AVOCET

CYCLOMETER 35

AVOCET 1-YEAR LIMITED WARRANTY

This Avocet Cyclometer is warranted against defects in material ind workmanship for one year after date of purchase, or two years after the manufacture date stamped on the PC board under the battery (YM), whichever comes first. Defective products will be repaired or replaced. The warranty will not cover the battery, normal wear, damage, or loss and is void if the Cyclometer is disassembled by anyone other than an authorized Avocet Service Center.

PROCESSING INFORMATION

Customer service and product information are available at www.avocet.com/service.html or by calling 650-470-0478. Warranty claims are to be sent to the Service Center by the owner, not by the retail store where the Cyclometer was purchased. Include a description of the problem. Only the original, dated cash register or charge card receipt will be accepted for proof of purchase date (no exceptions).

Send your Cyclometer freight prepaid to the Service Center at the address listed below. A traceable method of shipment is recommended in the event that your shipment to Avocet is lost in transit.

Avocet Service Center
170A University Ave.
Palo Alto, CA 94301

Customer service and product information are available at www.avocet.com or by calling 650-470-0478 ext 218

AVOCET, INC, P.O. Box 180, Palo Alto, CA 94302, USA

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PART I–OVERVIEW

PRESSING LEFT BUTTON
Selects Max & Av Speed and Total Distance
Starts and stops Timer and changes setup data

PRESSING RIGHT BUTTON
Moves between speed, distance and time
Moves from one setup function to the next

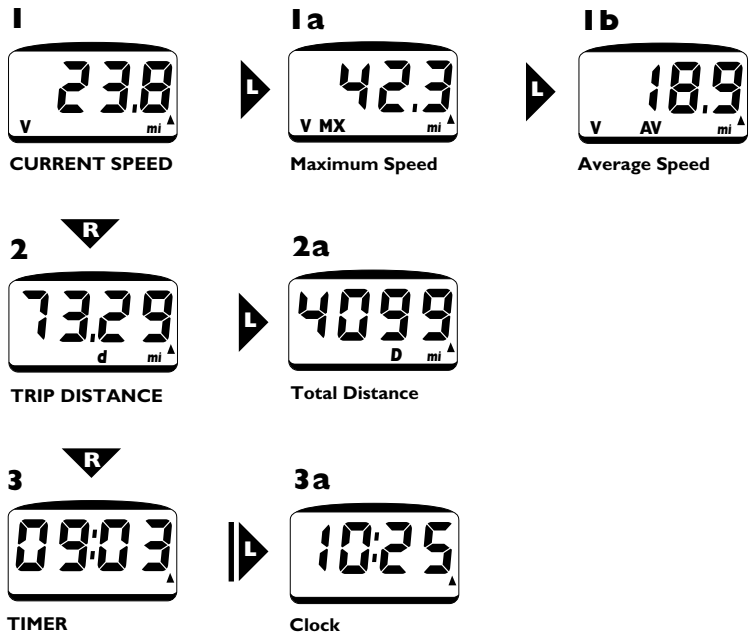
HOLDING LEFT BUTTON
Selects the Clock in the time function

HOLDING RIGHT BUTTON
Shows accumulated hours when timer is displayed

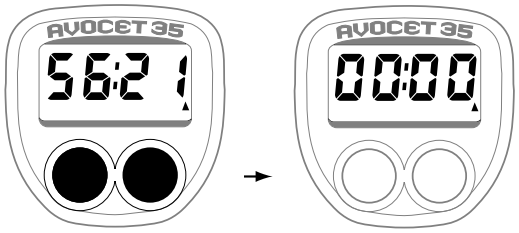
PRESSING BOTH BUTTONS
Resets functions individually

HOLDING BOTH BUTTONS
Resets all functions except Total Distance
Reaches setup

FUNCTIONS



INDIVIDUAL RESET. Press both buttons to reset the displayed function.



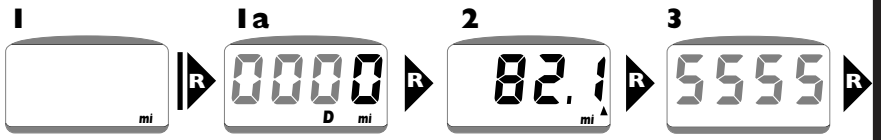
FUNCTION *FUNCTION RESET*

GLOBAL RESET. To reset all functions except total distance, hold both buttons about 3 seconds and release when the test pattern appears.

ANY FUNCTION *TEST PATTERN* *EVERYTHING RESET EXCEPT TOTAL DISTANCE*

SETUP. To reach setup hold both buttons in any function for 8 seconds. Continue holding when the test pattern appears, then release when 'mi' or 'km' appears.

Move from one setup function to the next by pressing the right button. Enter setup data with the left button. Hold the left button when 'mi' or 'km' is displayed to reach Total Distance Setup. Setup does not reset stored data.



MILES/KILOMETRS **TOTAL DISTANCE SETUP** **CALIBRATION** **SLEEP**

12/24 HOUR CLOCK **SET CLOCK HOUR** **SET CLOCK MINUTE**

PART II–FUNCTIONS

SPEED (V). Current speed is displayed to 999.9 mph or km/h in 0.1 increments. Low speeds are displayed down to 1 mph. The Cyclometer uses speed data to calculate distance, and in mountain biking, good low-speed sensitivity ensures that distance will not be lost during low speed climbing or while walking unridable trails. Speed data is on-line and not clipped or averaged. The speed display is updated every second. With immediate, high-precision speed you can gauge your performance and smoothness clearly.

MAXIMUM SPEED (MX). Maximum speeds of up to 999.9 mph or km/h are recorded with 0.1 resolution. Reset individually by pressing both buttons when maximum speed is displayed. If you are only interested in the maximum speed reached on a ride, do a global reset at the beginning, and check your maximum at the end. Reset before a descent or a sprint to find your maximum speed for that particular part of your ride. Maximum speed is an important performance indicator in sprint training, and you can track your progress if you reset before each effort, then check the maximum afterward.

AVERAGE SPEED (AV). Average speeds of up to 999.9 mph or km/h are displayed with 0.1 resolution. Reset individually by pressing both buttons when average speed is displayed. Usually you will want to know average speed for an entire ride. For training, you may want to reset often to check performance on specific sections of a ride.

If you measure your performance by average speed on a course you regularly ride, the Cyclometer 35 will show your progress. To make riding on wind trainers and rollers more interesting and effective, you can design increasing-tempo and steady-tempo workouts.

PaceArrow™. The PaceArrow, displayed in all functions when the bicycle is moving, indicates whether current speed is above or below average speed. For training, the PaceArrow is most effective on a rolling route. To keep the arrow pointing up, you will have to work hard on the uphills, then use the downhills for recovery. You can adjust the difficulty of the workout by resetting Average Speed more or less often. The PaceArrow and Average Speed make unforgiving taskmasters for those who like hard training.

Auto Start/Stop. The Cyclometer 35 displays true average speed. It only averages when the bicycle is moving. Its ride timer calculates average speed independent of the Timer. Time stopped at traffic lights or rest stops on long rides such as centuries will not reduce your average speed.

TRIP DISTANCE. Trip distances up to 999.9 miles are displayed. To 99.99 miles resolution is 0.01; at 100 miles resolution changes to 0.1. The display freezes when it reaches 999.9 miles. Reset by pressing both buttons when trip distance is displayed. Most riders measure trip distance for an entire ride and zero the display with a global reset before they start riding. The high resolution of the Cyclometer 35's trip distance display, and the unit's excellent low-speed sensitivity give extremely accurate trip distances–but only if the unit is calibrated precisely with an accurately measured tire circumference. See setup instructions for the method for accurately measuring circumference.

Use the Cyclometer 35's Trip Distance function to follow a route slip or to create a route slip for a tour with exact distances to turns and landmarks. In racing, Trip Distance will tell you how far you are into the course.

TOTAL DISTANCE. Whole miles up to 9,999 are displayed. After accumulating 9,999 miles the display freezes. Reset to 0 or adjust in Total Distance setup. To record yearly mileage, reset before your first ride of a new year.

If you have accumulated over 6,250 miles total distance, then change your Cyclometer to display kilometers, you will exceed the display capacity of 9,999. However this distance will be retained and will be displayed again upon returning to miles.

TIMER. Press the left button to start and stop the Timer. In the primary Timer display minutes and seconds are displayed to 59:59. Hold down the right button to show accumulated hours up to 9. When you release the right button, the display returns to minutes and seconds. Reset by pressing both buttons or by global reset. Reset also stops the Timer. You can time parts of your ride without resetting average speed, because average speed has its own timer.

CLOCK. Hold the left button to reach the Clock from the Timer. The Clock can be set up in either 12 or 24 hour format. The colon between the hours and minutes in the Clock flashes to distinguish it from the Timer.

PART III–SETUP

MILES OR KILOMETERS. To reach setup hold both buttons for 8 seconds until 'mi' or 'km' appears. Press the left button to switch between miles and kilometers. Stored speed and distance data are automatically converted to the units chosen. After selecting units, press the right button to go to calibration.

You can change from miles to kilometers for a specific ride such as a 40 km time trial or for a trip to a country where the metric system is used. Your accumulated miles will be converted to kilometers and not lost. You can also change during a ride to see how fast you are going in km/h and how many kilometers you have travelled. To change, hold both buttons in any function until 'mi' shows. Press the left button to show 'km', then press the right button until you have exited calibration.

TOTAL DISTANCE SETUP. If you want to adjust Total Distance, hold the left button when 'mi' or 'km' is displayed. Total Distance appears. Adjust the blinking digit with the left button, then go to the next digit with the right button. After adjusting all digits, exit to calibration with the right button.

When you install a new battery, accumulated total distance is lost. You can reenter this distance and you can also transfer distance from another computer by adjusting the total distance accumulated on your Cyclometer 35.

If you want to use the Total Distance function as a second Trip Distance function, you can adjust total distance to zero at the beginning of a week, month, or multi-day tour to record weekly, monthly, or tour miles.

CALIBRATION. Find the calibration number that matches your tire size from the table, or measure tire circumference by the precise calibration method. Calibration by the table will give acceptable precision for speed, but if you want to take advantage of your Cyclometer 35's ability to measure distance with precision to 0.01 mile, you must measure your tire circumference.

When the arrow at the lower right of the display points up, pressing the left button increases the calibration number. When it points down, the number decreases. Each button press changes the number .04", so it will take either 2 or 3 presses for the change to show on the display. Holding the left button increments rapidly through the numbers. At the correct number, press the right button to go to sleep setup.

Precise Calibration. To take full advantage of the precision of your Cyclometer 35, measure the front tire's 'rolling circumference' by the following method: Mark the ground under the valve stem when the stem is at its lowest point. Get on the bicycle and have a helper push you in your normal riding position until the valve stem returns to its lowest point. Take care that the tire travels in a straight line. Mark below the stem again, then measure the distance in inches between the marks. This measurement is your calibration number. Tire pressure can have a big effect on your measurement, so be sure to inflate your tires to your usual riding pressure. Recording the measurements for different bicycles and wheels below will save you the trouble of remeasuring in the future.

Bike/Wheel_____ Calibration #:_____

Bike/Wheel_____ Calibration #:_____

Calibration Table. Tire sizes are molded into tire sidewalls. This table is based on popular tire brands and assumes recommended inflation pressure and a rider weight of 165 lbs. (75 kg). Rear tires carry more weight than front, and this makes them smaller. If you use a rear mount, subtract .35" or 9 mm from the numbers below. There are many variables that affect tire size, so the table numbers are only approximate. To account for your unique combination of weight, tire pressure, and tire model, measure your tire circumference.

	Calibration Number	
Tire Size	Miles	Km
20 x 1.75	60.16 in	1528
24 x 1	69.02	1753
600 tubular	69.25	1759
650 tubular	75.95	1929
26 x 1	75.32	1913
26 x 1.25	76.89	1952
26 x 1.5	78.19	1986

	Calibration Number	
Tire Size	Miles	Km
26 x 1.95/2.0	80.51	2045
26 x 2.1	80.95	2056
26 x 1 3/8	81.42	2068
700 tubular	82.13	2083
700 x 20	81.93	2081
700 x 23	82.17	2087
700 x 25	82.32	2091

	Calibration Number	
Tire Size	Miles	Km
700 x 28	82.52	2096
700 x 32	83.31	2116
700 x 38	85.00	2159
27 x 7/8	81.77	2077
27 x 1	82.91	2105
27 x 1 1/8	83.58	2123
27 x 1 1/4	84.33	2142

SLEEP. Unless you want to put your Cyclometer to sleep, when 'SSSS' appears, press the right button to go to clock setup .

LEAVING THE CYCLOMETER IN SLEEP. If you don't intend to use the Cyclometer for two months or more, leave "SLEEP" displayed on the screen. Then up to 50% of power consumption will be saved. To activate the Cyclometer press the right button and complete setup.

CLOCK SETUP. The display shows '12 hr' indicating that the clock will display in 12 hour format. Press the left button to change to 24 hour format. Press the right button to exit to clock set.

SET CLOCK HOUR. The hour digits blink. Advance them by pressing the left button. At the correct hour press the right button.

SET CLOCK MINUTE. The minute digits blink. Advance them rapidly by holding the left button, or one at a time by pressing the left button. At the correct minute, exit setup by pressing the right button.

Instrument displays either miles or kilometers.
Functions can be reset individually or globally.

Speed Functions
SPEED: To 999.9 mph in 0.1 mph increments
Maximum speed: To 999.9 mph in 0.1 increments (resettable).
Average Speed: To 999.9 mph in 0.1 increments. Calculated only while the wheel is turning (resettable)
Pace Arrow™: Indicates whether current speed is above or below average speed. Displayed in all functions.

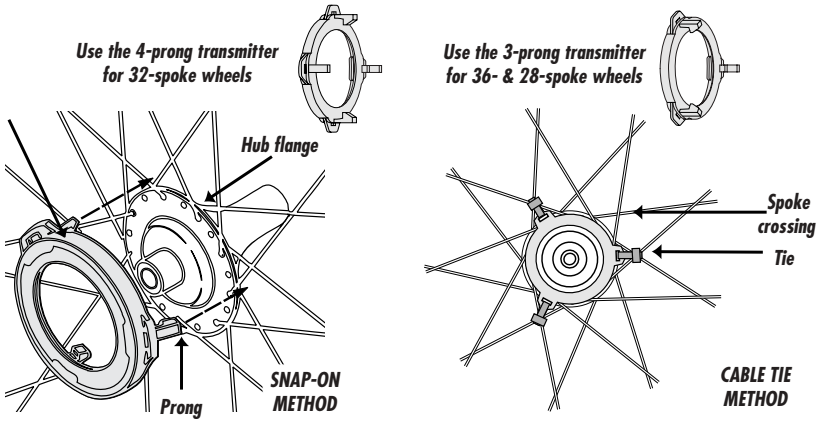
Distance Functions
TRIP DISTANCE: To 99.99 mi. in 0.01 mi increments, then from 100.0 to 999.9 in 0.1 mi increments (resettable). Display freezes at 999.9 mi
Total Distance: To 9,999 mi in 1 mi increments. Display freezes at 9,999 mi

Time Functions
TIMER: To 9:59:59 in 1 second increments (resettable)
Clock: To 1 minute; 12 or 24 hour format

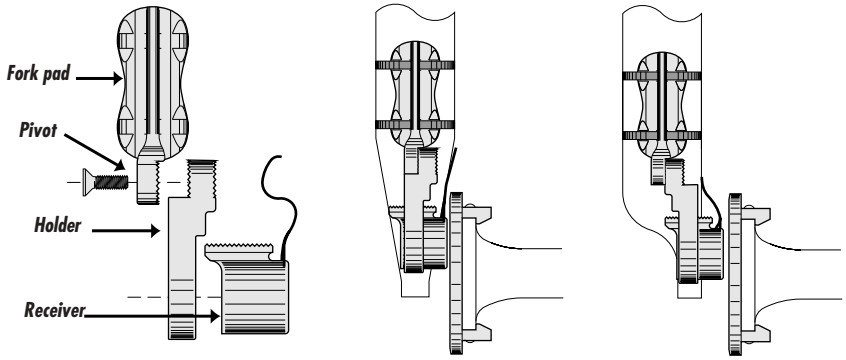
Setup functions
Miles/Kilometers: Stored data converted when setup is changed
Total Distance Setup: Total distance number programmable by the user
Wheel Size Calibration: Calibration for wheels from 30.2" circumference to 131" circumference in 0.04" increments (displayed to 0.1")
Sleep: Cuts power consumption by 50% while retaining stored data
Dimensions: 1.75" X 1.75" x 0.3"
Weight: Unit, .5 oz
Display: Liquid crystal, numbers 0.375 high
Operational Temperature Range: 0°F to 150°F
Data: Speed display updated every second. MultiPulse transmitter sends 20 pulses per wheel revolution
Weather resistance: Water resistant
Battery: 1.5 volt, 2 year life. Use Avocet Cyclometer 35 battery or 357 (Renata, Eveready, RayOVac, Phillips). SR44W (Maxell, National, Panasonic, Sony, Toshiba) D357H (Duracell).
Accessories: Rear mount kit for use with trainers that keep the front wheel stationary

PART V–INSTALLATION

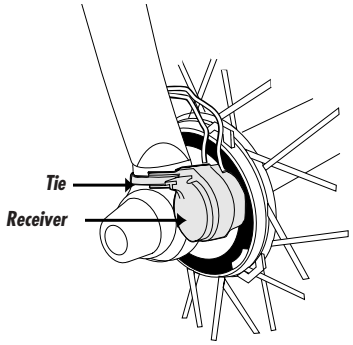
1. TRANSMITTER. Remove the front wheel. Count the number of spokes in the wheel. Use the 3-prong transmitter for 36 or 28-spoke wheels. For 32 spoke wheels, move the magnet to the 4-prong transmitter and use it instead. Do not turn the magnet over when you move it–keep the same side facing out. The transmitter snaps on the flange of a standard, low-flange hub. After attaching the transmitter reinstall the wheel. You can also attach the front transmitter with ties if your hub flange is too large or small for it to snap on. Cut off the transmitter prongs with scissors, then attach it to the spoke crossings.



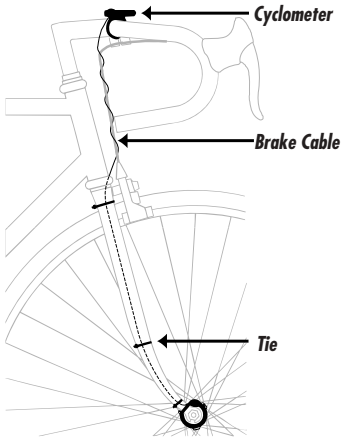
2a. MOUNTAIN RECEIVER. Fits any fork. If you have a suspension fork or a mountain bike fork with fat blades that taper for the slotted ends, use the mountain receiver. Clean and dry the front of the right fork blade. Slide the receiver into its holder (wires on the inside). Loosen the pivot screw and install the fork pad loosely on the front of the right fork blade with two cable ties inserted through the holes in the pad. Pivot and rotate the receiver until it touches the transmitter magnet. Tighten the pivot screw with the receiver against the front of the fork. Tighten and trim the cable ties, and fine-tune the adjustment by sliding the receiver in its holder until it nearly touches the transmitter.



2b. ROAD RECEIVER. For standard road forks. Position the receiver on the front of the right fork blade opposite the transmitter magnet (colored stripe in illustration). The side of the receiver with the wires coming out of it should be next to the magnet. Thread a cable tie through the hole in the receiver holder and around the fork. Pull the cable tie tight. Position the receiver so that it is close as possible to the transmitter by rotating the holder on the fork and by sliding its toothed adjuster in or out.

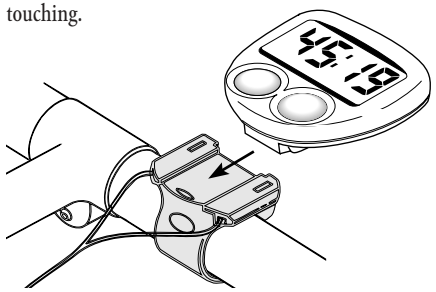


3. RECEIVER WIRE. Secure the wire with ties or tape starting at the receiver. Attach the wire only to parts that rotate when the bicycle is steered– the fork, the handlebar stem, or the front brake cable. Do not attach the wire to the head tube. Wrap excess wire around the front brake cable.



4. MOUNT BRACKET. Remove the clamp screw and place the mount bracket on the handlebar near the right side of the stem. Insert the clamp screw and tighten it until the bracket does not move when the Cyclometer is inserted or removed. If the handlebar is too small for the clamp, put the shim provided under the clamp for a tight fit.

5. MOUNTING THE UNIT. Slide the Cyclometer into the mount bracket from front to rear until it snaps on. Choose the speed function, then spin the front wheel and watch for a reading. If the display remains at zero make sure that the receiver and transmitter are aligned and nearly touching.



INSTALLING A NEW BATTERY.

To remove the battery, pry up the cap on the back of the Cyclometer with a screwdriver. Install the new battery with its positive (+) side toward the cap, then press in the cap with your thumb. Use only an Avocet Cyclometer 35 battery or equivalent (see specifications). Removing the battery erases setup data and total distance. After installing a battery, the unit goes into setup ready for entry of setup data. At this time total distance can be programmed into the Cyclometer.