SI-0114A-001

Supplementary items relating to pairing settings

Detailed explanation of pairing for the speed sensor and the heart rate sensor unit

Refer to page 11 of the Service Instructions for details on the pairing function.

In order to display the information for each unit at the main unit, it is first necessary for each unit to be registered with the main unit. This is called "pairing".
* If a unit is replaced or added, carry out pairing again for all units.

General procedure for pairing settings

(1) Start up setting mode on the main unit.
(2) Start up pairing mode from setting mode.
(3) Start up pairing standby mode.
(4) Start up pairing mode for each unit (insert the battery).
(5) Start pairing at the main unit (scanning).
* Be careful not to exit pairing mode until pairing of all units is complete. (Do not press the set button (exit▼)).
* Carry out pairing for one unit at a time. It is not possible to pair multiple units at the same time during a single scanning. Carry out steps (3), (4) and (5) separately for each unit.

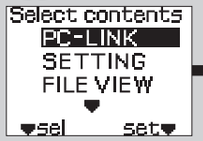
Details of pairing settings

* There is no order of priority for units when carrying out pairing. This procedure describes details for pairing the speed sensor and the heart rate sensor unit in that order as an example only.

Starting up pairing standby mode

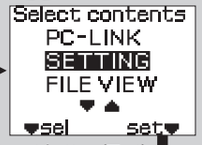
Press button A and button B on the main unit simultaneously to start up setting mode.

STEP 1



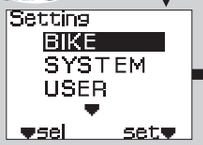
Press the select button (▼sel) once very briefly to move the cursor to "SETTING".

STEP 2



Press the set button (▼set) once very briefly to select "SETTING".

STEP 3

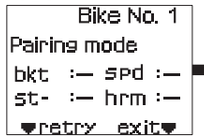


Press the select button (▼sel) five times very briefly to move the cursor to "PAIRING".

STEP 4

Press the set button (▼set) once very briefly to select "PAIRING".

STEP 5



When you press the select button (▼retry) on the main unit, the main unit will switch to pairing standby mode.

STEP 6

Insert the battery into the unit to be paired while the unit is in pairing standby mode.

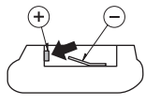
Pairing the speed sensor (inserting the battery)

* When the battery is inserted into a unit, pairing mode will start (for 30 seconds).
  The operations from STEP 3 to STEP 4 should be carried out within 30 seconds.
* Pairing mode for the SM-EW79F-E/I will start when the battery for the gear shifting system is connected (for 30 seconds).

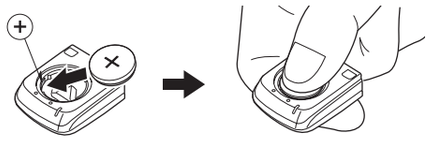
STEP 1
Hold the battery so that the + side is facing upward.

Battery used: CR1632

STEP 2
Check the position of the + terminal of the speed sensor.

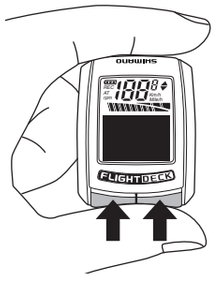


STEP 3
In order for pairing to be carried out accurately, insert the battery at an angle so that the side of the battery touches the + terminal which was checked in STEP 2. Hold the battery securely against the terminal in this way so that pairing can be carried out.
Be careful not to let the battery separate from the terminal even for a moment.

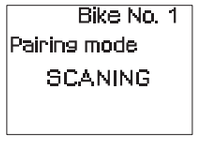


Hold the battery in place without closing the battery cap.
(Carry out STEP 4 within 30 seconds.)

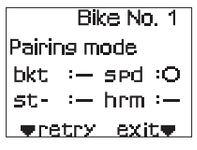
STEP 4
While holding the battery, use your other hand to very briefly press the select button and the set button on the main unit simultaneously.



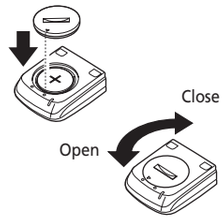
STEP 5
Pairing will then start.



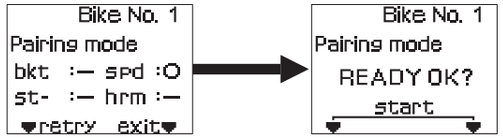
STEP 6
When pairing is finished, check that "○" appears next to "spd:".
* If pairing does not finish, remove the battery, wait 10 seconds or more, and then repeat the operation from STEP 3.



STEP 7
After pairing is finished, close the battery cap.
* The pairing settings which have just been made will not be automatically erased when the battery is removed at this time.



STEP 8
If "○" does not appear next to any of the units, press the select button (▼retry) to start pairing standby mode, and then continue with the pairing operation.

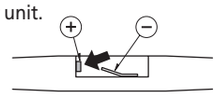


Pairing the heart rate sensor unit (inserting the battery)

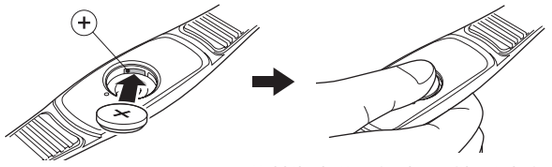
STEP 1
Hold the battery so that the + side is facing upward.

Battery used: CR2032

STEP 2
Check the position of the + terminal of the heart rate sensor unit.



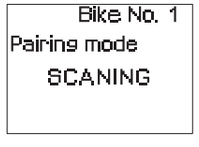
STEP 3
In order for pairing to be carried out accurately, insert the battery at an angle so that the side of the battery touches the + terminal which was checked in STEP 2. Hold the battery securely against the terminal in this way so that pairing can be carried out.
Be careful not to let the battery separate from the terminal even for a moment.



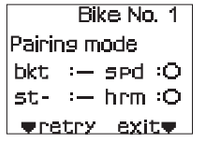
Hold the battery in place without closing the battery cap.
(Carry out STEP 4 within 30 seconds.)

STEP 4
While holding the battery, use your other hand to very briefly press the select button and the set button on the main unit simultaneously.

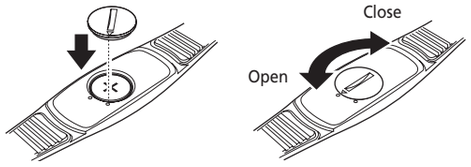
STEP 5
Pairing will then start.



STEP 6
When pairing is finished, check that "○" appears next to "hrm:".
* If pairing does not finish, remove the battery, wait 10 seconds or more, and then repeat the operation from STEP 3.



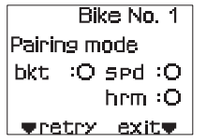
STEP 7
After pairing is finished, close the battery cap.



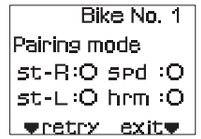
* The pairing settings which have just been made will not be automatically erased when the battery is removed at this time.

Exiting pairing mode

Once "○" appears next to all units and pairing has been completed for all units, press the set button (exit▼) to exit the pairing mode.
* If you exit pairing mode before the "○" appears next to all units, you will need to make all of the pairing settings again, so make sure that pairing is finished.



(SM-EW79F-E/I)

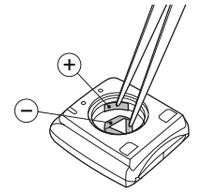


(SM-SC79)

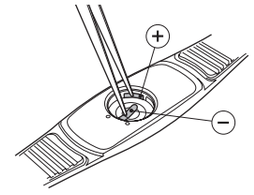
Note:
- Shimano makes no warranty whatsoever regarding problems such as loss of data.
- A fundamental feature of the SC-7900 is that it operates as a whole system which includes all of the respective units. Even if no communication with the main unit occurs, each individual unit will still use up the powering their batteries when they are used.

If pairing does not finish

- Touch the batteries securely against the terminals of each unit, and make sure that they do not separate from the terminals even for an instant.
- If pairing does not finish, remove the battery, wait 10 seconds or more, and then reinsert the battery.
- If pairing cannot be completed even after it has been carried out several times, touch a conductive object (such as a pair of tweezers or a screwdriver) simultaneously against the + terminal and the – terminal of each unit for 1 second or more to remove any residual charge, and then repeat the pairing operation.



Speed sensor



Heart rate sensor unit

⚠ WARNING
- Do not insert the batteries while the conductive objects are still touching the terminals, otherwise short-circuits may occur and cause operating problems or cause the batteries to leak, overheat or catch fire.
- Do not attempt to recharge the batteries. Their structure is not designed to allow recharging. If you try to recharge the batteries, they may explode.

(English)

INDEX

Cycle Computer **SC-7900**

English

Safety precautions

⚠ WARNING

- **Be careful not to pay excessive attention to the main unit LCD while riding, otherwise you may have an accident.**
- **Do not use this product if you are using a heart pacemaker.**
- **This product is not a medical device. Data values should be used as references only.**
- **Button batteries which have been removed after use should be kept in a safe place out of the reach of children to avoid accidental swallowing.**
  If batteries are swallowed by mistake, seek medical advice immediately.
- **Do not use any batteries other than those specified. If the batteries explode or leak, fire, personal injury or damage to surrounding objects may occur.**

Note:

* Equipment such as high-voltage power lines, signal devices, trams, personal computers and LED lights may affect the cycle computer and cause the heart rate to display incorrectly.
* Handle each unit carefully, and avoid subjecting them to any shocks.
* Avoid leaving the units exposed to extremely hot weather conditions for long periods.
* The units are designed to be fully waterproofed to withstand wet weather riding conditions; however, do not deliberately place them into water.
* Never disassemble any of the SC-7900 components, as they cannot be reassembled.
* The AC switch is used to clear the date and time information.
* Do not use thinner or other solvents to clean any of the components. Solvents may damage the main unit and sensor surfaces.
* To clean these parts, wipe them with a cloth soaked in a weak mixture of neutral detergent and water.
* Natural wear and deterioration which occurs as a result of normal use is not covered by warranty.
* If the button batteries are used incorrectly, they may leak or explode, so make sure you observe the following points.
  · Use only the specified batteries. Other types of battery cannot be used.
  · Remove the batteries if they are not going to be used for long periods.
  · If the batteries can no longer be used, they should be removed immediately.
  · Do not recharge the batteries.
  · Insert the batteries so that the + and – sides are correctly aligned.
  · Never throw the batteries into fire.
  · Used batteries should be disposed of in accordance with local waste regulations.
* None of the parts of the SC-7900 are interchangeable with the previous FLIGHT DECK system, and cannot be used in conjunction with them.
* Because each unit is connected wirelessly, a small amount of time lag may occur with displays.

1. Features of the SC-7900

Display can switch to show a variety of traveling data. (Page 25)
The travelling data such as travelling distance, travelling time, heart rate, calorie consumption, altitude and slope is displayed on the main unit LCD.

Automated stopwatch counter (Page 40)
The stopwatch counter can be started and stopped automatically by detecting the bicycle speed.

Remote operation from ST/SW (Page 25, 42)
Switching the display and recording lap data can be carried out by remote using the dual control lever.

Units are paired and connected wirelessly (Page 11, 21, 22)
The speed sensor, heart rate sensor unit and ST wireless units (optional) can be connected wirelessly. Up to a maximum of four bicycles can be registered in a single main unit. The main unit can be shared between the registered bicycles, and you can change which bicycle you ride.

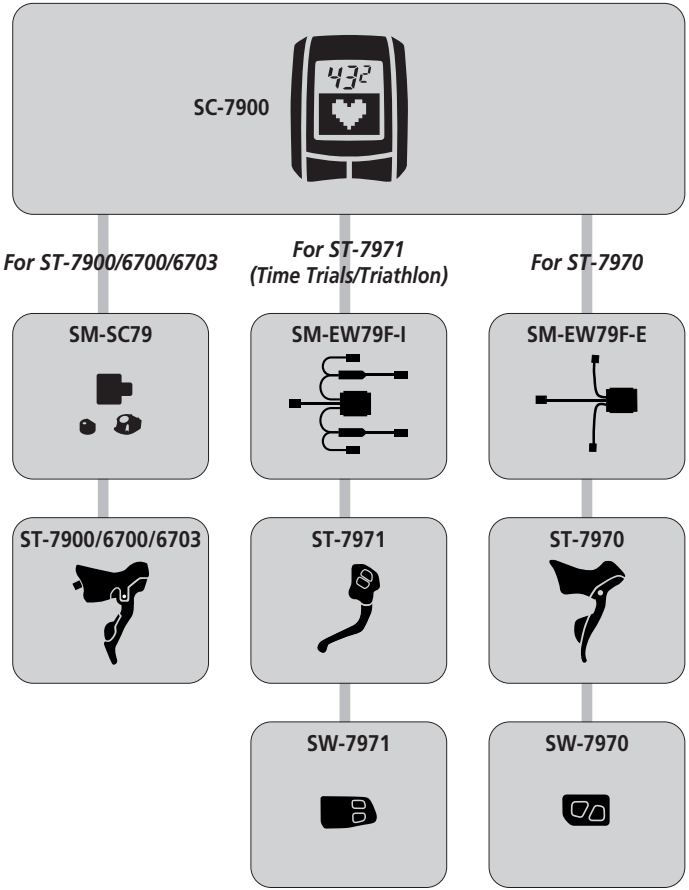
Managing your heart rate (Page 35, 36)
You can specify the minimum heart rate and maximum heart rate to use as targets for indicating your level of activity. If your heart rate goes outside the set limits, the main unit can notify you by means of a buzzer and the heart rate value flashing on the display.

Checking the display in dark places (Page 22)
Backlight illumination lets you check the information appearing on the LCD even in dark places.

Managing data using a computer (Page 43)
Communication between a personal computer and the main unit is possible by means of a USB dongle (optional).
This can be used to retrieve traveling data from the main unit, display this data in the form of graphs, change main unit settings and update the main unit software.

2. Table of Optional Item Combinations

Bracket combinations

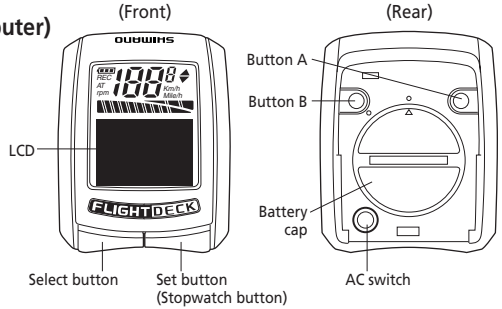


3. Product Overview

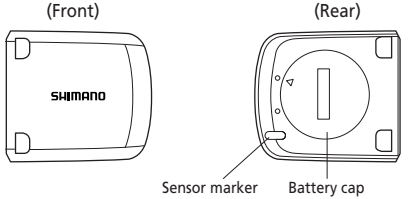
Package contents

Check that all of the following products are present.

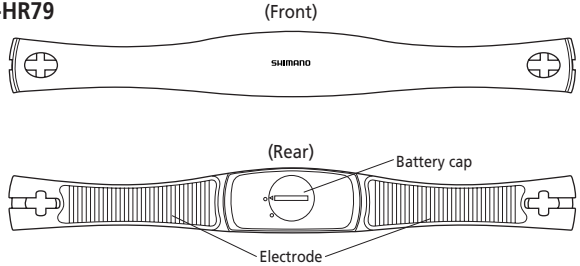
■ **Main unit (cycle computer) SC-7900**



■ **Speed sensor**



■ **Heart rate sensor unit SM-HR79**

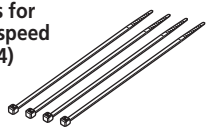


Accessories

- **Magnet**

- **Rubber belt for heart rate sensor unit**

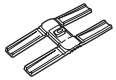
- **Cable ties for securing speed sensor (x4)**



- **Battery**

  CR2450 (x1)
  CR2032 (x1)
  CR1632 (x1)

- **Rubber seat for speed sensor**

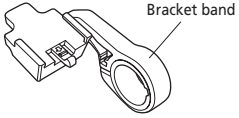


- **Service Instructions (This booklet)**
- **Application CD-ROM**

Options

■ **Bracket set for FLIGHT DECK** SM-SC79 (for ST-7900/6700/6703)

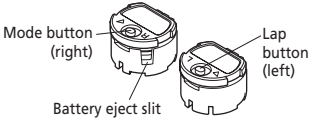
- **Bracket**



- **Bracket band adapter For 25.8 mm inner diameter**

- **Bracket fixing screws 18mm (x1) 15mm (x1)**

- **ST wireless units (1 each for left and right)**



- **Battery**

  CR1632 (x2)

- **Top cover for ST wireless unit**

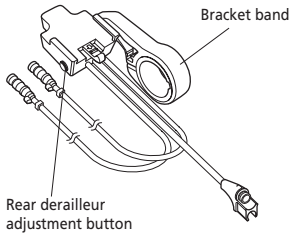
(for ST-7900) (for ST-6700/6703)

ST= Dual Control Lever

■ Bracket set for FLIGHT DECK

SM-EW79F-E (for ST-7970)

• Bracket



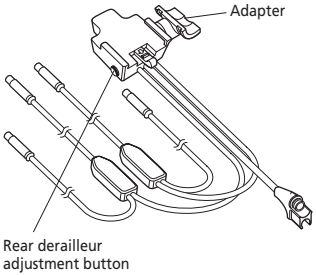
• Bracket band adapter
For 25.8 mm inner diameter

• Bracket fixing screws
18mm (x1)
15mm (x1)

■ Bracket set for FLIGHT DECK

SM-EW79F-I (for ST-7971/SW-7971)

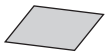
• Bracket



• Bracket band

• Bracket band adapter
For 25.8 mm inner diameter

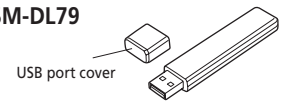
• Aero bar protective sticker



• Bracket fixing screws
18mm (x1)
15mm (x1)
12mm (x1)

• Cable ties for securing
adapter (2 types x4)

■ USB dongle SM-DL79



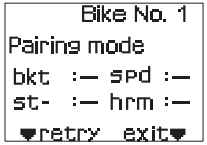
4. Pairing Function

In order for the main unit to display information from each of the sensors, the various units must first be registered with the SC-7900 system.
This is called 'pairing'.
* If a unit is replaced or added, carry out pairing again for all units.

■ Pairing setting method

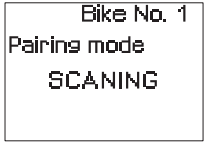
(1) Press button A and button B on the main unit simultaneously to start up setting mode.
(For details on starting up setting mode, refer to page 26.)

(2) Select "SETTING" in the main menu. Then select "PAIRING" in the Setting menu so that the pairing confirmation screen is displayed.
If pairing has not yet been carried out for a particular unit, "–" will appear beside the name of the unit. If pairing has already been carried out for a unit, "○" will appear.



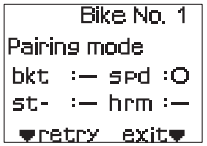
(3) When you press the select button (▼retry) on the main unit, the main unit will switch to pairing standby mode.
While the main unit is in pairing standby mode, insert the battery into the unit to be paired.
* The units will switch to pairing mode for 30 seconds after their batteries are inserted.
* The SM-EW79F-E/I will switch to pairing mode for 30 seconds once the battery for the gear shifting system has been connected.

(4) Press the select button and the set button on the main unit simultaneously within the 30 seconds that the unit to be paired is in pairing mode.
"SCANNING" will appear in the data display and pairing will then start.

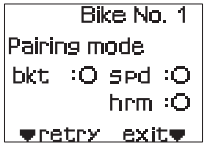


(5) When pairing is complete, "○" will appear beside the name of the unit which has just been paired. If you press the select button, the main unit will switch to pairing standby mode. You can then continue to carry

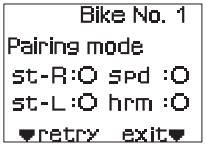
out pairing operations for any other unit which has not yet been paired.
* Do not press the set button (exit▼) until pairing has been completed for all units.



(6) Repeat steps (3) and (4) for each unit until all units have been paired.



(SM-EW79F-E/I)



(SM-SC79)

* The st-R and st-L (ST wireless units) are optional.
* The ST wireless units will start operating once bot the left and right units have finished being paired. They will not operate only by themselves.

(7) Once pairing has been completed for all units, press the set button (exit▼) to exit the pairing operation.
* If multiple SC-7900 users carry out pairing simultaneously, the units for other users may become paired with your own system. In order to make sure that pairing is carried out correctly, do not carry out pairing near any other users who are also carrying out pairing, or near any other devices which may operate wirelessly.
* After pairing has been completed, each user should check to make sure that pairing has been carried out correctly.

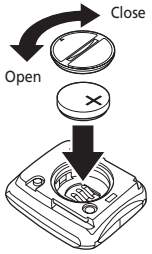
5. Replacing the Batteries

Insert so that the + side is facing upward as shown in the illustration, and then close the battery cap.

■ Main unit Battery used: CR2450 (x1)

In order to increase the operating life of the battery, it is recommended that you set the main unit to sleep mode after use so that it consumes less power. (For details on sleep mode, refer to page 19.)

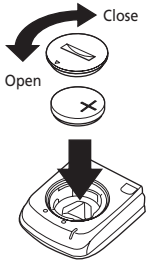
CAUTION:
- Always be sure to set the main unit to sleep mode before replacing the main unit battery.
- If you replace the battery without setting the main unit to sleep mode first, the main unit will start up in initialization mode.
  * For details on initialization mode, refer to page 20.
- If the low battery indicator appears in the main unit display, replace the battery with a new one straight away.
- If carrying out pairing between the main unit and the other units, batteries must be inserted into the other units too.
  * Refer to page 11 for details on pairing.



The batteries for units other than the main unit should be inserted when the units are being paired.

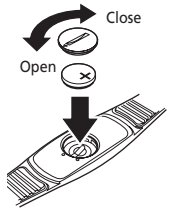
■ Speed sensor
Battery used: CR1632 (x1)

CAUTION:
- If the speed is not being displayed correctly in the main unit display, repeat the pairing operation. If this still does not solve the problem, replace the speed sensor battery with a new one.
- When replacing the sensor unit battery, remove the old battery, and then wait until about 10 seconds have passed before inserting the new battery.



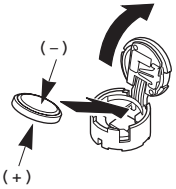
■ Heart rate sensor unit
Battery used: CR2032 (x1)

The heart rate sensor unit will operate and battery power will be consumed if the electrodes are touched, even if it is not fitted to your body.
In order to avoid battery power being consumed unnecessarily, remove the heart rate sensor unit and set the main unit to sleep mode immediately after use.

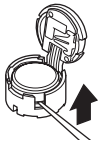


■ **ST wireless units**
Battery used: CR1632 (x1)

(1) Insert so that the - side is facing upward as shown in the illustration.
(2) Close the battery cap so that it is back in its original position.



* To remove the battery, insert a thin object into the battery eject slit and push out the battery, while being careful not to damage the battery or the unit.



⚠ WARNING

- Button batteries which have been removed after use should be kept in a safe place out of the reach of children to avoid accidental swallowing.
- If batteries are swallowed by mistake, seek medical advice immediately.
- Do not use any batteries other than those specified. If the batteries explode or leak, fire, personal injury or damage to surrounding objects may occur.
- Used batteries should be disposed of in accordance with local waste regulations.

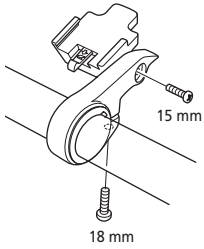
6. Installation

CAUTION:
Carry out pairing for a unit before installing the unit.
(For details on pairing, refer to page 11.)

■ **Installing the bracket**

< SM-SC79, SM-EW79F-E/I >

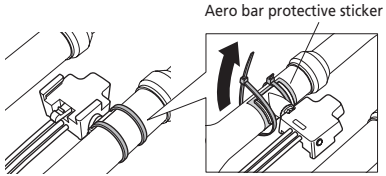
(1) Install the bracket band to the middle of the bicycle handlebars. Tighten the band using the fixing bolt.
Handlebar installation diameter :
31.8 mm / 25.8 mm (using an adapter)
Tightening torque : 1.0 N·m {8 in.lbs}
(2) Install the bracket to the band.
Tightening torque = 1.0 N·m {8 in.lbs}

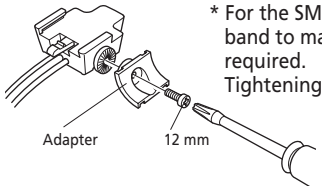


■ **Installing the bracket to the aero bar**

< SM-EW79F-I >

(1) Determine the installation position for the bracket, and then attach the aero bar protective sticker.
(2) Install the bracket to the handlebar as shown in the illustration. Tighten the cable tie along the groove in the adapter.



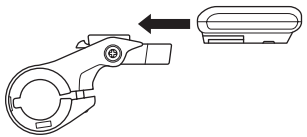


* For the SM-EW79F-I, replace the adapter and band to match the handlebars being used if required.
Tightening torque = 1.0 N·m {8 in.lbs}

(For details on connecting the cables, refer to page 18.)

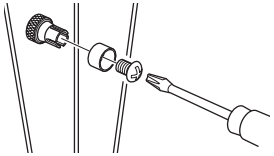
■ **Installing the main unit**

(1) Before installing the main unit, switch it to setting mode and set the user details and any other necessary settings.
(For details on starting up setting mode and methods of operation, refer to page 26.)
(2) Slide the main unit into the bracket as shown in the illustration to install it. At this time, insert the main unit securely until it clicks into place.

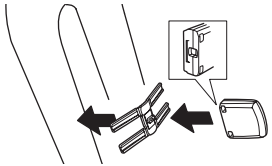


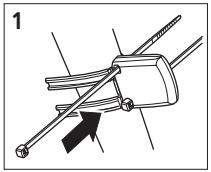
■ Installing the speed sensor

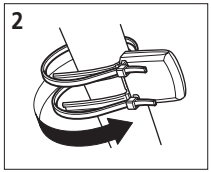
(1) Use a screwdriver to secure the accessory magnet (x1) to the right side of the front wheel as shown in the illustration.

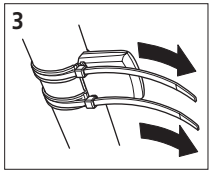


(2) Use two of the accessory cable ties to provisionally secure the speed sensor to the front fork as shown in the illustration.

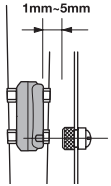




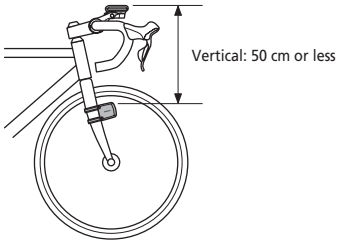


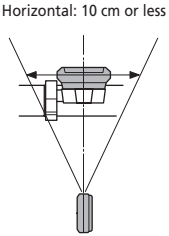


(3) Adjust the positions of the speed sensor and magnet so that the magnet passes directly over the marker of the speed sensor.
- Distance between speed sensor and magnet: 1 - 5 mm

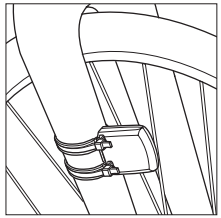


- Distance between main unit and speed sensor



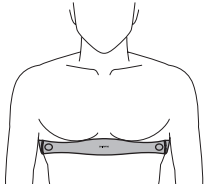


(4) Once the installation positions have been decided upon, securely tighten the speed sensor and the magnet.



■ Heart rate sensor unit

(1) Attach the hook of the rubber belt onto the plastic part (electrode). Attach the belt directly to your body so that the plastic part is close against your skin.
(2) The signal will be sent from the casing to the main unit via a transmitter, so attach the belt to the middle of your stomach area as shown in the illustration.

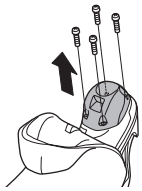


- In order to eliminate measurement errors, it is recommended that you moisten the electrode with water before attaching the belt.
- Dry skin or thick body hair may affect the reliability of measurement.
- If the weather is cold or your skin is dry, measurement errors may still occur even if the sensor is fitted directly against your skin.

■ Installing the ST wireless units

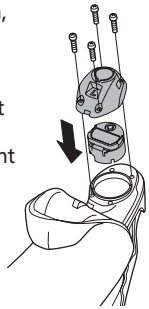
<SM-SC79>

(1) For a cable-type dual control lever such as the ST-7900/6700/6703, open up the bracket cover and remove the top cover of the lever unit.



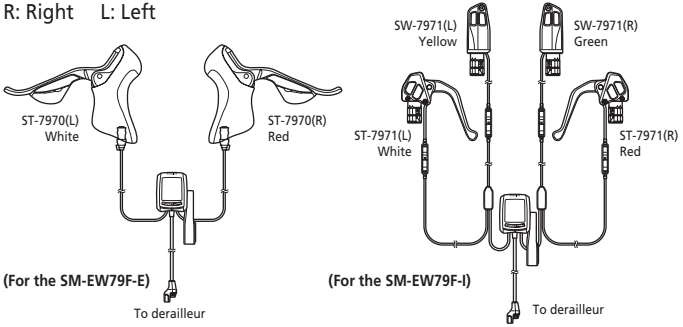
(2) Check whether the wireless unit is for the left or right, and then insert it so that the markings are aligned correctly.

(3) Install the ST wireless unit as shown in the illustration, and then fit the top cover and secure it by tightening the screw.
Tightening torque = 0.13 - 0.15 N·m {1.1 - 1.3 in.lbs}
* The top cover which was removed in step (1) cannot be used.
* The shape of the top cover to be installed is different for the ST-7900 and the ST-6700/6703.



■ Connection of the electric cables

Cable connection diagram
R: Right L: Left



7. Basic Operation

Power supply (ON)

The power supply for each component is supplied by the following operations and actions.

■ Main unit

The power supply for the main unit turns on when any one of the set button, select button, button A or button B is pressed.
* If using the ST-7970 or ST-7971, the power turns on when the gear shifting system battery is inserted.

■ Speed sensor

The power supply for the speed sensor turns on when the magnet passes over the speed sensor.

■ Heart rate sensor unit

The power supply for the heart rate sensor unit turns on when the sensor unit detects that the electrode has been placed against your body.

■ ST wireless units

The power supply for the respective ST wireless units turns on when you press either the mode button or the lap button.
* The power does not turn on when a gear shifting operation occurs.

Sleep mode (power saving function)

The power supply for each component switches to sleep mode by the following operations and actions.

■ Main unit

The main unit switches to sleep mode if no buttons on the main unit or on the ST wireless units have been pressed for over 30 minutes, or if there have been no signals detected from the speed sensor or heart rate sensor unit.
If you hold down the set button and the select button simultaneously for 2 seconds or more, it will force the main unit to switch to sleep mode.
(If the stopwatch is currently operating or if the main unit is in setting mode, it will not switch to sleep mode.)

■ **ST wireless units**

If there have been no button operations or gear shifting operations for 30 minutes or more, the ST wireless units will switch to sleep mode.

Restarting in initialization mode

If the language or the units have been changed, the main unit will start up in initialization mode.

* The main unit will also start up in initialization mode when the power is turned on for the first time.

■ **Restarting in initialization mode**

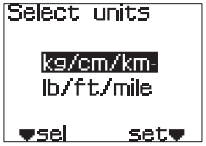
(1) To reset the main unit, replace the battery of the main unit or press the AC switch.

(2) Turn on the power supply for the main unit.
However, if the battery is replaced while the main unit has been in sleep mode for less than 30 seconds, the main unit will not start up in initialization mode.

(3) The startup screen for initialization mode will be displayed (for 3 seconds).

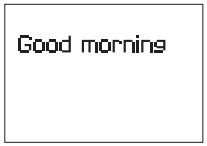
(4) Press the select button, button A and button B to select the display language.

(5) Press the set button to confirm the display language selection.



(6) Press the select button, button A and button B to select the units.

(7) Press the set button to confirm the units selection.



(8) The startup screen will be displayed (for 3 seconds).

(9) The bike No. selection screen will be displayed (for 3 seconds).

(10) If you press the select button while this screen is displayed, the bike number will flash and the bike number can then be changed. If you press the select button once more, the bike number can then be changed.
- Bike No.: 1-4

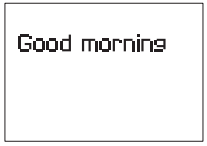
(11) Press the set button to confirm the bike number selected.

(12) The remaining memory/remaining time display will appear (for 3 seconds).
- User memory: 0% - 100%
  (no remaining memory when 0%)
- Record time: Length of time that traveling data can be recorded

CAUTION:
Check that there is enough memory remaining before riding the bicycle.

(13) The normal mode screen will be displayed.

Restarting from sleep mode



(1) The startup screen will be displayed (for 3 seconds).

(2) The bike No. selection screen will be displayed (for 3 seconds).
(3) If you press the select button while this screen is displayed, the bike number will flash and the bike number can then be changed.
If you press the select button once more, the bike number will increase.
• Bike No.: 1-4
(4) Press the set button to confirm the bike number selected.

(5) The remaining memory/remaining time display will appear (for 3 seconds).
• User memory: 0% - 100% (no remaining memory when 0%)
• Record time: Length of time that traveling data can be recorded

CAUTION:
Check that there is enough memory remaining before riding the bicycle.

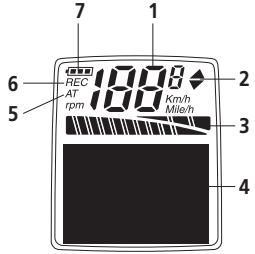
(6) The normal mode screen will be displayed.

Backlight illumination

(1) Hold down the select button on the main unit (for 3 seconds or more).
(2) The backlight of the LCD will illuminate (for 5 seconds).

8. Display Functions

LCD display details



(Display example)

1. Speed (km/h, mph)/ cadence display (rpm)
The cadence is displayed while the speed is appearing in the information display.

2. Pace arrow display
If the current traveling speed is faster than the average speed, an upward-pointing arrow will be displayed, and if it is slower, a downward-pointing arrow will be displayed. (They are only displayed while the stopwatch counter is being displayed too.)

3. Gear indicator
This displays the gear being used as an icon. (The display example shows the largest chainring and the 6th sprocket.)

4. Information display
For details, refer to page 25.

5. Automatic mode display
Displayed when the stopwatch mode is set to AUTO.

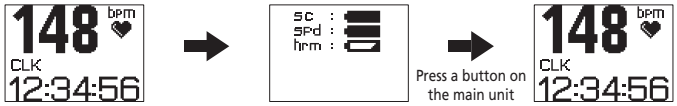
6. Memory operation display
REC is displayed while traveling data is being recorded.

7. Battery charge display
The battery charge for the gear shifting system is displayed when the bracket set (SM-EW79F-E/I) is being used. (It is not displayed when the SM-SC79 is being used.)

■ Low battery/low memory indicator

<Low battery indicator>
When the battery level for any of the batteries in the units is at a low level, a low battery confirmation screen is display by the main unit as a notification. This display can be cleared by pressing the set button, select button, button A or button B on the main unit.

- When using in combination with the bracket set (SM-EW79F-E/I), the low battery indicator will not be displayed even when the battery level for the gear shifting system is low.
- It is also not displayed during PC-LINK mode or while the pairing confirmation screen is being displayed.



(Low battery confirmation screen)

If the low battery indicator is being displayed for a unit, replace the battery for that unit as soon as possible.

Main unit display	Unit
sc	Main unit
spd	Speed sensor
hrm	Heart rate sensor unit
st-R	ST wireless unit /right (optional)
st-L	ST wireless unit /left (optional)

* The respective units must be paired for this to happen.

Low battery icon

<Low memory indicator>

When the amount of spare memory for recording traveling data in the main unit drops to 10% or less, the low memory confirmation screen is display by the main unit as a notification. This display can be cleared by pressing the set button, select button, button A or button B on the main unit.

(Low memory confirmation screen)

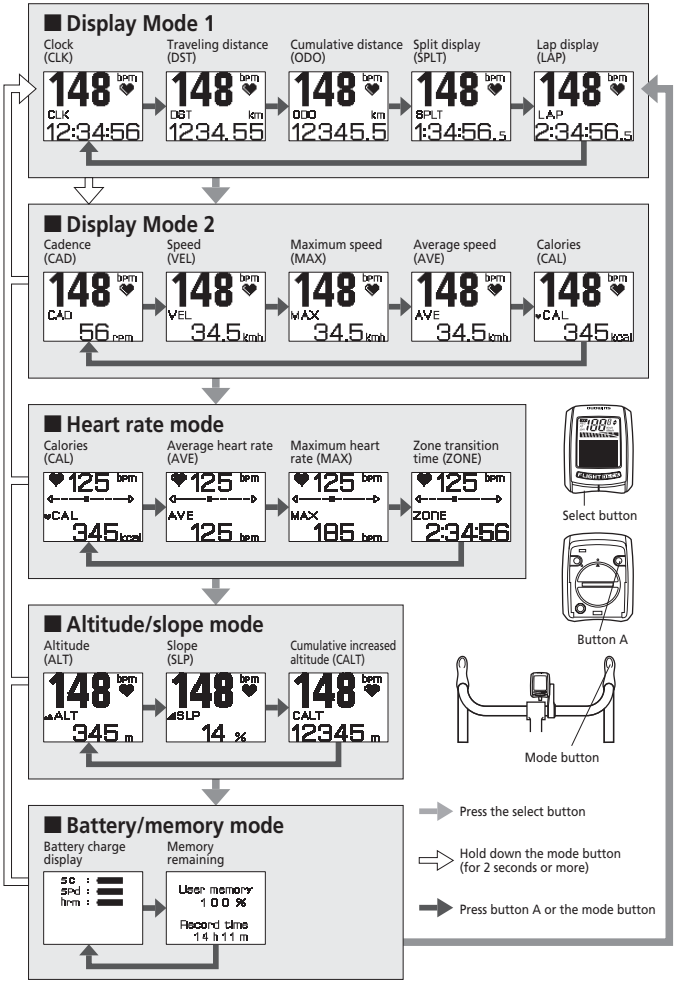
If the low memory indicator appears, delete any unneeded traveling data to make more free memory available.

(For details on how to delete data, refer to page 39.)

- If the low battery indicator and the low memory indicator are generated at the same time, each screen will be displayed alternately for one second.
- If you clear the low battery indicator or low memory indicator while riding the bicycle, the low battery or low memory confirmation screen will be displayed once more when speed signals are no longer being input.

Normal mode details

For details on measurement of the traveling time, refer to page 42.



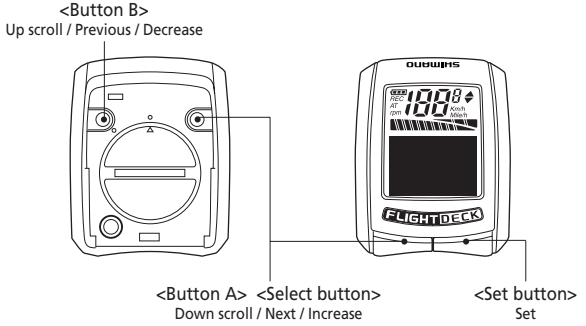
9. Setting Modes

■ Starting setting mode

Press button A and button B at the same time while the "Normal mode" display appears on the main unit.

* The main unit cannot be switched to setting mode while travelling data is being recorded.
* Settings can be made easily from a computer using FLIGHT DECK Manager. (Refer to page 43.)

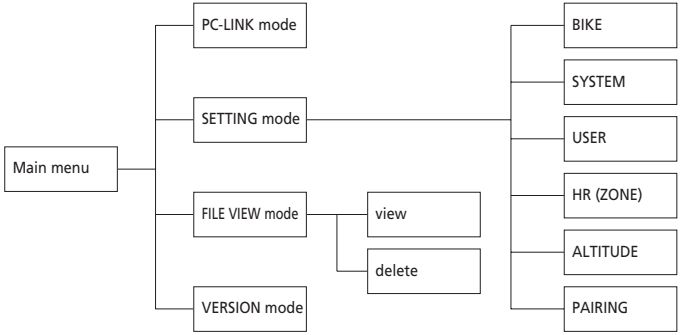
■ Setting mode operations



Item selection	To move cursor down	Press select button or button A
	To move cursor up	Press button B
Switching to setting screen	To move forward one screen	Press select button or button A
	To move back one screen	Press button B
Entering numbers	To increase	Press select button or button A
	To decrease	Press button B

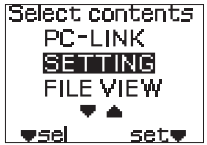
* If you hold a button down while entering a number, the number will increase or decrease more rapidly.

■ List of setting modes



< Main menu >

When SETTING mode is started, the main menu is displayed.



The following items can be operated or set from the main menu.

PC-LINK mode (page 48)

This mode connects a personal computer to the main unit via a USB dongle (optional).
Traveling data can be sent from the main unit, and bike, system and user settings and software updates can be carried out from the personal computer.

SETTING mode (page 28)

This mode is used for making main unit settings.

FILE VIEW mode (page 37)

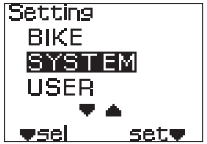
This mode is used for viewing and deleting traveling data.

VERSION mode

This mode is used for displaying the software version and network ID for the main unit.
(1) Select "VERSION" in the main menu.
(2) Press the set button.
(3) The confirmation screen for the firmware version and the network ID will be displayed. If you press the set button, the screen will return to the main menu.

SETTING mode

(1) Select "SETTING" in the main menu.
(2) Press the set button.
(3) The Setting menu will be displayed.



■ Bike settings

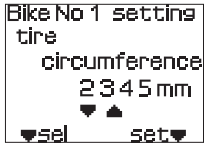
(1) Select "BIKE" from the Setting menu.
(2) Press the set button.
(3) The odometer distance input screen will be displayed.

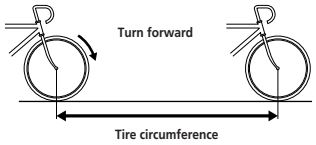
Entering the odometer distance
You can enter your desired cumulative distance.
(1) Press the set button to enable the odometer distance to be entered.
The odometer distance display will be highlighted.
(2) Press the select button, button A or button B to enter the desired value.
(3) Press the set button to confirm the value entered.
(4) If you press the select button or button A, the display will change to the next item.

(km)

(mile)

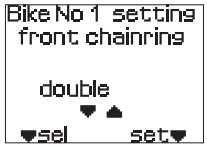
Entering the tire circumference
(Applicable tire circumferences: Refer to page 341.)
(1) Press the set button to enable the tire circumference to be entered.
The tire circumference display will be highlighted.
(2) Press the select button, button A or button B to enter the desired value.
(3) Press the set button to confirm the value entered.
(4) If you press the select button or button A, the display will change to the next item. If you press button B, the screen will return to the previous setting item.



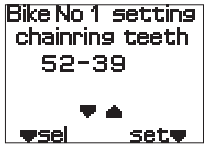


* Measure the tire circumference by inflating the tire to the correct pressure, making a mark on the ground where the tire touches it, then turning the wheel one full revolution with you riding the bicycle, and then measuring the distance between the two points.

Selecting the number of chainrings
(1) Press the set button to enable the number of chainrings to be changed.The chainring display will be highlighted.
(2) Press the select button, button A or button B to enter the desired number of chainrings.
• SINGLE • DOUBLE • TRIPLE
(3) Press the set button to confirm the number of chainrings selected.
(4) If you press the select button or button A, the display will change to the next item. If you press button B, the screen will return to the previous setting item.

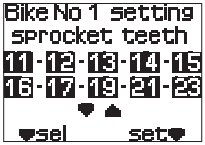


Selecting the number of chainring teeth
(1) Press the set button to enable the number of chainring teeth to be changed.
The number of teeth for the largest chainring will be highlighted.
(2) Press the select button, button A or button B to enter the desired number of chainring teeth.
(3) Press the set button to confirm the number of teeth selected.
The number of teeth for the next chainring will be highlighted.
(4) Repeat steps (2) and (3) to set the number of teeth for each chainring.



(5) If you press the select button or button A, the display will change to the next item. If you press button B, the screen will return to the previous setting item.

Selecting the number of sprocket teeth



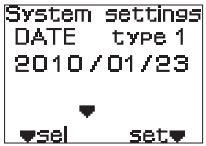
Check the number of sprocket teeth being used beforehand. (For details on the applicable sprocket tooth combinations, refer to page 50.)

(1) Press the set button to enable the number of sprocket tooth configuration to be changed. The number of sprocket teeth will be highlighted.
(2) Press the select button, button A or button B to enter the desired sprocket tooth combination.
(3) Press the set button to confirm the sprocket tooth combination selected.
(4) If you press the select button or button A, "exit" will be selected. If you press button B, the screen will return to the previous setting item.

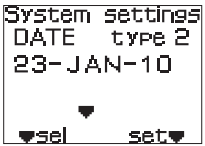
■ System settings

(1) Select "SYSTEM" from the Setting menu.
(2) Press the set button.
(3) The date entry screen will be displayed.

Entering the date



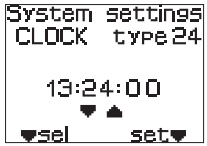
Date entry (type 1)



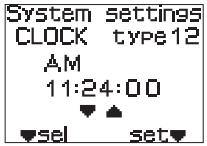
Date entry (type 2)

(1) Press the set button to enable the date display type to be changed.
The type display will be highlighted.
(2) Press the select button, button A or button B to select the desired display type.
• type 1: (YYYY/MM/DD)
• type 2: (DD-MMM-YY)
(3) Press the set button to confirm the display type. The date display will be highlighted.
Next enter the date.
(4) Press the select button, button A or button B to enter the desired value.
(5) Press the set button to confirm the value entered.
The next field to be entered will be highlighted.
(6) Repeat steps (4) and (5) to enter all of the desired values.
(7) If you press the select button or button A, the display will change to the next item.

Entering the time



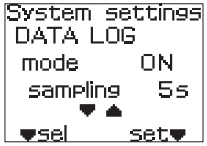
24-hour display (type 24)



12-hour display (type 12)

(1) Press the set button to enable the time display type to be changed.
The type display will be highlighted.
(2) Press the select button, button A or button B to select the desired display type.
• type 24: (24-hour display)
• type 12: (12-hour display)
(3) Press the set button to confirm the display type.
The time display will be highlighted.
Next enter the time.
(4) Press the select button, button A or button B to enter the desired value.
(5) Press the set button to confirm the value entered.
The next field to be entered will be highlighted.
(6) Repeat steps (4) and (5) to enter all of the desired values.
(7) If you press the select button or button A, the display will change to the next item. If you press button B, the screen will return to the previous setting item.

Setting data recording



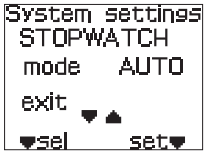
This sets whether traveling data is to be recorded or not. If it is to be recorded, set the interval (sampling period) for data to be extracted.
• Initial setting: OFF
(1) Press the set button to enable the data recording setting to be changed.
The ON/OFF setting for "mode" will be highlighted.
(2) Press the select button, button A or button B to select the data recording setting.
• mode: ON, OFF
(3) Press the set button to confirm the selected setting.
The sampling period value will be highlighted at this time.
Next set the sampling period.

(4) Press the select button, button A or button B to select the desired sampling period.
- Sampling period: 5 secs., 15 secs., 60 secs.

* The shorter the sampling period, the more detailed is the data that can be recorded, however the length of recording time available will also become shorter.

(5) Press the set button to confirm the selected setting.
(6) If you press the select button or button A, the display will change to the next item. If you press button B, the screen will return to the previous setting item.

Selecting the stopwatch mode



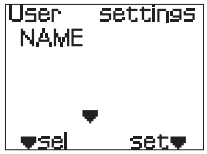
Starting and stopping the stopwatch counter can be done using the set button on the main unit, or automatically by receiving a speed signal.
(1) Press the set button to enable the stopwatch mode setting (AUTO/MANUAL) to be changed. The AUTO/MANU setting for "mode" will be highlighted.
(2) Press the select button, button A or button B to select the desired mode.
- AUTO (Automatic setting)
  When the main unit receives a speed signal, the stopwatch counter starts, and it stops approximately 4 seconds after the speed signal stops being received.
- MANU (Manual setting)
  The stopwatch counter starts and stops manually when the set button on the main unit is pressed.

(3) Press the set button to confirm the selected setting.
(4) If you press the select button or button A, "exit" will be selected. If you press button B, the screen will return to the previous setting item.

■ User settings

(1) Select "USER" from the Setting menu.
(2) Press the set button.
(3) The name entry screen will be displayed.

Entering your name

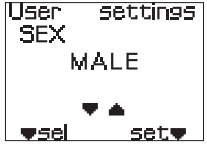


(1) Press the set button to enable the name to be entered.
You will then be able to enter the first character.
(2) Press the select button, button A or button B to select the desired letter.
- Maximum number of characters: 10
- Available characters: Alphabetic characters (uppercase/lowercase), numerals

(3) Press the set button to confirm the character which you have entered. The entry point will then move to the right of the character you have just entered.
(4) Repeat steps (2) and (3) to enter the whole of your name.
(5) After the final character has been entered, press the set button to confirm the name you have entered.
(6) If you press the select button or button A, the display will change to the next item.

* If you make a mistake while entering your name, finish off entering the name and then enter it again starting from step (1).

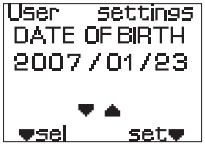
Changing the gender



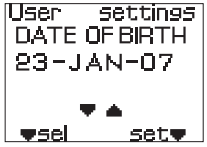
(1) Press the set button to enable the gender to be changed.
The gender display will be highlighted.
(2) Press the select button, button A or button B to select the gender.
- MALE • FEMALE

(3) Press the set button to confirm the selected gender.
(4) If you press the select button or button A, the display will change to the next item. If you press button B, the screen will return to the previous setting item.

Entering your birthday



(DATE type: 1)

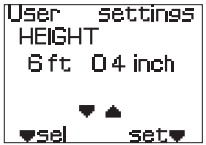


(DATE type: 2)

(1) Press the set button to enable the birthday to be entered.
The year display for the birthday will be highlighted.
(2) Press the select button, button A or button B to enter the desired value.
• Available year range: 1900 - 2099
(3) Press the set button to confirm the entered value.
The month display for the birthday will be highlighted.
(4) Repeat steps (2) and (3) to enter all of the desired values.
(5) If you press the select button or button A, the display will change to the next item. If you press button B, the screen will return to the previous setting item.

Entering your height

(cm)

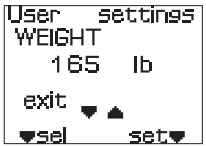


(feet)

(1) Press the set button to enable the height to be entered.
The height display will be highlighted.
(2) Press the select button, button A or button B to enter the desired value.
• Height range: 120.0 - 250.0 (cm)
4 feet 0 inches - 8 feet 4 inches
(3) Press the set button to confirm the value which you have entered.
(4) If you press the select button or button A, the display will change to the next item. If you press button B, the screen will return to the previous setting item.

Entering your weight

(kg)



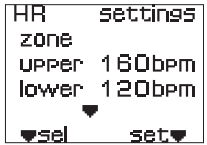
(lbs.)

(1) Press the set button to enable the weight to be entered.
The weight display will be highlighted.
(2) Press the select button, button A or button B to enter the desired value.
• Weight range: 20.0 - 250.0 (kg)
44 - 551 (lbs.)
* The weight in pounds is displayed without using decimals.
(3) Press the set button to confirm the entered value.
(4) If you press the select button or button A, "exit" will be selected. If you press button B, the screen will return to the previous setting item.

■ Setting your heart rate zone

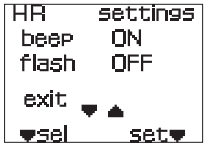
(1) Select "HR (ZONE)" from the Setting menu.
(2) Press the set button.
(3) The heart rate zone setting screen will be displayed.

Heart rate zone setting



Enter the upper limit and lower limit for your heart rate.
Set your desired heart rate zone in accordance with your training targets, etc.
(1) Press the set button to enable the heart rate zone to be entered.
The "upper" heart rate zone display will be highlighted.
(2) Press the select button, button A or button B to enter the desired value.
• Heart rate zone (upper): 31 - 240 (bpm)
The 'upper' value cannot be set to lower than the 'lower' value.
(3) Press the set button to confirm the upper heart rate zone setting.
The "lower" heart rate zone display will be highlighted.
Next set the lower heart rate zone setting.
(4) Press the select button, button A or button B to enter the desired value.
• Heart rate zone (lower): 30 - 239 (bpm)
The 'lower' value cannot be set to higher than the 'upper' value.
(5) Press the set button to confirm the lower heart rate zone setting.
(6) If you press the select button or button A, the display will change to the next item.

beep / flash setting



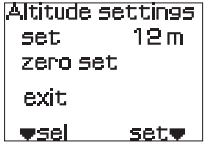
You can set whether or not a buzzer sounds and the heart rate value flashes as a warning if your heart rate during measurement goes outside the set heart rate zone.

(1) Press the set button to enable the buzzer setting to be changed.
The ON/OFF setting for "beep" will be highlighted.
(2) Press the select button, button A or button B to select whether or not the buzzer sounds.
• beep: ON/OFF
(3) Press the set button to confirm the selected setting.
The ON/OFF setting for "flash" will be highlighted.
Next set the "flash" setting.
(4) Press the select button, button A or button B to select the flash setting for the heart rate value.
• flash: ON/OFF
(5) Press the set button to confirm the selected setting.
(6) If you press the select button or button A, "exit" will be selected. If you press button B, the screen will return to the previous setting item.

■ Setting the altitude

(1) Select "ALTITUDE" from the Setting menu.
(2) Press the set button.
(3) The Altitude settings screen will be displayed.

Altitude settings

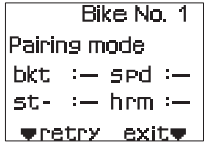


(1) Press the set button to enable the altitude setting to be changed.
The altitude display will be highlighted.
(2) Press the select button, button A or button B to enter the desired value.
(3) Press the set button to confirm the entered value.
(4) If you press the select button or button A, "zero set" will be selected.
(5) If you press the set button while "zero set" is highlighted, the altitude setting will be reset to zero.
(6) If you press the select button or button A, "exit" will be selected.
If you press button B, the screen will return to Altitude settings.
* Carry out step (5) only if required.

■ Checking the pairing

(1) Select "PAIRING" from the Setting menu.
(2) Press the set button.
(3) The pairing confirmation screen will be displayed.

Pairing confirmation screen



You can then check the pairing between the main unit and the various other units, and also check the pairing settings.
* For details on pairing operations, refer to page 11.

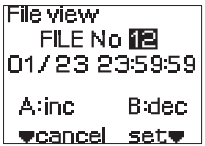
Note that if you press the select button (▼retry) while the pairing confirmation screen is displayed, the pairing settings which have already been completed will be initialized.

FILE VIEW mode

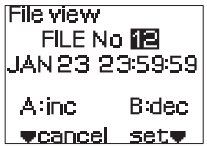
(1) Select "FILE VIEW" from the main menu.
(2) Press the set button.
(3) The File operation menu will be displayed.

■ Viewing files

This lets you view details such as distance, speed and heart rate contained in the traveling data recorded in the main unit.



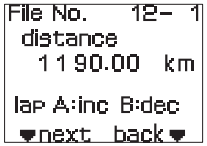
(DATE type: 1)



(DATE type: 2)

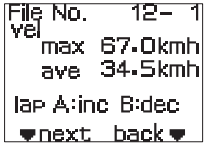
(1) Select "view" from the File operation menu.
(2) Press the set button.
(3) The File view selection screen will be displayed.
The file number will be highlighted.
(4) Press the select button, button A or button B to select the desired file number.
* To cancel the selection of a file and return to the File operation menu, press the select button.

(5) Press the set button to confirm the selected file number.
The distance view screen will be displayed.
• If lap times have been recorded, you can press button A or button B to view the distance for each lap.



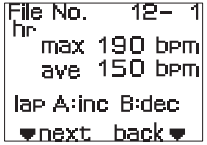
<Distance view>

(6) If you press the select button, the speed view screen will then be displayed.
If you press the set button, "exit" will be selected.
• If lap times have been recorded, you can press button A or button B to display the maximum speed and average speed for each lap.



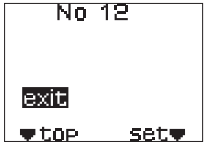
<Speed view>

(7) If you press the select button, the heart rate view screen will then be displayed.
Press the set button to return to the speed view screen.
• If lap times have been recorded, you can press button A or button B to view the maximum heart rate and average heart rate for each lap.



<Heart rate view>

(8) If you press the select button, "exit" will be selected.
Press the set button to return to the speed view screen.

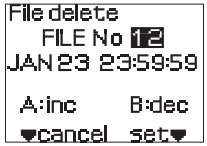


<exit>

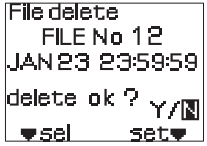
(9) Press the select button to switch to the distance view screen.
Press the set button to return to the File view selection screen.

■ Deleting files

This lets you delete traveling data which has been recorded in the main unit.
* Settings can be cleared all at once when using FLIGHT DECK Manager.



(1) Select "delete" from the File operation menu.
(2) Press the set button.
(3) The File delete selection screen will be displayed.
(4) Press the select button, button A or button B to select the desired file number.
* To cancel the selection of a file and return to the File operation menu, press the select button.
(5) Press the set button to confirm the selected file number.
The file delete confirmation screen will be displayed.



(6) Press the select button to select either "Y" (Yes) or "N" (No).
• delete ok ?:
Y (Yes): The selected file will be deleted.
N (No): The display will return to the File delete selection screen.
(7) Press the set button to confirm the selected operation.

10. Stopwatch Function/Recording Traveling Data

■ Starting and stopping the stopwatch counter

Starting and stopping the stopwatch counter can be switched between manual and automatic operation.
(For details on the setting method, refer to page 32.)

Automatic setting

(1) Switch the main unit display to normal mode.
- For the automatic setting, "AT" will appear in the LCD.

(2) Press the set button to switch the counter to standby. "stw" will illuminate in the information display.
(3) The counter will start when a speed signal is received.
"stw" will flash in the information display.
(4) The counter will stop approximately 4 seconds after the speed signal stops being received.
"stw" will illuminate in the information display.

* For the manual setting, the stopwatch will not stop even when the speed signal stops being received, and data will still continue to be recorded.

Manual setting

(1) Switch the main unit display to normal mode.
(2) Press the set button (stopwatch button) to start the stopwatch counter.
"stw" will flash in the information display.
(3) When you press the stopwatch button once more, the counter will stop.
"stw" will illuminate in the information display.

■ Resetting the counter and recording traveling data

The traveling data is recorded at the same time the stopwatch counter is reset.

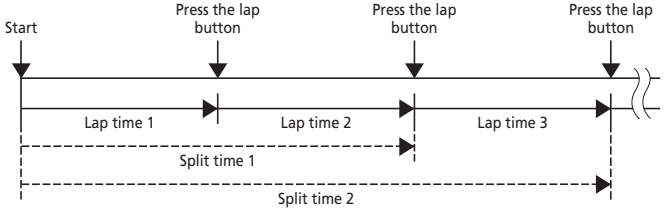
(1) Stop the stopwatch counter.
(2) Hold down the set button (stopwatch button) for 2 seconds or more.
(3) The stopwatch counter will then be reset to zero.
"stw" will disappear from the information display.

- If "Data recording" is set to ON, traveling data will be recorded in the main unit.
- "REC" will appear in the LCD while traveling data is being recorded.

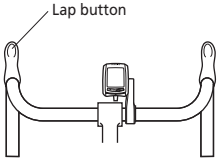
* For details on the setting method, refer to page 32.

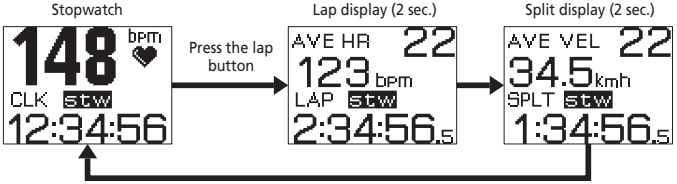
■ Lap recording operations

If you press the lap button while the stopwatch is running, the main unit will store the lap data (interval data) in its memory and the lap time will be displayed.
In addition, if more than one set of lap data is stored in the main unit memory after the stopwatch has started running, the split times (cumulative lap times) will also be displayed.



Press the lap button while the main unit is running the stopwatch.
The lap display will appear in the information display for 2 seconds.
Next, the split display will appear for 2 seconds.





■ Measurement of traveling time

The traveling time is recorded as split times. In order to measure the traveling time more accurately, set Stopwatch mode to "AUTO".
* For details on the setting method, refer to page 32.

11. FLIGHT DECK Manager

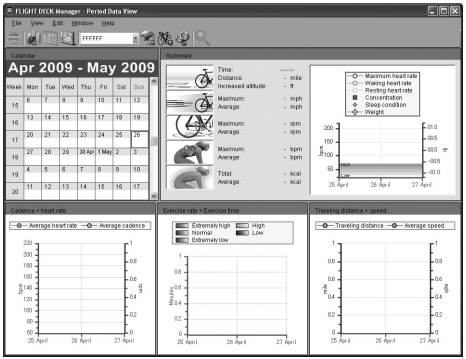
Communication can be carried out between the main unit and a personal computer which has the special FLIGHT DECK Manager application installed by connecting an optional USB dongle to the personal computer. This communication function can be used to carry out the following operations.

■ FLIGHT DECK Manager functions

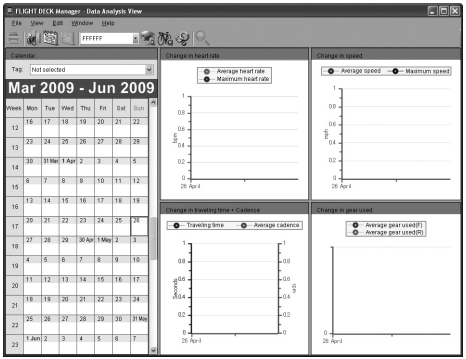
Setting functions	Bike setting, user setting and system setting operations are possible.
Data transfer functions	Traveling data which is stored in the main unit can be sent to the personal computer.
Data display functions	The traveling data which is sent to the personal computer can be displayed as graphs.
Software updating function	The software for the main unit can be updated.

Traveling Data View window

Period Data View window



Data Analysis View window



For details on how to use FLIGHT DECK Manager, refer to the help.

■ System requirements for using the software

The following environment is required for using FLIGHT DECK Manager.

[Operating system]
Microsoft® Windows Vista™ or later, or Microsoft® Windows® XP Service Pack 3 or later (Compatible with Japanese, English, French, Italian, Spanish, German or Dutch versions)
[Computer unit (PC/AT compatible only)]
Personal computer equipped with Pentium® 1GHz or higher
[Memory]
Windows Vista™: 1GB or more
Windows® XP: 512 MB or more
[Hard drive]
For installing FLIGHT DECK Manager: 40MB or more of free disk space
For storing data: Approx. 6MB* per account per month
* If using for 5 hours per day for 20 days per month
[Display]
Resolution: XGA (1024x768) or higher
Display colors: High color (16-bit / 65536 colors) or higher
[Disk drives]
CD-ROM drive
[Other]
USB port (Ver. 2.0/1.1)
CAUTION:
If using the Microsoft® Windows® XP operating system, Microsoft® .NET Framework 2.0 is necessary.
If Microsoft® .NET Framework 2.0 or higher has not been installed on the system, it must be installed at the same time as FLIGHT DECK Manager. 280 MB or more of free hard disk space is required in order to install Microsoft® .NET Framework 2.0.

■ Installing FLIGHT DECK Manager

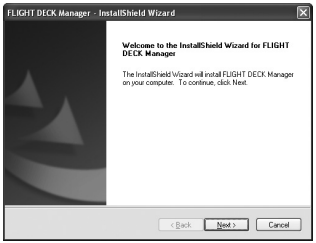
Screenshots from Windows XP are used as examples here.

(1) Insert the accessory application CD-ROM into the CD-ROM drive of the personal computer.
The setup program will start up automatically.

The startup program may not run automatically depending on the personal computer settings. If it does not run automatically, run the “autorun.exe” file in the CD-ROM drive.
* If the personal computer you are using does not have the .NET Framework installed, you must install the .NET Framework before installing FLIGHT DECK Manager.

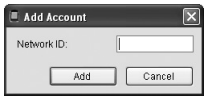
(2) Click the [Install FLIGHT DECK Manager] button.
(3) Select the language for the installation.
* Windows in English are used here as examples.

(4) Close all other programs which are currently running, and then click [Next].
Following the instructions on the screen to complete the installation.



■ Launching for the first time

(1) Launch FLIGHT DECK Manager.
The dialog box for adding a new account will be displayed.



(2) Enter the 6-digit network ID which is displayed on the main unit.
The network ID is displayed when the main unit is in Version mode. For details, refer to page 28.
* If you click [Cancel], entry of the network ID will be skipped.
If this is done, you can add new accounts using the application menu or the icon in the taskbar.
(3) The traveling data view window will be displayed.
When traveling data has been loaded from the main unit, the calendar color will change.

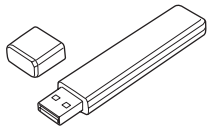
■ Installing the driver for the USB dongle

Install the driver for the optional USB dongle in order to use the dongle.
* The FLIGHT DECK Manager installation must be complete before this can be done.

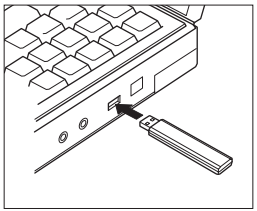
Screenshots from Windows XP are used as examples here.

(1) Remove the USB terminal cover from the USB dongle.

CAUTION:
Keep the cover safe after removal so that it does not get lost. In addition, keep it out of the reach of children.



(2) Insert the USB dongle into the USB port of the personal computer.



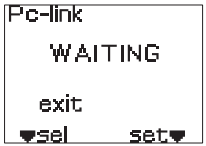
(3) The Hardware Update Wizard window will be displayed on the personal computer.
Select "Install software automatically" and then click [Next].
* Depending on the environment of the computer you are using, you may be prompted to connect to Windows Update to search for software. If this happens, select "Do not connect at this time" and then click [Next].

(4) When the message "Completing the Found New Hardware Wizard" is displayed, the setup for using the USB dongle is complete.
* Depending on the environment of the computer you are using, it may be necessary to restart the computer.

■ Connecting to the main unit (PC-LINK)

Use the USB dongle to establish a data connection between the personal computer and the main unit.
* The distance between the main unit and the USB dongle should be within 1.5 m.

(1) Connect the USB dongle to the personal computer.
(2) Launch FLIGHT DECK Manager.
A connection signal will be sent to the main unit.
(3) Start up Setting mode on the main unit.
(For details on starting up setting mode and methods of operation, refer to page 26.)
(4) Select "PC-LINK" at the main unit.
(5) The connection standby screen will be displayed.



- WAITING:
The main unit is waiting for a communication from the computer to establish the connection.
- CONNECTING:
Communication has been received and the connection mode is being negotiated.
- Link-ERR:
A connection error occurred.

If Link-ERR is being displayed

* Change the direction of the main unit or bring it closer to the USB dongle.
* Turn off any wireless devices which might be interfering with communication between the main unit and the USB dongle, or move such equipment further away. (Example: cordless phones, door phones, other devices using the 2.4GHz wireless band)
* Avoid using microwave ovens while a connection is in progress. Electromagnetic waves from microwave ovens may interfere with communication.
* If there are any other main units nearby which are in PC-LINK mode, switch them out of PC-LINK mode. If any USB dongles are being used in other computers, remove those USB dongles.

Check all of the above, and then repeat the operation from step (1).
(6) Communication processing with the various units (speed sensor, bracket, ST wireless units and heart rate sensor unit) will be interrupted and the main unit will return to communication mode with the personal computer.

12. Updating the Software

You can update the main unit's software by connecting the USB dongle to the personal computer so that the personal computer can communicate with the main unit. For details, refer to the Shimano website.

CAUTION:
- When the software is updated, all data files remaining inside the main unit will be deleted.
  * After updating, you can start off in PC-LINK mode to write the settings which are stored on the PC into the main unit.
- When updating the software, be sure to use a battery with sufficient charge remaining.
- In addition, do not remove the main unit's battery while updating is in progress.

13. Troubleshooting

Symptom	Remedy
Speed display does not appear.	Check that the speed sensor and the main unit positions (distance and direction) are correct.
	Check that the speed sensor and magnet positions are correct.
	Check that pairing has been carried out for the speed sensor.
Heart rate display does not appear.	Check that pairing has been carried out for the heart rate sensor unit.
Gear display does not appear.	Check that pairing has been carried out for the ST wireless units and the bracket (SM-EW79F-E/I).
The battery charge indicator is unstable during battery mode.	Replace the battery with a new one and check if the display becomes stable.

14. Main Specifications/Display Ranges

Heart rate	30 - 240 bpm (beats per minute)
Traveling distance	0.00 - 9999.99 (km, miles)
Cumulative distance	0.0 - 99999.9 (km, miles)
Longest traveling time	99 : 59 : 59
Average speed	0.0 - 130.0 km/h 0.0 - 80.8 mph
Cadence	0 - 299 rpm
Altitude	-550 - 9000 m
Tire circumference	1300 - 2400 mm
Calorie consumption	0 - 99,999 kcal
Battery/life	Approximately one year (300 days when used for 1 hour per day and PC-LINK used once a week) * This may be shorter depending on the operating environment, the PC-LINK frequency and other conditions.
Specified operating temperature range	0°C - 50°C
Handlebar installation diameter	31.8 mm / 25.8 mm (Using an adapter)
Applicable chainring tooth configurations	Largest chainring : 56, 55, 54, 53, 52, 50
	Intermediate chainring : 42, 39, 34
	Smallest chainring : 30
Main applicable sprockets tooth number configuration	11-21T : 11-12-13-14-15-16-17-18-19-21T
	11-23T : 11-12-13-14-15-16-17-19-21-23T
	11-25T : 11-12-13-14-15-17-19-21-23-25T
	11-27T : 11-12-13-14-15-17-19-21-24-27T
	11-28T : 11-12-13-14-15-17-19-21-24-28T
	12-23T : 12-13-14-15-16-17-18-19-21-23T
	12-25T : 12-13-14-15-16-17-19-21-23-25T
	12-27T : 12-13-14-15-16-17-19-21-24-27T

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following.
measures:

--- Reorient or relocate the receiving antenna.
--- Increase the separation between the equipment and receiver.
--- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
--- Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

This class [*] digital apparatus complies with Canadian ICES-003.

* Service Instructions in further languages are available at : **http://techdocs.shimano.com**

Please note: specifications are subject to change for improvement without notice. (English)