

## FUNCTIONS

- Cadence ( RPM)
- Average Cadence ( RPM)
- Speedometer (SPD) (0 TO 99.9 Km/hr or M/hr)
- Tripometer (DST) (0 to 999.99 Km or M)
- Odometer (ODO) (Up to 9999.9 Km or M)
- Auto trip timer (TM) (9:59:59)
- Maximum Speed (MXS) (0 to 99.9 Km/hr or M/hr)
- Clock, 12/24 hour Selectable
- Average Speed (AVS) (0 to 99.9 Km/hr or M/hr)
- Speed Comparator (+ or -)
- Speed Tendency
- Odometer Program Function (ODO)
- Auto Scan
- Maintenance Required Functions ( )

-1-

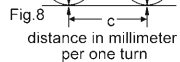
## HOW TO MEASURE WHEEL FACTOR

Press and hold LEFT and RIGHT buttons for 4 seconds to access wheel size input mode. Note all information in computer will be erased.

| Wheel Diameter d | Wheel Factor c |
|------------------|----------------|
| 26 x 1.0         | 1913           |
| 26 x 1.25        | 1953           |
| 26 x 1.4         | 2005           |
| 26 x 1.5         | 2010           |
| 26 x 1.75        | 2023           |
| 26 x 1.95        | 2050           |
| 26 x 2.0         | 2055           |
| 26 x 2.1         | 2068           |
| 26 x 2.3         | 2170           |
| 700 x 18         | 2070           |
| 700 x 20         | 2086           |
| 700 x 23         | 2096           |
| 700 x 25         | 2105           |
| 700 x 28         | 2138           |
| 700 x 30         | 2170           |
| 27 x 1"          | 2145           |
| 27 x 1 1/8"      | 2155           |
| 27 x 1 1/4"      | 2161           |

The digits on the bottom row will flash. The value you need to enter into the computer is the wheel factor. Wheel factor is the circumference of the wheel in mm. To obtain wheel factor:

- Fast (and not so accurate) Method - use chart provided.
- Most accurate method:
  - See figure 8.
  - Inflate your tires to proper pressure
  - Put a mark on the outside circumference of your front wheel (use masking tape).
  - Put a mark on the floor.
  - Put the mark on the wheel on the mark on the floor.
  - Rotate the wheel one full revolution until the mark on the wheel is on the floor again. Mark this spot on the floor.
  - Measure the distance between the marks on the floor in mm. This is your wheel factor (i.e. your wheel circumference).



Press the Right Button to adjust the value of the first digit of the Wheel Factor. Once you have entered the correct value press the Left Button to confirm the value and advance to the next digit. Repeat for all four digits. Press the Left Button to advance to KM/MILE selection.

KM/MILES SELECTION: After wheel size has been input, the Km/Miles units for distance and speed will flash. Press the RIGHT button to choose between Kilometer (KM) and Mile (M), press the LEFT button to confirm.

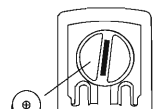
-10-

## BATTERY INSTALLATION

**Computer** - (Note: Battery is pre-installed) Remove the battery cover from the bottom of the computer using a small coin. Install the 3V battery with positive (+) pole facing the cover (Figure 1a). If the LCD shows irregular figures, take out the battery and install again. This will clear and restart the computer's microprocessor.

Battery is pre-installed

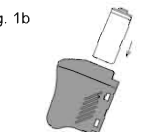
Fig. 1a



Computer Battery (3V / CR 2032)

**Wheel Transmitter** - (Note: Battery is pre-installed) Install the 12V battery in the wheel transmitter with the positive (+) pole facing the battery cap. Re-install the cap with a small coin and be sure it is tight to prevent moisture leakage (Figure 1b).

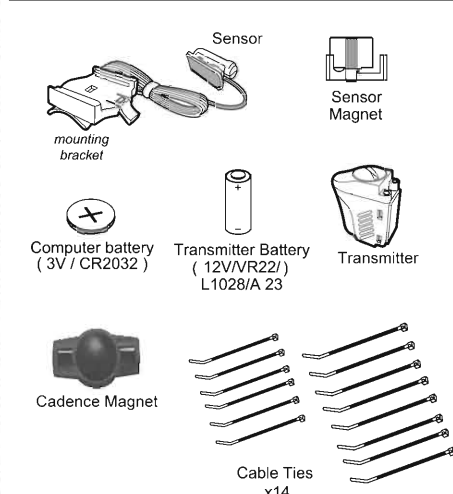
Fig. 1b



Transmitter Battery (12V / VR22L) 1028 / A 23

-2-

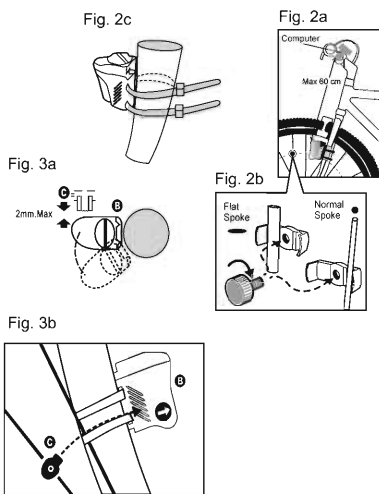
## ACCESSORIES



-3-

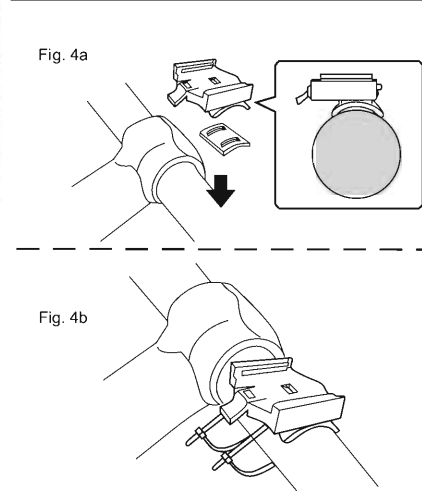
## FRONT WHEEL SENSOR INSTALLATION

Clamp the magnet onto the spoke of front wheel and attach the transmitter to the left fork (left side when you are in front of bicycle) by using the cable ties as shown in Fig. 2a, 2b and 2c. Make sure the arc of magnet intersects the alignment mark on the transmitter with 2 mm clearance as shown in Fig. 3a and 3b.



-4-

## MOUNTING BRACKET

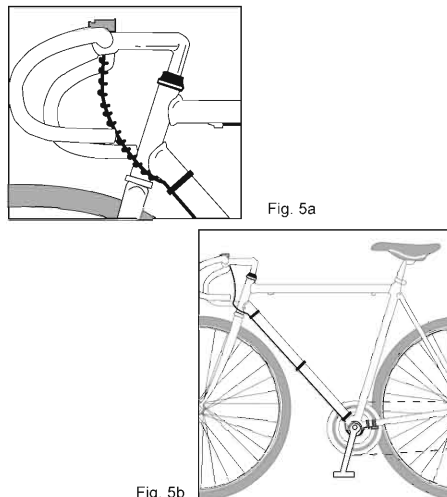


Attach the mounting bracket to the right side of the handlebar by using a screwdriver (Figure 4a and 4b). Make sure the mounting bracket is clamped tightly and will not slip on the handlebar with the rubber shims provided.

-5-

## CADENCE SENSOR INSTALLATION

a) See Figure 5a and 5b for routing of cadence wire.

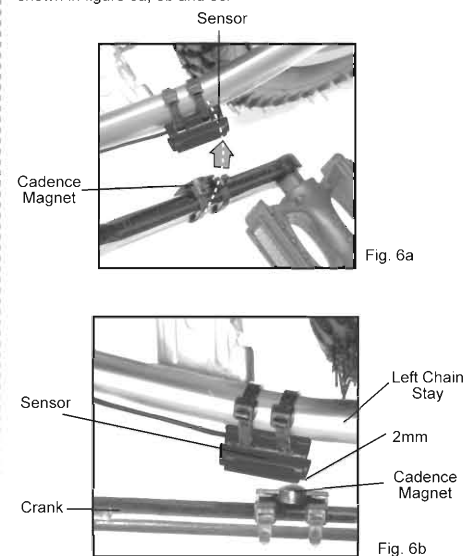


b) Make sure that there is enough wire clearance so the handlebars can rotate fully in both directions without pulling at the cadence sensor wire.

c) Route the wire down the frame of your bike and to the left chain stay. Do NOT install tire cable ties yet.

-6-

d) Without using tie wraps - position the cadence sensor on the left chain stay and the cadence magnet on the inside of the left crank. Position the sensor and magnet in such a way so that the magnet passes over the right portion of the sensor as shown in figure 6a, 6b and 6c.



e) Once you have determined the approximate position of the sensor and cadence magnet - loosely put the cable ties on the cadence magnet and cadence sensor. The magnet should be maximum 2mm from the sensor and be on the inside face of the left crank arm.

f) Test out the positioning of the cadence magnet and cadence sensor by rotating the cranks backwards to see if the computer registers a cadence value. If no value is registered reposition the sensor and magnet again.

Make sure the magnet passes over the right of the sensor as shown in Figure 6c

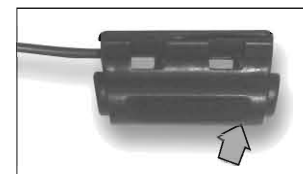


Fig. 6c

g) Once you have positioned the magnet and sensor properly - tighten up the cable ties securely and clip off the ends.

h) Secure the rest of the cadence wire securely to the frame of your bicycle with the remaining cable ties. Make sure that there are no dangling wires.

-8-

## COMPUTER INSTALLATION

Slide the computer onto the mounting bracket until it snaps firmly into position. Press the release button to remove the computer (Figure 7).

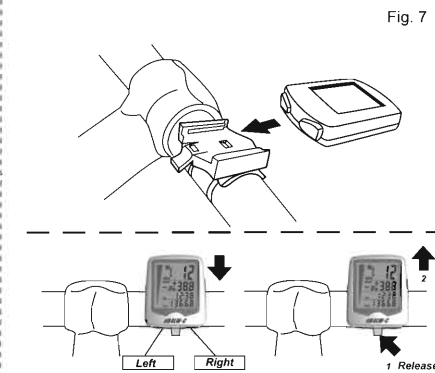


Fig. 7

-9-

Press the Right Button to adjust the value of the first digit of the Wheel Factor. Once you have entered the correct value press the Left Button to confirm the value and advance to the next digit. Repeat for all four digits. Press the Left Button to advance to KM/MILE selection.

KM/MILES SELECTION: After wheel size has been input, the Km/Miles units for distance and speed will flash. Press the RIGHT button to choose between Kilometer (KM) and Mile (M), press the LEFT button to confirm.

-10-

## COMPUTER FUNCTIONS

**DISPLAY**  
There are three main screens. Press the RIGHT button to toggle between the three display screens.

**Clock (12H/24H):** A 12 or 24-hour digital clock is displayed on the third row of the screen. After Km/mile selection in setup mode, the 12h/24h will flash. Press the RIGHT key to switch between the 12 and 24 hour format.

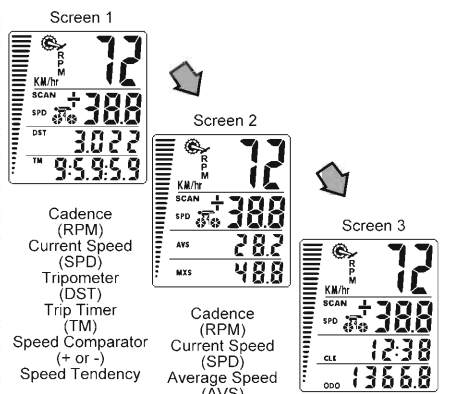
**Maintenance Required Function:** On the top left hand side a wrench icon will be displayed, just below the wrench the KM (or miles - M) will be displayed and the top row digits will be flashing. The digits represent the distance interval in KM (or miles) that the wrench icon will start flashing to remind you to perform maintenance on your bicycle. You can choose a maintenance reminder for every 200, 400, 600 and 800 KM (or miles). If 600 KM is chosen, the wrench will flash every 600, 1200, 1800 KM (or miles), etc. Press the LEFT button to stop the wrench ( ) from flashing. Press LEFT button to confirm maintenance interval and exit setup mode.

**ODOMETER:** To set the odometer (ODO) after battery replacement and wheel size setting, press RIGHT button to advance to ODO mode and then hold LEFT button for 5 seconds until the last digit of the ODO is flashing. To adjust the value, press the RIGHT button and then press the LEFT button to confirm and select the value. Repeat this sequence to reach the desired odometer value.

-11-

## COMPUTER FUNCTIONS

**DISPLAY**  
There are three main screens. Press the RIGHT button to toggle between the three display screens.



**Cadence (RPM)**  
**Current Speed (SPD)**  
**Tripometer (DST)**  
**Trip Timer (TM)**  
**Speed Comparator (+ or -)**  
**Speed Tendency**

**Cadence (RPM)**  
**Current Speed (SPD)**  
**Average Speed (AVS)**  
**Maximum Speed (MXS)**  
**Speed Comparator (+ or -)**  
**Speed Tendency**

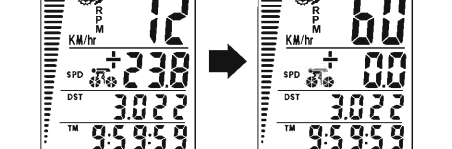
**Cadence (RPM)**  
**Current Speed (SPD)**  
**Clock (CLK)**  
**Total Distance/Odometer (ODO)**  
**Speed Comparator (+ or -)**  
**Speed Tendency**

-12-

## COMPUTER FUNCTIONS

**Cadence:** Current Cadence ( RPM) is shown on the Top Row of the screen. Cadence is the rotational speed of your cranks in RPM (revolutions per minute). When the 'Brackets' around the Crank Icon are flashing ( ) the computer is getting a Cadence signal.

To see (Average Cadence RPM) press the left button and Average Cadence will be displayed (FLASHING) for 4 seconds.



**Speed Comparator:** A "+" or "-" sign appears on the second line, to the right of the SPD icon. A "+" indicates you are traveling faster than your average speed (AVS). A "-" indicates you are riding slower than your average speed.

**Speed Tendency (Acceleration & Deceleration):** A cyclist icon appears on the second row of the display. The wheels turn forward to indicate acceleration, and turn backwards to indicate deceleration.

**Maintenance Reminder Functions:** The Maintenance Required Function lets you know when you need to do scheduled maintenance on your bicycle - for instance re-oil your chain after a pre-set distance is reached. The Maintenance Require Icon ( ) will appear when maintenance is required. During setup you can set the preset maintenance reminder function to 200, 400, 600 or 800 miles (or Km). If 600 KM is chosen, the wrench will flash every 600, 1200, 1800 KM (or miles), etc. Press the LEFT button to stop the wrench ( ) from flashing.

-13-

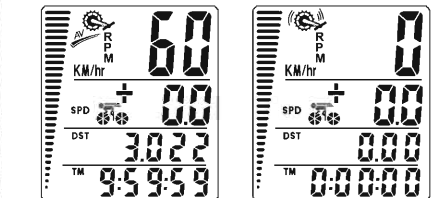
## COMPUTER FUNCTIONS

**Scan Mode (SCAN):** Scan mode allows you to see all screens without pressing any buttons. Each screen will be displayed for 4 seconds. Press the RIGHT button until the SCAN icon is displayed on the left hand side of the 2nd row. Press the RIGHT button to stop SCAN mode - note SCAN mode is ON only when SCAN is shown on the screen.

**Clock (CLK):** A 12/24 hour clock is displayed on the third row.

**Speedometer (SPD):** Instantaneous Speed is displayed in the 2nd row. The range of measurement is from 0 to 99KM/hr (0 to 99M/hr) and accuracy is +/-0.5KM/hr (M/hr).

**Odometer (ODO):** Total distance traveled (ODO) is displayed on the bottom row. To reset ODO, press and hold LEFT and RIGHT buttons for 5 seconds or remove the battery.



**Tripometer (DST):** Trip distance (DST) is displayed on the third row. Tripometer is activated automatically with speedometer input. Reset DST (Go to DST screen -- SCAN OFF) to zero by pressing the LEFT button for 2 seconds. NOTE: TM (Trip Time) and AVS (Average Speed) will also be reset.

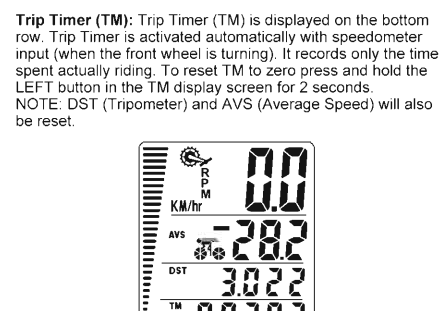
-14-

## COMPUTER FUNCTIONS

**Average Speed (AVS):** Average Speed (AVS) is displayed on the third row. AVS is calculated using the Trip Timer and Tripometer.

**Trip Timer (TM):** Trip Timer (TM) is displayed on the bottom row. Trip Timer is activated automatically with speedometer input (when the front wheel is turning). It records only the time spent actually riding. To reset TM to zero press and hold the LEFT button in the TM display screen for 2 seconds. NOTE: DST (Tripometer) and AVS (Average Speed) will also be reset.

**Auto Start / Stop:** To prolong battery life, the computer will automatically switch off if the unit is left unused for more than 5 or 6 minutes. Display will reappear with a press on either button.



**Maximum Speed (MXS):** Maximum Speed (MXS) is displayed on the bottom row. Maximum speed is stored in memory and updates only when a higher speed is reached. To reset maximum speed, press and hold the LEFT button in the MXS display screen for 2 seconds.

-15-

## TROUBLE SHOOTING

| PROBLEM   | SOLUTION   |
|---|--|
| No Cadence Value                                | Verify that the cadence sensor and cadence magnet are aligned properly   |
| Inaccurate Cadence Value                        | Verify that the cadence sensor and cadence magnet are aligned properly   |
| Inaccurate maximum Speed reading                | Unknown atmospheric or RF interference<br>Reset Max speed  |
| No Speedometer reading                          | Improper magnet/transmitter alignment. Check magnet/transmitter alignment and verify that the wheel transmitter battery is good. |
| Incorrect Speedometer Reading                   | RF interference from electromagnetic sources such as electronics, fluorescent lights, high voltage wires, telephone lines, etc.  |
| Slow display response                           | Temperature outside of operating limits (32-125°F or 0-55°C)   |
| No Trip Distance reading                        | Improper magnet/transmitter alignment. Check magnet/transmitter alignment and verify that the transmitter battery is good.       |
| Display shows irregular figures or blank screen | Re-install computer battery and verify that the computer battery is good.  |
| Black Display                                   | Temperature too hot or display exposed to direct sunlight too long.  |

-16-



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-17-

## COMPUTER INSTALLATION

Slide the computer onto the mounting bracket until it snaps firmly into position. Press the release button to remove the computer (Figure 7).

dB4LW-C- Wireless Cycle computer with Cadence

Owner's Manual



dB4LW-C