(English)

UM-7LN0A-000

User's Manual

EP8

Check our website for the latest manuals.
https://si.shimano.com

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IMPORTANT NOTICE

- Contact the place of purchase or a distributor for information on installation, adjustment, and replacement of the products which are not found in the user's manual. A dealer's manual for professional bicycle mechanics is available on our website (https://si.shimano.com).
- Please observe the appropriate rules and regulations of the country, state or region in which you conduct your business as a dealer.
- The Bluetooth ® word mark and logos are registered trademarks owned by the Bluetooth SIG, Inc. and any use of such marks by SHIMANO INC. is under license.

  Other trademarks and trade names are those of their respective owners.

For safety, be sure to read this user's manual thoroughly before use, follow it for correct use, and store it so that it can be referenced at any time.

The following instructions must be observed at all times in order to prevent personal injury and physical damage to equipment and surroundings.

The instructions are classified according to the degree of danger or damage which may occur if the product is used incorrectly.

DANGER	Failure to follow the instructions will result in death or serious injury.
WARNING	Failure to follow the instructions could result in death or serious injury.
CAUTION	Failure to follow the instructions could cause personal injury or physical damage to equipment and surroundings.

Important safety information

For safety, be sure to read this manual thoroughly before use, follow it for correct use, and store it so that it can be referenced at any time.

To ensure the safety of your E-BIKE, make sure to also refer to the user's manual for each product such as the battery, battery charger, cycle computer, and switch unit.

⚠ WARNING

- Do not disassemble or modify the product. This may cause the product to not operate correctly, and you may suddenly fall and be seriously injured.

■ Riding precautions

- Be sufficiently familiar with how to start the E-BIKE before riding on busy streets.

  You may start the E-BIKE unexpectedly, which may result in an accident.
- Be careful not to let the hemming of your clothes get caught in the chain while riding.

  You may fall and be seriously injured.
- Keep your fingers away from the chainrings, sprockets, and chain.

  They can be seriously injured if caught in the drive train. For the drive unit compatible with AUTO SHIFT, please note that the chainrings may rotate due to the operation of the drive unit, even when you are not pedaling.
- Ensure that head and tail lights can turn on before riding the bicycle.

■ Safety precautions

- Be sure to remove the battery and charging cable before wiring or attaching parts to the E-BIKE.

  Failure to do so may cause an electric shock.
- Do not touch the drive unit when it has been continuously used for a long period of time.

  The surface of the drive unit becomes hot and could cause burns.
- Clean the chain with an appropriate chain cleaner regularly.

  Intervals between maintenance depend on the use and riding circumstances.
- Never use alkali- or acid-based solvents such as rust cleaners.

  If those solvents are used, the chain might break and cause serious injury.
- Be sure to follow the instructions provided in the manuals when installing the product.

  Only use SHIMANO genuine parts. If a component or replacement part is incorrectly assembled or adjusted, it can lead to component failure and cause the rider to lose control and crash.
- Do not use this product outside of the operating temperature ranges.
  - Operating temperature: -10°C to 40°C

⚠ CAUTION

■ Riding precautions

- Observe the instructions in the manual for the E-BIKE in order to ride safely.

■ Safety precautions

- Never modify the system.

  Doing so may cause a system error.

- Use the product under the supervision of someone responsible for safety, and only as instructed.

  Do not allow anyone (including children) with reduced physical, sensory, or mental capacity, or those without experience or knowledge, to use the product.
- Do not allow children to play near the product.

Anti-tampering function

Do not attempt to modify your drive unit's output power or maximum assist speed. Doing this may increase the risk of serious injury to yourself and others. It may also put you at legal risk if the modification violates national or regional regulations.
It may be against the law for a SHIMANO drive unit to be used outside the countries or regions where it is authorized for sale if it does not meet the applicable laws and regulations applicable for use in such areas. Make sure to confirm that the applicable laws and regulations are complied with before using the product in such places.

Do not tamper with peripheral devices related to the drive unit or assist control of e-bikes. Doing so will generally reduce the service life of the system and risk damaging the drive unit, other components, and the bike itself. It may also void the warranties of SHIMANO products used as components of the bike that has been tampered with. Using the system in a state that it was not designed for may threaten the safety of yourself and passers-by. Tampering with the bike increases the risk to the lives, bodies, and property of others, and the risk of substantial personal liability costs and criminal prosecution in the event of an accident.

SHIMANO E-BIKE SYSTEMS detect whether the system has been tampered with and display an error code (E295) that indicates tampering (*1). The error code (E295) can be temporarily cleared by turning the power off, then on again. However, after the allowable number of times displaying error code E295 has been exceeded, SHIMANO E-BIKE SYSTEMS will enter Safe Mode (E299). While in Safe Mode (E299), the assist function of the drive unit will stop.
Safe Mode (E299) can only be deactivated by a special device at a SHIMANO office or authorized SHIMANO product distributor. It may be impossible to deactivate Safe Mode (E299) in certain situations.
* [1] Tampering refers to the state where a product does not comply with national or regional standards.

For details on error/warning codes, check the latest versions below:

https://si.shimano.com/error

NOTICE

■ Riding precautions

- Avoid wearing clothing that may get caught in a chain or wheel, as this may cause an accident.

■ Safety precautions

- If any malfunction or trouble occurs, consult the place of purchase.
- For any questions regarding methods of installation and maintenance, please contact your place of purchase.
- Be sure to attach dummy plugs to any unused E-TUBE ports.
- For installation and adjustment of the product, consult the place of purchase.
- The components are designed to be fully waterproofed to withstand wet weather riding conditions; however, do not deliberately place them into water.
- Do not clean the bicycle with a high-pressure wash. If water gets into any of the components, operating problems or rusting may result.
- Do not turn the bicycle upside down. There is a risk of damage to the cycle computer and switch unit.
- Handle the components carefully, and avoid subjecting them to strong shock.
- Although the bicycle still functions as a normal bicycle even when the battery is removed, the light will not turn on if it is connected to the electric power system. Be aware that using the bicycle under these conditions will be considered non-observance of the road traffic laws in Germany.
- When carrying the assist bicycle in a car, remove the battery from the bicycle and place it on a stable surface in the car.
- Contact the place of purchase for updates of the component software. The most up-to-date information is available on the SHIMANO website.
- Products are not guaranteed against natural wear and deterioration from normal use and aging.
- For maximum performance we highly recommend SHIMANO lubricants and maintenance products.

■ Connection and communication with a smartphone

SHIMANO CONNECT can be used by connecting a drive unit and smartphone via Bluetooth ® LE. SHIMANO CONNECT enables you to perform a range of tasks, such as customizing individual components or the system, or updating firmware.

- SHIMANO CONNECT: Smartphone application
- Firmware: Software inside each component

■ Connection and communication with PC

E-TUBE PROJECT Professional can be used by connecting a PC and E-BIKE as indicated below:

- Use a USB cable to connect the USB-C port of the USB unit to the USB port of a PC.
- Use Bluetooth ® LE to connect the drive unit and a PC.

E-TUBE PROJECT Professional enables you to perform a range of tasks, such as customizing individual components or the system, or updating firmware.

- E-TUBE PROJECT Professional: PC application
- Firmware: Software inside each component

■ Care and maintenance

- Do not use the thinners or harsh solvents to clean the products. Such solvents may damage the surface. When cleaning the products, use a cloth moistened with a neutral detergent diluted with water.
- The chainrings and sprockets should be periodically washed with a neutral detergent. In addition, cleaning the chain with neutral detergent and lubricating it can be an effective way of extending the life of the chainrings, sprockets, and the chain.
- Use a damp, well wrung out cloth when cleaning the battery and plastic cover.

■ Assist

- The proper level of assistance cannot be achieved unless the proper settings have been made (proper adjustment of the chain tension, etc.), so consult with the place of purchase.

■ Open source software

- The open source software used in this product is available at the following URL:

https://si.shimano.com/compliance/oss

■ Labels

- Some of the important information contained in this manual is also indicated on the device label.

	This symbol on your product, literature, or packaging reminds you that this product must be taken to separate collection at the end of its working life. Do not dispose of this product as unsorted municipal waste but instead take it for recycling. By ensuring the product is disposed correctly, you will help to prevent potential negative consequences for the environment and human health. For info on your nearest recycling point, check with your local waste authority.

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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

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

Regular inspections before riding the bicycle

Before riding the bicycle, check the following items. If any problems are found, consult your place of purchase or a distributor.

- Does the drive train perform gear shifting smoothly?
- Is there any looseness or damage in the component parts?
- Are the components securely installed to the frame / handlebar / stem, etc.?
- Do any abnormal noises occur while riding?
- Is there sufficient charge remaining in the battery?

Avoid wearing clothing that may get caught in a chain or wheel, as this may cause an accident.

Booklet structure

SHIMANO E-BIKE SYSTEMS user's manuals are split among several booklets, as described below.

Be sure to read these user's manuals thoroughly before use, and follow them for correct use. Store the user's manuals so that they can be referenced at any time.

Because SHIMANO E-BIKE SYSTEMS are compatible with a wide range of components, the E-BIKE may be equipped with components not mentioned here (including those from other manufacturers). If so, refer to the user's manuals for the individual components. Products from other manufacturers are not included in the list below.

The latest user's manuals are available on our website (https://si.shimano.com).

Name	Details
SHIMANO E-BIKE SYSTEMS User's Manual (this document)	This is the basic manual for SHIMANO E-BIKE SYSTEMS. It contains the following content: • Quick guide • Basic operations when riding
SHIMANO E-BIKE SYSTEMS Special Battery and Parts User's Manual • BT-EN605-A, BT-EN606-A, BT-EN805-A, BT-EN805-L-A, BT-EN806-A • BT-EN827	It contains the following content: • How to charge and handle the SHIMANO E-BIKE SYSTEMS special battery • How to attach and remove the SHIMANO E-BIKE SYSTEMS special battery to the bicycle • How to read the LEDs when charging or during an error
SHIMANO E-BIKE SYSTEMS Cycle Computer User's Manual • Clamp band type • Integrated type	It contains the following content: • Method for configuring settings via the main body buttons and switch unit
Switch Unit User's Manual • Multi-purpose switch • Wired type	This is the assist switch and shift switch user's manual. It describes switch unit handling and operations.
USB Unit User's Manual	The manual for a USB unit that adds functionality to an E-BIKE to enable configuration and maintenance using a PC application and power supply to external devices.

Notation in this manual

Items displayed on the cycle computer and supported applications are enclosed in square brackets in this manual. The number of languages that can be displayed differs between supported applications and cycle computers. If the language of this manual is not supported by supported applications or cycle computers, the information enclosed in square brackets is displayed in English.

Introduction

SHIMANO E-BIKE SYSTEMS characteristics

- **Support for a wide range of riding conditions**

  The new AUTO ASSIST modes [TRAIL+] and [CRUISE+] automatically provide optimal assistance based on riding conditions. Furthermore, the improved functionality of AUTO SHIFT frees you from manual shifting.

  A combination of AUTO ASSIST and AUTO SHIFT lets you enjoy the scenery and E-BIKE operations like never before. This product offers racing-level performance, while also supporting various other E-BIKE uses, such as everyday riding, urban riding, and cargo bicycles specialized for transporting goods.
- **Improved handling and control**

  A compact and lightweight yet powerful drive unit and battery improve handling and provide a comfortable riding experience. An update focused on assist characteristics has improved bicycle control. This greatly improves performance in technical climbs.
- **A range of high-capacity and lightweight batteries**

  With a range of battery capacities for different uses, this product can be used for various situations.
- **Improved E-BIKE design**

  A wireless shift switch and assist switch contribute to a simple and refined cockpit.
- **Improved customization**

  The " Supported applications " have been updated with a simpler user interface. This provides more intuitive customization.
- **Expandability**

  The model with a CAN unit can link with a wide range of products from other manufacturers to expand the functions of the E-BIKE.

  An optional USB unit can be added to allow power supply from a USB-C port and maintenance via the " Supported applications ."

Assist modes and customization

Assist mode

A SHIMANO E-BIKE SYSTEMS drive unit has three assist modes configured for your E-BIKE.

- [BOOST] / [TRAIL+] / [ECO]: A combination of assist modes for sport riding.
- [BOOST] / [CRUISE+] / [ECO]: A combination of assist modes for comfortable urban riding.

Assist mode	Level of assistance	Main application
[BOOST]	High	Precipitous mountain roads and steep slopes
[TRAIL+] / [CRUISE+] * 1	Automatic / Medium	Gentle ascending slopes and level ground
[ECO]	Low	Long distance riding on level ground, level parks with signals

* 1 In [TRAIL+] / [CRUISE+], the level of assistance is automatically adjusted based on pedal load and road gradient. (AUTO ASSIST) When AUTO ASSIST is disabled, the assist mode changes to [TRAIL] / [CRUISE] with the level of assistance set to medium.

TECH TIPS

- If the battery level is low or assistance is not required, you can turn assist mode to [OFF].
- AUTO ASSIST can be turned ON / OFF in the " Supported applications ."

Customization

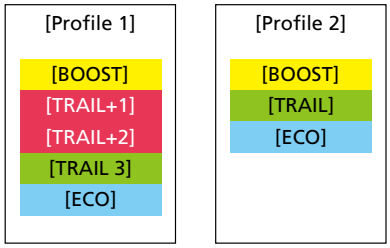
The " Supported applications " can be used to change the assist characteristics for the various assist modes of SHIMANO E-BIKE SYSTEMS, such as [Upper torque limit] and [Assist level]. Three assist modes are available by default, but up to five sets of customized settings can be registered for the [TRAIL] / [CRUISE] mode in the " Supported applications ."

TECH TIPS

- The assist settings may be capped by the bicycle manufacturer, depending on national and regional laws and regulations.

Assist profile

Up to two assist mode combinations (assist profiles) can be registered. Modes within each profile can be switched using the switch unit, and profiles can be switched using a cycle computer. For example, you can configure different assist profiles for urban riding and mountain riding and customize the assist modes in those profiles to make your E-BIKE more enjoyable.



AUTO SHIFT

This function uses sensors to detect riding conditions and automatically perform computer-controlled shifting. AUTO SHIFT is available for E-BIKEs with a compatible Di2 rear derailleur and Di2 internal geared hub. This product allows AUTO SHIFT to operate even when the rider is not pedaling the E-BIKE (coasting). Even while coasting, the drive unit rotates the chainring according to the shifting operations of the rear derailleur, and moves the chain to rotate the cassette.

TECH TIPS

- For information on AUTO SHIFT-compatible Di2 rear derailleurs / internal geared hubs for your drive unit, check the product lineup on the SHIMANO product website .
- Drive unit operation is required for AUTO SHIFT while coasting. Therefore, if the assist function stops because the battery level is too low, AUTO SHIFT will also stop functioning even while coasting.
- For safety reasons, AUTO SHIFT while coasting is less likely to operate when the rear wheel of the E-BIKE is raised off the ground on a work stand.

AUTO SHIFT settings of rear derailleur

The following settings can be configured from the " Supported applications ."

[While pedaling and coasting]

Enables AUTO SHIFT both while pedaling and coasting.

[While coasting only]

Enables AUTO SHIFT while coasting only.

[Adjust cadence]

Set the timing for AUTO SHIFT to operate, based on the cadence.

TECH TIPS

- The above settings can also be changed from a cycle computer.

AUTO SHIFT settings of internal geared hub

The following settings can be configured from the " Supported applications ."

[Adjust cadence]

Set the timing for AUTO SHIFT to operate, based on the cadence.

[Self-learning]

When set to ON, the shifting operations of the rider are learned to automatically adjust the shifting timing in an optimal manner.

[Start gear]

Automatically shifts to the set gear position when the bicycle is stopped to make it easier to start pedaling again. If you gear shift into a gear that is lower than the gear position set while the bicycle is stopped, the gear will not shift up automatically.

TECH TIPS

- The [Adjust cadence] and [Start gear] settings can also be changed from a cycle computer.
- For an E-BIKE with a Di2 internal geared hub, [Start gear] can also be enabled for manual shifting.

[E-BIKE system lock]

You can use " SHIMANO CONNECT " to lock the system when the power of the E-BIKE is turned OFF. When [E-BIKE system lock] is enabled, functions such as assist modes are not available. You can check the details of this function and how to configure and disable it in " SHIMANO CONNECT ."

NOTICE

- Make sure to also use a physical key, as this function does not lock the E-BIKE itself.

Before you ride

You cannot use the battery immediately after shipment.

The battery can be used after charging it with the designated battery charger.

Be sure to charge it before use.

Please read the SHIMANO E-BIKE SYSTEMS Special Battery and Parts User's Manual for how to charge and handle the battery.

TECH TIPS

- When the battery level is low, system functions will be shut off in the following order:
  (1) Power assist, AUTO SHIFT while coasting, [LIFT & SHIFT]
  (2) Electronic shifting, AUTO SHIFT while pedaling, start gear, power supply to CAN device, light

Quick guide

How to use the E-BIKE

TECH TIPS

Depending on the E-BIKE used, the installed battery, cycle computer, and switch unit may differ from what is listed here. Also refer to the user's manual for the components you are using listed in " Booklet structure ."

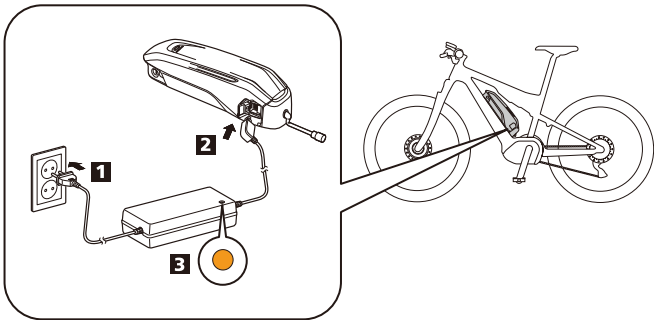
NOTICE

Check the compatibility of the battery and battery charger. Some batteries may not be chargeable with a conventional battery charger.

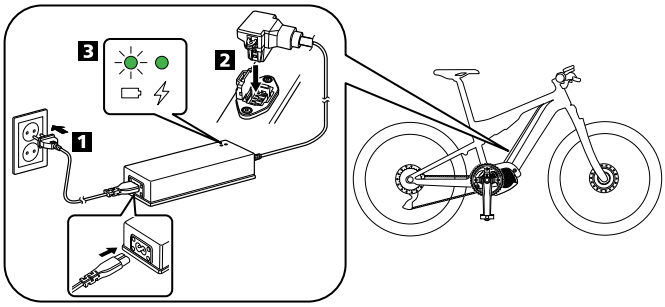
1. **Charge the battery.**

   The appearance, LED specifications, and charging port location vary depending on the battery, battery charger, and E-BIKE you are using.

   Example of external battery



   Example of integrated battery



   Refer to the user's manual for your battery charger for details on the LED lighting specifications.

   For a battery charger with one LED

State	LED	
Charging	●	Solid yellow
Error	☼	Flashing yellow

   For a battery charger with two LEDs

State	LED (state of battery)		LED (state of battery charger)	
Charging		Flashing green		Solid green
Error * 1		Solid red or flashing red		Solid red or flashing red

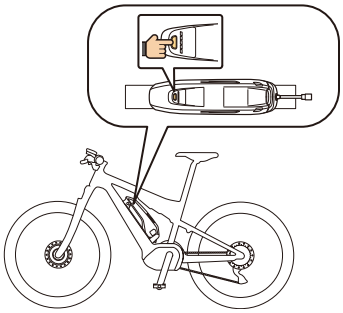
* 1 The combination of LEDs varies depending on the cause of the error that occurred. When an error occurs, either LED will flash or light up red.

2. Turn the power ON.

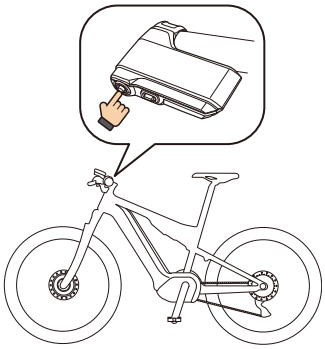
To turn OFF the power, repeat this procedure.

Wait a while before pressing the power button when turning the power ON again after the power has been turned OFF.

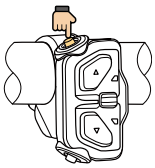
Example of external battery



Example of cycle computer



Example of wired type switch unit (left side of the handlebar)

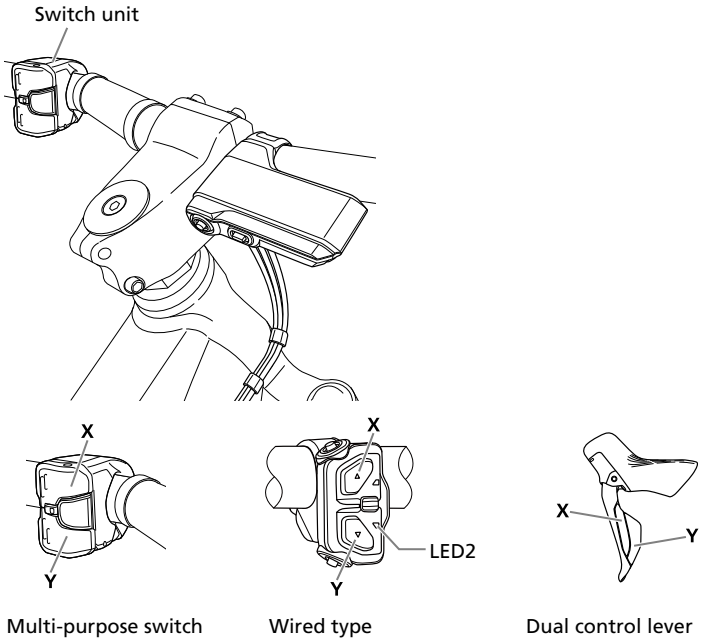


NOTICE

- Do not step on the pedal when turning the power ON / OFF. Doing so may cause a system error.
- If no operations are performed for a certain period of time after the power is turned ON, the power will automatically turn OFF (Auto power OFF function). However, the auto power OFF function is not available in the " walk assist mode ."

3. Press X / Y on the assist switch (left side of the handlebar) to select the assist mode.

- When the power is turned OFF, the assist mode resets to [OFF] the next time that the power is turned ON.
- Refer to the user's manual for your cycle computer for information on the assist mode display of the cycle computer.



Multi-purpose switch | Wired type | Dual control lever

LED2	Assist mode display
Off	[OFF]
Y ▲	▼ X
Solid light blue	[ECO]
▲	▼
Solid magenta (a deep pink with a purple tinge) or solid green	[TRAIL+] / [CRUISE+] ([TRAIL] / [CRUISE])
▲	▼
Solid yellow	[BOOST]

TECH TIPS

- In the default state indicated above, one [TRAIL+] / [CRUISE+] / [TRAIL] / [CRUISE] profile is registered. If multiple [TRAIL+] / [CRUISE+] / [TRAIL] / [CRUISE] profiles are registered, you can cycle through them between [ECO] and [BOOST].
- SHIMANO E-BIKE SYSTEMS enables you to customize the functions assigned to each switch and button. This manual assumes the default settings, unless otherwise specified.

4. Get on the E-BIKE and start riding.

Turn the pedals to start assist.

⚠ CAUTION

Be sure to learn the brake control characteristics and other characteristics. Brake handling may vary slightly depending on the E-BIKE you are using.

5. Turn the power OFF and park your bicycle when you arrive at your destination.

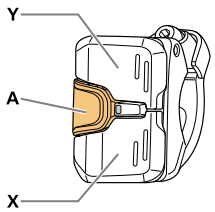
Switching between AUTO SHIFT and manual shifting

- AUTO SHIFT: Automatically shifts based on riding conditions. Manual shifting operations can be performed while AUTO SHIFT is enabled.
- Manual shifting: This is standard electronic shifting. Gears are shifted by operating the shift switch.

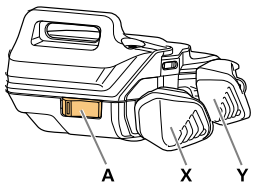
1. **Press A on the shift switch (right side of the handlebar).**

   Cycle computer display

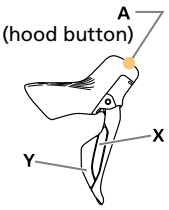
   Refer to the user's manual for your cycle computer for details.



Multi-purpose switch



Di2 shift switch



Dual control lever

Making walking and pushing the E-BIKE easy (walk assist)

This function assists when walking the E-BIKE, such as when pushing it with a heavy load or when you get off the E-BIKE while traveling up a slope.

Depending on the region of use, you may not be able to use it due to the laws of the region. In this case, the operations described here are disabled.

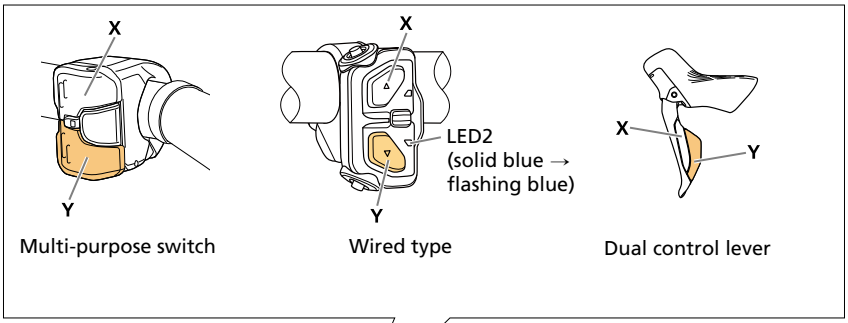
NOTICE

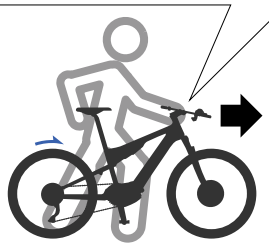
- This function cannot be used with bicycles that do not have assist switch installed.
- Walk assist operates at a maximum of 6 km/h. Be careful because the E-BIKE starts moving just by button operations.
- The following functions are restricted in the walk assist mode (when [WALK] is displayed on the cycle computer):
  - Auto power OFF function
  - Settings via a cycle computer or the " Supported applications "
  - Shifting adjustment (cannot switch to the adjustment mode)

Quick operation

1. **Push the E-BIKE while pressing the assist down switch (by default, Y on the left side of the handlebar).**

   The walk assist mode is enabled and the drive unit operates to assist you in pushing the E-BIKE.





2. **To stop the E-BIKE, release your finger from Y.**

   The drive unit will stop operating.

   To continue walking and pushing the E-BIKE

   Push the E-BIKE while pressing Y on the assist switch (left side of the handlebar) again.

   To stop walking and pushing the E-BIKE and start riding

   Ride the E-BIKE and pedal to return to the assist mode that was selected before enabling the walk assist

mode.

TECH TIPS

- You can enable the walk assist mode even while walking and pushing the E-BIKE, as long as the speed of the E-BIKE is 6 km/h or lower.
- The walk assist mode can also be operated with the conventional method.

  (1) Press and hold Y on the assist switch until it reaches the following state:
  - [WALK] is displayed on the cycle computer
  - LED2 of the wired type switch unit lights up blue

  (2) Press Y again and push the E-BIKE with Y pressed. The drive unit operates while Y is pressed to assist you in pushing the E-BIKE.

  (3) Press X on the assist switch to cancel the walk assist mode and return to the assist mode that was selected before the walk assist mode was enabled.

Walk assist while traveling up a slope

If you need to get off the E-BIKE while traveling up a slope, particularly on a mountain road or trail, you can perform the following operations to conveniently utilize the walk assist function.

1. **After you get off the E-BIKE, immediately press and hold Y on the assist switch.**

   When stopping temporarily to check the situation

   Release your finger from Y.

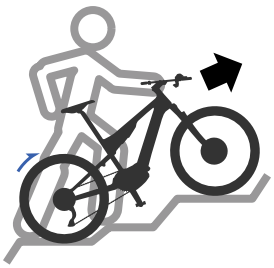
   The hill hold function provides assist power to ensure that the E-BIKE does not move backward on the slope.



   When pushing the E-BIKE uphill

   Push the E-BIKE with Y pressed.

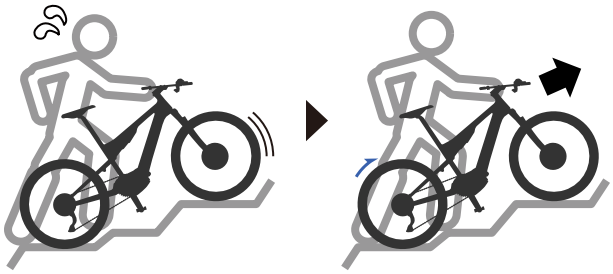
   The drive unit operates to assist you in pushing the E-BIKE.



   If the E-BIKE moves backward before you perform an operation

   Press and hold Y.

   Walk assist will activate even if the E-BIKE has moved backward, preventing it from continuing to move backward unintentionally.



To stop walking and pushing the E-BIKE and start riding

You can pedal to continue riding with the assist mode that was selected before enabling the walk assist mode. Also refer to " Assisting when starting on a steep slope [LIFT & SHIFT] " in the next section.

NOTICE

- When stopping on a slope, keep your hand on the brake lever for safety purposes and ensure that you can operate the brake at any time.

Assisting when starting on a steep slope [LIFT & SHIFT]

When you stop on a steep slope, this function makes it easier to resume riding by operating the drive unit and shifting to an easier gear. This function is available for both Di2 rear derailleur and mechanical rear derailleur.

NOTICE

- Because this function operates the drive unit, take care to ensure that your fingers or clothing hems are not caught in the drive train.

TECH TIPS

- This function is designed for use with an E-MTB, and may not function depending on the E-BIKE you are using.

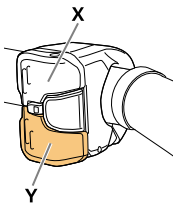
For a Di2 rear derailleur

1. **Switch to the walk assist mode.**

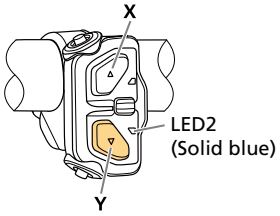
   Press and hold Y on the assist switch (left side of the handlebar) until it reaches the following state:

   - Cycle computer: [WALK] is displayed
   - Wired type switch unit: LED2 lights up blue

   If the walk assist mode is already enabled, release your finger from Y.



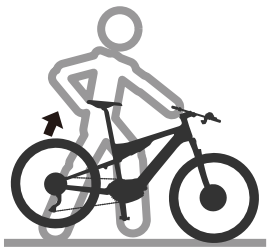
Multi-purpose switch



Wired type

2. **Lift up the rear wheel from the ground.**

   This can be achieved by lifting up the saddle or top tube, or by applying the front brake and pushing the handlebar forward.

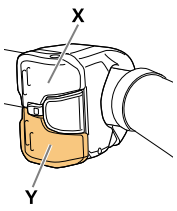




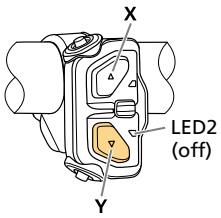
3. **Double-click Y with the rear wheel off the ground.**

   [LIFT & SHIFT] starts and the drive unit rotates the chainring. The system automatically shifts to an optimal

gear for starting from a stop.



Multi-purpose switch



Wired type

4. **When shifting is complete, return the rear wheel to the ground.**
5. **Ride the E-BIKE and resume pedaling.**

   When you start pedaling, the system returns to the assist mode that was selected before enabling the walk assist mode.

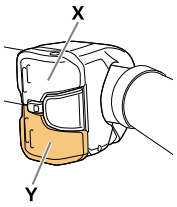
For a mechanical rear derailleur

1. **Switch to the walk assist mode.**

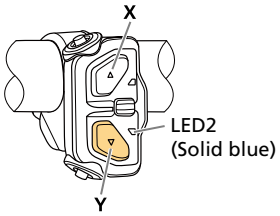
   Press and hold Y on the assist switch (left side of the handlebar) until it reaches the following state:

   - Cycle computer: [WALK] is displayed
   - Wired type switch unit: LED2 lights up blue

   If the walk assist mode is already enabled, release your finger from Y.



Multi-purpose switch



Wired type

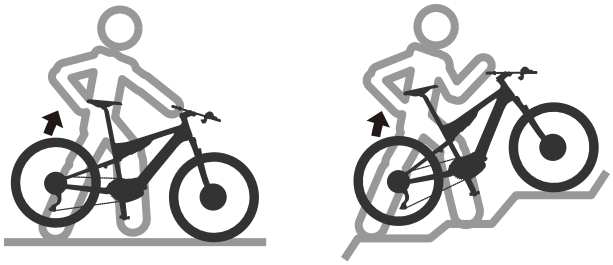
2. **Operate the shifter to select a suitable gear for starting.**

   Refer to the user's manual for your shifter.

   At this stage, shifting is only queued. Operating the shifter will move the rear derailleur to the selected gear, but shifting will not complete until the crank is turned.

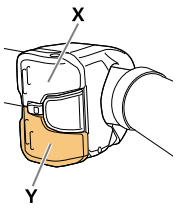
3. **Lift up the rear wheel from the ground.**

   This can be achieved by lifting up the saddle or top tube, or by applying the front brake and pushing the handlebar forward.

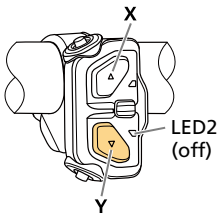


4. **Double-click Y with the rear wheel off the ground.**

   [LIFT & SHIFT] starts and the drive unit rotates the chainring. Shift to the gear operated in step 2 .



Multi-purpose switch



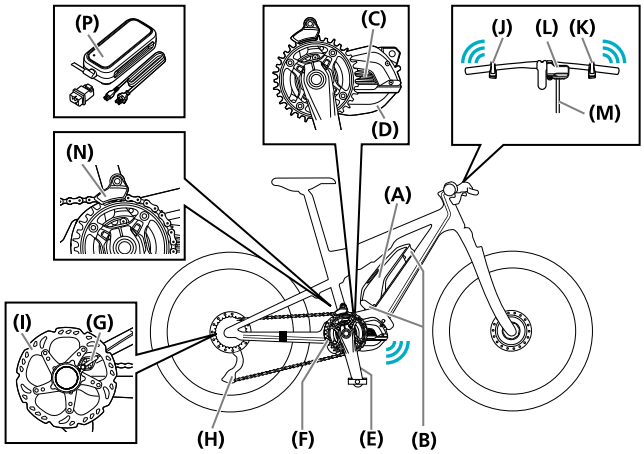
Wired type

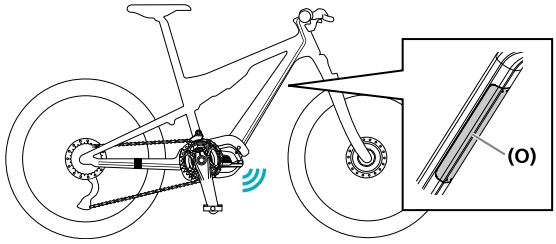
5. **When shifting is complete, return the rear wheel to the ground.**
6. **Ride the E-BIKE and resume pedaling.**

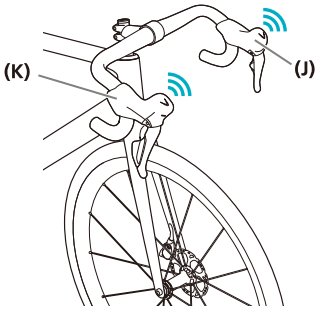
   When you start pedaling, the system returns to the assist mode that was selected before enabling the walk assist mode.

Names and specifications of parts

Names of parts







(A)	External type battery * 1
(B)	Battery mount * 2
(C)	Drive unit
(D)	Drive unit cover (right side and bottom side)
(E)	Crank arm
(F)	Chainring unit
(G)	Speed sensor * 3
(H)	Rear derailleur or internal geared hub * 4
(I)	Rotor
(J)	Switch unit (assist switch)
(K)	Switch unit (shift switch) or shifter

(L)	**Cycle computer**
(M)	**Electric wire**
(N)	**Chain device**
(O)	**Integrated battery** * 5
(P)	**Battery charger**

* 1 Depending on your E-BIKE, the battery may be installed at a location different from the position specified in the figure.

* 2 The battery mount of the integrated battery is installed inside the frame.

* 3 The shape and installation location of the speed sensor may vary depending on the E-BIKE you are using.

* 4 Electronic shifting: Di2 rear derailleur or motor unit + Di2 internal geared hub

* 5 There are the following variations in how the integrated battery can be mounted. For information on the installation / removal of a battery other than a swing-in type, refer to the manual for your E-BIKE.

- **Swing-in type**

  This type is equivalent to the conventional SHIMANO E-BIKE SYSTEMS integrated type.

  It can be installed and removed from the top or bottom of the down tube.
- **Slide-in type**

  This type is inserted along the down tube from the front of the drive unit.
- **Built-in type**

  This type has a battery secured inside the frame and cannot be removed.

  Request the place of purchase to replace the battery.

Drive unit specifications

Operating temperature range	-10 - 40°C
Storage temperature	-20 - 70°C
Drive unit type	Midship
Motor type	Brushless DC
Rated voltage	43.2 V
Rated output	250 W

TECH TIPS

- The maximum speed that provides assist is set by the bicycle manufacturer, but may vary depending on the conditions under which the bicycle is used.

Wireless function

Pairing with switch unit / Di2 shift switch / dual control lever

A SHIMANO E-BIKE SYSTEMS drive unit includes a built-in wireless unit (7LN1).

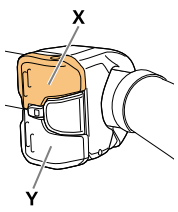
The wireless unit uses a proprietary wireless standard to perform wireless communication with compatible devices (switch unit, Di2 shift switch, and dual control lever). By pairing the control devices on both the left and right sides of the handlebar with the wireless unit, both assist mode switching and shifting can be performed wirelessly.

To pair the wireless unit with the control devices, use the “ Supported applications ” to add the devices to your E-BIKE system. SHIMANO CONNECT allows you to check detailed configuration methods in the application.

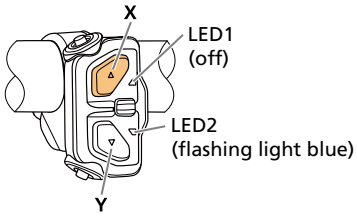
Pairing with a compatible non-SHIMANO device

The wireless unit (7LN1) integrated in the SHIMANO E-BIKE SYSTEMS drive unit supports Bluetooth ® connections with compatible non-SHIMANO devices. Perform the procedure below to prepare the wireless unit for pairing. Refer to the manual for the compatible non-SHIMANO device to perform the pairing procedure.

1. **Turn the power ON.**
2. **Press and hold the assist up switch (by default, X on the left side of the handlebar) until it reaches the following state:**
   - Cycle computer: The Bluetooth ® icon on the screen flashes
   - Wired type switch unit: LED1 turns off and LED2 flashes light blue



Multi-purpose switch



Wired type

TECH TIPS

- If you accidentally start pairing or want to start the procedure over, you can press X again after step 2 to cancel pairing.
- If communication is not established for 30 seconds after pairing, a timeout occurs. In that case, the operation in step 2 must be repeated.
- When pairing is successful and communication is established with the compatible non-SHIMANO device, the Bluetooth ® icon displayed on the screen of the cycle computer switches from flashing to solid. From this point, the Bluetooth ® icon will light solid whenever communication is established.
- The pairing procedure may differ for a compatible non-SHIMANO assist switch.

Supported applications

SHIMANO CONNECT

SHIMANO CONNECT can be used by connecting a drive unit and smartphone via Bluetooth ® LE. SHIMANO CONNECT enables you to perform a range of tasks, such as customizing individual components or the system, or updating firmware. It also displays traveling data, which allows your smartphone to be used like a cycle computer.

SHIMANO CONNECT enables you to display and check details on operations and settings.

For information on connecting to SHIMANO CONNECT, refer to the SHIMANO CONNECT Start Guide .

NOTICE

- When transferring ownership of a bicycle registered to SHIMANO CONNECT, make sure to unregister the bicycle from SHIMANO CONNECT. For information on unregistering a bicycle, refer to the instructions displayed in SHIMANO CONNECT.

TECH TIPS

- SHIMANO CONNECT can be downloaded using a 2D code displayed on the sub screen of a cycle computer. Refer to the user's manual for your cycle computer for details.

E-TUBE PROJECT Professional

E-TUBE PROJECT Professional can be used by connecting a PC and E-BIKE as indicated below:

- Use a USB cable to connect the USB-C port of the USB unit to the USB port of a PC.
- Use Bluetooth ® LE to connect the drive unit and a PC.

E-TUBE PROJECT Professional enables you to perform a range of tasks, such as configuring individual components or the system, performing customization, or updating firmware. For details, refer to the E-TUBE PROJECT Professional User's Manual .

NOTICE

- Conventional PC linkage devices (such as SM-PCE02) are not supported.
- If your E-BIKE does not have a USB unit, connect wirelessly.

2.4 GHz digital wireless systems

This product adopts digital wireless technologies in the 2.4 GHz frequency band, which are used for wireless LAN, etc.

It may receive interference in the following locations or environments, which can prevent wireless communication from being performed correctly in extremely rare cases:

- Near televisions, computers, radios, motors or engines, etc.
- Inside vehicles or trains
- Near railway crossings or tracks
- Near television stations or radar stations
- Near other wireless computers or digital control lights

Wireless unit specifications

Operating temperature	-10°C - 40°C
Wireless specifications	Bluetooth ® LE / SHIMANO ORIGINAL
Frequency band	2.4 GHz
Maximum radio-frequency power	<10 dBm
Firmware version	1.0.0 or later
Wireless unit	7LN1

Troubleshooting

Error / warning indication

For details on error / warning codes displayed on the cycle computer, check the latest versions below:

https://si.shimano.com/error

NOTICE

If the error persists, stop using the bicycle and swiftly contact your place of purchase or a distributor for assistance.

When a problem occurs

FAQ can be found at the following link. You can select the display language of the linked page.

■ SHIMANO E-BIKE SYSTEMS FAQ

https://bike.shimano.com/support-and-service/faq/STP0A.html

■ FAQ top page

https://bike.shimano.com/support-and-service/faq.html

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