



**Cateye Astrale**  
CYCLOCOMPUTER  
Model CC-CD100 N II

U.S. Pat. Nos. 4633216/4642606/5236759/5226340/5904442 and Patent Pending  
Design Patented  
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CCMCD1N2-010507 066600100 **1B**

**Setting Values Cross Reference Table (The tire size is marked on both sides of the tire.)**  
**Table de Correspondance des Valeurs de Réglage (La dimension du pneu figure de chaque côté du pneu)**  
**Werttabelle zur Einstellung des Radumfangs (die Radgröße entnehmen Sie der Aufschrift des Reifens)**  
**Tabel voor het bepalen van de wielomtrek (de bandenmaat staat vermeld aan beide zijden van de band)**  
**Tabella delle Corrispondenze dei Valori di Regolazione (La dimensione del pneumatico figura su ogni lato del pneumatico)**  
**Tabla de Valores (El tamaño de la rueda está marcado al lado de la llanta)**  
タイヤ周長ガイド (タイヤサイズは通常タイヤの側面に記載されています)

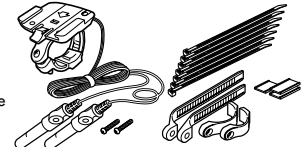
TIRE SIZE	L(mm)	TIRE SIZE	L(mm)	TIRE SIZE	L(mm)	TIRE SIZE	L(mm)
20 x 1.75	1491	26 x 1-1/8 Tubular	1970	27 x 1	2145	700 x 25C	2105
24 x 1	1753	26 x 1-3/8	2068	27 x 1-1/8	2155	700 x 28C	2136
24 x 3/4 Tubular	1785	26 x 1-1/2	2100	27 x 1-1/4	2161	700 x 30C	2170
24 x 1-1/8 Tubular	1795	26 x 1.40	2005	27 x 1-3/8	2169	700 x 32C	2155
24 x 1-1/4	1905	26 x 1.50	1985	650 x 35A	2090	700C Tubular	2130
24 x 1.75	1890	26 x 1.75	2023	650 x 38A	2125	700 x 35C	2168
24 x 2.00	1925	26 x 1.95	2050	650 x 38B	2105	700 x 38C	2180
24 x 2.125	1965	26 x 2.00	2055	700 x 18C	2070	700 x 44C	2224
26 x 1 (559mm)	1913	26 x 2.1	2068	700 x 19C	2090		
26 x 1 (650c)	1952	26 x 2.125	2070	700 x 20C	2086		
26 x 1.25	1953	26 x 2.35	2083	700 x 23C	2096		

**Specifications/Características técnicas/Technische daten/Specificaties/Caratteristiche tecniche/Specificaciones/仕様**

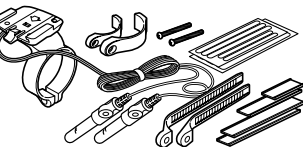
Controller/Calculateur/Controler/Controler/Elaboratore/Controlador/制御方式  
..... 4-bit 1-chip Microcomputer (Crystal Controlled Oscillator)  
Display/Affichage/Anzeige/Display/Visualizzazione/Pantalla/表示方式  
..... Liquid Crystal Display  
Sensori/Détecteur/Sensori/Sensori/Rivelatore/Sensor/検知方式  
..... No Contact Magnetic Sensor  
Operating Temperature Range/Température d'utilisation/zulässige Betriebstemperatur/Toegestane temp./Temperatura di utilizzo/使用温度範囲  
..... 0°C - 40°C(32°F - 104°F)

**SPARE ACCESSORIES/PIECES DE RECHANGE/ZUBEHÖRTEILE  
VERVANGINGSONDERDELEN/ACCESSORI/ACCESORIOS DE REPUESTO  
アクセサリパーツ**

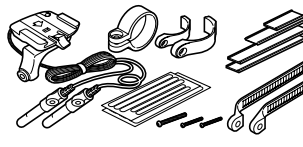
**# 169-6460N**  
Bracket Sensor Kit  
Kit Support Unité Principale et Détecteur  
Halterung+Radsensor Ausrüstung für Vorderradmontage  
Bracket en sensorkitset  
Element da montare : Supporto Unità principale e Sensore  
Conjunto de soporte y sensor  
ブラケットセンサーキット



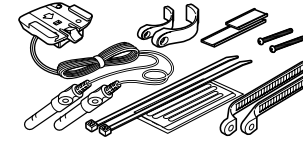
**# 169-6467**  
Center Mount Bracket Kit  
Kit de montage central de l'unité principale  
Halterung für Montage an der Lenkermitte  
Stuurbocht Bevestiging Set  
Kit di montaggio al centro del manubrio  
Kit Soporte pala Montaje Central  
センターマウントブラケットキット




**# 169-6468**  
Bracket Sensor Kit for Aero Bar  
Kit de Montage du Collier de Détecteur pour Barre Aero  
Halterung und Radsensor für Aero-Lenker  
Sensor bevestigingset voor Aero Stuurbocht  
Kit di Montaggio del Collare del Sensore per Barra Aero  
Kit abrazadera de sensor para manillares Aero  
エアロバー用ブラケットセンサーキット



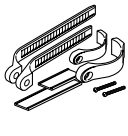
**# 169-6469**  
Stem Mount Bracket Kit  
Kit de montage de l'unité principale sur la broche du guidon  
Halterung für Montage an der Lenkerstange  
Stuurpen Bevestiging Set  
Kit di montaggio sull'attacco manubrio  
Kit Soporte pala Montaje en Tija  
ステム用ブラケットセンサーキット



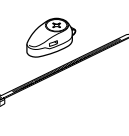
**# 169-6470**  
Attachment Kit  
Kit de Garnitures  
Befestigungsmaterial  
Kabelbevestigingset  
Guarnizioni da montare  
Elementos de fijación  
アタッチメントキット



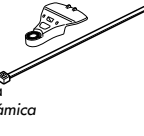
**# 169-6280**  
Universal Sensor Band  
Garniture Universelle pour Détecteur  
Universal Befestigungsband  
Universele Sensor klemstrip  
Guanizione Universale per Sensore  
Banda del Sensor Universal  
ユニバーサルセンサーバンド




**# 169-9765**  
Cadence Magnet  
Aimant de Cadence  
Pedalmagnet  
Kadans magneet  
Magneete Cadenza  
Imón de cadencia  
ケイデンスマグネット




**# 169-9780**  
Attachment for Aerofork  
Fixation pour fourche AERO  
Zusatz zur Federgabel  
Bevestiging voor aerovork  
Attacco per forcella aerodinamica  
Sujección para horquilla aerodinámica  
扁平フォーク用アタッチメント



**# 169-9691**  
Wheel Magnet  
Aimant de roue  
Radmagnet  
Wielmagneet  
Magneete ruota  
Imón de la rueda  
ホイールマグネット



**# 166-5150**  
Lithium Battery (CR2032)  
Pile au lithium (CR2032)  
Lithium-Batterie (CR2032)  
Lithium Batterij (CR2032)  
Bateria al Lítio (CR2032)  
Bateria de Lítio (CR2032)  
リチウム電池 (CR2032)



**LIMITED WARRANTY**

**1-Year Warranty for Main Unit Only (Accessories/Attachments and Battery Consumption excluded)**  
If trouble occurs during normal use, the part of the Main Unit will be repaired or replaced free of charge. The service must be performed by Cat Eye Co., Ltd. To return the product, pack it carefully and remember to enclose the warranty certificate with instruction for repair. Please write or type your name and address clearly on the warranty certificate. Insurance, handling and transportation charges to our service shall be borne by person desiring service.

**Address for service: CATEYE CO., LTD.**  
2-8-25, Kuwazu, Higashi Sumiyoshi-ku, Osaka 546-0041 Japan  
Attn.: CAT EYE Customer Service Section  
**Service & Research Address for United States Consumers:**  
**CATEYE Service & Research Center**  
1705 14th St. 115 Boulder, CO 80302  
Phone: 303-443-4595 Toll Free: 800-5CATEYE  
Fax: 303-473-0006 e-mail: CatEyeUSA@aol.com

**GARANTIE LIMITÉE**

**1 An de Garantie sur l'Unité Principale Uniquement (Les accessoires et la pile sont exclus de la garantie)**  
En cas de problème en cours d'utilisation normale, l'unité principale sera réparée ou remplacée gratuitement. Par Cat Eye Co., Ltd. Lors du renvoi du produit, il y a lieu de l'emballer soigneusement et de joindre le certificat de garantie avec les instructions de réparation. Les nom et adresse de l'acheteur doivent figurer de manière lisible sur le certificat de garantie. Les frais d'assurance, de manutention et d'envoi à notre Service Réparations seront supportés par le demandeur de la réparation.

**Adresse Service Réparations: CATEYE CO., LTD.**  
2-8-25, Kuwazu, Higashi Sumiyoshi-ku, Osaka 546-0041 Japan  
Attn.: CAT EYE Customer Service Section

**BEGRENZTE GARANTIE**

**1-Jahr-Garantie: Auf den Computer (Ersatzteile/Zubehörteile sowie Batterie nicht eingeschlossen)**  
Falls während des normalen Gebrauchs Fehler auftreten, wird das entsprechende Teil kostenlos repariert oder ersetzt. Die Reparatur muß von CAT EYE Co., Ltd. durchgeführt werden, und das zu reparierende Produkt muß direkt durch den Händler an CAT EYE Co., Ltd. gesandt werden. Bei der Rückgabe des Gerätes zur Reparatur packen Sie es sorgfältig anbei. Achten Sie darauf, Ihren Namen und Ihre Anschrift klar und deutlich lesbar auf die Garantiekarte zu schreiben, damit das Gerät so schnell wie möglich nach Beendigung der notwendigen Reparatur/Einstellung an Sie zurückgesandt werden kann.

**Anschrift bei Garantieansprüchen: CATEYE CO., LTD.**  
2-8-25, Kuwazu, Higashi Sumiyoshi-ku, Osaka 546-0041 Japan  
z. H.: CAT EYE Kundendienstabteilung oder wenden Sie sich bitte an den entsprechenden Importeur.

**GARANTIEBEPALINGEN**

**1 jaar garantie, alleen geldig op de computer (accessoires, aansluitingen en gebruik van batterij uitgezonderd)**  
Mochten er problemen optreden gedurende normaal gebruik, dan geschiedt reparatie of vervanging kosteloos. Dit doet door de fabrikant Cateye Co., Ltd. uitgevoerd te worden. Bij terugzending van de computer moet deze zorgvuldig verpakt worden en dient het garantiebewijs en een beschrijving van het probleem meegezonden te worden. Vermeld duidelijk uw naam en adres in blokletters of getypt op het garantiebewijs. Verzekerings- verzend- en transportkosten zijn voor rekening van de koper.

**Service adres: CATEYE CO., LTD.**  
2-8-25, Kuwazu, Higashi Sumiyoshi-ku, Osaka 546-0041 Japan  
ter attentie van: Cateye klantenservice

**GARANZIA LIMITATA**

**1 Anno di Garanzia soltanto sull'Unità Principale (Gli accessori e la pila sono esclusi dalla garanzia)**  
In caso di problema durante l'impiego normale, l'unità principale verrà riparata o sostituita gratuitamente da Cat Eye Co., Ltd. Al momento del ritorno del prodotto occorre imballarlo con cura allegandovi il certificato di garanzia con le istruzioni per le riparazioni. Il nome e l'indirizzo dell'acquirente devono essere presenti in modo leggibile sul certificato di garanzia. Le spese di assicurazione, di manutenzione e di spedizione al nostro Servizio Riparazioni saranno a carico del richiedente la riparazione.

**Indirizzo Servizio Riparazioni: CATEYE CO., LTD.**  
2-8-25 Kuwazu, Higashi Sumiyoshi-ku, OSAKA 546-0041, Giappone.  
Att: Dipartimento Assistenza Clienti

**GARANTIA LIMITADA**

**Se garantiza por un año únicamente el grupo central (Los accesorios, aditamentos y el consumo de la pila están excluidos)**  
Si ocurriera alguna avería durante el uso normal, se reparará o sustituirá la pieza o el grupo central. Cat Eye Co., Ltd. deberá realizar la reparación. Para devolver el producto, envuélvalo cuidadosamente y no olvide incluir el certificado de garantía y las instrucciones para repararlo. Rogamos escribir claramente a mano o a máquina su nombre y dirección. Los gastos de seguro, manipulación y transporte serán a cargo de la persona que solicite la reparación.

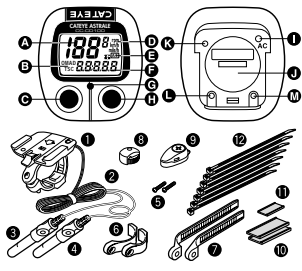
**Dirección para las reparaciones: CATEYE CO., LTD.**  
2-8-25, Kuwazu, Higashi Sumiyoshi-ku, Osaka 546-0041 Japan  
Attn.: CAT EYE Customer Service Section

**製品保証について**

**1年保証: コンピュータのみ (付属品及び電池の消耗は除く)**  
正常な使用状態で万一故障した場合は無料で修理・交換いたします。保証書にお客様のお名前・ご住所・ご購入日・故障状態をご記入の上、製品と共に当社宛て直接お送りください。お送りいただく際の送料はお客様にてご負担願います。修理完了後、当社より郵送にてお届けさせていただきます。

**[宛先]**  
**株式会社 キャットアイ 製品サービス課**  
〒546-0041 大阪市東住吉区桑津2丁目8番25号  
TEL: (06)6719-6863 FAX: (06)6719-2362

## E OPERATING INSTRUCTIONS



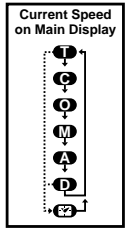
- A Main Display
- B Mode Symbol
- C Mode Button
- D Scale Symbol
- E Auto Mode Symbol
- F Sub-Display
- G Set Button
- H Start/Stop Button
- I AC Button
- J Battery Case Cover
- K Contact A
- L Contact B
- M Contact C

- 1 Bracket
- 2 Wire
- 3 Speed Sensor (with long wire)
- 4 Cadence Sensor (with short wire)
- 5 Screw
- 6 Sensor Bands-A (L/S)
- 7 Sensor Bands-B (L/S)
- 8 Wheel Magnet
- 9 Cadence Magnet
- 10 Sensor Rubber Pad (2 pcs.)
- 11 Bracket Rubber Pad
- 12 Nylon Ties

### MAINTENANCE/PRECAUTIONS

- Do not leave the main unit exposed to direct sunlight when the unit is not in use. Do not disassemble the main unit, sensor and magnet.
- Do not pay too much attention to your computer's functions while riding! Keep your eyes on the road and duly consider to traffic safety.
- Check relative position of sensor and magnet periodically.
- If mud, sand or the alike clogs between the buttons and the body, the movement of the buttons may be disturbed. Softly wash away such objects by water.
- For cleaning, use neutral detergent on soft cloth, and wipe off later with dry cloth. Do not apply paint thinner, benzene or alcohol, to avoid damages on the surface.

### BUTTON FUNCTIONS



#### Mode Button (left button)

The display mode mark shift in the illustrated sequence each time the button is pressed, and the corresponding data is simultaneously displayed on the sub-display. If the mode button is held for over 2 seconds, 24-hour clock will be displayed.

#### Start/Stop Button (right button)

Measuring of the Trip Distance and Elapsed Time is simultaneously started or stopped when the Start/Stop button is pressed. During operation the speed scale symbol flickers. Pressing the mode button can shift the main display from Current Speed to Cadence when Auto Mode is functioning.

#### Set Button (middle button)

When the Set Button is pressed in the stop state in each mode, the following value can be changed;

- In (O) mode ..... Wheel Circumference
- In 24-hour Clock mode ..... 24-hour Clock
- In (T),(D),(A) mode ..... on/off the Automatic Start/Stop

#### RESET:

Select any mode except Total Distance (O), and press the Mode button and Start/Stop button simultaneously. The memorized Trip Distance, Elapsed Time, Average Speed and Maximum Speed will be erased. (When the two buttons are pressed in O mode, the wheel circumference stored will be displayed.)

#### ALL CLEAR:

When the AC button is pressed, all data stored in memory (trip distance, speed scale, wheel circumference and clock time) will be erased. All displays illuminate, then the mile/h symbol alone appears. This operation should be executed only when irregular display occurs or no display appears. Since all the memories are erased, set the main unit again according to "Main Unit Preparation"

### MAIN UNIT PREPARATION

- The following must be completed before operation. A battery is already loaded in the main unit when purchased.

#### Setting Speed Scale

Press AC button on the bottom of the main unit to clear all data (Fig.1). All displays will illuminate. Then "mile/h" alone will be displayed as in Fig.2. "km/h" and "mile/h" are alternately displayed each time when the Start/Stop button is pressed. Select either as desired. Press the set button to set the speed scale. The display will be changed as shown in Fig.3.

#### Setting the wheel circumference

##### 1. How to measure the wheel circumference(Fig.4)

Put a mark on the tire tread and ride the bike one full wheel revolution. Mark the start and the end of the revolution on the ground and then measure the distance between the two marks. This is your actual circumference. Or, the "Selecting Values Cross Reference Table" tells you an approximate circumference according to tire size.

##### 2. Setting the wheel circumference

The figures 2155, standard wheel circumference for 27", will flicker as shown in fig. 3. When using 2155mm without revision, press the Set button. Current Speed and Elapsed Time will be displayed and 2155mm is set. To revise 2155mm, press the Start/Stop button to increase the number by one or press the Mode button to decrease the number by one. When either button is held down, it will rapidly increase/decrease. Choose a correct circumference between 10mm to 2999mm. When the desire figure appears, press the Set button. Current Speed and Elapsed Time will be displayed, then the figure you selected will be set.

##### 3. Resetting or changing the wheel circumference

Set the main unit in the (O) mode with the Mode button, and stop it with the Start/Stop button. Press the Set button then circumference reset mode will be ready for operation. Follow instructions given in (2) and revise the circumference as desired.

#### Setting the 24-hour clock time

Set the main unit in the 24 mode by pressing the Mode button for over 2 seconds, and stop it with the Start/Stop button. Press the Set button. The time stored appears, and the figures for minute flicker. Press the Start/Stop button to advance the figures by one. When the button is held down, it will rapidly increase. Set a time one or two minutes ahead of the current time. Press the Mode button. The figures for hour will flicker. Adjust it by using the Start/Stop button. Press the Set button and the undisplayed second will return to zero. Setting is completed. \*For accurate 24-hour clock setting, use your radio time signal.(Fig.5)

#### How to replace the battery (Fig.6)

If the display becomes invisible from the front, it is time for replacing battery. Prepare a new battery (CR2032) in advance, before taking out the old battery. Insert a new battery so that it is tightly fitted to the contact, as shown in the figure. When replacing, be careful not to press the buttons. Replacement must be done promptly (within 20 seconds).

After replacement, don't press AC button, because the data including total distance (odometer) is continuously measured.

However, the following malfunction might occur after replacement:

- No display appears.
- Unusual display appears.
- Display is O.K. but button don't work.

In the above cases, press AC button so that display / buttons returns to normal. (If AC button is pressed, all the data including odometer is erased. Please refer to "Main Unit Preparation" in the operating instructions.)

### MEASURING AND DISPLAY FUNCTIONS

**S Current Speed** 0.0(3.0) to 65.9mile/h [27inch] ±0.3 mile/h  
The Current Speed is displayed on main display (upper line) and updated once a second. In Auto-Mode, if you shift the main display from Current Speed to Cadence, Current Speed moves to the lower line with "S" mark.

**O Total Distance (Odometer)** 0.0 to 99,999 mile ±0.1 mile/h  
Continuously measured unless all clear operation is done. At 10,000 miles(km), the increment becomes 1 mile(km). At 100,000 miles(km), it returns to zero and counting begins anew.

**M Maximum Speed** 0.0(3.0) to 65.9mile/h ±0.3 mile/h  
With Reset operation, it returns to zero and counting begins anew.

**A Average Speed** 0.0 to 65.9 mile/h ±0.3 mile/h  
The average speed from start to current point is displayed within 27 hours 46 minutes 39 seconds (99.999 seconds) or 999.99 miles (km). If either is exceeded, (.E) is displayed and calculation ceases.

**D Trip Distance** 0.00 to 999.99 mile ±0.01 mile  
The trip distance from start to current point is displayed. With Reset operation, it returns to zero.

**T Elapsed Time** 0:00'00" to 9:59'59" ±0.003%  
Elapsed time is measured from start to current point, in units of hours, minutes and seconds. At 10 hours, it returns to zero and counting begins anew. With Reset operation, it returns to zero.

**C Cadence** 0(20) to 299 rpm (sub-display) ±1 rpm (below 100 rpm)  
Cadence[Pedal Revolutions per Minute (rpm)] is displayed on the sub-display. While Auto Mode is functioning it can be shifted to the main display by pressing the Start/Stop button and the range is from 0.0(20.0) to 199.9rpm in 0.1rpm increments in this case.

**24-hour Clock** 0:00' to 23:59' ±0.003%  
The Current Time is displayed as a 24-hour Clock on the sub-display.

### AUTO (AUTOMATIC START/STOP) FUNCTION

The CC-CD100N has an automatic Start/Stop function (Auto function). This Auto function switches on/off the unit to start or stop automatically. You don't need to press the Start/Stop button each time when the Auto function is switched on.

#### How to switch on/off the Auto function

Set the main unit in the (T),(D), or (A) mode. Press the Set button and the Auto function will be switched on/off each time the button is pressed. When the Auto function is switched on, the AT symbol appears.

\*When Auto mode is functioning, the Elapsed Time is counted only if the wheel is revolving. \*When the Auto function is switched on, the elapsed time may count about 2 seconds when you mount the main unit onto the bracket.

While Auto mode is functioning, Pressing the Start/Stop button can shift the Current Speed to Cadence display. It will return to Current Speed display when Auto function is released.

### POWER SAVING FUNCTION

When the main unit is left without receiving any input for 60-70 minutes continuously, the power will be automatically saved. Then the main unit will display the clock time only as shown in the figure. Press either the Mode button or Start/Stop button to release Power Saving mode. (The Power Saving mode is automatically released when the main unit receives signal from the sensor.)

### TROUBLE SHOOTING

- The following situations do not indicate malfunction of the cyclocomputer. Check the following before taking to repair.
- \* When current speed does not appear, short-circuit the contact on the back with metal. The unit will function normally if the speed display appears.

Display response is slow.	Is it at a low temperature under 32°F(0°C)? It returns to normal state when temperature rises.
No display.	Has the Lithium Battery in the main unit worn out? Replace the Lithium Battery with a new one.
Incorrect data appear.	Execute "All Clear" operation.
Current speed / Cadence does not appear.	Is there anything on the contact of the main unit or of the bracket? Wipe the contact clean.
	Is the distance between sensor and magnet too far? Are the marking line of the sensor and the center of magnet matched each other? Refer to "Sensor/Magnet Mounting" and re-adjust correctly.
	Is the wire broken? Replace the Bracket & Sensor part with a new one.
Transmission signal loss in damp or wet conditions.	Water or condensation may collect between the bracket sensor and the computer causing an interruption in the data transmission. Wipe the contacts with dry cloth. Contacts can also be treated with a water repellent silicon jelly from an automotive parts or hardware store. Do not use industrial water repellent; it may damage the bracket.
When the START/STOP Button is pressed, the unit doesn't activate or stop.	Is the unit in the Auto function? The START/STOP Button doesn't function in the Auto function.

### Specifications

Applicable Cycle Sizes	10 mm to 2,999 mm
Applicable Fork Diameter	11ø - 36ø (S:11-26ø L:21-36ø)
Power Supply	Lithium Battery (CR2032x1)
Battery Life	Approx. 3 years (The life of the first factory-loaded battery may be shorter)
Dimension/Weight	1-15/16"x 1-25/32"x 11/16"(49 x 45 x 17 mm) / 0.9 oz(25.5 g)

\*The specifications and design are subject to change without notice.



Fig.6