauma of the journey, but not so heavy as to be unmanageable. To conform to the regulations, the box and bike had to weigh 70 lbs. or less.

Considering the size of a tandem, we decided to remove the wheels to shorten its length and lower the profile. This had the advantage of allowing us to stabilize the the bike within the box at the fork and rear dropouts. Our idea was to make one modified bike box from four standard-sized boxes provided free by our local dealer, Conti's Bike Shop. The modified box was to be large enough to hold the frame and most of our bike gear (luggage racks, panniers, etc.), and would close up like a gift box with the top nesting down over the bottom.

We first cut the boxes so that each had only one end panel; then we separated the boxes into two sets. We next cut the sides out of one set of the boxes, which left us with two pieces which had a bottom (the largest section), two long sides and one short side. Next we fitted the two pieces together, slipping one section over the continued

other to obtain one complete bottom box long enough to hold our tandem frame. Since the two original bike boxes were the same size, it was not easy to slip them together with the together together the found that bending the sides of one box would give us a smooth, tight fit between the two sections. After obtaining the correct length we fastened the sections together with wood glue and used weights and clamps to hold the sections in place until they dried.

This fabricated section became the bottom of our box into which the tandem would be placed. In order to stabilize our precious investment, we added fittings to the box bottom to prevent the bike from moving. We glued 2 wooden blocks to one long side of the box. We drilled a hole in the front block to accommodate a used axle and quick release skewer. This allowed us to clamp the fork into the fixture, providing stability and keeping the bottom bracket and tubing off the bottom of the box. Because we couldn't find a similar release wide enough for the rear dropouts in our parts box, we just drove nails in the second wooden block. When we loaded the bike, we slid the dropouts over the nails before securing the fork in the quick release fixture. (A sketch of our box is included to clarify this description.)

To further protect the bottom bracket shells and tubing from being crushed, we placed 2" x 1" stringers the length of the box and short sections in each corner. We thought this was necessary due to the length of the box, because it might not always be set down flat, and we didn't want anything penetrating the box when it was stored upright. We fitted some small component boxes inside, where we could store the disc brakes, derailleur, pedals, etc. Most components, such as the cranks, handlebars, etc., were wrapped with 1/2 inch thick foam and placed over portions of the frame. Wheels were wrapped in garbage bags and placed one on each side of the frame.

Now that we had the bottom of the box fabricated, we needed to make a top which would slip tightly over the bottom section. We started off as we had for the bottom section using the third and fourth of our standard bike boxes. We made the top section about 1/2 inch longer and 1/2 inch wider than the bottom.

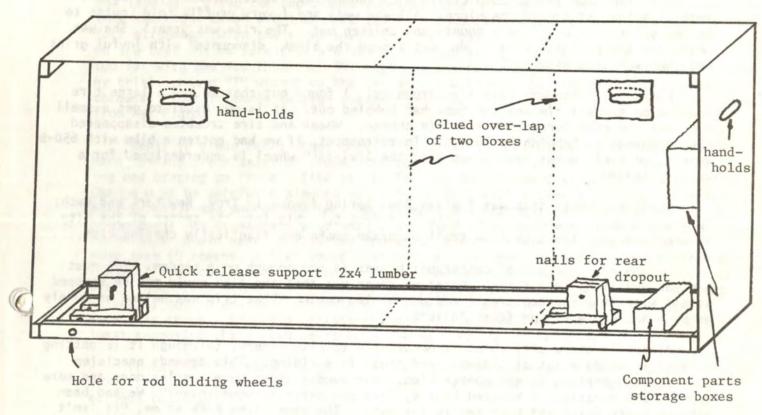
Because a box this size would be a nightmare to handle, we looked for a way to improve its mobility. We decided to put wheels on one end which could be removed once we got to the airport. We used a threaded steel rod for an axle, with nuts and washers to hold two lawnmower wheels. We drilled a second hole through the front wooden block, a little more forward than the skewer, and low enough to insure the wheels projected 2 to 3 inches below the bottom of the box. For handholds, we used the original ones on each side of the box. We reinforced these from the inside by gluing additional cardboard around the cut-outs. (We later discovered the cutouts needed extra reinforcement; it would have been better to have used masonite or something similar.) We also cut an additional handhold in the opposite end from the wheels to give us something to hold onto when maneuvering the box around airports. To insure that the box eventually arrived home, in case the tandem and its riders were separated in the friendly skies, we stenciled our name and address on both sides of the box in 5 inch high letters which proclaimed "BICYCLE - HANDLE WITH CARE."

Our box was held together with fiberglass reinforced tape and three ropes to make it easier for the airline baggage handlers. We took along extra fiberglass tape to close the box on the way home as well. When we reached Heathrow, we boarded a British Airways bus, which had a baggage trailer in tow carrying our box and other luggage, to London's West Terminal. At the spacious terminal we reassembled the continued

Packing a Tandem for England (continued)

tandem and stored the box at the "left luggage" office for a nominal fee. When our vacation was over, we reclaimed the box, packed up the bike and departed for Heathrow again by bus.

Our pains in disassembling much of the cycle and packing it this way resulted in no damage on the trip. We heartily recommend fabricating such a tandem shipping box for airline travel. Since our trip, we have loaned the box to a pair of fellow tandemists who are leaving soon for a three-week tour of England and France.



To prevent the wheels and washers from tearing the outside of the box, I recommend gluing 5-12" squares on the outside corners so that they, rather than the cardboard, will absorb the friction of the rotating wheels. Of course, they must have a hole through which you pass the steel rod.

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FOOTNOTE: In both cases, plastic bag and box, the tandems suffered no damage in shipping. Was this just blind luck? Anyone have some good ideas on how to get a tandem to Cape Cod for Tandem 79 without driving one's automobile or riding it?

OUR FIRST TANDEM, OR: LET THE BUYER BEWARE (Even Machine Designers with Classic Tandems) By Phil Fisher, Albany, N. Y.

My wife Louise and I were both looking for ways to improve our physical health and fitness. I enjoyed biking and although Louise didn't ride I decided to buy a tandem so we could ride together for health, club tours and togetherness. The choice wasn't large. We finally bought an Atala lady-back from the Down Tube in Albany, New York.

The bike came almost complete in a cardboard box. After assembly and adjustment, I soloed it around the block. All was well and I very gruffly told Louise to get on before she could have doubts and chicken out. The ride was great! She was instantly the perfect stoker! We went around the block, dismounted with joyful grins and the rear tire blew out!

Lesson #1: Tandems have tire troubles! I found out that we had a large tire mounted on a small rim and the tube had bubbled out. It is not usual to get a small rim, but the only correction is a rim change. Wheel and tire troubles disappeared with a change to Schwinn "LeTours". In retrospect, if we had gotten a bike with 650-B wheels, we would never have known that the 27x1-1/4" wheel is underdesigned for a touring tandem.

Our first short trip was 3 miles down Spring Avenue in Troy, New York and back. Spring Avenue is a gentle three mile hill from Suburbia into the center of the city. We descended into the city in a trail of brake smoke and frantically chasing kids.

Lesson #2: One set of centerpull brakes is not enough on a tandem. You must have an auxiliary rear brake! Later we found out that the bike could not be stopped at all with only one centerpull and one broken cable. That trip was halted as surely as by a serious wheel or frame failure.

Albany is not a city which is hospitable to bike riders, (although it is getting better) so we do a lot of sidewalk and cross lots riding. This demands precision steering and perfect stoker cooperation. Our Sunday rides were getting more and more awkward and erratic. I berated Louise, "Are you extra nervous today?" We had been hitting every brick and beer can in the path. She came right back at me, "It isn't me! I thought it was you!" So, off the bike and we did our little nutty dance to test the bike where she pushes her seat to the right and I push mine to the left and vise versa. By twisting the frame like this, we found that the ladyback bars had broken, thus making the bike uncontrollable.

Lesson #3: Should your bike feel whippy, insecure, or imprecise, check for a broken frame and/or bad hubs, axles or wheels.

This whole article may seem oversimplistic, but I think it important to repeat these points for new tandem riders. We tend to accept the machines we buy as perfect when, they may indeed have serious and dangerous design flaws.

As a machine designer, I could not forsee these problems, which, with a little bad luck, could have led to disaster.

I now tell people who ask at my shop to buy the tandem they like and be prepared to make structural changes. "Buy the bike you like, but you may have to burn the paint."

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TECHNICAL CORNER

Reply to Bruce Perry about pedals unscrewing: Yes they will!!! No amount of tightening can negate the great rolling force which un-winds them. If you have steel cranks use "Bearing Mount Grade Locktite" from most auto parts stores on the pedals of your reversed cranks. Don't do this on alloy cranks because you must use heat to loosen them (about 750F) and this will weaken the alloy too much. Instead tap the cranks with both right and left hand taps. I know this sounds wrong; but I have had only one failure in about 250 tries and we salvaged that with a Service Cycle bushing repair kit #52-171. I use Raleigh-Rampar taps because they are long and tapered. Clamp the two cranks together face to face and drive the right tap thru the right crank and then thru the left one. Thus tapping the left crank in perfect alighnment with the right one. Then vice versa and you have it. Use kerosene on the taps and be sure they are sharp. If you are using French pedals don't go too far with the new threads. The taps are tapered and you can adjust for tightness by trial. Use a "T" wrench on the tap or you will make bell-mouthed and crooked threads. Your friendly Raleigh dealer should have the taps. I have bought the equal from Mel Pinto.

Reply to Bruce Perry about converting tandems to front drive: Disadvantages - Hard to find crank axles of proper length. Some parts must be made. Need some bashing and brazing on frame. Bike is dirtier and more awkward to store and transport. Change must be carefully planned so chain doesn't tick stoker's right crank arm. Bike is about two pounds heavier. Deraileurs and gear sets are expensive. Advantages: No crosschain problem. Chain line is so long you can use any gears. Much longer chain wear. Unlimited number of speeds (I use 15 speeds -3 by 5). I have seen 60 speeds; a five speed rear hub, a four speed conversion and three chain rings!!! You can use all of your speeds. You can even cadence up hills if you desire. Much less maintainance when properly designed and adjusted. I build front drives by choice and mine commonly go a year or 2500 miles with only a monthly eccentric check. No chain replacement and little derailleur adjustment. Use the least expensive chain with polished pin ends. You won't need costly trick chains.

If interest is high enough I will write and illustrate an article about front drive tandems. My opinion is that a front drive tandem is the only design for serious touring.

Reply to Item #3 in "Notes on Brakes" by Harvey Sachs.

I will only discuss the Shimano-Bridgestone disc because that is the one with which I have had much experience.

The Shimano disc doesn't work very well as a primary brake (pilot has the handles) because it stops best with a lot of heat build up. On a bike this is above 20 MPH with two riders. If the bike is ridden solo there is no hint of this slow stopping problem. So be warned!!!

This brake works best on a heavy touring tandem as a secondary brake (stoker has the handles), if the gross weight is over 400 lbs. I use two; one on each wheel. The front disc is only about half as effective as the back one because of the long twisty cable run. I have not tried hydraulics because of expense and the complex maintainence which some of my customers would not do.

continued

Technical Corner (continued)

When using these discs I encourage the stoker to slow and hold the bike to a reasonable speed; this assures a stoker with poor hand strength that he or she can indeed control speed.

On long hills the heat output is hard to visualize. The pads smoke and stink and the disc turns color; but there is a benefit. The hotter the brake the better it stops. Even weak hands are enough to stop the bike.

The hub must be modified to hold the torque of the disc. I will furnish sketches to Double Talk of the modified hubs and all other parts needed for installation if there is enough requests.

I would like to compare the Shimano disc and the Phil disc as best as I can.

Price: About equal since the Shimano disc is really not a \$20,00 disc when fully modified. (Don't try to use the hub supplied with the brake kit. It is too narrow and could be unsafe on a tandem).

Stopping Ability: About equal from all reports-1 know that two Shimano discs on a 450 lb. tandem is adequate on the steepest hills.

Service: I think my Shimano modification is easier to service than the Phil disc. The only tool needed to remove my disc is a small Allen wrench and the hands. Adjustment is about once a month on a bike used daily and pads can be cut out of Chevy pads if replacement is difficult. (Good machinists only!)

My own hub takes Campy Record balls, cones and cups and is easily understood by a bike mechanic. I use common easily obtained brake cables but the housing is 1/4 inch motorcycle housing and the stoppers are specially made. This cuts the braking effort almost in half.

To sum up: I think the Shimano disc and caliper is very adequate if properly installed.

Phil Fisher

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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 make 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.



SOUTHERN TANDEM RALLY '79 September 1-3, 1979



- WHAT IS IT? An event especially planned for people who own those funny bikes with two seats and two sets of pedals, and who enjoy riding them with other people. We think it's the first of its kind held in the South. There's three days of cycling planned, with rides ranging from 30 miles to 80 miles through some of the finest tandem country in Georgia. While it's called the Southern Rally, all tandem cyclists are invited to come enjoy our Southern Hospitality.
- WHEN & WHERE IS IT? The rally is scheduled for Labor Day Weekend, September 1-3, 1979. All tandem teams should meet at 9:00 a.m., EDT, on September 1 at the train station in Stone Mountain, Georgia, east of Atlanta. That's in downtown Stone Mountain next to City Hall, NOT in the Park. There is plenty of free parking there for the weekend. From Stone Mountain, the rally goes to Hard Labor Creek State Park.
- WHAT ARE THE ACCOMMODATIONS? It's camping out time! The cabins at Hard Labor Creek State Park are already booked solid, but the park assures us that plenty of tent spaces are available. There are shower facilities and flush toilets. There's even a swimming hole, and more! We've also got a refrigerator provided to keep your food and beverages cold, and we'll even provide cooking facilities and utensils. A sag will carry your gear (tent and personal belongings) back after the rally.
- WHAT'S IT COST? \$6.00 registration fee covers maps, the sagwagon service, and an information packet. Camping fee is \$3.50/tent/night. The fee allows full use of all park facilities. The food cost is entirely up to you.
- HOW TO SIGN UP? Fill out the registration form and mail it, with a check or money order for \$6.00, to:

Phil Winter 6117 Peachtree Corners Circle Norcross, Ga 30092

The registration deadline is August 28, 1979

MORE INFORMATION? Call either of the ride organizers before 11:00 p.m. EDT, or send your request with a SASE to:

RALLY ORGANIZERS

Jack Goertz Rt. 19, Box 248 Birmingham, AL 35244 (205)-967-2829

Phil Winter 6117 Peachtree Corners Circle Norcross, GA 30092 (404)-448-7377

REGISTRATION & RELEASE OF ORGANIZERS & SPONSORS:

By signing this release, We understand the intent and agree to absolve all sponsors, organizers, and associated entities, be they individuals or organizations, singly and collectively, of all blame for any injury, misadventure, harm, loss, or inconvenience suffered as a result of taking part in any ride or in connection with any activity result of taking part in any ride or in connection with any activity associated with or related to the Southern Tandem Rally. (Parent or guardian must sign for all entrants under 19).

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Fill out and mail with \$6.00 registration fee to Phil Winter, 6117 Peachtree Corners Circle, Norcross, GA 30092. Deadline is August 28, 1979.

XEROX COPIES ARE OKAY

FOR SALE AND WANTED ITEMS

FOR SALE: Jack Taylor 23/22 super touring tandem frame. Double gent, brazed fittings for handlebar end shifters. Built for Phil Wood front and rear hubs, disc brakes front and rear and will take 650 or 27" (700) wheels. Front and rear pannier carriers, Phil Wood BB, Lefol alloy fender guards. \$850.00. Ed Cockman, P. O. Box 3314, Incline Village, Nevada 89450 702-831-3869. The color is Metallic Blue.

FOR SALE: SCHWINN PARAMOUNT TANDEM 22-19 DIAMOND - MIXTE GREEN.

PRICE \$600.00 OWEN MOORE, 411 NORTH 4TH STREET, LEMOGNE, PA.

17043. TELEPHONE: 717-761-4822

FOR SALE: GITANE 10 SPEED TANDEM, 22½"-19½" MENS/MIXTE, COMPLETELY REBUILT, NEW PAINT, MANY NEW PARTS AND MANY EXTRAS INCLUDING BROOKS SADDLES, MATTHAUSER BRAKES, ALUMINUM RIMS, TIPO Q/R FRONT HUB, SENTOUR DERAILLERS WITH END SHIFTERS, PLATFORM PEDALS WITH TOE CLIPS, SCHWINN NYLON TIRES. BIKE HAS BEEN RIDDEN 2 MILES SINCE REBUILD. B.O. OVER \$375. CALL OR WRITE JERRY CASEY AT 79 MERAINE STREET, JAMACIA PLAINS, MARYLAND PHONE: 617-524-1986.

FOR SALE: ONE PAIR OF MAXI CAR HUBS, 140 MM REAR, SEALED BEARING WITH REAR DRUM BRAKE, SLIGHTLY USED. THE PRICE IS \$50.00.

ALSO FOR SALE, NEW 650B PAIR OF TIRES AND TUBES--\$10.00.

PLEASE CONTACT DON CARLTON, 2104 SOUTH MICHIGAN AVENUE.

CALDWELL, IDAHO 83605.

FOR SALE AND WANTED ITEMS

FOR SALE: SCHWINN PARAMOUNT 22-19 M/L AVOCET SADDLES, 15 SPEED TA CRANK 3T BARS AND STEM, MATHAUSER-MAFAC BRAKES, SHIMANO BAR-ENDS, ETC. \$850, PLUS SHIPPING, USED 300 MILES.

RONN E. RITZ, 1424 BURNETT, AMES, IOWA 50010 PHONE: 515-232-0972

TANDEM CAPTAIN WANTED:

Interested in Riding a 25" Paramount tandem around the Northern Midwest area weekends and evenings? No rental fee, I'm just looking for someone to Ride my tandem with. Call after 6.

GEORGIA TRUEBLOOD, 825 RIDGE AVENUE, EVANSTON, ILL. 60202
PHONE: 312-328-1197

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West and and the true of the state of these van toses--210'0.

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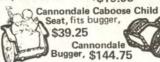


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