

13TH ANNUAL BRANDYWINE TOUR!



DELAWARE VALLEY
BICYCLE CLUB

P O BOX 497 MEDIA PA. 19063

FREE!

SUMMER 1989

BEAM ME UP, SCOTTY!



NEW BIKE SHOP IN HAVERTOWN

The Bicycle Chain, 26 Brookline Blvd, right off of Darby Rd. in Havertown, is the newest addition to the cycling community. Owner Jonathan Newman is an "old" pro in the business, having managed at one of the local shops as well as selling parts and accessories for some of the area's major suppliers. I promised Jon that the first "one" would be on me. Perhaps we'll be seeing advertisements for The Bicycle Chain in upcoming issues of the newsletter.

QUOTE

"When one door closes, another opens; but we often look so long and regretfully upon the closed door that we do not see the one which has opened for us."

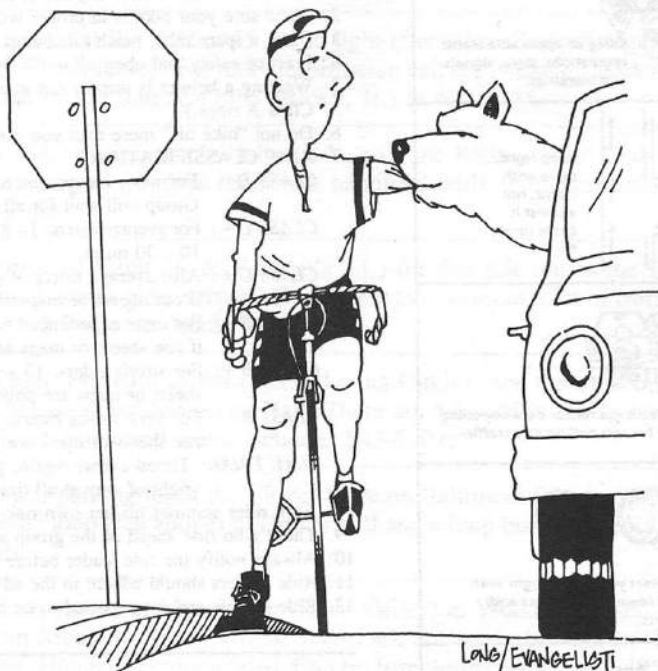
- Alexander Graham Bell

This will be my final issue as editor of this newsletter.

As much as I have enjoyed doing the job for the past year and a half, the responsibilities of raising a family are competing for the already too little bit of free time that I have. My three year-old son, Joseph, who rides a 12" BMX while wearing an extra-small V1-Pro, is already darting past me in the driveway shouting, "You can't catch me!" My four month-old daughter, Lucy, already knows how to win her daddy's heart with a big smile. I rest my case.

I would like to express my gratitude to Mike Keating and Ira Josephs for all of the time they have put into the ride calander each month. I would also like to thank the past editor, Rich Patterson, for continuing to put together the Special Events section until family responsibilities got the better of him. I also thank all of you who took time to write or call just to say "Hey, how's it going?" But what the heck...you still have my number!

Illustration by Raymond Long and James Evangelisti



Always use proper hand signals.

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Media, PA 19063
891-9098

C/D Rides: Ira Josephs
10 Applebough La.
Rose Valley, PA 19065
565-4058

*Please contact the Ride Coordinators
before the 7th of each month.*

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The views expressed in this publication are not necessarily the views of the Delaware Valley Bicycle Club, nor do we endorse products or services advertised.

Letters to the Editor must be signed to be considered for publication.

Club Merchandise

Club T-Shirts \$6.00
Club Car Decals50
Club Bike Decal25
Club Water Bottle 2.00
Club Patches 1.25

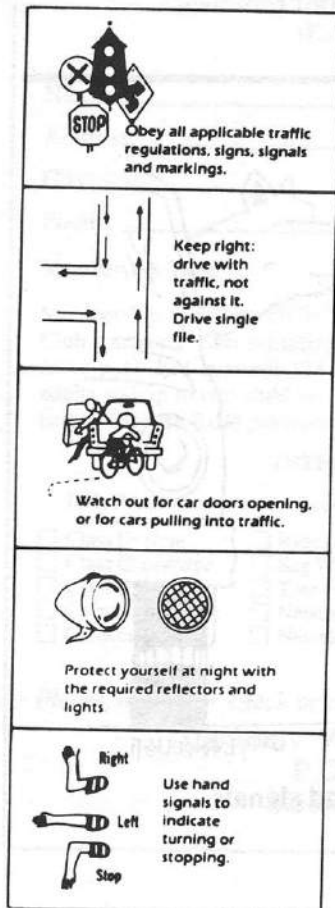
DVBC Meeting Place

Unitarian Universalist Church of Delaware County, 145 W. Rose Tree Road (near Rt. 252 & Rose Tree Park). First Monday of each month. Doors open at 7:00 P.M. Public is welcome.

Ride Guidelines

1. Arrive 10 to 15 minutes early and be **READY TO LEAVE ON TIME!** Rides will start no more than 5 to 7 minutes late!
2. Make sure your bike is in proper working order **BEFORE** you arrive.
3. Carry a spare tube, patch kit, pump and water bottle.
4. Practice safety and obey *all* traffic laws.
5. Wearing a helmet is usually not mandatory, but is encouraged. (A helmet is mandatory for all time trials and some Class A rides.)
6. Do not "bike off" more than you can do. Go on rides within your ability, interest and experience.
7. **RIDE CLASSIFICATIONS:**
 - CLASS D:** For new, inexperienced riders or families: speed 5 - 7 mph, frequent stops, as few hills as possible. Group will wait for all riders. Mileage usually less than 10 miles, but longer distances permissible.
 - CLASS C-:** For average riders: 7 - 8 mph, rest stops as needed. Group will wait for stragglers. Distance recommended: 10 - 30 miles.
 - CLASS C+:** Also average riders: 9 - 10 mph, rest stops every 45 - 60 minutes. No obligation to wait for stragglers if cue sheets or maps are provided by the ride leader.
 - CLASS B-:** For more experienced riders: 11 - 12 mph, stops every 15 - 20 miles. No obligation to wait for stragglers if cue sheets or maps are provided.
 - CLASS B+:** For strong riders: 13 - 15 mph, stops every 20 - 30 miles. No obligation to wait for stragglers if cue sheets or maps are provided.
 - CLASS A:** For very strong riders: 16 - 20 mph, stops every 30 - 50 miles. No obligation to wait for stragglers if cue sheets or maps are provided.
- TIME TRIAL:** Timed event. Again, you must obey all traffic laws. A hard helmet is mandatory. You must yield the right of way at all times. Club time trials should not be regarded as races, but as training rides.
8. Each rider assumes his/her own risk on all time trials and touring rides.
9. Those who ride ahead of the group are on their own ride.
10. Always notify the ride leader before leaving the group.
11. Ride leaders should adhere to the advertised speed of the ride.
12. Ride leaders are not expected to be bike mechanics.

NOTE: In the case of questionable weather or road conditions, the Ride Leader may decide to cancel the event. Call the Ride Leader if in doubt. All Club rides are rated according to degree of difficulty. If you're in doubt about your cycling ability, try out a ride one class below the one you're not sure about and then work your way up. The general public is invited to all events organized and conducted by Delaware Valley Bicycle Club. A program is presented by the Club for bicyclists of all ages, all abilities, and all interests. Except for the Freedom Tour, Brandywine Tour and Club picnic, all club events are free to the general public. The general public is welcome!!!



Ride Calendar

July 2 • 9:30 A.M. Miles: 10 • Class D <i>Ridley Creek Park</i>	Meet at the Moylan-Rose Valley train station at Manchester (Rose Valley) & Woodward Rds. in Rose Valley. Enjoy this popular ride from Media to Ridley Creek State Park at a very slow pace. There are some hills but we can walk the biggest. Helmets recommended. Call Ira Josephs for details: 565-4058.
July 10 • 7:30 P.M. <i>DVBC Meeting</i>	Doors open at 7:00, meeting begins at 7:30. SPECIAL TOPIC: Come to the meeting and be surprised. Unitarian Church, 145 W. Rose Tree Rd., Media.
July 11 • 6:00 P.M. Miles: 15 • Class C— <i>One Hill</i>	Meet at the lower parking of Clover on Balt. Pike in Springfield. Try this mostly flat ride—with one serious hill—through some of the more populated sections of Delaware County. For more information call Walter Linton at 328-2871.
July 16 • 8:00 A.M. Miles: 25-30 • Class C <i>Watermelon Breakfast</i>	Now don't be confused. This is another ride today featuring watermelon (to honor national watermelon day?). Leave from Chadds Ford Elementary School on Rt. 1, ¼ mi. south of Rt. 100. Ride to Fran Demillion's house [Tour de Fran's?] in West Chester for a watermelon breakfast. Return through scenic countryside. One dollar (\$1) donation requested. Call Fran at 431-2675.
July 16 • 10:00 A.M. Miles: 30-35 • Class C+ <i>Talk about Paradise</i>	Meet at Octoraro School at Rt. 41 & Highland Ave. (3 miles north of Rts. 10 & 41) in Chester Co. Enjoy this ride to the Strasburg RR. Expect some hills; also, a ride through "Paradise." For lunch, bring or buy, or try Shoo Fly Pie. Ride leader is Rich Bernhard: 284-2019.
July 16 • 10:30 A.M. Miles: 6 • Class All <i>Watermelon Tour</i>	The first annual! Starts at Governor Printz Park (Rt. 420 & Delaware River, next to Walber's) in Tinicum Township. Registration starts at 10:30 A.M., ride leaves at 11:00. Registration is \$2.50 (\$1.50 by pre-registering—see elsewhere in this issue). Leisurely Class "D" pace for 6 flat miles and <i>après-ride</i> watermelon. Call Hank Hox for details: 521-5442.
July 17 • 6:00 P.M. Miles: 20 • Class C+ <i>Three Town Cruise</i>	Meet at the Burger King at High & Price Sts. in West Chester. Ride this somewhat hilly route (2-2½ hours) and take in the three towns of West Chester, Marshalltown & Unionville. Call ride leader Fred Rothman for more information: 431-4311.
July 18 • 6:15 P.M. Miles: 20-22 • Class C <i>Main Line</i>	Meet at the bubble gum factory located on Eagle Road, between Darby and Lawrence Roads, in Havertown. Ride out to the Villanova area on the Main Line, taking advantage of the cooler evening air. For more details call Frank Havnoonian at 449-6154 (evenings).
July 22 • 8:00 A.M. Miles: 43 • Class B— <i>Eastern Shore II</i>	Meet at the Acme at 24th & Upland Sts. in Upland to car-pool to the starting point in Galena, MD. Ride will not leave Galena before 9:15. Lunch at St. Luke's Church (built in 1732) in Church Hill, MD, by the Chester River. May be canceled if the temperature is above 90°. Doug Kennedy: 543-4664.
July 22 • 9:30 A.M. Miles: 25-30 • Class C <i>South Jersey Ride</i>	Meet at Kingsway Regional High School at Rts. 322 & 551 (2nd light after Com. Barry Bridge) in New Jersey, for a mostly flat ride through South Jersey. For more information call the Patterson tandem-trailer team (led by "I hardly break a sweat up the toughest hills" Ricky, Jr.) at 622-2954.
July 23 • 9:15 A.M. Miles: 5 • Class: All <i>Goshen Time Trial</i>	Meet (9:15 SHARP) at Providence Rd., just north of Goshen Rd., near the Radnor Hunt Club. This is a good regular event for anyone wishing to improve their bike handling skills. For more information call Rollin' Rich Patterson at 622-2954.
July 23 • 1:00 P.M. Miles: 30 • Class B— <i>Cheyney to Westtown</i>	Meet at the Media Courthouse (corner of Front St. & Veteran's Sq.) for this ride out to the Cheyney and Westtown area. The route includes some great scenery along the way—without a lot of traffic. Call ride leader Don Ashbrook at 566-9142 for more details.
July 29 • 9:00 A.M. Miles: 27 • Class C+ <i>Fairmount Park</i>	Meet at the main entrance of the Phila. Museum of Art (facing Logan Circle). See the Museum of Art building, Lemon Hill, Strawberry Mansion and Memorial Hall. There are a few hills. Bring lunch. For more information call co-leaders Sarah Shirk and Annie Setter at 543-5107.
July 29 • 9:00 A.M. Miles: 30 • Class C+ <i>MedialDrexel Hill . . .</i>	. . . <i>Two Loop Ride</i> . Meet at the lower parking lot of the Clover Store on Baltimore Pike in Springfield. This ride includes the "One-Hill Ride" loop (see above) to Drexel Hill and a loop back to Media. Walter Linton at 328-2871 for more details.
August 6 • 9:30 A.M. Miles: 10 • Class D <i>Ridley Creek Park</i>	Meet at the Moylan-Rose Valley train station at Manchester (Rose Valley) & Woodward Rds. in Rose Valley. Enjoy this popular ride from Media to Ridley Creek State Park at a very slow pace. There are some hills but we can walk the biggest. Helmets recommended. Call Ira Josephs for details: 565-4058.
August 7 • 7:30 P.M. <i>DVBC Meeting</i>	Doors open at 7:00, meeting begins at 7:30. SPECIAL TOPIC: To be announced. Come out to learn and/or be entertained. Unitarian Church, 145 W. Rose Tree Rd., Media.

PENNY FARTHING

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CLOSED WEDNESDAY



13th Annual Brandywine Tour!

September 17, 1989

28, 50 or 100 mile routes

Sponsored by the Delaware Valley Bicycle Club



TIME: 8-9 A.M. for 100 milers; 9-10 A.M. for 50 milers; 10-11 A.M. for 28 milers.

PLACE: Chadds Ford Elementary School on Route 1 (1/2 mile west of Route 100).

COST: Just \$8 at the gate. Pre-registration, postmarked by September 10, only \$5.50! **Tour will be held rain or shine!**

Expected Attendance: 350-500 riders.

Services Provided by DVBC: Food stop, maps, sag wagon, portable rest rooms, award patch and well marked routes.

Routes: Scenic country back roads through the beautiful Brandywine River Valley. Century route passes through three counties including Lancaster County. Full and Half-Centuries pass through King's Cattle Ranch in Buck and Doe Run. The 28-mile route is mostly flat except for Harmony Hill Road which has a covered bridge. All riders have a food stop in Embreeville. Century riders also have a food stop in Lancaster County.

Description: You travel at your own pace, with family or friends, or make new cycling friends. All ages, all abilities and all types of bikes are welcome. The 28-mile route is a great opportunity for newer cyclists and leisure riders. Meet new biking friends with similar abilities while enjoying an outstanding ride.

Recommendation: Use safe cycling habits. Helmet use is recommended but not mandatory. Each rider must assume his/her own responsibility.

About DVBC: DVBC promotes all forms of cycling! Total paid membership exceeds 400 cyclists. The club is affiliated with LAW, Pa. Bike Federation, USCF, and the Bike Coalition of Delaware Valley. DVBC is the premier bike club in Delaware County and is a non-profit organization. This event is open to *all* cyclists. Enjoy the late summer bicycling season!

More Information: Please call Frank at (215) 449-6154 or Rich at (215) 622-2954.

13th Annual Brandywine Tour (TOBRV) – September 17, 1989

Pre-registration Form

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Age: _____ Distance: 100 miles ☐ 50 miles ☐ 28 miles ☐

Waiver/Release

In consideration of the acceptance of my application for entry in the above event, I hereby waive, release, and discharge any and all claims for damages for death, personal injury, or property damage which I may have, or which may hereafter accrue to me, as a result of my participation in the said event. This release is intended to discharge in advance the promoters, the sponsors, the Delaware Valley Bicycle Club, the promoting clubs, the officials, and any involved municipalities or other public entities (and their respective agents and employees), from and against any and all liability arising out of or connected in any way with my participation in said event, even though that liability may arise out of negligence or carelessness on the part of the persons mentioned above.

I further understand that serious accidents occasionally occur during bicycle riding; and that participants in bicycle riding occasionally sustain mortal or serious personal injuries, and/or property damage, as a consequence thereof. Knowing the risks of bicycle riding, nevertheless, I hereby agree to assume those risks and to release and hold harmless all of the persons or entities mentioned above who (through negligence or carelessness) might otherwise be liable to me (or my heirs or assigns) for damages.

It is further understood and agreed that this waiver, release, and assumption of risk is to be binding on my heirs and assigns.

(signature — If you are under 18 years of age, then your parent or guardian must sign)

Please send this signed form with a check or money order for \$5.50 to: **Brandywine Tour**
Delaware Valley Bicycle Club
P.O. Box 497
Media, PA 19063

Please postmark pre-registration by September 10, 1989.



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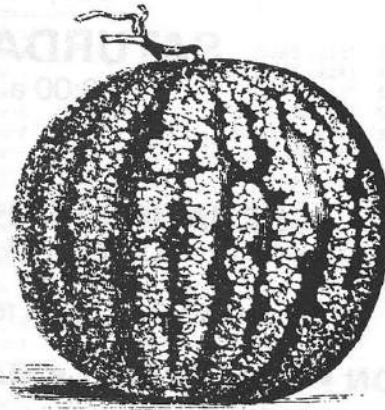
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13 Convenient Locations

PAOLI Paoli Shopping Ctr. 647-8023	ALLENTOWN 1728 Tilghman St. 439-1724	WEST CHESTER 200 W. Gay Street 436-8984	NEWARK 212 E. Main St. 302-368-8779	WILMINGTON 2900 N. Concord Pk. 302-479-9438
WAYNE 165 W. Lancaster Ave. 687-1110	PHOENIXVILLE 711 Nutt Rd. 935-9111	BROOMALL 2619 W. Chester Pike 356-3022	DOVER 595 N. Dupont Hwy. 302-678-1772	PIKE CREEK Pike Creek Shop. Ctr. 302-998-0202
COLLINGDALE 533 Mac Dade Blvd. 583-7711	ARDMORE 55 W. Lancaster Ave. 649-9839	EMMAUS 831 Chestnut St. 967-1029		

1st Annual Watermelon Tour

For Family & "Leisure" Riders

Get out and see
What fun riding a bike can be
For the young
And the not so young!



DATE: Sunday, July 16, 1989

TIME: Registration: 10:30 A.M.
Ride starts at 11:00 A.M.

COST: \$2.50 day of ride (\$1.50 by pre-registration)

PLACE Governor Printz Park (next to Walber's — Rt. 420 & Delaware River, Tinicum Township, Delaware County, PA)

ROUTE: Approximately 6 miles of flat riding.

DESCRIPTION: Travel at your own pace with family and friends, or better yet, make some new cycling friends. Leisurely "Class D" pace accommodates the young, the not-so-young, and leisure riders of all ages in between.

RECOMMENDATIONS: Use safe cycling habits. Helmet use is strongly urged but not required. Each rider must assume his/her own responsibility and make sure their bike is in proper working order.

ABOUT DVBC: The Delaware Valley Bicycle Club promotes all forms of cycling! Total paid membership is around 600. We are affiliated with *Bicycle USA (LAW)*, *Pennsylvania Bike Federation*, and *Five County Coalition*. DVBC is the premier Delaware County bike club and is a non-profit corporation.

SERVICES PROVIDED: Map or cue sheet, route marked at every turn, sag wagon for bike mishaps, and *après-ride* watermelon.

Name _____ Phone _____ Age* _____

Address _____

City _____ State _____ Zip _____

Return this form with check or money order to

Delaware Valley Bicycle Club
c/o Watermelon Tour
408 Iriquois St.
Lester, PA 19029

*If you are under 18 years of age then your parent or guardian must sign a waiver/release form at the ride.

Save \$1.00 by pre-registering with this form. All pre-registration forms should be postmarked by June 30, 1989. Come out to another DVBC great event! (Part of proceeds may go towards funding the Blue Route Bikeway/Walkway.)

A Lotus Spreadsheet for Bike Gearing

	A	B	C	D	E	F	G	H	I	J
1		# OF	COG	GEAR		GEAR	GEAR			
2		TEETH	ID	COMBO		INCHES	COMBO	INCHES		
3										
4	LARGEST FRONT SPROCKET:	F-1	F-1/R-1	@IF(B8=0,0,\$B\$4/B8*\$B\$16)	F-1/R-1					
5	2nd LARGEST FRONT SPROCKET:	F-2	F-1/R-2	@IF(B9=0,0,\$B\$4/B9*\$B\$16)	F-1/R-2					
6	3rd LARGEST FRONT SPROCKET:	F-3	F-1/R-3	@IF(B10=0,0,\$B\$4/B10*\$B\$16)	F-1/R-3					
7			F-1/R-4	@IF(B11=0,0,\$B\$4/B11*\$B\$16)	F-1/R-4					
8	SMALLEST REAR SPROCKET:	R-1	F-1/R-5	@IF(B12=0,0,\$B\$4/B12*\$B\$16)	F-1/R-5					
9	2nd SMALLEST REAR SPROCKET:	R-2	F-1/R-6	@IF(B13=0,0,\$B\$4/B13*\$B\$16)	F-1/R-6					
10	3rd SMALLEST REAR SPROCKET:	R-3	F-1/R-7	@IF(B14=0,0,\$B\$4/B14*\$B\$16)	F-1/R-7					
11	4th SMALLEST REAR SPROCKET:	R-4	F-2/R-1	@IF(B8=0,0,\$B\$5/B8*\$B\$16)	F-2/R-1					
12	5th SMALLEST REAR SPROCKET:	R-5	F-2/R-2	@IF(B9=0,0,\$B\$5/B9*\$B\$16)	F-2/R-2					
13	6th SMALLEST REAR SPROCKET:	R-6	F-2/R-3	@IF(B10=0,0,\$B\$5/B10*\$B\$16)	F-2/R-3					
14	7th SMALLEST REAR SPROCKET:	R-7	F-2/R-4	@IF(B11=0,0,\$B\$5/B11*\$B\$16)	F-2/R-4					
15			F-2/R-5	@IF(B12=0,0,\$B\$5/B12*\$B\$16)	F-2/R-5					
16	REAR WHEEL DIAMETER (IN.):		F-2/R-6	@IF(B13=0,0,\$B\$5/B13*\$B\$16)	F-2/R-6					
17			F-2/R-7	@IF(B14=0,0,\$B\$5/B14*\$B\$16)	F-2/R-7					
18			F-3/R-1	@IF(B8=0,0,\$B\$6/B8*\$B\$16)	F-3/R-1					
19			F-3/R-2	@IF(B9=0,0,\$B\$6/B9*\$B\$16)	F-3/R-2					
20			F-3/R-3	@IF(B10=0,0,\$B\$6/B10*\$B\$16)	F-3/R-3					
21			F-3/R-4	@IF(B11=0,0,\$B\$6/B11*\$B\$16)	F-3/R-4					
22			F-3/R-5	@IF(B12=0,0,\$B\$6/B12*\$B\$16)	F-3/R-5					
23			F-3/R-6	@IF(B13=0,0,\$B\$6/B13*\$B\$16)	F-3/R-6					
24			F-3/R-7	@IF(B14=0,0,\$B\$6/B14*\$B\$16)	F-3/R-7					

Figure 1

If you are changing your gearing by replacing either your cranks or your freewheel (or both), I've developed a Lotus 1-2-3 (Release 2)* spreadsheet that eliminates the drudgery from calculating your gears. If you are simply replacing a worn part, you may also want to consider changing your gearing.

Gears are measured in "gear-inches," a unit related to how far forward the bike will travel with one revolution of the cranks. The "higher" the gear, the further a bike will travel with one crank revolution and the harder it will be to pedal. Common sense tells you that less effort is required to make a bike travel 10 feet than 20 feet. It also tells you that it is easier to pedal a 24-inch wheel through one wheel revolution than a 27-inch wheel, since you travel less distance with the 24-inch wheel. Gear-inches give us a standardized unit for determining "how hard it is to pedal" or "how far the bike will travel with one revolution of the pedals."

To determine the gear-inches of a gear, divide the number of teeth on the front cog by the number of teeth on the rear cog and multiply by the rear wheel diameter (in inches). Example: 52-tooth front cog, 13-tooth rear cog, and a 27-inch rear wheel: $52/13 \times 27 = 108$ gear-inches.

Choosing the "best" gearing for your individual riding style involves several factors: 1) range, number and spacing of gears; 2) ease of shifting pattern; 3) availability of a specific cog combination; and 4) cost. A racer needs several tightly-spaced high gears that have a fairly simple shifting pattern. A rider touring the Rockies with camping equipment needs a wider range of gears to climb the toughest hills and may not be too concerned with the shifting pattern.

An even spacing of gears is desirable. If the gear-inch difference between two adjacent gears is large, you may find yourself forced to choose between "spinning your brains out" in the lower gear and "barely able to pedal" in the higher gear. At the same time you might have two different gear combinations (52/26 and 44/22, e.g.) that have the same (or almost the same) gear-inches. If this happened twice, your 10-speed would effectively become an 8-speed. Another consideration to gearing is chain and cog wear. The wear on these parts is greatest when the chain crosses from the outermost cog on one set to the innermost cog of the other set. Neither extreme diagonal combination should be one of your frequently used gears.

You may end up with well-spaced gears but at the price of complex shifting patterns. It is inconvenient to shift down two cogs on the freewheel and then shift up one on the chainwheel—provided you can even remember the pattern—just to reach the next gear. There is little point in having "ideal" gearing if you end up not using some of your gears because of the shifting involved. One simple shifting pattern is known as half-step. Half step is set up so that shifting one cog in the rear results in about half the change that shifting one cog in the front would produce. Thus, you shift a whole step up front or a half-step in the rear.

How to Create the Spreadsheet

Enter the column headings; enter columns A, C, and D as shown in figure 1. Copy range D4..D24 to F4. Enter the formulas shown in E4, E11 and E18 (I used the @IF function so that 0 is returned instead of ERR when dividing by 0). Copy cell E4 to range E5..E10. Copy E11 to E12..E17. Copy E18 to E19..E24. Column B is used to input the various size cogs and Column G is used as the destination for the VALUES of Column E.

For ease of use I have included two macros in column I and recommend you include them in your spreadsheet. Enter the macros as shown in I5..I10 and I12..I15. (If the first character in a cell is a slash, you must precede it with a quote, single for flush left or double for flush right). The entries in Columns H and J are for identifying and documenting the macros and are optional. Finally you name the macros. Move the cursor to I5, then RANGE, NAME, CREATE, press backslash, press e, then press ENTER. Move the cursor to I12 and repeat the procedure, (substituting "s" for "e").

Set the global format to 2 decimal places. Format the range B4..B14 to zero decimal places. You may also choose (Release 2 only) to suppress formulas that evaluate to zero.

	# OF	GEAR	GEAR	GEAR	GEAR
	TEETH	COMBO	INCHES	COMBO	INCHES
LARGEST FRONT SPROCKET:	52	F-1	F-1/R-1	108.00	F-1/R-1 108.00
2nd LARGEST FRONT SPROCKET:	44	F-2	F-1/R-2	100.29	F-1/R-2 100.29
3rd LARGEST FRONT SPROCKET:	36	F-3	F-1/R-3	87.75	F-1/R-3 87.75
			F-1/R-4	78.00	F-1/R-4 78.00
SMALLEST REAR SPROCKET:	13	R-1	F-1/R-5	66.86	F-1/R-5 66.86
2nd SMALLEST REAR SPROCKET:	14	R-2	F-1/R-6	58.50	F-1/R-6 58.50
3rd SMALLEST REAR SPROCKET:	16	R-3	F-1/R-7	51.38	F-1/R-7 51.38
4th SMALLEST REAR SPROCKET:	18	R-4	F-2/R-1	43.89	F-2/R-1 43.89
5th SMALLEST REAR SPROCKET:	21	R-5	F-2/R-2	38.86	F-2/R-2 38.86
6th SMALLEST REAR SPROCKET:	24	R-6	F-2/R-3	33.75	F-2/R-3 33.75
7th SMALLEST REAR SPROCKET:		R-7	F-2/R-4	29.57	F-2/R-4 29.57
			F-2/R-5	26.57	F-2/R-5 26.57
REAR WHEEL DIAMETER (INCHES):	27.00		F-2/R-6	23.44	F-2/R-6 23.44
			F-2/R-7	21.00	F-2/R-7 21.00
			F-3/R-1	18.18	F-3/R-1 18.18
			F-3/R-2	16.36	F-3/R-2 16.36
			F-3/R-3	14.55	F-3/R-3 14.55
			F-3/R-4	12.73	F-3/R-4 12.73
			F-3/R-5	10.91	F-3/R-5 10.91
			F-3/R-6	9.09	F-3/R-6 9.09
			F-3/R-7	7.27	F-3/R-7 7.27

Figure 2

Entries have been made and processed.

How to Use the Spreadsheet

Enter your rear wheel diameter in inches in B16. Enter the number of teeth on your largest front sprocket in B4. Enter the number of teeth on your next largest front sprocket in B5. If you have a triple crank, enter the number of teeth on the smallest sprocket in B6. Starting with your smallest rear sprocket, enter the number of teeth in B8. Continue entering the rear sprocket data. If you have 5 rear sprockets, B13 and B14 will be blank. If you have 6, B14 will be blank.

Now it is time to put Lotus to work. If you have included the macros, you need only press ALT-S. Otherwise, recalculate the spreadsheet (if in manual recalc). Do a RANGE, VALUE procedure with E4..E24 as the range to convert and G4 as the destination. Next, do a DATA, SORT, DESCENDING (you may choose ascending if you wish) procedure with F4..G24 as the range and G4 as the primary key. Finally, move the cursor far enough to the right so that Column G comes into view. In Column G, the gears will

be listed, in order, from highest (gear-inches) to lowest (or lowest to highest if you chose ascending). Listed in Column F are the combinations that result in the gear-inch values in Column G. See Figure 2.

To try a different set of sprockets, you may either press ALT-E (if you have included the macros) and are going to change both the front and rear sprockets, or simply move to Column B, make your changes, then press ALT-S. ALT-E will erase the range B4..B14, recalculate Column E, erase Columns F & G (except for headings), recopy Col. D to Col. F, and place the cursor in B4 to start entries. If you are not using macros, move to Column B and make your changes. Copy the range D4..D24 to F4, then follow the instructions from the previous paragraph.

When you obtain a satisfactory combination of sprockets you may want to print Columns F and G to use as a reference until you learn your new gear pattern. The combination of sprockets you want may not be one of the "standards" offered by bike shops or catalogs. Some combinations may be easily customized from a standard. In my case (ultra-6: 13,14,16,18,21,24), I had to do a fair amount of investigation. Finally I was referred to Harry Havnoonian who was able to do the customization. My persistence was rewarded as I now have a nearly perfect (for me) range of gears. I hope this spreadsheet helps you find your "perfect" gears.

*Release 1A does not have the RANGE, VALUE feature. Users of this version must instead FILE, XTRACT, VALUES for the range E4..E24 then FILE, COMBINE, COPY (the file just XTRACTED) to G4.

Gear-Inches for Speed/Cadence

		Cadence			
		70	80	90	100
6	28.81	25.21	22.41	20.17	
7	33.61	29.41	26.14	23.53	
8	38.42	33.61	29.88	26.89	
9	43.22	37.82	33.61	30.25	
10	48.02	42.02	37.35	33.61	
11	52.82	46.22	41.08	36.97	
12	57.62	50.42	44.82	40.34	
13	62.43	54.62	48.55	43.70	
14	67.23	58.82	52.29	47.06	
15	72.03	63.03	56.02	50.42	
16	76.83	67.23	59.76	53.78	
17	81.63	71.43	63.49	57.14	
18	86.43	75.63	67.23	60.50	
19	91.24	79.83	70.96	63.87	
20	96.04	84.03	74.70	67.23	
21	100.84	88.24	78.43	70.59	
22	105.64	92.44	82.17	73.95	
23	110.44	96.64	85.90	77.31	
24	115.25	100.84	89.64	80.67	
25	120.05	105.04	93.37	84.03	
26	124.85	109.24	97.11	87.40	
27	129.65	113.45	100.84	90.76	
28	134.45	117.65	104.58	94.12	
29	139.26	121.85	108.31	97.48	
30	144.06	126.05	112.05	100.84	

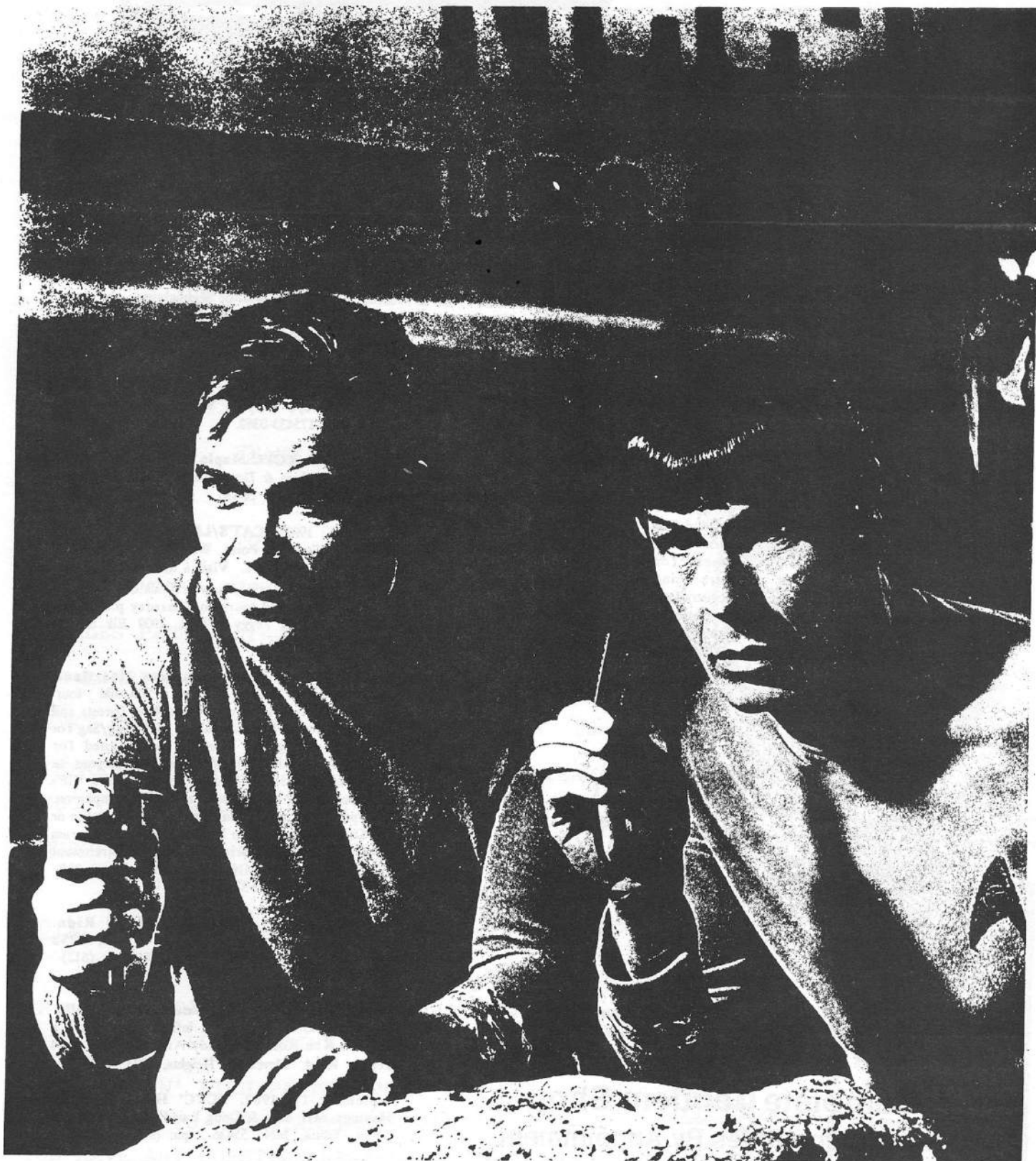
Alfa Lurn: Aluminum siding (San Marino)
Caja Rural: Savings bank (Spain)
Chateau d'Ax: Furniture (Italy)
Domex: Paper goods (Sweden)
Fagor: Appliances (Spain)
Histor-Fina: Paints-Gasoline (Belgium)
Kelme-Varta: Shoes-Batteries (Spain-Columbia)
Malvor: Cosmetics (Italy)
Ryslaao-Postobon: Soft drinks (Columbia)
SuperConfex: Supermarkets (Netherlands)
Teka: Appliances (Spain)
Warnasch: Industrial washing machines (Italy)
Zahor: Chocolates (Spain)

Associated Press

It happened last weekend, when Constable Philip Rajah and his 4-year-old police dog, Rex, encountered two "suspicious individuals" in Pie-

Rex, they added, was being treated for a serious neck injury at a veterinary clinic.

"We're going to have an accident if you don't stop tickling me."



Editor's note:

(I know this picture has nothing in the Universe to do with cycling, but one of my co-workers, Fred, brought it into the bike shop the other day and it managed to make us all smile. So "Beam me up, Scotty," "Highly illogical, Captain," "Warp factor-eight," "He's dead, Jim!"...one picture really does tell a thousand words. And memories are forever...)

Tandems — Bikes Built for Two

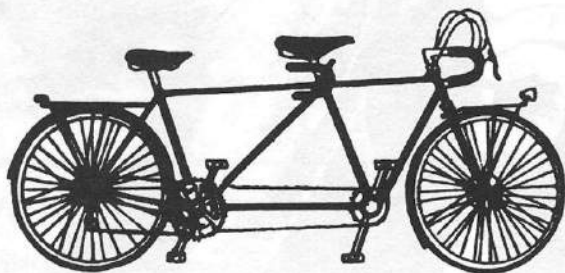


TANDEM CALENDAR '89

MAKE PLANS TO BE THERE!

June 30-July 4, 1989. **LAW National Rally.** Salisbury, MD. Cycle on flat, rural roads with many water views. Designated tandem rides daily of varying lengths. T-shirts for first 1,000 registrants. Special A/C rooms set aside for tandems. For information about tandems-only pre/post tour, send SASE to Al & Ruth Schaffer, 3212 Midfield Road, Baltimore, MD 21208. ph: (301)-484-0306. For general information about the LAW Rally, send SASE to LAW National Rally'89, Salisbury State University, Salisbury, MD 21801-6837.

July 15-16, 1989. **Tennessee Tandem Weekend.** Ya'll come and pedal the foothills, hollars, and valleys of East Tennessee. Ken and Vickie Adams will host a weekend in Dandridge, TN. We promise beautiful scenery, quaint towns, and fast downhill. Fee is only \$15.00 per tandem. That includes maps, cue sheets, and snacks for Saturday's rides. A variety of rides are being offered, from 15 miles to 60 miles. Registration forms, schedule of events, and more information is yours for a SASE to Ken & Vickie Adams, Rt. 3, Box 8, Main Street, Dandridge, TN 37725. ph: (615)-397-9694.



Tandems East

A Complete Tandem Shop

Demonstration Rides By Appointment

Sales • Service • Parts • Advice

Trailers • Kid Backs • Wheel Building

Burley • Santana • Cannondale

33 Arcadia Place, Vineland, NJ

609-691-8779 • Ask for Mel or Barbara

July 21-23, 1989. **Eastern Tandem Rally, '89.** Elizabethton, PA. Tandem'89 will be based in Elizabethtown College in the northwestern corner of Lancaster County, PA. This is an ideal setting, away from the usual heavily-traveled tourist areas of the famous Amish country. The beautiful rolling countryside will be highlighting the well-kept farmlands for which Lancaster County is known worldwide. Chocolate lovers will relish the rides to Hershey and Lititz, known for Hershey Kisses and Wilbur Buds. Don't know what a "Wilbur Bud" is? Come to ETR'89! SASE to Tandem'89, c/o Bicycle World, P.O. Box 362, Lititz, PA 175433-0362.

July 22, 1989. **TCTC Maple Grove Ride.** Maple Grove, MN. Sara & Doug Laird, 5232 Edenmoor Street, Edina, MN 55436. ph: (612)-925-5185.

July 28-30, 1989. **CAT'S/LOONS/COWS Truce Weekend.** Stevens Point, WI. Tours through the Wisconsin countryside. Visit a local brewery and a local cheese factory. Early arrivals can get maps for self-guided tours on Thursday p.m. rides. SASE to John & Peggy O'Dell, 1909 Elk Street, Stevens Point, WI 54481.

August 5-13, 1989. **Minnesota Heartland Tandem Bike Tour.** This is a 300-mile tour through northern Minnesota's beautiful forests and its refreshing network of lakes. Camping/Sag for carrying your gear. Program is designed for introducing blind or visually impaired persons to tandemming, and to provide experienced and VIP's an opportunity to tour with a sighted companion. \$230/person. For more information, please write or call Deb Willette or Bob Norbie, Outdoor Program Center, Hobson Memorial Union, 1500 Birchmont Drive NE, Bemidji, MN 56601-2699. Phone 218-755-2999 or 218-755-3760.

August 12, 1989. **TCTC' Northfield Ride.** Northfield, MN. Sara & Doug Laird, 5232 Edenmoor Street, Edina, MN 55436. ph: (612)-925-5185.

September 1-4, 1989. **Midwest Tandem Rally,** Cleveland, OH. For more information, send a SASE to Ken Roehl & Candy Anker-Roehl, 3554 Fenley Road, Cleveland Heights, OH 44121.

September 17, 1989. **TCTC' Hastings Ride.** Hastings, MN. Sara & Doug Laird, 5232 Edenmoor Street, Edina, MN 55436. ph: (612)-925-5185.

October 7, 1989. **TCTC 4th Annual Chili Ride.** Woodbury, MN. Sara & Doug Laird, 5232 Edenmoor Street, Edina, MN 55436. ph: (612)-925-5185.

October 27-29, 1989. **Southern Tandem Rally.** Central Georgia. SASE to Ben & Gay Quaintance, 417 Audubon Circle, Grif fin, GA 30223

TEAM Casual

Challenges Competitors to "Follow The Leader"

TEAM DVBC's FATHER'S DAY FIVE MILE TIME
(TEAM Casual) TRIAL RESULTS:

<u>RIDER'S NAME</u>	<u>FRAME</u>	<u>TIME</u>	<u>AGE</u>	<u>PTS.</u>	<u>TP</u>
ED SILCOX	BIANCHI	13:20	42	08	51
RUSTY POTTS	TREK	12:00	32	10	10
BOB PITTMAN	SCHWINN	15:59	42	05	05
CHARLES PARKER	TREK	13:22	33	07	14
TOM LORRIGAN	CENTURIAN	14:04	30	06	06
BUNKY WEBB	SCHWINN	12:43	29	09	18

TIMEKEEPER: ROLLIN' RICH PATTERSON OF TEAM
DVBC (TEAM Casual) (215) 622-2954

COURSE: GOSHEN, SUGARTOWN, AND PROVIDENCE
ROADS.

NOTE: NOT ALL PARTICIPANTS WERE TEAM Casual
members.

TP: TOTAL POINTS FOR TEAM Casual's WINTER/
SPRING/ SUMMER TIME TRIAL SERIES

CALL ROLLIN' RICH PATTERSON IF YOU NEED
DIRECTIONS TO THE STARTING LOCATION OR IF
YOU HAVE ANY QUESTION REGARDING TEAM Casual!
CALL ROLLIN' RICH AT 215-622-2954.

A HELMET IS MANDATORY! ROLLING STARTS PE-
NALIZED BY ADDING 10 SECONDS. THIS SERIES
IS OPEN TO ANYONE. JOIN US! JOIN US!

Wear a helmet.



**The
competition
hates our
guts.**

**EXPERIENCE RACING
LIKE NEVER BEFORE**

TENTATIVE TEAM
DELAWARE VALLEY
BICYCLE CLUB
TIME TRIAL
SCHEDULE

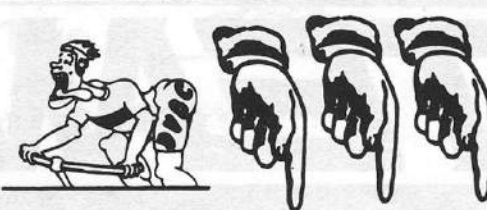
JUN 18, 9:15 AM
JUL 23, 9:15 AM
AUG 20, 9:15 AM
SEP 10, 9:15 AM
OCT 29, 9:15 AM
NOV 23- Glasgow,
Del. Morning

WEAR A HELMET!!!

BE ON TIME!

WITHSTAND THE
TOUGHEST TEST OF
ALL- THE TEST
OF TIME!

**WITHSTAND THE TOUGHEST
TEST OF ALL -
THE TEST OF TIME**



**PLEASE
AFFIX
POSTAGE**

(NEW SUPPLY OF CLUB T-SHIRTS IS IN!)

Please Label Care

The above mailing label constitutes a DVBC membership card expiring 60 days past postmark.

FIRST CLASS MAIL

The DVBC is a non-profit corporation formed to educate the public as to the safe use of the bicycle through lectures, seminars, planned rides, and other activities promoting the bicycle as an efficient and enjoyable means of exercise, recreation, and transportation.

Non-members are welcome on rides, but are urged to consider their ability and experience when selecting a ride. (See Ride Guidelines.) All rides are subject to cancellation due to weather. If in doubt about the weather or level of difficulty of the ride, please call the ride leader. Though the use of safety equipment, particularly helmets, is strongly urged, the club cannot accept responsibility for accidents or injury while participating in a DVBC event.

Application for 1989 DVBC Membership (Expires 2/28/90)

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Date of Birth: _____

Membership Type: ☐ Individual - \$10 ☐ Family - \$14

Membership includes: *DVBC Newsletter Magazine*, discounts at most Club sponsors, Club subsidized events, and free *Bicycle Touring Newsletter* published quarterly (\$3 value). Family membership includes two adults and up to two children. Your membership attracts advertisers and helps influence local government decisions concerning bicycle issues.

INTEREST SURVEY

Ride Pace

- ☐ Class D: *slow*
☐ Class C: *average*
☐ Class B: *brisk*
☐ Class A: *fast*
☐ Off-Road

I'll volunteer for:

- ☐ Ride Leader
☐ Sag Wagon Driver
☐ Tour Food Stop
☐ Newsletter Editor
☐ Newsletter Typist
☐ Newsletter Collator
☐ Advertising Coordinator
☐ Newsletter Co-editor
☐ Newsletter Delivery
☐ Triathlon Editor

Please send your check or money order to:

Delaware Valley Bicycle Club
P.O. Box 497
Media, PA 19063

The DVBC Safety Foundation is established to promote bicycle safety in the Delaware Valley using posters, flyers, bumper stickers and rewards.

I wish to donate to the DVBC Safety Foundation:

☐ \$1 ☐ \$2 ☐ \$5 ☐ \$10 ☐ \$15 ☐ \$20 ☐ \$25

Membership to DVBC Subdivisions

You must join the main organization (left half of this form) in order to be able to join a DVBC subdivision.

☐ \$7.00 DVBC-Team Drexel Hill (Road Racing)
Drexel Hill Cyclery

☐ \$5.00 Team Delaware Valley Bicycle Club
Team Casual! (Road Racing)

☐ \$5.00 DVBC Triathlon Div.

☐ \$5.00 DVBC Tandem Div.

_____ Total Amount Enclosed