

ESC3

Charger Operating Instructions

Introduction

Thank you for purchasing a Yamaha charger. This manual provides safety-related information about the charger and instructions on how to operate it correctly. In this manual, the symbols shown at right are used to mark items that require special attention to ensure correct operation.

WARNING

A WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

NOTICE

A NOTICE indicates special precautions that must be taken to avoid damage to the vehicle or other property.

TIP

A TIP provides key information to make procedures easier or clearer.

1.IMPORTANT SAFETY INSTRUCTIONS TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, CAREFULLY FOLLOW THESE INSTRUCTIONS

1. **SAVE THESE INSTRUCTIONS** – This manual contains important safety and operating instructions for battery charger.
2. Before using battery charger, read all instructions and cautionary markings on battery charger, battery, and product using battery
3. **CAUTION** – To reduce risk of injury, charge ESB1 type rechargeable battery (capacity: 11.8 Ah, 42 cells) or JWB-2 type rechargeable battery (capacity: 6.7Ah, 40 cells) only. Other types of batteries may burst causing personal injury and damage.

WARNING

- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.
- When using this charger, place it on a flat, stable surface. Be sure to unplug the power plug from the electrical outlet after using the charger.
If the charger falls, or if someone trips over the power cord, personal injury or damage to the unit could result.
- Do not use the power cord if it is damaged.
If the power cord is damaged, it must be replaced by a special cord or assembly available from the manufacture or its service agent.
- Do not use the charger outdoors, submerge it in water, or leave it in the rain.
The charger was not designed to be waterproof. If moisture enters the interior of the charger, damage to the unit could result.
Also, do not handle the power plug or the charging plug with wet hands; otherwise, electric shock could result.
- Do not use the charger around flammable materials.
In particular, check the area around the charger to make sure that no highly flammable materials are present.
- Do not disassemble or modify the charger.
The charger could overheat, catch fire, and explode.
- Do not drop the charger or subject it to shocks.
Personal injury or damage to the charger could result.
- Avoid prolonged contact with the skin.
It is normal for the charger to heat up while it is charging. Therefore, prolonged contact with the skin may result in a low-temperature burn injury.

NOTICE

- Do not use this charger if the power cord is wound around the unit.
Otherwise, the charger may overheat and be damaged.
- Make sure that the charging plug and the battery charging connector are free of dust, dirt, oil, and moisture. Also, do not insert any metallic object or other foreign substance into the plug or the connector, for this may cause the charger to malfunction or damage the battery.

2.Charging Location

To ensure proper charging, select a location that satisfies all the following conditions.

A location that is indoors with good ventilation where the charger will not be exposed to direct sunlight or moisture, such as rain.

The recommended room temperature (10–25 °C) is maintained while the charger is operating.

The charger is on a flat, stable surface with the charge indicator lamp facing up.

The power cord is out of the way so that no one will trip over it and accidentally pull the plug out of the electrical outlet.

TIP

- Do not place the charger in locations exposed to direct sunlight, near a heater or other heat source, or where the temperature may drop below freezing.
If the charger or the battery becomes hot, the charger protection function may prevent the unit from starting or turn it off while it is charging.
Also, the protection function activates if the charger is cold.
- Keep the area around the charger free of other objects and do not place a cover or similar item over the unit.
The charger protection function may activate if the flow of air is blocked.

3.Charging Procedure

TIP

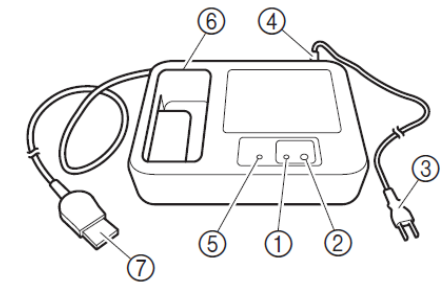
- If the vehicle has traveled a long distance or on a long uphill grade, or if it has been left outside in the cold for a long time, the battery temperature may not be suitable for charging.
In such a case, the charger may not start charging (remains in standby mode) until the battery has reached a suitable temperature.

1. Place the charger on a flat, stable surface with the charge indicator lamp facing up.
2. Insert the charger power plug into an electrical outlet.

3. (ESB1) Firmly insert the charger charging plug all the way into the charging connector on the battery. (JWB-2) Put the battery into the inlet of the charger.
 - The charge indicator lamp will light up green and the charger will automatically start charging.
 - When the battery has been fully charged, the charge indicator lamp will turn off and power to the charger will be automatically turned off.
4. Once the battery has been charged, (ESB1) unplug the charger charging plug from the charging connector on the battery. (JWB-2) Remove the battery from the charger.
5. Unplug the charger power plug from the electrical outlet.
6. (JWB-2) Refresh Charging: If the battery needs to be refreshed, the refresh lamp (orange) blinks to indicate that the battery should be refresh charged. When the refresh start button is pressed while the refresh lamp is blinking (for about 60 seconds), the refresh lamp lights up and refreshing of the battery is started. As with charging, the battery capacity lamps indicate the progress of battery refreshing. The refreshing time will differ according to the battery capacity.

To charging connector on battery

- ① Refresh lamp
- ② Refresh start button
- ③ Power plug
- ④ Charge power socket
- ⑤ Charge indicator lamp
- ⑥ Battery insert innlet
- ⑦ Charging plug



4.Indicator Lamp Display during Charging

- Lamp lights up green
The charger is charging normally.
When charging is completed, the lamp automatically turns off.
- Lamp flashes green
The battery temperature is not suitable for charging or the battery voltage is too low. (Standby mode is activated.)
In standby mode, the indicator lamp will slowly flash green once per second and the charger will not start charging.
When the temperature is suitable for charging, the charge indicator lamp will stop flashing and remain on green, and the charging operation will automatically re-start.

TIP

- Standby mode may be activated, and the charge indicator lamp may flash green once per second if the ambient temperature changes while the charger is charging. When the temperature is suitable for charging, the charge indicator lamp will stop flashing and remain on green, and the charging operation will automatically re-start.
- If standby conditions continue for a long time, the charge indicator lamp will start flashing green rapidly (five times per second) and the charging operation will be terminated.
If this happens, unplug the charging plug and the power plug. Re-locate the charger in accordance with "Sec. 2, Charging Location," and try to charge the battery again.

- Lamp lights up or flashes red
When the charge indicator lamp lights up or flashes red, the charger may be malfunctioning.
Stop using the charger immediately and have it checked by the dealer where you purchased the unit.

TIP

- The charger protection function may be activated by a change in the ambient temperature even while charging is in progress.
In this case, the charge indicator lamp will flash red and the charger will stop charging.
If this happens, unplug the charging plug and the power plug. Re-locate the charger in accordance with "Sec. 2, Charging Location," and try to charge the battery again.

5.What to Do when Trouble Occurs

If you have problems operating the charger, check the following items before consulting with the dealer where you purchased the unit.

The charger does not charge (or it charges, but the battery power does not increase).

Check the following items if you cannot charge the battery.

1. Is the power plug (Fig. ③) securely connected? And (ESB1) is the charging plug (Fig. ⑦) (JWB-2) Is the battery inserted securely?
2. Is the power cord plug securely inserted into the charger power socket (Fig. ④)?
3. Is the charge indicator lamp lit up green?

If the indicator lamp is flashing green, re-locate the charger in accordance with "Sec. 2, Charging Location," and try to charge the battery again.

If you still cannot charge the battery, the charger may be malfunctioning. Have the charger checked and serviced by the dealer where you purchased the unit.

The charge indicator lamp is flashing green slowly (once per second).

The charger is in standby mode. This does not indicate a malfunction. Once the charge indicator lamp stops flashing and remains on green, normal charging will start.

The charge indicator lamp is flashing green rapidly (5 times per second).

The charger has remained in standby mode for a long time and has stopped charging the battery. Re-locate the charger in accordance with "Sec. 2, Charging Location," and try to charge the battery again.

The charge indicator lamp lights up or flashes red.

Charging is not possible because there is something wrong with the charger or the battery. Stop using the charger and have the unit and the battery checked by the dealer where you purchased the unit.

The charger is emitting a strange odor and smoke.

If this happens, unplug the power plug and the charging plug and stop using the charger immediately. Have the charger checked and serviced by the dealer where you purchased the unit.

The charger heats up.

While the charger is charging the battery, it is normal for the unit to heat up to some degree (about 40–60 °C). If the charger gets too hot, though, it may be malfunctioning. If this happens, unplug the power plug and the charging plug and stop using the charger immediately. Have the charger checked and serviced by the dealer where you purchased the unit.

6.Supply cord

Be sure to use the genuine power cord (North America: X0F-87132-C00, EU: X0F-87132-B00, AUS: X0F-87132-A00).
(North America) Use a UL Listed, 2.0m, Type NISPT-2, AWG No.18 power supply cord, rated for 300V 10A,
with a connector rated for 125V 7A and a polarized KS-15W plug rated for 125V 10A.