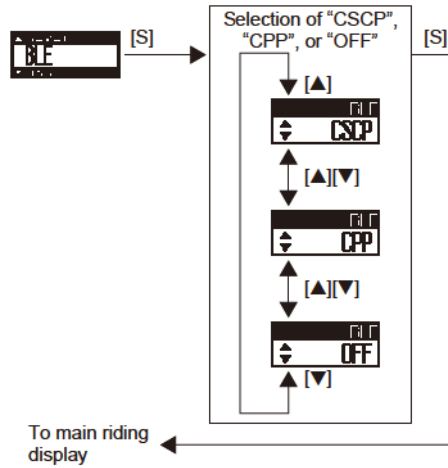


1. Select "CSCP", "CPP", or "OFF" by using the assist mode switches (up & down).
2. When you press the function select switch at the desired item display, the setting will be kept and the main riding display will be shown.

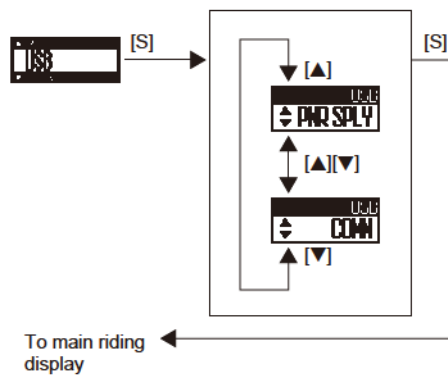
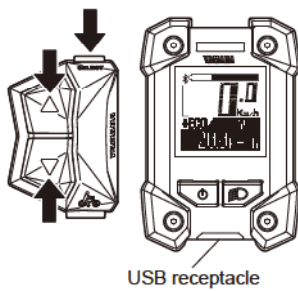


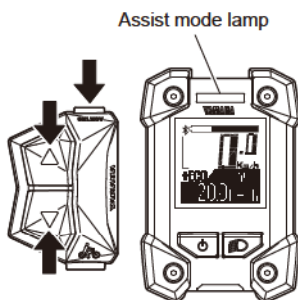
## ● USB

You can use the USB receptacle as a power supply.

### TIP

- Normally you should not use "COMM" because this is a service mode used for wired communication.
- When the power is turned off, the mode automatically changes to "PWR SPLY".





## ● LED

You can select to light up the assist mode lamp according to the assist mode or keep the assist mode lamp unlit all the time.

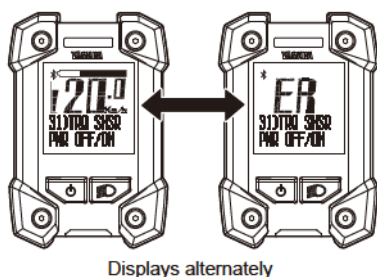
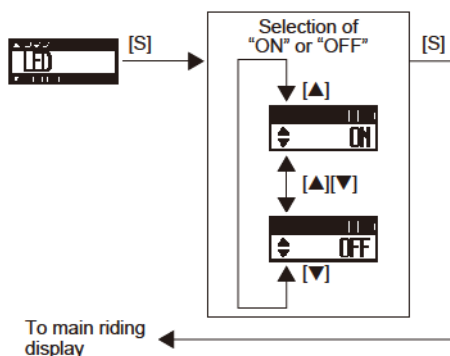
When "ON" is selected, the assist mode lamp will light up according to the assist mode.

When "OFF" is selected, the assist mode lamp will remain unlit all the time.

## TIP

Even if the assist mode lamp is set to "OFF", it will light up in red if an error occurs.

1. Select "ON" or "OFF" by using the assist mode switches (up & down).
2. When you press the function select switch at the desired item display, the setting will be kept and the main riding display will be shown.



Displays alternately

## ○ Diagnosis mode

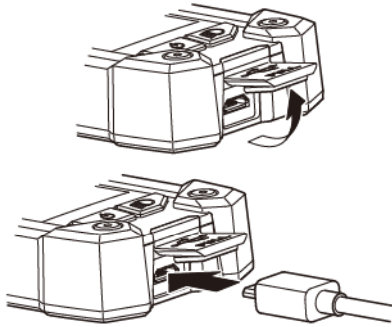
The e-Bike Systems are equipped with a diagnosis mode. If a malfunction or fault occurs in the e-Bike Systems, the assist mode lamp will light up in red, and the main riding display and "ER" will be shown alternately, while an error description will inform you of the type of error in the function display. See "Troubleshooting" regarding symptoms and remedies for abnormal displays and abnormal flashing.

## ⚠ WARNING

If the problem cannot be solved, have your bicycle inspected by a dealer as soon as possible.

## TIP

Even if the assist mode lamp is set to "OFF", it will light up in red if a malfunction or fault occurs.



### ○ Power supply to external devices

Power can be supplied to most external devices (e.g. various smart phones etc.) by connecting a commercial USB 2.0 OTG cable.

[To supply power]

1. Open the USB receptacle cap of the display.
2. Connect the USB cable to the display and external device.
3. Turn on the power of the vehicle.

[To stop the power supply]

1. Turn off the power of the vehicle.
2. Disconnect the USB cable and put on the cap of the USB receptacle.

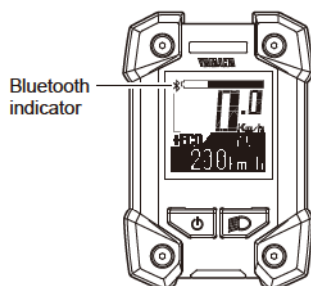
### NOTICE

- Do not apply unreasonable force on the USB plug or pull the USB cable.
- Check that the USB plug is facing the right way and not totally out-of-position with the USB receptacle or slanted, and make sure it is fully inserted all the way in.
- Do not connect the USB receptacle and the USB plug in a wet state.
- Use a USB 2.0 OTG cable that conforms to the standards.
- Do not insert foreign objects into the USB receptacle unit.

Otherwise the display unit and external device may malfunction.

### TIP

- Power is supplied automatically when an external device is connected with the USB cable.
- No power is supplied if the remaining capacity of the battery pack is low.
- The power supply of the vehicle will go off and power supplied by the USB connection will also stop if the vehicle is not operated for 5 minutes.



## ○ Communication with Bluetooth low energy technology

The wireless equipment corresponding to the CSCP or CPP profiles can provide the communication via Bluetooth low energy technology.

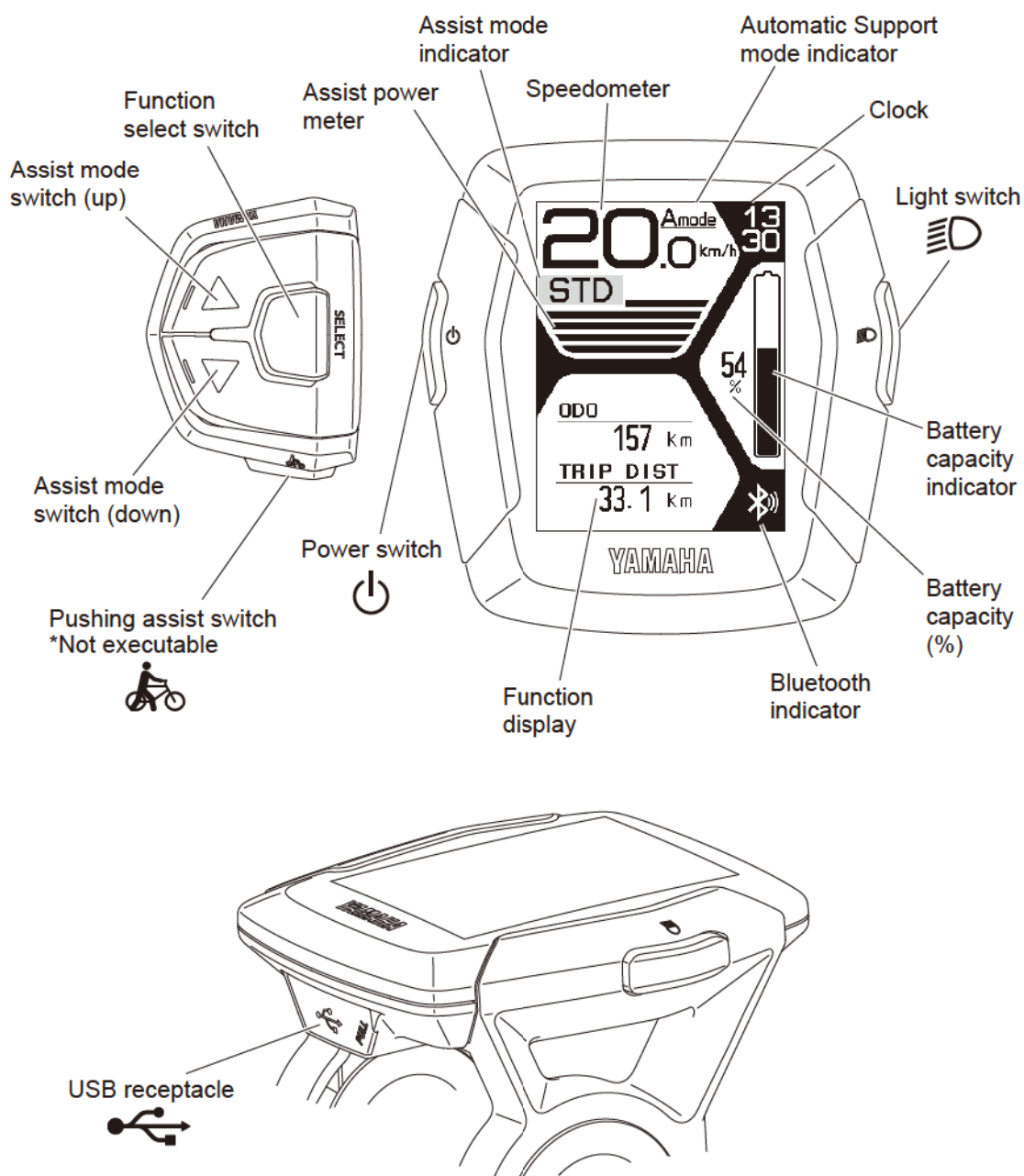
1. Set the profiles of the display unit by referring to “Stopwatch and settings”.  
Also confirm that they are in accordance with the connection settings of your wireless communication equipment.
2. Check that the Bluetooth indicator is displayed.
3. Select “Yamaha #####” from the user menu of your wireless communication equipment.  
For more information, see the instruction manual of the wireless communication equipment.

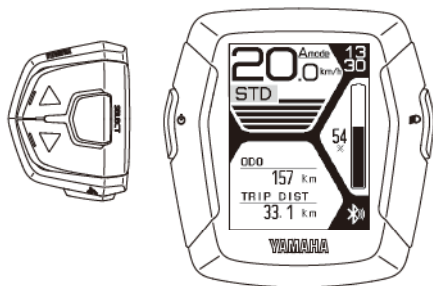
\* “#####” of “Yamaha #####” is a combination of irregular alphanumeric characters.

### TIP

- Keep the distance between the display and wireless communication equipment within 1 m. The maximum communication distance of this equipment is 1 m.  
If the wireless communication equipment is kept in a bag, etc., the actual communication distance might be shorter.
- Do not use the equipment in places with magnetic fields, static electricity, or electromagnetic interference.  
If the equipment is used near transmitters, broadcasting stations or the following type of equipment, wireless communication may not be possible.
  - Microwave ovens
  - Digital cordless phones
  - Wireless communication devices
  - Near other wireless equipment using the 2.4 GHz band.
- Do not cover the display with objects such as aluminum sheets that block the radio waves. Otherwise, wireless communication may not be possible.
- For the output power level of each profile, see the “Specifications”.

## Display unit (Display C)





## Display unit (Display C)

The display unit offers the following operations and information displays.

### NOTICE

This device complies with part 15 of the FCC Rules and Industry Canada licence exempt RSS-247 standard. Operations 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.

Le manuel d'utilisation des appareils radio exempts de licence doit contenir l'énoncé qui suit, ou l'équivalent, à un endroit bien en vue et/ou sur les appareils : Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

FCC ID : 2ADBKX1R00  
IC : 740A-X1R00  
CAN ICES-3 (B)/NMB-3 (B)

Brand name : YAMAHA  
Model no. : X1R00  
Manufacturer name : YAMAHA MOTOR CO., LTD.

MADE IN CHINA

## **NOTICE**

### **Federal Communication Commission Interference Statement**

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 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.

### **FCC Caution:**

To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices.)

### **FCC Radiation Exposure Statement:**

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

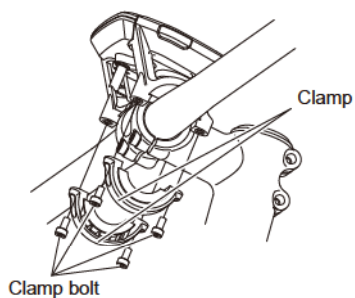
### **IC Radiation Exposure Statement:**

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 0.5 cm between the radiator and your body.

### **Déclaration d'exposition à la radiation:**

Cet équipement respecte les limites d'exposition aux rayonnements IC RSS-102 définies pour un environnement non contrôlé. Cet équipement doit être installé et mis en marche à une distance minimale de 0.5 cm qui sépare l'élément rayonnant de votre corps.

The display unit offers the following operations and information displays.



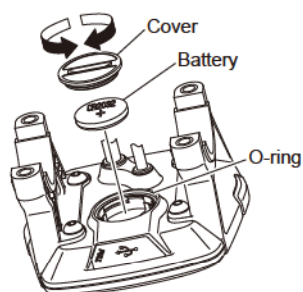
## ○ Installing the battery

The display unit needs to be removed and installed for changing the battery.

- Remove the clamp by loosening the four bolts and remove the display from the handle.
- When installing the display unit, tighten the four clamp bolts from the back side of the clamp.

## ⚠ WARNING

**Tighten the clamp bolts to 2 N·m. Otherwise, during riding, vibration could cause the clamp bolts to come loose with the risk that the display unit may fall off. A loose display could distract the rider or interfere with control.**



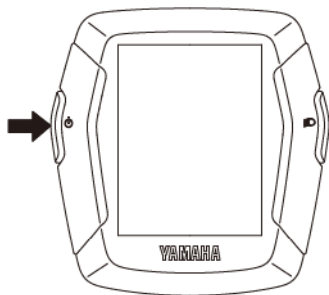
## ○ Battery

Check if the rated battery (CR2032) is installed in the rear of the display unit.

If a battery is not installed, or if there is not sufficient battery power remaining, install a new battery. To adjust the time, see "Settings".

## TIP

- Make sure that the O-ring is installed correctly.
- Use a new CR2032 button cell battery (sold separately).
- When a battery is drained, whenever it turns on the vehicle power supply, the clock begins to count from 11:00. Please replace the battery, if such a condition appears.



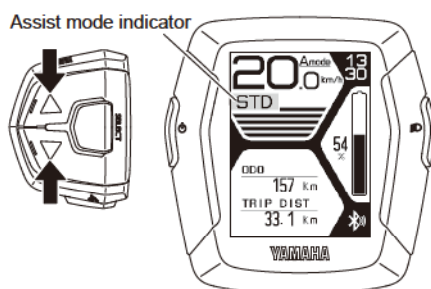
## ○ Power “On/Off”

Each time you press the power switch, the power switches between “On” and “Off”.

When you turn on the power, all of the displays come up. After that, it transitions to the main riding display.

### TIP

- When you turn on the power, the assist mode is automatically set to Off mode.
- Keep your feet off the pedals when turning on the display unit. Also, do not start riding immediately after turning on the display unit. Doing so could weaken the assist power. (Weak assist power in either of these cases is not a malfunction.) If you did either of the above by accident, remove your feet from the pedals, turn on the power again, and wait a moment (approximately two seconds) before starting to ride.

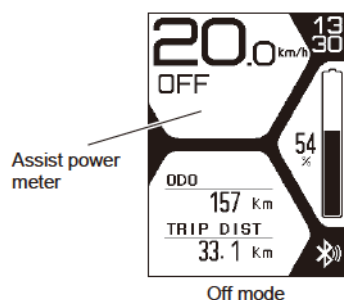


## ○ Displaying and switching the assist mode

You can select the assist mode by using the assist mode switches (up & down).

The selected assist mode is displayed by the assist mode indicator.

- When you press the assist mode switch (up), the mode changes from “OFF” to “+ECO”, or from “+ECO” to “ECO”, or “ECO” to “STD”, or “STD” to “HIGH”, or “HIGH” to “EXPW”.
- When you press the assist mode switch (down), the mode changes from “EXPW” to “HIGH”, or from “HIGH” to “STD”, or “STD” to “ECO”, or “ECO” to “+ECO”, or “+ECO” to “OFF”.



### TIP

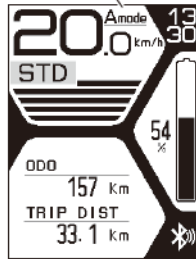
- Bicycles equipped with the PWseries SE or PWseries TE drive unit have no Extra Power mode.
- Further pressing of the assist mode switch will not cycle the assist mode selections.
- In the Off mode, the assist power meter is not displayed.

Bicycles equipped with the PWseries TE drive unit can use the Automatic Support mode.

#### TIP

The Automatic Support mode is a function enabling automatic change to the optimized assist mode according to the riding conditions.

Automatic Support mode indicator



- To use the Automatic Support mode, press the assist mode switch (up) for 1 second or longer. The Automatic Support mode indicator will light up and the mode will be changed to the Automatic Support mode.
- To cancel the Automatic Support mode, press the assist mode switch (up) for 1 second or longer. The Automatic Support mode indicator will go off and the Automatic Support mode will be canceled.

#### TIP

Even if you press the assist mode switches (up & down) while in Automatic Support mode, the assist mode cannot be changed.

| Assist mode | Assist mode indicator       |
|-------------|-----------------------------|
| EXPW        | <b>EXPW</b> Orange          |
| ▲▼          |                             |
| HIGH        | <b>HIGH</b> Violet          |
| ▲▼          |                             |
| STD         | <b>STD</b> Blue             |
| ▲▼          |                             |
| ECO         | <b>ECO</b> Green            |
| ▲▼          |                             |
| +ECO        | <b>+ECO</b> Yellowish green |
| ▲▼          |                             |
| OFF         | <b>OFF</b>                  |

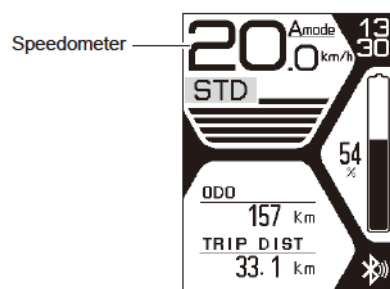
PW-X drive unit

| Assist mode | Assist mode indicator       |
|-------------|-----------------------------|
| HIGH        | <b>HIGH</b> Violet          |
| ▲▼          |                             |
| STD         | <b>STD</b> Blue             |
| ▲▼          |                             |
| ECO         | <b>ECO</b> Green            |
| ▲▼          |                             |
| +ECO        | <b>+ECO</b> Yellowish green |
| ▲▼          |                             |
| OFF         | <b>OFF</b>                  |

PWseries SE drive unit

| Assist mode            | Assist mode indicator       |
|------------------------|-----------------------------|
| Automatic Support mode | <b>HIGH</b> Violet          |
|                        | <b>STD</b> Blue             |
|                        | <b>ECO</b> Green            |
|                        | <b>+ECO</b> Yellowish green |

PWseries TE drive unit

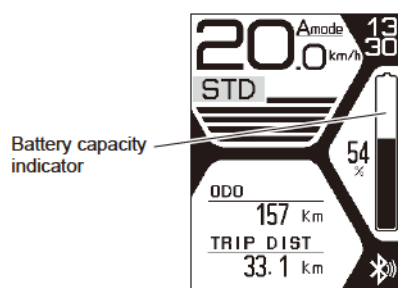


## ○ Speedometer

The speedometer displays your bicycle speed (in kilometer per hour or mile per hour). To select the km/mile, see “Settings”.

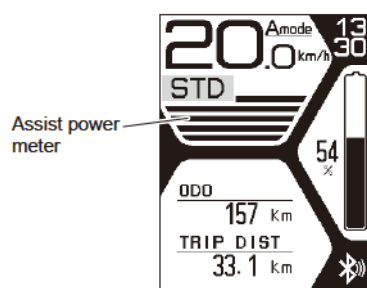
## TIP

If your bicycle speed is less than 2.0 km/h or 1.2 MPH, the speedometer displays “0.0 km/h” or “0.0 MPH”.



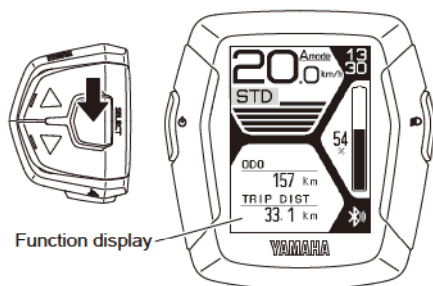
## ○ Battery capacity indicator

The battery capacity indicator displays an estimate of how much capacity is left in the battery.



## ○ Assist power meter

The assist power meter displays an estimate of the assist power during riding. When the e-Bike Systems are not in operation, none of the segments of the assist power meter are displayed. When the e-Bike Systems are operating, as the assist power increases, the segments of the assist power meter are added one by one.



## ○ Function display

The function display can display the following functions.

- Odometer
- Trip meter
- Average bicycle speed
- Maximum bicycle speed
- Range (Remaining assist distance)
- Cadence
- Trip time

Push the function select switch, the display changes as follows:

Odometer → Trip meter → Average bicycle speed → Maximum bicycle speed → Range → Cadence → Trip time → Odometer

You can select the items to be displayed.  
For more information, see “Settings”.

You can reset the data for trip meter, trip time, average bicycle speed, and maximum bicycle speed.  
For more information, see “Settings”.

## TIP

When you connect to the smartphone and run the application, the Trip meter, Trip time, Average bicycle speed, and Maximum bicycle speed will all be reset.

ODO  
157 Km

TRIP DIST  
33.1 Km

AVE  
7.7 km/h

## ● Odometer

This displays the total distance (in kilometers or miles) ridden while the power was on.  
The odometer cannot be reset.

## ● Trip meter

This displays the total riding distance (in kilometers or miles) since it was last reset.  
When you turn off the power, the data up to that point will be saved.  
For the procedure of resetting the trip meter to measure a new distance traveled, see “Settings”.

## ● Average bicycle speed

This displays the average bicycle speed (in kilometers per hour or miles per hour) since it was last reset.  
When you turn off the power, the data up to that point will be saved.  
For the procedure of resetting the average bicycle speed, see “Settings”.

MAX  
13.7 km/h

RANGE  
15 km

CADENCE  
50 rpm

TRIP TIME  
1:47:35

### ● Maximum bicycle speed

This displays the maximum bicycle speed (in kilometers per hour or miles per hour) since it was last reset. When you turn off the power, the data up to that point will be saved.

For the procedure of resetting the maximum bicycle speed, see “Settings”.

### ● Range (Remaining assist distance)

This displays an estimate of the distance (in kilometers or miles) that can be ridden with assist on the residual battery capacity of the battery installed. If you switch the assist mode when the remaining assist distance is displayed, the estimate of the distance that can be ridden with assist changes.

The remaining assist distance estimate cannot be reset.

#### TIP

- The remaining assist distance changes depending on the riding situation (hills, headwind, etc.) and as the battery runs down.
- If in Off mode, “- - -” is displayed.

### ● Cadence

This displays your pedaling speed in revolutions per minute.

The pedaling cadence display cannot be reset.

#### TIP

If you pedal in backward, “0” is displayed.

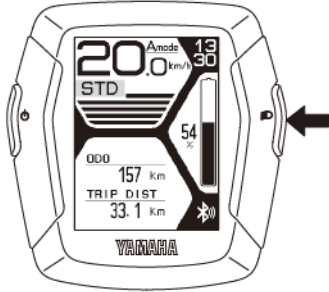
### ● Trip time

This displays the total riding time since it was last reset. When you turn off the power, the data up to that point will be saved.

For the procedure to reset the trip time, see “Settings”.

#### TIP

If your bicycle speed is less than 2.0 km/h or 1.2 MPH, the trip time will not be accumulated.

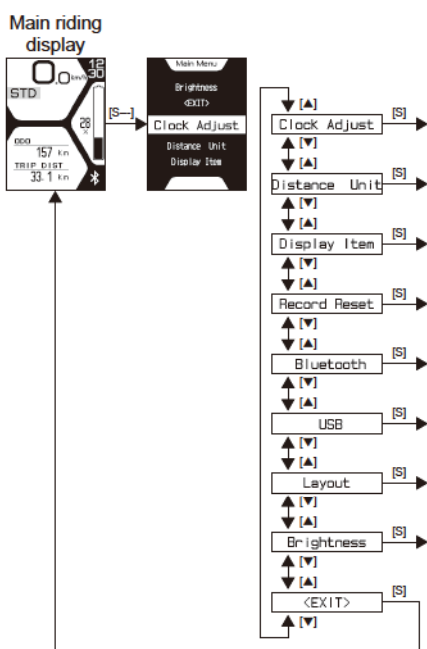
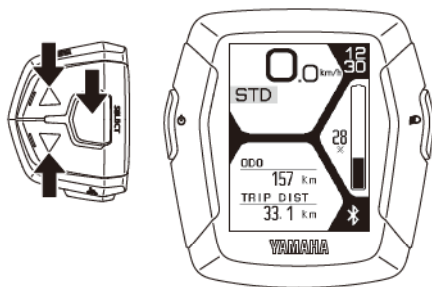


- **Headlight “On/Off”** (Applies only to models equipped with a headlight powered by the battery pack. The taillight, which is powered by the battery pack, is switched on/off with the headlight.) 

Each time you press the light switch, the headlight switches between “On” and “Off”.

#### TIP

- Display backlight will operate simultaneously with the light switch.
- When the light switch is “On”, the brightness will be low. When the light switch is “Off”, the brightness will be the selected condition. For the procedure of selecting the brightness condition, see “Settings”.



## ○ Settings

The display enables the following.

- Clock Adjust  
Clock setting
- Distance Unit  
km/mile setting
- Display Item  
Sets the items to be displayed in the function display during normal riding.
- Record Reset  
Resets the values of the trip meter, average bicycle speed, maximum bicycle speed, and trip time.
- Bluetooth (Bluetooth low energy technology)  
Switches the profiles and turns off the wireless function.
- USB  
Switches the USB receptacle between a power supply port and a wired communication port.
- Layout  
Switches the layout of the display.
- Brightness  
Changes the brightness of the display backlight.

1. Press the function select switch for 2 seconds or longer.
  2. Select an item by using the assist mode switches (up & down).
- When you select an item to set and press the function select switch, the setting will be displayed.  
Selecting "EXIT" returns to the main riding display.

## ! WARNING

For all setting procedures, be sure to stop the bicycle and perform the required settings in a safe location. Otherwise, lack of attention to surrounding traffic or other hazards could cause an accident.

## TIP

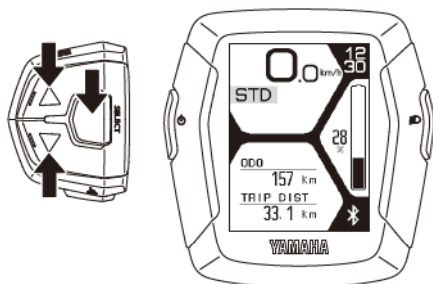
- The settings cannot be adjusted while riding.
- If you do the following during setting, the item that you are setting will be canceled and the display will return to the main riding display.
  - Turning the crank (pedal) in the traveling direction
  - Turning the rear wheel at 1.2 mph (2 km/h) and more
  - Pushing the pushing assist switch

[S---] ..... Press the function select switch for 2 seconds or longer

[S] ..... Press the function select switch

[▲] ..... Press the assist mode switch (up)

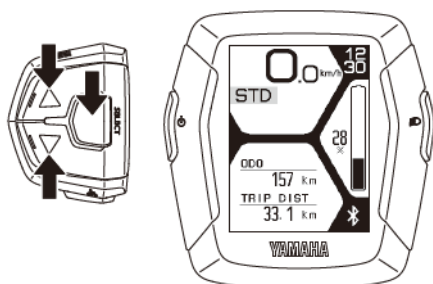
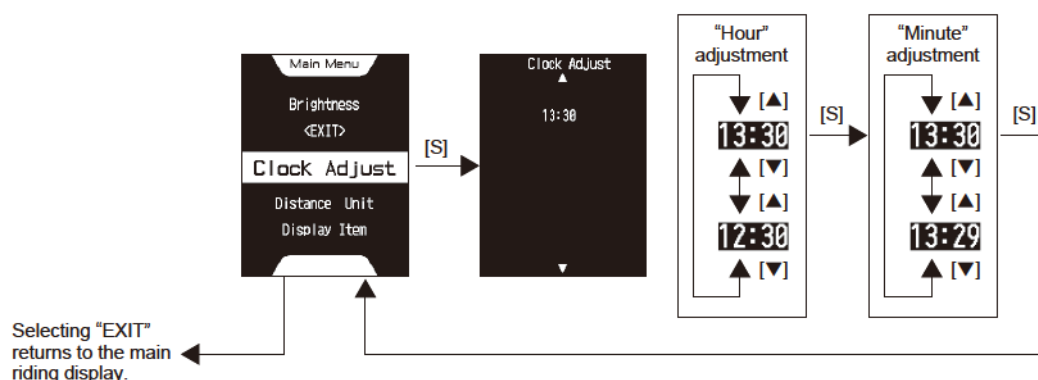
[▼] ..... Press the assist mode switch (down)



## ● Clock Adjust

You can adjust the time of the clock.

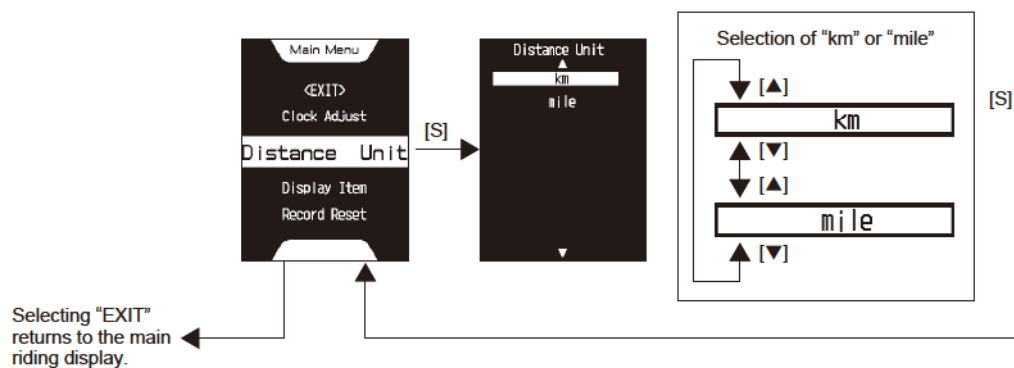
1. Check that the "Hour" is flashing and adjust the hour by using the assist mode switches (up & down).
2. Press the function select switch to adjust the minutes.
3. Check that the "Minute" is flashing and adjust the minutes by using the assist mode switches (up & down).
4. Press the function select switch to return to the main menu display.

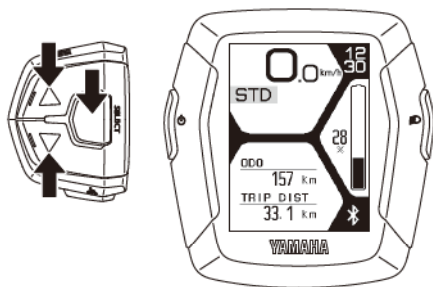


## ● Distance Unit

You can select the display units for distance and speed. When "km" is selected, the traveled distance will be indicated in kilometers and the speed in km/h. When "mile" is selected, the traveled distance will be indicated in miles and the speed in mph.

1. Select "km" or "mile" by using the assist mode switches (up & down).
2. When you press the function select switch, the setting will then be kept and the display will return to the main menu display.





## ● Display Item

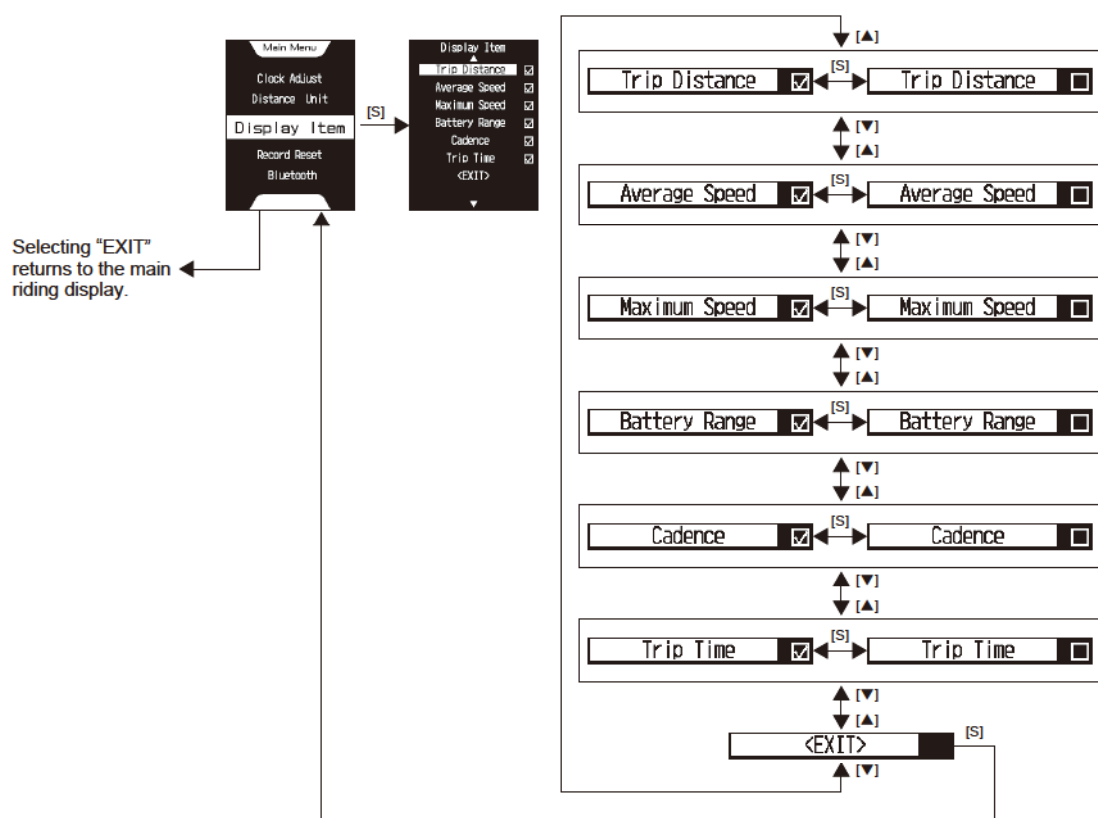
You can select to show or hide different items in the function display during normal riding.

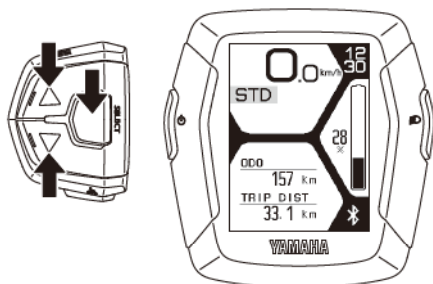
The items which you can select to show or hide are: Trip Distance (Trip meter), Average Speed (Average bicycle speed), Maximum Speed (Maximum bicycle speed), Battery Range (Range), Cadence, and Trip Time.

### TIP

You cannot hide the odometer indication.

1. Select an item by using the assist mode switches (up & down).
2. Use the function select switch to show or hide the selected item. (When an item is shown, a check mark will be shown in the check box.)
3. When you select "EXIT" and press the function select switch, the setting will be kept and the display will return to the main menu display.





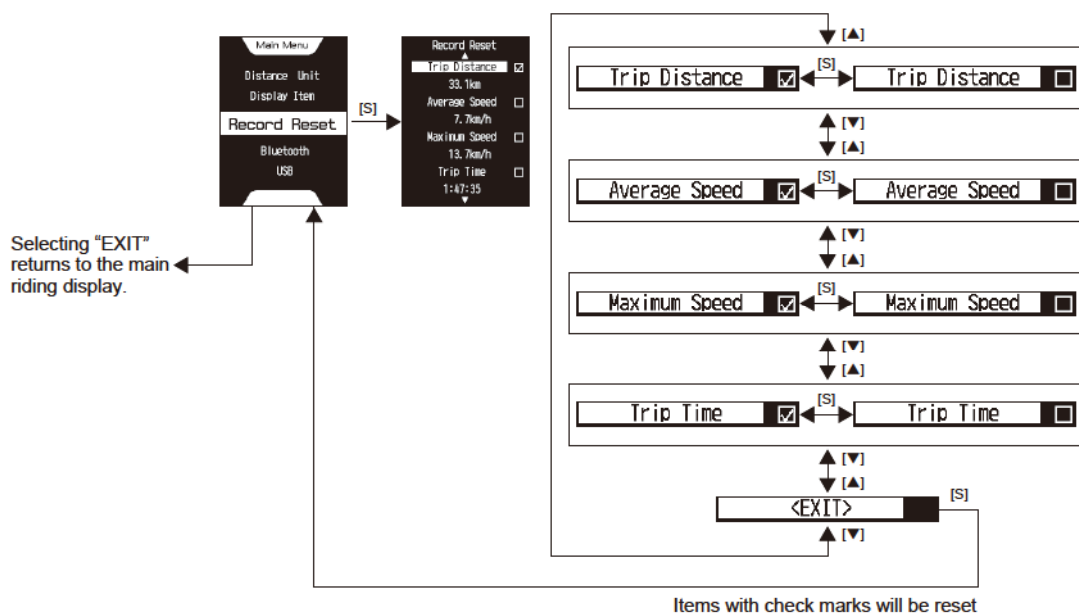
## ● Record Reset

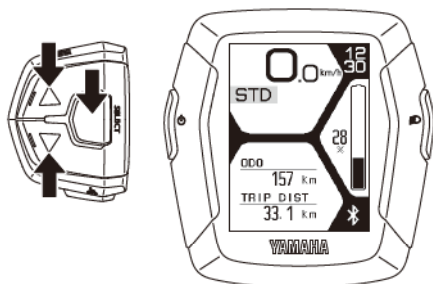
You can reset the Trip Distance (Trip meter), Average Speed (Average bicycle speed), Maximum Speed (Maximum bicycle speed), and Trip Time values.

### TIP

You cannot reset the odometer.

1. Select an item by using the assist mode switches (up & down) and use the function select switch to place a check mark in the check box for the item that you want to reset.
2. When you select "EXIT" and press the function select switch, the items with check marks will be reset and the display will return to the main menu display.





## ● Bluetooth (Bluetooth low energy technology)

You can set the profile to use the wireless function with Bluetooth low energy technology, or you can select not to use the wireless function.

When "OFF" is selected, the wireless function will be inactive.

When "CSCP" is selected, the Cycling Speed and Cadence Profile will be available.

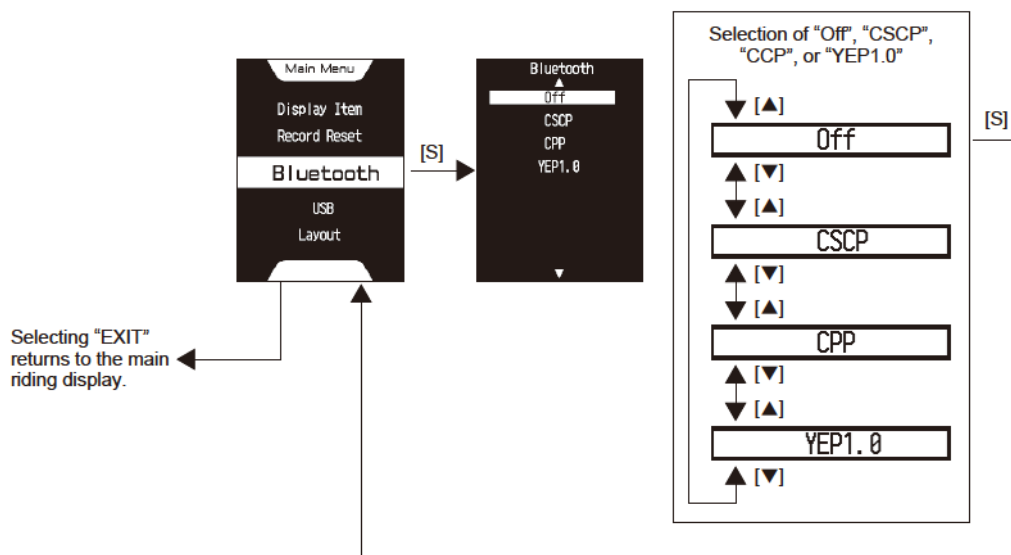
When "CPP" is selected, the Cycling Power Profile will be available.

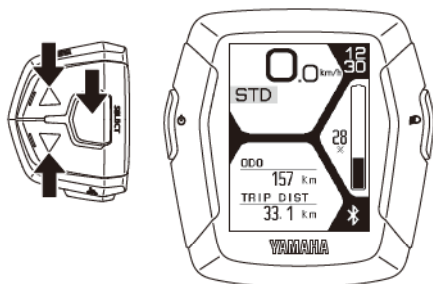
When "YEP1.0" is selected, the e-Bike profile preset by YAMAHA MOTOR CO., LTD. will be available.

### TIP

- Set the profile according to the wireless communication equipment that communicates via Bluetooth low energy technology.
- For the output power level of each profile, see "Specifications".
- Even if the power is turned off, the setting will be kept. When the power is turned on the next time, the last used setting will be selected.

1. Select "Off", "CSCP", "CPP", or "YEP1.0" by using the assist mode switches (up & down).
2. When you press the function select switch, the setting will then be kept and the display will return to the main menu display.



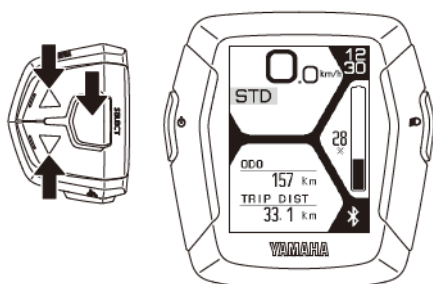
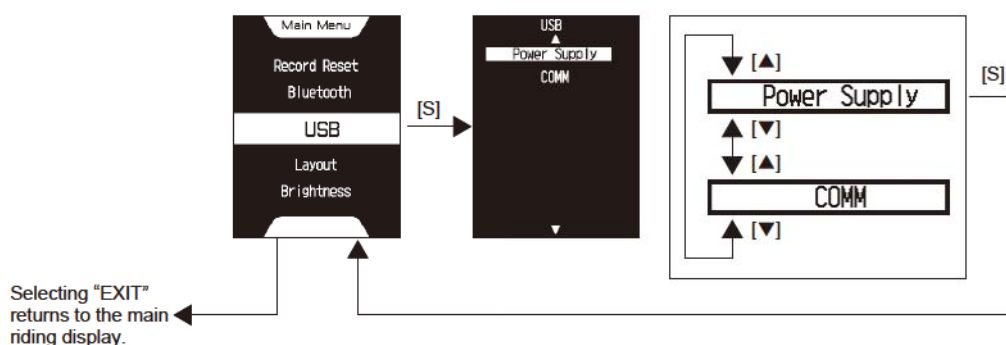


## ● USB

You can use the USB receptacle as a power supply.

### TIP

- Normally you should not use “COMM” because this is a service mode used for wired communication.
- When the power is turned off, the mode automatically changes to “Power Supply”.



## ● Layout

You can select the layout for the main riding display.

When you select “Default”, the main riding display will be shown.

When you select “Compass”, mainly navigation information will be displayed once the unit has been paired with the smartphone application.

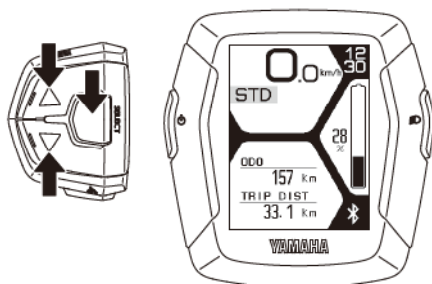
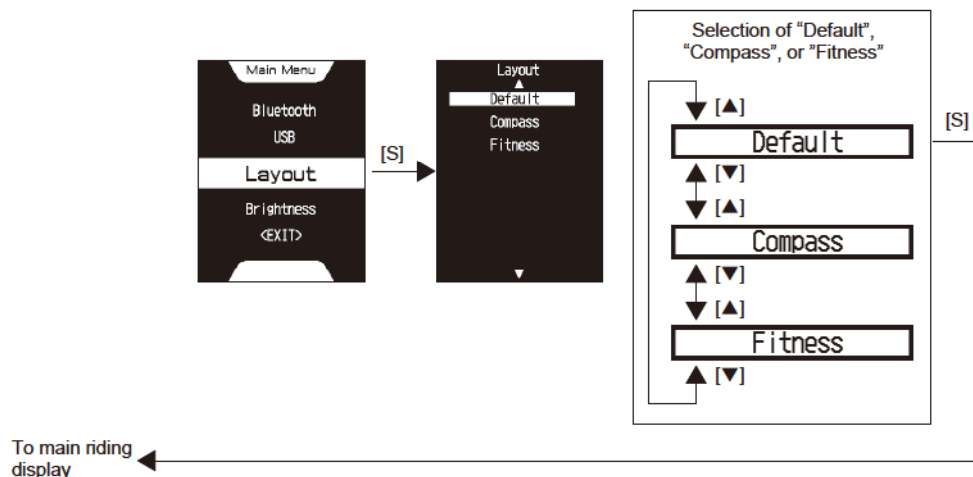
When you select “Fitness”, mainly fitness information will be displayed once the unit has been paired with the smartphone application.

### TIP

- To display the correct information on the “Compass” and “Fitness” displays, be sure to use the Bluetooth low energy technology communication and the YEP1.0 profile in order to make the display unit and the smartphone application work properly together.
- When the display unit and smartphone application are properly paired, the Compass function and Fitness function will start on the application side, and the display will automatically change.
- When the power is turned off, the mode automatically changes to “Default”.

1. Select “Default”, “Compass”, or “Fitness” by the assist mode switches (up & down).

2. Press the function select switch when the desired unit is indicated in the display. This setting will then be kept and the display will return to the main riding display.



## ● Brightness

You can select the brightness of the display backlight.

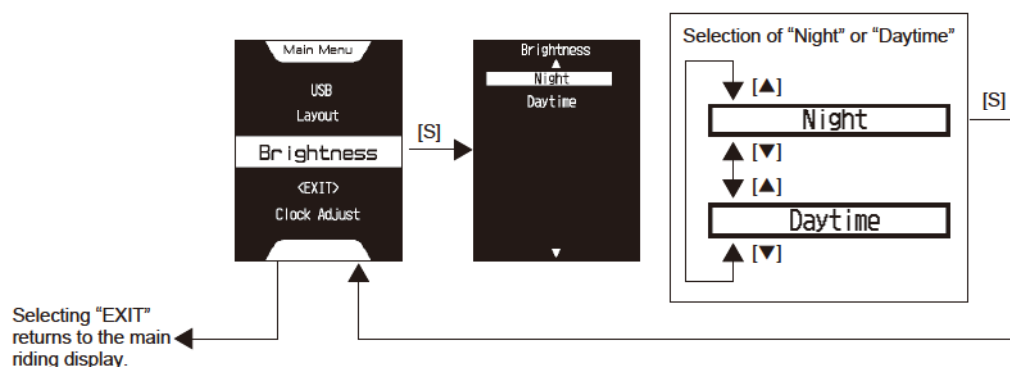
When "Daytime" is selected, the brightness will be high during the light switch is "Off", and it becomes low if the light switch is turned "On".

When "Night" is selected, the brightness will be low all-ways.

1. Select "Daytime" or "Night" by using the assist mode switches (up & down).
2. When you press the function select switch, the setting will then be kept and the display will return to the main menu display.

## TIP

Even if the power is turned off, the setting will be kept. When the power is turned on the next time, the last used setting will be selected.



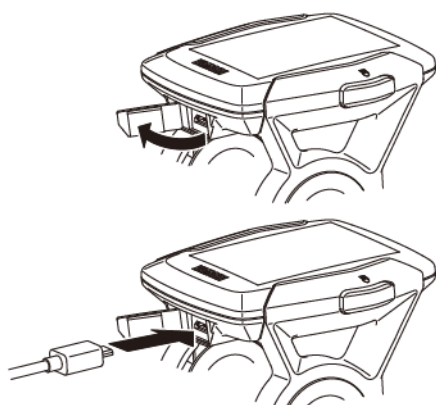


## ○ Diagnosis mode

The e-Bike Systems are equipped with a diagnosis mode. If a malfunction or fault occurs in the e-Bike Systems, an error message will be displayed. For the symptoms and actions, see "Troubleshooting".

## ⚠ WARNING

If the problem cannot be solved, have your bicycle inspected by a dealer as soon as possible.



## ○ Power supply to external devices

Power can be supplied to most external devices (e.g. various smart phones etc.) by connecting a commercial USB 2.0 OTG cable.

[To supply power]

1. Open the USB receptacle cap of the display.
2. Connect the USB cable to the display and external device.
3. Turn on the power of the vehicle.

[To stop the power supply]

1. Turn off the power of the vehicle.
2. Disconnect the USB cable and put on the cap of the USB receptacle.

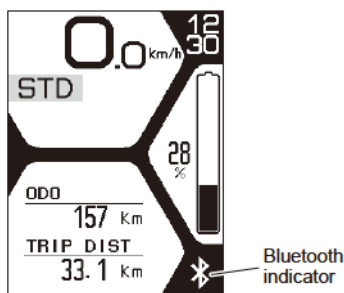
## NOTICE

- Do not apply unreasonable force on the USB plug or pull the USB cable.
- Check that the USB plug is facing the right way and not totally out-of-position with the USB receptacle or slanted, and make sure it is fully inserted all the way in.
- Do not connect the USB receptacle and the USB plug in a wet state.
- Use a USB 2.0 OTG cable that conforms to the standards.
- Do not insert foreign objects into the USB receptacle unit.

Otherwise the display unit and external device may malfunction.

## TIP

- Power is supplied automatically when an external device is connected with the USB cable.
- No power is supplied if the remaining capacity of the battery pack is low.
- The power supply of the vehicle will go off and power supplied by the USB connection will also stop if the vehicle is not operated for 5 minutes.



## ○ Communication with Bluetooth low energy technology

The wireless equipment corresponding to the CSCP, CPP, or YEP1.0 profiles can provide the communication via Bluetooth low energy technology.

1. Set the profiles of the display unit by referring to “Settings”.  
Also confirm that they are in accordance with the connection settings of your wireless communication equipment.
2. Check that the Bluetooth indicator is displayed.
3. Select “Yamaha #####” from the user menu of your wireless communication equipment.  
For more information, see the instruction manual of the wireless communication equipment.  
\* “#####” of “Yamaha #####” is a combination of irregular alphanumeric characters.
4. Make sure that the Bluetooth indicator displays successful pairing.

### TIP

- Keep the distance between the display and wireless communication equipment within 1 m. The maximum communication distance of this equipment is 1 m.  
If the wireless communication equipment is kept in a bag, etc., the actual communication distance might be shorter.
- Do not use the equipment in places with magnetic fields, static electricity, or electromagnetic interference.  
If the equipment is used near transmitters, broadcasting stations or the following type of equipment, wireless communication may not be possible.
  - Microwave ovens
  - Digital cordless phones
  - Wireless communication devices
  - Near other wireless equipment using the 2.4 GHz band.
- Do not cover the display with objects such as aluminum sheets that block the radio waves. Otherwise, wireless communication may not be possible.
- For the output power level of each profile, see the “Specifications”.

## ○ Display of paired application

By using the Bluetooth low energy technology communication and YEP1.0 profile and then pairing the display unit with the smartphone application, navigation information (Compass) and fitness support (Fitness) will be available on the display.

### ⚠ WARNING

**Do not look at the display while bicycling since lack of attention to surrounding traffic can cause an accident.**

### TIP

In this manual, all information that can be shown on the display unit, is described. However, some information may not be correctly shown owing to the smartphone application.

## ● Compass (Navigation information)

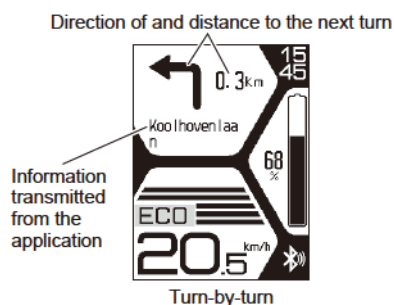
Sets the destination or waypoints by using the smartphone application and shows this information on the display.

You can select the information to be displayed. Push the function select switch to change the displayed information.

### • Turn-by-turn

The upper part shows the distance to the next turn on the traveling route to reach the destination.

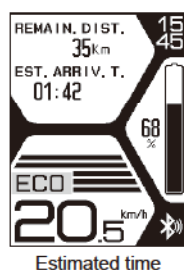
The lower part shows relevant information (such as a street name, crossing name, or place name) transmitted from the application. The displayed information depends on the application.

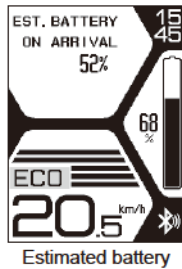


### • Estimated time

The remaining distance to the destination is shown at the top.

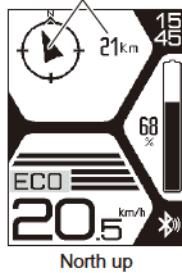
The estimated time of arrival at the destination is shown under this.





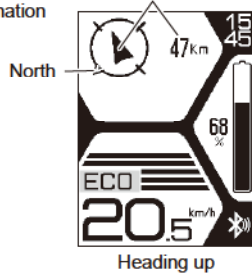
- **Estimated battery**  
Displays the estimated remaining battery capacity when you arrive at the destination.

Direction and straight-line distance to waypoint or destination

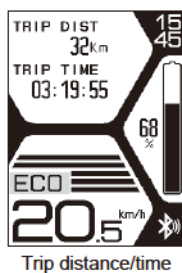


- **North up**  
The upper part displays the heading to the destination and straight-line distance when the compass direction of the display unit has been fixed to north. It displays the heading to the next waypoint and straight-line distance in case waypoints have been set.

Direction and straight-line distance to waypoint or destination



- **Heading up**  
The upper part displays the direction and straight-line distance to the destination in relation to the current traveling direction and compass direction. It displays the direction and straight-line distance to the next waypoint in relation to the compass direction in case waypoints have been set.



- **Trip distance/time**  
The upper part displays the distance traveled since the smartphone application started the navigation. The lower part displays the elapsed time since the smartphone application started the navigation.

## **WARNING**

Be sure to obey local traffic regulations and ride according to the actual road conditions. Otherwise, you could cause a traffic accident.

## **TIP**

- When the Turn-by-turn function of the smartphone application starts, only the Turn-by-turn display will be shown. Even if the function select switch is pressed, the display will not change.
- When the Compass function of the smartphone application starts, you can switch the display mode among North up, Heading up, and Trip distance/time by pressing the function select switch. However, you cannot change to any other display modes.
- The displayed contents of the navigation information depends on the smartphone application.
- The estimated remaining battery capacity varies according to the riding mode.

## ● **Fitness (Fitness-support information)**

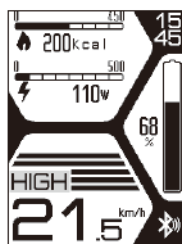
Set the target riding distance, target riding time, calorie burn target, etc. using the smartphone application and show this information on the display.

You can select the information to be displayed. Push the function select switch, the display changes.

### • **Calorie/Power**

The upper part displays the calorie burn target value together with the accumulated burned calories over time since the application started the Fitness function. In addition, the number of burned calories for the current ride is displayed by a bar graph.

The lower part displays the target pedal power value and current pedal power. The current pedal power is displayed by a bar graph.

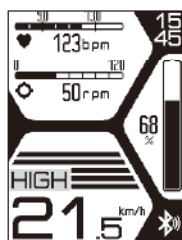


Calorie/Power

### • **Heart rate/Cadence**

The upper part displays the target heart rate together with the current heart rate as beats per minute. In addition, the current heart rate is displayed by a bar graph.

The lower part displays the target cadence value together with the current cadence value as revolutions per minute. In addition, the current cadence value is displayed by a bar graph.



Heart rate/Cadence



Workout distance/time

- **Workout distance/time**

The upper part displays the target distance traveled value together with the accumulated distance traveled over time since the application started the Fitness function. In addition, the current distance traveled is displayed by a bar graph.

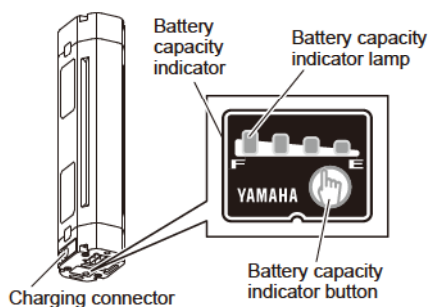
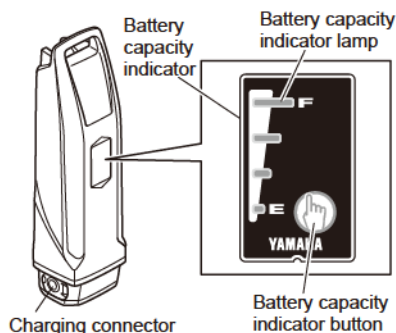
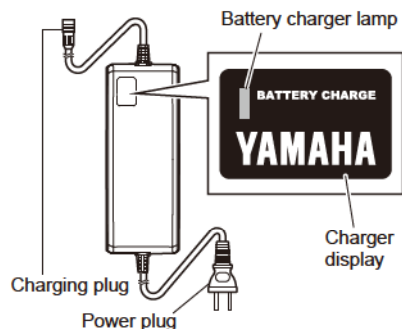
The lower part displays the target riding time value and accumulated riding time since the application started the Fitness function. In addition, the current riding time is displayed by a bar graph.

#### **TIP**

- The number of burned calories and pedal power are measured by an original method developed by YAMAHA MOTOR CO., LTD. The figures are for reference and may differ from similar figures of other products.
- In order to display the heart rate, this information must be received from a commercially available heart rate sensor supporting the smartphone application and Bluetooth low energy technology communication specifications.

The accuracy of the displayed heart rate depends on the measuring accuracy of the heart rate sensor.

## G. Battery pack and charging procedure



The battery pack equipped for the Yamaha e-Bike Systems is a lithium-ion battery. The lithium-ion battery is lightweight and offers superior capacity. However, it does have the following characteristics.

- Its performance decreases in extremely hot or cold environments.
- It naturally loses its charge.

The battery pack for the Yamaha e-Bike Systems also has an embedded computer which notifies you of estimated residual battery capacity and suspected faults via the battery capacity indicator lamp.

By pressing the battery capacity indicator button, you can display the residual battery capacity for approximately 5 seconds.

See "Checking the residual battery capacity" for the estimate of the residual battery capacity. See "Troubleshooting" for information on fault flashing.

### **WARNING**

Do not use any other charger or charging method to recharge the special batteries. Using any other charger could result in fire, explosion, or damage the batteries.

### **WARNING**

**IMPORTANT SAFETY INSTRUCTIONS — SAVE THESE INSTRUCTIONS**  
**TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, CAREFULLY FOLLOW THESE INSTRUCTIONS**

This manual contains important safety and operating instructions for battery charger Type PASC4.

Before using battery charger, read all instructions and cautionary markings on battery charger, battery and product using battery.

Only use it to charge PASB4 type batteries for Yamaha e-Bike Systems. Other types of batteries may burst causing injury to persons and damage.

### **NOTICE**

Do not apply grease on the terminal of the battery.

## **NOTICE**

This battery charger has been tested and found to comply with the limits for a ClassB digital device, pursuant to part 15 of 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.

This device complies with Canadian ICES-001.

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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## **Appropriate charging environments**

For safe and efficient charging, use the battery charger in a location that is:

- Flat and stable (when on the bicycle)
- Free of rain or moisture
- Out of direct sunlight
- Well-ventilated and dry
- Not accessible to children or pets
- Temperature between 59–77 °F (15–25 °C)

## Inappropriate charging environments and solutions

The hot and cold environments described below can cause charging to enter standby or suspension without fully charging the battery.

- **Summertime charging standby/suspension**

If charging in a location receiving direct summer sunlight or immediately after riding, the battery charger might enter charging standby (all four battery capacity indicator lamps flash slowly). See "Reading the charging status for battery pack". This is to automatically stop charging in order to protect the battery from exceeding the specified temperature while charging. You can avoid charging suspension by starting to charge with the battery cold or at a room temperature of 59–77 °F (15–25 °C). If charging suspension occurs, move the battery charger to a cool location to reduce the charging standby time.

- **Wintertime charging standby/suspension**

Charging standby will occur if the temperature is less than 32 °F (0 °C). If charging is started and the temperature drops below this level due to late-night cooling or other factors, charging is suspended and standby mode is entered to protect the battery. In such cases, restart charging at an indoor location with a temperature of 59–77 °F (15–25 °C).

- **Noise on televisions/radios/computers**

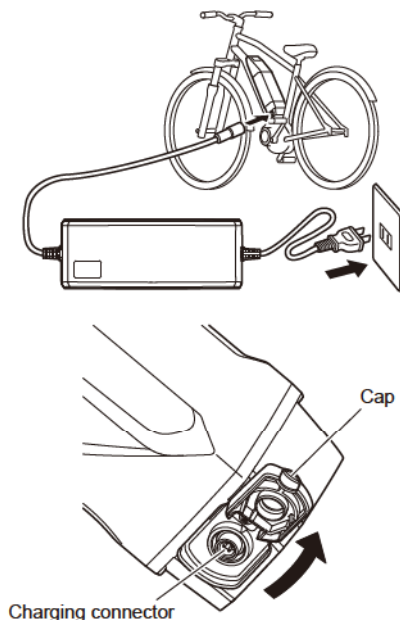
Charging next to televisions, radios, or similar appliances might cause static, flickering images, and other interference. If this occurs, recharge in a location further away from the television or radio (such as in another room).

### **WARNING**

If a charging fault occurs during charging, remove the power plug of the battery charger from the socket and wait for the battery pack/battery charger to cool.

## Charging the battery pack mounted on the bicycle (Down tube type)

1. Connect the power plug of the battery charger to a household power outlet.
2. Remove the cap of charging inlet from the charging connector on the battery pack, and connect it to the charging plug on the battery charger.



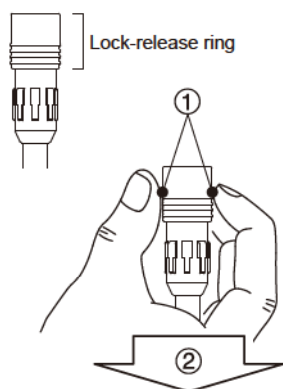
## Charging the battery pack mounted on the bicycle (Multi location type)

1. Connect the power plug of the battery charger to a household power outlet.
2. Remove the cap of charging inlet from the charging connector on the bicycle, and connect it to the charging plug on the battery charger. How to open the cap varies between bicycles.

### NOTICE

- Do not connect the charging plug of the battery charger with the charging connector of the battery in a wet state.
- Be sure to connect the charging plug only after the charging connector on the battery pack is completely dry.  
Otherwise the battery charger and battery pack may malfunction.
- Do not apply excessive force to the charging plug or pull on the cord with the charging plug connected to the battery.  
Otherwise, the plug or connector may be damaged.
- Do not pedal while the charging plug is connected.

3. See "Reading the charging status for battery pack", and check that the battery charger is charging the battery pack.
4. The battery capacity indicator lamps will light up one by one until all four are on. Then, when charging is complete, all of the lamps will go off.



5. Confirm that charging is complete, and then disconnect the charging plug from the battery pack.

How to disconnect the plug (see the left figure)

① Grasp the lock-release ring.

② Pull it out straight.

6. Place the cap of charging inlet on the battery pack's charging connector.

### **WARNING**

Never handle the power plug, charging plug or touch the charger contacts with wet hands. This could result in electric shock.

### **TIP**

- Charging will start automatically.
- If the display unit is turned on while the battery pack is charging, all normal displays will be shown, including the battery capacity indicator, but the assist system will not function.
- When the battery pack is connected to the battery charger, the battery charger lamp will flash at approximately 0.2 second intervals to indicate that the battery pack is being prepared to be charged. Leave it alone and charging will start normally.

## **Charging the battery pack removed from the bicycle**

1. Turn the display unit off.
2. Insert the key into the battery lock, and turn it to release the battery lock.
3. Remove the battery pack.

### **WARNING**

Use both hands when removing the battery pack. Do not drop the battery pack or subject it to impact. Doing so could cause the battery pack to become hot or catch fire, resulting in serious injury or property damage.

### **TIP**

How to remove Multi location type battery packs varies between bicycles. For more information, see the instruction manual supplied with the bicycle.

