Cycle Computer

FLIGHT DECK

SC-6502/SC-6501/SC-M500
Be careful not to pay excessive attention to the computer data while riding, otherwise you might have an accident.

**NOTE:**

* The all clear (AC) button is used to clear the main unit memory.
* Never disassemble the main unit, as it cannot be reassembled.
* The main unit is fully waterproofed to withstand wet weather conditions; however, do not deliberately place it into water.
* Avoid leaving the main unit exposed to extremely hot weather conditions.
* Handle the main unit carefully, and avoid subjecting it to any shocks.
* Do not use thinner or other solvents to clean parts such as the main unit and sensor, as they may dissolve the part casings.
* To clean these parts, wipe them with a cloth soaked in a weak mixture of neutral detergent and water.
* If using the SM-6501/M/MD together with an LED lamp from another manufacturer, the speed measurement function may not work correctly. If using an LED lamp from another manufacturer, it is recommended that you use the SM-6500-RS.

### Specifications

<table>
<thead>
<tr>
<th>Meter</th>
<th>SC-6502</th>
<th>SC-6501 / SC-M500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bracket/Sensor unit</td>
<td>SM-SC70</td>
<td>SM-6501</td>
</tr>
<tr>
<td>STI lever</td>
<td>ST-7800</td>
<td>ST-M510</td>
</tr>
</tbody>
</table>

### 1. Display Modes

"Current speed" and "Gear indicator [bar]" are always displayed

#### Mode 1

- **CLK**: Clock
- **TIM**: Trip time
- **DST**: Trip distance
- **ODO**: ODO meter
- **STW**: Stop watch

#### Mode 2

- **Cadence**: Main display cadence
- **MAX**: Maximum speed
- **AVE**: Average speed
- **Cnt**: Lap counter

**Press mode button once**

**Press mode button continuously for 2 seconds or more**
2. Display Contents

**mode 1**

- Current speed (VEL)
- Clock (CLK)
- Trip time (TIM)
- Trip distance (DST)
- ODO meter (ODO)
- Stop watch
- Stop watch–trip distance (DST STW)
- Stop watch–average speed (AVE STW)
- Stop watch–maximum speed (MAX STW)
- Cadence (rpm)
- Main display cadence
- Maximum speed
- Average speed
- No. of gear teeth (digital)
- Gear indicator (bar)
- Pace Arrow
- Low battery display

**mode 2**

- Trip time (TIM)
- Trip distance (DST)
- ODO meter (ODO)
- Stop watch
- Stop watch–trip distance (DST STW)
- Stop watch–average speed (AVE STW)
- Stop watch–maximum speed (MAX STW)
- Cadence (rpm)
- Main display cadence
- Maximum speed
- Average speed
- No. of gear teeth (digital)
- Gear indicator (bar)
- Pace Arrow
- Low battery display
3. Name and function of each part

[Diagram showing the parts and their functions]

1. **Current speed (VEL)**
   - Range: 0.0 (2.0) - 130.0 km/h
   - 0.0 (1.2) - 80.0 mph
   - When main display cadence appears on top, current speed will appear at the top of the main display.

2. **Gear indicator (bar)**
   - For double: Low position
   - For triple: Middle position
   - For single:
   - Displays: Top for smallest sprocket, Low for largest sprocket

3. **Time display (CLK)**
   - 24-hour clock
   - Clock will appear when changing mode 2 to mode 1 and during power saver function.

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**STI Brake Bracket**


< ST-M510, SL-M510 >


**Switch B**

**Battery cap**

**AC All clear Switch**

**R.H. side lever:** Mode button
**L.H. side lever:** ST/SP button

**ST/SP button**

**Mode button**

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**ST-M952, ST-M750, ST-M570, SL-M952, SL-M750, SL-M570 >**

**ST/SP button**

**Mode button**
**Trip distance group (TIM, DST, MAX, AVE)**

The trip distance group includes the trip time (TIM), trip distance (DST), maximum speed during the trip (MAX) and the average speed during the trip (AVE). To activate the trip distance group, press the Mode button until “TIM” is displayed, and then press the ST/SP button.

**Trip time (TIM)**

0 - 99:59:59 (h; min; sec)

**km/mile flashes**

Press the ST/SP button and the Mode button simultaneously while this group is active.

**Trip distance (DST)**

0 - 99999.9 km, mile

**Maximum speed (MAX)**

0.0 (2.0) -130.0 km/h

**Average speed (AVE)**

0.0 (2.0) -130.0 km/h

**Pace Arrow**

Moves when distance time is operating.

The upward arrow indicates that the current speed is faster and the downward arrow indicates that the current speed is slower than the average speed for the trip.

**Note:**

- To calculate the average speed, you must travel for more than 10 seconds or more.
- If the trip time exceeds 100 hours or the trip distance exceeds 1,000 kilometers (620 miles), “ER” will be displayed and the pace arrow comparison will disappear. However, the TIM and DST measurements will start again from zero and the MAX speed will be retained.

**ODO meter (ODO)**

Displays the cumulative distance travelled.

**Stopwatch (STW) group**

This group includes stopwatch trip distance, average speed, and maximum speed. The stopwatch is activated by pressing the ST/SP button. While the stopwatch group is operating, the stopwatch (STW) display will flash. Stopwatch trip distance (DST, STW) records total during STW function. Stopwatch average speed (AVE, STW) records the average speed during STW function. Maximum speed (MAX, STW) records the maximum speed during the stopwatch function.

**Note:**

The functions of this group are only available when stopwatch is activated. If the trip distance mode is also activated simultaneously, it is not possible to view the distance. However, the TIM distance, average speed, and maximum speed will still be recorded during this time.
[7] Cadence (rpm)  
Cadence is calculated from the F-R gear tooth numbers and current speed.  
Note: Cadence always appears during bicycle movement regardless if the crankarms are rotating.

[8] Main display cadence (VEL)  
Cadence (rpm) can also be shown in main display. Current speed will move to sub-display.

[9] Lap counter (CNT)  
This function is used to count laps, etc. (range 0 - 99)  
Lap counter is activated by pressing the ST/SP button.  
To reset the counter to zero, press mode and ST/SP button simultaneously.

[10] Digital number of gear teeth (F-R)  
Gear combinations are displayed when a shift has been made. This will show for approx 2 seconds then original screen will return.

[11] Low battery display (LO BAT)  
This flashes when the remaining battery power is low. The battery should be replaced with a new one as soon as possible.

[12] Power saver function  
When the computer does not receive a signal or no button is pressed during a 30-minute period, the unit will change to power saver function, and only the clock will appear on the display.  
Canceling power save mode  
The normal display will return as soon as switch “A” or switch “B” is pressed.

Note: During the stopwatch function the stopwatch will continue to operate even when the power saver function has been activated. The stopwatch will stop automatically after 90 minutes have passed.
4. Changing the setting data and the bicycle number

- Refer to “8. Data input”.
- To change the time setting, change the sub-display to show the CLK display, and then press switch “B” for 5 seconds or more and then enter the new time setting.
- This function lets you reset input data without losing any data that has been recorded up to that point (such as total distance and trip distance).

5. Viewing data after removing the computer from the bracket mount

The data can still be viewed even when the computer has been removed from the handlebar bracket.

6. Setting tolerances

<table>
<thead>
<tr>
<th>Data</th>
<th>Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEL</td>
<td>±1%</td>
</tr>
<tr>
<td>DST, ODO</td>
<td>0.05%</td>
</tr>
<tr>
<td>CLK</td>
<td>30ppm (5 minutes or less per month)</td>
</tr>
<tr>
<td>STW, TIM</td>
<td>50ppm</td>
</tr>
</tbody>
</table>
7. Installation to the bicycle

Install the levers to the handlebars. Then connect and adjust the brake and shifting cables. Refer to the STI Lever Service Instructions for details on these procedures.

(1) Installing the signal cable
(SM-SC70/SM-6501)
Install the signal cable as shown in Figure No1.

* For the SM-6501-M, SM-6501-MD refer to the Service Instructions included.

(2) Installing the computer
Install the band and the bracket as shown in Figure No2.

SM-SC70/SM-6501
Tape the signal cable to the handlebars.

(3) Slide the computer onto the bracket until it clicks into its place.
as shown in Figure No3.

After this, wrap handlebar with finishing tape around the handlebars to secure both the signal cable and the brake cable.

First measure the tire circumference and check the number of chainring and sprocket teeth.

(4) Installing the magnet and sensors
Use a screwdriver to temporarily secure the magnet to a spoke on the right hand side of the front wheel as shown in fig4. Put a rubber shim between the fork and the sensor as shown in fig5. (Fork diameter range is 11-35mm)
Place the magnet on the sensor line as shown in the illustration. Adjust the position of the magnet so that the distance between the magnet and the sensors is 1-5 mm. Secure the magnet and the sensors firmly in these positions.

Set the positions so that the distance between the meter and the sensor are within the following:
Vertical: 50 cm
Horizontal: 10 cm

8. Data input (*data for up to 4 bicycles can be entered)

<table>
<thead>
<tr>
<th>1. Km or Miles</th>
<th>2. ODOmeter data</th>
<th>3. Tire circumference*</th>
<th>4. No. of chainring and sprocket teeth*</th>
<th>5. Type of rear derailleur*</th>
<th>6. Current time</th>
</tr>
</thead>
</table>

First measure the tire circumference and check the number of chainring and sprocket teeth.

To measure the tire circumference, first ensure that the tire is inflated to the standard tire pressure. Make a mark on the tire and the ground at the point where the tire touches the ground. Then move the bicycle forward one full revolution of the front wheel while seated on the bicycle. Mark the point where the marking on the tire touches the ground again. Measure the distance between the two points in millimeters. Round the distance to the nearest multiple of 5mm.
The value will increase by 5mm each time switch “A” is pressed. The value will change rapidly when switch “A” is pressed continuously.

Once the desired value is displayed, press switch “B” for 2 seconds or more to set.

In the case of tires which have circumference of less than 2050mm, press switch “A” continuously. After the value increases to 2400, it will change to 1300. Continue pressing switch “A” until the desired value is reached, and then press switch “B” for 2 seconds or more to set.

The tire size display can appear as any one of the following 18 displays, in addition to 26 x 1.75 (2050mm)

Tire circumference (mm) 26 1.75 26-1.75 indicates the tire size for 26inch x 1.75

The display will appear as shown in fig.9. Enter the value which was measured previously.

2050 – Tire circumference (mm)
26 1.75 – indicates the tire size for 26inch x 1.75

The value will increase by 5mm each time switch “A” is pressed. The value will change rapidly when switch “A” is pressed continuously.

Once the desired value is displayed, press switch “B” for 2 seconds or more to set.

In the case of tires which have circumference of less than 2050mm, press switch “A” continuously. After the value increases to 2400, it will change to 1300.

Continue pressing switch “A” until the desired value is reached, and then press switch “B” for 2 seconds or more to set.

The tire size display can appear as any one of the following 18 displays, in addition to 26 x 1.75 (2050mm)

Tires with sizes other that these are not displayed

<table>
<thead>
<tr>
<th>ETRTO</th>
<th>Main Display</th>
<th>Sub Display</th>
<th>ETRTO</th>
<th>Main Display</th>
<th>Sub Display</th>
</tr>
</thead>
<tbody>
<tr>
<td>23-571</td>
<td>1970</td>
<td>26 1.00</td>
<td>57-559</td>
<td>2095</td>
<td>26 2.20</td>
</tr>
<tr>
<td>32-584</td>
<td>2005</td>
<td>26 1.40</td>
<td>40-584</td>
<td>2100</td>
<td>26 1.1/2</td>
</tr>
<tr>
<td>40-559</td>
<td>2030</td>
<td>26 1.50</td>
<td>54-571</td>
<td>2100</td>
<td>26 2.35</td>
</tr>
<tr>
<td>47-559</td>
<td>2050</td>
<td>26 1.75</td>
<td>20422</td>
<td>2100</td>
<td>700 70</td>
</tr>
<tr>
<td>18-622</td>
<td>2070</td>
<td>700 18</td>
<td>23-622</td>
<td>2105</td>
<td>700 23</td>
</tr>
<tr>
<td>50-559</td>
<td>2070</td>
<td>26 1.90</td>
<td>25-622</td>
<td>2115</td>
<td>700 25</td>
</tr>
<tr>
<td>37-590</td>
<td>2075</td>
<td>26 1.3/8</td>
<td>28-622</td>
<td>2135</td>
<td>700 28</td>
</tr>
<tr>
<td>47-559</td>
<td>2075</td>
<td>26 1.95</td>
<td>57-559</td>
<td>2260</td>
<td>26 2.1/8</td>
</tr>
<tr>
<td>54-559</td>
<td>2085</td>
<td>26 2.00</td>
<td>19-622</td>
<td>2090</td>
<td>700 19</td>
</tr>
<tr>
<td>54-559</td>
<td>2090</td>
<td>26 2.10</td>
<td>19-622</td>
<td>2090</td>
<td>26 2.10</td>
</tr>
</tbody>
</table>

* If the tire circumference matches one of those in this list, the tire size is displayed automatically.
(4) Entering the number of chainring and sprocket teeth

The display will then change to that shown in fig.10.

Enter the values staring from the outer chainring. “48” (or “42” if no. 3 or 4 has been selected) will flash on the display. Press switch “A” until “--” is displayed and then press switch “B”.

The following tooth numbers are pre-set into the computer:

<table>
<thead>
<tr>
<th>No.</th>
<th>Front chainring</th>
<th>Cassette</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>48 x 38 x 28</td>
<td>11, 12, 13, 14, 15, 16, 17, 18, 19, 21 (10 sprockets)</td>
</tr>
<tr>
<td>2</td>
<td>48 x 38 x 28</td>
<td>11, 12, 13, 14, 15, 16, 17, 18, 19, 21 (10 sprockets)</td>
</tr>
<tr>
<td>3</td>
<td>42 x 32 x 22</td>
<td>11, 12, 13, 14, 15, 16, 17, 18, 19, 21 (10 sprockets)</td>
</tr>
<tr>
<td>4</td>
<td>42 x 32 x 22</td>
<td>11, 12, 13, 14, 15, 16, 17, 18, 19, 21 (10 sprockets)</td>
</tr>
</tbody>
</table>

When using a double front chainwheel, press switch “A” once so that “--” is displayed, and then press switch “B” once to set, the front chainwheel will then be registered as a double front chainwheel and the display will change to show the rear sprocket settings. (Note: Switch “B” should be pressed and released immediately. If you press it for more than 2 seconds, the next rear derailleur type will be displayed for data entry.)

When using a triple front chainwheel, the value can be set from 15 to 34 by the same procedure of setting middle chainring.

Enter the number of teeth for the inner chainring (for double front chainwheel) or the middle chainring (for triple front chainwheel). “38” (or “32” if no. 3 or 4 has been selected) will flash on the display.

The display will then change to that shown in fig.12.

When setting the inner chainring or the middle chainring, the display will change to that shown in fig.12.

Enter the number of sprocket teeth.

The display will then change to that shown in fig.13.

Enter the number of teeth for the inner chainring (for double front chainwheel) or the middle chainring (for triple front chainwheel). “38” (or “32” if no. 3 or 4 has been selected) will flash on the display.

The display will then change to that shown in fig.14.
If the cassette has seven sprockets, press switch “A” once to change the flashing “21” to “--”, and then press switch B once. This will indicate that there is no 8th sprocket, and the operation for entering the number of sprocket teeth will be complete.

If the cassette has 8 sprockets, enter the number of teeth for this position and follow the same procedure as above to enter “--” in the 9th position otherwise enter the number of teeth for the 9th sprocket. If the cassette has 10 sprockets, enter the number of teeth for the 10th sprocket.

**Checking the number of teeth entered**

Once the setting of number of sprocket teeth is completed, the display will return to the initial input display. Re-check all values by repeatedly pressing switch “B” to confirm each number of teeth. Press switch “B” once each time and check whether the entered number of teeth are matching with the sprocket position on the display.

If all values entered are correct, press switch “B” for 2 seconds or more to continue the next entry procedure.

**Checking the number of teeth entered**

Once the setting of number of sprocket teeth is completed, the display will return to the initial input display. Re-check all values by repeatedly pressing switch “B” to confirm each number of teeth. Press switch “B” once each time and check whether the entered number of teeth are matching with the sprocket position on the display.

If all values entered are correct, press switch “B” for 2 seconds or more to continue the next entry procedure.

(5) Entering the type of rear derailleur

The display will change to that shown in fig 15. The display will change from “111” to “222” each time switch “A” is pressed.

| 111 | ...... for Traditional rear derailleur |
| 222 | ...... for Rapid Rise Rear derailleur (reverse spring type) |

Press switch “B” for 2 seconds or more to continue the next entry procedure.

(6) Setting the time

(24 hour format)

The display will change to that shown in fig 16.

Set the time to one minute later than the current time.

**Example**

- If the time is 10:46:23 ...... 10:47: --
- If the time is 13:59:16 ...... 14:00: --

The hours will advance when switch “A” is pressed. If switch “A” is pressed continuously, the hours will advance rapidly. Press switch “B” once to set the hour.

The minutes section will then start flashing as shown in Fig 17. Set the minutes in the same procedure as for setting the hours. The clock will then start.

To continue entering data for a different bicycle number, change the sub-display to a display other than the CLK display, and then press switch “B” for 5 seconds or more. The press switch “A” until the bicycle number to be entered is displayed and then press switch “B” again. Refer to “4. Changing the setting data” for details on entering new data.

**Note:** To reset clock

Get a display where CLK appears on the sub-display. Press switch “B” for 5 seconds or more to change the time setting.

**Replacing the battery**

- **Meter (CR-2032 battery)**
  Insert the battery so that the (+) side is visible as shown in Fig. 18, and then tighten the battery cap.
  The battery which is installed at the time of purchase is for monitoring purposes. If the LO BAT low battery indicator appears, replace the battery as soon as possible.

- **Sensor (LR44 battery)**
  Insert the battery so that the (+) side is visible as shown in Fig. 19, and then tighten the battery cap.

**Note:**

If the speed does not display correctly even though the LO BAT low battery indicator does not appear, replace the sensor battery.
**Trouble Shooting**

* Speed is not displayed.
  - Check that the speed sensor and the main unit are positioned correctly (distance and facing direction).
  - Check that the positions of the speed sensor and magnet are correct.
  - Check that the main unit is fixed correctly to the bracket.

* Display does not appear or is faint.
  - Poor main unit contact, or battery is depleted. Replace the main unit battery with a new one.

* Incorrect data is displayed.
  - Press the A/C button to re-enter the data.

* Display is dark.
  - This is because the main unit has become hot and has been affected by long-term exposure to direct sunlight, such as can occur during hot weather. Store the main unit in a cool, shady place so that it can cool down and return to normal.

* Data display movement is slow.
  - The computer operating temperature range is −10°C to 50°C. Check that the temperature is not lower than −10°C.

* Gear indicator [bar] does not display correctly.
  - Lift up the plate spring that the sensor is mounted on as shown in the illustration.

![Diagram showing the plate spring and rubber sensor pad.](image-url)