Under the Hood
By
Ralph Draves


For those interested in the mechanics of producing a cue sheet, or what is "Under the Hood" here is the "blueprint"!

Over the last several years as Road Ride Developer, I have created cue sheets and maps for the bicycle club. During this time my skills and techniques have slowly evolved and grown, to the point that I now feel quite comfortable in making them. Without modern technology and my trusted Macintosh, the job would be impossible. Over time, to make my job easier, I have acquired new hardware and computer software. My latest addition is a Garmin eTrex Summit GPS (Global Positioning System). I'll explain later just how the unit works. The following is pretty much the method I use to generate a cue sheet and map with a profile. I will describe how I produced Two Coves that appears in this issue.

Ideas for a ride can be generated in a variety of ways. A club member might suggest a ride; an old one might need revision, or, after looking over local maps, I might come up with an idea. The latter was the idea for Two Coves.

With an idea in mind, I turn on my Mac and open a program called Street Atlas USA by DeLorme. This CD Rom has every street in the United States even the smallest back road. As with any program, it has bugs, inaccuracies, and needs updating. Despite its faults, it's an indispensable tool. I start the ride from a convenient location, in this case, Liberty Bicycles. Street Atlas enables you to trace the route and at the same time gives you the mileage. Once the route is outlined on the computer, I'll drive to the starting point.

At Liberty, I'll set the car trip odometer to zero and have pad and pencil ready to take notes on every turn, stop sign, traffic signal, railroad crossing, and even points of special interest. The route basically leaves Liberty and goes up Pinners Cove and returns to Liberty via Merrills Cove.

Once the route is driven, I return to my computer and open StreetAtlas, copy the frames that contain the route I want, and paste them into the drawing program of AppleWorks. Using the various tools in the tool palette, I trace the route, streets, railroads, and other information I need for the map. Once satisfied, I delete the pasted Street Atlas frames, leaving just the traced material.

The information is then copied and pasted into Freehand, a graphic drawing program much more advanced than AppleWorks. Freehand palette tools give you far greater flexibility tracing and drawing over AppleWorks. Using the various Freehand palette tools I draw the map. When satisfied, I delete the AppleWorks material. The map is now nearly finished.

I have my Freehand template setup to show two pages on the monitor. I now turn my attention to page one, the cue sheet page. This page is laid out in quarters so that when the cue sheet is finally ready for publication and printed it will easily fit into your pocket. Each section is linked so typing can flow from one section to the other. In 1994, I obtained the "touring font" from LAB when our club hosted the national bicycle rally in

Asheville. The font shows directions with different symbols. I carefully check to make sure the "go" miles agree with the "cumulative" mileage, the directions are clear, and the correct "touring font" direction symbol has been used. The cue sheet and map is now nearing completion and I ready to use my new GPS gadget.

The eTrex Summit is a six-ounce, 12 channel receiver with buttons on the side to navigate through the various modes. The unit can easily fit in the palm of your and can even be mounted on your bicycle handlebars. I have it mounted in a special bracket on the dash of my car and plugged into the cigarette lighter to conserve the two AA batteries. GPS receivers are a development of the space age and use satellites to trace your position on the Earth' surface. A GPS can create a track log, a breadcrumb trail of your movements by recording waypoints using at least three satellites. The Summit also gives the altitude; total distance ascended and descended, minimum and maximum elevations, and several other elevation data.

Once all the desired information is gathered and stored in the GPS, I return to my computer to input the elevation data into an Excel spreadsheet. The GPS unit is set to record elevation in feet, but when down loaded into the spreadsheet the data is entered automatically in meters, a universal standard, and must be converted back into feet. Next, I must get the data into Freehand. At first, this was tricky and I had to experiment. Again, I found I had to first copy and paste the data into AppleWorks' spreadsheet, which is limited to 500 cells in each column. Two Coves, a 16.1-mile ride, has close to 800 cells of elevation data in Excel. This made it necessary to copy the information in stages into AppleWorks and then into Freehand. Once in Freehand, it's easy to create the elevation profile.

Finally, when the cue sheet and map with its profile are complete, it's time to get on my bike and ride the route. You too can ride and don't worry about what's "under the hood," just enjoy the ride.