Radar Cycling Computer

'99

- **Owner's Manual**
  Manuale d'uso
  Manuel de l'utilisateur
  Gebrauchsanweisung
  Handleiding
  Manual do Proprietário
  Manual del Propietario
  取扱説明書

TREK®

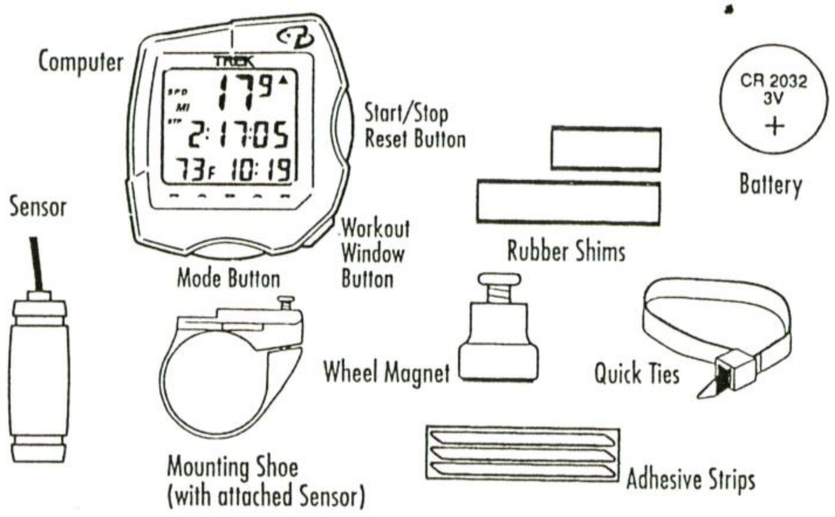
TREK OWNERS MANUAL

Congratulations and Thank you for purchasing the Trek Radar Bicycling Computer! The New Trek Radar with Workout Window (patent pending) represents the latest in Bicycle computer technology and concept. The Workout Window feature can greatly enhance the riding experience of any cyclist, whether they are a recreational rider or a top notch racer. The Radar with Workout Window may actually change the way you ride your bicycle!

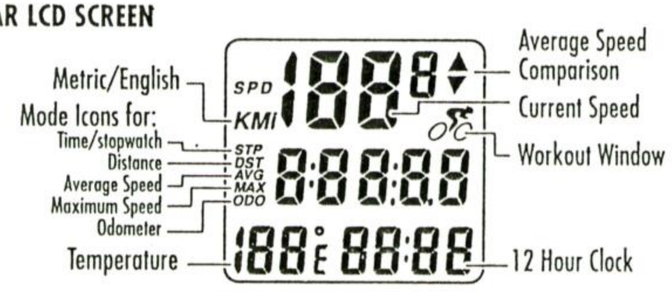
Please read this instruction-manual carefully and save this manual for future reference.

Precautions
Remember to watch the road while riding. Watching your bicycle computer makes it difficult to see upcoming obstacles. Awareness of potential road, trial, or traffic problems should be your main concern.

PARTS LIST



RADAR LCD SCREEN



DEFINITION OF FUNCTIONS

Speedometer (miles or kilometers) (SPD)
(M/hr or KM/hr)
Tells you your instantaneous speed. Accurate to 0.1 mph or Kmph



SPD/STP

Automatic Ride Time Stopwatch (STP)
Stopwatch that starts and stops when your wheel is turning. Records your time actually spent riding, up to 9:59:59



SPD/DST

Trip Odometer (DST)
Tells you the distance for your current ride from 0 to 999.99 mi. or km.

Average Speed (AVS)
Your average speed calculated using your true ride time and trip distance



SPD/AVG

Average Speed Comparison (▲ or ▼)
Compares current speed to average speed. As you are riding, a (▲) or (▼) will appear in the top right hand corner of the display. This will indicate whether your current speed is faster (▲) or slower (▼) than your current average speed. This function is automatic, requires no programming and cannot be disabled

Cumulative Odometer (ODO)
Stores your total mileage for the year in tenths of a mile or km from 0 to 9999.9 and in full miles or km from 10,000 to 99,999



SPD/ODO



SPD/MAX

Maximum Speed (MAX)
Shows the fastest speed you have achieved during your ride. The Maximum speed function of the Radar can be reset independently of the other functions in the Radar by holding the MODE key for 2 seconds while the Maximum speed is showing on the display. This feature is excellent when you are doing sprint workouts.

Digital 12/24 hr CLOCK
Gives you the time of day in either 12 or 24 hour format.

Temperature
The Radar is equipped with a temperature sensor that gives you instantaneous temperature in either degrees Fahrenheit or Celsius from -19-60o C or 2-140o F. The temperature reading is tied to the calibration of the unit. In the US mode the display will read out Miles, Fahrenheit and 12 hour clock format. In the European mode the display will read Kilometers, Celsius and 24 hour clock format.

Auto Shut Down
Trek computers will automatically shut-down after 5-10 minutes of non-use to save battery power. The Radar will automatically restart as soon as the unit receives input from the wheel.

Workout Window

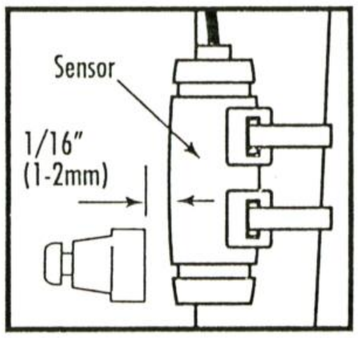
The RADAR is equipped with Trek's patented ***Workout Window***™ feature. The ***Workout Window*** is a "computer within your computer" that allows you to record a second set of ride information (Speed, Average Speed, Distance etc.) independent from the normal operating modes. The ***Workout Window*** allows you to easily separate the information for a race from the information for your total ride so that you can have an accurate picture of your racing or training intensity.



The ***Workout Window*** is easily accessible from any of the Radar's main operating screens simply by pressing the ***Workout Window Button***.

INSTALLATION

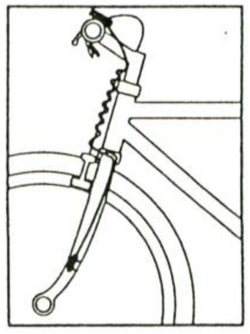
Sensor and Wheel Magnet



1. Position the sensor unit to the inside of either the right of left fork blade anywhere from 3-6 inches up from the fork blade tip. Attach the sensor to the fork blade with the quick ties but do not tighten the ties completely until final adjustment is complete.

2. Attach the wheel magnet to a spoke, aligning the magnet with the sensor so it faces and intersects the bottom polished line on the sensor. The magnet should have 1-2 mm clearance from the sensor. If the sensor and magnet are too close or touching, rotate the sensor unit toward the back of the fork blade until adequate clearance is achieved. Carefully tighten the quick ties making sure you maintain the proper space between the magnet and the sensor. Trim the excess quick tie strap using a scissors or fingernail clipper. Tighten the magnet screw, but be careful not to over tighten as this can damage the fitting.

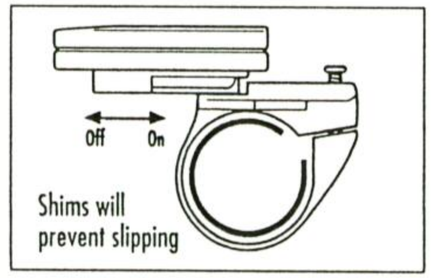
Sensor Wiring and Bracket



1. Route the sensor wire up the back of the fork blade or wind the wire around the blade, making sure that the wire is not loose and that you leave enough wire to reach the handlebar. Secure the wire to the fork blade immediately above the sensor and at the top of the fork blade, using the adhesive strips that are provided or electrical tape.

2. Wind the wire upward around the front brake cable until the wire is adjacent to the handlebar, allowing enough slack for free movement of the steering assembly cables.

3. Attach the bracket to the handlebar on either side of the stem. The bracket goes onto the handlebar with the wire toward the rider side of the bar. Use the appropriate rubber shim between the bracket and handlebar to provide a secure fit.



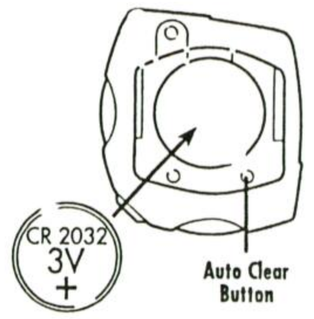
Attaching the Computer to the Bracket



The Trek Radar Computer attaches to the mounting bracket by sliding the unit onto the bracket from the back until it snaps firmly into position. To remove the computer from the bracket, place your thumb against the back of the mounting bracket and pull the computer toward you with your index finger.

COMPUTER SET UP

Battery Installation

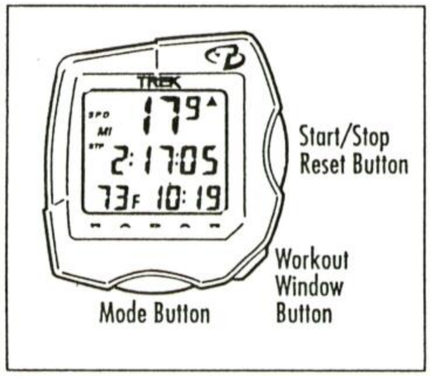


1. Remove the battery cover from the back side of the computer using a narrow flat blade screwdriver.

2. Install the battery so that the positive "+" side of the battery is visible, and replace the battery cover.

CAUTION: On the bottom of the computer head next to the battery door is a small recessed button. This is the Auto Clear Button. Pressing this button will clear all memories and reset all functions to their default values.

BUTTON FUNCTIONS



The Radar is equipped with 3 buttons that control the functions of the unit:

1. MODE
Changes the Main Screens of the Radar

2. WORKOUT WINDOW
Enters and Exit's the Workout Window

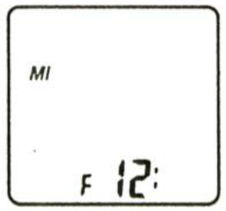
3. START/STOP
Starts and stops the Stopwatch in the Workout Window and adjusts the digits when setting the Clock, Wheel Size and Odometers.

PROGRAMMING YOUR TREK RADAR CYCLE COMPUTER

We will now begin to program the features of the Radar. Take a few minutes to familiarize yourself the operation of the buttons and how the Radar operates before proceeding.

Quick Escape Feature
At any time during the programming of the Radar simply press and hold the MODE key for 1 second to store all information up to that point in memory and return to the main screen.

Setting the Clock, Thermometer and Miles or Kilometers



1. In the SPD/STP screen, press and hold the MODE key for 2 seconds.

2. The screen will clear and Mi, F and 12 will appear indicating the American calibration settings.

3. Press the START/STOP key to change to the Metric settings if desired, or press the MODE key to set screen and advance to Adjusting the Clock

4. The Hours digits will appear and begin to flash. Advance the Hours by pressing the START/STOP key. NOTE: Holding the START/STOP key will fast advance the digits.

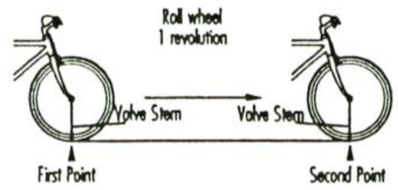
5. Press the MODE key to set the screen and advance to setting the Minutes in the same manner as Hours.

6. Press the MODE key one final time to set the screen and return to the main screen .

Wheel Size Setting
The wheel size setting number is equal to the distance, in millimeters, that your front wheel travels during one complete revolution. Each time the wheel magnet passes the sensor unit on your fork, the sensor sends an impulse to the computer telling it that your wheel has completed one revolution. The computer calculates this distance vs. time to give you accurate readings for the various modes.

Determining Wheel Size Setting
There are three methods for determining the wheel size setting. For the most accurate computer readings, it is best to measure the actual distance that your wheel travels in one complete revolution. This method is called a **wheel roll out.**

Method One: Wheel Roll Out

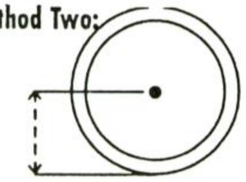


- Perform the wheel roll out on a hard, flat, smooth surface such as a garage or basement floor.
- Make sure your tires are properly inflated.

1. Position your bike so that the valve stem of the front wheel is at its bottom most position. Mark the spot on the floor directly under the center of the valve stem using a piece of tape or chalk.

2. Roll the bicycle forward in a straight line, while putting downward pressure on the handlebars to simulate rider weight. When the wheel has completed one revolution and the valve stem is at its bottom position, mark the floor directly under the center of the valve stem with tape or chalk. Measure the distance between the two marks in millimeters. (Note: Conversion of in. to mm. is 1 in.=25.4 mm.) This is your wheel setting number. You can repeat this procedure and average your results. We recommend that you record your wheel setting numbers here for future reference.

Method Two:



Measure wheel radius (including tire) in mm and multiply by 6.2832=Wheel setting number.

Method Three:
Refer to the following chart and input the number that corresponds to your tire size. (Note: Actual size of two similarly marked tires from different manufactures can vary significantly, making this method the least accurate.)

WHEEL SIZE CHART

	Wheel/Tire Size	Wheel Size Setting in mm
ATB	26 x 1.0 ATB	1913
	26 x 1.25	1953
	26 x 1.5	1985
	26 x 1.9	2055
	26 x 2.0	2074
	26 x 2.1	2095
	26 x 2.2	2110
ROAD	700 x 20c	2074
	700 x 23c	2114
	700 x 25c	2124
	700 x 28c	2140
	700 x 32c	2155
	700 x 35c	2175
	700 x 38c	2180
	700 x 40c	2190
	650 x 20c	1945
	650 x 23c	1990
	Wide 700c Tubular	2117
	Narrow 700c Tubular	2105
	27 x 1"	2145
	27 x 1-1/4	2160

Setting Wheel Size

1. With the Radar in the SPD/ODO screen, press and hold the MODE key for 2 seconds. The screen will clear and the default wheel size (2124 700 x 25c) will appear with the first digit flashing.

2. Use the START/STOP key to advance to the correct number for your wheel size.



3. Press the MODE key to set and advance to the next digit.

4. Repeat until all digits are programmed.

5. Pressing the MODE key the last time will advance the unit to programming the Odometer.

Setting the Programmable Odometer

The Radar is equipped with separate Programmable Odometers for both the main functions and the Workout Window. The Programmable Odometer allows you to re-enter your computers last mileage back into memory after a battery change.

NOTE: Remember to write down the mileage of both the Main Odometer and Workout Window Odometer before you change the battery in the unit.

1. Entering the main Programmable Odometer happens automatically after you have finished setting the wheel size. The screen will clear and 5 zeros will appear with the first digit flashing.



2. Use the START/STOP and MODE keys to advance and set the digits in the same manner as you did with the clock and wheel size.

3. When you press the MODE key for the last time the unit will return to the main SPD/ODO window.

4. To skip the procedure for setting the programmable odometer press and hold the MODE key for one second.

TO SET THE PROGRAMMABLE ODOMETER IN THE WORKOUT WINDOW

1. Press and Hold the MODE key for 2 seconds while in the Workout Window SPD/ODO screen.

2. The screen will clear and 5 zeros will appear with the first digit flashing. Use the START/STOP and MODE keys to advance and set the digits in the same manner as you did with the clock and wheel size.

3. When you press the MODE key for the last time the unit will return to the Workout Window SPD/ODO Screen.

OPERATION OF THE MAIN RADAR FUNCTIONS

The operation of the main functions of the Trek Radar cycle computer is mostly automatic. The stopwatch turns on and off automatically when the wheel turns. Average and Maximum speeds are automatically calculated using the ride time stopwatch.

Resetting the Main Functions

Reset the stopwatch by pressing and holding the START/STOP for 2 seconds while in the SPD/STP screen. This action also clears Average Speed, Maximum Speed and Trip Distance, as well as all of the Workout Window functions to zero.

Resetting Maximum Speed

If you are doing sprint workouts, the Maximum Speed of the Radar can be reset independent of the other functions by pressing and holding the MODE key for two seconds while in the Maximum Speed screen.

OPERATING THE WORKOUT WINDOW

The Radar is equipped with Trek's patented computer within a computer, the Workout Window. The Workout Window allows you to track the intensity portions of your ride separately from the information for the whole ride.

The revolutionary Workout Window feature was developed to make your riding experience—

SAFER

No need to compromise traffic laws to enhance your average speed. Ride safely through traffic knowing that you can start the Workout Window when you reach the open road.

HEALTHIER

No need to skip a proper warm up and cool down to enhance your average speed. Start your Workout Window after your warm up and stop it before your cool down.

MORE ENJOYABLE

No need to accept a compromised average speed. The Workout Window can be a real motivator by showing you your true average speed when you have the "Hammer Down".

MORE PRODUCTIVE

Use the Workout window to track your performance while ridding your favorite course, during intervals, time trials, or even sprints. Get the feedback you need without losing your cumulative riding data.

Entering the Workout Window

Press the WORKOUT WINDOW key from any main screen to enter the Workout Window. The Workout Window Icon (🚲) will appear on the right hand side of the screen.

Activating the Workout Window

To activate the Workout Window you must press the START/STOP key in the Workout Window SPD/STP screen to start the Stopwatch. Once the START/STOP key is pressed the action of the Stopwatch is automatic, starting and stopping when the wheel of the bike is turning. To stop the Workout Window you must press the START/STOP key again. The Workout Window icon will flash to indicate that the Workout Window is operating.



Clearing the Workout Window

1. Pressing the START/STOP key for 2 seconds in the main SPD/STP screen will reset all functions, both main and Workout Window

2. Pressing the START/STOP key for 2 seconds in the WORKOUT WINDOW SPD/STP screen will reset only the WORKOUT WINDOW functions and will not affect the Normal Operating functions.

3. Resetting Maximum Speed –Just as in the Normal operating mode. If you are doing sprint workouts, the Workout Window maximum speed of the Radar can be reset independent of the other WORKOUT WINDOW functions by pressing and holding the MODE key for two seconds while in the SPD/MAX screen.

QUICK REFERENCE GUIDE

Desired Function	Which Key to Press	Notes
Advance Digits While Programming	Start/Stop	Hold for Fast Advance
Set Digits While Programming	Mode	
Escape From Programming Mode	Mode for 1 Sec	
Set Clock, Thermometer and Units	Mode for 2 Sec	In SPD/STP Screen
Set Wheel Size	Mode for 2 Sec	In SPD/ODO Screen
Main Programmable ODO	Automatic at end of Wheel Size Setting	
Reset All Functions	Start/Stop for 2 Sec	In SPD/STP Screen
Reset Main Max Speed Only	Mode for 2 Sec	In SPD/MAX Screen
Enter Workout Window	Workout window	In any Screen
Workout Window Programmable ODO	Mode for 2 sec	In Workout Window SPD/ODO Screen
Start Workout Window	Start Stop while in Workout Window	Initial start only, subsequent starts and stops are automatic
Reset only Workout Window Functions	Start/Stop for 2 Sec	In Workout Window SPD/STP Screen
Reset only Workout Window Max Speed	Mode for 2 Sec	In Workout Window SPD/MAX Screen

TROUBLESHOOTING GUIDE

Problem	Solution
No speedometer reading	Check for proper magnet sensor alignment. Check computer to make sure it is snapped firmly into the bracket.
Display Readout Fades	Poor battery contact or dead battery-remove the battery, check contactor replace battery.
Display shows irregular figures	Press A/C button on the back of the unit to clear and restart the computer.
MX display reads 99.5	Clear modes by pressing BOTH buttons in regular mode for 1 sec ond, check wheel magnet/sensor alignment.
Slow display response	Temperature outside of computer operating limits 32–120˚F (0–49˚C)
Black display	Computer unit too hot or display exposed to direct sunlight for too long. Let the unit cool and it should return to normal.

RECORD DATA HERE