SHIMANO STEPS

E8000 / E6000 Series

SERVICE MANUAL

English(AU)

SHIMANO

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Please note: specifications are subject to change
for improvement without notice. (English)
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SHIMANO TOTAL ELECTRIC POWER SYSTEM

FEEL THE RIDE!
EXTEND YOUR RANGE AND PEDALLING POWER.

Get on to trails and ride across terrain that goes up and down. Pedal the bicycle and feel your body interacting with the ground as you angle through a curve and meet the next perspective. SHIMANO STEPS lets you use your legs in a natural way, and helps you use them for longer. Pedal up ascents to trails you couldn't access before. Even against a headwind, be confident that your legs can get you home. SHIMANO experience delivers smooth, silent, and subtle assistance.

INDEX

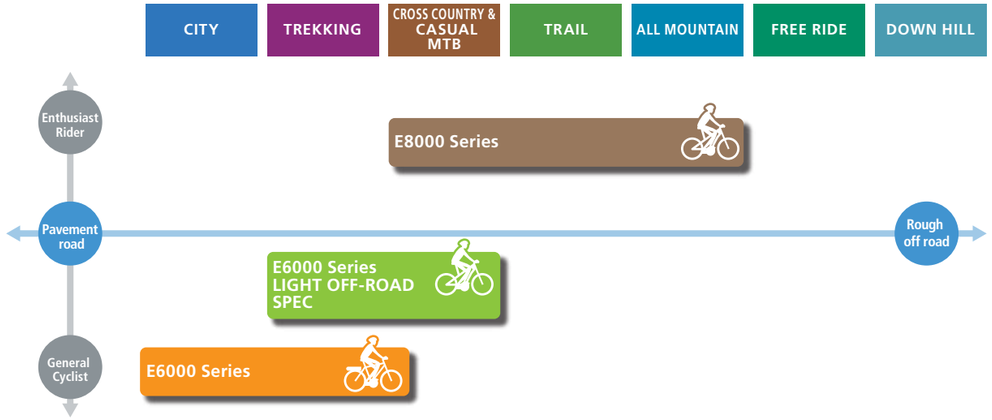
TOTAL CONCEPT

E8000 Series
E6000 Series

SHIMANO STEPS

In 2014 SHIMANO released the E6000 Series of **SHIMANO Total Electric Power System**, STEPS for short. For round-town and light off-road use, this system aimed at perfect integration of gear shifting and power assistance to provide a completely natural cycling feel. A midship drive unit was implemented to ensure optimal balance and handling, and all the electronic components were designed for reliability and weather resistance. This technology has evolved in the E8000 Series, a system expressly tailored for use with true mountain-bike frames. Retaining the satisfying feel of pedalling and natural, responsive, brake modulation, the robust E8000 Series now enables authentic MTB maneuverability. It gives people of all ages and abilities the freedom to get outside and enjoy off-road riding. Elder riders can rediscover the authentic pleasure of MTB riding, experienced riders can go further. Novices can get up hills. Everyone arrives with fresher legs. Whatever strength and stamina the riders have, fully integrated power assistance and automatic gear shifting (E6000 Series) can enable friends to share the fun and explore new grounds.

E8000 Series



E6000 Series

EXPLORE NEW GROUNDS

WITH SHIMANO STEPS MTB

SHIMANO STEPS | MTB

E8000 Series

WHY SHIMANO STEPS MTB WAS DEVELOPED

FOR PEOPLE TODAY, WHO SEEK NEW EXPERIENCES

SHIMANO set out to create a power-assist and electric-gear-shifting system that allows frame makers to create MTBs that handle like real mountain bikes. Power assistance extends the range of experienced riders, who can arrive at new trails with fresher legs and be confident about returning. Inexperienced riders can keep up with stronger riders, who are happy to share the fun. Elder riders, too, can rediscover the pleasures of their youth. Meanwhile, riding a true MTB with power assistance is a new experience in itself. The E8000 Series allows all riders to develop abilities on bikes with the agile handling, acceleration, and balance of normal MTBs.

PRODUCT CONCEPT

MORE FREEDOM TO ENJOY REAL MTB RIDING

Designed for mountain biking, SHIMANO STEPS MTB (E8000 Series) enables both hard-core trail chasers and occasional adventurers to go further, to have more fun, to experience more freedom. Anyone can enjoy the nippy handling, stopping power, and balance of a real MTB, and now with the added benefit of power assistance. Firmware programming and DI2 electronic shifting, both developed especially for mountain bikes and trail riding, enable advanced and intuitive operation. With just the right amount of assistance delivered at just the right time, whatever the level of experience, any rider can enjoy new thrills and acquire new skills.

TARGET

DEEPER FRIENDSHIPS. GREATER FREEDOM. BIGGER DREAMS.

SHIMANO STEPS MTB (E8000 Series) providers intuitive, power-assisted pleasure to all kinds of riders. Because power assistance evens out differences in strength and stamina, newcomers can cycle up to trail heads with stronger riders, and experienced riders can share their passion with not-yet-fit friends. From grandchildren to grandparents, families are free to explore nature together. Mixed groups, each member through their own effort plus the right amount of power assistance, can share the joy of interacting with the natural terrain. Alone or together, freed from limitations, everyone can enjoy ultimate freedom.

- **Reaching heights they've never achieved before, hard-core riders appreciate how SHIMANO quality allows them to go further in their quest for thrills.**
- **Stronger riders are able to arrive at trail heads with fresher legs, enjoy more time on the trail and, even in the face of a headwind, be confident of getting back.**
- **Enjoying the same ride feel that captivated the first generation of mountain bikers, with power assistance and automatic shifting, novice riders can gradually increase their fitness level while developing their latent abilities.**

SYSTEM MECHANISM E8000 Series

Climb to new horizons. Get to trails more quickly and with fresher legs. Extend your range and enjoy the sensation of pedalling with a quiet and powerful motor, refined and responsive assistance, and a large-capacity battery. SHIMANO has squeezed this helpful power into a form that gives you an authentic MTB ride feel.

EXTERNAL BATTERY TYPE

DI2
DI2 or MECHANICAL REAR DERAILLEUR

INTEGRATED BATTERY TYPE






DRIVE UNIT / DRIVE UNIT COVER

WHAT SHIMANO DELIVERS WITH SHIMANO STEPS E8000 MTB

To extend the pleasure of riding to everyone, each SHIMANO Total Electric Power System provides both power assistance and the satisfying feel of pedalling. The E8000 Series has been designed to be robust, lightweight, and compact. Positioned low on the frame, the midship drive unit allows better-balanced frame designs. The short chain stay specification and narrow Q-Factor ensure that power-assisted MTBs can be designed with the mechanical performance and authentic handling characteristics of conventinal mountain bikes. SHIMANO's experience of the rigours of the trail and commitment to quality bring you a refined, responsive system that promptly delivers just the right amount of assistance for your cadence and speed. SHIMANO wants to bring you next level and discover greater freedom.

DU-E8000
Drive Unit

- **COMPACT DRIVE UNIT**
  - » Shorter chain stay possible
  - » More clearance (suspension/tire)
- **POWER OUTPUT**
  - » 70Nm (max.), 250W
- **LIGHTWEIGHT**
  - » Quantity weight, e.g. light weight of < 2.88kg (without drive unit cover)
  - » Improves bike handling
- **DRIVE UNIT CHARACTERISTICS**
  - » Direct pedaling feel in on and off assist power
  - » Stable Assist Power output by cadence

DRIVE SIDE
(with SM-DUE80-A)

Drive Unit Cover

SM-DUE80-A / SM-DUE80-B
(Standard Cover) **(Mount Bolt Cover)**


Left


Right

SM-DUE10
Speed Sensor Unit
» Cable length: 340, 540 or 1400mm

SM-DUE11
Speed Sensor Unit
» Cable length: 760mm

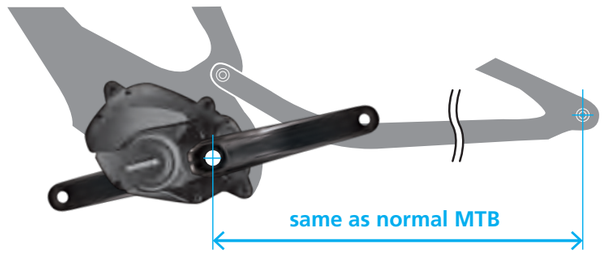
RT-EM900 / RT-EM800
Disc Brake Rotor (with the magnet)
» Outer diameter: 180mm or 160mm


RT-EM900-M


RT-EM800-M

SHORT CHAIN STAY FOR NIMBLE HANDLING

The drive unit has been designed so that frames can have almost same chain stay length as conventional normal MTBs. The short chain stay specification allows frame makers to design power-assisted mountain bikes that provide the same maneuverable handling and authentic feel as conventional normal MTBs. Meanwhile, the drive unit and refined electronic control deliver seamless shifting that allows riders to fully enjoy more technically demanding stretches of trail riding. Coupled with a manoeuverable frame, the E8000 Series is part of a complete MTB experience.

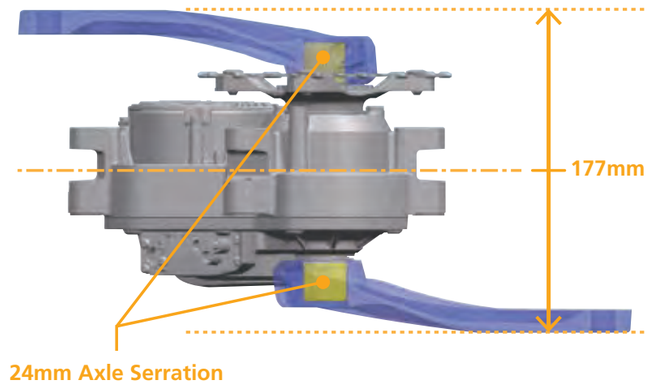


SHIMANO STEPS MTB allows you to go further, climb higher and arrive fresher, while offering uncompromised maneuverability and riding feel.

DRIVE UNIT / DRIVE UNIT COVER

Q-FACTOR KEPT FOR PEDALLING COMFORT

The distance between left and right crank can make a big difference to the feel of pedalling. Pushing the pedals with feet wide apart causes discomfort and greater frame flex, which wastes effort. The compact E8000 series drive unit keeps the cranks close together. Moreover, because the Q-Factor is zero offset from the centerline of drive unit, pedalling is smooth, comfortable and efficient.



The distance between the outside of the cranks is known as the Q-Factor. With the E8000 Series, the Q-Factor is almost the same as with standard XT cranks.

RIGID MOUNTING DESIGN

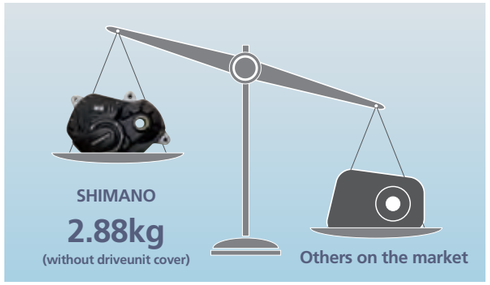
To withstand the rigors of the trail and deliver power assistance with maximum efficiency, with bolts on either side gripping in a deeper triangular configuration, the E8000 Series drive unit is securely held in place while offering a rigid platform for efficient power transfer.

E8000 Series
DU-E8000

E6000 Series
DU-E6001 / E6002 / E6010 / E6012

COMPACT WITH HIGH POWER

Specially designed for mountain bikes, the E8000 series drive unit is compact enough to keep the chain stays short, the Q-Factor narrow, and to allow adequate clearance for tyres and suspension. The reduced weight also ensures that handling remains nimble. Delivering up to 70 Nm of torque or 250 W rated power, the drive unit quietly helps riders get up and over steep inclines. The attractive design also features cooling fins to dissipate heat. The total package is compact, lightweight, and delivers plenty of power.



EASIER MAINTENANCE

The electric wires, brake hose and cables aperiodically need to be checked as necessary. Now, rather than having to remove the whole crank assembly for maintenance, the hose and cable can be accessed simply by removing the driveunit cover.

SELECTABLE DRIVEUNIT COVER

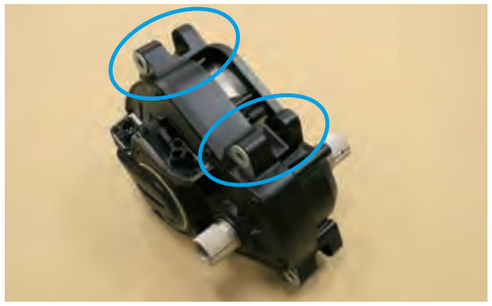
Depending on the type of bike and the way it will be ridden, two types of driveunit cover are available. One provides the minimum necessary coverage (SM-DUE80-A). When more robust protection is needed, a more extensive cover (SM-DUE80-B) can be used. However, depending on the frame design, it might not be possible to fit both types of cover onto a bike.

SM-DUE80-A
(Standard Cover)

SM-DUE80-B
(Mount Bolt Cover)

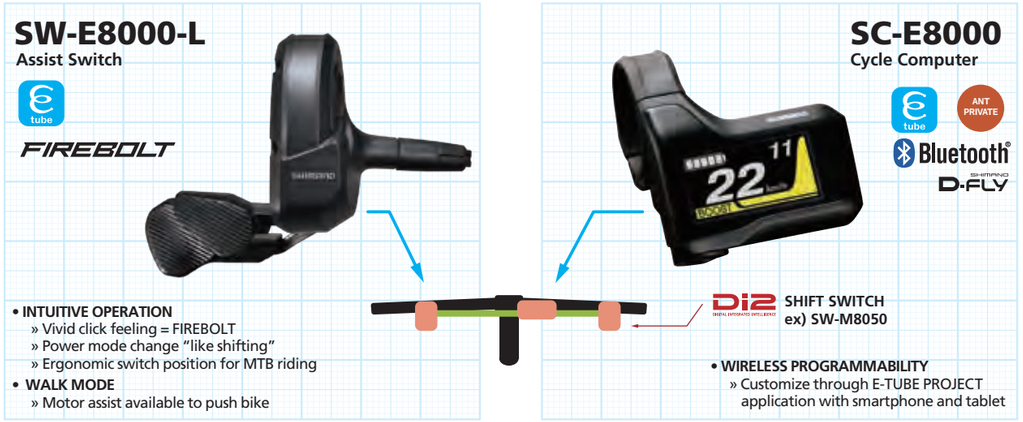
INTERNAL ROUTING CAPABILITY / EASIER TO ATTACH

A groove in the drive unit enables internal routing of the electric wires, brake hose etc. Internal routing helps better appearance and prevent disconnection when riding on rough trails.
Plus, the press-fitting screw hole design eliminates play and makes it much easier to attach the drive unit to the frame. This effectively solves the previous dilemma of having to shape the drive unit to exactly fit the frame, which made the drive unit much more difficult to install.



ASSIST SWITCH / CYCLE COMPUTER

Designed for reflexive operation while trail riding, intuitive control switches can be located where the rider's thumbs naturally rest. With a colour LCD that communicates key information at a glance, the cycle computer is also easy to use.



CADENCE

INTUITIVE OPERATION

Left and right, operating the thumb switches soon becomes second nature for controlling power-assist modes, lights, and other functions. Mode information is plain to see with just a glance at the colour-LCD computer display.

QUICK WALK

To get power assistance while walking, you only have to make a long press on a switch, regardless of the mode being used. You are free to just start walking without having to go through a selection sequence.

WIRELESS PROGRAMMING

You can update the unit firmware, adjust DI2 settings, carry out error checks, and customize each unit via Bluetooth®, using SHIMANO's E-TUBE aplication on a smartphone or tablet.

INTELLIGENT WALK ASSIST

For times when you have to walk the bike up a mountain trail, intelligent walk assist regulates the maximum speed according to the current DI2 gear setting of the bike.

RIDING CHARACTERISTICS
(FIRMWARE)

SHIMANO understands the crucial role played by firmware. Every day, we work to revise and improve the operation of our firmware. We know that it is even possible to improve the performance of hardware through a firmware update.

NATURAL-FEELING POWER ASSIST FOR MTBs

The basic function of efficient pedaling is to move the bike forward efficiently, but riders also demand nimble handling, responsive acceleration, and low-speed controllability from mountain bikes. The E8000 Series is specifically developed for the needs of MTB riders. To realize a natural riding feel, the programming ensures that just the right amount of power assistance is delivered when it is needed. Meanwhile, it also promptly withdraws assistance if not required. In particular, when the speed passes 25 km/h and assistance cuts out, pedaling remains smooth with no gaps.
When you accelerate from standing or out of a curve, power assistance responds by quickly getting you up to speed. During tricky technical riding involving tight turns or balanced immobility, prompt cut off ensures that the bike responds immediately. When the system provides assistance, it feels natural. Spin the pedals quickly and the drive unit adds power to your output. When cadence falls, it supplies torque to help you up sudden inclines or longer climbs.

ASSISTANCE TUNED TO RIDER NEEDS

Firmware programming controls gear-by-gear level of power assistance according to monitored speed, torque, cadence, and other data. To make the most efficient use of battery power and to ensure the most responsive assistance across different terrains, rider-selectable modes are available.
To add the torque you need to power up steep inclines, **Boost Mode** can provide as much as 300% assistance.
Across the cadence range, versatile **Trail Mode** subtly assists rider effort when pedalling over varied terrain.
Eco Mode is best when cycling mostly on the flat, for example when riding to a trail head.
Walk Mode is also there to aid you when pushing the bike.
In each mode, the firmware works to smoothly contribute just the right amount of assistance. (see opposite page 16)

BOOST MODE

TRAIL MODE

ECO MODE

WALK MODE

Color Recognition

You can immediately see which mode you are in by glancing at the colour on the cycle computer display: yellow for Boost, green for Trail, and blue for Eco.

E-TUBE PROJECT

E-tube offers flexibility by allowing you to customize settings and update firmware by Windows PC or tablet, smartphone. You can access a range of electronic components information quick and easy and check the system status in moments.

WHAT CAN YOU DO WITH E-TUBE PROJECT?

CUSTOMIZE

to settings of your choice

FIRMWARE

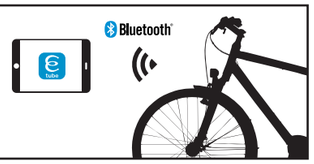
update

RUN ERROR CHECK

Notice something unusual?

WIRELESS PROGRAMMING
(E8000 Series ONLY)

You can update the unit firmware, adjust DI2 settings, carry out error checks, and customize each unit via Bluetooth®



TRY TO USE

Available functions in each devices

	PC (Windows)	Tablet	Smart phone
Customize	X	X	X
Firmware update	X	X	X
Error check	X	X	–
Preset	X	X	Limited*
Single unit connection	X	–	–

* Only reading and writing

CUSTAMIZATION

Customize functions and operations as you please. Discover the settings that match your personal riding style.

FIRMWARE UPDATE

The application automatically checks for new firmware each time it is started-up. This allows you to keep all units up-to-date at all times.

ERROR CHECK

If you notice an abnormality, immediately perform a diagnosis using the app. The unit at issue is identified, allowing you to quickly and easily seek repairs. *Tablet version only.

HOW TO USE E-TUBE PROJECT

STEP 1

GET THE APPLICATION

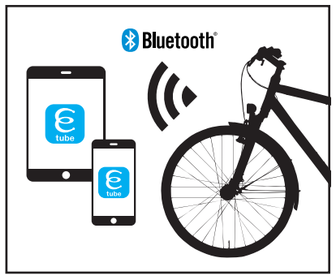
Download the application from the APP Store and website.

http://e-tubeproject.shimano.com/application/

STEP 2

CONNECTING TO THE BICYCLE

Connect to Bluetooth®, get started.



BATTERY / BATTERY MOUNT

No rider ever wants to run out of power, so a large-capacity battery is a must. The E8000 Series battery has a low-profile and attractively-styled design which allows it to be mounted safely out of the way on the downtube, and it is waterproof and robust to protect against the impacts and vibrations of energetic riding.

External Type

BT-E8010
Battery
for Down Tube

BM-E8010
Battery Mount
for Down Tube

Integrated Type

BT-E8020
Battery for Down Tube

BM-E8020
Battery Mount
for Down Tube

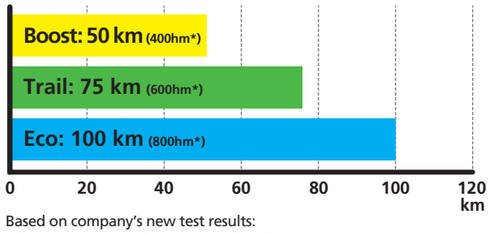
- **MTB DEDICATED DESIGN**
  - » Low profile
  - » Impact and vibration resistant
  - » Water proof
- **CAPACITY: 504Wh (36V, 14Ah)**
  - » Long riding range
- **BATTERY WEIGHT**
  BT-E8010 : 2.65kg
  BT-E8020 : 2.9kg
- **DURABLE BATTERY** (**Consistent recharge**)
  - » More than 60% after charge 1000 times
- **COMPATIBLE WITH E6000 SERIES**
  - » Longer riding distance (100km) on normal mode with DU-E6001/E6002/E6010/E6012
  - » Keep compatibility with current EC-E6000 and current frame mount
- **BATTERY LIFE:** *1000 cycles * After 1,000 cycles full charging still more than 300Wh=60%(Reference)

BT-E8010	BM-E8010	DU-E8000
BT-E8020	BM-E8020	DU-E6001 DU-E6002 DU-E6010 DU-E6012

(Refer annex-1 for detail on page 108)

The down tube-type battery is supplied as a set together with the battery mount, and can be used with the DU-E8000 and the DU-E6001/E6002/E6010/E6012. In addition, the battery mount dimensions on the frame and the charger (EC-E6000) are the same as before.

RIDING DISTANCE (INCLUDING CLIMBING)



Based on company's new test results:
- Combined weight (rider + bicycle): 100kg
- Battery: 504Wh

* height meters: climbing distance (positive altitude)

Data only represents an indication for the actual riding distance. The actual range can vary depending on usage and rider profile, riding conditions and battery life.

HIGH CAPACITY

The E8000 Series battery is 504 Wh. Riders can venture further and be confident of not running out of power in a remote place. There will always be enough energy for DI2 shifting actions in case the battery runs out of power.

SUPERB CHARGE HOLDING

All rechargeable batteries gradually store less power with each recharge. However, after 1,000 charge cycles, this superbly long-lasting battery unit is specified to still hold 300 Wh, which is 60% of its capacity when new.

INTERCHANGEABLE WITH E6000 SERIES

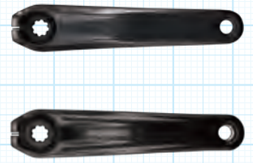
The E8000 series battery has greater capacity than the E6000 series downtube battery. If the need arises, however, the series can be also fitted with the BT-E6010 battery.

CRANKSET CHAINRING / CHAINDEVICE

Sudden changes of terrain, which induce abrupt changes in power transfer, put lots of mechanical stress on rotating parts. Along with such changes, tyre impact during trail riding can also unseat the chain. As usual, SHIMANO provides tough, dependable solutions.

FC-E8050 HOLLOWTECH
Crankset

FC-E8000
Crankset



- **E-MTB DEDICATED CRANK SET**
  - » Crank options
    - Hollow crank arm (FC-E8050)
    - Solid crank arm (FC-E8000)
  - » HOLLOWTECH II type BB axle
    - Lightweight and rigidity
  - » 2 options on the grade of price
  - » Compatible with chain line 50 and 53mm
- **CRANK ARM LENGTH: 170, 175mm**

SM-CRE80-B
Chainring for Chain Line 53mm

SM-CRE80
Chainring for Chain Line 50mm

- **E-MTB DEDICATED CHAINRING**
  - » w/o Chain Guide only
  - » 34T, 38T option for 10s and 11s
  - » DYNAMIC CHAIN ENGAGEMENT + with teeth shape to prevent chain drop
- **CHAIN MANAGEMENT**
  - » Chainring
    - Same profile as SM-CRM81 (DEORE XT)

SM-CDE80
Chain Device

(with plate) (without plate)

- **CHAIN MANAGEMENT**
  - » Chain device
    - Drive unit direct mount type (53mm chain line)
    - Frame mount type (50mm / 53mm chain line)

DYNAMIC CHAIN ENGAGEMENT

For single-wheel MTB drive systems, Shimano has optimized the tooth design. Virtually eliminating chain drop in normal riding, broader teeth and a special hooked profile provide 150% more chain retention force.

RIGID SPLINED CRANK CONNECTION WITH STRONG 24 MM BB AXLE SPLINES

The drive area has suitably intrepid eMTB styling and allows a chain line of either 50 mm or 53 mm. The FC-E8050 option provides the high-strength, lightweight rigidity of Hollowtech cranks.

DEALER SUPPORT

PROVIDING QUICK AND ACCURATE SUPPORT FOR CUSTOMER NEEDS.

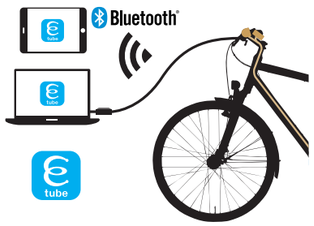
The quality and serviceability of SHIMANO STEPS is a blessing not only for riders, but for dealers as well.

LOW-MAINTENANCE

Except for chain rings and chains, which are consumable items, the system is fundamentally maintenance-free. The gears inside the drive unit (the core of an e-bike) have been designed to provide the total durability required and boast a high level of quality which extends their usefulness.

SIMPLE OPERATION

The difficulties that occur within drive unit, cycle computer, and other components are unique to e-bikes and diagnosed using knowledge of traditional bicycles. However, using the "E-TUBE PROJECT" enables you to check system status and diagnose faults with ease.



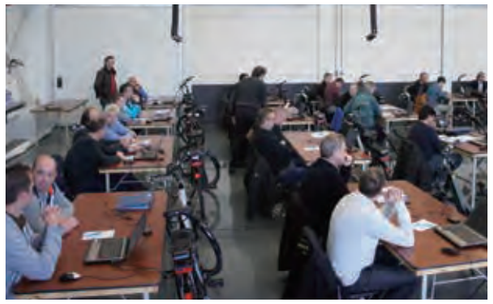
BETTER SERVICEABILITY

The ability to provide e-bike components as well as other bicycle parts via the same production system is a strength unique to SHIMANO. You can purchase products or service parts by contacting SHIMANO distributor.

DEALER TRAINING PROGRAM

Electronic parts of e-bikes may be an unknown field for dealers. For this reason, SHIMANO will provide training and dealer support and hands on training at retail trade shows by our Shimano Technical Representatives to gain full understanding of SHIMANO STEPS.

- General and technical information related to SHIMANO STEPS
- Hands on experience with E-TUBE PROJECT
- Servicing and warranty procedures
- Riding/testing a lot of bicycle models fitted with SHIMANO STEPS



MANUAL DOWNLOAD SITE

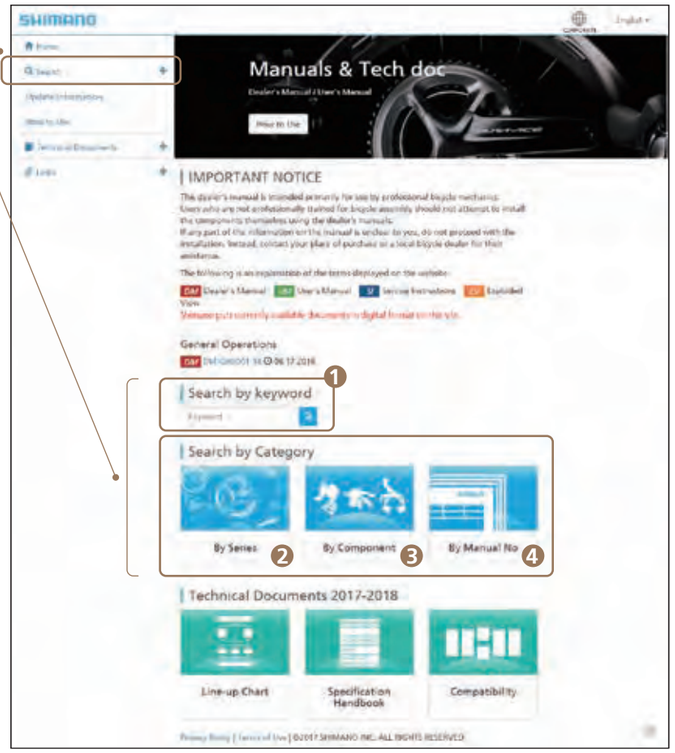
(http://si.shimano.com/)

Access the site at the following URL.
This site publishes the following documents. User's manuals, Dealer's manuals, Service instructions, Exploded views.
It also serves as a portal site leading to sites that publish the following documents. Line-up chart, Specifications, Compatibility.
You can see this site from PC, smartphone or tablet.

Search options are as follows.

1. Keyword
2. Series
3. Component
4. Manual number

There are separate search screens for each search keyword.
Search screens can be launched from their thumbnails.



E8000 Series

BASIC USAGE INFORMATION

IMPORTANT NOTICE

This booklet is an excerpt from the user's manual and dealer's manual.

For the latest version of each manual, visit our website at:
http://si.shimano.com

This booklet shows the steps for assembly. For disassembly, perform these steps in reverse order.

ASSIST MODE

You can select an assist mode for each particular application.

BOOST	TRAIL	ECO	WALK
			
Use when powerful assistance is required, such as when riding up steep uphill slopes. This mode is designed for use on steep inclines and precipitous mountains. When riding on level public roads with traffic lights, the assistance provided may be excessive, in which case, switch to [ECO] mode.	Use when an intermediate level of assistance is needed, such as when you want to enjoy riding comfortably on a gentle slope or level ground.	Use when you want to enjoy long distance riding on level ground. When pedaling is not very strong, the amount of assistance is reduced and energy consumption is lessened.	This mode is particularly useful when walking the bicycle, taking the bicycle out up an incline or when it is bearing a heavy load. It is also useful when walking the bicycle across uneven terrain such as rocky areas.
When the battery level is running low, the level of assistance is lowered to increase the traveling range.			

OFF

This mode does not provide power assistance when the power is turned on. Since there is no power consumption associated with the power assistance, it is useful for reducing battery consumption when the battery is running low.

WALK

This mode is particularly useful when walking the bicycle, taking the bicycle out up an incline or when it is bearing a heavy load. It is also useful when walking the bicycle across uneven terrain such as rocky areas.
The intelligent walk assist function activates when an electric shifting system such as XTR, DEORE XT SEIS is connected.
System individually supplies assist power to detect gear position.
“Intelligent walk assist” support rider more torque output in steep climb condition in lower side gears.
“Quick walk assist” function works quickly by holding down SW from any mode.

* The maximum speed up to which power assistance is provided is set by the manufacturer and is conditional on where the bicycle is to be used.

RIDING THE BICYCLE

1. Turn on the power.
- You cannot use the battery immediately after shipment. Refer to “CHARGING THE BATTERY” (page 27).
- Do not place your feet on the pedals when turning the power on. A system error may result.
- Power cannot be turned on while charging.

2. Select your preferred assist mode.

3. Assistance will start when the pedals start turning.

4. Change the assist mode in accordance with the riding conditions.

5. Turn the power off when parking the bicycle.
- Do not place your feet on the pedals when turning the power off. A system error may result.

CHARGING THE BATTERY

You cannot use the battery immediately after shipment.
The battery can be used after charging it with the designated charger.
Be sure to charge it before use. The battery can be used when the LED on it lights up.
The use of a genuine Shimano battery is recommended. If using a battery from another manufacturer, make sure to carefully read the instruction manual for the battery before use.

⚠ DANGER

- Use the Shimano specified charger and observe the specified charging conditions when charging the specified battery. Not doing so may cause overheating, bursting, or ignition of the battery.

⚠ CAUTION

- When removing the battery charger power plug from the outlet or the charging plug from the battery, do not pull it out by the cord.
- When charging the battery while it is mounted on the bicycle, be careful not to trip over the charger cord or get anything caught on it. This may lead to injury or cause the bicycle to fall over, damaging the components.

- If the bicycle is stored for an extended period of time immediately after purchase, you will need to charge the battery before using the bicycle. Once the battery is charged, it starts to deteriorate.
- Connect to E-TUBE PROJECT and click [Connection check] to confirm whether the battery in use is a genuine Shimano battery or another brand.

Charging the Battery while Installed onto the Bicycle

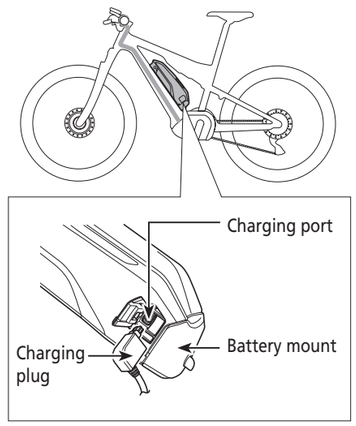
Battery charger: EC-E6000
Battery: BT-E8010/BT-E8020/BT-E6010

1. Connect the charger's power plug to the outlet.

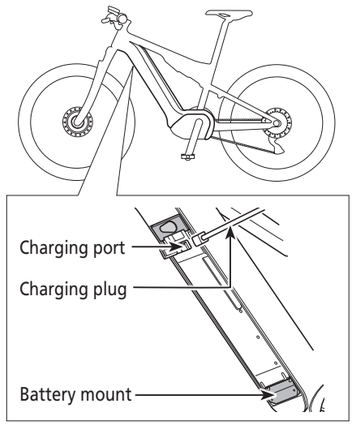
2. Insert the charging plug into the battery mount charging port.

* Place the battery charger on a steady surface such as the floor before charging.
* Stabilize the bicycle to ensure that it does not collapse during charging.

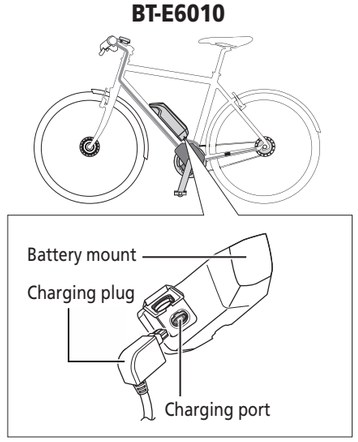
BT-E8010



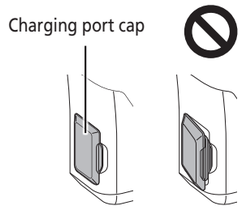
BT-E8020



BT-E6010



Make sure that the charging port cap is closed securely.



When Charging the Battery Alone

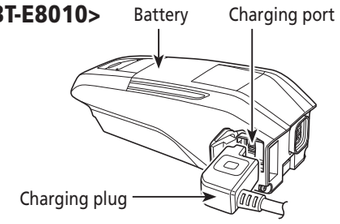
Battery charger: EC-E6000
Battery: BT-E8010/BT-E8020

1. Connect the battery charger's power plug to the outlet.

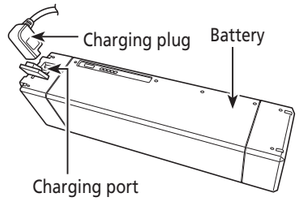
2. Insert the charging plug into the battery's charging port.

Charge the battery on a flat surface indoors.

<BT-E8010>



<BT-E8020>



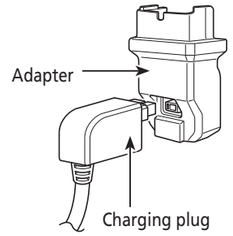
Battery charger: EC-E6000
Battery: BT-E6010

1. Attach the adapter to the charging plug.

2. Plug the charger's power plug into the outlet.

3. Plug the adapter into the battery's charging port.

- When inserting the adapter into the charging port, insert it so that the charging plug is positioned below the adapter. The adapter cannot be inserted if the charging plug is above the adapter.
- Charge the battery on a flat surface indoors.



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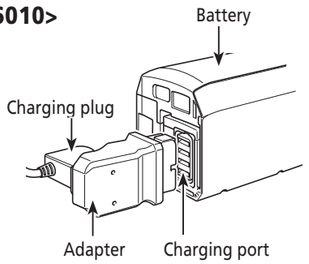
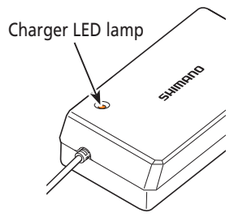


About the Charger LED Lamp

After charging has started, the LED lamp on the charger lights up.

● **Lit up**	Charging (Within 1 hour after the completion of charging)
☀ **Blinking**	Charging error
● **Turned off**	Battery disconnected (1 hour or more after the completion of charging)



About the Battery LED Lamp

You can check the current charging status on the LED lamp on the battery.

Battery LED lamps

Charging-in-Progress Indication

Battery level indication*1	Battery level
	0% - 20%
	21% - 40%
	41% - 60%
	61% - 80%
	81% - 99%
	100%

*1 ▰ : No light ▰ : Lit up ☀ : Blinking

Battery Level Indication

The current battery level can be checked by pressing the battery's power button.

Battery level indication*1	Battery level
▰ ▰ ▰ ▰ ▰	100% - 81%
▰ ▰ ▰ ▰ ▱	80% - 61%
▰ ▰ ▰ ▱ ▱	60% - 41%
▰ ▰ ▱ ▱ ▱	40% - 21%
▰ ▱ ▱ ▱ ▱	20% - 1%
☀ ▱ ▱ ▱ ▱	0% (When battery is not installed on bicycle)
▱ ▱ ▱ ▱ ▱	0%, Power off / Shutdown (When battery is installed on bicycle)

*1 ▱ : No light ▰ : Lit up ☀ : Blinking

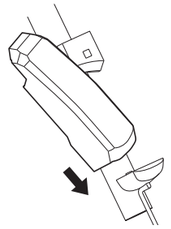
When remaining battery capacity is low, system functions begin to shut off in the following order.
1. Power assistance (Assist mode automatically switches to [ECO] and then assistance shuts off.
   The switch to [ECO] occurs earlier if a battery-powered light is connected.)
2. Gear shifting
3. Light

INSTALLING / REMOVING THE BATTERY

Installation of the Battery

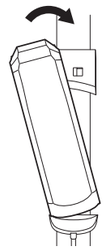
BT-E8010/BT-E6010

1. Align the indentation in the bottom of the battery with the protrusion on the mount and insert the battery.



2. Slide the battery to the right starting from the point where it is inserted. Push in the battery until you hear it click.

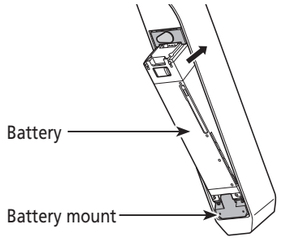
3. Return the key to the locking position, remove it, and store it in a safe place.



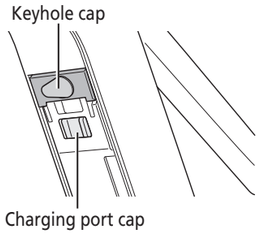
- To prevent the battery from falling out, check to see that the battery is locked after installation.
- Before riding, make sure that the charging port cap is closed.
- To prevent the battery from falling out, do not ride the bicycle with the key inserted.

BT-E8020

Insert the battery into the battery mount until there is a click.
- When inserted until a click is heard, the battery is locked automatically.



- To prevent the battery from falling out, check to see that the battery is locked after installation.
- Before riding, make sure that the keyhole cap and charging port cap are closed.
- To prevent the battery from falling out, do not ride the bicycle with the key inserted.



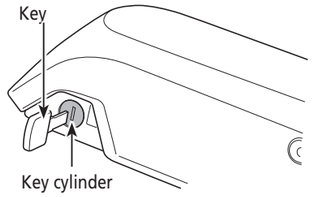
Removing the Battery

The following description may not be applicable as different types of keys are available.

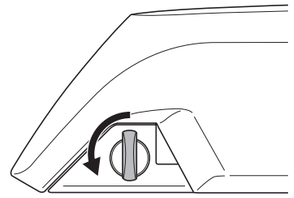
BT-E8010/BT-E6010

1. Turn off the power, then insert the key into the key cylinder in the battery holder.

- Hold the battery firmly and be careful that it does not drop when removing or carrying it.
- The position of the key does not affect the insertion of the battery. You can insert it regardless of the key position.
- You cannot remove the key when it is not in the inserting position.

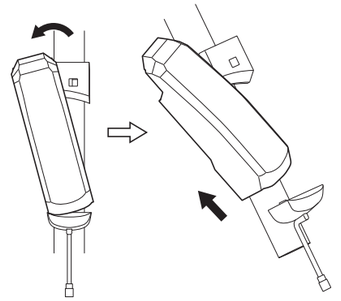


2. To unlock the battery turn the key to the left until you feel some resistance.



3. Hold the upper part of the battery and slide it to the left to remove it.

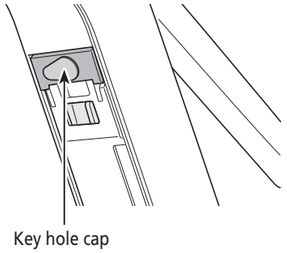
Hold the battery firmly and be careful that it does not drop when removing or carrying it.



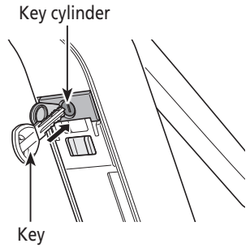
BT-E8020

- If using a battery cover manufactured by another company, remove the battery cover before removing the battery.

1. Remove the keyhole cap.

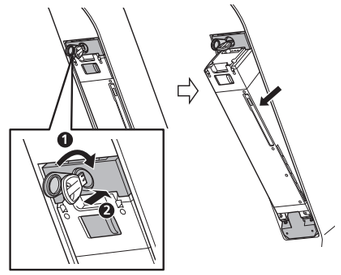


2. Insert the key into the key cylinder in the battery mount.

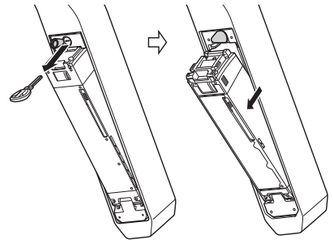


- The position of the key does not affect the insertion of the battery. You can insert it regardless of the key position.
- You cannot remove the key when it is not in the inserting position.

3. To unlock the battery, turn the key clockwise and push it in.



4. Remove the key from the key cylinder, close the keyhole cap, and detach the battery.



- Support the battery with your hand when detaching to make sure that it does not fall out.
- Do not attach or detach the battery with the key left inserted into the key cylinder or the keyhole cap left open. The battery may be damaged from contact with the handle of the key or the keyhole cap.

BATTERY HANDLING

General

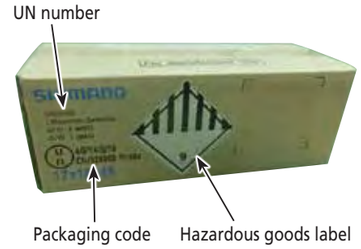
- Keep batteries in a dry and shaded space
- Do not try to open E-Bike components (not only battery but also Drive unit, cycle computer display)
- Do not use a high-pressure washer
- Protect open connectors from dirt and mud

Carton

Batteries are hazardous goods

- SHIMANO STEPS battery and carton:
  - Dangerous Goods class 9: MISCELLANEOUS HAZARDOUS GOODS
  - Dangerous Goods name: Lithium Ion Battery
  - UN Number 3480: Lithium Ion Battery
  - Packaging Code: Codes for Types of Packaging Materials

Packaging is made for the content.



Transportation

- When you are transporting an E-Bike on a car,
  - Use special bike carrier that can carry the high load of E-Bikes
  - Take out battery and cycle computer

Storage

- Store in cool indoor places and stable temperature (approx. 10 to 20 °C)
- No direct sunlight or rain
- If storing the battery away for a long period
  - Charge around 70%
  - Recommended that you charge the battery about once every half a year
  - Be sure to charge it before use

Battery life

- It will vary depending on below factors
  - The storage method
  - The usage conditions
  - The surrounding environment and the characteristics of the individual battery pack

Used batteries

- Lithium ion batteries are recyclable, valuable resources.
- If battery needs to be recycled, please follow local regulation.

TURNING THE POWER ON / OFF

Automatic power off function

If the bicycle has not moved for over 10 minutes, the power will automatically turn off.

Turning the power ON and OFF via the battery BT-E8010/BT-E8020/BT-E6010

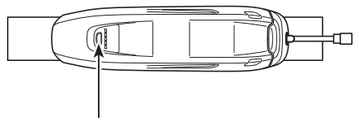
Press the power button on the battery. The LED lamps will light up indicating remaining battery capacity.

- When turning on the power, check that the battery is firmly attached to the holder.
- Power cannot be turned on while charging.
- Do not place your foot on the pedals when turning on. A system error may result.

BT-E8010/BT-E8020

- To force power off, hold down the power button for 6 seconds.
- If the bicycle has not moved for over 10 minutes, the power will automatically turn off. (Automatic power off function)

<BT-E8010>



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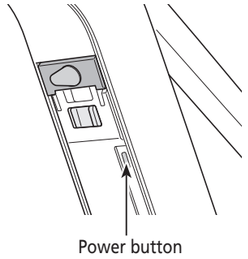

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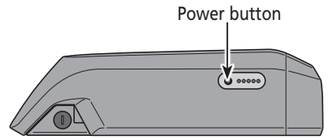


Turning the power ON and OFF via the cycle computer SC-E6010

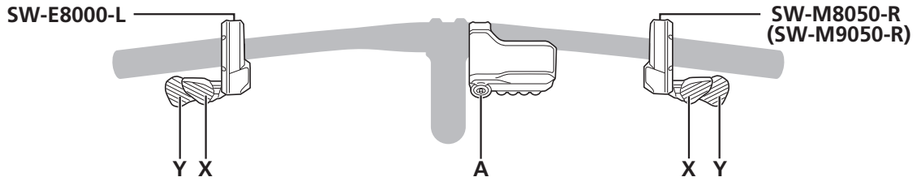
- Hold down the power button on the cycle computer for 2 seconds.

If built-in battery of cycle computer isn't charged sufficiently, the power will not turn on.
The built-in battery of the cycle computer is charged only when the cycle computer screen is on.

ABOUT THE FUNCTIONS OF THE ASSIST SWITCHES AND SHIFT SWITCHES

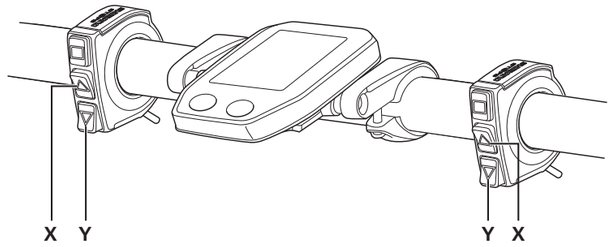
The following explains the operation procedure for cases where the switch settings are set to the default values.

SW-E8000-L/SC-E8000/SW-M8050-R (SW-M9050-R)

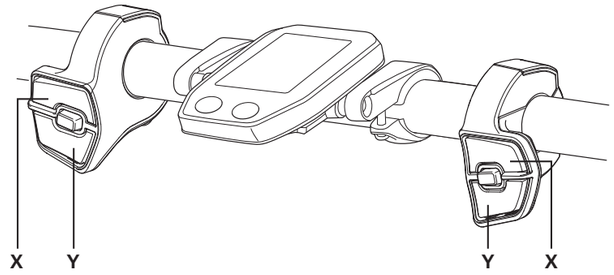


SW-E8000-L		SW-M8050-R (SW-M9050-R)	
X	**Switching assist modes:** the level of assistance becomes stronger	X	**Shifting gears:** pedaling becomes heavier
Y	**Switching assist modes:** the level of assistance becomes weaker	Y	**Shifting gears:** pedaling becomes lighter
A	Changing the cycle computer display		

SC-E6010/SW-E6000



SC-E6010/SW-E6010



X	**When switching assist modes:** the level of assistance becomes stronger **When shifting gears:** pedaling becomes heavier	Y	**When switching assist modes:** the level of assistance becomes weaker **When shifting gears:** pedaling becomes lighter

CYCLE COMPUTER DISPLAY AND SETTING

Basic Screen Display

Displays the status of the power assisted bicycle, traveling data.

- These explanations for the cycle computers SC-E8000 and SC-E6010, referred to in this instruction manual, are illustrated using the screen displays of SC-E8000 only, except where the displays of the cycle computers differ significantly.

(A) Battery level indicator
Displays the current battery level.

(B) Gear position (Only displays when electronic gear shifting is in use)
Displays the currently set gear position.

(C) Assist gauge
Displays the assistance.

(D) Assist mode display
Displays the current assist mode. (Assist mode automatically switches to [ECO] as remaining battery capacity declines. The switch to [ECO] occurs earlier if a battery-powered light is connected.)

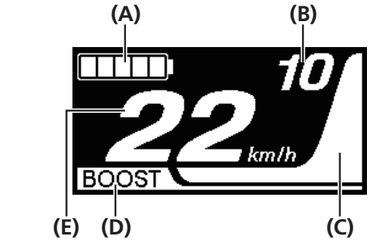
(E) Current speed
Displays the current speed.
The display can be switched between km/h and mph.

(F) Current time
Shows the current time.

(G) Icon to indicate when the light is on
Notifies you when the battery-powered light is on.

(H) Traveling data display
Displays the current traveling data.

<SC-E8000>



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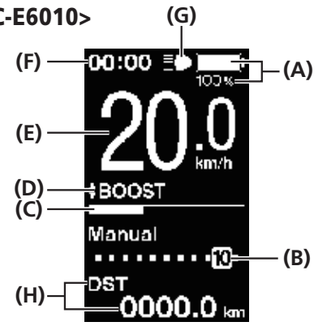
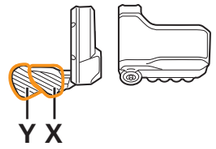


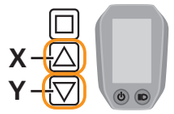
Changing Assist Mode

Press X or Y to switch assist modes.

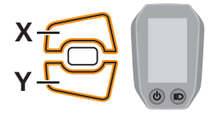
SW-E8000-L/SC-E8000



SW-E6000/SC-E6010



SW-E6010/SC-E6010

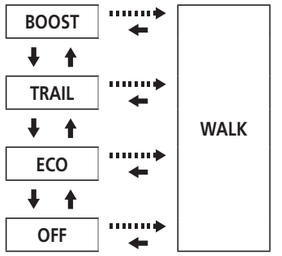


BOOST: Assist boost
TRAIL: Assist trail
ECO: Assist eco
OFF: Assist off
WALK: Walk assist

↑: Short press X
↓: Short press Y
▪▪▪▪▪▪▪▪▶: Long press Y
←: Short press X (This operation is for canceling [WALK] mode)

<SC-E8000>

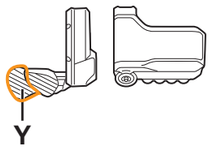
<SC-E6010>



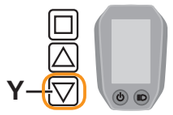
Switching to [WALK] mode (walk assist mode)

1. With your feet off the pedals and current speed at [0 km/h], hold down Y until [WALK] displays.

SW-E8000-L/SC-E8000

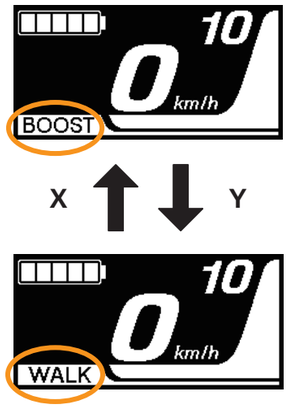


SW-E6000/SC-E6010



SW-E6010/SC-E6010

<SC-E8000>



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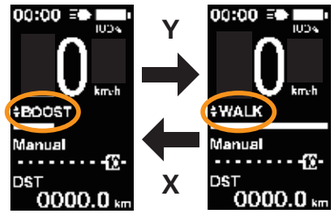


A warning tone will sound while switching is in progress if it is not possible to switch to [WALK] mode because the current speed is not [0 km/h] or there is pressure on the pedals etc.

2. Release Y when [WALK] displays.

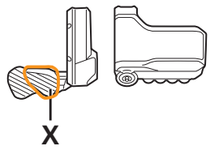
3. Hold down Y again to activate walk assist.

- Walk assist remains active provided Y is being held down.

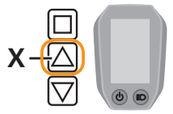
4. To cancel [WALK] mode, release Y and press X.

- When [WALK] mode is canceled, the mode active before [WALK] mode was set, is re-activated.

SW-E8000-L/SC-E8000



SW-E6000/SC-E6010



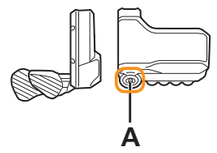
SW-E6010/SC-E6010

- If Y is not pressed for one minute or more, the mode active before [WALK] mode was set, is re-activated.
- If the bicycle is not moved after [WALK] mode is activated, walk assist is automatically inactivated. To re-activate [WALK] mode, momentarily release Y and then hold down Y.
- The walk assist function can operate at a maximum of 6 km/h.
- The assistance level and speed vary with the gear position.
- The intelligent walk assist function activates when an electric shifting system such as XTR, DEORE XT SEIS is connected.
  System individually supplies assist power to detect gear position.
  "Intelligent walk assist" support rider more torque output in steep climb condition in lower side gears.
  "Quick walk assist" function works quickly by holding down SW from any mode.

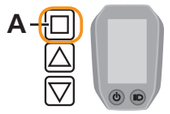
Switching between displayed traveling data

The type of traveling data displayed changes each time you press A.

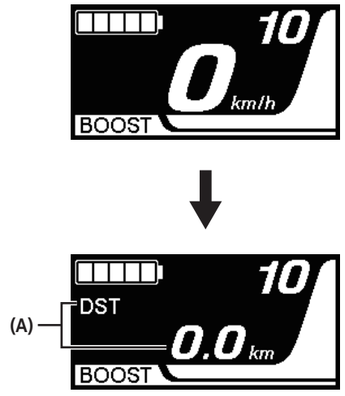
SW-E8000-L/SC-E8000



SW-E6000/SC-E6010

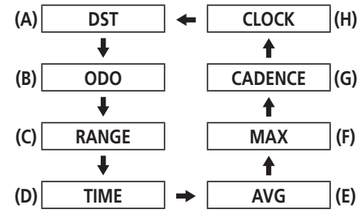


SW-E6010/SC-E6010



Holding down A when DST is displayed clears all traveling data.

- **(A)** Traveling distance
- **(B)** Cumulative distance
- **(C)** Maximum traveling distance *1, 3
- **(D)** Traveling time (optional) *2
- **(E)** Average speed (optional) *2
- **(F)** Maximum speed (optional) *2
- **(G)** Number of crank rotations *2
- **(H)** Current time *4



*1 When [RANGE] is displayed, the battery level is not displayed. The traveling range should be used as a reference only.
*2 Optional item: You can configure the display settings in E-TUBE PROJECT. For details, refer to "CONNECTION AND COMMUNICATION WITH DEVICES" (page 51).
*3 When walk assistance is functioning, the on screen display [RANGE] changes to [RANGE ---].
*4 Displayed constantly on SC-E6010.

When traveling data is displayed, the screen returns to speed display after 60 seconds.
When speed data is displayed, pressing A changes the traveling data displayed starting with DST.

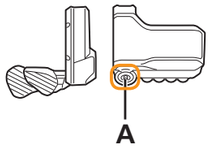
About the Setting Menus

Accessing the Setting Menu

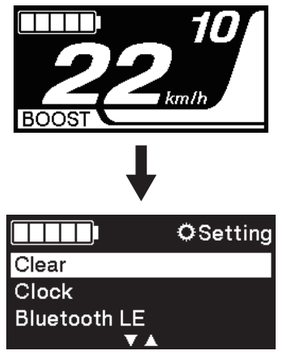
SW-E8000-L/SC-E8000

1. Hold down A when the bicycle is not moving to display the menu list screen.

SW-E8000-L/SC-E8000



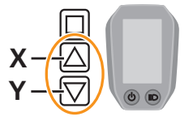
<SC-E8000>



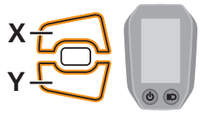
SW-E6000/SC-E6010 SW-E6010/SC-E6010

1. Hold down X and Y when the bicycle is not moving to display the menu list screen.

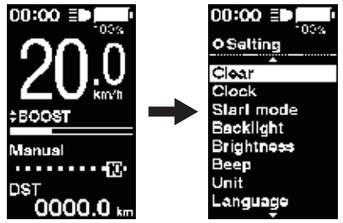
SW-E6000/SC-E6010



SW-E6010/SC-E6010

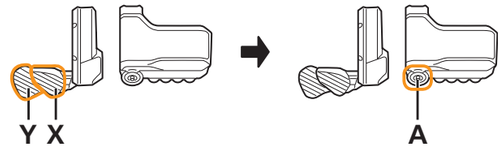


<SC-E6010>



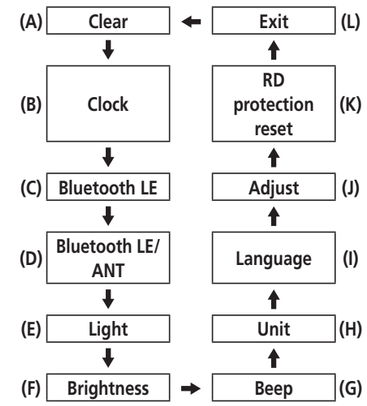
2. Press X or Y to select the various menus. Press A to display the setting screen for the selected menu.

SW-E8000-L/SC-E8000

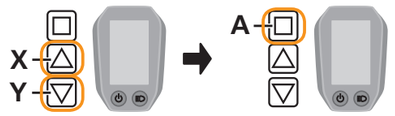


(A) Clear settings
(B) Clock setting
(C) Bluetooth LE pairing
(D) Bluetooth LE/ANT connection status
(E) Turning the light on/off
(F) Display backlight brightness setting
(G) Turning the beep noise on/off
(H) Switching between km and miles
(I) Language setting
(J) Adjusting the electronic gear shifting unit
(K) Activating RD Protection Reset*
(L) Return to the main screen

<SC-E8000>



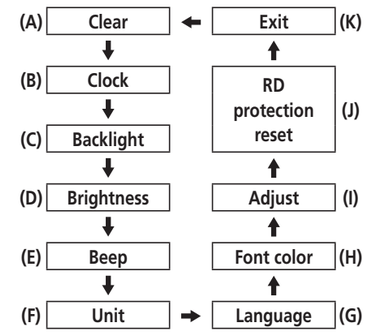
SW-E6000/SC-E6010



SW-E6010/SC-E6010

(A) Clear settings
(B) Clock setting
(C) Turning the display backlight on/off
(D) Display backlight brightness setting
(E) Turning the beep noise on/off
(F) Switching between km and miles
(G) Language setting
(H) Changing the font color
(I) Adjusting the electronic gear shifting unit
(J) Activating RD Protection Reset*
(K) Return to the main screen

<SC-E6010>



[Start mode] and [Auto] are displayed on the menu list screen; however, they are not available for use.

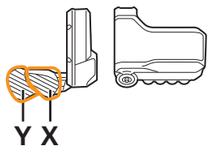
* In order to protect the system from falling down etc., if the bicycle is subjected to a strong impact, the RD Protection function will operate and the connection between the motor and the link will be momentarily severed so that the rear derailleur can no longer operate. Executing RD Protection Reset restores the connection between the motor and the link, as well as the function of the rear derailleur.

Clear

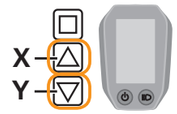
Reset the traveling distance to default.

1. Press X or Y to select [DST].

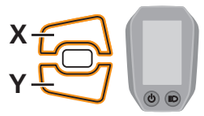
SW-E8000-L/SC-E8000



SW-E6000/SC-E6010



SW-E6010/SC-E6010



SC-E8000/SC-E6010

Items	Details
Exit	Return to the setting menu screen
DST	Clearing the traveling distance
Default<SC-E6010>	Reset the SC display setting to default

SC-E6010

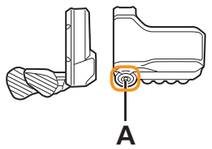
Default value set in the SC display setting

Items	Default value
Backlight	ON
Beep	ON
Unit	km
Language	English
Brightness	3
Font color	White

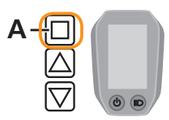
2. To reset traveling distance, select [OK] using X or Y and press A to confirm.
After resetting, the screen will automatically return to the menu list screen.

- A reset confirmation screen is not displayed on SC-E6010.

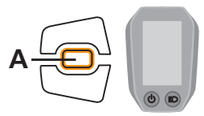
SW-E8000-L/SC-E8000



SW-E6000/SC-E6010



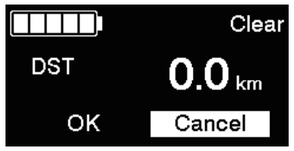
SW-E6010/SC-E6010



When the traveling distance is cleared, TIME, AVG and MAX are also cleared.

<SC-E8000>

<SC-E6010>



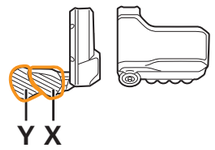
Clock

Configure the "Clock" setting.

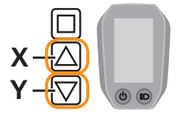
1. Press X or Y to adjust the time.

- Press X to increase the numbers.
- Press Y to decrease the numbers.

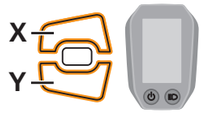
SW-E8000-L/SC-E8000



SW-E6000/SC-E6010

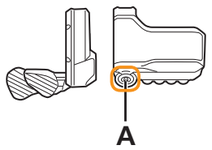


SW-E6010/SC-E6010

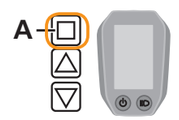


2. Pressing A enables the set value and moves you to the minutes setting.

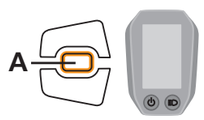
SW-E8000-L/SC-E8000



SW-E6000/SC-E6010



SW-E6010/SC-E6010



3. Press X or Y to set the minutes.

4. Pressing A enables the set value and takes you back to the Setting menu screen.

You can change the numbers quickly by holding down X or Y.

Bluetooth® LE Pairing(SC-E8000)

E-TUBE PROJECT for smartphones/tablets may be used if a Bluetooth LE connection is established with a smartphone/tablet.

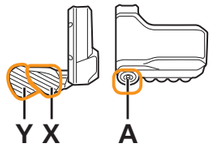
1. Before setting up a connection, turn on Bluetooth LE on the smartphone/tablet.

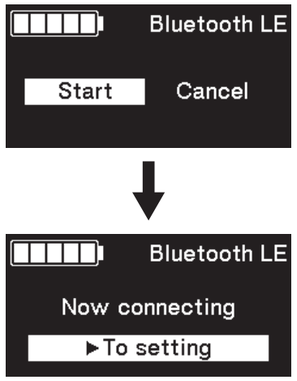
2. Open E-TUBE PROJECT and set it to listen for Bluetooth LE signals.

3. Press X or Y to select [Start].
To start Bluetooth LE pairing, press A to confirm.

- If you press A during Bluetooth LE pairing, the transmission will be interrupted, then the screen will return to the menu list screen.

SW-E8000-L/SC-E8000





Items	Details
Start	Starts Bluetooth LE pairing
Cancel	To not perform pairing, select [Cancel]

Generally, Bluetooth LE transmission will begin automatically when the cycle computer is turned on, however, pairing can be started by selecting [Start] from the [BLE pairing] menu when connectivity is poor.

4. When connection is successful, SHIMANO STEPS logo is displayed on screen. If connection is not successful, a message indicating this is displayed.

- After successful connection or a connection failure, press one of X/Y/A or the screen will automatically return to the menu list screen after awhile.

Connection successful

Connection failed

5. When connection is successful, the unit name will display in E-TUBE PROJECT.

6. Select the unit name displayed on screen.

- To disconnect, cancel the Bluetooth LE connection from the smartphone/tablet. (The cycle computer will exit connection mode and return to regular operation mode.)

Bluetooth LE/ANT(SC-E8000)

Current status of wireless connections can be displayed on screen.
For details on ANT connection, refer to "ANT connection" in the section "About Wireless Functions" (page 51).

Select [Bluetooth LE/ANT]] from the menu list screen and confirm to display current wireless connection status.

When connected via Bluetooth LE

When an ANT signal is being emitted

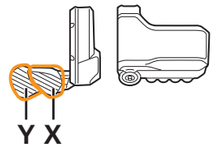
When neither BLE nor ANT is connected

Light (SC-E8000)

Configure the battery-powered light setting.

1. Press X or Y to select the required setting.

SW-E8000-L/SC-E8000

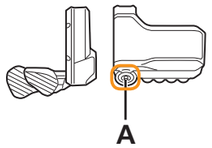


Items	Details
ON	Keep light always on
OFF	Keep light always off

2. Press A to confirm the setting.

- After confirmation, the screen will automatically return to the menu list screen.

SW-E8000-L/SC-E8000

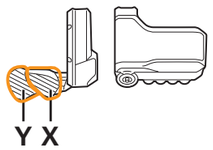


Beep

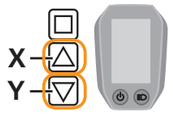
The beep noise can be turned on/off.

1. Press X or Y to select the required setting.

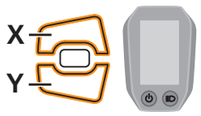
SW-E8000-L/SC-E8000



SW-E6000/SC-E6010



SW-E6010/SC-E6010

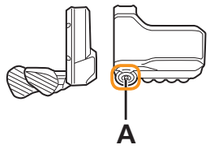


Items	Details
ON	Enable beeps
OFF	Disable beeps

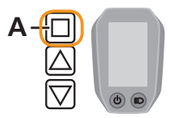
2. Press A to confirm the setting.

- After confirmation, the screen will automatically return to the menu list screen.

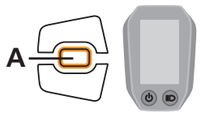
SW-E8000-L/SC-E8000



SW-E6000/SC-E6010



SW-E6010/SC-E6010



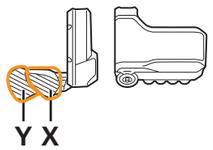
Even when [Beep] is set to OFF, a beep will sound when there is a misoperation, system error, etc.

Language

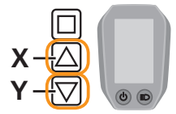
Configure the language setting.

1. Press X or Y to select the required setting.

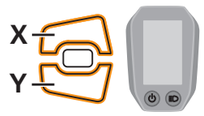
SW-E8000-L/SC-E8000

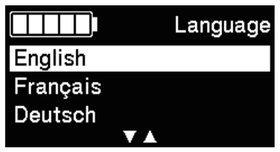


SW-E6000/SC-E6010



SW-E6010/SC-E6010



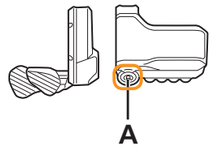


Language
English
French
German
Dutch
Italian
Spanish

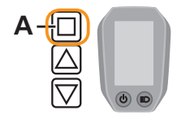
2. Press A to confirm the setting.

- After confirmation, the screen will automatically return to the menu list screen.

SW-E8000-L/SC-E8000



SW-E6000/SC-E6010



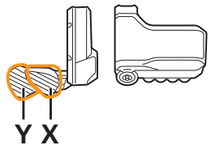
SW-E6010/SC-E6010

RD Protection Reset

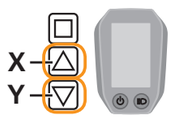
In order to protect the system from falls etc., if the bicycle is subjected to a strong impact, the RD Protection function will operate and the connection between the motor and the link will be momentarily severed so that the rear derailleur can no longer operate. Executing RD Protection Reset restores the connection between the motor and the link, as well as the function of the rear derailleur.

1. Press X or Y to select [OK].

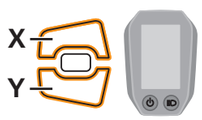
SW-E8000-L/SC-E8000

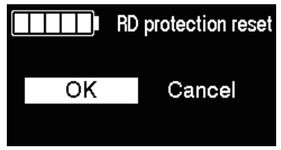


SW-E6000/SC-E6010



SW-E6010/SC-E6010

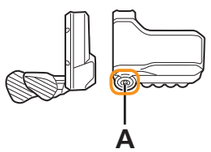




Items	Details
OK	RD Protection Reset will operate
Cancel	To not execute RD Protection Reset, select [Cancel]

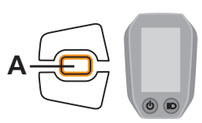
2. Press A to confirm [OK], recover the connection between the motor and the link by rotating the crank.

SW-E8000-L/SC-E8000



SW-E6000/SC-E6010

SW-E6010/SC-E6010



Exit

Closes the menu list screen and returns to the basic screen.

1. Press X or Y to select [Exit] on the menu list screen.

2. Press A to confirm. After confirmation, the screen will return to the basic screen.

DRIVE UNIT SETTING BACKUP FUNCTION FOR THE CYCLE COMPUTER

To check the drive unit settings backed up to the cycle computer, export the PDF report from the E-TUBE PROJECT [Unit log acquisition] menu.
When exchanging the drive unit, send the report along with the unit to your place of purchase or a local bicycle dealer.

CONNECTION AND COMMUNICATION WITH DEVICES

The system can be configured and firmware can be updated when the bicycle is connected to a device.
You need E-TUBE PROJECT to configure SHIMANO STEPS and update firmware.
Download E-TUBE PROJECT from the support website (http://e-tubeproject.shimano.com).
For information on how to install E-TUBE PROJECT, check the support website.

- You need SM-PCE1 and SM-JC40/JC41 to connect SHIMANO STEPS to a PC. They are not required if there is an available port.
- Firmware is subject to change without notice.
- PC connection and communication are not possible during charging.
- Connecting to devices is not possible while charging.

About Wireless Functions

Functions

ANT connection

The wireless unit transmits the following information to the cycle computer.

- Battery level
- Front and rear derailleur gear positions
- Adjustment value

The latest functions can be checked by updating the software via E-TUBE PROJECT. For details, consult the place of purchase.

Bluetooth LE connection

E-TUBE PROJECT for smartphones/tablets may be used if a Bluetooth LE connection is established with a smartphone/tablet.

How to Make Connections

ANT connection

ANT transmission will begin automatically when the cycle computer is turned on. To confirm whether connection was successful, check the [Bluetooth LE/ANT] menu.

Bluetooth LE connection

Generally, Bluetooth LE transmission will begin automatically when the cycle computer is turned on, however, pairing can be started by [Bluetooth LE] menu when connectivity is poor.

2.4GHz digital wireless system

2.4GHz-frequency digital wireless technology, which is the same technology used for wireless LAN.
However, on very rare occasions, objects and places may generate strong electromagnetic, waves and interference, which may result in incorrect measurement.

- Television, PC, radios, motors/engines, or in car and trains.
- Railroad crossings and near railway tracks, around television transmitting stations and radar bases.
- Other wireless computers or digitally controlled light.

SHIMANO STEPS

E8000 Series

TECHNICAL DEALER INFORMATION

IMPORTANT NOTICE

This booklet is an excerpt from the user's manual and dealer's manual.

For the latest version of each manual, visit our website at:
http://si.shimano.com

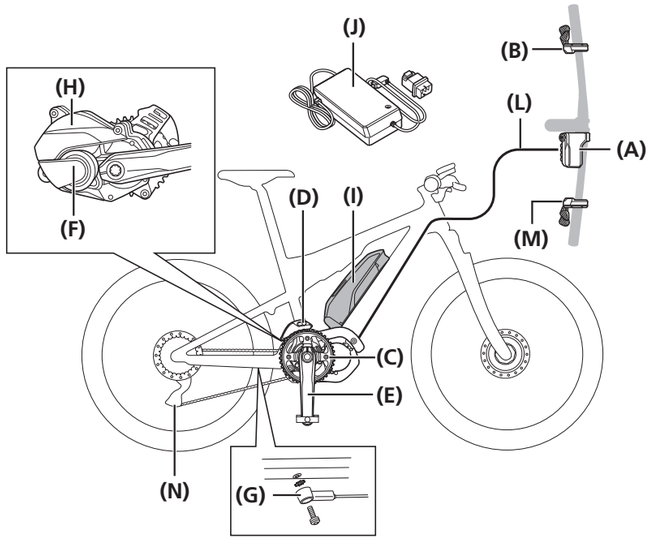
This booklet shows the steps for assembly. For disassembly, perform these steps in reverse order.

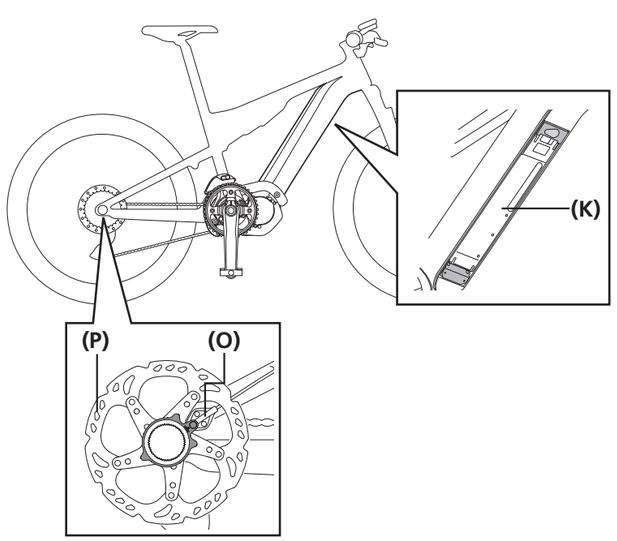
LIST OF TOOLS

The following tools are needed for installation, adjustment, and maintenance purposes.

Component	Where to use	Tool	
Cycle computers	Clamp bolt	3mm	3mm hexagon wrench
Assist switch	Unit fixing bolt	3mm	3mm hexagon wrench
	Lever fixing bolt	2mm	2mm hexagon wrench
Electric wire	Connector	TL-EW02	TL-EW02
Battery mount (BM-E8010)	Mount lower case	3mm 8mm	3mm hexagon wrench / 8mm spanner
	Key unit	3mm	3mm hexagon wrench
	Key unit cover	2.5mm	2.5mm hexagon wrench
	Mount upper case	2.5mm	2.5mm hexagon wrench
Battery mount (BM-E8020)	Mount lower case	5mm	5mm hexagon wrench
	Mount upper case	#2	Screwdriver [#2]
	Key cylinder	2mm	2mm hexagon wrench
	Key unit	5mm	5mm hexagon wrench
	Key unit cover	#2	Screwdriver [#2]
Speed sensor (SM-DUE10)	Speed sensor fixing bolt	4mm	4mm hexagon wrench
Speed sensor (SM-DUE11)	Speed sensor fixing bolt	#10	HEXALOBULAR [#10]
Magnet unit	Fixing bolt	#2	Screwdriver [#2]
Light cable	Mounting bolt	#2	Screwdriver [#2]
Drive unit	Drive unit fixing bolt (M8)	-	-
	Cover fixing bolt (M3)	#2	Screwdriver [#2]
Crank arm	Cap	TL-FC16 TL-FC18	TL-FC16/TL-FC18
	Stopper plate	5mm	5mm hexagon wrench
Chain device	Guide fixing bolt (M5)	4mm	4mm hexagon wrench
	Back plate fixing bolt (M6)	3mm	3mm hexagon wrench
Front chainring	Lock ring	TL-FC39 TL-FC36	TL-FC39+TL-FC36

NAME OF PARTS





(A) Cycle computer:
SC-E8000

(B) Assist switch:
SW-E8000-L

(C) Front chainring:
SM-CRE80/SM-CRE80-B

(D) Chain device:
SM-CDE80

(E) Crank arm:
FC-E8000/FC-E8050

(F) Drive unit:
DU-E8000

(G) Speed sensor:
SM-DUE10

(H) Drive unit cover:
SM-DUE80-A
(type that covers drive unit ports)
SM-DUE80-B
(type that covers drive unit ports and the frame installation bolts)

(I) Battery (external type)/
Battery mount (external type):
BT-E8010/BM-E8010

(J) Battery charger:
EC-E6000

(K) Battery (built-in type)/
Battery mount (built-in type):
BT-E8020/BM-E8020

(L) E-TUBE (EW-SD50)

When using electronic gear shifting

(M) Shifting switch:
SW-M9050-R
SW-M8050-R

(N) Rear derailleur (DI2):
RD-M9050
RD-M8050

(O) Speed sensor:
SM-DUE11

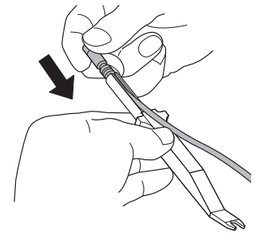
(P) Disc brake rotor:
RT-EM800
RT-EM900

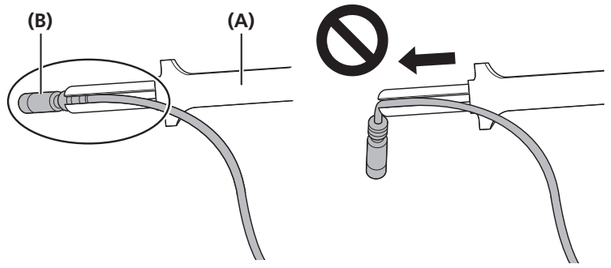
Maximum cable length (EW-SD50)
(L) ≤ 1600mm

CONNECTING THE ELECTRIC WIRE

Set so that the projection on the connector is aligned with the groove in the narrow end.

(A) TL-EW02
(B) Plug





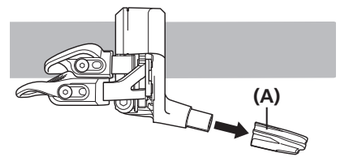
(A) TL-EW02
(B) Plug

Use the Shimano original tool for installation and removal of the electric wire.
When installing the electric wire, do not forcibly bend the plug.
It may result in a poor contact.
When connecting the electric wire, push it in until it clicks in place.

Connect the electric wire to the assist switch

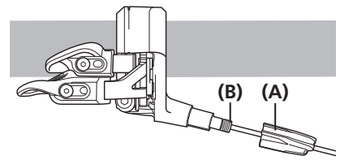
1. Remove the cable cap from the assist switch.

(A) Cable cap



2. Pass the electric wire through the cable cap, and connect it to the assist switch.

(A) Cable cap
(B) Electric wire

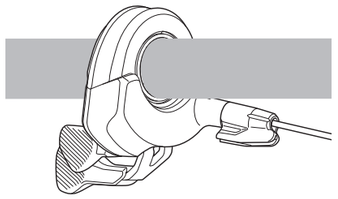


Make sure the electric wire is connected through the cable cap. If the wire is not passed through the cable cap, the electric wire connector may be damaged.

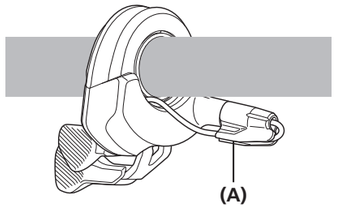
3. Install the cable cap.
When routing the electric wire along a cable built-in handlebar, run the wire along the guide of the cable cap then the handlebar.

(A) Guide

When routing the electric wire in the direction of the stem



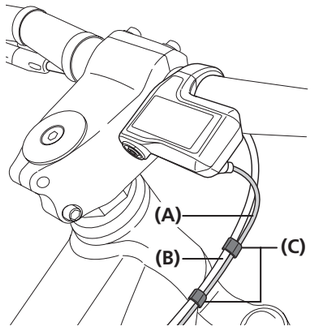
When using a cable built-in handlebar



Securing the electric wire (SC-E8000)

Bind the brake horse (or brake outer casing) to the electric wire connecting the cycle computer and drive unit, using the band, as shown in the illustration.

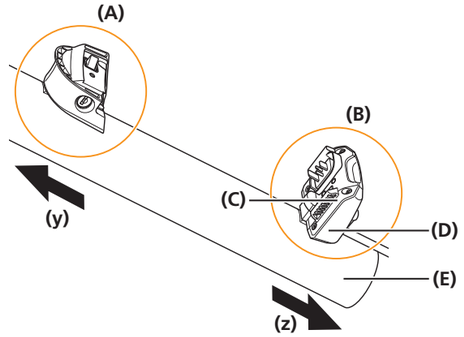
(A) Electric wire of the cycle computer
(B) Brake horse (or brake outer casing)
(C) Band



The band is included in SC-E8000.

INSTALLING THE BATTERY MOUNT

BM-E8010

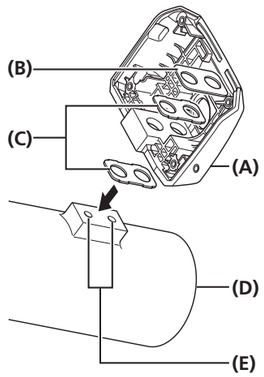


(y) Front of bicycle
(z) Rear of bicycle

(A) Key unit
(B) Battery connection unit
(C) Mount upper case
(D) Mount lower case
(E) Frame

1. Set in place the rubber spacers and metal spacer on the mount lower case and align the frame mounting holes with the bolt holes in the mount lower case.

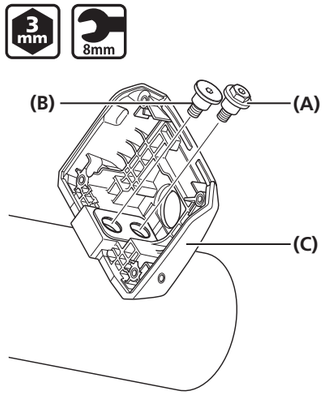
(A) Mount lower case
(B) Metal spacer
(C) Rubber spacer
(D) Frame
(E) Frame mounting holes



2. Secure the mount lower case by tightening the two types of mount fixing bolt (M5).
Tighten the mount fixing bolt (M5) (low head type) first.

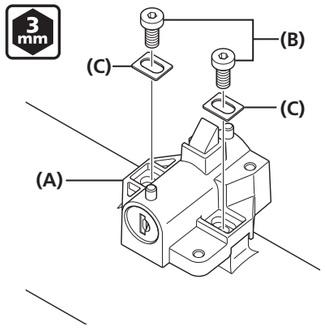
(A) Mount fixing bolt (M5)
(hexagon bolt type):
Use a 3mm hexagon wrench or 8mm spanner on the mount fixing bolt.
(B) Mount fixing bolt (M5)
(low head type):
Use a 3mm hexagon wrench on the mount fixing bolt.
(C) Mount lower case

3mm / 8mm	Tightening torque: 3 N·m



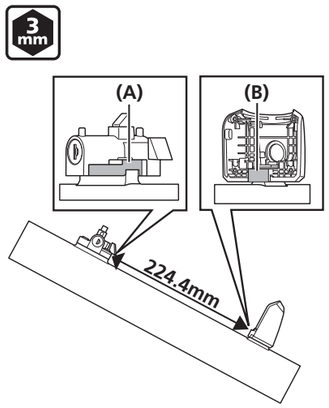
3. Temporarily attach the key unit with the key unit fixing bolts (M5).

(A) Key unit:
Key unit is not included with Shimano products.
(B) Key unit fixing bolt (M5)
(C) Washer



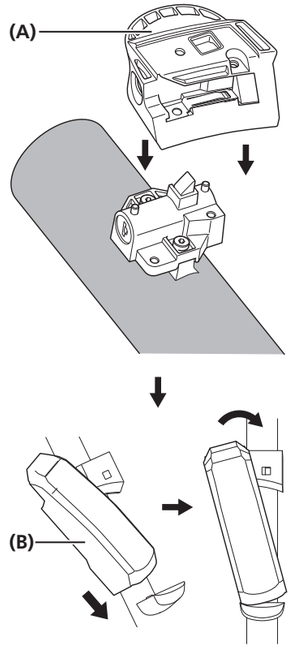
4. Adjust the position of the key unit so that the distance between section (A) of the key unit and section (B) of the mount lower case is 224.4mm and then fully tighten the key unit fixing bolts.

3 mm	**Tightening torque: 3 N·m**



5. Temporarily attach the key unit cover to the key unit and adjust so that the battery can be smoothly connected/disconnected and no noise is produced due to looseness during riding.

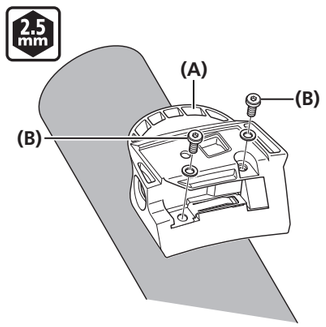
(A) Key unit cover
(B) Battery



6. Secure the key unit cover with the key unit cover fixing bolts (M4).

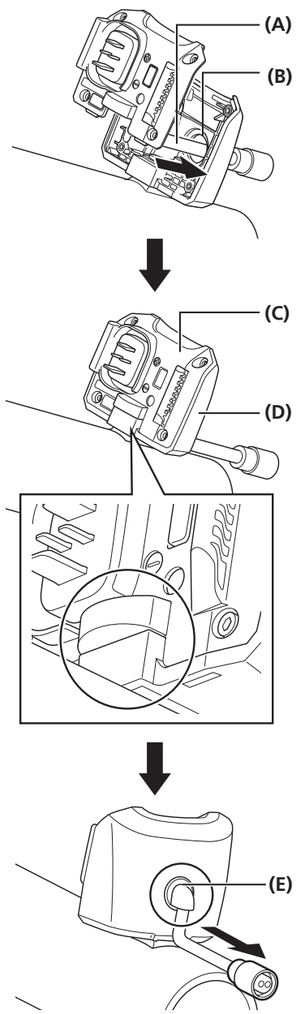
(A) Key unit cover
(B) Key unit cover fixing bolt (M4)

2.5 mm	**Tightening torque: 0.6 N·m**



7. Route the battery cable through the cable routing hole.
Align the protruding parts of the mount upper case and mount lower case.
Pull the battery cable until the rubber bush is implanted in the cable routing hole.

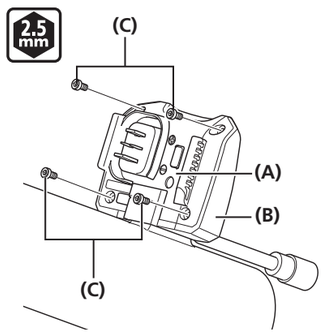
(A) Battery cable
(B) Cable routing hole
(C) Mount upper case
(D) Mount lower case
(E) Rubber bush



8. Tighten on the mount upper case using the mount upper case fixing bolts (M3).

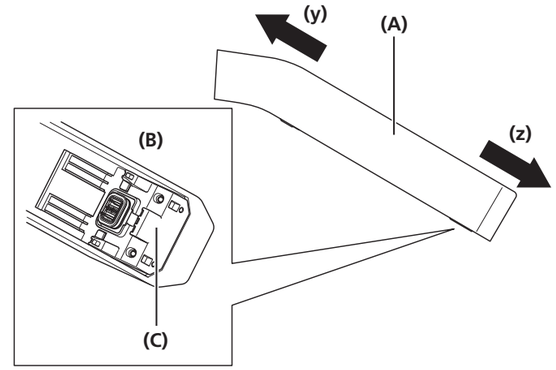
(A) Mount upper case
(B) Mount lower case
(C) Mount upper case fixing bolt (M3)

2.5 mm	**Tightening torque: 0.6 N·m**



BM-E8020

Assembly of the battery connection unit

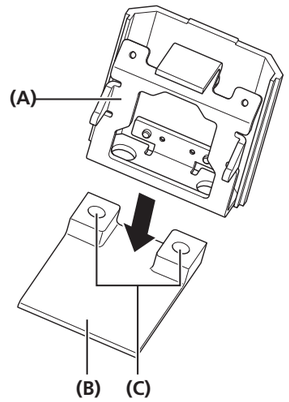


(y) Front of bicycle
(z) Rear of bicycle

(A) Frame
(B) Battery connection unit
(C) Mount upper case and mount lower case when assembled

1. Align the frame mounting holes with the bolt holes in the mount lower case.

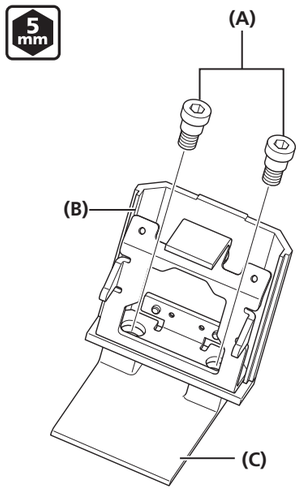
(A) Mount lower case
(B) Frame
(C) Frame mounting holes



2. Secure the mount lower case to the frame by the tightening the mount fixing bolts (M8).

(A) Mount fixing bolt (M8)
(B) Mount lower case
(C) Frame

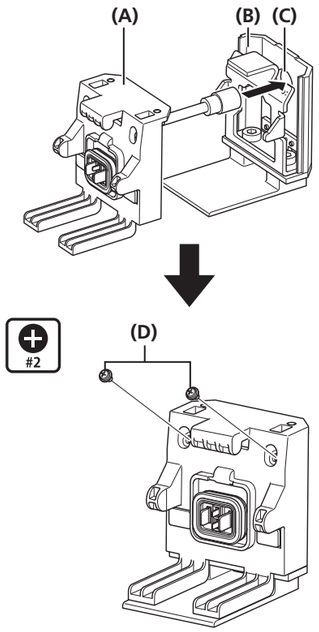
5 mm	**Tightening torque: 10 N·m**



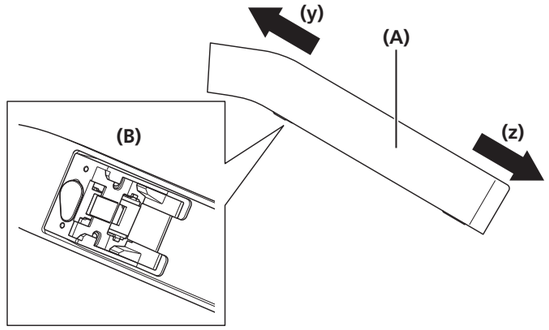
3. Route the battery cable through the cable routing hole in the mount lower case and then tighten on the mount upper case using the mount upper case fixing bolts (M3).

(A) Mount upper case
(B) Mount lower case
(C) Cable routing hole
(D) Mount upper case fixing bolt (M3)

#2	**Tightening torque: 0.6 N·m**



Assembly of the key unit



(y) Front of bicycle
(z) Rear of bicycle

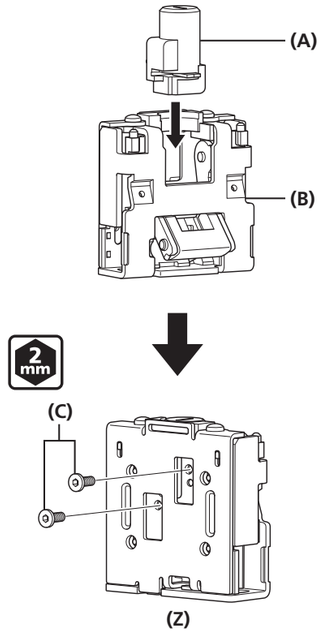
(A) Frame
(B) Key unit

4. Insert the key cylinder into the key unit.
Secure the key cylinder in place by tightening the key cylinder fixing bolts (M4) from the reverse side of the key unit.

(Z) Reverse side of key unit

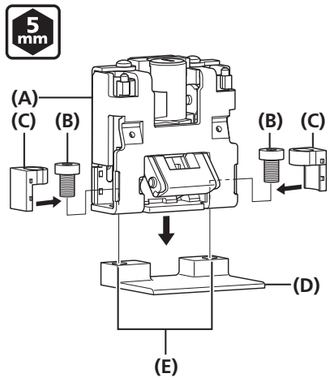
(A) Key cylinder:
Key cylinder is not included with Shimano products.
(B) Key unit
(C) Key cylinder fixing bolt (M4)

2 mm	**Tightening torque: 0.6 N·m**



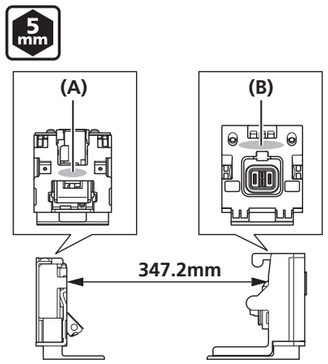
5. Align the fixing bolt holes in the key unit with the frame mounting holes.
Temporarily attach the key unit to the frame with the key unit fixing bolts (M8).
Attach the bolt dropout prevention rubbers.

(A) Key unit
(B) Key unit fixing bolt (M8)
(C) Bolt dropout prevention rubber
(D) Frame
(E) Frame mounting holes



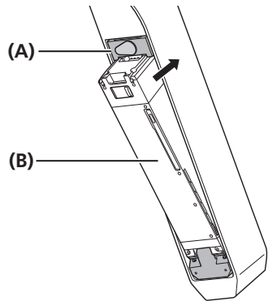
6. Adjust the position of the key unit so that the distance between section (A) of the key unit and section (B) of the battery connection unit is 347.2mm and then fully tighten the key unit fixing bolts.

5 mm	**Tightening torque: 10 N·m**

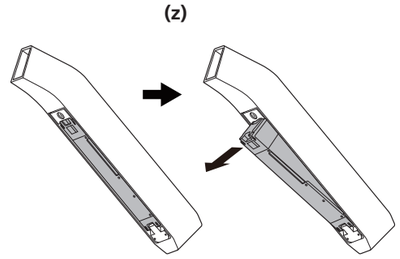


7. Temporarily attach the key unit cover to the key unit and adjust so that the battery can be smoothly connected/disconnected and no noise is produced due to looseness during riding.

(A) Key unit cover
(B) Battery



Attaching/detaching the battery on downward attachment/removal design frames



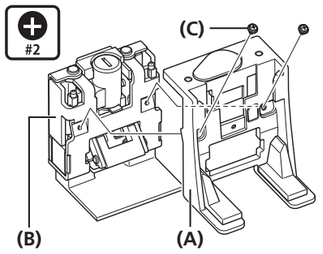
(z) Downward attachment/ removal design frame

8. Attach the key unit cover to the key unit.

Secure in place the key unit with the key unit fixing bolts (M3).

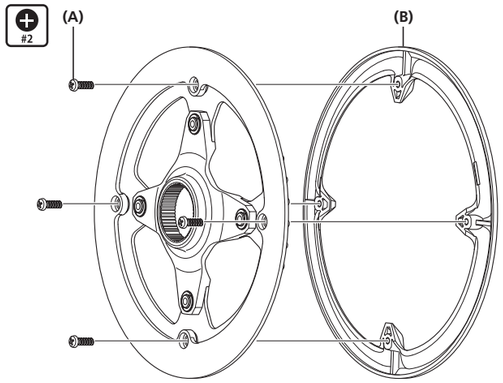
(A) Key unit cover
(B) Key unit
(C) Key unit cover fixing bolt (M3)

#2	**Tightening torque: 0.6 N·m**



Replacing the chain guard (SM-CRE80 44T Double chain guard)

Replace the chain guard as shown in the illustration.



(A) Chain guard fixing bolt
(B) Chain guard

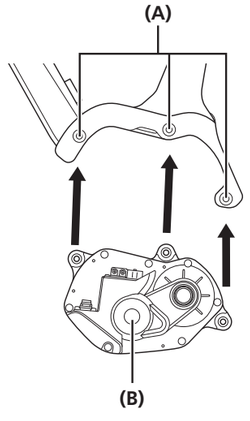
#2	**Tightening torque: 0.7 N·m**

INSTALLING AND WIRING THE DRIVE UNIT

Installing the Drive Unit

Route the cables before installing the drive unit.

1. Align the drive unit with the three mounting holes on the right side and left side of the frame.

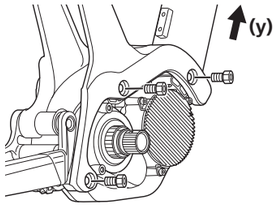


(A) Mounting holes
(B) Drive unit

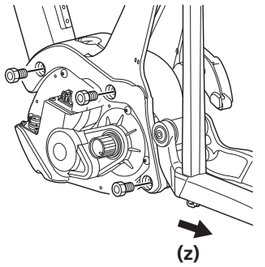
Be careful not to pinch the cables with the frame or drive unit case.

2. First attach the drive unit fixing bolts (M8) to the right side. After this, attach the drive unit fixing bolts (M8) to the left side. Tighten the drive unit fixing bolts (M8) until the drive unit makes firm contact with the inside of the right side of the frame.

Right side



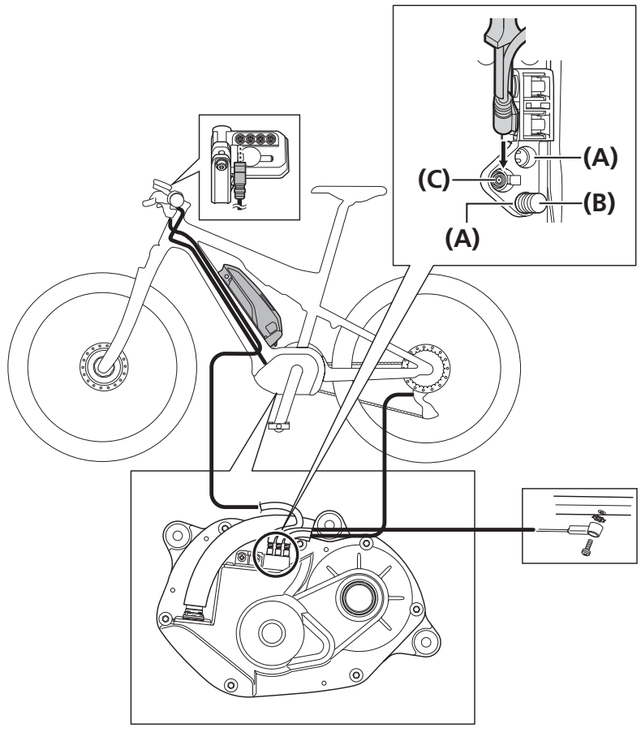
Left side



(y) Front of bicycle
(z) Rear of bicycle

Drive unit fixing bolts (M8) and nuts are not included with Shimano products. Use those supplied by the manufacturer. For information on the tightening torques, contact the manufacturer.

Drive Unit Wiring Diagram



(A) Cycle computer port/ Rear derailleur port/E-TUBE port

(B) Dummy plug

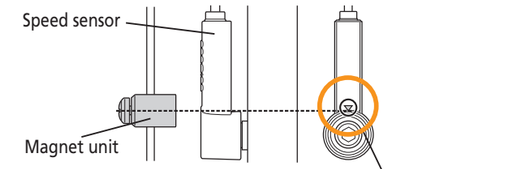
(C) Speed sensor port

- Be sure to attach dummy plugs to any unused ports.
- The cycle computer/rear derailleur ports can be used to connect the cycle computer or rear derailleur.

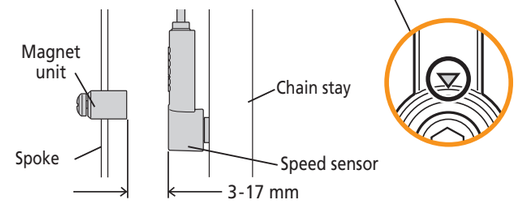
INSTALLING/REMOVING THE SPEED SENSOR

<SM-DUE10>

1. Mounting the magnet.
Mount the magnet so that its center is aligned over the apex of the triangle symbol.



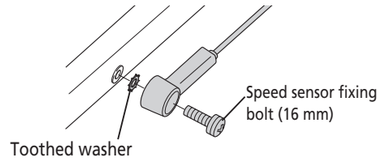
2. Before installing the speed sensor, check that the clearance between the speed sensor and the magnet unit will be within 3 to 17 mm.



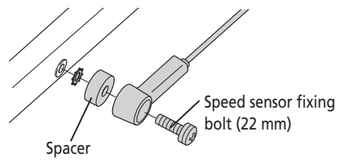
3. Attach the speed sensor with the speed sensor fixing bolt.

4 mm	**Tightening torque: 1.5 to 2 N·m**

- If the clearance is within the designated range, place the toothed washer between the speed sensor and the chain stay.



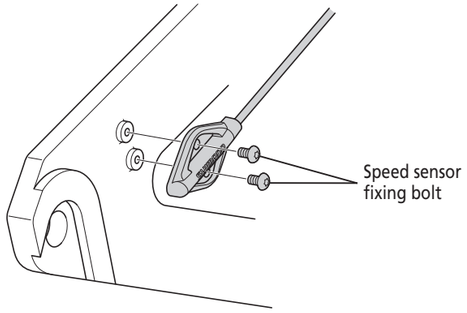
- If the clearance exceeds **17mm**, use a spacer to adjust it.



<SM-DUE11>

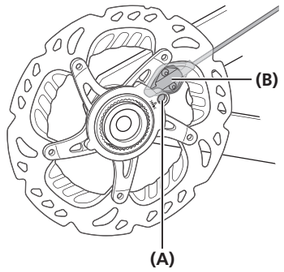
Install the speed sensor with the 2 speed sensor fixing bolts.

#10H	**Tightening torque: 0.6 N·m**



- Use the special magnet model for the disc brake rotor.

(A) Magnet unit
(B) Speed sensor



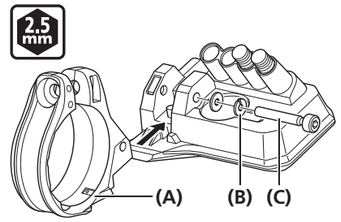
MAINTENANCE

Replacing the Clamp Band

1. Remove the case fixing bolt with a 2.5mm hexagon wrench and replace the clamp band.

(A) Clamp band
(B) Washer
(C) Case fixing bolt

2.5 mm	**Tightening torque: 0.6 N·m**



If using a handlebar with a thick diameter, reinstall it using the included Ø35mm clamp band.

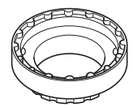
Replacing the Front Chainring

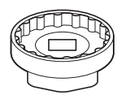
1. Perform procedures with the chain installed to the rear wheel. Attach the left and right crank arms using TL-FC16.

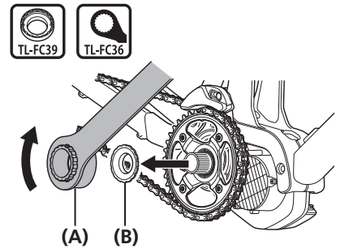
2. While holding the wheel, use the Shimano original tool to loosen the lock ring in the direction shown in the illustration.

(A) TL-FC39/TL-FC36
(B) Lock ring

- If using a torque wrench, use TL-FC39 in combination with TL-FC33.
- An impact wrench cannot be used.


TL-FC39


TL-FC33

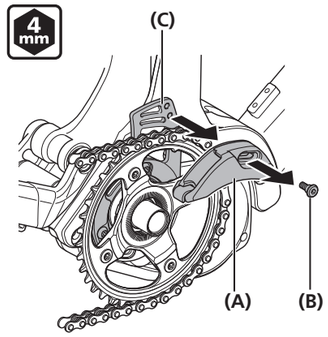


3. Remove and then replace the front chainring.
To install a front chainring, refer to "INSTALLING AND WIRING THE DRIVE UNIT" (page 69) and "INSTALLING THE CRANK AND FRONT CHAINRING" (page 152).

Replacing the Guide of the Chain Device

1. Loosen the guide fixing bolt (M5) to remove the guide from the back plate, and then replace it.

(A) Guide
(B) Guide fixing bolt (M5)
(C) Back plate

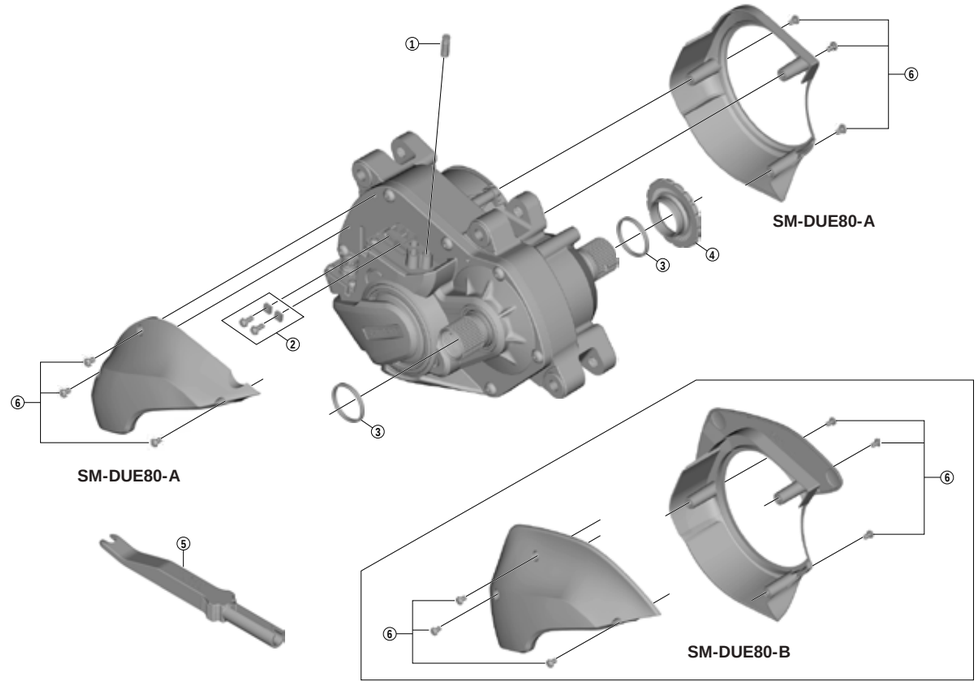


A chain device cannot be used with SM-CRE80 (44T CL: 50mm Double chain guard).

EXPLODED VIEW

See our website at http://si.shimano.com for the latest information.

DU-E8000 Drive Unit
SM-DUE80 Drive Unit Cover



ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
1	**Y6VE15000**	Dummy Plug
2	**Y72F98010**	Screw (2 pcs.) & Nut (2 pcs.)
3	**Y72F00018**	SPACER SPINDLE
4	**Y72F00002**	LOCK RING
5	**Y6VE16000**	TL-EW02 Plug Tool
6	**Y72G98010**	Caver Fixing Bolts (6 pcs.)

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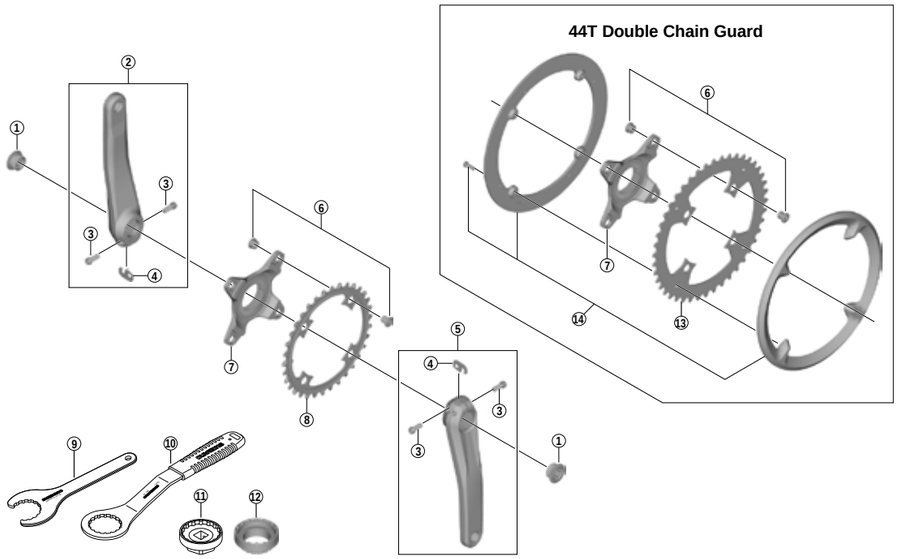
FC-E8050 FC-E8000
SM-CRE80 SM-CRE80-B E8000 Series Crankset



ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
1	**Y1F811100**	Crank Arm Fixing Bolt
2	**Y1VW98010**	Left Hand Crank Arm Unit 170 mm for FC-E8050
	Y1VW98020	Left Hand Crank Arm Unit 175 mm for FC-E8050
	Y1VX98010	Left Hand Crank Arm Unit 170 mm for FC-E8000
	Y1VX98020	Left Hand Crank Arm Unit 175 mm for FC-E8000
3	**Y1KS98030**	Clamp Bolt (M6 x 19) & Washer for FC-E8050
	Y1GS00030	Clamp Bolt (M6 x 19) for FC-E8000
4	**Y1FU98120**	Plate
5	**Y1VW98030**	Right Hand Crank Arm Unit 170 mm for FC-E8050
	Y1VW98040	Right Hand Crank Arm Unit 175 mm for FC-E8050
	Y1VX98030	Right Hand Crank Arm Unit 170 mm for FC-E8000
	Y1VX98040	Right Hand Crank Arm Unit 175 mm for FC-E8000
6	**Y1VY98010**	Gear Fixing Bolt (M8 x 8.5 / 1 Unit = 4 pcs.) & Nut (1 Unit = 4 pcs.)
7	**Y1VY00010**	4 Arm Adapter (SM-CRE80)
	Y1VY00020	4 Arm Adapter (SM-CRE80-B)
8	**Y1VY00030**	Chainring 34T (SM-CRE80/SM-CRE80-B)
	Y1VY00040	Chainring 38T (SM-CRE80/SM-CRE80-B)
9	**Y13009210**	TL-FC32 Adapter Tool
10	**Y13098000**	TL-FC36 Adapter Tool
11	**Y13009230**	TL-FC33 Adapter Tool
12	**YEZY00016**	TL-FC39 FC Installation Tool
13	**Y1VY44000**	Chainring 44T (SM-CRE80)
14	**Y1VY98020**	44T Double Chain Guard Unit

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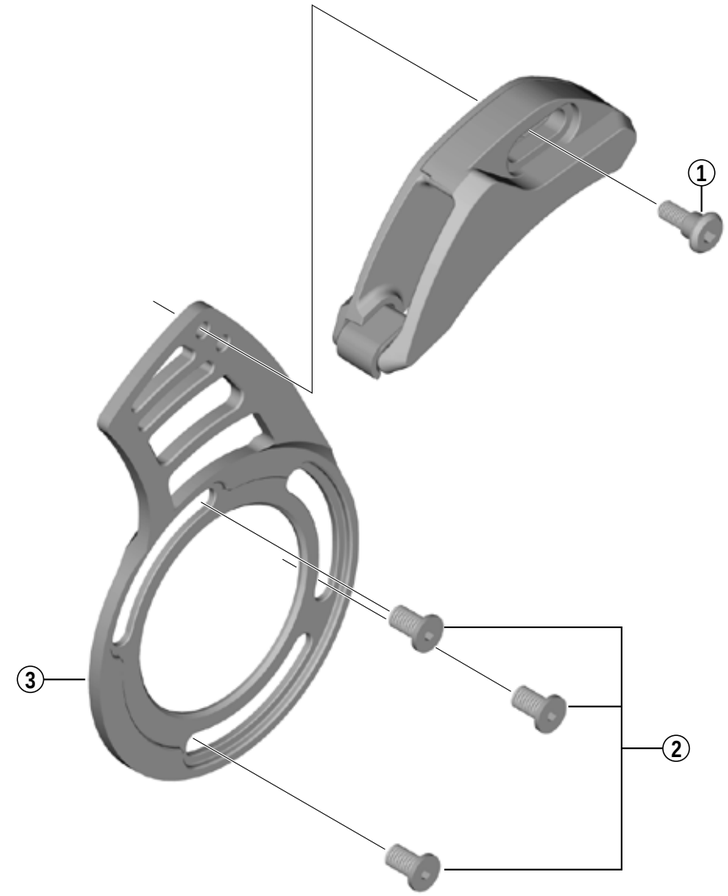
SM-CDE80 Chian Device



ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
1	**Y1VV00005**	Bolt M5
2	**Y1VV98010**	Back Plate Fixing Bolts (3 pcs.)
3	**Y1VV00001**	Back Plate

Jan.-2017-4151
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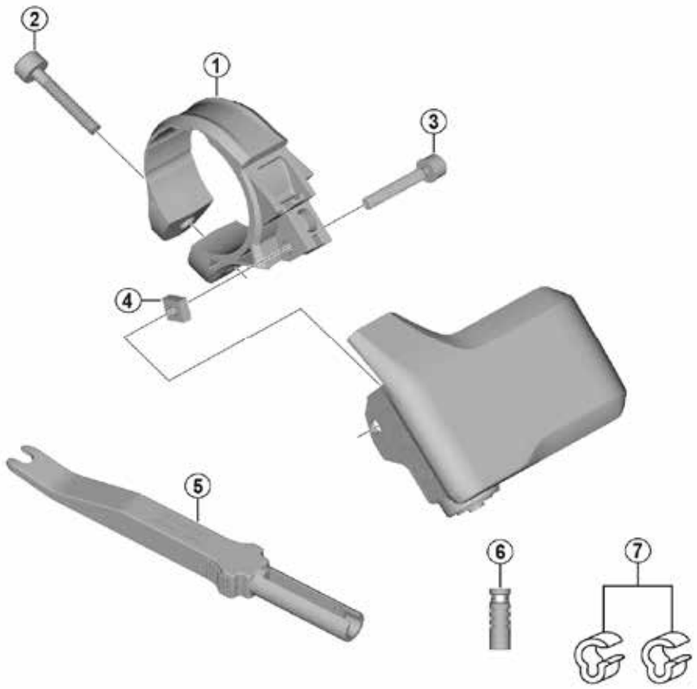
SC-E8000 E8000 Series System Information Display



SC-MT800

ITEM NO.	SHIMANO CODE NO.	DESCRIPTION	INTERCHANGE-ABILITY		
1	**Y71F00002**	Stay A (Ø31.8)	A		
	Y71F00003	Stay B (Ø35)	A		
2	**Y7GC00700**	Stay Fixing Bolt	A		
3	**Y72K00002**	Case Fixing Bolt			
4	**Y7GC00600**	Case Nut	A		
5	**Y6VE16000**	TL-EW02 Plug Tool	A		
6	**Y6VE15000**	Dummy Plug	A		
* 7	**Y70H98040**	Band A (2 pcs.)			

A: Same parts.
B: Parts are usable, but differ in materials, appearance, finish, size, etc.
Absence of mark indicates non-interchangeability.

Feb.-2017-4069A
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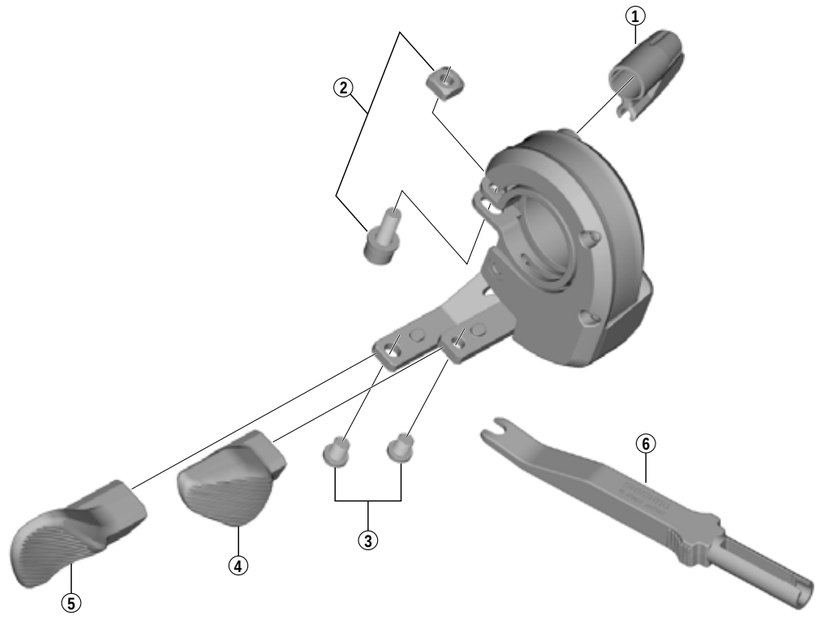
SW-E8000-L Switch Unit for Assist



SW-M8050

ITEM NO.	SHIMANO CODE NO.	DESCRIPTION	INTERCHANGE-ABILITY		
1	**Y0B200019**	Cable Cap	A		
2	**Y0B298010**	Clamp Bolt (M4 x 12) & Nut	A		
3	**Y01W98010**	Lever Slide Fixing Bolt (2 pcs.)	A		
4	**Y0B300010**	A Lever L	A		
5	**Y0B300002**	B Lever L	A		
6	**Y6VE16000**	TL-EW02 Plug Tool	A		

A: Same parts.
B: Parts are usable, but differ in materials, appearance, finish, size, etc.
Absence of mark indicates non-interchangeability.

May.-2017-4066
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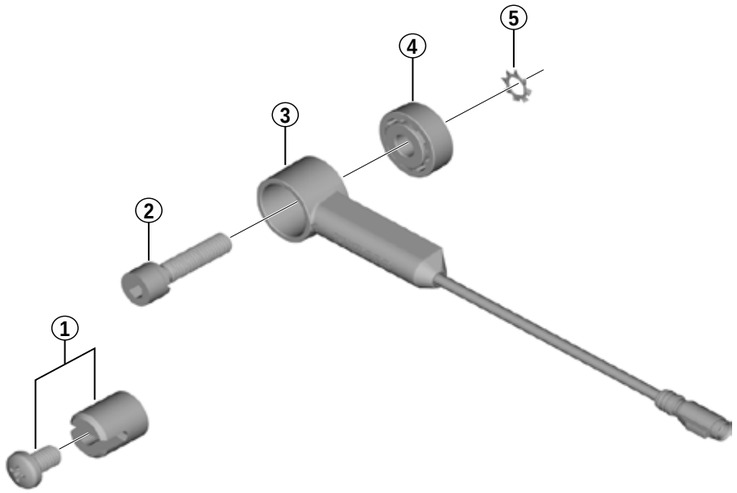
SM-DUE10 Speed Sensor Unit



ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
1	**Y72H98010**	Magnet Unit
2	**Y70L000G0**	Speed Sensor Fixing Bolt L16 (4 mm Hexagon Head)
	Y70L000U0	Speed Sensor Fixing Bolt L22 (4 mm Hexagon Head)
3	**Y72H00007**	Speed Sensor L550
	Y72H00010	Speed Sensor L1410
4	**Y70L000F0**	Spacer
5	**Y70L000M0**	Toothed Washer

Sep.-2016-4150

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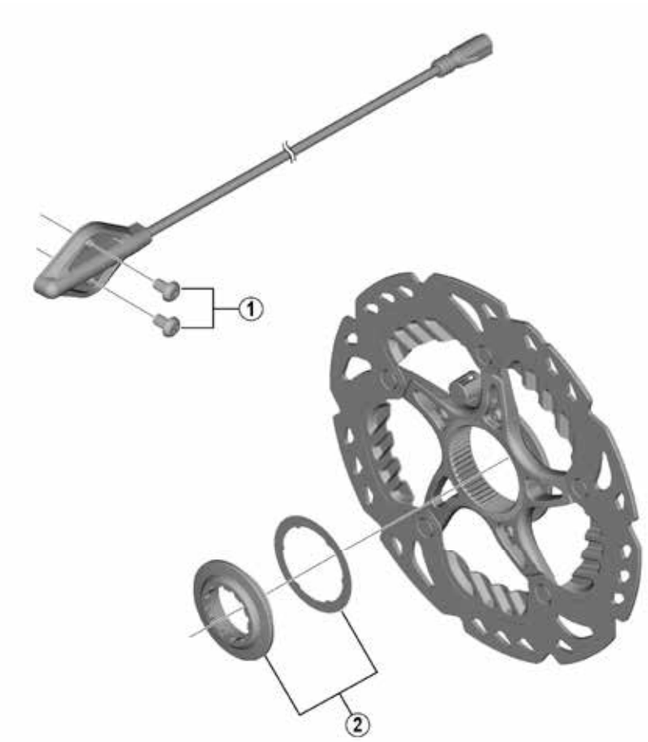
SM-DUE11 Speed Sensor Unit
RT-EM900/EM800 Disc Brake Rotor



ITEM NO.	SHIMANO CODE NO.	DESCRIPTION	INTERCHANGE-ABILITY
1	**Y72J98010**	Speed Sensor Fixing Bolt (M3) 2 pcs.	
2	**Y8K198010**	Lock Ring & Washer	

A: Same parts.
B: Parts are usable, but differ in materials, appearance, finish, size, etc.
Absence of mark indicates non-interchangeability.

Jun.-2017-4279

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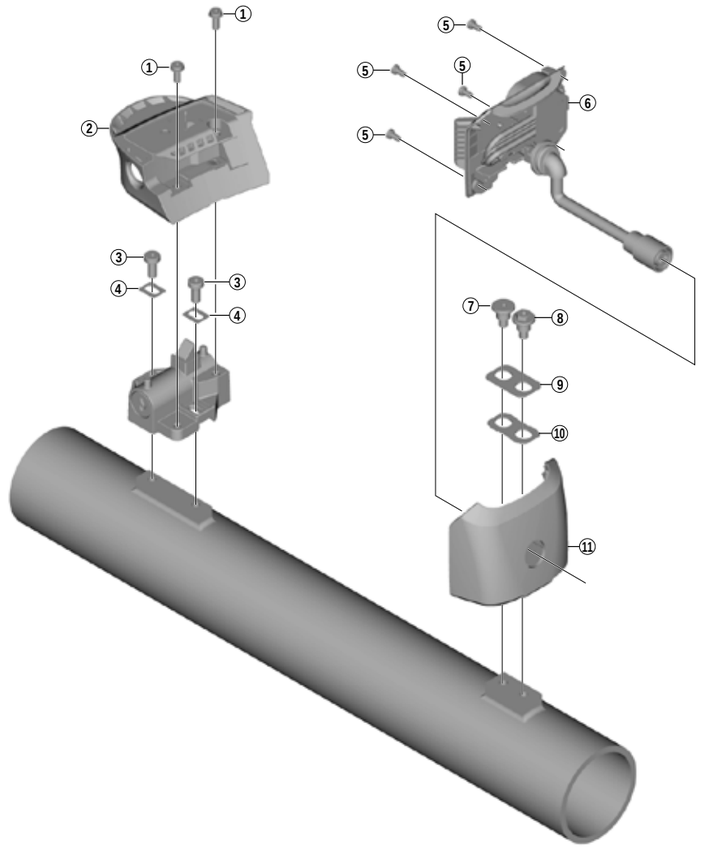
BM-E8010 Battery Mount



ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
1	**Y72U00003**	M4 BOLT KEY COVER
2	**Y72U00008**	KEY UNIT COVER ASSY
3	**Y72U00001**	M5 BOLT KEY UNIT
4	**Y72U00007**	SPACER KEY UNIT
5	**Y72U00004**	M3 BOLT LOWER CASE
6	**Y72U00015**	UPPER CASE ASSY 250
	Y72U00014	UPPER CASE ASSY 300
	Y72U00017	UPPER CASE ASSY 600
7	**Y72U00005**	M5 BOLT LOWER CASE F
8	**Y72U00006**	M5 BOLT LOWER CASE R
9	**Y72U00010**	SPACER LOWER CASE
10	**Y72U00011**	RUBBER LOWER CASE
11	**Y72U00012**	LOWER CASE ASSY

Mar.-2017-4043

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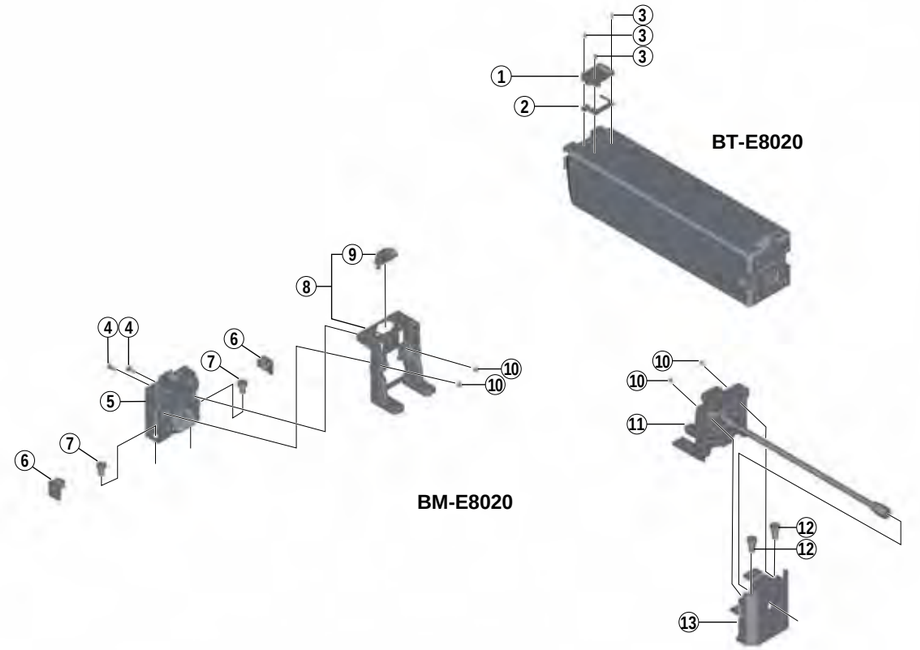
BT-E8020 Battery
BM-E8020 Battery Mount



ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
1	**Y72V00007**	CG PORT CAP
2	**Y72V00008**	FRAME CG PORT CAP
3	**Y72V00006**	M2.6 BOLT CG PORT
4	**Y72W00002**	M4 BOLT KEY UNIT
5	**Y72W00001**	RATCHET ASSY
6	**Y72W00004**	RUBBER M8 FIXING
7	**Y72W00003**	M8 BOLT RATCHET
8	**Y72W00014**	RAIL ASSY
9	**Y72W00015**	KEY CAP
10	**Y72W00006**	M3 BOLT
11	**Y72W00009**	CONNECTOR ASSY 250
	Y72W00013	CONNECTOR ASSY 400
12	**Y72W00011**	M8 BOLT LOW ER FRAME
13	**Y72W00008**	HOLDER FRAME ASSY

Mar.-2017-4156

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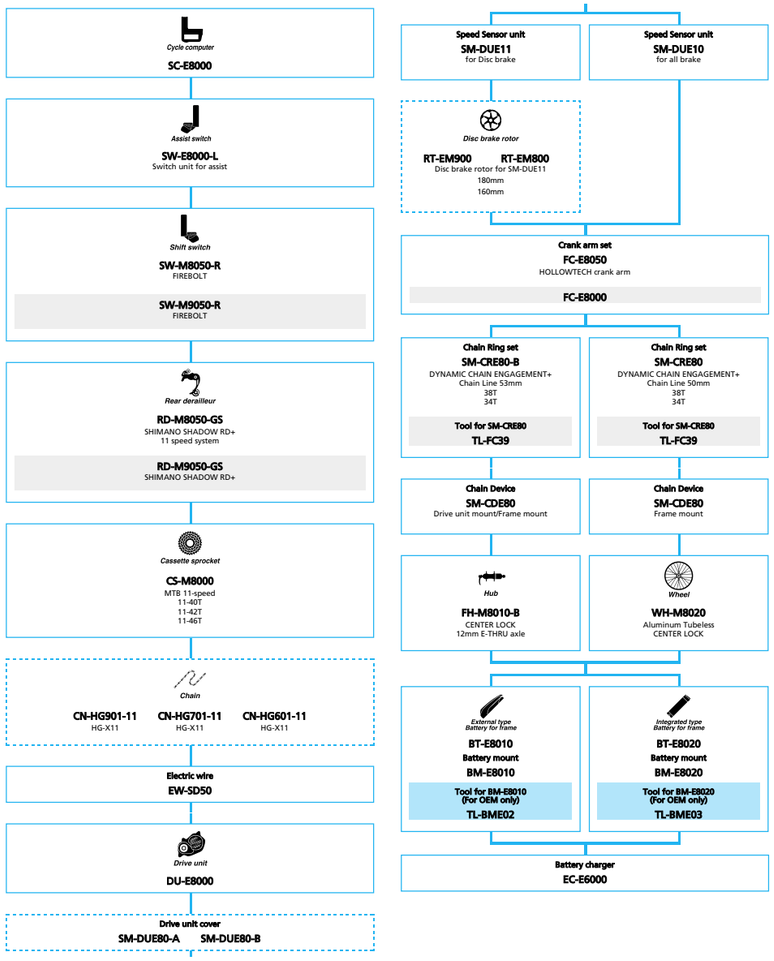
LINE-UP CHART

See our website at http://si.shimano.com for the latest information.

E8000 Series Electronic Derailleur Spec.

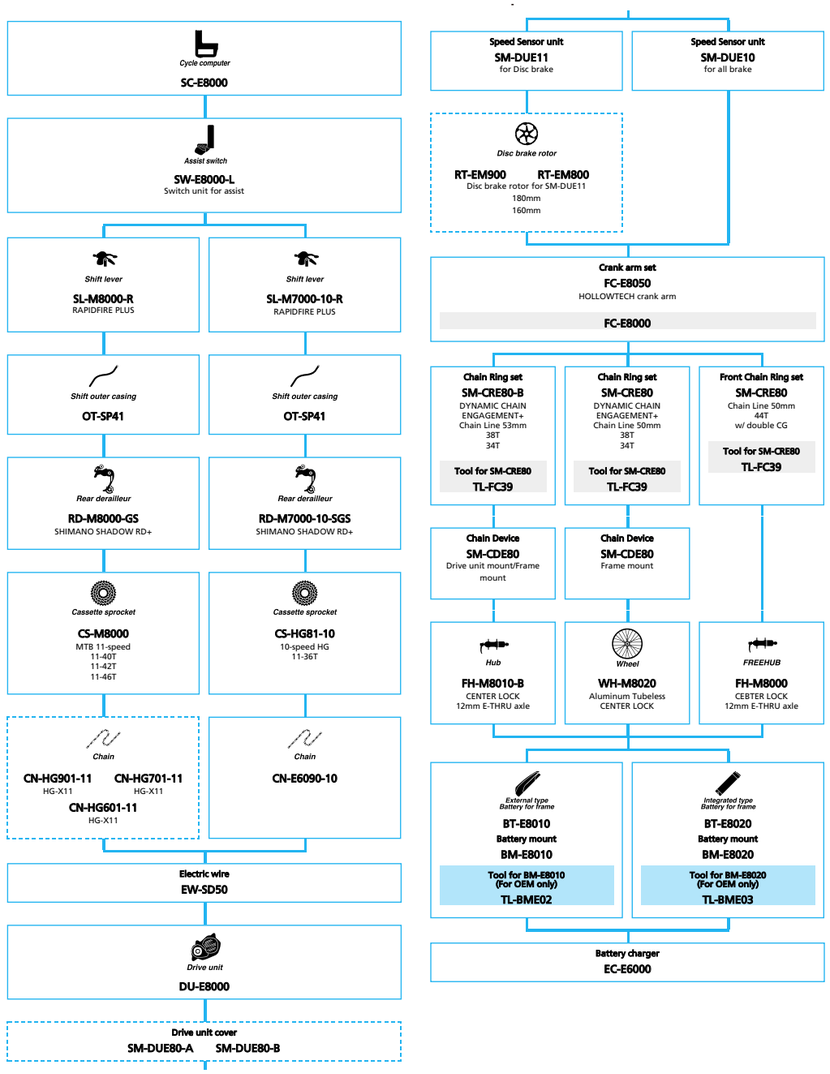
... Additional Option ... All select
... Alternative option ... Single select



Ver. 2.0, May. 16, 2017, SHIMANO INC.

E8000 Series Mechanical Derailleur Spec.

... Additional Option ... All select
... Alternative option ... Single select



Ver. 2.0, May. 16, 2017, SHIMANO INC.

SPECIFICATION SHEET

See our website at http://si.shimano.com for the latest information.

Switch Unit <SW-E8000-L>

SW-E8000-L

Series		SHIMANO
Model no.		SW-E8000-L
Switch Type		FIREBOLT
Color	1	Standard
	2	-
	3	-
Usage		For assist
Right SW		-
Left SW		X
Switch numbers (pcs)		2
Master unit		-
Firmware update by E-tube Project		X
E-tube port (pcs)		1
E-tube connector (pcs)		0
System On-Off		-
Assist Mode Change		X
Display change		-
Automatic/Manual Change		-
Light On-Off		-*
Multiple input	2 step	-
	Hold	-
Note		* By Setting Menu

Cycle Computer <SC-E8000>

SC-E8000

Series		SHIMANO
Model no.		SC-E8000
Color	1	Standard
	2	-
	3	-
Mount position	Center on handlebar	X
Master unit		-
Wireless system		ANT private/Bluetooth® LE
Firmware update by E-tube Project		X
E-tube port (pcs)		4
E-tube connector (pcs)		0
Back Light		X
LCD size (inch)		1.6
Beep		X
Display Detachable		-
Display Change Button		X
Reset button		-
Inside battery		X
System on/off button		-
Light on/off button		-
Auto Start & Auto Stop		-
Contents of Display	Clock	X
	Assist mode display	X
	Battery charge level	***X
	Current Speed	X
	Gear Position Display	*,***X (11spd)
	Start mode	-
	Automatic shift mode	-
	Maximum speed	** X
	Average speed	** X
	Trip distance	X
	Trip time	** X
	Odometer	X
	Estimated range	X
	Range overview	-
	Assist power indicator	X
	Error Message	X
	Cadence	X
	Human Out put Power	X
	Calorie	X
Setting menu	Trip Distance reset	X
	Odometer reset	-
	Setting Clear	-
	Clock adjustment	X
	Start mode	-
	Back light on/off	-
	Light on/off	X
	Back light brightness	X
	Beep on/off	X
	Unit (km/mile)	X
	Font color	-
	Adjusting for shift	*,***X
	Adjusting for auto shift timing	-
	RD protection Reset	*,***X
	Bluetooth® LE pairing	X
	Bluetooth® LE/ANT connection status	X
Language	English	X
	German	X
	Dutch	X
	French	X
	Spanish	X
	Italian	X
Note		2 Spec of clamp band diameter. ϕ31.8 and ϕ35.0 * In case of SEIS ** Option by E-tube project *** Data of list of "Display function" is sent to other digital device by ANT private.

Drive Unit <DU-E8000>

DU-E8000

Series		SHIMANO
Model no.		DU-E8000
Color	1	Black
	2	-
	3	-
Compatible Brake type		Disc brake, V-BRAKE
Motor type		Brushless motor
Position		Mid ship
Compatible Wheel Size (mm)		*1,300-3,000
Maximum Rated Power (Watt)		250
Maximum torque (Nm)		70
Rated Voltage		DC 36V
DI2 compatible	IHG	-
	RD	*X
Light off road compatible	IHG	-
	RD	-
Maximum support bike speed	24km/h	-
	25km/h	*X
	20mph	*X
	Other	-
Riding Characteristics setting	Dynamic	*X
	Explorer	*X
	Customize	*X
Assist pattern Setting	Light off-road	-
	Comfort	-
Maximum assist ratio (%)	BOOST	X
	HIGH	-
	TRAIL	X
	NORMAL	-
	ECO	X
Power supply for front light		DC 6V
Power supply for rear light		DC 6V
Maximum Current supply front and rear light total (A)		2
Safe way home function		X
Communication		E-TUBE
Master unit		X
Firmware update by E-TUBE PROJECT		X
E-TUBE port (pcs)		2
E-TUBE connector (pcs)		0
Port for Light (pcs)		0
Terminal for Light (pcs)		1
Port for Speed Sensor (pcs)		1
Chain case compatible		-
Chain Device compatible		X
Torque sensor		X
Crank arm position sensor		X
Bike speed sensor		** X
Cadence sensor		X
Walk assist function	On / Off	X
	Standard	X
	Intelligent	*** X
	Quick	X
Automatic shift	IHG 11s	-
	IHG 8s	-
	RD	-
SYMPHOMATIC	IHG	-
	RD	-
Compatible BB type		24 mm Axle Serration
DU fixing bolt (pcs)		-
Note		* Set by E-TUBE PROJECT ** By using SM-DUE10/ SM-DUE11 *** By using RD-M9050/ RD-M8050

Drive Unit Cover <SM-DUE80>

SM-DUE80-A

SM-DUE80-B

Series		SHIMANO	SHIMANO
Model no.		SM-DUE80-A	SM-DUE80-B
Color	1	Standard	Standard
	2	-	-
	3	-	-
Cover	Right	X	X
	Left	X	X
Available DU angle		0-60 degree	0-60 degree
Note		Standard cover	Mount bolt cover

Speed Sensor Unit <SM-DUE11/SM-DUE10>

SM-DUE11

SM-DUE10

Series		SHIMANO	SHIMANO
Model no.		SM-DUE11	SM-DUE10
Brake Spec	Disc	X	X
	Rim	-	X
Color	1	Standard	Standard
	2	-	-
	3	-	-
Cable Length(mm)	340	-	X
	540	-	X
	760	X	-
	1400	-	X
Note		-	-

Disc Brake Rotor <RT-EM900/RT-EM800>

RT-EM900-M

RT-EM800-M

Series		SHIMANO	SHIMANO
Model no.		RT-EM900	RT-EM800
CENTER LOCK		X	X
6-bolt (P.C.D. 44 mm)		-	-
ICE TECHNOLOGIES		X	X
ICE TECHNOLOGIES FREEZA		X	-
Outside diameter	203 mm	-	-
	180 mm	X*	X*
	160 mm	X*	X*
	140 mm	-	-
Alloy lock ring		X	X
Adapter	Material	Aluminum	Aluminum
	Finish	Painted	Painted
Rotor	Material	Stainless steel + Aluminum + Stainless steel	Stainless steel + Aluminum + Stainless steel
	Finish	Polished	Polished
Pad compatibility	Matal	X	X
	Resin	X	X
Average weight (w/o lock ring)		-	-
Note		* For rear only with magnet bracket	* For rear only with magnet bracket

Crankarm <FC-E8050/FC-E8000>

FC-E8050

FC-E8000

Series		SHIMANO	SHIMANO
Model no.		FC-E8050	FC-E8000
Color	1	Standard	Standard
	2	-	-
	3	-	-
Crank arm type	Hollow Tech	X	-
	Solid	-	X
Q factor (mm)		177	177
Chain case compatible		-	-
Crank arm length (mm)	175	X	X
	170	X	X
	Others	-	-
Crank arm	Material	Aluminum	Aluminum
	Finish	Anodized	Painted
BB Type		24mm Axle Serration	24mm Axle Serration
Note			

Chainring <SM-CRE80-B/SM-CRE80>

SM-CRE80-B / SM-CRE80

Series		SHIMANO	SHIMANO	SHIMANO
Model no.		SM-CRE80-B	SM-CRE80	SM-CRE80
Color	1	Standard	Standard	Standard
	2	-	-	-
	3	-	-	-
Gear speed		1	1	1
Rear speed	11-speed	*X	*X	*X
	10-speed	*X	*X	*X
	9-speed	-	-	-
	Single	-	-	-
Dynamic Chain Engagement Plus		X	X	-
Chain ring teeth	44T	-	-	X
	38T	X	X	-
	34T	X	X	-
	Others	-	-	-
Chain guard type	Double	-	-	X
	Single	-	-	-
	W/O CG	X	X	-
Chain ring fixing lock nut		Included in drive unit	Included in drive unit	Included in drive unit
Chain ring cover outer diameter (mm)		-	-	-
Chain case compatible		-	-	-
Chain line (mm)	53	X	-	-
	50	-	X	X
	46.5	-	-	-
P.C.D. (mm)		104	104	104
Chain ring	Material	Steel	Steel	Steel
	Finish	Plating	Plating	Painted
Spider arm	Material	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized
Chain ring fixing bolt	Material	Stainless steel	Stainless steel	Stainless steel
	Finish	SP Black	SP Black	SP Black
Gear arms		4 arm	4 arm	4 arm
Note		*E-Bike RD system compatiblle chain	*E-Bike RD system compatiblle chain	*E-Bike RD system compatiblle chain

Chain Device <SM-CDE80>

SM-CDE80

Series		SHIMANO	SHIMANO
Model no.		SM-CDE80	SM-CDE80
Color	1	Standard	Standard
	2	-	-
	3	-	-
Chain Line (mm)	53	X	X*
	50	-	X*
Chain compatibility	11Speed	X	X
	10Speed	X	X
Top Gear Teeth	38T	X	X
	34T	X	X
Assumed Rear Sprocket Teeth	11-36	X	X
	11-40	X	X
	11-42	X	X
	11-46	X	X
Direct Mount to Drive Unit		X	-
Compatible Drive Unit		DU-E8000	DU-E8000
Rear suspension stroke(mm)		0-170	0-170
Back plate	Material	Aluminum	-
	Finish	Anodized	-
Chain guide	Material	Resin	Resin
Note		w/plate	1.w/o plate 2.X* means 53mm frame or 50 mm frame

Battery <BT-E8010/BT-E8020/BT-E6010>

BT-E8010

BT-E6010

Series		SHIMANO	SHIMANO	SHIMANO
Model no.		BT-E8010	BT-E8020	BT-E6010
Color	1	Black	Black	Black
	2	-	-	Gray
	3	-	-	-
Chemistry		Li-Ion	Li-Ion	Li-Ion
Position		Down tube	Down tube	Down tube
Rated voltage (V)		36	36	36
Rated capacity (Ah)		14	14	11.6
Rated capacity (Wh)		504	504	418
Cyclelife span for charge (times)		1000 (more than 60%)	1000 (more than 60%)	1000 (more than 60%)
Time to charge (hour)		*5	*5	*4
Charge level display		X	X	X
Error signal		X	X	X
Charging port		X	X	-
Tail light / Reflector integration		-	-	-
Lock system		X	X	X
Key hole		-	-	-
System on/off switch		X	X	X
Compatible battery mount		BM-E8010	BM-E8020	BM-E6000
Compatible charger		EC-E6000	EC-E6000	EC-E6000
Note		*By EC-E6000	*By EC-E6000	*By EC-E6000

Battery Mount <BM-E8010/BM-E8020/BM-E6010>

BM-E8010

Series		SHIMANO	SHIMANO	SHIMANO
Model no.		BM-E8010	BM-E8020	BM-E6010
Color	1	Black	Black	Black
	2	-	-	-
	3	-	-	-
Position		Down tube	Down tube	Down tube
Charging port		-	-	*X
Lock system		X	X	-
Key hole		-	-	X
System on/off switch		-	-	-
Battery cable		X	X	X
Battery cable length	250	X	X	X
	300	X	-	X
	400	-	X	-
	600	X	-	X
	900	-	-	-
	920	-	-	-
	1000	-	-	-
	1020	-	-	-
Compatible battery		BT-E8010	BT-E8020	BT-E6010
Note		-	-	-

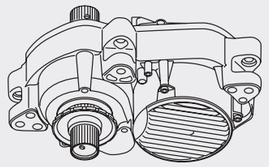
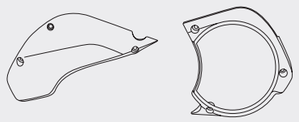
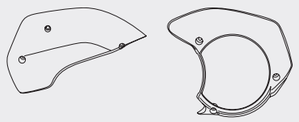
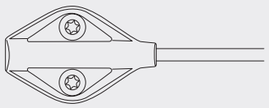
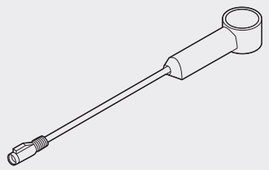
Battery Charger <EC-E6000>

EC-E6000

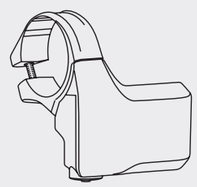
Series		SHIMANO
Model no.		EC-E6000-4
Color	1	Standard
	2	-
	3	-
Typical example country / Region		Australia / New Zealand
Compatible battery		BT-E6000/BT-E6001/BT-E6010 BT-E8010/BT-E8020
Compatible battery mount		BM-E6000/BM-E6010
Compatible voltage		AC100V-240V 50-60Hz
CE standard		X
UL standard		X
Korea standard		-
Time to full charge (hour)		*4 / **5
Time to 80% charge (hour)		*2 / **2.5
Charging Level Display		-
Plug in charging type		X
Charging temperature		0-40°C
Storage temperature		-20-60°C
Error signal		X
Adapter for battery connecter		X
Compatible AC power cable		-
Built in AC cable		X
Built in AC cable length (m)		1
Note		*In case of BT-E6000 & BT-E6010 **In case of BT-E6001, BT-E8010 & BT-E8020

ORIGINAL SERVICE PARTS & TOOLS

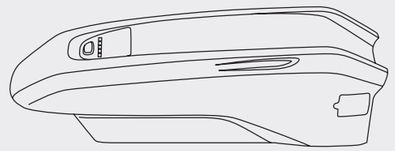
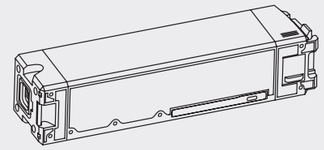
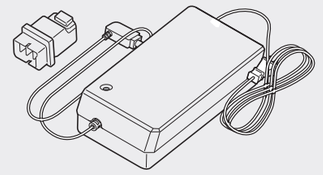
Drive Unit / Drive Unit Cover

Image	Model Number	Description	Code. No
	DU-E8000	Drive unit mid ship position without cover (SM-DUE80) 25km/h	IDUE8000K
	SM-DUE80	Drive unit cover SM-DUE80-A (standard) with screw	ISMDUE80A
		Drive unit cover SM-DUE80-B (large) with screw	ISMDUE80B
	SM-DUE11	Speed sensor unit cable 760mm length	ISMDUE11A
	SM-DUE10	Speed sensor unit cable 540mm length	ISMDUE10

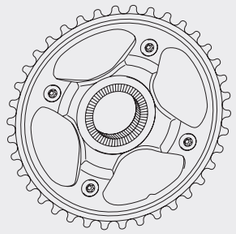
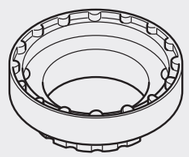
Cycle Computer

Image	Model Number	Description	Code. No
	SC-E8000	Cycle computer SC-E8000 including band A (2pcs) and clamp band (31.8 & 35mm)	ISCE8000A

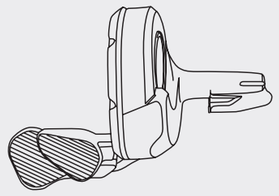
Battery & Battery Charger

Image	Model Number	Description	Code. No
	BT-E8010	Battery BT-E8010 for frame type (down tube) 504Wh black EU / Australia / New Zealand	IBTE8010B
	BT-E8020	Battery BT-E8020 for frame type (down tube integrated) 504Wh black EU / Australia / New Zealand	IBTE8020B
	EC-E6000	Battery charger for Australia / New Zealand including battery connector	IECE60004

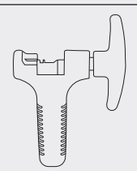
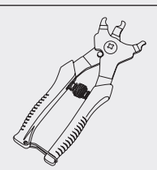
Chain device & Chainring

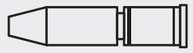
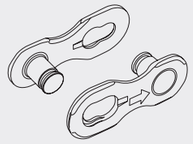
Image	Model Number	Description	Code. No
	SM-CDE80	Chain device for FC-E8000/E8050 drive unit mount with plate	ISMCDE80
	SM-CRE80	Chainring for FC-E8000/E8050 34T without CG for chainline 50mm	ISMCRE80A4X
		Chainring for FC-E8000/E8050 38T without CG for chainline 50mm	ISMCRE80A8X
		Chainring for FC-E8000/E8050 44T with CG (double) for chainline 50mm	ISMCRE80B4DG
		Chainring for FC-E8000/E8050 34T without CG for chainline 53mm	ISMCRE80BA4X
		Chainring for FC-E8000/E8050 38T without CG for chainline 53mm	ISMCRE80BA8X
	TL-FC39	TL-FC39 adapter removal tool for FC-E8000/E8050	YEZY00016

Assist Switch / Shift Switch

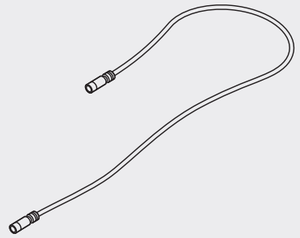
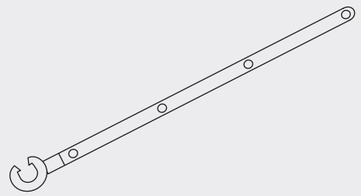
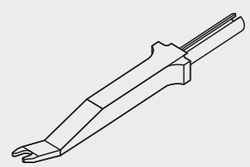
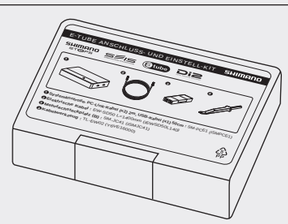
Image	Model Number	Description	Code. No
	SW-E8000-L	Switch unit (left) for power mode change clamp band type	ISWE8000L

Chain (Common with E6000 Series)

Image	Model Number	Description	Code. No
	CN-HG701-11	11 speed chain (HG-X11) 1pcs SIL-TECH surface treatment (outer/inner link plate) 116 links QUICK-LINK (SM-CN900-11)	ICNHG70111116Q
		11 speed chain (HG-X11) 1pcs SILTECH surface treatment 138 links QUICK-LINK (SM-CN900-11)	ICNHG70111138Q
	CN-HG601-11	11 speed chain (HG-X11) 1pcs SIL-TECH surface treatment (inner link plate) 116 links QUICK-LINK (SM-CN900-11)	ICNHG60111116Q
		11 speed chain (HG-X11) 1pcs SIL-TECH surface treatment (inner link plate) 138 links QUICK-LINK (SM-CN900-11)	ICNHG60111138Q
		11 speed chain (HG-X11) 20pcs SILTECH surface treatment (inner link plate) Work shop package 138 links QUICK-LINK (SM-CN900-11)	ICNHG60111116QS
	CN-E6090-10	10 speed chain (HG-X) 1pcs 118 links front single only two lines connecting pin	ICNE609010118I
		10 speed chain (HG-X) 1pcs 138 links front single only two lines connecting pin	ICNE609010138I
		10 speed chain (HG-X) 20pcs Work Shop package 118 links front single only two lines connecting pin	ICNE609010118IS
	TL-CN28	Chain tool for cutting and connecting SHIMANO 6-11speed chain	Y13098500
	TL-CN10	Chain tool for connecting and removing SHIMANO QUICK-LINK	Y13022000

	Chain Pin	For 11-speed chain (with sharp nose)	3 pcs.	Y0AH98030
			50 pcs.	Y0AH98010
		For 10-speed chain (except CN-7800, with two lines)	3 pcs.	Y08X98031
			50 pcs.	Y08X98021
	QUICK-LINK	For 11-speed chain QUICK-LINK SM-CN900-11 single use, 2 pairs		ISMCN90011A
		For 11-speed chain QUICK-LINK SM-CN900-11 single use, 50 pairs work shop jar		ISMCN90011BS

Others (Common with E6000 Series)

Image	Model Number	Description	Code. No
	EW-SD50	E-TUBE electric wire black (1600mm) for connecting cycle computer (SC) and drive unit (DU)	IEWSD50L160
		E-TUBE electric wire black (550mm) for connecting drive unit (DU) and motor unit (MU) for DI2 shifting	IEWSD50L55
	EW-SD50-I	Wire holder (cable-tie) for electric wire EW-SD50 for internal routing. 1unit = 20pcs	IEWSD50ISM1
	TL-EW02	Plug tool for connection and disconnection of E-TUBE electric wires	Y6VE16000
	Case kit	E-TUBE PROJECT connecting & setting device case kit including: - SM-PCE1 (PC linkage device with USB cable) - EW-SD50 (electric wire 1400mm) - SM-JC41 (Junction B) - TL-EW02 (Plug tool)		IETUBEKIT2E

TROUBLE SHOOTING

Battery LED Lamp Error Indications

System errors and similar warnings are indicated by the battery LED lamps through various lighting patterns.

Error indication type	Indication condition	Lighting pattern *1	Recovery
System error	Communication error with the bicycle system		Make sure that the cable is not loose or improperly connected. If the situation does not improve, contact the place of purchase.
Temperature protection	If the temperature exceeds the guaranteed operating range, the battery output is turned off.		Leave the battery in a cool place away from direct sunlight until the internal temperature of the battery decreases sufficiently. If the situation does not improve, contact the place of purchase.
Security authentication error	This is displayed if a genuine drive unit is not connected. This is displayed if any of the cables are disconnected.		Connect a genuine battery and drive unit. Check the condition of the cables. If the situation does not improve, contact the place of purchase.
Charging error	This is displayed if an error occurs during charging.		Remove the charger from the battery and press the power button. If an error appears contact an agency.
Battery malfunction	Electrical failure inside the battery		Connect the charger to the battery and then remove the charger. Press the power button with only the battery connected. If an error appears with only the battery connected, contact the place of purchase.

*1 : No light : Lighting up : Blinking

Warning Messages on the Cycle Computer

This disappears if the error is fixed.

<SC-E8000>

Code	Display preconditions	Operational restriction when an error is being displayed	Remedy
W010	Temperature of the drive unit is higher than it is during times of normal operation.	Power assistance may be lower than usual.	Stop using the assist function until the temperature of the drive unit drops. If the situation does not improve, contact the place of purchase.
W011	The traveling speed cannot be detected.	The maximum speed up to which power assistance is provided may be lower than usual.	Check that the speed sensor is properly installed. If the situation does not improve, contact the place of purchase.
W013	Initialization of torque sensor was not completed successfully.	Power assistance may be lower than usual.	With your foot off the pedal, press the battery power button and turn on the power again. If the situation does not improve, contact the place of purchase.
W032	An electronic derailleur may have been installed in place of a mechanical derailleur.	Power assistance provided in [WALK] mode may be lower than usual.	Reinstall the derailleur for which the system is configured to support. If the situation does not improve, contact the place of purchase.

Error Message On The Cycle Computer

If an error message is displayed on the entire screen, follow one of the procedures below to reset the display.
- Press the power button of the battery.
- Remove the battery from the holder.

If resetting does not solve the problem or the same problem occurs frequently, consult an agency.

Code	Display preconditions	Operational restriction when an error is being displayed	Remedy
E010	A system error was detected.	Power assistance is not provided during riding.	Press the power button of the battery to turn it on again. If the situation does not improve, contact the place of purchase.
E011	An error occurred in system operation.	Power assistance is not provided during riding.	Turn on the power again.
E013	An anomaly was detected in the drive unit's firmware.	Power assistance is not provided during riding.	Contact the place of purchase or bicycle dealer.
E014	The speed sensor may have been installed in the wrong position.	Power assistance is not provided during riding.	Contact the place of purchase or bicycle dealer.
E020	A communication error between the battery and drive unit was detected.	Power assistance is not provided during riding.	Check that the cable between the drive unit and battery is properly connected. If the situation does not improve, contact the place of purchase.
E021	Battery connected to drive unit conforms with system standards but is not supported.	Power assistance is not provided during riding.	Press the power button of the battery to turn it on again. If the situation does not improve, contact the place of purchase.
E022	Battery connected to drive unit does not conform with system standards.	All system functions shutdown.	Press the power button of the battery to turn it on again. If the situation does not improve, contact the place of purchase.
E033	The current firmware is not compatible with this system.	Power assistance is not provided during riding.	Connect to E-TUBE PROJECT, then update the firmware for all units to the latest version.
E043	Part of the cycle computer's firmware may be damaged.	Power assistance is not provided during riding.	Contact the place of purchase or bicycle dealer.

Trouble Shooting for Each Fuction/Unit

Assist function

Symptom	Cause / Possibility	Remedy
Assistance is not being provided.	Is the battery sufficiently charged?	Check the battery charge. If the battery is nearly spent, recharge it.
	Are you riding on long slopes in summer weather or riding for a long time carrying a heavy load? The battery may be overheating.	Turn off the power, wait for a while and then check once more.
	The drive unit (DU-E8000), cycle computer (SC-E8000 / SC-E6010) or assist switch (SW-E8000-L / SW-E6000 / SW-E6010) may be connected incorrectly or there may be a problem with one or more of them.	Contact the place of purchase.
	Is the speed too high?	Check the cycle computer display. Assistance is not provided at speeds of 25 km/h or more.
Assistance is not being provided.	Are you pedaling?	The bicycle is not a motorbike, so you need to operate the pedals.
	Is the assist mode set to [OFF]?	Set assist mode to a mode other than [OFF]. If you still do not feel that assistance is being given, contact the place of purchase.
	Is the system power ON?	If you have performed the steps below and still do not feel the assistance, contact the place of purchase. **<SC-E8000>** Press the battery power button to turn the power ON. **<SC-E6010>** Press and hold the cycle computer power button for 2 seconds, or press the battery power button to turn the power ON.
Assist traveling distance is too short.	The traveling distance may become shorter depending on road conditions, the gear position and total light usage time.	Check the battery charge. If the battery is nearly spent, recharge it.
	The battery characteristics will drop during winter weather.	This is not a sign of a problem.
	The battery is a consumable part. Repeated recharging and long periods of use will cause the battery to deteriorate (lose its performance).	If the distance that can be traveled on a single charge is very short, replace the battery with a new one.
	Is the battery fully charged?	If the distance that can be traveled when the battery is fully charged has decreased, the battery may have degraded. Replace the battery with a new one.

Symptom	Cause / Possibility	Remedy
Pedaling is stiff.	Are the tires inflated to a sufficient pressure?	Use a pump to add air.
	Is the assist mode set to OFF?	Set the assist mode to [BOOST]. If you still do not feel that assistance is being given, contact the place of purchase.
	The battery may be running low.	After charging the battery well, check the level of assistance again. If you still do not feel that assistance is being given, contact the place of purchase.
	Did you turn on the power with your foot placed on the pedal?	Turn on the power again without putting pressure on the pedal. If you still do not feel that assistance is being given, contact the place of purchase.

Battery

Symptom	Cause / Possibility	Remedy
The battery quickly loses its charge.	The battery may be at the end of its service life.	Replace the battery with a new one.
The battery cannot be recharged.	Is the power plug of the charger securely inserted into the electrical outlet?	Disconnect and then reconnect the power plug of the charger, and then repeat the recharging operation. If the battery still cannot be recharged, contact the place of purchase.
	Is the charging plug of the charger securely inserted into the battery?	Disconnect and then reconnect the charging plug of the charger, and then repeat the recharging operation. If the battery still cannot be recharged, contact the place of purchase.
	Is the charging adapter securely connected to the charging plug, or to the battery charging port?	Securely connect the charging adapter to the charging plug or to the battery charging port, and charge again. If the battery still does not charge, consult a dealer.
	Is the connecting terminal for the battery charger, charging adapter, or battery dirty?	Wipe the connection terminals with a dry cloth to clean them, and then repeat the recharging operation. If the battery still cannot be recharged, contact the place of purchase.
The battery does not start recharging when the charger is connected.	The battery may be at the end of its service life.	Replace the battery with a new one.
The battery and charger are becoming hot.	The temperature of the battery or charger may have exceeded the operating temperature range.	Stop recharging, wait for a while and then recharge again. If the battery is too hot to touch, it may indicate a problem with the battery. Contact the place of purchase.
The charger is warm.	If the charger is being used continuously to charge batteries, it may become warm.	Wait a while before using the charger again.

Symptom	Cause / Possibility	Remedy
The LED on the charger does not illuminate.	Is the charging plug of the charger securely inserted into the battery?	Check the connection for any foreign objects before reinserting the charging plug. If there is no change, contact the place of purchase.
	Is the battery fully charged?	If the battery is fully charged, the LED on the battery charger turns off, but this is not a malfunction. Disconnect and then reconnect the power plug of the charger, and then repeat the recharging operation. If the LED on the charger still does not illuminate, contact the place of purchase.
The battery cannot be removed.		Contact the place of purchase.
The battery cannot be inserted.		Contact the place of purchase.
Fluid is coming out from the battery.		Contact the place of purchase.
An abnormal odor can be detected.		Stop using the battery immediately and contact the place of purchase.
Smoke is coming out from the battery.		Stop using the battery immediately and contact the place of purchase.

Lights

Symptom	Cause / Possibility	Remedy
The front light or the tail light does not illuminate even when the switch is pressed.	The E-TUBE PROJECT settings may be wrong.	Contact the place of purchase.

Cycle computer

Symptom	Cause / Possibility	Remedy
The cycle computer is not displayed when you push the battery power button.	The amount of battery charge may be insufficient.	Recharge the battery, and then turn the power on once more.
	Is the power turned on?	Hold down the power button to turn on the power.
	Is the battery charging?	The power cannot be turned on while the battery is mounted on the bicycle and being charged. Stop charging.
	SC-E6010 Is the cycle computer correctly installed to the bracket?	Install the cycle computer correctly.

Symptom	Cause / Possibility	Remedy
The cycle computer is not displayed when you push the battery power button.	Is the electric wire connector correctly installed?	Check to see if the connector of the electric wire connecting the motor unit to drive unit is not disconnected. If you are not sure, contact the place of purchase.
	A component that the system cannot identify may be connected.	Contact the place of purchase.
SC-E6010 The system does not start up when you press and hold the cycle computer power button for 2 seconds.	Did you use the cycle computer in, or expose it to, low temperatures for an extended period?	The cycle computer may become unable to turn on if used in, or exposed to, low temperatures for an extended period. Turn it on by pressing the power button on the battery. If it still does not turn on, consult a dealer.
	Is the cycle computer correctly installed to the bracket?	Install the cycle computer correctly.
The gear position is not displayed.	The gear position is only displayed when using the electronic gear shifting unit.	Check if the electric wire connector is disconnected. If you are not sure, contact the place of purchase.
Can the beep be turned off.		Change the setting. Refer to "Beep" (page 48)
SC-E6010 Can the backlight be turned off.		Change the setting.
The setting menu cannot be launched while riding the bicycle.	The product is designed so that if it detects that the bicycle is being ridden, the setting menu cannot be launched. This is not a sign of an abnormality.	Stop the bicycle and then make the settings.

Other

Symptom	Cause / Possibility	Remedy
When pressing the switch, two beeps sound, and the switch cannot be operated.	Operation of the switch being pressed has been disabled.	It is not a sign of a malfunction.
Three beeps sound.	An error or warning is occurring.	This occurs when a warning or error is displayed on the cycle computer. Refer to "Error Message On The Cycle Computer" (page 100) and follow the instructions provided for the appropriate code.
When using an electronic gear shifting, I feel that the level of assistance weakens when the gears shift.	This occurs because the level of assistance is being adjusted to the optimum level by computer.	It is not a sign of a malfunction.
Sound occurs after gear shifting.		Contact the place of purchase.

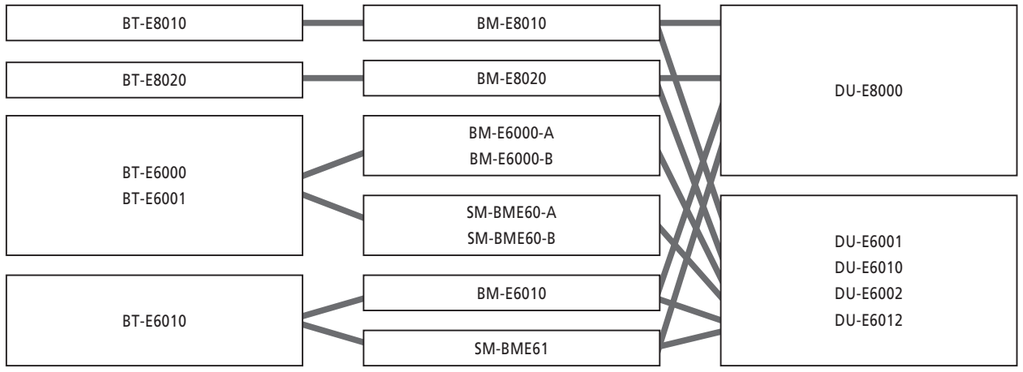
Symptom	Cause / Possibility	Remedy
A noise can be heard from the rear wheel during normal riding.	Gear shifting adjustment may not have been carried out correctly.	**For mechanical gear shifting** Adjust the cable tension. For details, refer to the Service Instructions for the derailleur. **For electronic gear shifting** Contact the place of purchase.
When you stop the bicycle, the gear does not shift to the position preset in the start mode.	You may have been pressing the pedals too strongly.	If you press the pedals lightly, the gear shifts more easily.

FAQ

Subject	Question	Answer
SYSTEM	Can we ride the bike with E8000 series in the mountain?	It depends on the country, region and complete bicycle style. Please check the local regulation. But SHIMANO STEPS E8000 series follows EN15194 regulation.
SYSTEM	How to start the system?	Press the power on button on Battery. In case of SC-E6010, press the power button on SC-E6010 or Battery.
SYSTEM	Can DI2 components work with SHIMANO STEPS E8000 series?	Yes, the only rear system of XTR M9050 series or XT M8050 series can work (without SM-BTR1, SM-BTR2 and BT-DN110).
SYSTEM	Which speed is available for SHIMANO STEPS E8000 Series?	1x11 speed is available with rear derailleur (DI2 and mechanical) , 1x10 speed is available with rear derailleur (only mechanical).
SYSTEM	Is the Auto mode available for E8000 series?	No, it is not available. Because the E8000 series is designed with only rear derailleur, isn't designed with 8speed internal geaed hubs DI2.
SYSTEM	How much speed can the drive unit assist the power?	It can assist by 25km/h.
SYSTEM	How many assist modes are available for E8000 series?	4 Modes are available (Boost, Trail, Eco and Walk) Refer to "ASSIST MODE" (page 26).
SYSTEM	How long distance of each mode?	Eco : 100km (800hm*) Trail : 75km (600hm*) Boost : 50km (400hm*) * height meters: climbing distance (positive altitude)
SYSTEM	How many percentage is the power assist level for each modes?	Boost : 300%
SYSTEM	How many torque is the power assist level for each modes?	Boost : 70Nm, Trail and Eco : (no announcement)
SYSTEM	How many watts can the drive unit produce?	250W (rated power)
SYSTEM	Can I buy the fixing bolts on the frame for E8000 series drive unit (DU-E8000) from SHIMANO?	No, you can't. You should contact the bike brand maker or importer.
SYSTEM	Which battery is available for E8000 series drive unit? And how big is the capacity?	3 types are available on down tube type. It is not available on rear carrier type. And the biggest capacity is 504Wh. Refer to "BATTERY / BATTERY MOUNT" (page 20) for detail.
SYSTEM	Can I use other 3rd party battery?	Yes, . But the system can't work and recognize it without authorization by Shimano.
SYSTEM	Can I connect two batteries at same time?	No, you can't. The system doesn't accept.
SYSTEM	Can I change the gear combinations?	No, you can't. The gear combinations can be set by OEM manufactures or SHIMANO only.
SYSTEM	Can I replace the chain ring or cassette sprocket with same gear combinations?	Yes, you can.
SYSTEM	Can I use TL-FC38 of E6000 series for E8000 series to replace the chain ring?	No, you can't. You should use new TL-FC39 for E8000 series.
SYSTEM	What is basic different between FC-E8050 and FC-E8000?	The basic different is FC-E8050 is hollow crank and light weight, FC-E8000 is a solid crank.
SYSTEM	Does Q-factor with chain ring SM-CRE80-B become bigger than with SM-CRE80?	No, Q-factor is same.
SYSTEM	How wide is Q-factor for E8000 series? Is it different from E6000 series?	E8000 series Q-factor is 177mm which is smaller than E6000 series 189mm. Refer to "Q-FACTOR KEPT FOR PEDALLING COMFORT" (page 14).
SYSTEM	Do I have to use the chain device?	No, it is not must. But we strongly recommend to use it for aggressive riding especially.
SYSTEM	Where can the chain device be fixed?	Normally it can be fixed on the drive unit directly with chain ring SM-CRE80-B, or on the frame mount drive unit with SM-CRE80.
SYSTEM	Can I use my smart phone as cycle computer for SHIMANO STEPS E8000 series?	Yes, you can use it by connecting with wireless unit like SC-E8000, EW-WU111and EW-WU101.
CYCLE COMPUTER	Is there any new functions on cycle computer?	It can shows Cadence.
BATTERY & BATTERY MOUNT	Can I know the compatibility between a battery and battery mount etc.?	Refer the compatibility chart for detail on Annex-1 (page 108).
E-TUBE	Is E-TUBE application available on the tablet and smart phone both?	Yes, it is. (Ver.3.1 onwards for iPad and iPhone, Ver3.2 onwards for Android tablet and smart phone)
E-TUBE	Do I have to pay for E-TUBE application on a tablet or a smart phone?	No, it is free.
E-TUBE	Is the error check with E-TUBE by connecting Bluetooth LE available on smart phone?	No, it is not available.
WATER PROOF	Which IPX level of water proof is for E8000 series?	IPX4, but Internal Shimano standard same level as DI2 product. We do not recommend high pressure water
WEIGHT	How much wegiht of drive unit and battery is?	Drive unit weight is 2.88kg (without drive unit cover). BT-E8010 weight is 2.65kg BT-E8020 weight is 2.9kg

Annex-1

Battery and battery mount compatibility



SHIMANO STEPS | CITY

SHIMANO STEPS | *TREKKING*

E6000 Series

PROVIDING THE PLEASURE OF PUSHING PEDALS EVERY DAY

Easy and light handling, smooth and silent shifting, just the right amount of power assist to make your ride comfortable. All these factors contribute to a balanced pedaling sensation. With SHIMANO STEPS the joy of riding a bicycle is retained, while providing an even higher level of freedom. Independent of fitness level or age, long rides or steep slopes become easier than ever. Avoiding the stressful environment of motorized traffic, congestion or CO_2 emission are nog longer an issue, making SHIMANO STEPS a sustainable choice.
Whether riding in urban areas or getting away for a special adventure, SHIMANO lets you go where you like, when you like. Because SHIMANO thinks of e-bikes as bicycles, we are able to deliver a genuine cycling experience.

THE PHILOSOPHY BEHIND SHIMANO STEPS

E6000 Series system uses a midship drive unit in consideration of the weight balance of the completed bike, which offers natural riding feel handling. The electronic systems, including the driveunit, were designed with a focus on weather resistance and reliability. The SHIMANO STEPS system features pedal assist which doesn't negate the sense of pedaling a bicycle and provides a natural sense of braking. Smooth, accurate gear shifting is made possible via intelligent control. All of these features combine to offer a new level of e-bike usability and riding comfort.

SYSTEM MECHANISM E6000 Series


Gray version


Black version

CITY TOURING TYPE


ASSIST SWITCH
SW-E6000


SHIFT SWITCH
SW-E6000


ASSIST SWITCH
SW-E6010-L

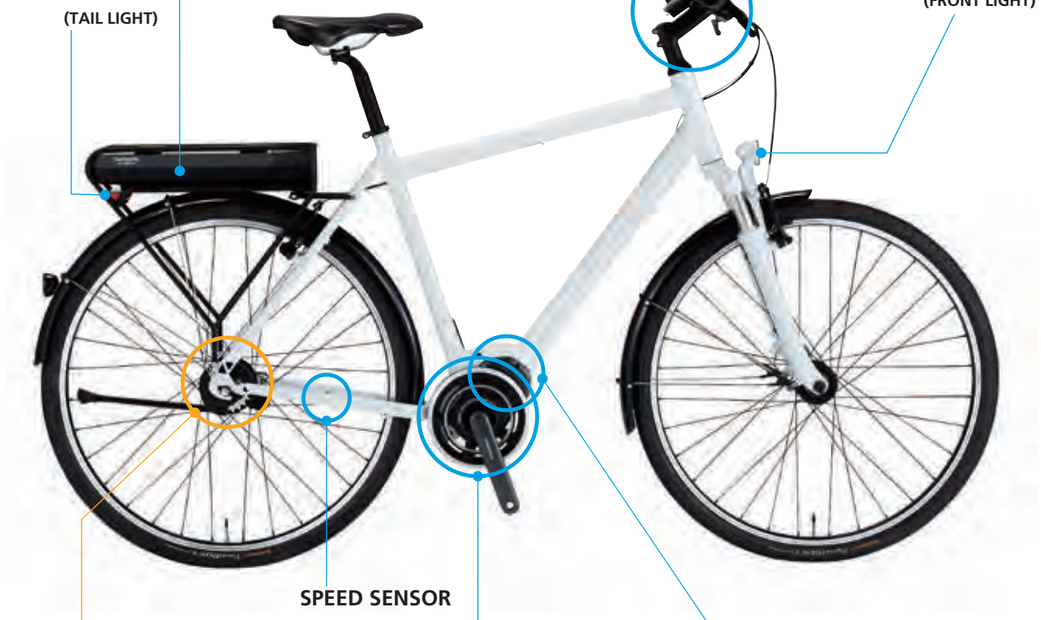

SHIFT SWITCH
SW-E6010-R


CYCLE COMPUTER
SC-E6010 / SC-E6000

BATTERY & BATTERY MOUNT (FOR REAR CARRIER)
BT-E6000 / BM-E6000 / BT-E6001

(TAIL LIGHT)

(FRONT LIGHT)



SPEED SENSOR

INTERNAL GEARED HUB
MOTOR UNIT
SG-S7051 / C6061 & MU-S705
SYNCHROMATIC

- CHAIN RING SM-CRE60
- CRANK ARM SET FC-E6000 / FC-E6010
- DRIVE UNIT DU-E6001 / DU-E6002 / DU-E6010 / DU-E6012
- DRIVE UNIT COVER

LIGHT OFFROAD TYPE

- ASSIST SWITCH
- CYCLE COMPUTER
  SW-E6000 / SW-E6010
  SC-E6010 / SC-E6000

BATTERY & BATTERY MOUNT (FOR DOWN TUBE)
BT-E8010 / BM-E8010 / BT-E6010 / BM-E6010

SPEED SENSOR

- CHAIN RING SM-CRE60
- CRANK ARM SET FC-E6000 / FC-E6010
- DRIVE UNIT DU-E6001 / DU-E6002 / DU-E6010 / DU-E6012
- DRIVE UNIT COVER

Note: Light Offroad uses a specialized software. (It is set by OEM manufacturers)

E6000 SERIES LIST

DU-E6001/E6002

tube

SYMPHOMATIC

DU-E6010 / E6012

tube SYMPHOMATIC

DU-E6001 / E6002

Drive Unit for disc brake/rim brake/roller brake

- Compact/Lightweight
- Operating Temperature: -10°C~+50°C
  Storage Temperature: -20°C~+70°C
- Normal Voltage: 36V
- Rated Output: 250W (EPAC EN15194)
- Max Torque: 50N·m
- Sensor: Torque Sensor/Cadence Sensor/Crank Position Sensor/Speed Sensor
- Standard included » Walk assist
  » SYMPHOMATIC (when using DI2 internal geared hub)
  » Start mode (when using DI2 internal geared hub)
  » Full automatic shifting (when using DI2 8 speed internal geared hub)
- Color options: Black, Gray

DU-E6010 / E6012

Drive Unit for coaster brake

- Natural brake feeling
- Standard included » Walk assist
  » SYMPHOMATIC (when using DI2 internal geared hub)
  » Start mode (when using DI2 internal geared hub)
  » Full automatic shifting (when using DI2 8 speed internal geared hub)
- Black color

• SPEED SENSOR UNIT » Cable length: 340 / 540 / 1400mm

DI2 tube SYMPHOMATIC

SG-S7051 / C6061 & MU-S705

Internal Geared Hub DI2 & Motor Unit

- Available in 8 or 11-speed versions
- Choose from a disc brake, hub roller brake, V-brake or coaster brake
- Durable construction and low maintenance requirements

Note: SHIMANO STEPS can also be used with a mechanical rear derailleur or internal geared hub.

FC-E6000 FC-E6010 SM-CRE60

SM-CRE60

Chainring

- Combine with FC-E6000 / FC-E6010
- Gear combination: 38T, 44T
- Rear speed options: 11-speed, 10/9-speed
- Color options: Black/Silver, Black/Gray

FC-E6000 / FC-E6010

Crankset

- Crank arm length: 170, 175mm
- Color options: Black, Gray

SC-E6010

tube

SC-E6000

tube

SC-E6010

Cycle Computer

- Easy to read screen
  » Wide display with large font
- Simple operation
  » Power on/off switch
  » Light on/off switch
- More convenient
  » Adapts 6 languages (English, French, German, Dutch, Italian and Spanish)
- Maintains compatibility
  » Compatible with SC-E6000 bracket

SC-E6000

Cycle Computer

- Standard computer functions
- Multiple mounting options, with different angles and positions

SW-E6000

tube

SIS

SW-E6010

tube

SW-E6000

Shift Switch / Assist Switch

- Switch for DI2 shift and for assist mode (High/Normal/ECO/Off)
- Switch for cycle computer contents
- Color options: Black, Gray

SW-E6010-L/R

Shift Switch / Assist Switch

- Attractive styling
- Ergonomic shape and intuitive operation
- Distinctive click feeling

SM-DUE01

Light Adapter

Electrical specifications for lights

- 6 V (+- 0.5V)
- Output max. 1000mA (tail and front light combined)
- No stand-light function.

BT-E6000
BT-E6001
BM-E6000

BT-E6000

Battery for Rear Carrier

- Capacity: 418Wh (36V, 11.6Ah)
- Charging time: 4hours
- Temperature: +0°C~+40°C (Charging)
  -10°C~+50°C (Operating)
- Battery life: *1000 cycles *After 1,000 cycles full charging still more than 250Wh
- Color options: Black, Gray

BT-E6001

Battery for Rear Carrier

BT-E8010

Battery for Down Tube

- Capacity: 504Wh (36V, 14Ah)
- Charging time: 5hours
- Temperature: +0°C~+40°C (Charging)
  -10°C~+50°C (Operating)
- Battery life: *1000 cycles *After 1,000 cycles full charging still more than 300Wh
- Color options: Black, Gray (BT-E6001)
  Black (BT-8010)

BT-E8010
BM-E8010

BM-E6000-A/B

Battery Mount for Rear Carrier

BM-E6010 / BM-E8010

Battery Mount for Down Tube

- Clean appearance
- More convenient
  » Charge without removing battery
- Color options: Black, Gray (BM-E6000-A/B)
  Black (BM-E6010, BM-E8010)

BT-E6010
BM-E6010

BT-E6010

Battery Mount for Down Tube

BT-E6010 — BM-E6010 — SM-BME61 — DU-E6001 DU-E6002 DU-E6010 DU-E6012

BT-E8010 — BM-E8010

(Refer annex-1 for detail on page 108)

Adapter

EC-E6000

EC-E6000

Battery Charger

- Charge without removing battery
- Charge with battery directly by using adapter
- Fast charging time – charges to 80% of total capacity in 2h (418Wh) or 2.5h (504W), 100% in 4h (418Wh) or 5h (504Wh)
- Small connector

SYMPHOMATIC

SHIMANO STEPS features computer-controlled shifting systems, that are combined with SHIMANO's unique DI2 technology to accurately detect and analyze the rider's pedaling force after operating the rear shift switch. This is a ground-breaking system that momentarily relaxes the assist force from the motor, allowing the rear internal gear hub to shift smoothly.

SYMPHOMATIC DI2

FULL AUTOMATIC SHIFTING MODE（8 speed only）

E6000 Series drive unit in combination with a DI2-compatible 8 speed internal geared hub to offer full automatic shifting. The SHIMANO STEPS system automatically selects and shifts into the optimum gear, based on the number of crank rotations and speed. Also, riders can always manually shift into the gear they want, even in auto mode. When they do, the SHIMANO STEPS system uses a learning function to recognize the manual shift operation and automatically fine-tune future automatic shift timings to the rider's liking. This offers a stress-free ride, eliminating the need for the rider to worry about whether they're in the right gear or have to change gears after an abrupt stop.

DI2

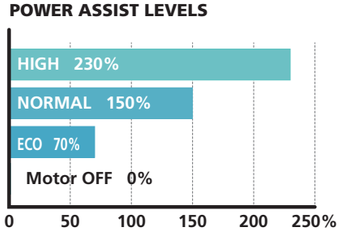
CONVENIENT WALK ASSIST

The Walk Assist Mode provides electrically driven assistance when traveling at 6 km/h or less. This is particularly helpful when pushing your bicycle up a steep slope, such as when exiting an underground parking area. Ergonomic switch designs allow easy operation.

SUFFICIENT ASSIST POWER

The SHIMANO STEPS drive unit is compact and lightweight. The system also features motors with 50 N·m max output (equivalent to a pedal force of about 300N), enough to handle steep slopes.

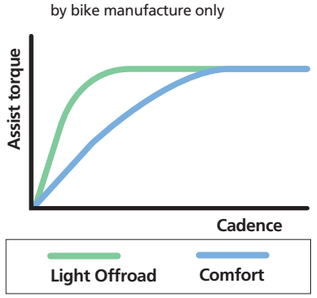
POWER ASSIST LEVELS



DIFFERENT RIDING CHARACTERISTIC

E-Bikes with a Light offroad setting have a more dynamic and faster acceleration compared to comfort E-Bikes.

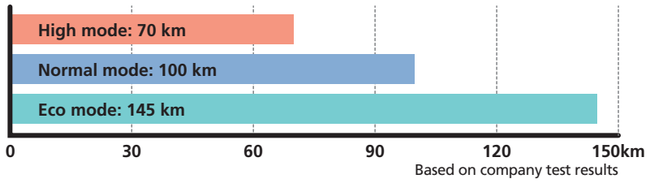
Note: Change of setting by bike manufacture only



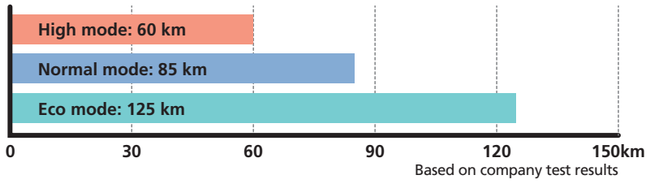
OPTIMIZED BATTERY DESIGN

The small-size, light-weight SHIMANO STEPS system also contributes to battery performance. SHIMANO tests show that fully-charged batteries allow travel distances of 70 km in High Mode, 100 km in Normal Mode, and 145 km in Eco Mode. The SHIMANO STEPS system has a longer range of assistance compared to competitor models, which is made possible by considering the capacity of the battery to achieve low power consumption per km.

<504Wh battery>



<418Wh battery>



QUICK CHARGING

The battery can be charged to approximately 80% of capacity in 2 hours(418wh), 2.5 hours(504wh) with EC-E6000, which offers peace of mind in case you forget to charge the battery the night before.

<EC-E6000> Changing Rate	418Wh	504Wh
80%	2 hours	2.5 hours
100%	4 hours	5 hours

<SM-BCE60> Changing Rate	418Wh	504Wh
80%	3.2 hours	4 hours
100%	4 hours	5 hours

RECEIVED GOOD REVIEWS IN PROFESSIONAL JOURNALS IN EUROPE

SAZ bike

1 / 2017

E-drive manufacturer rankings

Supplier

	2016 score	previous year
1. SHIMANO	1,73	1,87
2. Bosch	1,86	1,99
3. Neodrivers	1,97	
4. Yamaha	2,04	2,03
5. Panasonic	2,32	2,22
6. Ansmann	2,55	2,80
7. Brose	2,58	2,41
8. Go Swissdrive	2,70	2,89
9. Impulse	2,72	2,55
10. TeanzX	3,23	3,14
11. BionX	3,76	3,59

SHIMANO STEPS was ranked highest in Product quality, Complaints handling, Service and Maintenance costs for E-Bike System suppliers.

SHIMANO STEPS

E6000 Series

BASIC USAGE INFORMATION

IMPORTANT NOTICE

This booklet is an excerpt from the user's manual and dealer's manual.

For the latest version of each manual, visit our website at:
http://si.shimano.com

This booklet shows the steps for assembly. For disassembly, perform these steps in reverse order.

HOW TO USE

Charging the battery
Be sure to charge it before use.
❯ Refer to following section

▼

Turn on the power.
Power cannot be turned on while charging.
❯ Refer to "TURNING THE POWER ON/OFF" (page 128)

▼

Select your preferred assist mode.
Assistance will start when the pedals start turning.
❯ Refer to "CHANGING THE ASSIST MODE" (page 130)

▼

Change the assist mode in accordance with the riding conditions.

▼

Turn off the power when parking the bicycle.
❯ Refer to "TURNING THE POWER ON/OFF" (page 128)

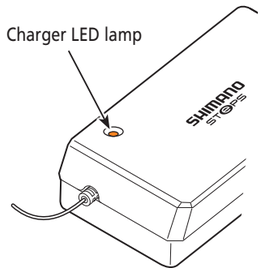
CHARGING THE BATTERY

You cannot use the battery immediately after shipment. The battery can be used after charging it with the designated charger. The battery can be used when the LED on it lights up.
Charging time depends on the battery charger model.

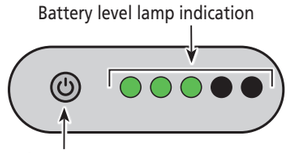
About battery and charger displays

You can check the current charging status.

● **Lights up**	Charging (Within 1 hour after the completion of charging)
☀ **Flashing**	Charging error
● **Turned off**	Battery disconnected (1 hour or more after the completion of charging)



You can check the current charging status on the battery level lamp located on the battery.



Charging-in-progress indication*1	Battery level
☀ ● ● ● ●	0% - 20%
● ☀ ● ● ●	21% - 40%
● ● ☀ ● ●	41% - 60%
● ● ● ☀ ●	61% - 80%
● ● ● ● ☀	81% - 99%
● ● ● ● ●	100%

Empty ▼ Charged

*1 ● : No light ● : Lights up ☀ : Flashing

The current battery level can be checked by pressing the battery's power button.

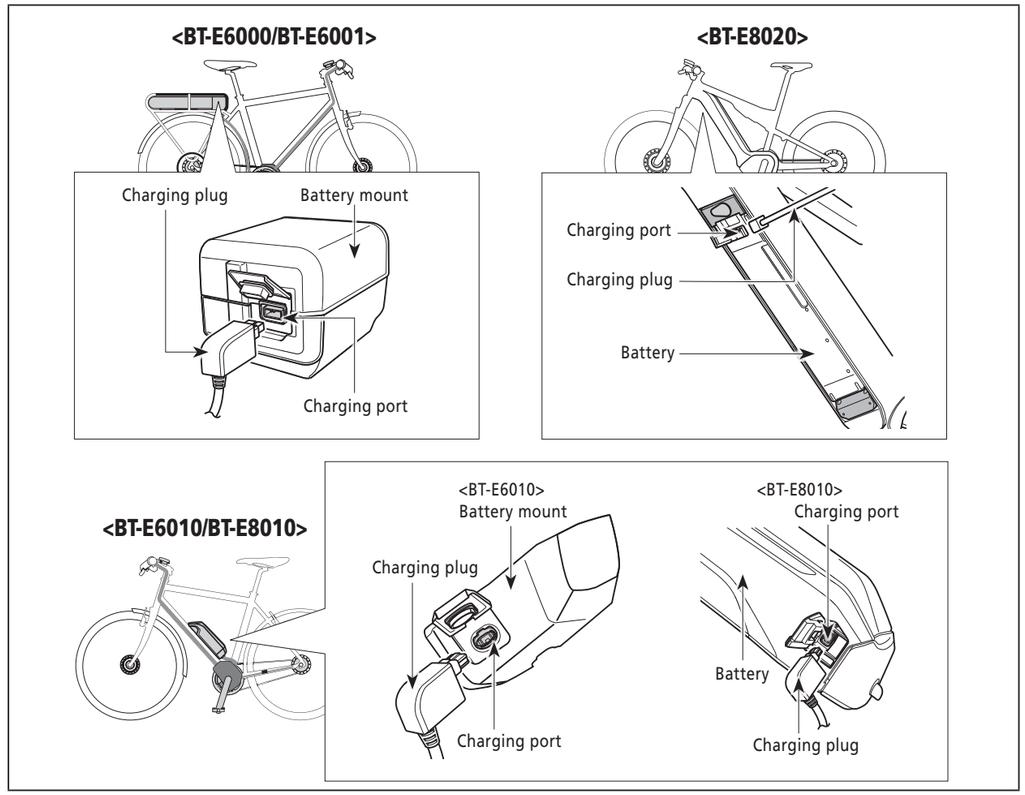
Current remaining battery level indication*1	Battery level
● ● ● ● ●	100% - 81%
● ● ● ● ●	80% - 61%
● ● ● ● ●	60% - 41%
● ● ● ● ●	40% - 21%
● ● ● ● ●	20% - 1%
☀ ● ● ● ●	0%
● ● ● ● ●	Power off / Shutdown

Charged ▼ Empty

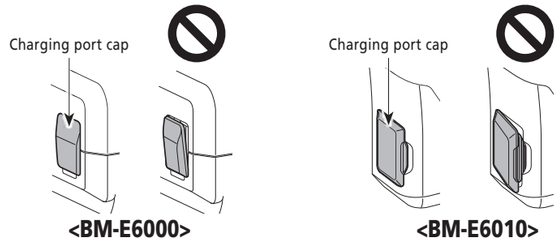
*1 ● : No light ● : Lights up ☀ : Flashing

Charging the Battery While Installed onto the Bicycle with EC-E6000 only

1. Insert the Battery Charger power plug into the outlet.
2. Insert the charging plug into the charging port on the battery mount or the battery.



- Place the battery charger main body on a steady surface such as the floor before charging.
- Stabilize the bicycle to ensure that it does not collapse during charging.
- Make sure that the charging port cap is closed securely.



Charging the Battery Alone

Charge the batteries on a flat surface indoors.

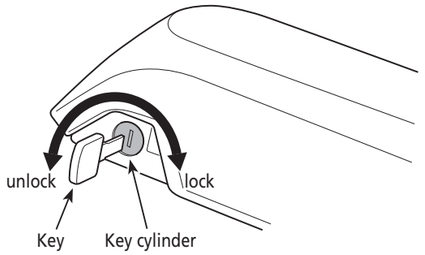
Battery for Down Tube

1. Turn off the power.
2. Insert the key into the key cylinder in the battery holder, then turn the key to the unlocking position.

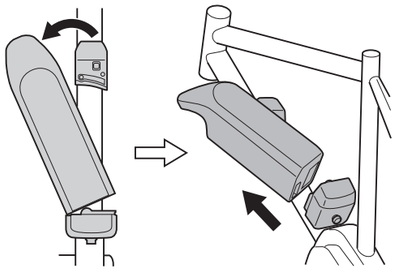
CAUTION

To prevent the battery from dropping off, do not ride the bicycle with the key inserted.

- The position of the key does not affect the insertion of the battery. You can insert it regardless of the key position.
- You cannot remove the key when it is not in the inserting position.



3. Hold the upper part of the battery and slide it to the left to remove it.



BT-E8010
BT-E8020

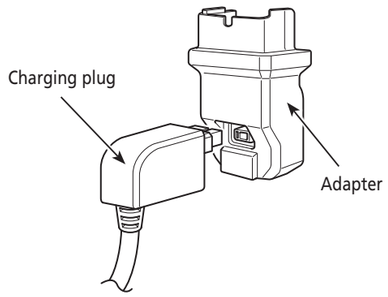
4. Refer to "Removing the Battery" (page 33).
   Refer to "When Charging the Battery Alone" (page 29).
   Refer to "Installation of the Battery" (page 32).

BT-E6010

4. Attach the adapter to the charging plug (<EC-E6000> only).

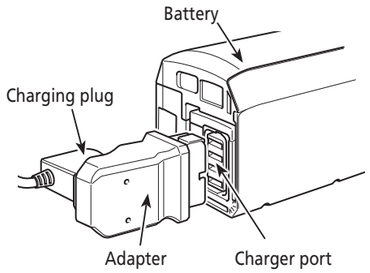
5. Plug the charger's power plug into the outlet.

<EC-E6000> only



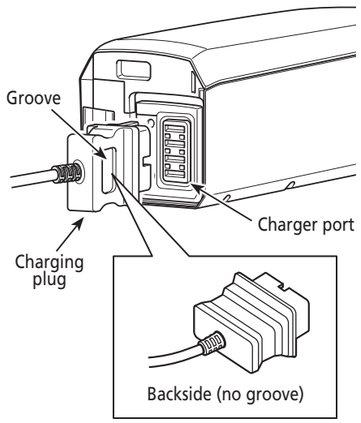
6. Attach the adapter (<EC-E6000>) / charging plug (<SM-BCE60>) into the charging port.

<EC-E6000>



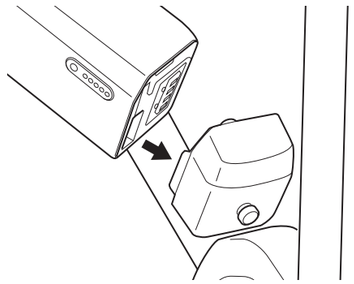
- When inserting the adapter into the charger port, hold the charging plug so it is facing down toward the adapter. Do not insert the charging plug upward into the adapter.

<SM-BCE60>

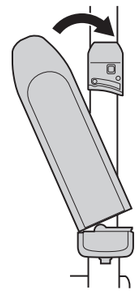


- You cannot insert it with the groove side facing down.

7. After battery charged, Align the indentation in the bottom of the battery with the protrusion on the holder and insert the battery.



8. Slide the battery to the right starting from the point where it is inserted. Push in the battery until you hear it click.



9. Return the key to the locking position, remove it, and store it in a safe place.

⚠ CAUTION

Check to see that the battery is locked before riding the bicycle. The battery may fall out while riding if not properly locked in place.

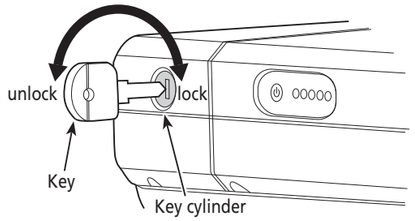
Battery for Rear Carrier <BT-E6001/E6000>

1. Turn off the power.

2. Insert the key into the key cylinder in the battery holder, then turn the key to the unlocking position.

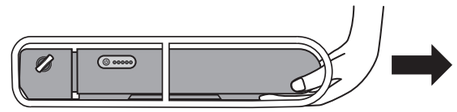
⚠ CAUTION

To prevent the battery from dropping off, do not ride the bicycle with the key inserted.



- The position of the key does not affect the insertion of the battery. You can insert it regardless of the key position.
- You cannot remove the key when it is not in the inserting position.

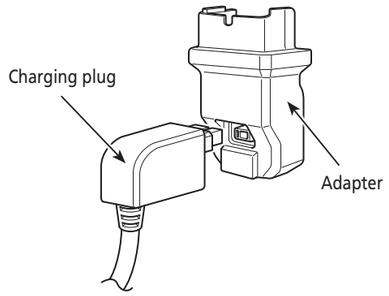
3. Pull out the battery.



4. Attach the adapter to the charging plug (<EC-E6000> only).

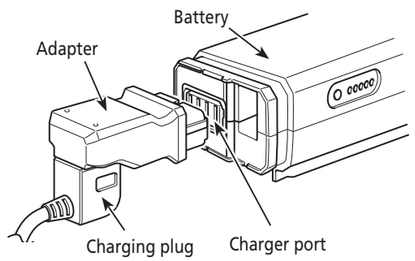
5. Plug the charger's power plug into the outlet.

<EC-E6000> only



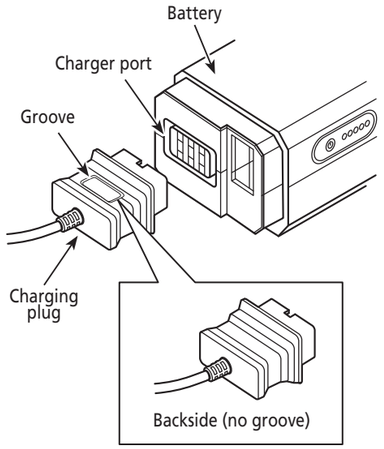
6. Attach the adapter (<EC-E6000>) / charging plug (<SM-BCE60>) into the charging port.

<EC-E6000>



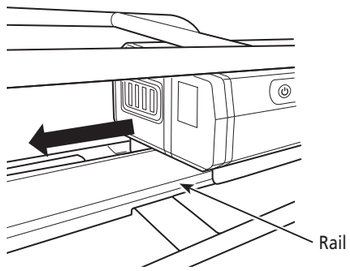
• When inserting the adapter into the charger port, hold the charging plug so it is facing down toward the adapter. Do not insert the charging plug upward into the adapter.

<SM-BCE60>



• You cannot insert it with the groove side facing down.

7. After battery charged, set the battery on the holder rail from behind and slide it forward.
Push it in firmly.



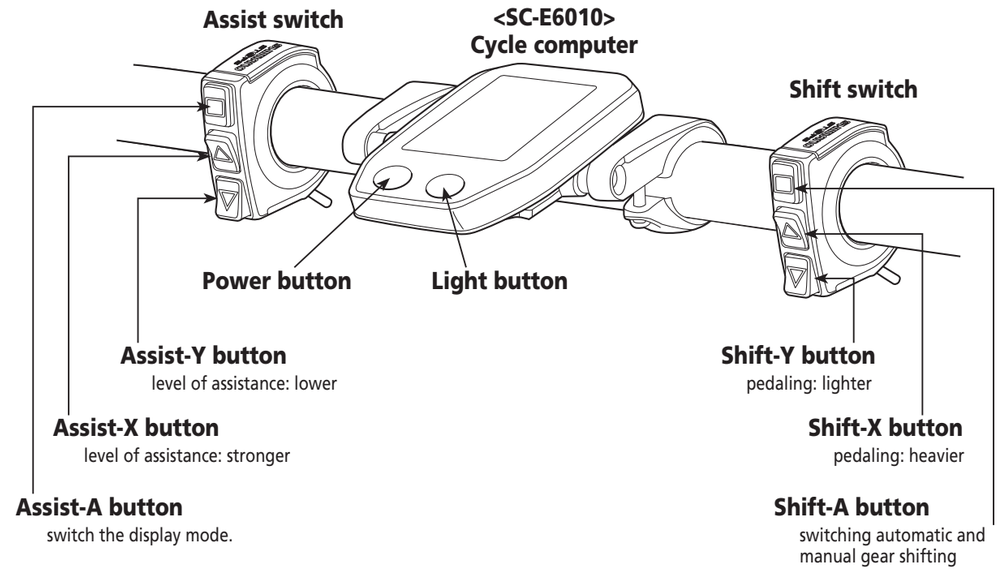
8. Return the key to the locking position, remove it, and store it in a safe place.

⚠ CAUTION

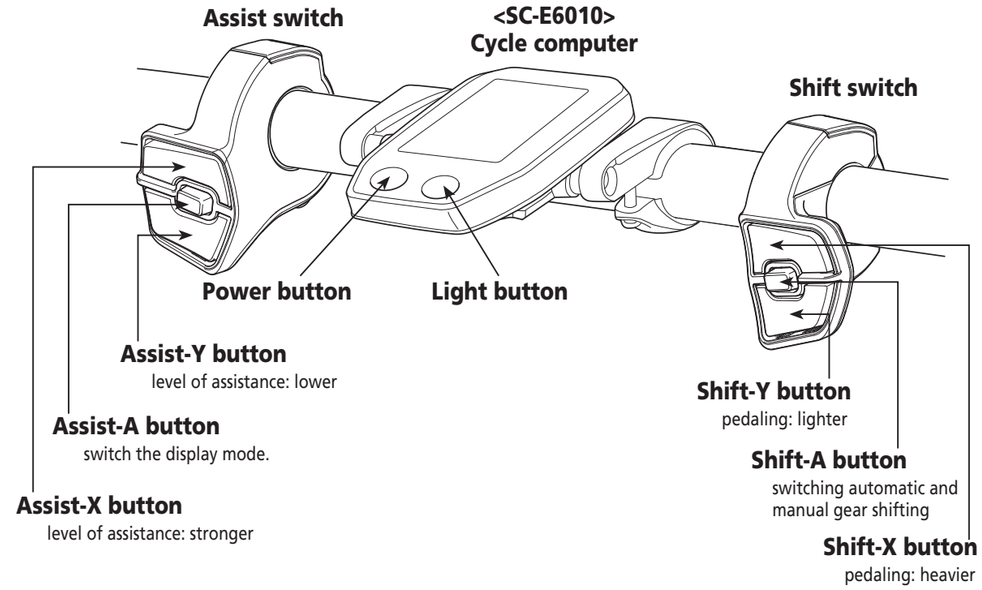
Check that the battery is locked before riding the bicycle. The battery may come loose and fall out if not properly locked in place before riding.

BASIC OPERATIONS

<SW-E6000>



<SW-E6010>

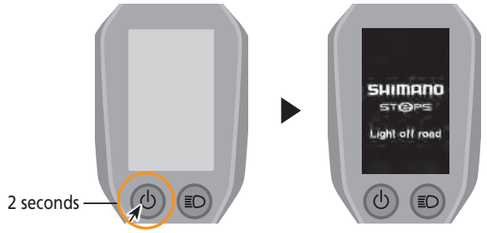


TURNING THE POWER ON/OFF

Turning the power ON and OFF via the Cycle computer <SC-E6010>

1. To turn on the power, hold down the power button for 2 seconds.
Displays the SHIMANO STEPS logo screen during system start up.

2. To turn off the power, hold down the power button for 2 seconds again.
Displays the SHIMANO STEPS logo screen during system shut down.



Example: SC-E6010 in the Light offroad setting.

If built-in battery of cycle computer isn't charged sufficiently, the power will not turn on.
The built-in battery of the cycle computer is charged only when the cycle computer screen is on.

Turning the power ON and OFF via the battery

1. To turn on the power, press the power button once.
All the indicators turn on when the power is on.

⚠ CAUTION

- When turning on the power, check that the battery is firmly attached to the holder.
- Power cannot be turned on while charging.

When turning the power ON or OFF, do not place your foot on the pedal.

2. To turn off the power, press the power button once again.

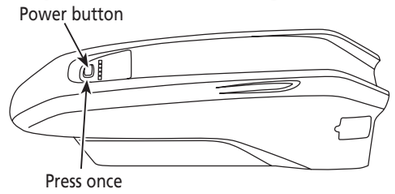
Automatic Power Off Function

If the bicycle has not moved for over 10 minutes, the power will automatically turn off.

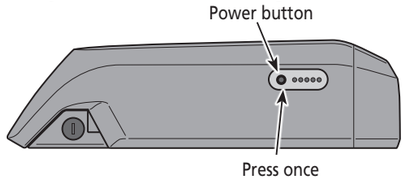
Battery for Down Tube Mounting <BT-E8020>

Refer to "TURNING THE POWER ON / OFF" (page 36)

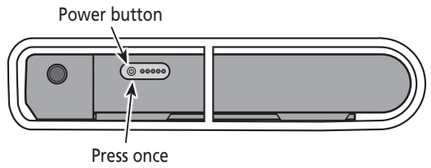
Battery for Down Tube Mounting <BT-E8010>



Battery for Down Tube Mounting <BT-E6010>



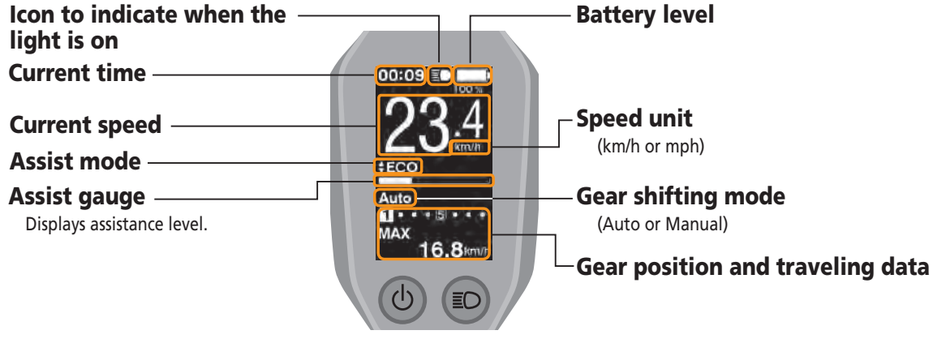
Battery for Rear Carrier <BT-E6001/E6000>



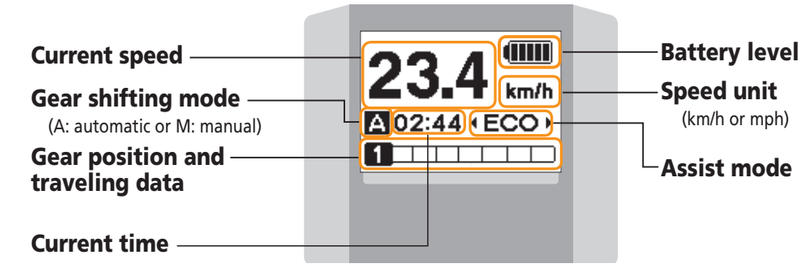
CYCLE COMPUTER

Displays the status of the power assisted bicycle, traveling data.
The number of gears and the shifting mode are only displayed when using electronic gear shifting.

<SC-E6010>



<SC-E6000>



Battery Level Indicator

You can check the battery level on the cycle computer while riding.

<SC-E6010>

Display	Battery level
	100%
	
	0%

<SC-E6000>

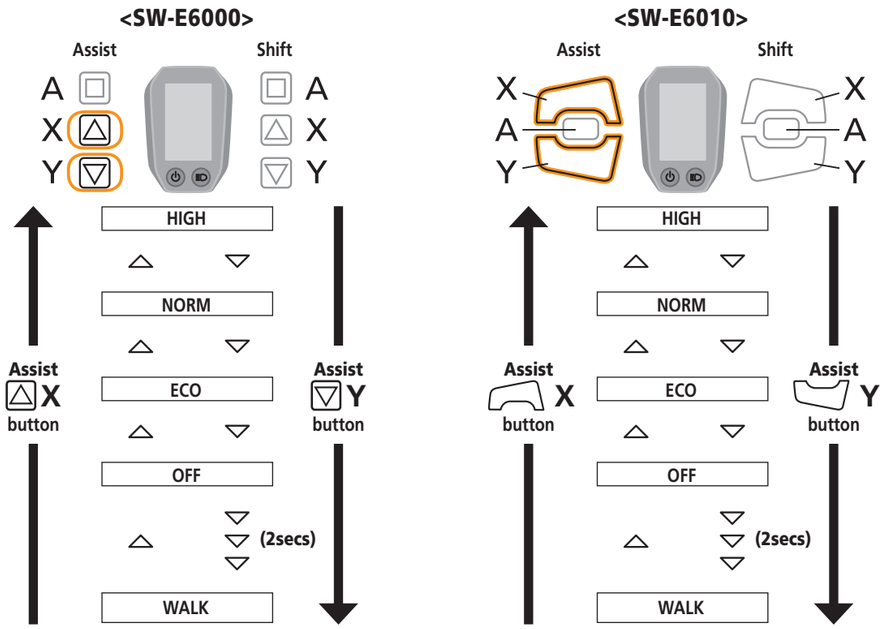
Display	Battery level
	81 - 100%
	61 - 80%
	41 - 60%
	21 - 40%
	1 - 20%
	0%

CHANGING THE ASSIST MODE

You can select a SHIMANO STEPS assist mode for each particular application.

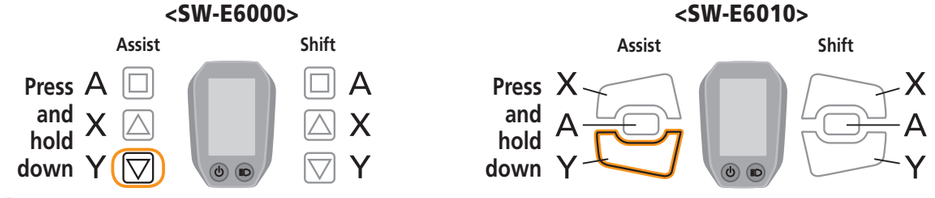
HIGH	NORM (NORMAL)	ECO	WALK
			
Use when powerful assistance is required, such as when riding up steep uphill slopes.	Use when an intermediate level of assistance is needed, such as when you want to enjoy riding comfortably on a gentle slope or level ground.	Use when you want to enjoy long distance riding on level ground. When pedaling is not very strong, the amount of assistance is reduced and energy consumption is lessened.	This mode is particularly useful when you walk the bicycle with heavy baggage on it or walk it out of a basement.
OFF			
This mode does not provide power assistance when the power is turned on. Since there is no power consumption associated with the power assistance, it is useful for reducing battery consumption when the battery is running low.			

How to Change the Assist Mode



Walk Assist Mode Operation

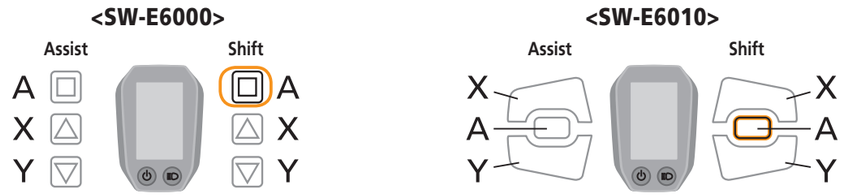
1. When "WALK" is displayed, press and hold down Assist-Y button to start the walk assist function.
2. Releasing Assist-Y button, or pressing Assist-X button can stop the walk assist function.

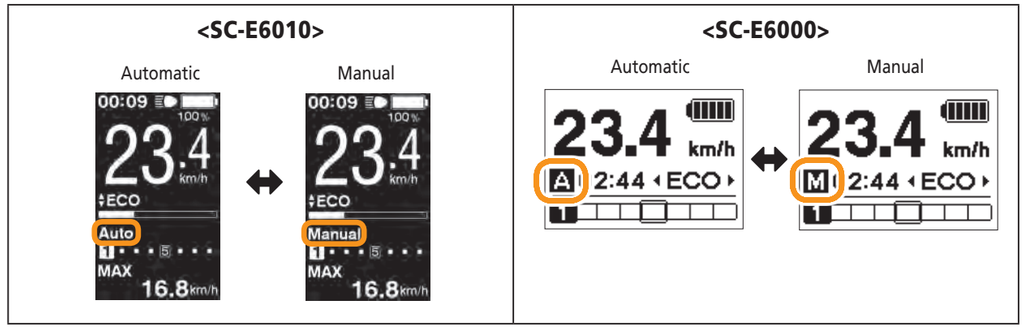


- If Assist-Y is not operated for over 1 minute, the mode will change to OFF.
- If the bicycle does not move after the walk assist function turns on, the function automatically stops. To restart the walk assist function, release the assist switch and press and hold down Assist- Y again.
- The walk assist function can operate at a maximum of 6 km/h.
- The assistance level and speed vary with the gear position.

SWITCHING GEAR SHIFTING MODE (AUTO/MANUAL)

1. From the basic screen, press Shift-A button to switch between automatic and manual gear shifting modes.





TURNING THE BATTERY-POWERED LIGHT ON OR OFF

The light turns off in conjunction with the battery power. When the battery power is off, the light is off.

<SC-E6010>

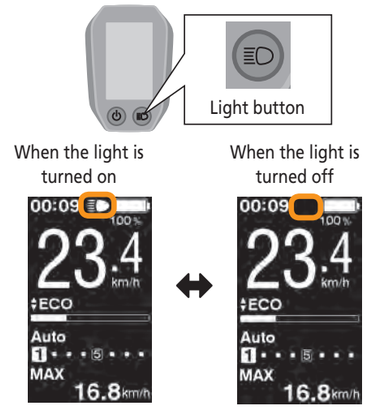
1. Push the light button on the cycle computer to turn the light on

Turning the light on, and an icon indicating that the light is on appears on the screen.

2. Push the button again to turn the light off

Once the light is turned off, the icon on the screen disappears

Note: When the battery powered light is not connected and "Backlight" is set to "MANUAL", pressing the light button turns the cycle computer's backlight on and off.



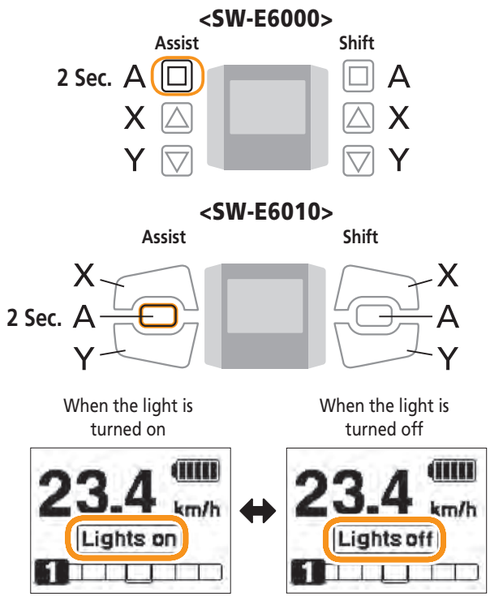
<SC-E6000>

1. To turns light on, press the Assist-A button for 2 seconds.

Displays this information instead of the clock and assist mode. It is displayed for about 2 seconds.

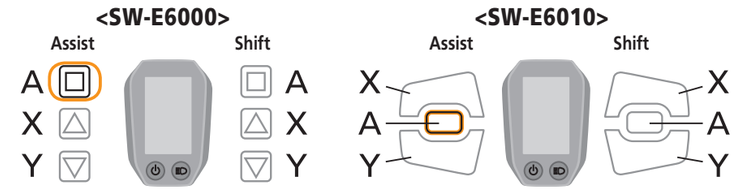
2. To turns light off, press the Assist-A button for 2 seconds again.

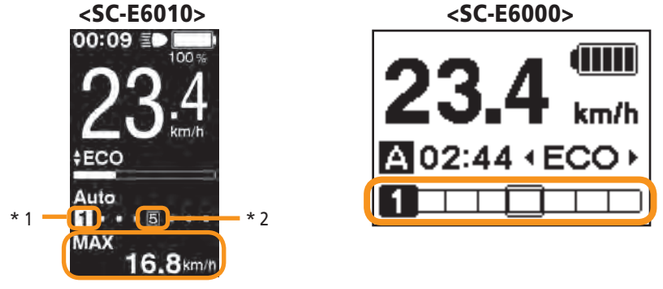
Displays this information instead of the clock and assist mode. It is displayed for about 2 seconds.



SWITCH THE GEAR POSITION AND TRAVELING DATA DISPLAY

Displays the current gear ratio or traveling data.
The type of traveling data displayed changes each time you push Assist-A button.





Display (<SC-E6010>)	Details	Display (<SC-E6000>)
* 1	Gear position*7 (displayed only when the motor unit is connected)	1
* 2	Gear position*6 (when setting start mode)	1
DST 109.7 km	Traveling distance	DST 109.7 km
ODO 11097 km	Cumulative distance	ODO 11097 km
RANGE 97 km	Traveling range*3 *5	RANGE 107 km
RANGE HIGH 61 km NORM 77 km ECO 97 km	Traveling range (optional)*4	RANGE HIGH 61 km NORM 77 km ECO 97 km
TIME 143h 29m	Traveling time (optional)*4	TIME 143:29
AVG 16.8km/h	Average speed (optional)*4	AVG 16.8km/h
MAX 16.8km/h	Maximum speed (optional)*4	MAX 16.8km/h

*3 When "RANGE" is displayed, the battery level and the walk assist indicator do not appear on the screen.
*4 Optional item: You can configure the display settings in E-TUBE PROJECT.
*5 When the walk assist function is working, "-" is displayed in the "RANGE" screen.
*6 The starting gear position is displayed when using start mode.
*7 The gear position is only displayed when using electronic gear shifting.

SHIMANO STEPS

E6000 Series

TECHNICAL DEALER INFORMATION

IMPORTANT NOTICE

This booklet is an excerpt from the user's manual and dealer's manual.

For the latest version of each manual, visit our website at:
http://si.shimano.com

This booklet shows the steps for assembly. For disassembly, perform these steps in reverse order.

LIST OF TOOLS TO BE USED

The following tools are required to assemble or remove the product.

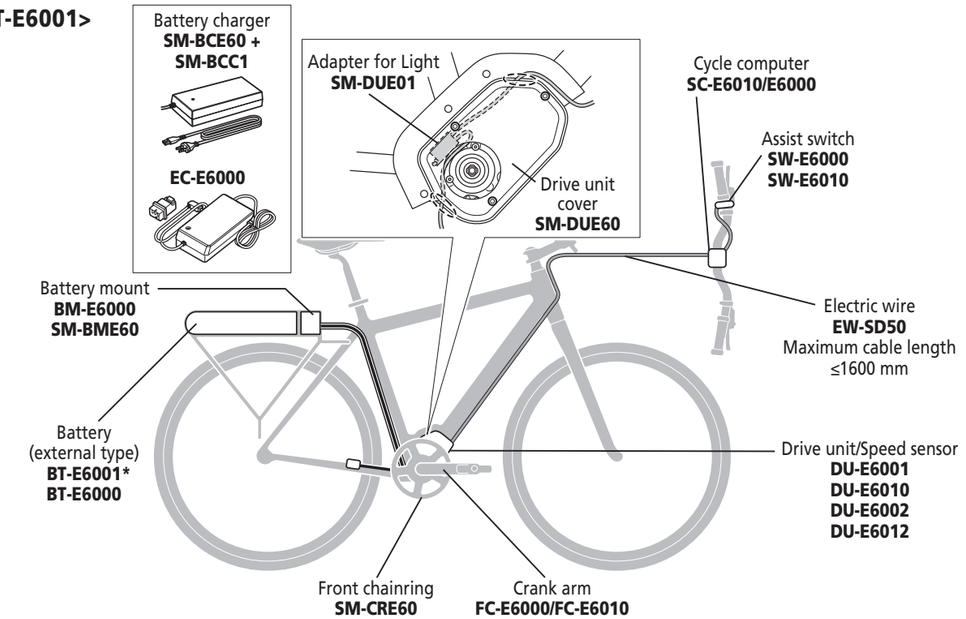
Component	Where to use	Tool	
Cycle computer	Handlebar fixing bolt	#2	Screwdriver #2
	Angle adjustment screw	#2	Screwdriver #2
Assist switch (SW-E6000)	Fixing bolt	#2	Screwdriver #2
Assist switch (SW-E6010)	Fixing bolt	3 mm	3 mm hexagon wrench
Battery Mount (SM-BME61)	Key unit Mount lower case	3 mm	3 mm hexagon wrench
	Key unit cover Mount upper case	#1	Screwdriver #1
Battery Mount (BM-E8010)	Mount lower case	3 mm / 8mm	3 mm hexagon wrench / 8 mm Spanner
	Key unit	3 mm	3 mm hexagon wrench
	Key unit cover	2.5 mm	2.5 mm hexagon wrench
	Mount upper case	2.5 mm	2.5 mm hexagon wrench
Battery Mount (BM-E8020)	Mount lower case	5 mm	5 mm hexagon wrench
	Mount upper case	#2	Screwdriver #2
	Key cylinder	2 mm	2 mm hexagon wrench
	Key unit	5 mm	5 mm hexagon wrench
	Key unit cover	#2	Screwdriver #2
Speed sensor	Speed sensor fixing bolt	4 mm	4 mm hexagon wrench
Magnet unit	Mounting screw	#2	Screwdriver #2
Electric wire	Connector	TL-EW02	TL-EW02
Light adapter	Unit fixing screw	#2	Screwdriver #2
Drive Unit	Frame installation bolt		M8 bolt and nut-compatible*
	Cover fixing bolt (M3)	#2	Screwdriver #2
Front chainring	Lock ring	TL-FC32 / TL-FC36 / TL-FC38	TL-FC32 / 36+TL-FC38
Crank arm	Crank installation bolt	14mm	14 mm socket wrench
Chain	Chain		TL-DUE60

* For information on compatible tools, contact a manufacturer of completed bicycles.

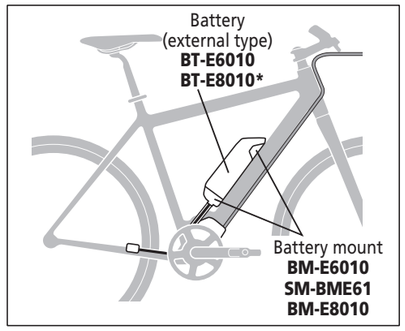
NAME OF PARTS

In the Case of Mechanical Gear Shifting (Rear)

<BT-E6000>
<BT-E6001>

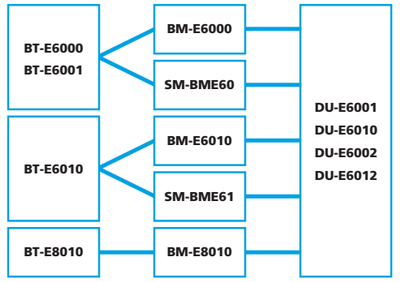


<BT-E6010>
<BT-E8010>



Wire harness
E-TUBE

Compatibility of battery and battery mount

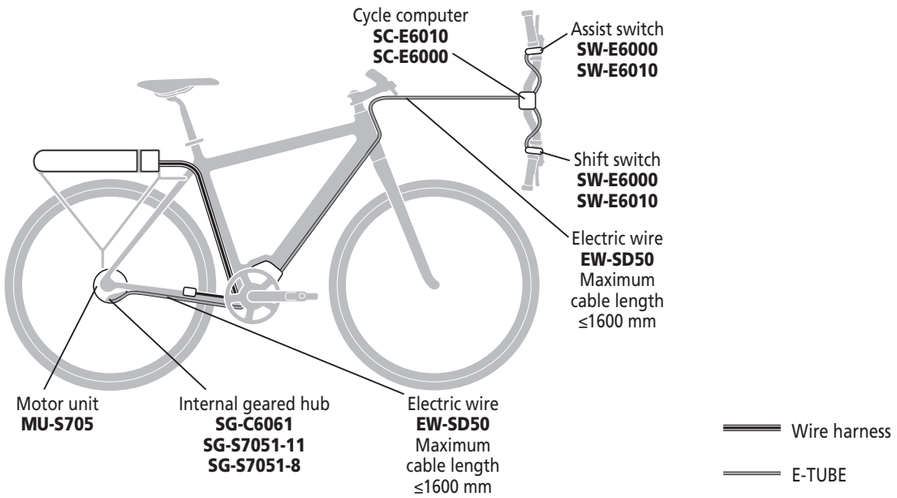


(Refer to Annex-1 (page 108) for detail.

* If the firmware version of the drive unit is 3.2.6 or lower, the battery may not operate properly. Update the firmware version via E-TUBE PROJECT.

The drive specification may be of the belt type. In this case, the front chainring, rear sprocket and belt are supplied by the belt's manufacturer. Also, for details concerning assembly and adjustment, refer to the technical information provided by the belt manufacture.

In the Case of Internal Geared Hub Shifting



- The drive specification may be of the belt type. In this case, the front chainring, rear sprocket and belt are supplied by the belt's manufacturer. Also, for details concerning assembly and adjustment, refer to the technical information provided by the belt manufacturer.
- For information on how to install MU-S705, refer to "Installation of the motor unit to the hub (MU-S705)" in the dealer's manual for the ALFINE S705 series.

SYSTEM SPECIFICATIONS

Operating temperature range: During discharge	-10 – 50 °C	**Battery type**	Lithium Ion Battery
Operating temperature range: During charging	0 – 40 °C	**Nominal capacity**	14 Ah (504Wh) 11.6 Ah (418Wh)
Storage temperature	-20 – 70 °C	**Rated voltage**	36 V DC
Storage temperature (Battery)	-20 – 60 °C	**Drive unit type**	Midship
Charging voltage	100 – 240 V AC	**Motor type**	Brush-less DC
Drive unit maximum torque	50 N·m	**Rated drive unit power**	250W

Note: The range of the assist function speed is different depending on the specifications. DU-E6000, E6001, E6010: 25km/h or less.

CHARGING THE BATTERY

Refer to "**CHARGING THE BATTERY**" (page 120).
Refer to "**BATTERY HANDLING**" (page 35).

BASIC OPERATIONS

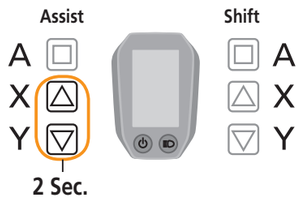
Refer to "**BASIC OPERATIONS**" (page 127).

SETTING MENU OF CYCLE COMPUTER

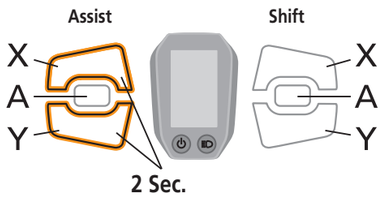
General

1. With the bicycle stopped, pressing both the Assist-X and Assist-Y at the same time for 2 seconds.
The "Setting menu" screen is displayed.

<SW-E6000>

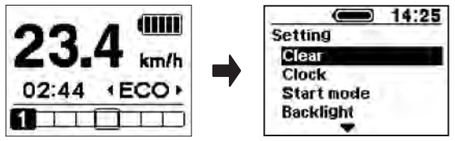


<SW-E6010>



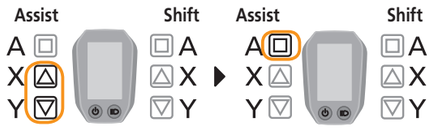
<SC-E6010>

<SC-E6000>



2. Press the Assist-X or Assist-Y to move the cursor to the item you want to configure.
3. Pressing the Assist-A displays the setting screen for the item selected.
4. After the setting is finished, Press the Assist-X or Assist-Y to move the cursor to "Exit".
5. Pressing the Assist-A exits the setting menu and takes you back to the basic screen.

<SW-E6000>



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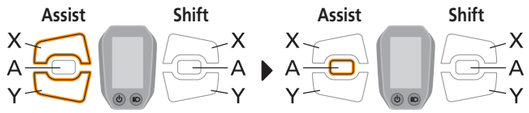


X Y

Configurable items	Details
Clear	Clear settings
Clock	Clock setting
Start mode*2	Start mode setting
Backlight	Backlight setting
Brightness*1	Backlight brightness settings
Beep	Beep setting
Unit	Switching between km and miles
Language	Language setting
Font color*1	Font color settings
Adjust*2	Adjusting the power gear shifting unit
Auto*2	Shift timing adjustment
Exit	Return to the main screen

*1: This menu is only for the <SC-E6010>.
*2: This operation is only available when using electronic gear shifting.

Clear Setting

Clear the traveling distance, or reset the display setting to default.

1. With the bicycle stopped, pressing both the Assist-X and Assist-Y at the same time for 2 seconds.
The "Setting menu" screen is displayed.

2. Press the Assist-X and Assist-Y to move the cursor to "Clear", then press the Assist-A.
"Clear" setting screen is displayed.

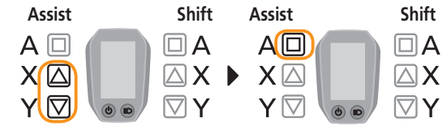
3. Press the Assist-X or Assist-Y to move the cursor to the item you want to configure.

Configurable items	Details
Exit	Return to the setting menu screen
DST	Clearing the traveling distance
Default	Reset the SC display setting to default

Default value set in the SC display setting

Configurable items	Default value
Backlight	ON
Beep	ON
Unit	km
Language	English
<SC-E6010> Brightness	3
<SC-E6010> Font color	White

<SW-E6000>



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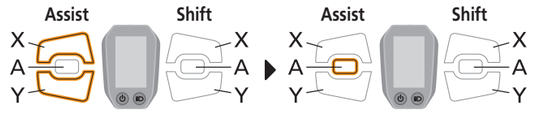


<SC-E6010>

<SC-E6000>

4. Pressing the Assist-A button enables the setting item indicate by the cursor and takes you back to the "Setting menu" screen.

When the traveling distance is cleared, TIME, AVG, and MAX are also cleared.

5. Press the Assist-X or Assist-Y to move the cursor to "Exit".
6. Pressing the Assist-A exits the setting menu and takes you back to the basic screen.

Clock Setting

Configure the clock setting.

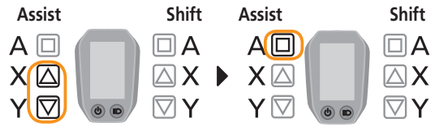
1. **With the bicycle stopped, pressing both the Assist-X and Assist-Y at the same time for 2 seconds.**
   The "Setting menu" screen is displayed.

2. **Press the Assist-X and Assist-Y to move the cursor to "Clock", then press the Assist-A.**
   "Clock" setting screen is displayed.

3. **Press the Assist-X or Assist-Y to set the hour, then press the Assist-A enables the set value.**
   The cursor moves to the minutes setting.

Press Assist-X to increase the numbers.
Press Assist-Y to decrease the numbers.

<SW-E6000>



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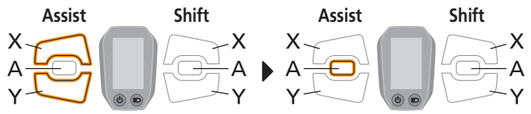
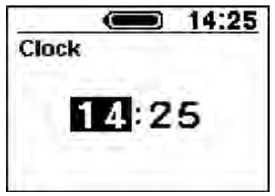


<SC-E6010>

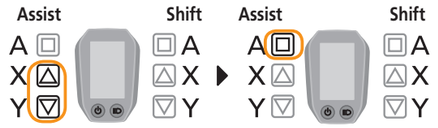
<SC-E6000>



4. **Press the Assist-X or Assist-Y to set the minutes, then press the Assist-A enables the set value.**
   The "Setting menu" screen is displayed.

You can change the numbers quickly by holding down the Assist-X or Assist-Y.

<SW-E6000>



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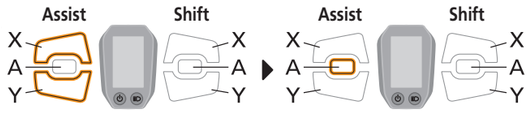


5. **Press the Assist-X or Assist-Y to move the cursor to "Exit".**

6. **Pressing the Assist-A exits the setting menu and takes you back to the basic screen.**

Start Mode Setting

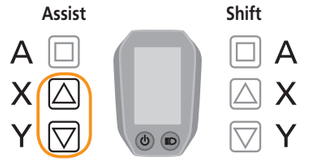
Sets the start gear when using start mode function.

1. **With the bicycle stopped, pressing both the Assist-X and Assist-Y at the same time for 2 seconds.**
   The "Setting menu" screen is displayed.

2. **Press the Assist-X and Assist-Y to move the cursor to "Start mode", then press the Assist-A.**
   "Start mode" setting screen is displayed.

3. **Press the Assist-X or Assist-Y to move the cursor to the item you want to configure.**

<SW-E6000>



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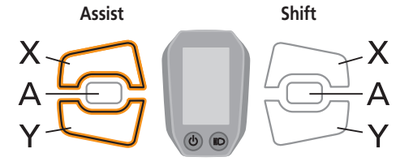
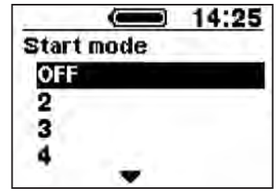


Configurable items	Details
OFF	No setting
2	2-speed
3	3-speed
4	4-speed
5	5-speed

<SC-E6010>

<SC-E6000>



4. **Pressing the Assist-A button enables the set value at the cursor position.**
   The "Setting menu" screen is displayed.

<SW-E6000>

<SW-E6010>

5. **Press the Assist-X or Assist-Y to move the cursor to "Exit".**

6. **Pressing the Assist-A exits the setting menu and takes you back to the basic screen.**

Beep Setting

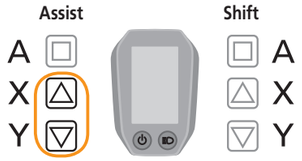
Configure the enable/disable beeps setting.

1. **With the bicycle stopped, pressing both the Assist-X and Assist-Y at the same time for 2 seconds.**
   The "Setting menu" screen is displayed.

2. **Press the Assist-X and Assist-Y to move the cursor to "Beep", then press the Assist-A.**
   "Beep" setting screen is displayed.

3. **Press the Assist-X and Assist-Y to move the cursor to "ON" or "OFF".**

<SW-E6000>



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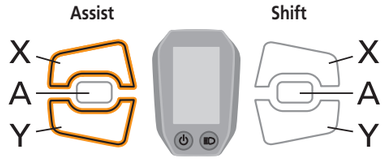

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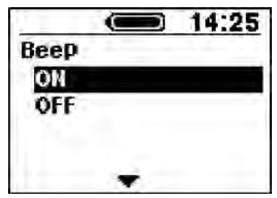
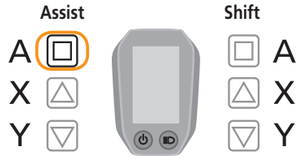


4. **Pressing the Assist-A button enables the set value at the cursor position.**
   The "Setting menu" screen is displayed.

<SW-E6000>



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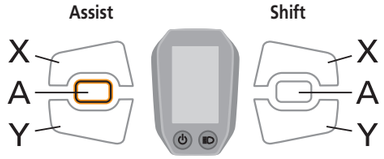


5. **Press the Assist-X or Assist-Y to move the cursor to "Exit".**

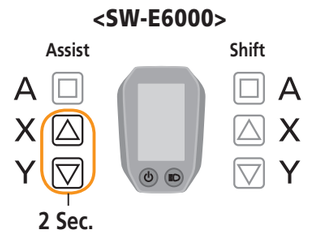
6. **Pressing the Assist-A exits the setting menu and takes you back to the basic screen.**

Language Setting

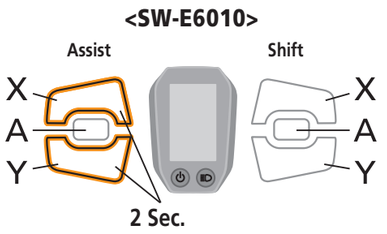
Configure the language setting.

1. **With the bicycle stopped, pressing both the Assist-X and Assist-Y at the same time for 2 seconds.**
   Displays the setting screen.

<SW-E6000>

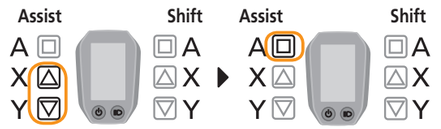


<SW-E6010>



2. **Press the Assist-X or Assist-Y to move the cursor to the "Language", then press the Assist-A.**
   Displays the "Language" setting screen.

<SW-E6000>



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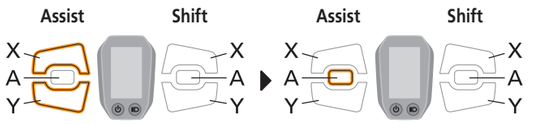
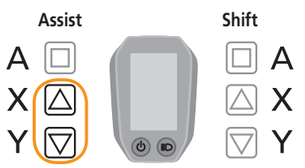


3. **Press the Assist-X or Assist-Y to move the cursor to the item you want to configure.**

<SW-E6000>



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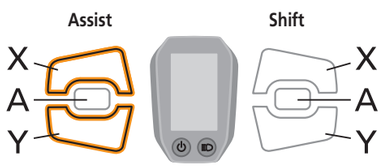


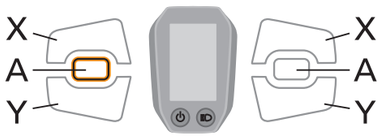
<SC-E6010>

<SC-E6000>

4. **Pressing the Assist-A button enables the setting item.**
   indicated by the cursor and takes you back to the "Setting menu" screen.

<SW-E6000>

<SW-E6010>



5. **Press the Assist-X or Assist-Y button to move the cursor to "Exit".**

6. **Pressing the Assist-A exits the setting menu and takes you back to the basic screen.**

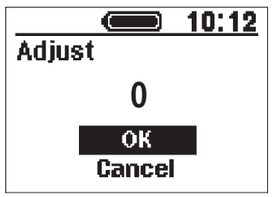
Adjust (Motor unit with DI2 internal geared hub)

Motor unit can be adjusted when it is assembled with DI2 internal geared hub.

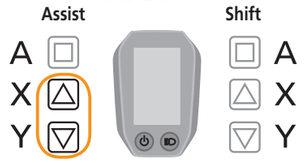
1. **With the bicycle stopped, pressing both the Assist-X and Assist-Y at the same time for 2 seconds.**
   The "Setting menu" screen is displayed.
2. **Press the Assist-X and Assist-Y to move the cursor to "Adjust", then press the Assist-A.**
   "Adjust" setting screen is displayed.
3. **Check whether the adjustment value is set to "0".**

<SC-E6010>

<SC-E6000>



<SW-E6000>



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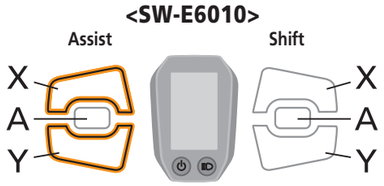
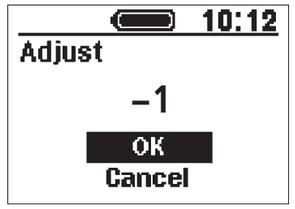


If the adjustment value is [0]

1. **Press Shift-X or Shift-Y to adjust the adjustment value up or down by 1 speed.**

<SC-E6010>

<SC-E6000>



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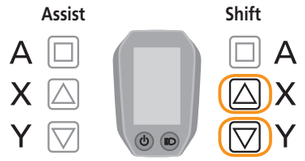
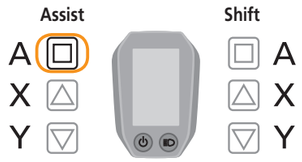


<SW-E6010>

2. **Press Assist-A.**
   Select "OK", then perform an actual gear shift to check whether the condition has improved.

<SW-E6000>



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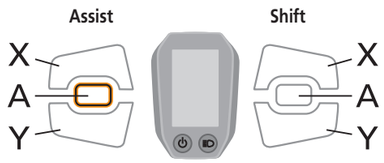
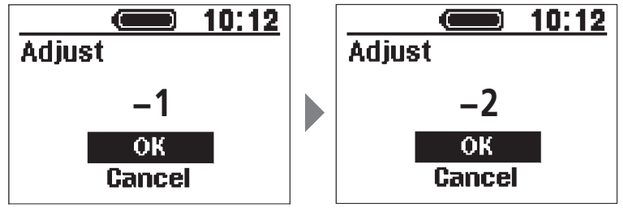


The condition has improved

Adjust the adjustment value by 1 speed in the same direction and check the gear shifting operation again.

Repeat these steps until any noise or unusual feeling disappears.

<SC-E6000>



<SC-E6010>

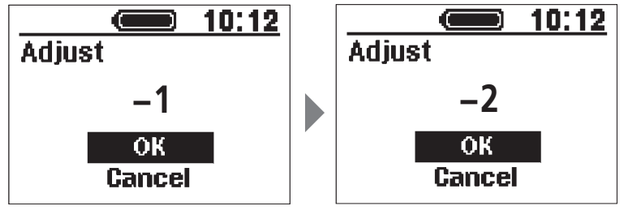
No apparent change

Adjust the adjustment value by 1 speed in the same direction and check the gear shifting operation again.

If the condition has improved, see "**The condition has improved**" to continue.

If the condition has worsened, see "**The condition has worsened**" to continue.

<SC-E6000>



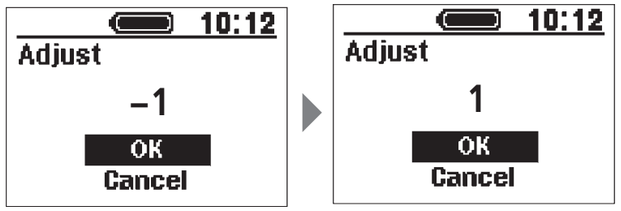
<SC-E6010>

The condition has worsened

Adjust the adjustment value by 2 speeds in the opposite direction and check the gear shifting operation again.

Then, adjust the value by 1 speed in the same direction and check until any noise or unusual feeling is gone.

<SC-E6000>



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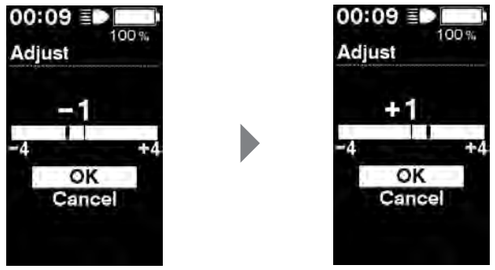
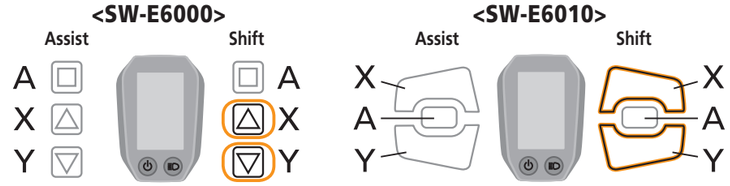


Finally, go for an actual ride and check for any noise or unusual feeling.

If the adjustment value is not [0]

1. Press Shift-X or Shift-Y and revert the adjustment value to [0].

<SW-E6000> <SW-E6010>



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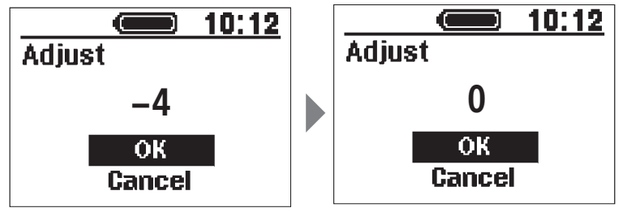

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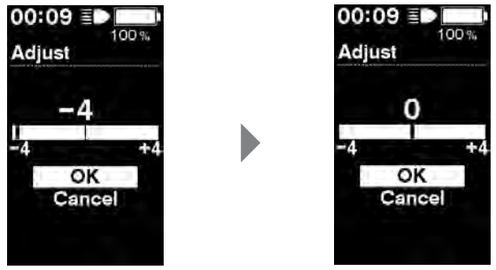
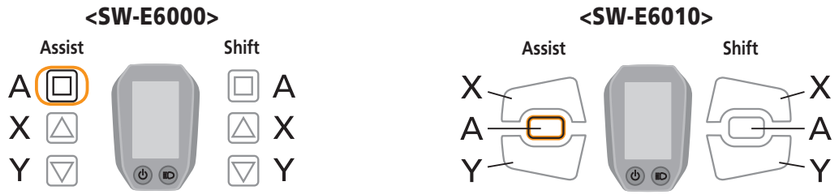


2. Press Assist-A.
   Select "OK", then perform an actual gear shift to check whether the condition has improved.

   If there is any noise or unusual feeling, see "**If the adjustment value is [0]**" to continue.

<SW-E6000> <SW-E6010>



Finally, go for an actual ride and check for any noise or unusual feeling.

- Motor unit shifting adjustment can only be performed when it is assembled with DI2 internal geared hub.
- The settings have a range of "-4" to "4".

Auto Shift Timing Adjustment

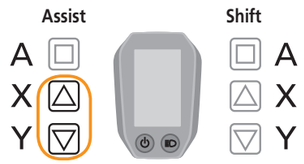
Shift timing can be adjusted when in automatic shift mode.

1. With the bicycle stopped, pressing both the Assist-X and Assist-Y at the same time for 2 seconds.
The “Setting menu" screen is displayed.

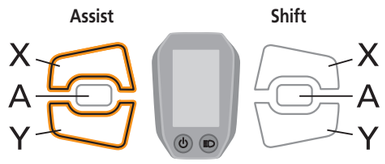
2. Press the Assist-X and Assist-Y to move the cursor to "Auto", then press the Assist-A.
“Auto" setting screen is displayed.

3. Press Assist-X or Assist-Y to adjust the values.
- Pressing Assist-X and adjusting the value upward adjusts shift timing to make pedaling easier.
- Pressing Assist-Y and adjusting the value downward adjusts shift timing to make pedaling harder.

<SW-E6000>



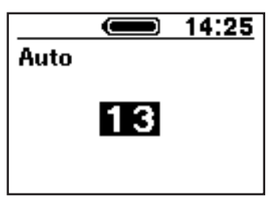
<SW-E6010>



- The displayed set value indicates the offset from the default value through the crank rotations reference value that is referred to during automatic shifting.
- The set value is automatically refreshed by the learning function according to manual operations made while in automatic shift mode.

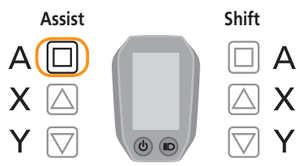
<SC-E6010>

<SC-E6000>

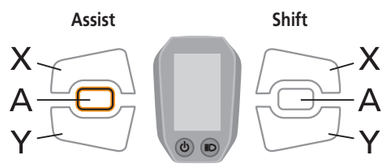


4. Pressing the Assist-A button enables the set value at the cursor position.
The “Setting menu" screen is displayed.

<SW-E6000>



<SW-E6010>



5. Press the Assist-X or Assist-Y to move the cursor to "Exit".

6. Pressing the Assist-A exits the setting menu and takes you back to the basic screen.

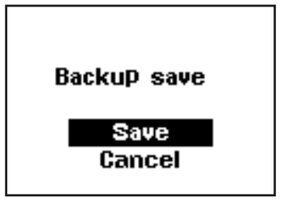
Update confirmation window for the drive unit settings backup data

The cycle computer has a function to automatically back up drive unit settings.
In the following cases, when the cycle computer power is turned on, a window confi rming whether to update the backup data is displayed:
- Reinstalling the cycle computer on a bicycle with different settings
- If the drive unit settings have been changed via E-TUBE PROJECT

1. To update the drive unit settings select [Save], to cancel update select [Cancel].

<SC-E6010>

<SC-E6000>



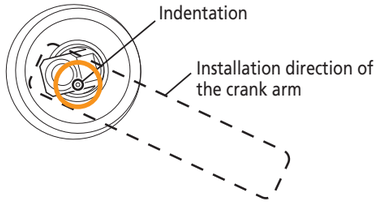
If the settings cannot be accessed due to a drive unit malfunction, they can be accessed using E-TUBE PROJECT.

INSTALLING THE CRANK AND FRONT CHAINRING

Perform the procedure below for all models, regardless of whether with powered or mechanical gear shifting.

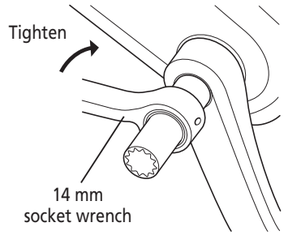
1. Install the left crank arm.

Align the round indentation on the square spindle with the installation direction of the crank arm as shown in the illustration.



2. Attach the crank arm fixing bolt and tighten it with a 14 mm socket wrench.

14mm	**Tightening torque: 35 to 50 N·m**



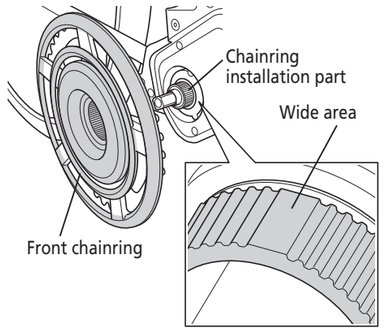
3. Align the cutout in the front chainring with the wide area on the chainring installation part when inserting the front chainring.

For drive unit <DU-E6000>

- When installing a front chainring labeled "SM-CRE60", a spacer needs to be placed between the front chainring and the chainring installation part. In this case, consult an agency.

For drive unit <DU-E6001/E6010/E6002/E6012>

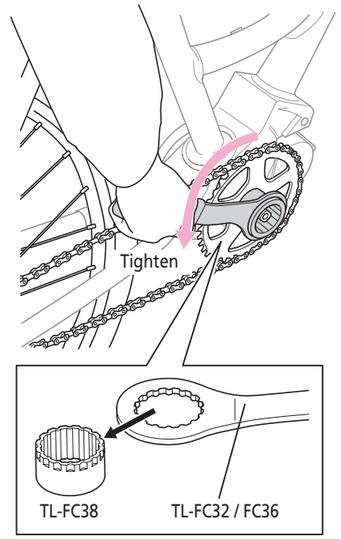
- This can be attached only on front chainrings labeled "SM-CRE60".
- There are also models without a wide area. For those models, positioning is not needed to install the front chainring.



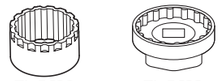
4. Tighten the lock ring by hand and attach the Shimano original tool.

While holding the left crank, tighten the lock ring in the direction shown in the illustration.

TL-FC38	**Tightening torque: 35 to 45 N·m**



If using a torque wrench, use TL-FC38 in combination with TL-FC33.



Note: An impact wrench cannot be used.

CAUTION

The lock ring has a left hand thread.

5. Insert the right crank arm attach the crank arm fixing bolt, and tighten it.

14mm	**Tightening torque: 35 to 50 N·m**

Finally, attach the crank arm cap.

6. After installing the crank arm, rotate the crank to check that it rotates smoothly.

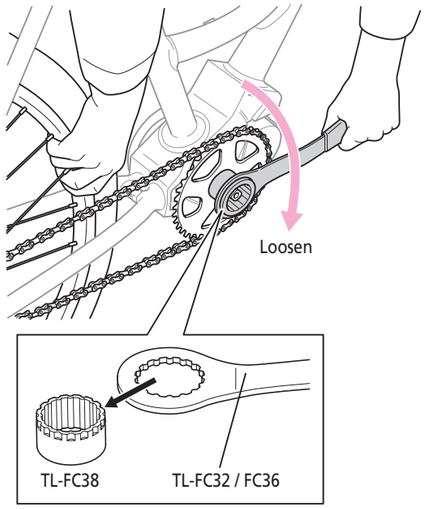
REPLACING THE FRONT CHAINRING

Perform replacement with the chain installed to the rear wheel.

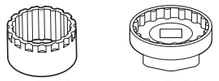
1. Remove the crank arm cap.

2. Remove the crank mounting bolt with a 14 mm socket wrench. After that, remove the right side crank using TL-FC11.

3. Place the bicycle on the ground or while holding the wheel, use the TL-FC38 with the TL-FC32 or FC36 to loosen the lockring clockwise.



If using a torque wrench, use TL-FC38 in combination with TL-FC33.



Note: An impact wrench cannot be used.

⚠ CAUTION

The lock ring has a left hand thread.

4. Replace the front chainring. To install a front chainring refer to steps 3 to 6 in "INSTALLING THE CRANK AND FRONT CHAINRING" (page 152).

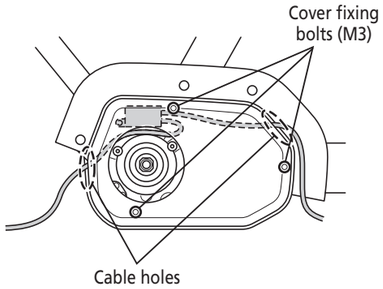
ATTACHING/REMOVING THE DRIVE UNIT COVER

Before checking the wiring, installation or removal, the drive unit cover must be removed.

1. To Remove the drive unit cover, loosen the cover fixing bolts in the three locations.

Before installing the drive unit cover, Pass the front light and tail light cables through the cable holes.

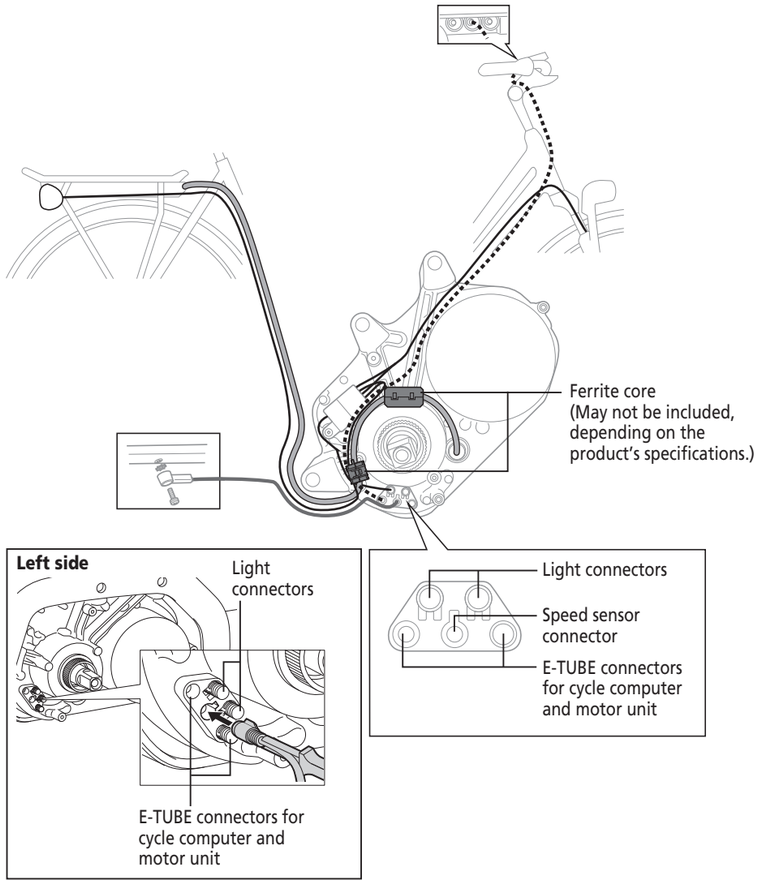
#2	**Tightening torque: 0.6 N·m**



Note: When installing the cover, check that the cables is not screwed. If the cable is left screwed, it may cause damage to the cable.

WIRING

Below is an example of wiring on a rear carrier type battery.



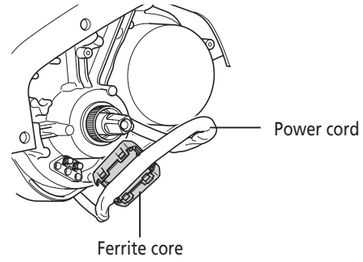
Be sure to attach dummy plugs to any unused ports.

Installing/Removing the Ferrite Core (DU-E6001/E6010/E6002/E6012)

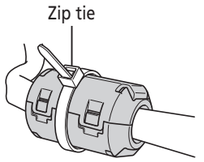
If a ferrite core is included with drive unit, install it by following the procedure described below.
Depending on the specifications, a ferrite core may not be included with drive unit, so installation is not required.

1. Install the ferrite core on the power cord.

Make sure that the power cord is not pinched and firmly secure the ferrite core.



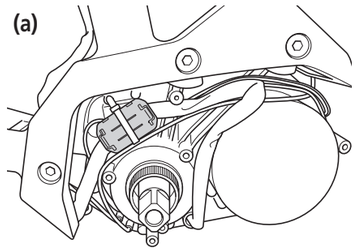
2. Fix the ferrite core with the zip tie.



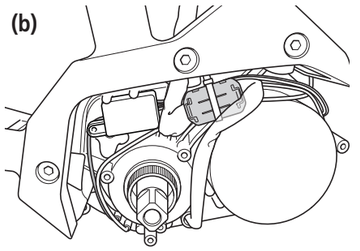
- Check that the ferrite core tabs are firmly secured.
- Do not cut off the excess portion of the zip tie. The cut surface of the zip tie may scratch the cable or case.
- Do not drop the ferrite core or subject it to any shocks. Subjecting the ferrite core to shocks will cause it to break or crack, rendering it unusable.

3. Position the ferrite core so that the power cord fits inside the drive unit.

Battery for rear carrier <example>



Battery for down tube mounting <example>

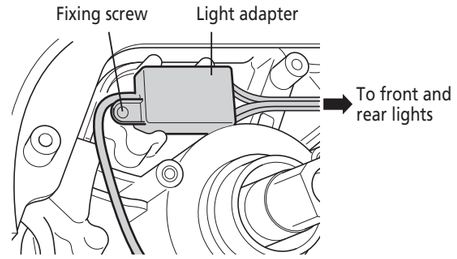


Connecting the Light Adapter to the Drive Unit (DU-E6001 / DU-E6010)

To connect the light by the light adapter, carry out wiring as follows.

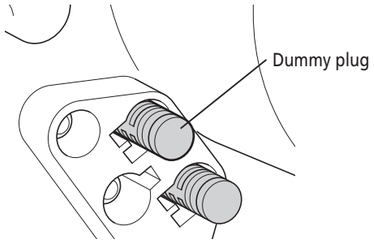
1. **Remove the drive cover.**
   Refer to "**ATTACHING/REMOVING THE DRIVE UNIT COVER**" (page 155).

2. **Attach the light adapter in the direction shown in the illustration.**
   Secure it to the drive unit with the unit fixing screw.

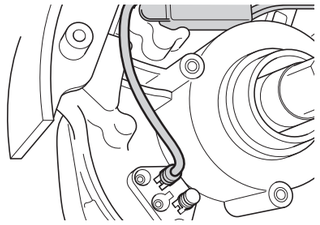


#2	Tightening torque: 0.6 N·m

3. **Remove the dummy plug from the drive unit with Shimano original tool <TL-EW02>.**

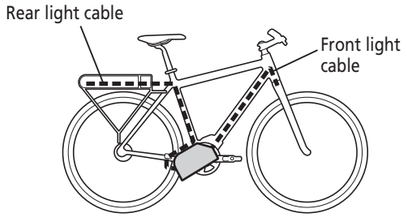


4. **Attach the connector of the light adapter to the drive unit.**



5. **Attach the drive cover.**
   Refer to "**ATTACHING/REMOVING THE DRIVE UNIT COVER**" (page 155).

6. **Fix the light cables to the electric wire around the light adapter and route them along the frame.**

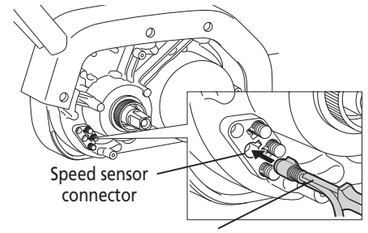


For information on compatible lights, contact a manufacturer of completed bicycles.

INSTALLING/REMOVING THE SPEED SENSOR

Connecting/disconnecting the Speed Sensor to the Drive Unit

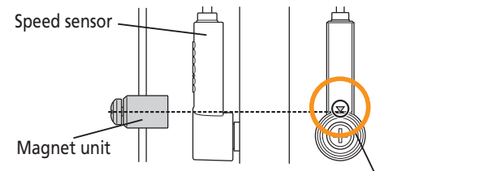
1. **Connect the speed sensor unit electric wire to the drive unit speed sensor connector.**



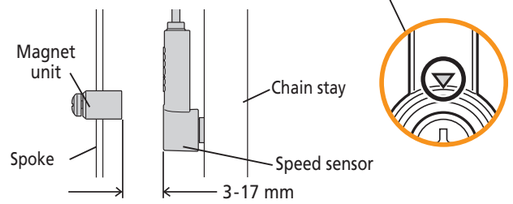
Shimano original tool **<TL-EW02>**
• Connecting: using the narrow side.
• Disconnecting: using the wide side.

Installing/Removing the Speed Sensor

1. **Mounting the magnet.**
   Mount the magnet so that its center is aligned over the apex of the triangle symbol.



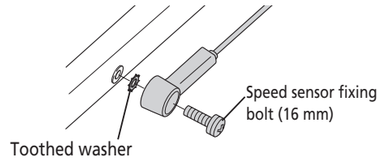
2. **Before installing the speed sensor, check that the clearance between the speed sensor and the magnet unit will be within 3 to 17 mm.**



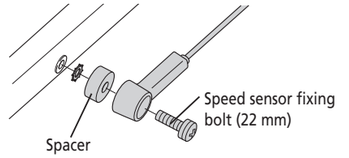
3. **Attach the speed sensor with the speed sensor fixing bolt.**

#2	Tightening torque: 1.5 to 2 N·m

• If the clearance is within the designated range, place the toothed washer between the speed sensor and the chain stay.

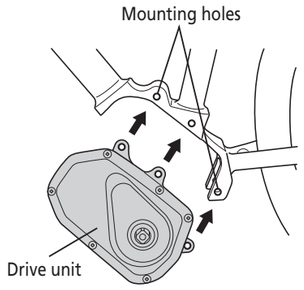


• If the clearance exceeds **17mm**, use a spacer to adjust it.



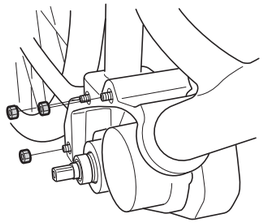
INSTALLING/REMOVING THE DRIVE UNIT

1. Align the three mounting holes in the drive unit with those in the frame.



Be careful not to pinch the cables with the frame or drive unit case.

2. Insert M8 bolts, attach nuts from the opposite side, and tighten them to the designated torque.



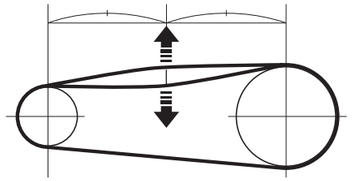
Bolts and nuts are not included with Shimano products. Use those supplied by the manufacturer. For information on the tightening torques, contact the manufacturer.

MEASURING AND ADJUSTING THE CHAIN TENSION

When using an internal geared hub, it is necessary to adjust the chain tension.

Measure and Adjust the Chain Tension Manually

1. Set the chain in place and pull it up and down with a force of about 10N (1kg).



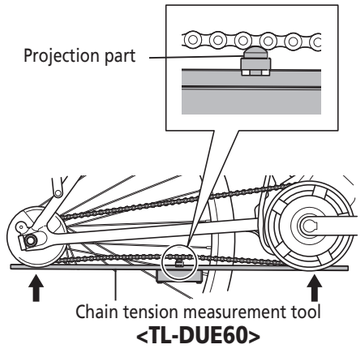
2. Adjust so that there is 15 mm or more of slack in the chain.

Measure and Adjust Chain Tension with the Chain Tension Measurement Tool <TL-DUE60>

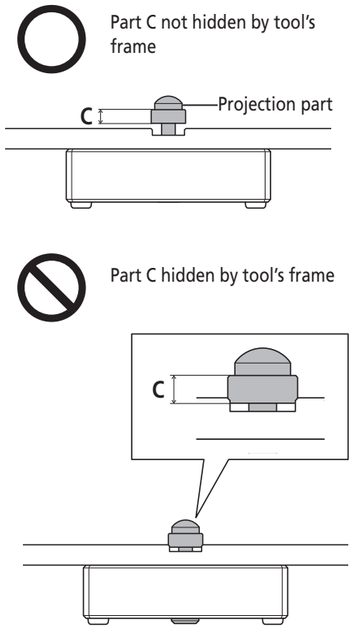
Set the chain in place, and then apply pressure from the bottom of the chain with the chain tension measurement tool.

1. Place the chain tension measurement tool against the bottom of the chain.

2. Press up until chain tension measurement tool touches the front chainring and rear sprocket.



3. Adjust the chain tension so that part C of the projection part is not hidden by the chain tension measurement tool's frame.



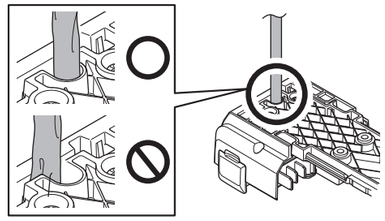
INSTALLING/REMOVING THE BATTERY MOUNT

For Rear Carrier <BM-E6000>

1. Secure the key unit to the lower case sub assembly by tightening M4 bolt (A) and (B).
- For (A) using the screwdriver #2
- For (B) using the 6.4 mm flat-blade screw driver

#2 / 6.4mm	**Tightening torque: 1.6 to 1.8 N·m**

2. Align the harness assembly chamfer and battery mount rail, in that order, with the lower case sub assembly.



3. Mount the lower case sub assembly and the battery mount rail using the M4 bolt (C).

#2	**Tightening torque: 1.6 to 1.8 N·m**

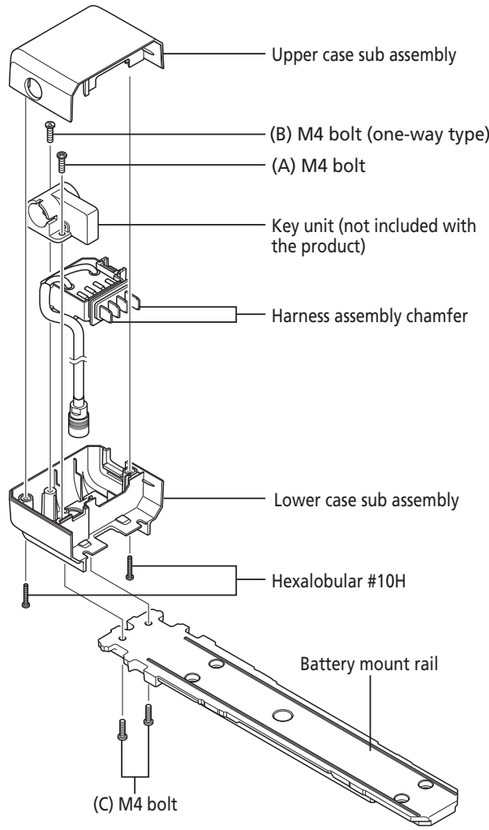
4. Assemble the upper case sub assembly with the lower case sub assembly by 2 bolts.

#10H	**Tightening torque: 1.1 to 1.3 N·m**

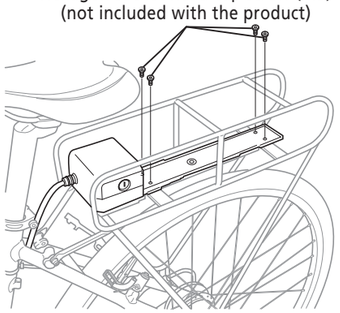
5. Align the mounting holes in the carrier with those in the battery mount.

6. Insert hexagon socket head cap screws into the upper part of the battery mount and tighten it to the carrier.

Bolts and nuts are not included with Shimano products. Use those supplied by the manufacturer.
For information on the tightening torques, contact the manufacturer of the carrier.



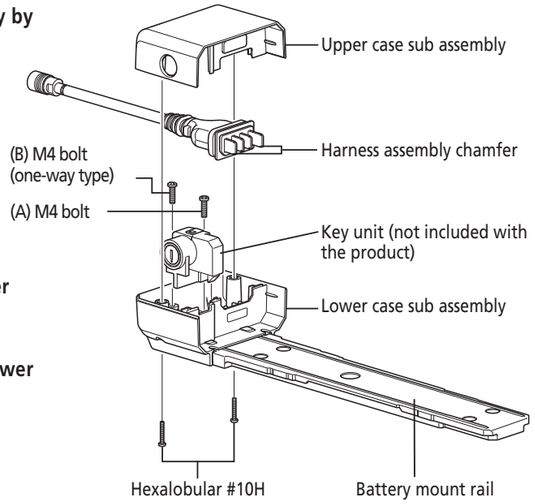
Hexagon socket head cap screw (M5)
(not included with the product)



For Rear Carrier <SM-BME60>

1. **Secure the key unit to the lower case sub assembly by tightening M4 bolt (A) and (B).**
   - For (A) using the Screwdriver #2
   - For (B) using the 6.4 mm flat-blade screw driver

#2 / 6.4mm	**Tightening torque: 1.6 to 1.8 N·m**



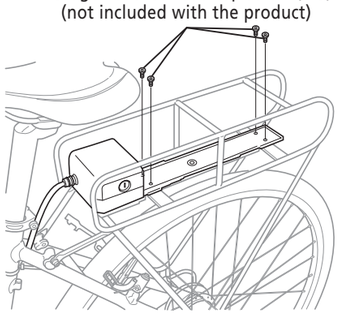
2. **Align the harness assembly chamfer with the lower case sub assembly.**

3. **Assemble the upper case sub assembly with the lower case sub assembly by 2 bolts.**

#10H	**Tightening torque: 1.1 to 1.3 N·m**

4. **Align the mounting holes in the carrier with those in the battery mount.**

5. **Insert hexagon socket head cap screws into the upper part of the battery mount and tighten it to the carrier.**

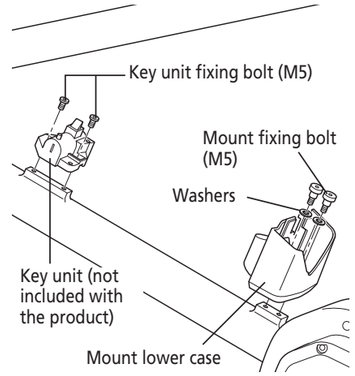


Bolts and nuts are not included with Shimano products. Use those supplied by the manufacturer.
For information on the tightening torques, contact the manufacturer of the carrier.

For Down Tube Mounting <BM-E6010>

1. **Attach the mount lower case to the mounting holes in the frame, insert the mount fixing bolts (M5) into the washers, and secure the case using the bolts.**
   With the 3 mm Allen key

3 mm	**Tightening torque: 3 N·m**

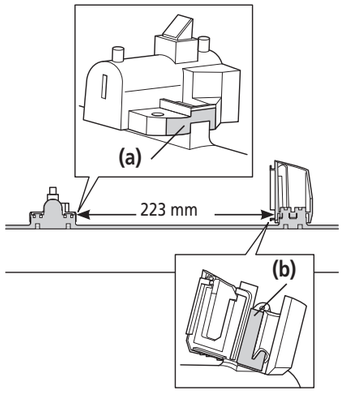


2. **Temporarily attach the key unit with the key unit fixing bolts (M5).**

Key unit is not included with Shimano products.

3. **Adjust the position of the key unit to allow a clearance of 223 mm between (a) and (b) shown in the illustration.**

4. **Temporarily attach the key unit cover and perform adjustment to make sure that the battery can be smoothly connected and disconnected and no noise will be produced due to looseness during traveling.**



5. **Fully tighten the key unit fixing bolts.**
   With the 3 mm Allen key

3 mm	**Tightening torque: 3 N·m**

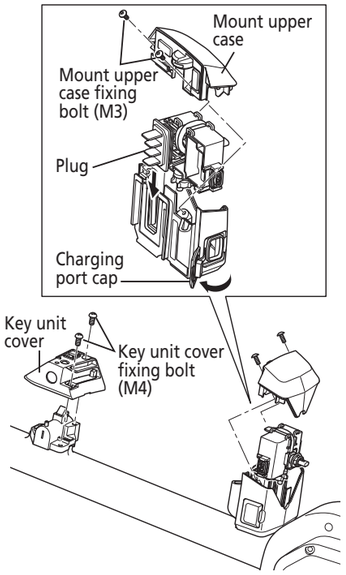
6. **Fully tighten the key unit cover fixing bolts (M4) to attach the key unit cover.**

#1	**Tightening torque: 0.6 N·m**

- For BM-E6010, make sure to pull open the charging port cap fully before inserting the plug, as in the illustration. Inserting the plug with the cap closed will disrupt the proper opening/closing of the cap.

7. **Insert the plug into the mount lower case. Insert the plug between the mount upper case, and secure them using the mount upper case fixing bolts (M3).**

#1	**Tightening torque: 0.6 N·m**



For Down Tube Mounting <SM-BME61>

1. **Attach the mount lower case to the mounting holes in the frame, insert the mount fixing bolts (M5) into the washers, and secure the case using the bolts.**
With the 3 mm Allen key

3 mm	**Tightening torque: 3 N·m**

2. **Temporarily attach the key unit with the key unit fixing bolts (M5).**

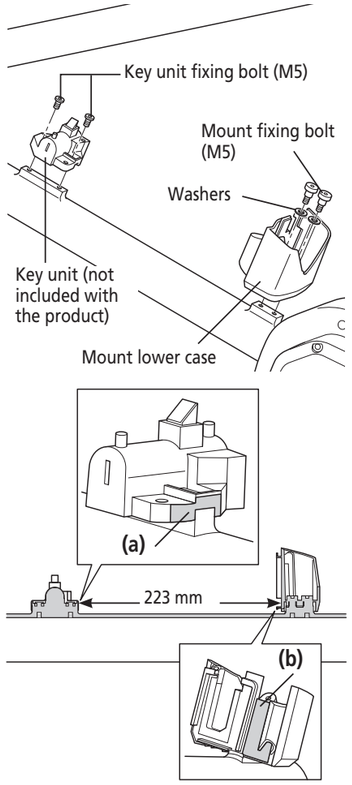
Key unit is not included with Shimano products.

3. **Adjust the position of the key unit to allow a clearance of 223 mm between (a) and (b) shown in the illustration.**

4. **Temporarily attach the key unit cover and perform adjustment to make sure that the battery can be smoothly connected and disconnected and no noise will be produced due to looseness during traveling.**

5. **Fully tighten the key unit fixing bolts.**
With the 3 mm Allen key

3 mm	**Tightening torque: 3 N·m**



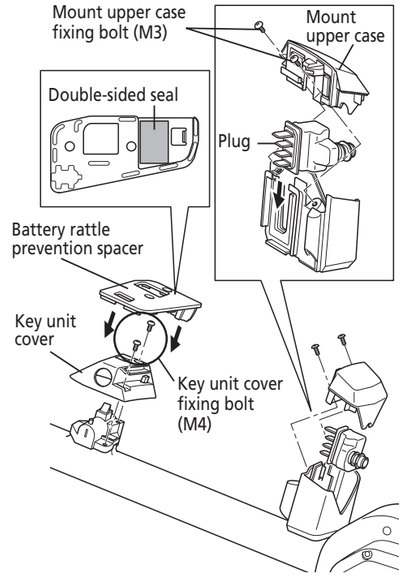
6. **Fully tighten the key unit cover fixing bolts (M4) to attach the key unit cover.**

#1	**Tightening torque: 0.6 N·m**

7. **Mount the battery rattle prevention spacer.**
8. **Peel the release liner off the double-sided seal on the back of the battery rattle prevention spacer and mount.**
9. **Insert the plug into the mount lower case. Insert the plug between the mount upper case, and secure them using the mount upper case fixing bolts (M3).**

#1	**Tightening torque: 0.6 N·m**

Check that there is no oil, foreign objects, etc., on the adhesive surface of the double-sided seal or on the surface to which the double-sided seal is to be attached. If there is, remove it.



E-TUBE PROJECT

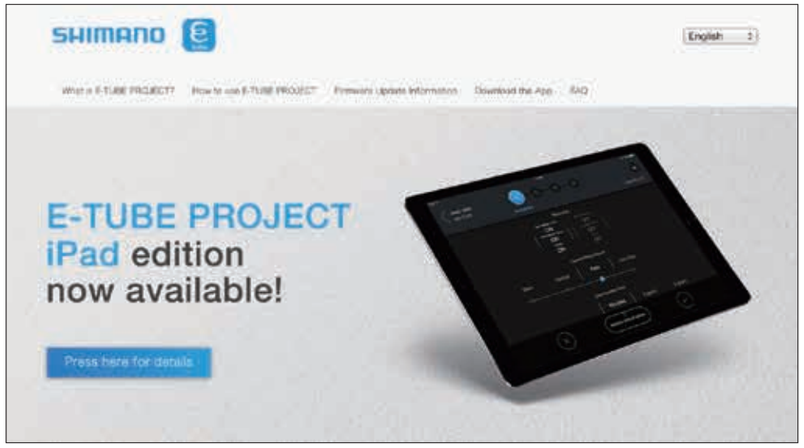
The "E-TUBE PROJECT" application can be used to connect a bicycle to a personal computer. This application offers the following functions:

- Update of the firmware for the entire system or for unit parts
- Customization functions that allow a wide range of settings to be made from the cycle computer
- Fault diagnosis via error checks

Get the Application

See the website below for details and for the latest information on the E-TUBE PROJECT.

Application for E-TUBE PROJECT is available at:
http://e-tubeproject.shimano.com

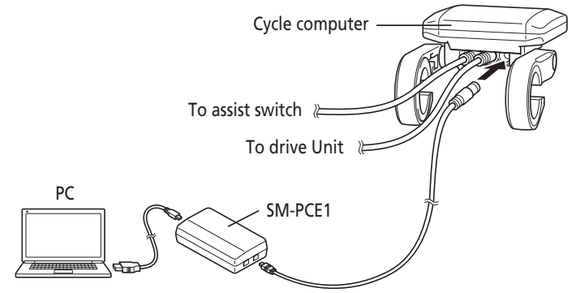


Connecting to the Bicycle

Use Shimano original tool **<TL-EW02>**

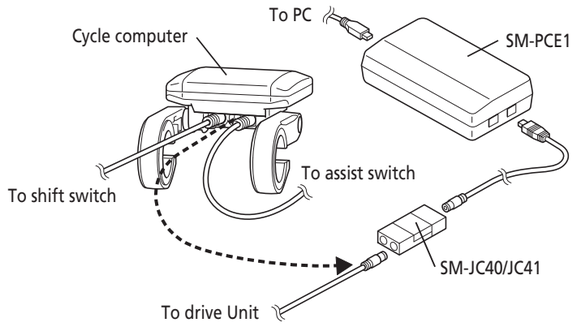
When the cycle computer has an available port

1. Remove a dummy plug from cycle computer.
2. Connect <SM-PCE1> to an available port of the cycle computer.

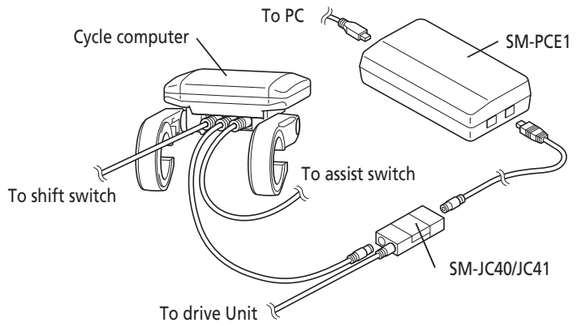


When the cycle computer has no available port

1. Connect <SM-JC40/JC41> to <SM-PCE1>.
2. Disconnect <EW-SD50> from the center port of the cycle computer and connect it to <SM-JC40/JC41>.

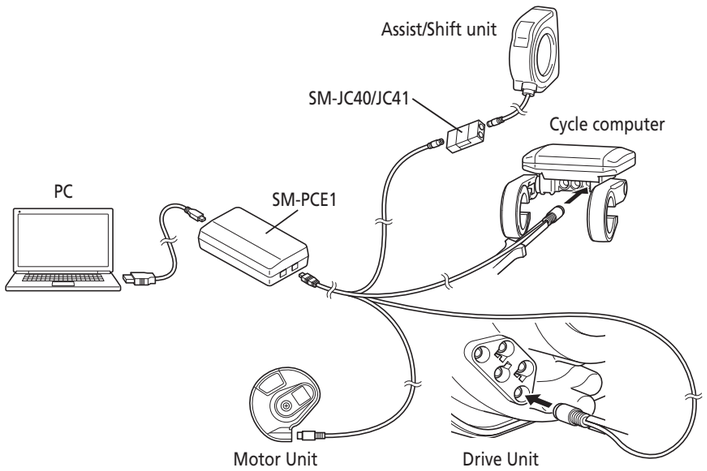


3. Connect <EW-SD50> to the available port of <SM-JC40/JC41> and the center port of the cycle computer.



Connecting to Individual Units

1. Connect <SM-PCE1> to the connector of each unit.



Preparation

Get the latest firmware* from Shimano

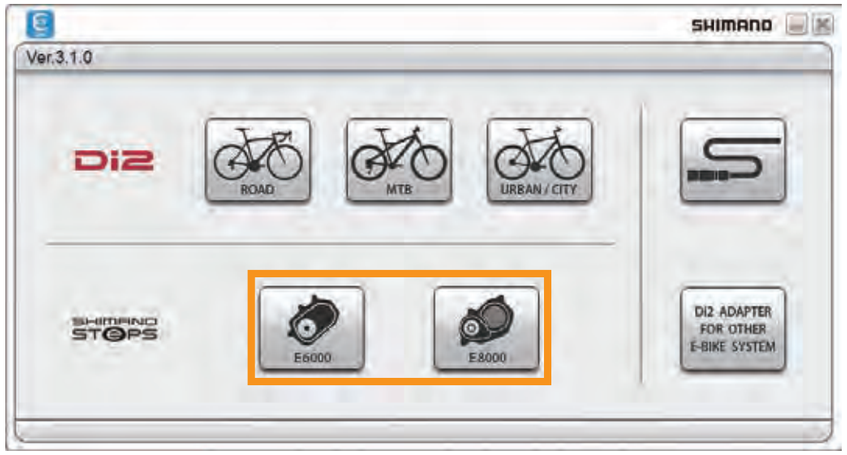
* Software controlling for each unit of SHIMANO STEPS

1. Start the "E-TUBE PROJECT" application on a PC that is connected to the Internet.

Double-click the  icon on the desktop. After the start screen is displayed, a screen that shows the available connections will be displayed.

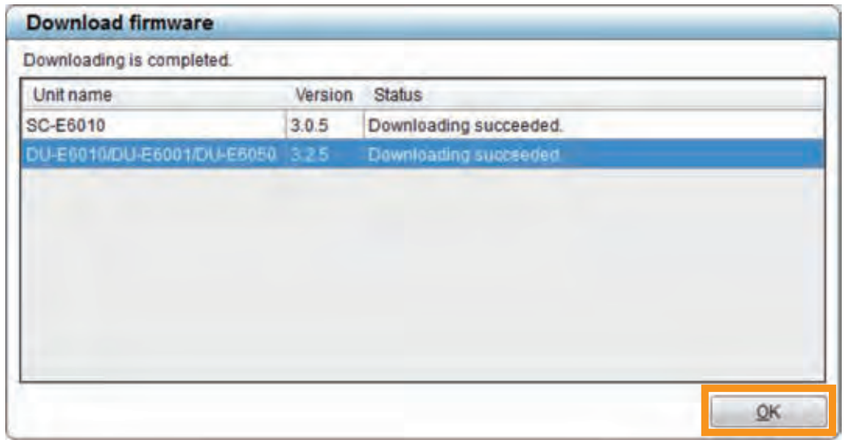
2. Click  or  on the screen that shows the available connections.

A dialog box will be displayed to begin checking for the firmware update. If there is an update available for the firmware on the PC, the latest update from Shimano will be downloaded.



3. Click [OK].

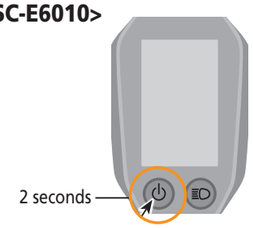
[Download Firmware] dialog box is closed.



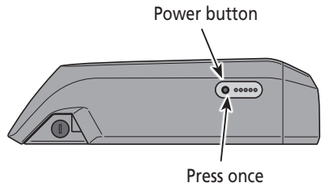
Make connection check

1. Turn on the power.

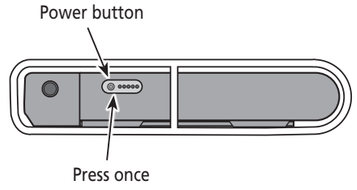
<SC-E6010>



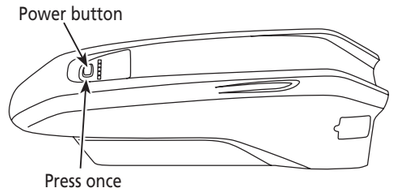
<BT-E6010>



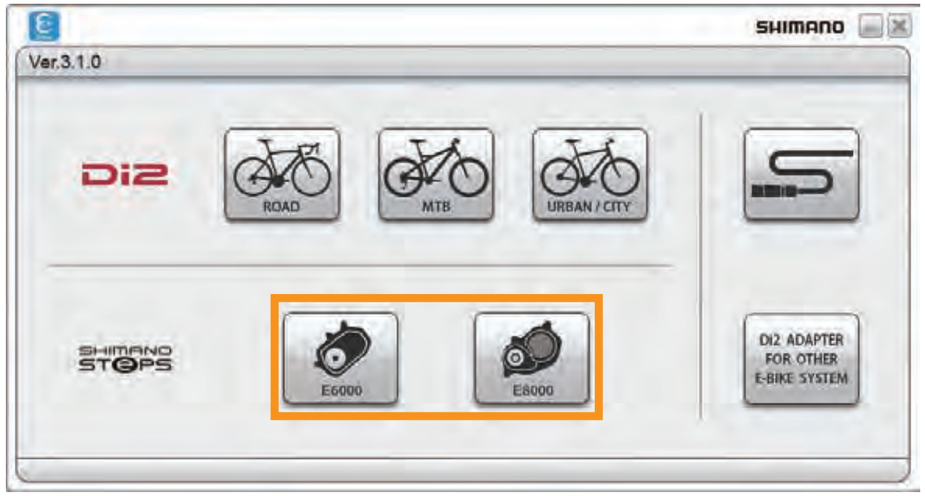
<BT-E6001/BT-E6000>



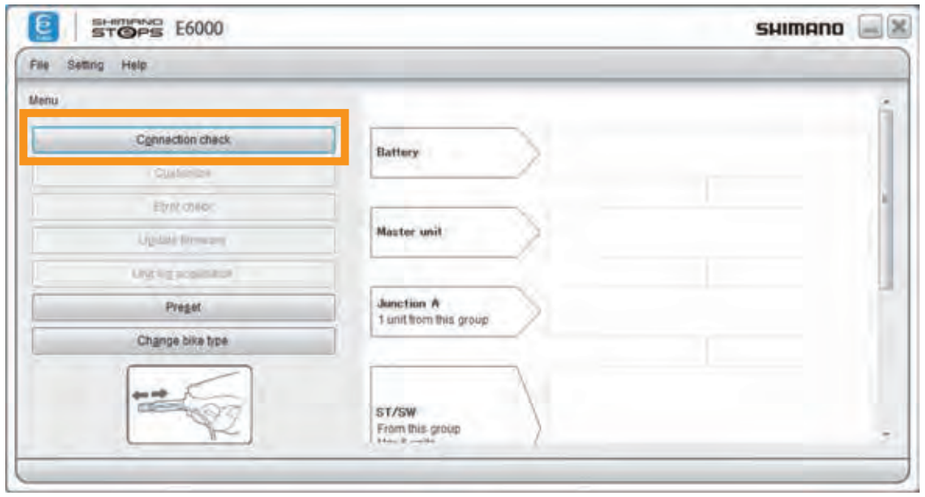
<BT-E8010>



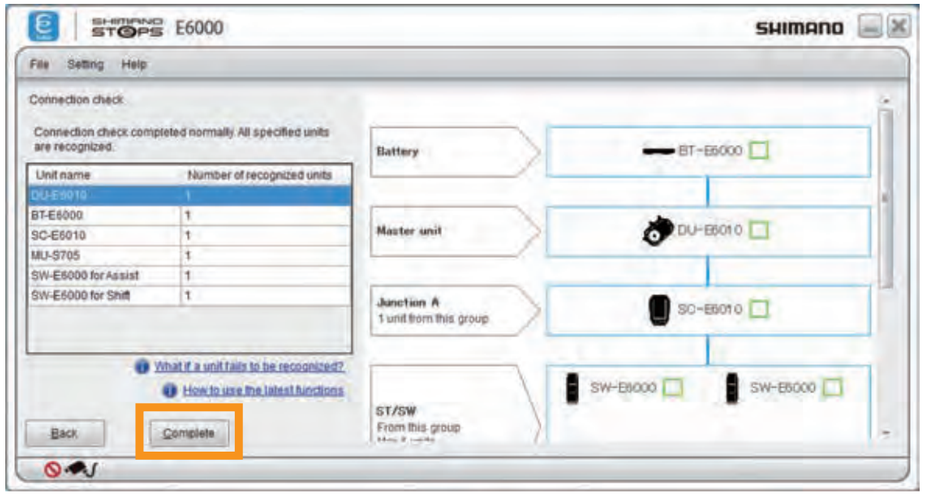
2. Click or on the screen that shows available connections.



3. Click the [Connection check] button.



4. Click the [Complete] button to complete connection check.

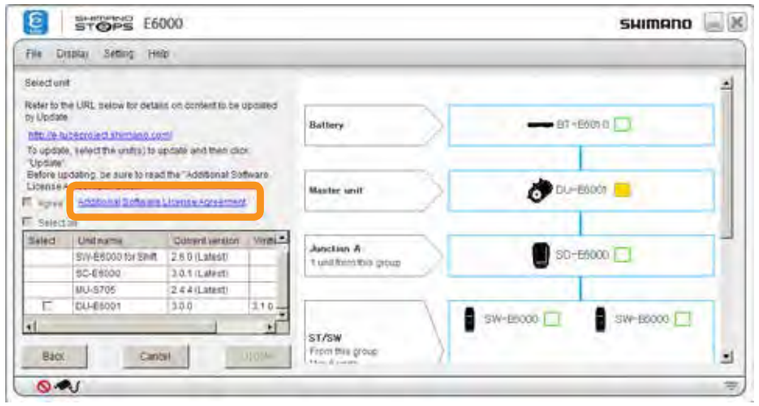


Start the Application

Update firmware

(In case of a drive unit's firmware is before 3.1.0.)

1. Click [Additional Software License Agreement] and agree to the displayed Software License Agreement.



Additional Software License Agreement

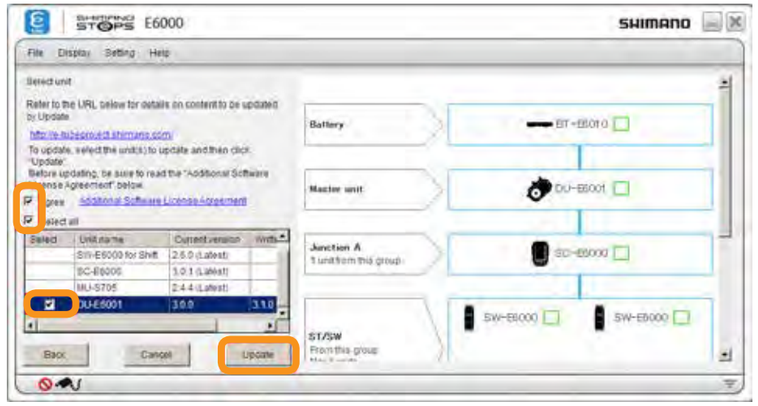
Before updating the firmware, please carefully read this Additional Software License Agreement (“Agreement”).
In updating the firmware you agree to be bound by the terms and conditions of this Agreement.
If any of the terms or conditions are not acceptable to you, do not update the firmware.

Additional Article 1 Obtaining and Carefully Reading the Latest Version of the Manual
This firmware update will add new functions to the bicycle.
After updating the firmware, obtain and carefully read the latest version of the manual before using the bicycle.
The latest version of the manual may be obtained from the webpage below.
http://si.shimano.com/#seriesList/65

Additional Article 2 Obligation Accruing to the Updating Party
If the firmware update is executed by a party (“Updating Party”) other than the user of the bicycle, the Updating Party shall be obligated to ensure that the user of the bicycle fulfills the obligation, stipulated in Additional Article 1, to obtain and carefully read the latest version of the manual.
Fulfillment of this obligation requires the Updating Party to provide to the user of the bicycle a printed copy of the latest version of the manual in cases where the user of the bicycle does not have access to the Internet.

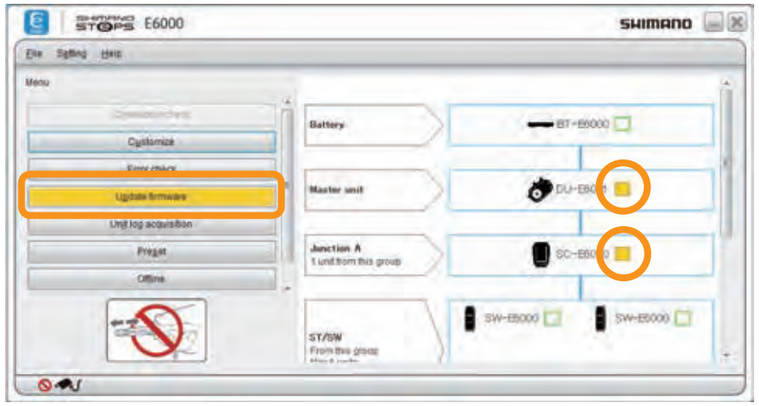
2. After agreeing, the check box [Agree] becomes available.

3. Check [Agree] and then check [Select all] or the box next to [Unit name].
   After clicking [Update], updating begins.



(In case of a drive unit's firmware is both before and after 3.1.0.)

1. The unit will be highlighted in yellow if the latest firmware is available after connecting the unit to the PC. Click [Update firmware].



2. Select all units that can be updated, and click [Update].

3. Units will be highlighted in green once they have been updated to the latest firmware. Click [Complete].

Restoring firmware

When firmware is corrupted, the name of the currently connected unit does not display during connection check. In such cases, the firmware should be restored in accordance with instructions displayed on screen.

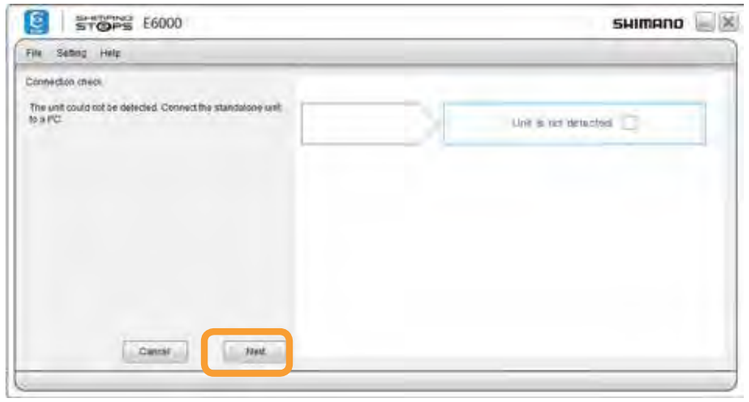
• The following steps demonstrate the procedure involved in restoring firmware, taking as an example a case where the firmware for the cycle computer has become corrupted.

1. Click "Next".

2. Connect 1 unit only to the PC linkage device, and then click "Next".

Do not remove or re-insert the battery or electric wires while this procedure is in progress. If they are removed or re-inserted, procedures must be repeated from the main window.

3. Reconfirms that the unit cannot be detected. Click "Next".



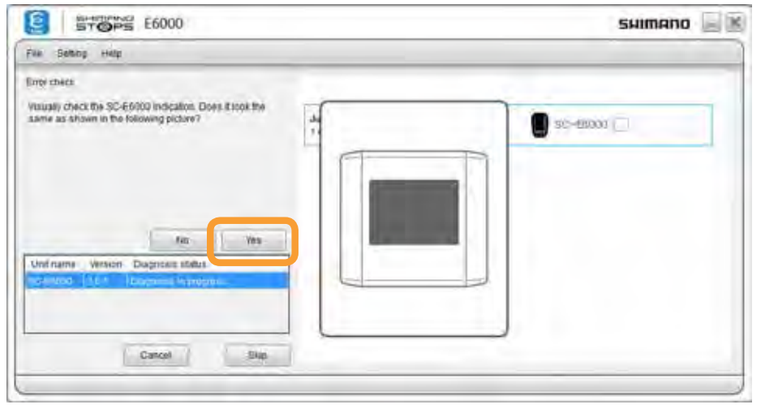
Do not remove or re-insert the battery or electric wires while this procedure is in progress. If they are removed or re-inserted, procedures must be repeated from the main window.

4. Invokes the unit with the corrupted firmware, and overwrites its firmware with new firmware. Click "Next".

The firmware is being overwritten. Do not disconnect until the process is complete.

5. The firmware overwriting process is complete. Click "Next".

6. Check the operation of the unit and the display. If there are no issues with the displayed unit, click "Yes".



7. Click "Next" when confirmation of normal operation displays.

8. Click "Complete" to finish the firmware restoration process.

Customize

This function is used to customize the E-BIKE system.
The BOSCH eBike Drive Unit and other E-bike Drive Units cannot be customized with E-TUBE PROJECT.

1. Click [Customize] in the main menu screen.

(Main menu screen)

2. Click [Drive unit setting], [Display monitor settings], [Switch setting], [Derailleur adjustment setting], [Motor unit gear setting] in the customize menu screen to go to each setting screen.

(Customize screen)

Drive unit setting

Configure the settings of the drive unit.

1. Display the customize menu screen.

(Main menu screen)

2. Click [Drive unit setting] in the customize menu screen.

3. Click each item to select the settings description.

The items that can be set are as follows.

Item	Description
Light connection	Select "Yes" when connecting a light or "No" when not connecting a light.
Start mode	Switches the start mode on or off. You can change gear position when on is selected.
Automatic gear shifting	The auto shifting setting window is displayed. You can select whether auto shifting is enabled, disabled, and the auto shifting adjust values.

Display monitor settings

Configure the settings of the display monitor.

1. Display the customize menu screen.

2. Click [Display monitor settings] in the customize menu screen.

3. Click each item to select the settings description.

<SC-E6000>

<SC-E6010>

The items that can be set are as follows.

Item	Description
Display units	You can select the International System (km) or the Imperial System (mile) of units.
Display switchover	You can select whether to display the items "Traveling time", "Average speed", "Maximum speed", and "Range overview".
Time setting	You can adjust the time setting.
Beep setting	You can select whether to turn the beep on or off.
Backlight setting	You can select whether to turn the backlight on, off or manual.
Brightness	The backlight brightness can be selected from the following levels: "Level 1" / "Level 2" / "Level 3" / "Level 4" / "Level 5". This menu can only be set using SC-E6010.
Display language	You can select the display language from "English", "French", "German", "Dutch", "Italian", and "Spanish".
Font color	The font color can be set to white or black. This menu can only be set using SC-E6010.

* Click [Restore default values] and then [Set] to reset the settings to default.

Switch setting

1. Display the customize menu screen.
2. Click [Switch setting] in the customize menu screen.

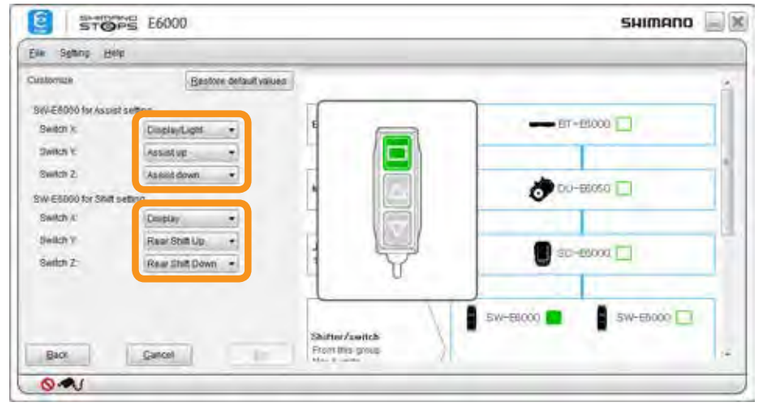
3. Click [Switch mode setting] or [Switch function setting] to go to each setting screen.

Switch mode setting

SW-E6000/E6010 can be used as the assist mode switch or gear shifting switch. You can select which mode to use.
On the E-TUBE PROJECT screen, the assist mode switch is indicated as "SW-E6000/E6010 for Assist" and the gear shifting switch is indicated as "SW-E6000/E6010 for Shift". Configure the setting according to the instructions displayed on the screen.

Switch function setting

You can change the functions to assign to switches (X), (Y) and (Z).
Select the desired setting for each switch.



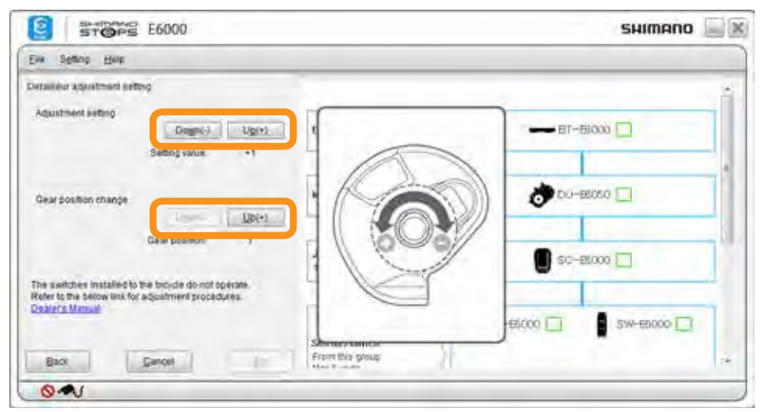
Note: Click [Restore default values] and then [Set] to reset the switch functions to default.

Derailleur adjustment setting

The derailleur can be adjusted.
Note: Usually, this operation is not necessary.

1. Display the customize menu screen.
2. Click [Derailleur adjustment setting] in the customize menu screen.

3. Click [Down] / [Up] to adjust.
Note: During this operation, the derailleur will not operate even when the shift switch of SW-S705 and SW-E6000/E6010 is operated.
Note: The crank does not need to be rotated for operations related to adjustment and gear-shifting.



The settings to be adjusted are as follows.

	Item	Description
Adjustment setting	Down (-)	The components that control gear-shifting rotate in the direction to indicate a lighter gear (clockwise, direction of "-" indication).
	Up (+)	The components that control gear-shifting rotate in the direction to indicate a heavier gear (counterclockwise, direction of "+" indication).
	Displays the current set value in [Setting Value]. (-4 to +4)	
Gear position change	Down (-)	Gears will be shifted to a lighter gear.
	Up (+)	Gears will be shifted to a heavier gear.
	Displays the current number of sprockets in [Gear position]. (1 to 8 or 1 to 11)	

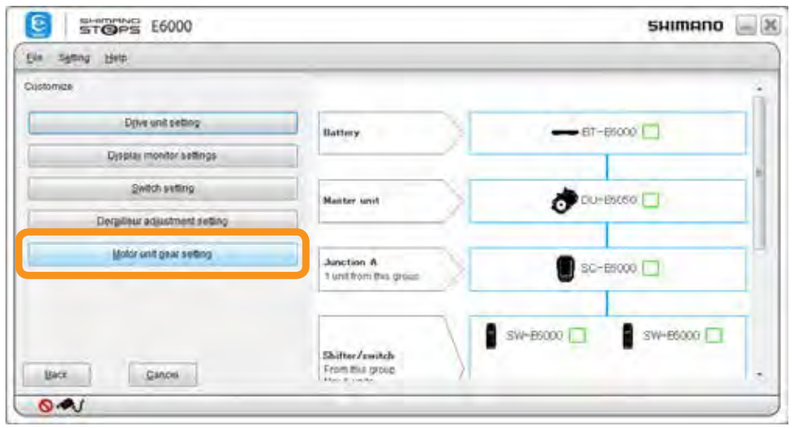
4. Click [Set] to complete adjustment.

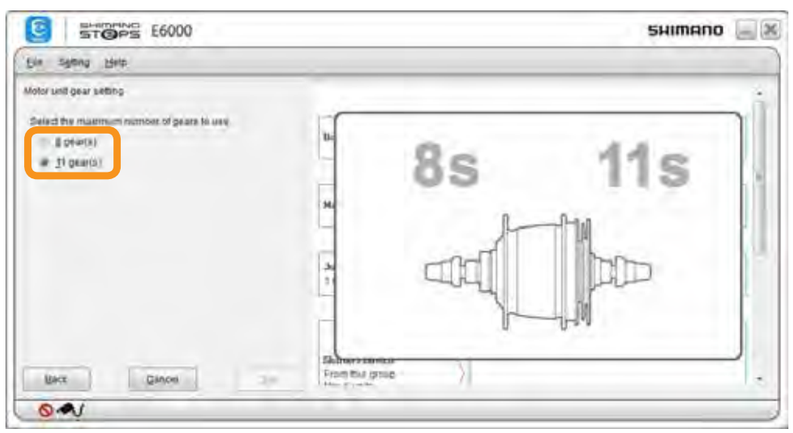
Motor unit gear setting

MU-S705 can be used for hubs of SG-S705 (11 gears), SG-S505 (8 gears) and SG-C6060 (8 gears) by making additional settings. These settings can be made with the motor unit gear setting.
Note: Before making the motor unit gear setting, check the derailleur to be installed.

1. Display the customize menu screen.

2. Click [Motor unit gear setting] in the customize menu screen.





The items that can be set are as follows.

Item	Description
8 gear(s)	Select this when MU-S705 is installed to SG-S505 / SG-C6060.
11 gear(s)	Select this when MU-S705 is installed to SG-S705.

3. Click any setting and then [Set] in the motor unit gear setting screen.

Error Check

When a single unit or multiple units are connected, this function checks their operation and identifies any units which have a problem.

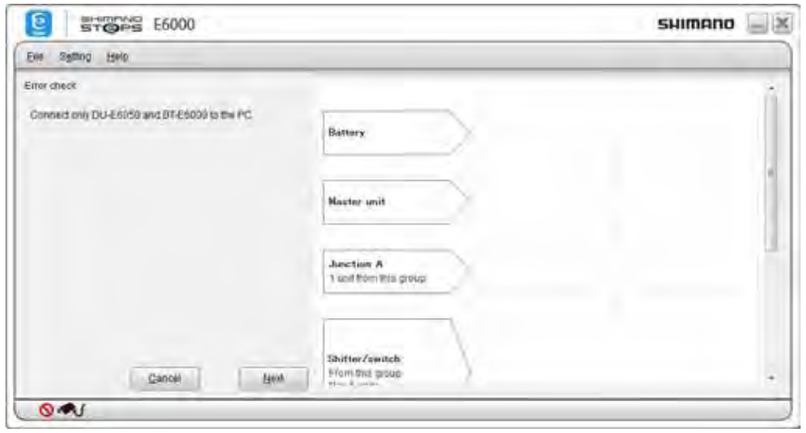
1. Click [Error check] in the main menu screen.

2. Select the unit you want to check and then click [Start diagnosis].

- An error check of the selected unit will start. Perform operations following the instructions on the screen.

3. If there is no malfunction, this will be highlighted in green.
   If a malfunction might occur, this will be highlighted in red.

4. If a malfunction might occur, recheck using a single connection.



5. If a malfunction still might occur even after rechecking, this will be highlighted in red.
   Contact a SHIMANO distributor.

Unit Log Acquisition

Click [Unit log acquisition] on the main menu screen.

• Acquires various data from the connected units and displays them in a report format. The report is displayed in PDF format.

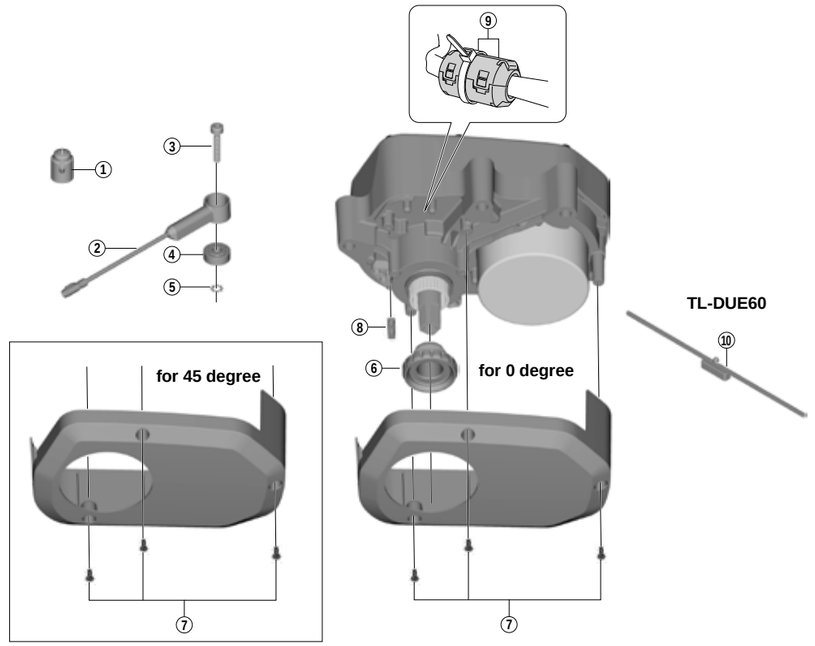
Preset

This function allows you to connect one or more units and read or write all the settings of those units at the same time. The readout settings can be saved in a file. The settings can also be successively written to multiple bicycles.

EXPLODED VIEW

See our website at http://si.shimano.com for the latest information.

DU-E6000 Drive Unit with Cover
DU-E6001/DU-E6010 Drive Unit
SM-DUE60 0 degree/45 degree Drive Unit Cover

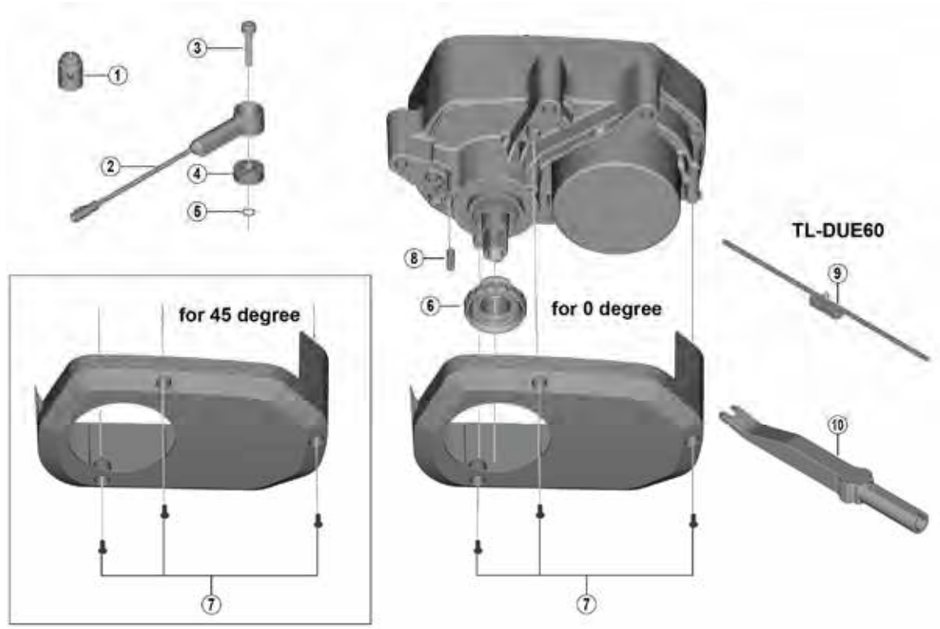


ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
1	**Y70L98010**	Magnet Unit
2	**Y70L98020**	Speed Sensor
3	**Y70L000G0**	Speed Sensor Fixing Bolt L16 (4 mm Hexagon Head)
	Y70L000U0	Speed Sensor Fixing Bolt L22 (4 mm Hexagon Head)
4	**Y70L000F0**	Spacer
5	**Y70L000M0**	Toothed Washer
6	**Y70L00010**	Lock Ring
7	**Y70L98030**	Fixing Bolts (M3 x 8) set for SM-DUE60 0 degree and 45 degree
8	**Y6VE15000**	Dummy Plug
9	**Y70L98040**	Ferrite Core & Zip Tie
10	**YEZY00002**	Chain tension measurement tool TL-DUE60

A: Same parts.
B: Parts are usable, but differ in materials, appearance, finish, size, etc.
Absence of mark indicates non-interchangeability.

Jun.-2016-3761F
© Shimano Inc. I

DU-E6002/DU-E6012 Drive Unit
SM-DUE60 0 degree/45 degree Drive Unit Cover



ITEM NO.	SHIMANO CODE NO.	DESCRIPTION	INTERCHANGE-ABILITY		
1	**Y70L98010**	Magnet Unit			
2	**Y70L98020**	Speed Sensor			
3	**Y70L000G0**	Speed Sensor Fixing Bolt L16 (4 mm Hexagon Head)			
	Y70L000U0	Speed Sensor Fixing Bolt L22 (4 mm Hexagon Head)			
4	**Y70L000F0**	Spacer			
5	**Y70L000M0**	Toothed Washer			
6	**Y70L00010**	Lock Ring			
7	**Y70L98030**	Fixing Bolts (M3 x 8) set for SM-DUE60 0 degree and 45 degree			
8	**Y6VE15000**	Dumm Y Plug			
9	**YEZY00002**	Chain tension measurement tool TL-DUE60			
10	**Y6VE16000**	TL-EW02 Plug Tool			

A: Same parts.
B: Parts are usable, but differ in materials, appearance, finish, size, etc.
Absence of mark indicates non-interchangeability.

Jun.-2017-4290
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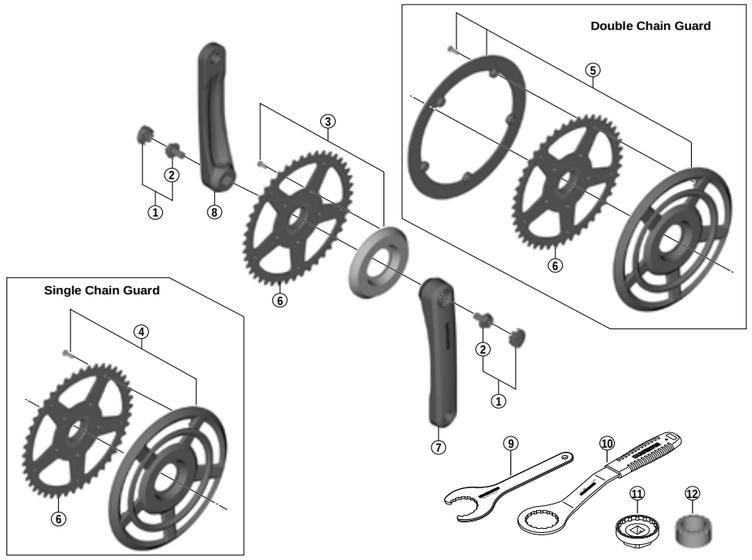
FC-E6000 Crank Arm
SM-CRE60 Gear



ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
* 1	Y1Y598010	Crank Arm Fixing Bolt Unit for Black
	Y1R298010	Crank Arm Fixing Bolt Unit for Gray
2	Y1SC02000	Crank Arm Fixing Bolt (M8 x 15)
3	Y1R298020	Chain Ring Cover & Fixing Bolt (5 pcs.)
4	Y1R298030	38T Single Chain Ring Cover (1 pc) & Fixing Bolt (1 Unit = 5 pcs.) for Black
	Y1R298070	38T Single Chain Ring Cover (1 pc) & Fixing Bolt (1 Unit = 5 pcs.) for Gray
	Y1R298040	44T Single Chain Ring Cover (1 pc) & Fixing Bolt (1 Unit = 5 pcs.) for Black
	Y1R298080	44T Single Chain Ring Cover (1 pc) & Fixing Bolt (1 Unit = 5 pcs.) for Gray
5	Y1R298050	38T Double Chain Ring Cover (1 pc) & Fixing Bolt (1 Unit = 5 pcs.) for Black
	Y1R298090	38T Double Chain Ring Cover (1 pc) & Fixing Bolt (1 Unit = 5 pcs.) for Gray
	Y1R298060	44T Double Chain Ring Cover (1 pc) & Fixing Bolt (1 Unit = 5 pcs.) for Black
	Y1R298100	44T Double Chain Ring Cover (1 pc) & Fixing Bolt (1 Unit = 5 pcs.) for Gray
6	Y1Y400001	Chain Ring 38T
	Y1Y400002	Chain Ring 44T
*	Y1Y502000	Right Hand Crank Arm 170 mm (Black)
* 7	Y1R202000	Right Hand Crank Arm 170 mm (Gray)
	Y1Y502100	Right Hand Crank Arm 175 mm (Black)
	Y1R202100	Right Hand Crank Arm 175 mm (Gray)
*	Y1Y501000	Left Hand Crank Arm 170 mm (Black)
* 8	Y1R201000	Left Hand Crank Arm 170 mm (Gray)
	Y1Y501100	Left Hand Crank Arm 175 mm (Black)
	Y1R201100	Left Hand Crank Arm 175 mm (Gray)
9	Y13009210	TL-FC32 Adapter Removal Tool
10	Y13098000	TL-FC36 Adapter Removal Tool
11	Y13009230	TL-FC33 Adapter Removal Tool
12	YEZY00010	TL-FC38 Adapter Removal Tool for DU-E6000/ DU-E6001

Jun.-2016-3762B
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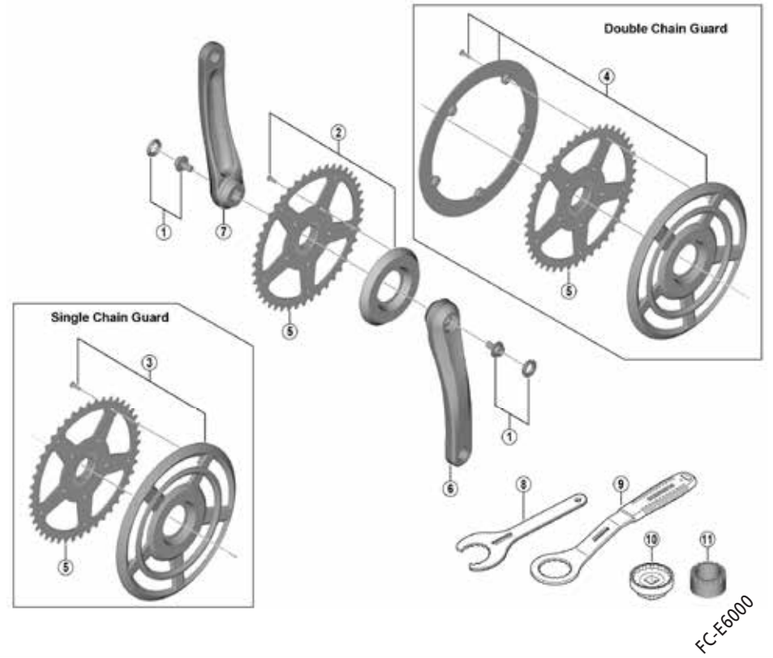
FC-E6010/SM-CRE60 Crankset



ITEM NO.	SHIMANO CODE NO.	DESCRIPTION	INTERCHANGE-ABILITY		
1	Y1FP98010	Crank Arm Fixing Bolt & Cap	B		
2	Y1R298020	Chain Ring Cover & Fixing Bolt (5 pcs.)			
3	Y1R298030	38T Single Chain Ring Cover (1 pc) & Fixing Bolt (1 Unit = 5 pcs.) for Black			
	Y1R298070	38T Single Chain Ring Cover (1 pc) & Fixing Bolt (1 Unit = 5 pcs.) for Gray			
	Y1R298040	44T Single Chain Ring Cover (1 pc) & Fixing Bolt (1 Unit = 5 pcs.) for Black			
	Y1R298080	44T Single Chain Ring Cover (1 pc) & Fixing Bolt (1 Unit = 5 pcs.) for Gray			
4	Y1R298050	38T Double Chain Ring Cover (1 pc) & Fixing Bolt (1 Unit = 5 pcs.) for Black			
	Y1R298090	38T Double Chain Ring Cover (1 pc) & Fixing Bolt (1 Unit = 5 pcs.) for Gray			
	Y1R298060	44T Double Chain Ring Cover (1 pc) & Fixing Bolt (1 Unit = 5 pcs.) for Black			
	Y1R298100	44T Double Chain Ring Cover (1 pc) & Fixing Bolt (1 Unit = 5 pcs.) for Gray			
5	Y1Y400001	Chain Ring 38T (SM-CRE60)			
	Y1Y400002	Chain Ring 44T (SM-CRE60)			
6	Y1WT05010	Right Hand Crank Arm 170 mm (Black)	B		
	Y1WT05000	Right Hand Crank Arm 170 mm (Gray)	B		
	Y1WT03010	Right Hand Crank Arm 175 mm (Black)	B		
	Y1WT03000	Right Hand Crank Arm 175 mm (Gray)	B		
7	Y1WT05110	Left Hand Crank Arm 170 mm (Black)	B		
	Y1WT05100	Left Hand Crank Arm 170 mm (Gray)	B		
	Y1WT03110	Left Hand Crank Arm 175 mm (Black)	B		
	Y1WT03100	Left Hand Crank Arm 175 mm (Gray)	B		
8	Y13009210	TL-FC32 Adapter Removal Tool			
9	Y13098000	TL-FC36 Adapter Removal Tool			
10	Y13009230	TL-FC33 Adapter Removal Tool			
11	YEZY00010	TL-FC38 Adapter Removal Tool			

A: Same parts.
B: Parts are usable, but differ in materials, appearance, finish, size, etc.
Absence of mark indicates non-interchangeability.

Jun.-2017-4292
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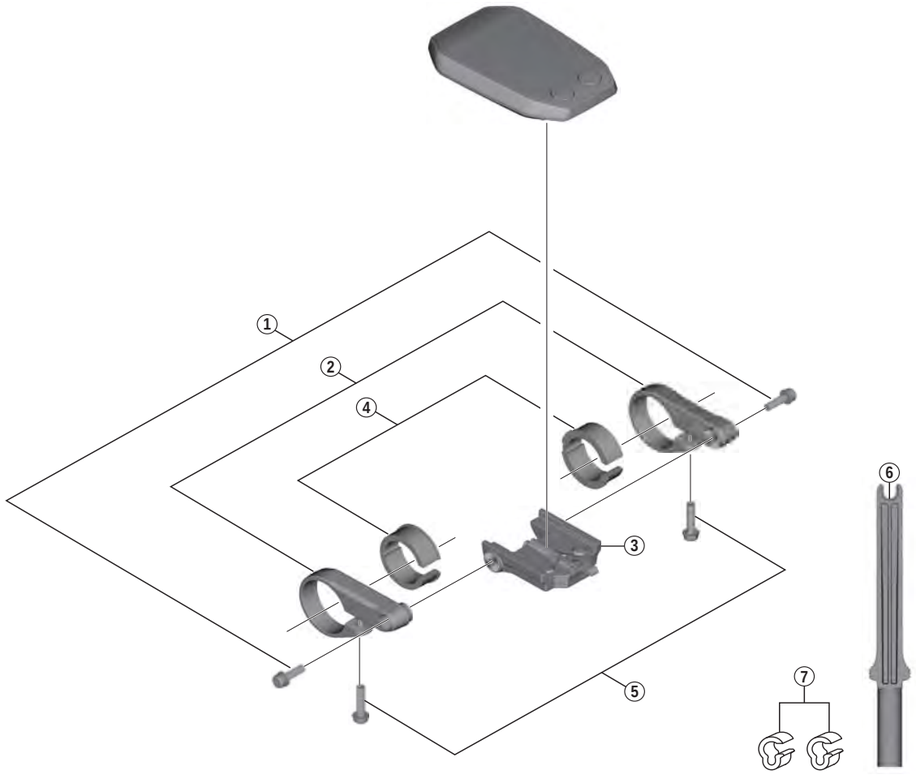
SC-E6010 Cycle Computer



ITEM NO.	SHIMANO CODE NO.	DESCRIPTION	INTERCHANGE-ABILITY (SC-E6000)		
1	**Y70Z98010**	Stay Fixing Screw (M4 x 15.5 mm) 2 pcs.	A		
2	**Y70Z98020**	Stay R & Stay L	A		
3	**Y70Z98030**	Bracket Terminal	B		
4	**Y70Z98040**	Adapter (Ø25.4 mm) 2 pcs.	A		
* 5	**Y70Z98050**	Clamp Screw (M4 x 20 mm) 2 pcs.	A		
	Y70Z98010	Clamp Screw (M4 x 15.5 mm) 2 pcs.	A		
6	**Y6VE16000**	TL-EW02 Plug Tool			
7	**Y70H98040**	Band A (2 pcs.)			

A: Same parts.
B: Parts are usable, but differ in materials, appearance, finish, size, etc.
Absence of mark indicates non-interchangeability.

Jun.-2016-3922B
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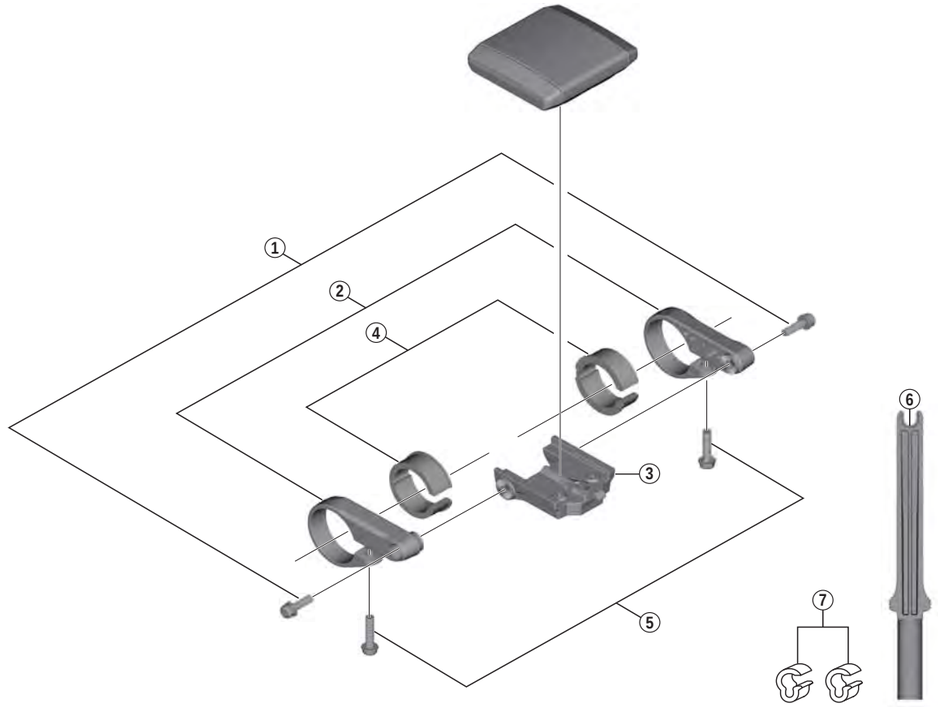
SC-E6000 Cycle Computer



ITEM NO.	SHIMANO CODE NO.	DESCRIPTION	INTERCHANGE-ABILITY (SC-E6010)		
1	**Y70Z98010**	Stay Fixing Screw (M4 x 15.5 mm) 2 pcs.	A		
2	**Y70Z98020**	Stay R & Stay L	A		
3	**Y70H02000**	Bracket	B		
4	**Y70Z98040**	Adapter (Ø25.4 mm) 2 pcs.	A		
* 5	**Y70Z98050**	Clamp Screw (M4 x 20 mm) 2 pcs.	A		
	Y70Z98010	Clamp Screw (M4 x 15.5 mm) 2 pcs.	A		
6	**Y6VE16000**	TL-EW02 Plug Tool			
7	**Y70H98040**	Band A (2 pcs.)			

A: Same parts.
B: Parts are usable, but differ in materials, appearance, finish, size, etc.
Absence of mark indicates non-interchangeability.

Jun.-2016-3763C
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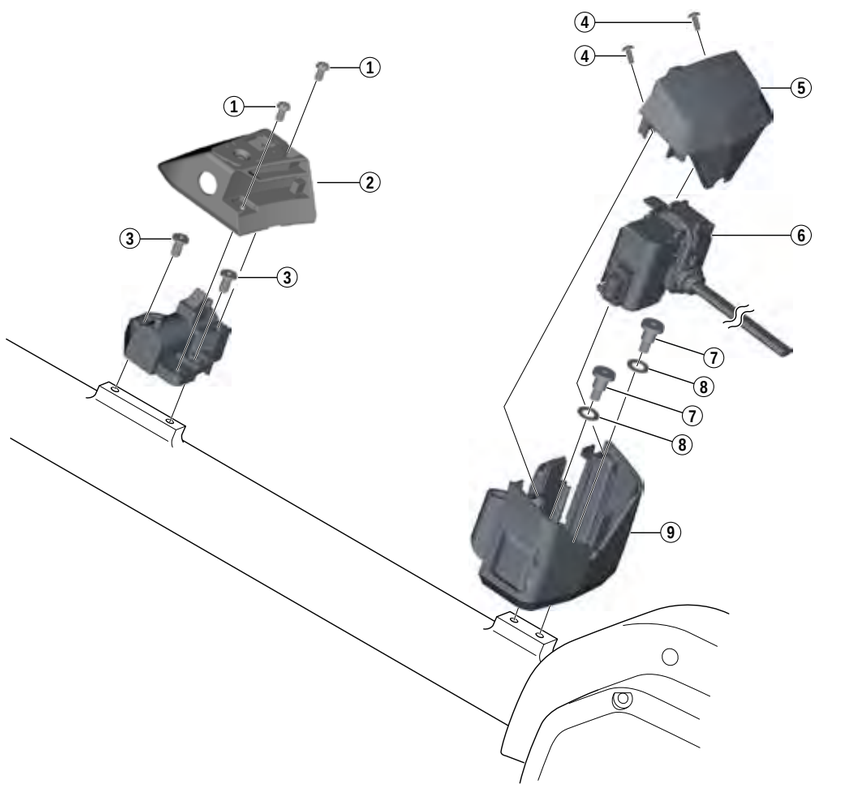
BM-E6010 Battery Mount



ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
1	**Y71B00002**	M4 BOLT
2	**Y71B00003**	KEY UNIT COVER ASSY
3	**Y71B00004**	M5 BOLT
4	**Y71B00005**	M3 BOLT
5	**Y71B00006**	UPPER CASE ASSY
*	**Y71B00011**	HARNESS ASSY (250 mm)
6	**Y71B00007**	HARNESS ASSY (300 mm)
*	**Y71B00012**	HARNESS ASSY (600 mm)
7	**Y71B00009**	HOLDER FIXING BOLT
8	**Y71B00008**	RUBBER WASHER
9	**Y71B00010**	LOWER CASE ASSY

Feb.-2017-3525B
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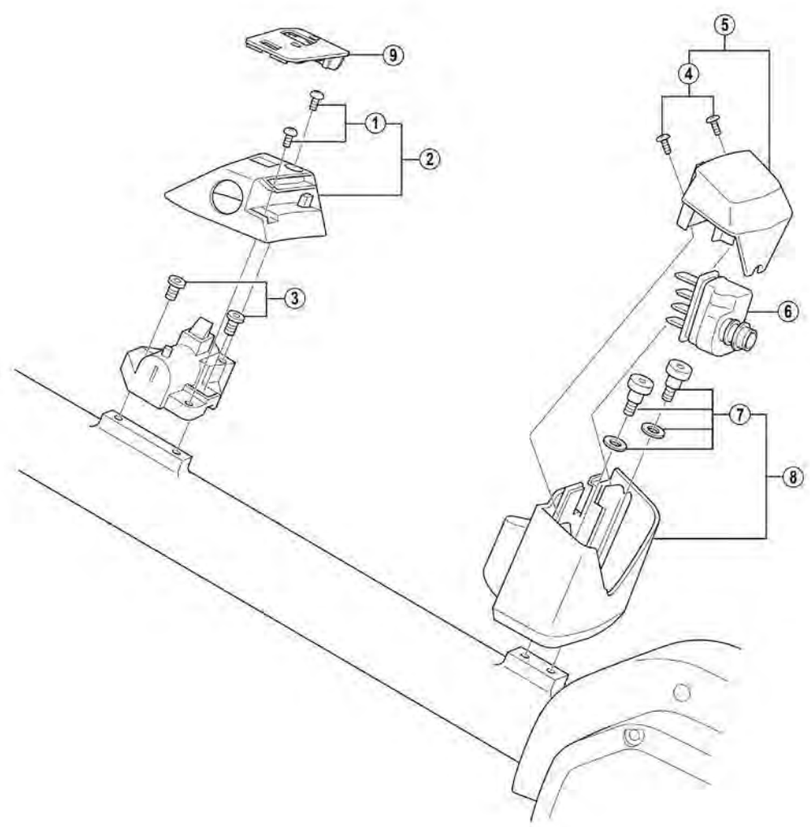
SM-BME61 Battery Mount



ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
1	**Y70N98010**	Key Unit Cover Fixing Bolt (M4)
2	**Y70N98020**	Key Unit Cover & Fixing Bolt (M4)
3	**Y70N98030**	Key Unit Fixing Bolt (M5)
4	**Y70N98040**	Mount Upper Case Fixing Bolt (M3)
5	**Y70N98050**	Mount Upper Case & Fixing Bolt (M3)
6	**Y70N00014**	Plug
7	**Y70N98060**	Mount Fixing Bolt (M5) & Washer
8	**Y70N98070**	Mount Lower Case Unit
9	**Y70N00018**	Battery Rattle Prevention Spacer

A: Same parts.
B: Parts are usable, but differ in materials, appearance, finish, size, etc.
Absence of mark indicates non-interchangeability.

Nov.-2015-3814B
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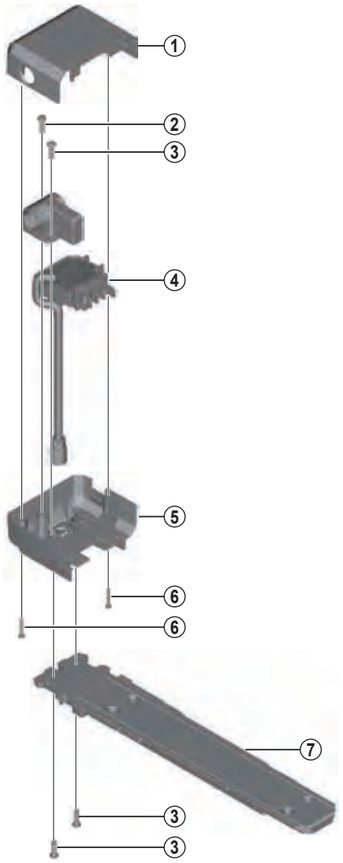
BM-E6000-A/BM-E6000-B Battery Mount



A:AXA
B:ABUS / TRELOCK

ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
1	**Y71A00007**	Upper case assy(A)_Gray
	Y71A00012	Upper case assy(A)_Black
	Y71A00011	Upper case assy(B)_Gray
	Y71A00013	Upper case assy(B)_Black
2	**Y71A00005**	M4 bolt (one way type)
3	**Y71A00004**	M4 bolt
4	**Y71A00006**	Harness assembly
5	**Y71A00003**	Lower case assy(A)
	Y71A00010	Lower case assy(B)
6	**Y71A00008**	Hexalobular #10H
7	**Y71A00009**	Battery Rail

Apr.-2016-3970A
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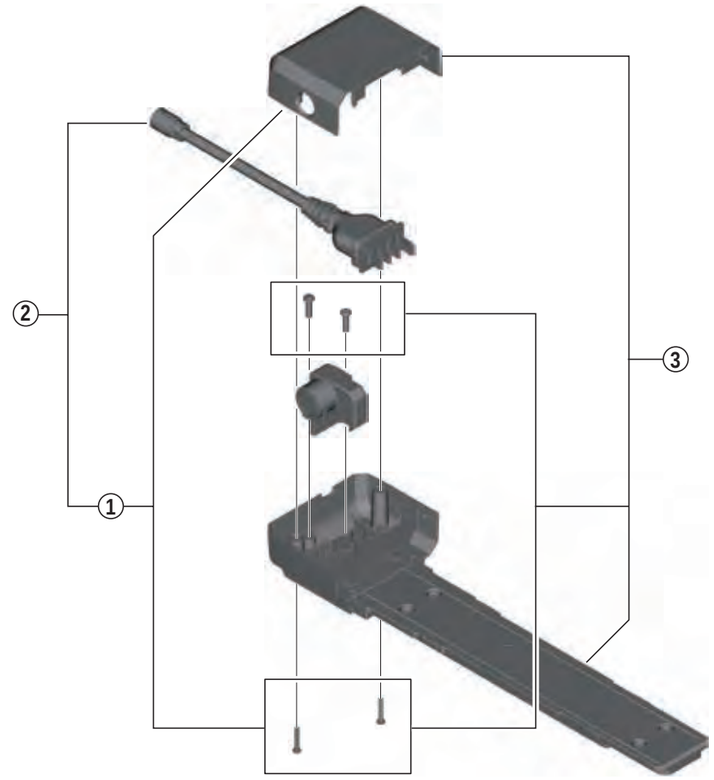
SM-BME60-A/SM-BME60-B Battery Mount



A:AXA
B:ABUS / TRELOCK

ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
1	**Y70M98030**	Upper Case Assembly (A-Type)
	Y70M98040	Upper Case Assembly (B-Type)
2	**Y70M98010**	Upper Case Assembly (A-Type) & Wire Harness
	Y70M98020	Upper Case Assembly (B-Type) & Wire Harness
3	**Y70M98050**	Upper Case Assembly & Lower Case Assembly (A-Type)
	Y70M98060	Upper Case Assembly & Lower Case Assembly (B-Type)

Apr.-2016-3885A
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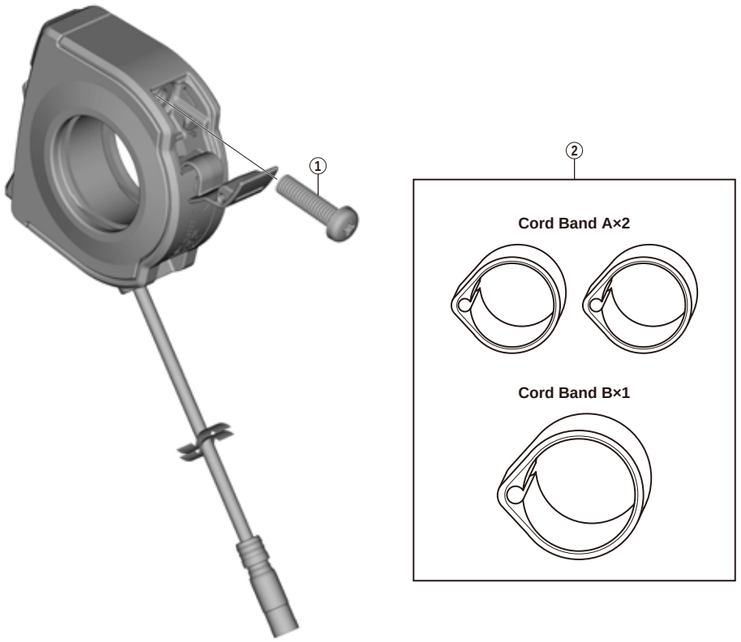
SW-E6000 Assist/Shift Switch



ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
1	**Y70J000B0**	Fixing Bolt M4
2	**Y7EU98010**	Cord Band Unit

Nov.-2015-3764B
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SM-DUE01 Light Adapter

ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
1	**Y70P03000**	Unit Fixing Screw M3

A: Same parts.
B: Parts are usable, but differ in materials, appearance, finish, size, etc.
Absence of mark indicates non-interchangeability.

Nov.-2015-3765A
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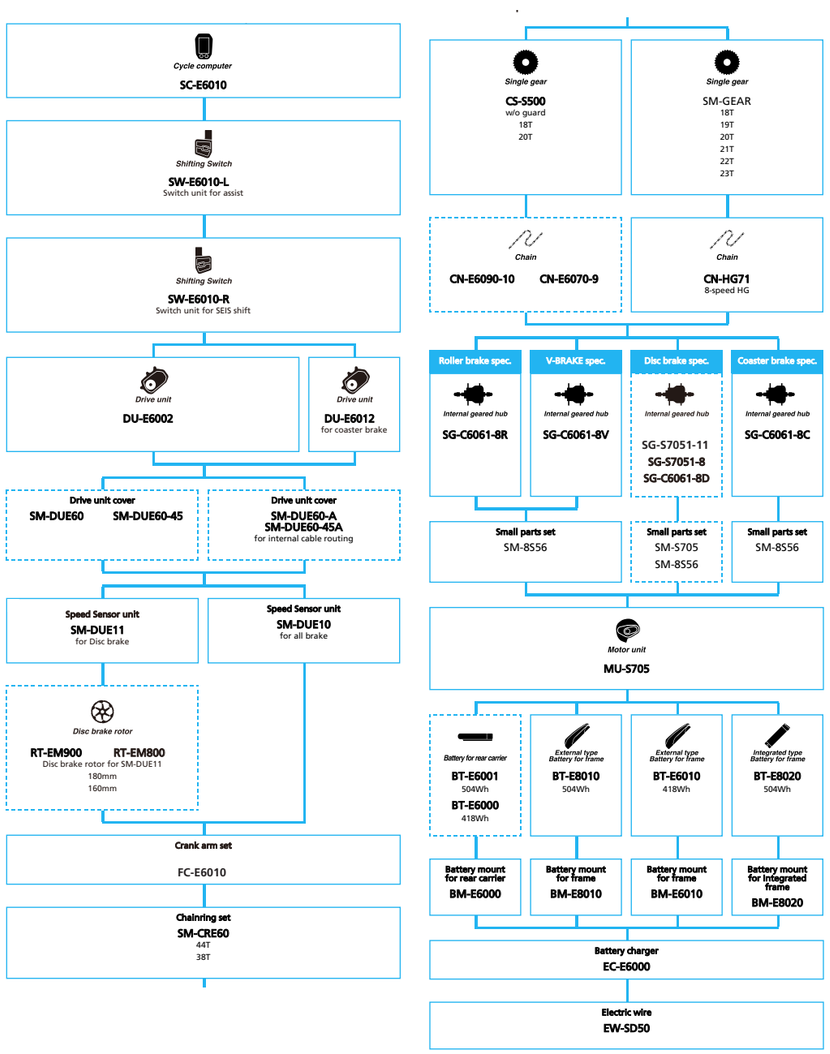
LINE-UP CHART

See our website at http://si.shimano.com for the latest information.

E6000 Series DI2 Internal Geared Hub Spec.

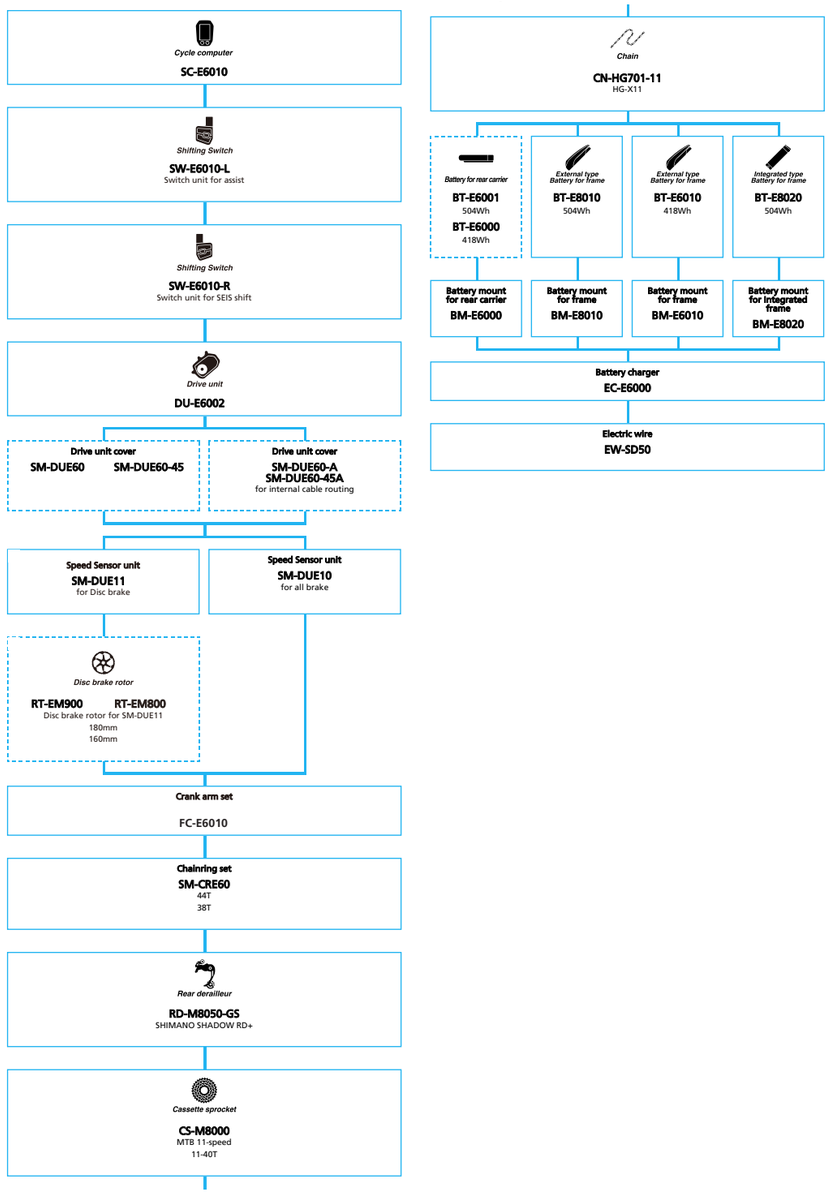
□ ... All select
⬚ ... Single select



Ver. 2.0, May. 16, 2017, SHIMANO INC.

E6000 Series DI2 Internal Geared Hub, Coaster Brake Spec.

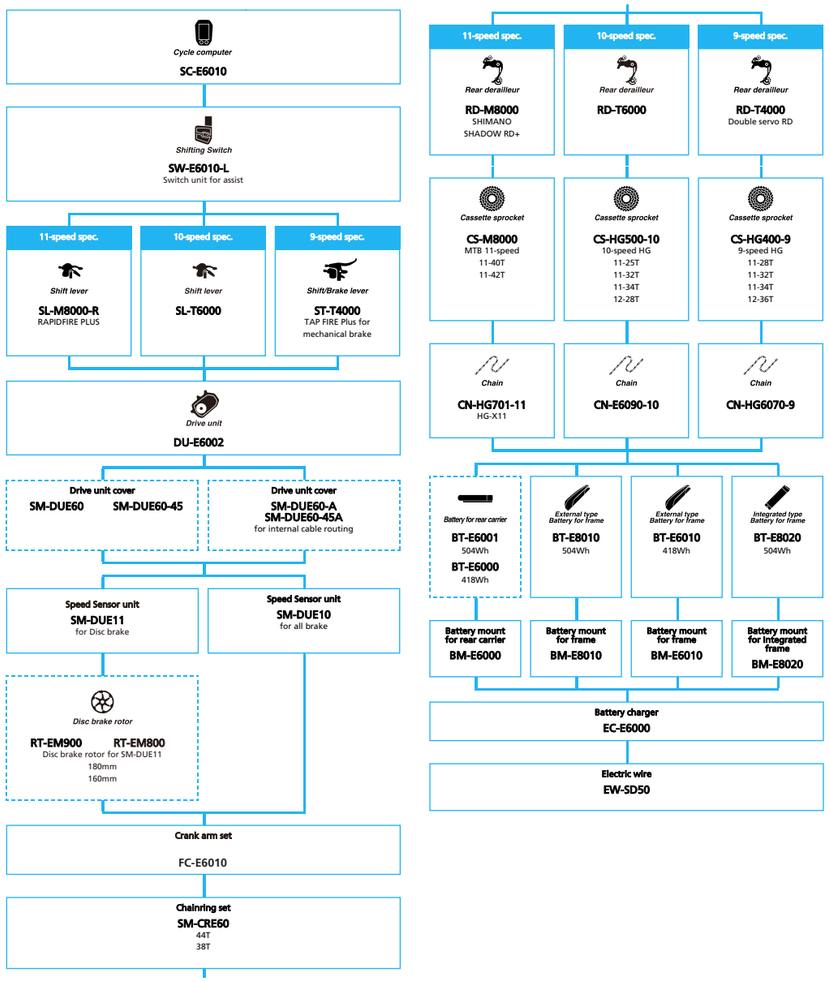
□ ... All select
⬚ ... Single select



Ver. 2.0, May. 16, 2017, SHIMANO INC.

E6000 Series Mechanical Derailleur Spec.

... All select
... Single select



Ver. 2.0, May. 16, 2017, SHIMANO INC.

SPECIFICATION SHEET

See our website at http://si.shimano.com for the latest information.

Cycle Computer <SC-E6010/SC-E6000>


SC-E6010

Series		SHIMANO	SHIMANO
Model no.		SC-E6010	SC-E6000
Color	1	Black	Gray
	2	-	-
	3	-	-
Mount position	Center on handlebar	X	X
Master unit		-	-
Wireless system		-	-
Firmware update by E-tube Project		X	X
E-tube port (pcs)		3	3
E-tube connector (pcs)		0	0
Back Light		X	X
LCD size (inch)		2.7	1.85
Beep		X	X
Display Detachable		X	X
Display Change Button		-	-
Reset button		-	-
Inside battery		X	X
System on/off button		X	-
Light on/off button		X	-
Auto Start & Auto Stop		-	-
Contents of Display	Clock	X	X
	Assist mode display	X	X
	Battery charge level	X	X
	Current Speed	X	X
	Gear Position Display	*X (8/11spd)	*X (8/11spd)
	Start mode	X	X
	Automatic shift mode	X	X
	Maximum speed	** X	** X
	Average speed	** X	** X
	Trip distance	X	X
	Trip time	** X	** X
	Odometer	X	X
	Estimated range	X	X
	Range overview	X	X
	Assist power indicator	X	-
	Error Message	X	X
	Cadence	**** X	-
	Human Out put Power	**** X	-
	Calorie	**** X	-
Setting menu	Trip Distance reset	X	X
	Odometer reset	-	-
	Setting Clear	X	X
	Clock adjustment	X	X
	Start mode	X	X
	Back light on/off	X	X
	Light on/off	-	-
	Back light brightness	X	-
	Beep on/off	X	X
	Unit (km/mile)	X	X
	Font color	X	X
	Adjusting for shift	* X	* X
	Adjusting for auto shift timing	* X	* X
	RD protection Reset	* X	-
	Bluetooth® LE pairing	-	-
	Bluetooth® LE/ANT connection status	-	-
Language	English	X	X
	German	X	X
	Dutch	X	X
	French	X	X
	Spanish	X	X
	Italian	X	X
Note		* In case of SEIS ** Option by E-tube project **** In case of using with DU-E8000	* In case of SEIS ** Option by E-tube project

Drive Unit <DU-E6010/DU-E6001/DU-E6002/DU-E6012>


DU-E6010

Series		SHIMANO	SHIMANO	SHIMANO	SHIMANO
Model no.		DU-E6002	DU-E6012	DU-E6001	DU-E6010
Color	1	Black	Black	Black	Black
	2	Gray	-	Gray	-
	3	-	-	-	-
Compatible Brake type		V-BRAKE, Roller brake, Disc brake	Coaster brake	V-BRAKE, Roller brake, Disc brake	Coaster brake
Motor type		Brushless motor	Brushless motor	Brushless motor	Brushless motor
Position		Mid ship	Mid ship	Mid ship	Mid ship
Compatible Wheel Size (mm)		*1,300-2,400	*1,300-2,400	*1,300-2,400	*1,300-2,400
Maximum Rated Power (Watt)		250	250	250	250
Maximum torque (Nm)		50	50	50	50
Rated Voltage		DC 36V	DC 36V	DC 36V	DC 36V
DI2 compatible	IHG	*X	*X	*X	*X
	RD	*X	-	-	-
Light off road compatible	IHG	*X	-	-	-
	RD	*X	-	*X	-
Maximum support bike speed	24 km/h	-	-	-	-
	25 km/h	*X	*X	X	X
	20 mph	*X	*X	-	-
	Other	-	-	-	-
Assist pattern Setting	Light off-road	*X	*X	*X	-
	Comfort	*X	*X	*X	X
Maximum assist ratio (%)	BOOST	-	-	-	-
	HIGH	230	230	230	230
	TRAIL	-	-	-	-
	NORMAL	150	150	150	150
	ECO	70	70	70	70
Power supply for front light		DC 6V	DC 6V	**** DC 6V	**** DC 6V
Power supply for rear light		DC 6V	DC 6V	**** DC 6V	**** DC 6V
Maximum current supply front and rear light total (A)		2	2	1	1
Safe way home function		X	X	X	X
Communication		E-TUBE	E-TUBE	E-TUBE	E-TUBE
Master unit		X	X	X	X
Firmware update by E-TUBE PROJECT		X	X	X	X
E-TUBE port (pcs)		2	2	2	2
E-TUBE connector (pcs)		0	0	0	0
Port for Light (pcs)		0	0	2	2
Terminal for Light (pcs)		1	1	0	0
Port for Speed Sensor (pcs)		1	1	1	1
Chain case compatible		X	X	X	X
Chain Device compatible		-	-	-	-
Torque sensor		X	X	X	X
Crank arm position sensor		X	X	X	X
Bike speed sensor		** X	** X	X	X
Cadence sensor		X	X	X	X
Walk assist function	On/Off	*X	*X	-	-
	Standard	X	X	X	X
	Intelligent	-	-	-	-
	Quick	X	X	-	-
Automatic shift	IHG 11s	-	-	-	-
	IHG 8s	X	X	X	X
	RD	-	-	-	-
SYMPHOMATIC	IHG	X	X	X	X
	RD	-	-	-	-
Compatible BB type		Square type	Square type	Square type	Square type
DU fixing bolt (pcs)		-	-	-	-
Note		* Set by E-TUBE PROJECT ** By using SM-DUE10/ SM-DUE11	* Set by E-TUBE PROJECT ** By using SM-DUE10	* Set by E-TUBE PROJECT **** By using SM-DUE01	* Set by E-TUBE PROJECT **** By using SM-DUE01

Drive Unit Cover

<SM-DUE60/SM-DUE60-45/SM-DUE60-A/SM-DUE60-45A>


SM-DUE60-45

Series		SHIMANO	SHIMANO	SHIMANO	SHIMANO
Model no.		SM-DUE60	SM-DUE60-45	SM-DUE60-A	SM-DUE60-45A
Color	1	Gray	Gray	Gray	Gray
	2	Black	Black	Black	Black
	3	-	-	-	-
Right Cover	Right	X	X	X	X
	Left	-	-	-	-
Available DU angle		0 degree	45 degrees	0 degree	45 degrees
Note				For internal cable routing	For internal cable routing

Chainring <SM-CRE60>


SM-CRE60

Series		SHIMANO	SHIMANO	SHIMANO
Model no.		SM-CRE60	SM-CRE60	SM-CRE60
Color	1	Black / Silver	Black / Silver	Black / Silver
	2	Black / Gray	Black / Gray	-
	3	-	-	-
Gear speed		1	1	1
Rear speed	11-speed	X	-	-
	10-speed	X	-	-
	9-speed	X	-	-
	Single	X	X	X
Dynamic Chain Engagement Plus		-	-	-
Chain ring teeth	44T	X	X	X
	38T	X	X	X
	34T	-	-	-
	Others	-	-	-
Chain guard type	Double	X	-	-
	Single	-	X	-
	W/O CG	-	-	X
Chain ring fixing lock nut		Included in drive unit	Included in drive unit	Included in drive unit
Chain ring cover outer diameter (mm)		-	-	95.5
Chain case compatible		-	X	X
Chain line (mm)	53	-	-	-
	50	-	-	-
	46.5	X	X	X
P.C.D. (mm)		-	-	-
Chain ring	Material	Steel	Steel	Steel
	Finish	Painted	Painted	Painted
Spider arm	Material	-	-	-
	Finish	-	-	-
Chain ring fixing bolt	Material	-	-	-
	Finish	-	-	-
Gear arms		-	-	-
Note				

Crankarm <FC-E6010/FC-E6000>


FC-E6010


FC-E6000

Series		SHIMANO	SHIMANO
Model no.		FC-E6010	FC-E6000
Color	1	Black	Gray
	2	Gray	Black
	3	-	-
Crank arm type	Hollow Tech	-	-
	Solid	X	X
Q factor (mm)		213	189.6
Chain case compatible		X	X
Crank arm length (mm)	175	X	X
	170	X	X
	Others	-	-
Crank arm	Material	Aluminum	Aluminum
	Finish	Painted	Painted
BB Type		Square type	Square type
Note			

Chain <CN-HG701-11/CN-E6090-10/CN-E6070-9/CN-HG71>


CN-E6090-10

Series	SHIMANO	SHIMANO	SHIMANO	SHIMANO
Model no.	CN-HG701-11	CN-E6090-10	CN-E6070-9	CN-HG71
Type	HG-X11	HG-X 10-speed	HG 9-speed	HG
E-Bike RD system compatible	X	X	X	-
Pin link plate	SIL-TEC	SIL-TEC	Gray	Silver
Roller link plate	SIL-TEC	SIL-TEC	Gray	Gray
Roller	-	-	-	-
Chromizing treatment link pin	X	X	X	X
Hollow pin	-	-	-	-
Average weight (114 links)	257g	276g	276g	324g
Note				

Shift Switch/Assist Switch <SW-E6000/SW-E6010>


SW-E6000


SW-E6010-R

Series		SHIMANO	SHIMANO	SHIMANO	SHIMANO
Model no.		SW-E6000	SW-E6000	SW-E6010-L	SW-E6010-R
Switch Type		-	-	-	-
Color	1	Gray	Gray	Standard	Standard
	2	Black	Black	-	-
	3	-	-	-	-
Usage		For assist	* For SEIS shift	For assist	For SEIS shift
Right SW		-	X	-	X
Left SW		X	-	X	-
Switch numbers (pcs)		3	3	3	3
Master unit		-	-	-	-
Firmware update by E-tube Project		X	X	X	X
E-tube port (pcs)		0	0	0	0
E-tube connector (pcs)		1	1	1	1
System On-Off		-	-	-	-
Assist Mode Change		X	-	X	-
Display change		X	* X	X	X
Automatic/Manual Change		-	* X	-	X
Light On-Off		* X	-	* X	-
Multiple input	2 step	-	* X	-	-
	Hold	-	-	-	** X
Note		* Set by E-tube project	* Set by E-tube project	* Set by E-tube project	** Available for RD

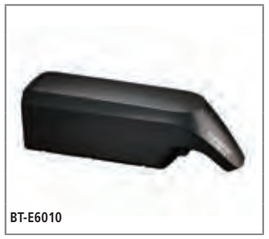
Adapter for DC light <SM-DUE01>


SM-DUE01

Series		SHIMANO	SHIMANO
Model no.		SM-DUE01	SM-DUE01
Color	1	Standard	Standard
	2	-	-
	3	-	-
Type		For DC light	For DC light
Cables for lights	With	*X	-
	Without	-	X
Front light		X	X
Rear light		X	X
Water proof connector		DU side	DU side
Wire holder		-	-
Note		*Cable length: 1600 mm	

Battery <BT-E8010/BT-E6010/BT-E6001/BT-E6000>

BT-E8010+BM-E8010



BT-E6010

BT-E6000+BM-E6000

Series		SHIMANO	SHIMANO	SHIMANO	SHIMANO
Model no.		BT-E8010	BT-E6001	BT-E6000	BT-E6010
Color	1	Black	Black	Black	Black
	2	-	Gray	Gray	Gray
	3	-	-	-	-
Chemistry		Li-Ion	Li-Ion	Li-Ion	Li-Ion
Position		Down tube	Rear carrier	Rear carrier	Down tube
Rated voltage (V)		36	36	36	36
Rated capacity (Ah)		14	14	11.6	11.6
Rated capacity (Wh)		504	504	418	418
Cyclelife span for charge (times)		1000 (more than 60%)	1000 (more than 60%)	1000 (more than 60%)	1000 (more than 60%)
Time to charge (hour)		*5	*5	*4	*4
Charge level display		X	X	X	X
Error signal		X	X	X	X
Charging port		X	-	-	-
Tail light / Reflector integration		-	-	-	-
Lock system		X	X	X	X
Key hole		-	-	-	-
System on/off switch		X	X	X	X
Compatible battery mount		BM-E8010	BM-E6000	BM-E6000	BM-E6000
Compatible charger		EC-E6000	EC-E6000	EC-E6000	EC-E6000
Note		*By EC-E6000	*By EC-E6000	*By EC-E6000	*By EC-E6000

Battery Mount
<BM-E8010/BM-E6010/BM-E6000-A/BM-E6000-B>

BM-E8010+BT-E8010

BM-E6010+BT-E6010

BM-E6000-A+BT-E6000

Series		SHIMANO	SHIMANO	SHIMANO	SHIMANO
Model no.		BM-E8010	BM-E6010	BM-E6000-A	BM-E6000-B
Color	1	Black	Black	Black	Black
	2	-	-	Gray	Gray
	3	-	-	-	-
Position		Down tube	Down tube	Rear carrier	Rear carrier
Charging port		-	*X	*X	*X
Lock system		X	-	-	-
Key hole		-	X	X	X
System on/off switch		-	-	-	-
Battery cable		X	X	X	X
Battery cable length	250	X	X	-	-
	300	X	X	-	-
	600	-	-	-	-
	900	X	X	-	-
	920	-	-	-	-
	1000	-	-	X	X
	1020	-	-	-	-
Compatible battery		-	-	X	X
Average weight		BT-E8010	BT-E6010	BT-E6000/BT-E6001	BT-E6000/BT-E6001
Note			*By EC-E6000	*By EC-E6000	*By EC-E6000

Battery Charger <EC-E6000/SM-BCE60>


SC-E8000

Series		SHIMANO	SHIMANO
Model no.		EC-E6000-4	SM-BCE60
Color	1	Standard	Standard
	2	-	-
	3	-	-
Typical example country / Region		Australia / New Zealand	All
Compatible battery		BT-E6000/BT-E6001/BT-E6010 BT-E8010/BT-E8020	BT-E6000/BT-E6010
Compatible battery mount		BM-E6000/BM-E6010	-
Compatible voltage		AC100V-240V 50-60Hz	AC100V-240V 50-60Hz
CE standard		X	X
UL standard		X	-
Korea standard		-	-
Time to full charge (hour)		*4 / **5	*4
Time to 80% charge (hour)		*2 / **2.5	3.2
Charging Level Display		-	-
Plug in charging type		X	-
Charging temperature		0-40°C	0-40°C
Storage temperature		-20-60°C	-20-60°C
Error signal		X	X
Adapter for battery connecter		X	-
Compatible AC power cable		-	SM-BCC1
Built in AC cable		X	-
Built in AC cable length (m)		1	-
Average weight		-	-
Note		*In case of BT-E6000 & BT-E6010 **In case of BT-E6001, BT-E8010 & BT-E8020	*In case of BT-E6000 & BT-E6010

Power Cable <SM-BCC1-4>


SM-BCC1-4

Series	SHIMANO
Model no.	SM-BCC1-4
Typical example country / Region	Australia New Zealand
Rated power input (V)	240
Cable length (m)	1
Note	

Electric Wire <EW-SD50>


EW-SD50

Series	SHIMANO	SHIMANO
Model no.	EW-SD50	EW-SD50-I
Type	For External routing	For Built-in routing
Compatible system	E-tube system	E-tube system
E-tube port (QTY)	0	0
E-tube connector (QTY)	2	2
Note	Cable lentgh 150-1600mm* *1600 mm is for E-bike usage only	Cable lentgh 150-1600mm* *1600 mm is for E-bike usage only

Internal Geared hub <SG-S7051-11/SG-S7051-8>


SG-S705

Series		ALFINE	ALFINE
Function name		Inter-11	Inter-8
Model no.		SG-S7051-11	SG-S7051-8
Color	1	Silver	Silver
	2	Black	Black
	3	-	-
Brake Type	Mount Type	Center Lock Type	Center Lock Type
	Recommnended Model	-	-
Speeds		11	8
Gear ratio	Total	409%	307%
	1	0.527	0.527
	2	0.681	0.644
	3	0.770	0.748
	4	0.878	0.851
	5	0.995	1
	6	1.134	1.223
	7	1.292	1.419
	8	1.462	1.615
	9	1.667	-
	10	1.888	-
	11	2.153	-

Internal Geared hub

<SG-C6061-8R/SG-C6061-8V/SG-C6061-8C/SG-C6061-8D/SG-C6061-8CD>

SG-C6061-8R

Series		NEXUS	NEXUS	NEXUS	NEXUS	NEXUS
Function name		Inter-8	Inter-8	Inter-8	Inter-8	Inter-8
Model no.		SG-C6061-8R	SG-C6061-8V	SG-C6061-8C	SG-C6061-8D	SG-C6061-8CD
Color	1	Silver	Silver	Silver	Silver	Silver
	2	Black	Black	Black	Black	Black
	3	-	-	-	-	-
Brake Type	Mount Type	Inter-M	V-BRAKE	Coaster Brake	Center Lock Type	Coaster and Special disc brake mount for SM-RTC60
	Recommended Model	-	-	-	-	-
Speeds		8	8	8	8	8
Gear ratio	Total	307%	307%	307%	307%	307%
	1	0.527	0.527	0.527	0.527	0.527
	2	0.644	0.644	0.644	0.644	0.644
	3	0.748	0.748	0.748	0.748	0.748
	4	0.851	0.851	0.851	0.851	0.851
	5	1	1	1	1	1
	6	1.223	1.223	1.223	1.223	1.223
	7	1.419	1.419	1.419	1.419	1.419
	8	1.615	1.615	1.615	1.615	1.615
	9	-	-	-	-	-
	10	-	-	-	-	-
	11	-	-	-	-	-

Motor Unit <MU-S705>

MU-S705

Series	ALFINE
Model no.	MU-S705
Compatible internal geared hub	SG-S7051 SG-C6060 SG-C6061
Compatible speed	11/8-speed
Electric power connector	E-tube
Average weight	147g
Note	

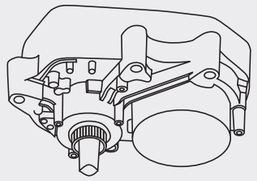
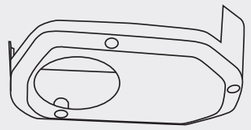
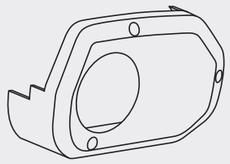
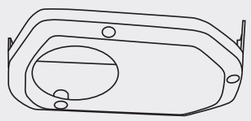
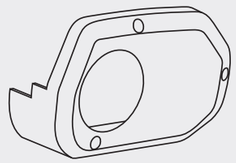
Cassette Sprocket <CS-S500>

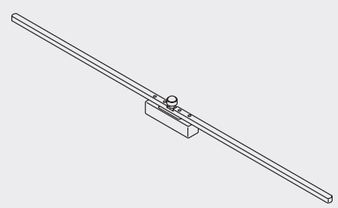
CS-S500

Series		ALFINE
Model no.		CS-S500
Chain Guard	with	X
	without	X
Gear teeth	14T	-
	16T	-
	17T	-
	18T	X (w/ and w/o guard)
	19T	-
	20T	X (w/ and w/o guard)
	21T	-
	22T	-
	23T	-
Gear thickness (mm)		2.0
Recommended chain	Super Narrow HG-X 10-speed	X
	Super Narrow HG 9-speed	X
	HG 8-speed (1/2"x3/32")	-
	1/2"x1/8"	-
Gear	Material	Steel
	Finish	Chrome plated
Note		

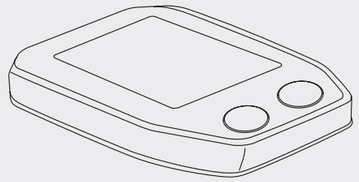
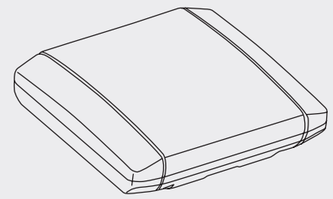
ORIGINAL SERVICE PARTS & TOOLS

Drive Unit / Drive Unit Cover

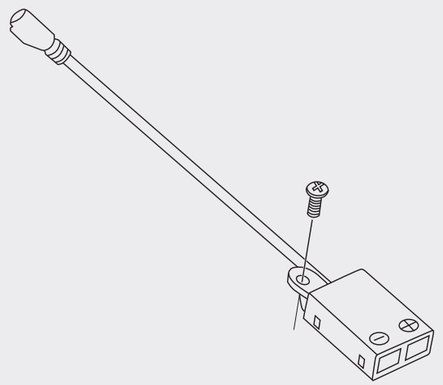
Image	Model Number	Description	Code. No
	DU-E6001	Drive unit mid ship position without cover (SM-DUE60) gray 25km/h	IDUE6001
		Drive unit mid ship position without cover (SM-DUE60) black 25km/h	IDUE6001L
	DU-E6010	Drive unit mid ship position without cover (SM-DUE60) black 25km/h for coaster brake	IDUE6010L
	DU-E6002	Drive unit mid ship position without cover (SM-DUE60), speed sensor and magnet gray 25km/h	IDUE6002KG
		Drive unit mid ship position without cover (SM-DUE60), speed sensor and magnet black 25km/h	IDUE6002KL
	DU-E6012	Drive unit mid ship position without cover (SM-DUE60), speed sensor and magnet black 25km/h for coaster brake	IDUE6012KL
SM-DUE60 	SM-DUE60	Drive unit cover gray (0 degree)	ISMDUE60
		Drive unit cover black (0 degree)	ISMDUE60L
SM-DUE60-A 		Drive unit cover gray (0 degree) for A spec internal cable routing	ISMDUE60A
		Drive unit cover black (0 degree) for A spec internal cable routing	ISMDUE60AL
SM-DUE60-45 		Drive unit cover gray (45 degrees)	ISMDUE6045
		Drive unit cover black (45 degrees)	ISMDUE6045L
SM-DUE60-45A 		Drive unit cover gray (45 degrees) for A spec internal cable routing	ISMDUE6045A
		Drive unit cover black (45 degrees) for A spec internal cable routing	ISMDUE6045AL

	TL-DUE60	Chain tension measurement tool	YEZY00002

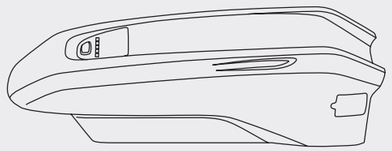
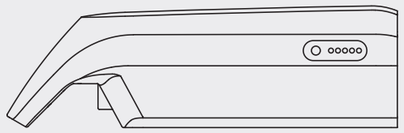
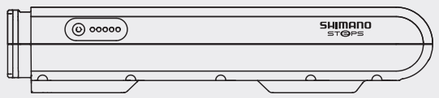
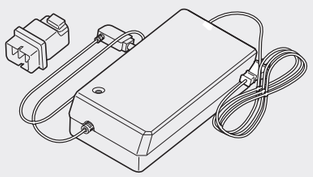
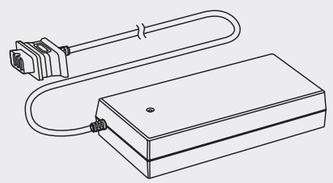
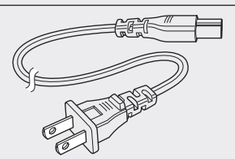
Cycle Computer

Image	Model Number	Description	Code. No
	SC-E6010	Cycle computer (display only)	ISCE6010D
	SC-E6000	Cycle computer (display only)	ISCE6000D

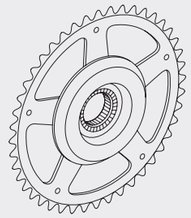
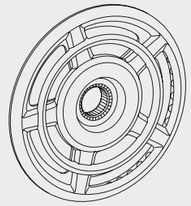
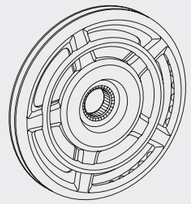
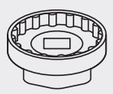
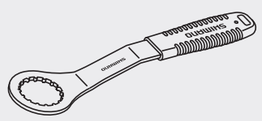
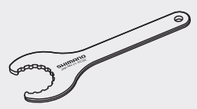
Light Adapter

Image	Model Number	Description	Code. No
	SM-DUE01	Light adapter without cables	ISMDUE01A
		Light adapter with 2 cables for front and rear light	ISMDUE01B

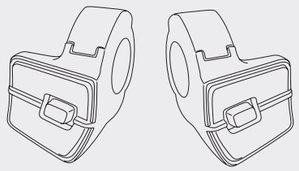
Battery & Battery Charger

Image	Model Number	Description	Code. No
	BT-E8010	Battery BT-E8010 for frame type (down tube) 504Wh black EU / Australia / New Zealand	IBTE8010B
	BT-E6010	Battery BT-6010 for frame type (down tube) 418Wh gray for EU / Australia / New Zealand	IBTE6010GB
		Battery BT-6010 for frame type (down tube) 418Wh black for EU / Australia / New Zealand	IBTE6010LB
	BT-E6000	Battery BT-6000 for rear carrier type 418Wh gray for EU / Australia / New Zealand	IBTE6000GB
		Battery BT-6000 for rear carrier type 418Wh black for EU / Australia / New Zealand	IBTE6000LB
	BT-E6001	Battery BT-6001 for rear carrier type 504Wh gray for EU / Australia / New Zealand	IBTE6001GB
		Battery BT-6001 for rear carrier type 504Wh black for EU / Australia / New Zealand	IBTE6001LB
	EC-E6000	Battery charger for Australia / New Zealand including battery connector	IECE60004
	SM-BCE60	Battery charger for BT-E6000/ E6010 without SM-BCC1 (power cable)	ISMBCE60
	SM-BCC1	Power cable for SM-BCR1, SM-BCC1-4 240v, for Australia, (Type-O), IND. pack	ISMBCC14

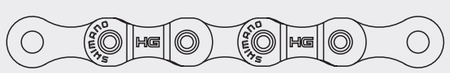
Chainring

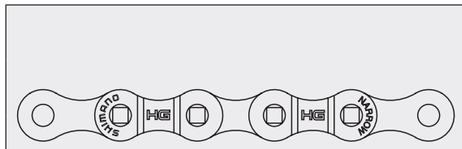
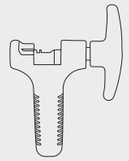
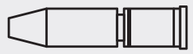
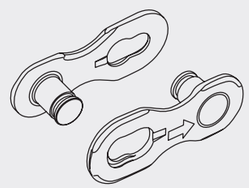
Image	Model Number	Description	Code. No
	SM-CRE60	Chainring for FC-E6000/E6010 38T without CG black/silver	ISMCRE60A8XG
		Chainring for FC-E6000/E6010 44T without CG black/silver	ISMCRE60B4XG
		Chainring for FC-E6000/E6010 38T with CG (single) black/silver	ISMCRE60A8SG
		Chainring for FC-E6000/E6010 38T with CG (single) black/gray	ISMCRE60A8SGG
		Chainring for FC-E6000/E6010 44T with CG (single) black/silver	ISMCRE60B4SG
		Chainring for FC-E6000/E6010 44T with CG (single) black/gray	ISMCRE60B4SGG
		Chainring for FC-E6000/E6010 38T with CG (double) black/silver	ISMCRE60A8DG
		Chainring for FC-E6000/E6010 38T with CG (double) black/gray	ISMCRE60A8DGG
		Chainring for FC-E6000/E6010 44T with CG (double) black/silver	ISMCRE60B4DG
		Chainring for FC-E6000/E6010 44T with CG (double) black/gray	ISMCRE60B4DGG
	TL-FC38	Lock ring tool for DU-E6000/E6001/ E6010	YEZY00010
	TL-FC33	Adapter removal / installation tool (HOLLOWTECH II bottom bracket adapter tool (for impact wrench))	Y13009230
	TL-FC36	Adapter removal / installation tool (HOLLOWTECH II bottom bracket adapter tool (Premium version))	Y13098000
	TL-FC32	Adapter removal / installation tool (HOLLOWTECH II bottom bracket adapter tool (Standard version))	Y13009210

Assist Switch / Shift Switch

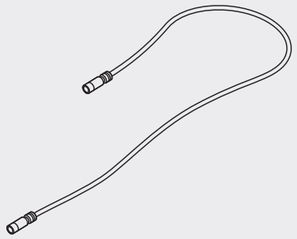
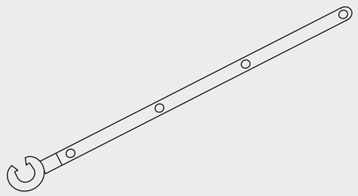
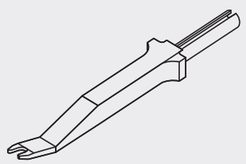
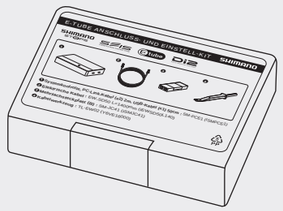
Image	Model Number	Description	Code. No
	SW-E6000	Switch gray for assist (initial setting) compatible with SEIS by E-TUBE PROJECT including cord band A x2, cord band B x1	ISWE6000A1
		Switch black for assist (initial setting) compatible with SEIS by E-TUBE PROJECT including cord band A x2, cord band B x1	ISWE6000A1L
	SW-E6010-L	Switch (left) for assist including electric wire, cord band A x2, cord band B x1	ISWE6010L
	SW-E6010-R	Switch (right) for SEIS shift including electric wire, cord band A x2, cord band B x1	ISWE6010R

Chain

Image	Model Number	Description	Code. No
	CN-HG701-11	11 speed chain (HG-X11) 1pcs SIL-TECH surface treatment (outer/inner link plate) 116 links QUICK-LINK (SM-CN900-11)	ICNHG70111116Q
		11 speed chain (HG-X11) 1pcs SILTECH surface treatment 138 links QUICK-LINK (SM-CN900-11)	ICNHG70111138Q
	CN-HG601-11	11 speed chain (HG-X11) 1pcs SIL-TECH surface treatment (inner link plate) 116 links QUICK-LINK (SM-CN900-11)	ICNHG60111116Q
		11 speed chain (HG-X11) 1pcs SIL-TECH surface treatment (inner link plate) 138 links QUICK-LINK (SM-CN900-11)	ICNHG60111138Q
		11 speed chain (HG-X11) 20pcs SILTECH surface treatment (inner link plate) Work shop package 138 links QUICK-LINK (SM-CN900-11)	ICNHG60111116QS
	CN-E6090-10	10 speed chain (HG-X) 1pcs 118 links front single only two lines connecting pin	ICNE609010118I
		10 speed chain (HG-X) 1pcs 138 links front single only two lines connecting pin	ICNE609010138I
		10 speed chain (HG-X) 20pcs Work Shop package 118 links front single only two lines connecting pin	ICNE609010118IS
	CN-E6070-9	9 speed chain (HG) 1pcs 118 links front single only two lines connecting pin	ICNE60709118I
		9 speed chain (HG) 1pcs 138 links front single only two lines connecting pin	ICNE60709138I
		9 speed chain (HG) 20pcs Work shop package 118 links front single only two lines connecting pin	ICNE60709118IS

	CN-HG71	8/7/6 speed chain (HG) 1pcs 116 links QUICK-LINK (SM-UG51)		ECNHG71C116Q
		8/7/6 speed chain (HG) 1pcs 116 links black connecting pin		ECNHG71C116I
		8/7/6 speed chain (HG) 1pcs 138 links black connecting pin		ECNHG71C138I
		8/7/6 speed chain (HG) 20pcs Work shop package 116 links black connecting pin		ECNHG71C116IS
	TL-CN10	Chain tool for connecting and removing SHIMANO QUICK-LINK		Y13022000
	TL-CN28	Chain tool for cutting and connecting SHIMANO 6-11speed chain		Y13098500
	Chain Pin	For 11-speed chain (with sharp nose)	3 pcs.	Y0AH98030
			50 pcs.	Y0AH98010
		For 10-speed chain (except CN-7800, with two lines)	3 pcs.	Y08X98031
			50 pcs.	Y08X98021
		For 9-speed chain (silver color)	3 pcs.	Y06998030
			50 pcs.	Y06998020
		For 8/7/6-speed chain (black color)	3 pcs.	Y04598010
			50 pcs.	Y04598020
	QUICK-LINK	For 11-speed chain QUICK-LINK SM-CN900-11 single use, 2 pairs		ISMCN90011A
		For 11-speed chain QUICK-LINK SM-CN900-11 single use, 50 pairs work shop jar		ISMCN90011BS
		For 6/7/8-speed chain QUICK-LINK SM-UG51 single use, 2 pairs		ESMUG51A
		For 6/7/8-speed chain QUICK-LINK SM-UG51 single use, 50 pairs work shop jar		ISMUG51BS

Others

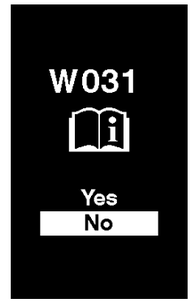
Image	Model Number	Description	Code. No
	EW-SD50	E-TUBE electric wire black (1600mm) for connecting cycle computer (SC) and drive unit (DU)	IEWSD50L160
		E-TUBE electric wire black (550mm) for connecting drive unit (DU) and motor unit (MU) for DI2 shifting	IEWSD50L55
	EW-SD50-I	Wire holder (cable-tie) for electric wire EW-SD50 for internal routing. 1unit = 20pcs	IEWSD50ISM1
	TL-EW02	Plug tool for connection and disconnection of E-TUBE electric wires	Y6VE16000
	Case kit	E-TUBE PROJECT connecting & setting device case kit including: - SM-PCE1 (PC linkage device with USB cable) - EW-SD50 (electric wire 1400mm) - SM-JC41 (Junction B) - TL-EW02 (Plug tool)	IETUBEKIT2E

TROUBLE SHOOTING

Warning Message On The Cycle Computer

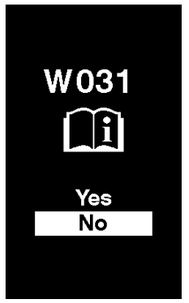
This disappears if the error is fixed.

Cycle Computer <SC-E6010>



If the warning code "W031" has occurred.

Cycle Computer <SC-E6000>

Code	Situation where the error occurred	Operational restrictions when a warning is being displayed	Remedy
W031	Displays when chain tension has yet to be adjusted or when the installation angle of the crank needs to be checked. Does not display when these have been checked already via E-TUBE PROJECT	The assist functions do not work. (Power gear shifting does not work.)	**Select "Yes" if the chain tension and the installation angle of the crank are correct.** **<SC-E6010>** 

List of Warnings

Code	Situation where the error occurred	Condition for removing the operational restriction when a warning is being displayed	Remedy
W010	The temperature of the drive unit is high.	The level of assistance may decrease.	Stop using the assist function until the temperature of the drive unit drops. If the situation does not improve, consult us.
W011	The traveling speed cannot be detected.	The maximum speed up to which power assistance is provided may decrease. (Power assistance is provided up to 25 km/h in top gear.)	Check that the speed sensor is properly installed.
W012	The crank may be installed in the wrong direction.	-	Install the crank in the correct direction, then turn on the power again.
W030	Two or more assist switches are connected to the system.	Gear shifting is not available for power gear shifting derailleurs.	Change the assist switch to the gear shifting switch, or connect only one assist switch and turn on the power again. If the situation does not improve, consult us.
-	A communication error between the drive unit and the motor unit was detected.	Gear shifting is not available for power gear shifting derailleurs.	Check that the cable is properly connected between the drive unit and the motor unit. If the situation does not improve, consult us.

Error Message On The Cycle Computer

If an error message is displayed on the entire screen, follow one of the procedures below to reset the display.

- Press the power button of the battery.
- Remove the battery from the holder.

<SC-E6010>

<SC-E6000>

List of Errors

Code	Situation where the error occurred	Operational restriction when an error is being displayed	Remedy
E010	A system error was detected.	Power assistance is not provided during riding.	Press the power switch of the battery to turn on the power again. If the situation does not improve, consult us.
E012	The initialization of the torque sensor failed.	Power assistance is not provided during riding.	With your foot off the pedal, press the power switch of the battery to turn on the power again. Refer to "MEASURING AND ADJUSTING THE CHAIN TENSION" (page 161), then check that the chain tension is appropriate.
E013	An error was detected in the drive unit's firmware.	Power assistance is not provided during riding.	Restore the firmware for the drive unit using E-TUBE PROJECT.
E014	The speed sensor may be installed in the wrong position.	Power assistance is not provided during riding.	Amend the position of the speed sensor and the magnet unit, turn on the power and rotate the crank clockwise until the error resolves (maximum: approx. 100 rotations).
E020	A communication error between the battery and drive unit was detected.	Power assistance is not provided during riding.	Check that the cable between the drive unit and battery is properly connected. If the cable is damaged, replace it with a new one.
E030	Total number of gears setting for the motor unit does not match the number of gears in the internal geared hub.	Power assistance is not provided during riding.	Configure the motor unit so that the total number of gears setting matches the number of gears in the internal geared hub.
E031	The chain tension may not yet be adjusted or the crank may not be installed in the proper position.	The assist functions do not work. (Power gear shifting does not work.)	Amend the chain tension and the installation angle of the crank, and then select "Yes" in response to W031, which displays when the power is turned on for the first time.
E033	The current firmware is not compatible with this system.	Power assistance is not provided during riding.	Connect to E-TUBE PROJECT, then update the firmware for all units to the latest version.
E043	An error was detected in the firmware for the cycle computer.	Power assistance is not provided during riding.	Restore the firmware for the cycle computer using E-TUBE PROJECT.

Battery Level and Error Indication

Error indication type	Indication condition	Lighting pattern *1	Recovery
System error	Communication error with the bicycle system	☼ ● ● ● ●	Make sure that the cable is not loose or improperly connected. If the situation does not improve, consult us.
Temperature protection	If the temperature exceeds the guaranteed operating range, the battery output is turned off.	☼ ● ● ● ●	Leave the battery in a cool place away from direct sunlight until the internal temperature of the battery decreases sufficiently. If the situation does not improve, consult us.
Security authentication error	This is displayed if a genuine drive unit is not connected. This is displayed if any of the cables are disconnected.	☼ ● ● ● ●	Connect a genuine battery and drive unit. Check the condition of the cables. If the situation does not improve, consult us.
Charging error	This is displayed if an error occurs during charging.	☼ ● ● ● ●	Remove the charger from the battery and press the power button, if an error appears, consult us.
Battery malfunction	Electrical failure inside the battery	☼ ● ● ● ☼	Connect the charger to the battery and then remove the charger. Press the power button with only the battery connected. If an error appears with only the battery connected, consult us.

*1 ● : No light ● : Lights up ☼ : Flashing

Trouble Shooting for Each Function/Unit

Assist function

Symptom	Cause / Possibility	Remedy
Assistance is not being provided.	Is the battery sufficiently charged?	Check the battery charge. If the battery is nearly spent, recharge it.
	Are you riding on long slopes in summer weather or riding for a long time carrying a heavy load? The battery may be overheating.	Turn off the power, wait for a while and then check once more.
	The drive unit (DU-E6000 / DU-E6001 / DU-E6050 / DU-E6010 / DU-E6002 / DU-E6012), cycle computer (SC-E6000 / SC-E6010) or assist switch (SW-E6000 / SW-E6010) may be connected incorrectly or there may be a problem with one or more of them.	Consult us.
	Is the speed too high?	Check the Cycle Computer display. Assistance is not provided at speeds of 25 km/h or more.
Assistance is not being provided.	Are you pedaling?	The bicycle is not a motorbike, so you need to operate the pedals.
	Is the assist mode set to "OFF"?	Set the assist mode to "HIGH". If you still do not feel that assistance is being given, consult us.
	Is the system power ON?	If you have performed the steps below and still do not feel the assistance, contact the place of purchase. **<SC-E6010>** Press and hold the cycle computer power button for 2 seconds, or press the battery power button to turn the power ON. **<SC-E6000>** Press the battery power button to turn the power ON.
Assist traveling distance is too short.	The traveling distance may become shorter depending on road conditions, the gear position and whether the light are ON or OFF.	Check the battery charge. If the battery is nearly spent, recharge it.
	The battery characteristics will drop during winter weather.	This is not a sign of a problem.
	The battery is a consumable part. Repeated recharging and long periods of use will cause the battery to deteriorate (lose its performance).	If the distance that can be traveled on a single charge is very short, replace the battery with a new one.
Pedaling is stiff.	Are the tires inflated to a sufficient pressure?	Use a pump to add air.
	Is the assist mode set to OFF?	Set the assist mode to "HIGH". If you still do not feel that assistance is being given, consult us.
	The battery may be running low.	After charging the battery well, check the level of assistance again. If you still do not feel that assistance is being given, consult us.
	Did you turn on the power with your foot placed on the pedal?	Turn on the power again without putting pressure on the pedal. If you still do not feel that assistance is being given, consult us.

Battery

Symptom	Cause / Possibility	Remedy
All the five battery level indicators stay on.	The firmware version of the drive unit may be out-of-date.	Consult us.
The battery quickly loses its charge.	The battery may be at the end of its service life.	Replace the battery with a new one.
The battery cannot be recharged.	Is the power plug of the charger securely inserted into the electrical outlet?	Disconnect and then reconnect the power plug of the charger, and then repeat the recharging operation. If the battery still cannot be recharged, consult us.
	Is the recharging plug of the charger securely inserted into the battery?	Disconnect and then reconnect the recharging plug of the charger, and then repeat the recharging operation. If the battery still cannot be recharged, consult us.
	Is the charging adapter securely connected to the charging plug, or to the battery charger port?	Securely connect the charging adapter to the charging plug or to the battery charger connector, and charge again. If the battery still does not charge, consult us.
	Is the connecting terminal for the battery charger, charging adapter, or battery dirty?	Wipe the connection terminals with a dry cloth to clean them, and then repeat the recharging operation. If the battery still cannot be recharged, consult us.
The battery does not start recharging when the charger is connected.	The battery may be at the end of its service life.	Replace the battery with a new one.
The battery and charger are becoming hot.	The temperature of the battery or charger may exceed the operating temperature range.	Stop recharging, wait for a while and then recharge again. If the battery is too hot to touch, it may indicate a problem with the battery. Consult us.
The charger is warm.	If the charger is being used continuously to charge batteries, it may become warm.	Wait a while before using the charger again.
The LED on the charger does not illuminate.	Is the recharging plug of the charger securely inserted into the battery?	Check the connection for any foreign objects before reinserting the charging port. If there is no change, consult us.
	Is the battery fully charged?	If the battery is fully charged, the LED on the battery charger turns off, but this is not a malfunction. Disconnect and then reconnect the power plug of the charger, and then repeat the recharging operation. If the LED on the charger still does not illuminate, consult us.
The battery cannot be removed.		Consult us.
The battery cannot be inserted.		Consult us.
Fluid is coming out from the battery.		Consult us.
An abnormal odor can be detected.		Stop using the battery immediately and consult us.
Smoke is coming out from the battery.		Stop using the battery immediately and consult us.
The replaced battery does not work.	The firmware of the drive unit may not be compatible with the battery.	Consult us.

Lights

Symptom	Cause / Possibility	Remedy
The front light or the tail light does not illuminate even when the switch is pressed.	The E-tube Project settings may be wrong.	Consult us.

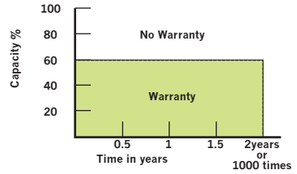
Cycle computer

Symptom	Cause / Possibility	Remedy
The cycle computer is not displayed when you push the battery power button.	The amount of battery charge may be insufficient.	Recharge the battery, and then turn the power on once more.
	Is the power turned on?	Hold down the power button to turn on the power.
	Is the battery charging?	The power cannot be turned on while the battery is mounted on the bicycle and being charged. Stop charging.
	Is the cycle computer correctly installed to the bracket?	Install the cycle computer correctly.
	Is the electric wire connector correctly installed?	Check to see if the connector of the electric wire connecting the motor unit to drive unit is not disconnected. If you are not sure, consult us.
	A component that the system cannot identify may be connected.	Consult us.
<SC-E6010> The system does not start up when you press and hold the cycle computer power button for 2 seconds.	Did you use the cycle computer in, or expose it to, low temperatures for an extended period?	The cycle computer may become unable to turn on if used in, or exposed to, low temperatures for an extended period. Turn it on by pressing the power button on the battery. If it still does not turn on, consult a dealer.
	Is the cycle computer correctly installed to the bracket?	Install the cycle computer correctly.
The gear position is not displayed.	The gear position is only displayed when the power gear shifting unit is installed.	Check if the electric wire connector is disconnected. If you are not sure, consult us.
Can the beep be turned off.		Change the setting. Refer to "Beep Setting" (page 144).
Can the backlight be turned off.		Change the setting.
The setting menu cannot be launched while riding the bicycle.	The product is designed so that if it detects that the bicycle is being ridden, the Setting menu cannot be launched. This is not a sign of an abnormality.	Stop the bicycle and then make the settings.
Cycle Computer obviously does not give the right speed.	The correct speed depends on the proper setting of the wheel circumference by the bike manufacturer.	Contact us to have the correct wheel circumference adjusted.

Other

Symptom	Cause / Possibility	Remedy
When pressing the switch, two beeps sound, and the switch cannot be operated.	Operation of the switch being pressed has been disabled.	It is not a sign of a malfunction.
Three beeps sound.	An error or warning is occurring.	This occurs when a warning or error is displayed on the cycle computer. Refer to "Error Message On The Cycle Computer" (page 222) and follow the instructions provided for the appropriate code.
When using a electronic gear shifting mode, I feel that the level of assistance weakens when the gears shift.	This occurs because the level of assistance is being adjusted to the optimum level by the computer control.	It is not a sign of a malfunction.
Sound occurs after gear shifting.		Consult us.
A noise can be heard from the rear wheel during normal riding.	Gear shifting adjustment may not have been carried out correctly.	**For mechanical gear shifting** Adjust the cable tension. For details, refer to the Service Instructions for the derailleur. **For powered gear shifting** Consult us.
When you stop the bicycle, the gear does not shift to the position preset in the start mode.	You may have been pressing the pedals too strongly.	If you press the pedals lightly, the gear shifts more easily.

FAQ

Subject	Question	Answer
BATTERY	Charging port on battery mount or battery?	Yes, BM-E6000, BM-E6010 (battery mount) and BM-E8010 (battery).
BATTERY	How many % is the battery charged by Shimano (shipping condition from Shimano)?	Around 30%
BATTERY	How fast is the battery self-discharge (shipping condition from Shimano)?	The battery can be charged within 5.9 years. Refer to **Graph-1** (page 231) for the detail.
BATTERY	What is the battery storage characteristic (after start to use / wake up from deep sleep mode)?	The 100% voltage will be zero after 13.6months under sleep mode. Refer to **Graph-2** (page 231) for the detail.
BATTERY	What is the estimated lifetime of the battery?	More than 60% after charge 1000 times or 2years. 
BATTERY	Is it necessary to charge the battery to a certain level when you don't use the battery over the wintertime?	Yes, Charge around 70% (Three marks are illuminated on the battery level indicator.)
BATTERY	How much is the biggest battery capacity?	504Wh
BATTERY	Is it possible to get replacement keys for the battery lock?	Yes, full service is done by key maker.
BATTERY	How to make a brand new battery from deep sleep mode?	Charge the battery, turn on the power of SC-E6010, or connect to E-TUBE PROJECT.
BATTERY	Is it possible to set the battery to deep sleep mode again?	No
BATTERY	When I can ride 100 km with full charge new battery, how many km can I ride after the 1000 cycles at 60% remaining capacity?	60 km (418 Wh case)
BATTERY	How long can I ride with one segment left over on the battery display?	Battery capacity left: 1-20%
BATTERY	What happen when the battery is not charged before winter storage? How long can the battery survive? After engine is cut off due to low voltage.	Under normal winter conditions, the battery can retain its charge until spring. During the winter, we strongly recommend users to charge the battery to 70% before storing.
BATTERY	Does the battery wake up after longer time of storage by just pushing the on off button, or do you have to put it on the charger?	Push the button to wake up, even the sleep mode start after 10 minutes w/o any operation. If no power on, have to charge on the charger.
BATTERY	How many charges does the battery need before it gets the full capacity?	Only one charge.

Subject	Question	Answer
BATTERY	What does it mean deep sleep mode?	The shipment condition from Shimano is under deep sleep mode to minimize battery consumption. Charge on the charger before first usage to wake up battery from deep sleep mode.
CHARGER / BATTERY	Does the charger goes off ones the battery is full, or does it go on trickle charge?	It goes on trickle charging.
CYCLE COMPUTER	What to do if E-Bike can not be switched by pressing the display button?	1. Press the power button on the batttery 2. Remove the battery and re-install it on the battery mount
CYCLE COMPUTER	Will Shimano offer a walk assist?	Yes, walk mode is available. (E-TUBE firmware ver.2.7.0 onwards)
CYCLE COMPUTER	Is the possible to change the display language?	Yes, 6 languages are available, English, French, German, Dutch, Italian and Spanish.
CYCLE COMPUTER	Is the display detachable?	Yes
CYCLE COMPUTER	Is it possible to see the mileage on the display when it is taken off the bike?	No, after take off display 30 seconds then system is shutting down. After re-attached, full function is there.
CYCLE COMPUTER	Is it possible to upgrade from the SC-E6000 display to the SC-E6010 display?	Yes, the bracket is the same so you just have to exchange the display. However, make sure to do a Software Update of the Firmware after installing the new display.
CYCLE COMPUTER	Which assistance is making STEPS at different assistance modes?	ECO: 70% , NORM: 150%, HIGH: 230% Refer to "Beep Setting" (page 144)"POWER ASSIST LEVELS" (page 116) for the detail.
CYCLE COMPUTER	Is it possible to set the ODO to 0 km?	No
CYCLE COMPUTER	Will it be possible to change assistance as follows: always press UP Button (eco - norm - high- off -- eco -norm- high - off- etc.)	No
CYCLE COMPUTER	Will there be a service interval on the display? Means the display should advise the customer to go to workshop for example after 6 months.	Not available.
CYCLE COMPUTER	Will there be a error code, if sprocket has more teeth than it is stored in the STEPS computer?	No error code.
CYCLE COMPUTER	Speed or distance travelled seems not to be correct.	System parameters might not be set, correctly. Check tire diameter in Unit Log Acquisition.
DRIVE UNIT	How does the cut off of the engine work at 25 km/h? Suddenly cut off or fade out?	Not suddenly, gradually.
DRIVE UNIT	How can I set a different wheel circumference.	This is not possible. Please contact us.
DRIVE UNIT	How can I install the progressive Light Offroad firmware on a Trekking Bike?	This type of change can only be done by the Bike Manufacturer. Please contact us for assistance.

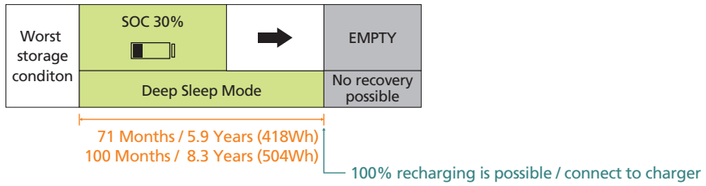
Subject	Question	Answer
DRIVE UNIT (Speed sensor)	What happen when the wheel magnet is off?	1/ There will be warning on the display "W011" (cannot determine accurate speed). 2/ Drive unit still support the rider up to the speed calculated from the gear ratio and cadence.
E-TUBE PROJECT	Can a dealer change the tire diameter?	No for dealer. DU setting must be done by assembly manufacturers or us.
E-TUBE PROJECT	Is it possible to change the external gear ratio? Front and rear gears?	Yes, We have 38T and 44T for front. But setting of DU must be done by OEM, distributor or Shimano.
E-TUBE PROJECT	Do the Steps components have a individual part number (running number) which is shown in the diagnosis report? In case the parts get stolen.	No. On the product itself yes, inside the software of the product no.
E-TUBE PROJECT	Is it possible to print out the diagnosis report with the found defect? This is needed as evidence for a dealer to show to consumer.	Yes
E-TUBE PROJECT	Dealer want to input the Address and Name of the shop in the header of the diagnosis report.	Not possible.
CRANK ARM	What will happen when the crank arm is not assembled in accordance of our manual? 180 ° offset, 90° offset?	Cycle computer can show error code W012.
DI2	Can I change a mechanical STEPS bike to DI2?	In general this is possible. Please contact us for the detailed procedure.
LIGHT SYSTEM	Can I change the front and tail light of a STEPS Bike?	This is possible but check for the requirements of a compatible light.
WARRANTY	How long is the warranty period of the system?	2 years, SHIMANO follows European warranty regulation.

Graph-1

SOC: State of charge

Storage Characteristic (Deep Sleep Mode)

■**BT-E6000 / BT-E6010 (418Wh)**
BT-E6001 / BT-E8010 / BT-E8020 (504Wh)



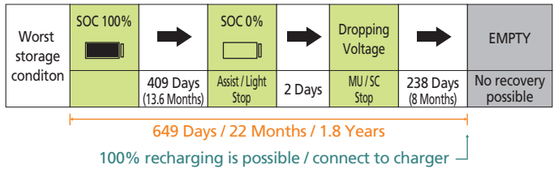
• Shipping condition from Shimano: SOC 30%, battery is in “Deep Sleep mode”

Graph-2

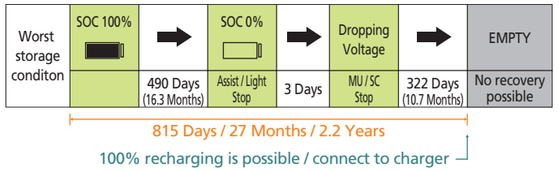
SOC: State of charge

Storage Characteristic (Sleep Mode)

■**BT-E6000 / BT-E6010 (418Wh)**



■**BT-E6001 / BT-E8010 / BT-E8020 (504Wh)**



• If Battery is out of “Sleep mode” and 100% charged, it will be at 0% after 13.6 Months (418Wh case) / 16.3 months (504Wh case)
• When SOC is 0% Assist and Light will not have function anymore
• From SOC 0% the battery voltage will drop / battery can still be charged within 2.8 Months (418Wh case) / 10.7 Months (504Wh case)

Worst Storage Condition (In a day):
• 4 hours when temperature between 40°C and 60°C
• 20 hours when temperature between –20°C and 30°C

SHIMANO BICYCLE COMPONENT WARRANTY

Shimano® bicycle components come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Shimano Australia Pty. Ltd. A.B.N. 19 056 284 710, whose business address is 35 Mangrove Lane, Taren Point NSW 2229, telephone 1300 731 077, Email: info@shimano.com.au ("Shimano") gives the following warranty which is additional to other rights and remedies available under the Australian
Consumer Law.

SHIMANO® ADDITIONAL WARRANTY

Shimano warrants to the original retail purchaser who purchases in Australia a new Shimano® bicycle product ("Product") (not being a component of a purchase of a complete bicycle) that:

- If the Product is found to be defective due to faulty materials or workmanship and has only been used in Australia in accordance with the manufacturer's instructions under normal use and reasonable care (in the opinion of Shimano); and
- The warranty claim is made within 2 years, or for Dura-Ace and XTR components within 3 years, or for Shimano® wheels, shoe products and soft goods within 1 year, of original purchase ("Warranty Period");and
- Within the Warranty Period the defective Product is sent insured to Shimano with (i) the original retailer's sale document and receipt identifying the Product and date of purchase, and (ii) details of the defect and (iii) a return address within Australia; then

Shimano will, subject to the following conditions, repair or replace (at its option) the defective Product and send it insured to the return address provided.

WARRANTY EXCLUSIONS

This warranty will not apply where the defect arises due to any of the following:

- use of the Product in an assembly for which it was not designed;
- the incorrect installation or removal of or attempt to repair the Product;
- damage in transit in forwarding the Product to Shimano;
- lack of technical skill, competence or experience of the user;
- poor maintenance, unauthorised modification, or improper , negligent or careless use of the Product ;
- use of the Product outside Australia or in a competition or for commercial purposes;
- the Product, or bicycle of which it is a component, being abused or involved in an accident; or
- Damage or deterioration to the surface finish, aesthetics or appearance of the Product.

WARRANTY FURTHER CONDITIONS

- Shimano's liability under this warranty is limited to repairing or replacing and returning the defective Product to the purchaser. A purchaser making a claim must bear the cost of sending the Product to Shimano and any cost in removing, refitting or readjusting the Product in a bicycle assembly;
- This warranty will not apply to a Product that is a component in a sale of a complete bicycle whether pre-assembled or subsequently assembled. In such instance any claim should be made to the retailer or other entity from whom the bicycle was purchased or the manufacturer or other entity liable at law.
- Retailers and wholesale outlets for Shimano® Products cannot modify this warranty in any way. Any alteration will only be binding on Shimano if it is in writing and signed by a Director.
- It is the purchaser's responsibility to regularly examine a Product to determine the need for, and attend to, normal service or replacement.

WEB SITE

MANUAL DOWNLOAD SITE

http://si.shimano.com

PRODUCT INFORMATION SITE

http://productinfo.shimano.com/#/

SHIMANO STEPS SPECIAL SITE

https://shimano-steps.com/

E-TUBE PROJECT SUPPORT SITE

http://e-tubeproject.shimano.com

Note: The screen images are subject to change without notice