Amazon Basics AB104 12 Volt 2A Battery Charger Instruction Guide

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Amazon Basics AB104 12 Volt 2A Battery Charger

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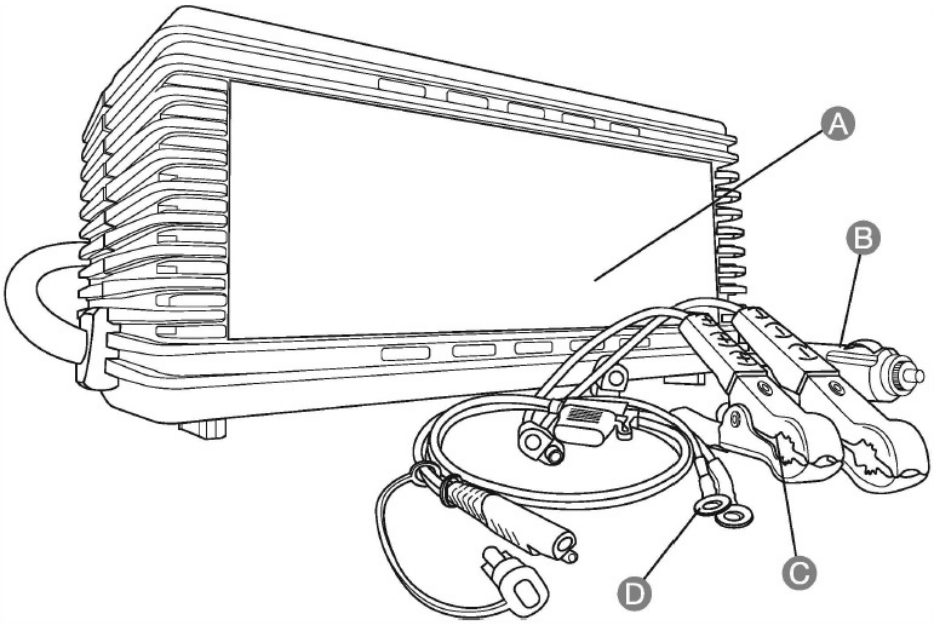
Before getting started, ensure the package contains the following components:



1. Charging status LEDs
2. Battery clamps (quick-connect)
3. 12 V accessory plug (quick-connect)
4. Ring connectors (quick-connect)

Important Safety Instructions

Read these instructions carefully and retain them for future use. If this product is passed to a third party, then these instructions must be included. When using electrical appliances, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and/ or injury to persons including the following:

- Keep out of reach of children.
- Do not expose the charger to rain or snow.
- Use of an attachment not recommended or sold by the battery charger manufacturer may result in a risk of fire, electric shock, or injury to persons.
- To reduce the risk of damage to the electrical plug and cord, pull by the plug rather than the cord when disconnecting the charger.
- An extension cord should not be used unless absolutely necessary. The use of an improper extension cord could result in a risk of fire and electric shock. If an extension cord must be used, make sure:
- The pins on the plug of the extension cord are the same number, size, and shape as those of the plug on the charger.
- The extension cord is properly wired and in good electrical condition.
- The wire size is large enough for the AC ampere rating of the charger, as specified in the chapter “Grounding and AC Power Cord Connections”.
- Do not operate the charger with a damaged cord or plug – replace the cord or plug immediately.
- Do not operate the charger if it has received a sharp blow, been dropped or otherwise damaged in any way; take it to a qualified service technician.
- Do not disassemble the charger; take it to a qualified service technician when service or repair is required. Incorrect reassembly may result in a risk of electric shock or fire.
- To reduce the risk of electric shock, unplug the charger from the outlet before attempting any maintenance or cleaning. Turning off controls will not reduce this risk.

WARNING Risk of explosive gases. Working in the vicinity of a lead-acid battery is dangerous. Batteries generate explosive gases during normal battery operation. For this reason, it is of utmost importance that you follow the instructions each time you use the charger.
To reduce the risk of battery explosion, follow these instructions and those published by the battery manufacturer and manufacturer of any equipment you intend to use in the vicinity of the battery. Review the cautionary markings on these products and on the engine.

- Consider having someone close by enough to come to your aid when you work near a lead-acid battery.
- Have plenty of fresh water and soap nearby in case battery acid contacts skin, clothing or eyes.
- Wear complete eye protection and clothing protection. Avoid touching your eyes while working near a battery.
- If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters eyes, immediately flood eyes with running cold water for at least 10 minutes and get medical attention immediately.
- Never smoke or allow sparks or flames in the vicinity of the battery or engine.
- Be extra cautious to reduce the risk of dropping a metal tool onto the battery. It might spark or short-circuit the battery or other electrical parts that may cause an explosion.
- Remove personal metal items such as rings, bracelets, necklaces and watches when working with a lead-acid battery. A lead-acid battery can produce a short-circuit current high enough to weld a ring or the like to metal, causing a severe burn.
- Use the charger for charging only 6 and 12 V LEAD-ACID (STD, AGM or deep-cycle) rechargeable batteries. It is not intended to supply power to a low-voltage electrical system other than in a starter-motor application. Do not use the battery charger for charging dry-cell batteries that are commonly used with home appliances. These batteries may burst and cause injury to persons and damage to property.
- Never charge a frozen battery.

FCC – Supplier's Declaration of Conformity

Unique Identifier	B0TTZ12D18 – Car Battery Chargers
Responsible Party	Amazon.com Services, Inc
U.S. Contact Information	410 Terry Ave N. Seattle, WA 98109, United States
Telephone Number	(206) 266-1000

FCC Compliance Statement

1. This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

- this device may not cause harmful interference, and
- this device must accept any interference received, including interference that may cause undesired operation.

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

FCC 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 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

Canada IC Notice

This Class B digital apparatus complies with Canadian CAN ICES-3(B) / NMB-3(B) standard.

Preparing to Charge

- If it is necessary to remove the battery from the vehicle to charge, always remove the grounded terminal from the battery first. Make sure all accessories in the vehicle are off, so as not to cause an arc.
- Be sure the area around the battery is well-ventilated while the battery is being charged.
- Clean battery terminals. Be careful to keep corrosion from coming in contact with eyes.
- Add distilled water in each cell until battery acid reaches the level specified by the battery manufacturer. Do not

overfill. For a battery without removable cell caps, such as valve-regulated lead-acid batteries, carefully follow the manufacturer's recharging instructions.
- Study all battery manufacturer's specific precautions while charging and recommended rates of charge.
- Determine battery voltage by referring to your vehicle owner's manual and make sure that the output voltage selector switch is set to the correct voltage. If the charger has an adjustable charge rate, charge the battery initially at the lowest rate.

Charger Location

- Locate charger as far away from the battery as DC cables permit.
- Never place the charger directly above the battery being charged; gases from battery will corrode and damage the charger.
- Never allow battery acid to drip on the charger when reading electrolyte specific gravity or filling the battery.
- Do not operate the charger in a closed-in area or restrict ventilation in any way.
- Do not set a battery on top of the charger.

DC Connection Precautions

- Connect and disconnect DC output clips only after setting any charger switches to the OFF position and removing the AC cord from the electrical outlet. Never allow clips to touch each other.
- Attach clips to the battery and body, as indicated in the next 2 chapters.

Follow These Steps When Battery Is Installed In Vehicle

WARNING A spark near the battery may cause a battery explosion! To reduce the risk of a spark near the battery:

- Position the AC and DC cords to reduce the risk of damage by the hood, door, or moving engine part.
- Stay clear of fan blades, belts, pulleys, and other parts that can cause injury to persons.
- Check the polarity of battery posts. The POSITIVE (POS, P, +) battery post usually has a larger diameter than the NEGATIVE (NEG, N, -) post.
- Determine which post of the battery is grounded (connected) to the body.
- **For a negative-grounded vehicle**, connect the POSITIVE, W (RED) clip from the battery charger to the POSITIVE (POS, P, +) !!I, ungrounded post of the battery. Connect the NEGATIVE (BLACK) Q. clip to the vehicle body or engine block away from the battery. Do not connect the clip to the carburetor, fuel lines, or sheet-metal body parts. Connect to a heavy-gauge metal part of the frame or engine block.
- **For a positive-grounded vehicle**, connect the NEGATIVE (BLACK) clip from the battery charger to the NEGATIVE (NEG, N, -) ungrounded post of the battery. Connect the POSITIVE (RED) clip to the vehicle body or engine block away from the battery. Do not connect the clip to the carburetor, fuel lines, or sheet-metal body parts. Connect to a heavy-gauge metal part of the frame or engine block.
- When disconnecting the charger, turn switches to off, disconnect the AC cord, remove the clip from the vehicle body and then remove the clip from the battery terminal.
- See operating instructions for information on charging times.

Follow These Steps When Battery Is Outside Vehicle

WARNING A spark near the battery may cause a battery explosion! To reduce the risk of a spark near the battery:

- Check the polarity of battery posts. The POSITIVE (POS, P, +) battery post usually has a larger diameter than the NEGATIVE (NEG, N, -) post.
- Attach at least a 24-inch-long 6-gauge (AWG) insulated battery cable to the NEGATIVE (NEG, N, -) battery post.
- Connect the POSITIVE (RED) charger clip to the POSITIVE (POS, P, +) battery post.
- Position yourself and the free end of the cable as far away from the battery as possible – then connect the NEGATIVE (BLACK) charger clip to the free end of the cable.
- Do not face the battery when making the final connection.
- When disconnecting the charger, always do so in reverse order of the connecting procedure and break the first connection while standing as far away from the battery as practical.
- A marine (boat) battery must be removed and charged on shore. Charging it on board requires equipment specially designed for marine use.

Grounding And AC Power Cord

Connections

This battery charger is intended for use on a nominal 120 V ~ circuit. The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances. The plug pins must fit the receptacle (outlet). Do not use with an ungrounded system.

DANGER Never alter the AC cord or plug provided – if it does not fit the outlet, have a properly grounded outlet installed by a qualified electrician. An improper connection can result in a risk of an electric shock or electrocution.
NOTICE Pursuant to Canadian Regulations, the use of an adapter plug is not allowed in Canada. The use of an adapter plug in the United States is not recommended and should not be used.

Using an Extension Cord

The use of an extension cord is not recommended. If you must use an extension cord, follow these guidelines:

- The pins on the plug of the extension cord must be the same number, size, and shape as those of the plug on the charger.
- Ensure that the extension cord is properly wired and in good electrical condition.
- The wire size must be large enough for the AC ampere rating of the charger, as specified:

Length of cord (feet)	25	50	100	150
AWG* size of cord	18	18	18	16

*AWG-American Wire Gauge

Control Panel

LED Indicators

	CLAMPS REVERSED/BAD BATTERY (red) LED flashing: The connections are reversed.
	CLAMPS REVERSED/BAD BATTERY (red) LED lit: The charger has detected a problem with the battery. See Troubleshooting for more information.
	CHARGING (yellow/orange) LED lit: The charger is charging the battery.
	CHARGED/MAINTAINING (green) LED lit: The battery is fully charged and the charger is in maintain mode.

NOTICE See the operating instructions for a complete description of the charger modes. Before First Use

- Check for transport damage.
- Remove all cord wraps and uncoil the cables prior to using the battery charger.

DANGER Risk of suffocation! Keep any packaging materials away from children – these materials are a potential source of danger, e.g., suffocation.

Operation

CAUTION Do not start the vehicle with the charger connected to the AC outlet or it may damage the charger and your vehicle.
NOTICE This charger is equipped with an auto-start feature. Current will not be supplied to the battery clamps until a battery is properly connected. The clamps will not spark if touched together.

Charging Battery In A Vehicle

- Turn off all the vehicle’s accessories.
- Keep the hood open.
- Clean the battery terminals.
- Place the charger on a dry, non-flammable surface.
- Lay the AC/DC cables away from any fan blades, belts, pulleys and other moving parts.
- Connect the battery, following the precautions listed in previous chapters.
- Connect the charger to an electrical outlet.
- When charging is complete, disconnect the charger from the AC power, remove the clamps from the vehicle’s body and then remove the clamp from the battery terminal.

Charging Battery Outside Of A Vehicle

- Place the battery in a well-ventilated area.
- Clean the battery terminals.
- Connect the battery, following the precautions listed in previous chapters.
- Connect the charger to the electrical outlet.

- When charging is complete, disconnect the charger from the AC power, disconnect the negative clamp and finally the positive clamp.
- A marine (boat) battery must be removed and charged on shore.

Using The Quick-Connect Cable Connectors

Connect any of the three (3) output cables leads to the charger. Make sure to place the charger on a dry, non-flammable surface.

WARNING Never connect the clamp and ring terminal connectors together for use in other applications, such as external battery or other power source charging, or to extend the output cable length, as reverse polarity and/or overcharge conditions will occur.

Quick-Connect Battery Clamp

- Connect the end of the charger output cable to the end of the quick-connect battery clamp.
- Follow the steps in the previous sections to connect the output clamps to the battery.
- After a good electrical connection is made to the battery, plug the power cord into a grounded 120 V- electrical wall outlet.

Quick-Connect Ring Terminal

The ring connectors are permanently attached to the battery, providing easy access to quickly connect the charger to your battery. This application is appropriate for motorcycles, lawn tractors, ATVs and snowmobiles.

1. To permanently attach to a battery, loosen and remove each nut from the bolt at the battery terminal.
2. Connect the red POSITIVE connector ring to the POSITIVE battery terminal.
3. Connect the black NEGATIVE connector ring to the NEGATIVE battery terminal.
4. Replace and tighten the nuts to secure them.
5. Connect the cable to the end of the charger output cord. Take care to keep the wires and plug away from metal and moving parts.
6. Plug the charger power cord into a grounded 120 Velectrical wall outlet.

12 V Quick-Connect Accessory Plug

1. Connect the end of the charger output cable to the end of the 12 V quick-connect accessory plug.
2. Insert the 12 V accessory plug into the 12 V accessory outlet.
3. Route the power cord from the charger through the vehicle’s open window.
4. Plug the charger power cord into a grounded 120 V~ electrical wall outlet.
5. If the vehicle’s ignition key has to be on in order for the accessory outlet to supply/receive power, turn the key without starting the engine.

Automatic Charging Mode
In Automatic Charging mode, the charger switches to maintain mode automatically after the battery is charged.

Completion of Charge

Charge completion is indicated by the Charged/Maintaining  (green) LED. When lit, the charger has switched to maintain operating mode.

Maintain Mode (Float Mode Monitoring)

When the Charged/Maintaining  (green) LED is lit, the charger has entered maintenance mode. In this mode, the charger keeps the battery fully charged by delivering a small current when necessary. If the charger has to provide its maximum maintain current for a continuous 12 hour period, it will go into abort mode (see Aborted Charge section). This is usually caused by a drain on the battery or the battery could be bad. Make sure there are no loads on the battery. If there are, remove them. If there are none, have the battery checked or replaced.

Maintaining a Battery

This product maintains both 6 V and 12 V batteries, keeping them at full charge. It is not recommended for industrial applications.

- **NOTICE** The maintenance mode technology allows you to safely charge and maintain a healthy battery for extended periods of time. However, problems with the battery, electrical problems in the vehicle, improper connections or other unanticipated conditions could cause excessive current draws. As such, occasionally monitoring your battery and the charging process is recommended.
- **Aborted Charge**
  If charging cannot be completed normally, charging will abort. When charging aborts, the charger's output is shut off and the Clamps Reversed/Bad Battery (red) LED will light. Do not continue attempting to charge this battery. Check the battery and replace, if necessary.
- **Desulfation Mode**
  If the battery is left discharged for an extended period of time, it could become sulfated and not accept a normal charge. If the charger detects a sulfated battery, the charger will switch to a special operating mode designed for such batteries. If successful, normal charging will resume after the battery is desulfated. Desulfation could take 8 to 1O hours. If desulfation fails, charging will abort and the Clamps Reversed/Bad Battery  (red) LED will light.

Cleaning And Maintenance

WARNING Risk of electric shock! Unplug the product before cleaning.
WARNING Risk of electric shock! During cleaning, do not immerse the electrical parts of the product in water or other liquids. Never hold the product under running water.

Cleaning

- Clean the clamps each time you are finished charging. Wipe off any battery fluid that may have come in contact with the clamps to prevent corrosion.
- Occasionally cleaning the case of the charger with a soft cloth will keep the finish shiny and help prevent corrosion.

Maintenance

- A minimal amount of care can keep your battery charger working properly for years.

- Coil the input and output cords neatly when storing the charger. This will help prevent accidental damage to the cords and charger.
- Store the charger unplugged from the AC power outlet in an upright position.
- Store inside in a cool, dry place. Do not store the clamps clipped together, on the handle, on or around metal, or clipped to the cables

Troubleshooting

Problem	Possible Cause
Battery clamps do not spark when touched together.	• This charger is equipped with an auto start feature. It will not supply current to the battery clamps until a battery is properly connected. The clamps will not spark if touched together.
All three LEDs come on for 2 seconds, then turn off.	• The charger is plugged into an AC outlet.
The charger will not turn on when properly connected.	• AC outlet is not energized. • Poor electrical connection. • Connections are reversed. • Battery is defective.
I cannot select a 6 V or 12 V setting.	• The charger is equipped with Auto Voltage Detection, which automatically detects the voltage and charges the battery.

Problem	Possible Cause
The red  LED is lit.	• The battery voltage is still below 10 V (for a 12 V battery) or 5 V (for a 6 V battery) after 2 hours of charging. (or) • In maintain mode, the output current is more than 2.0 A for 12 hours. • Desulfation was unsuccessful. • Lack of progress is detected and battery voltage is below 14.2 V (for a 12 V battery) or 7.1 V (for a 6 V battery). • The battery's initial voltage is below 12.2 V (for a 12 V battery) or 6.1 V (for a 6 V battery) and the total input is less than 1.5 Ah. • The battery voltage drops to below 12.2 V (for a 12 V battery) or 6.1 V (for a 6 V battery) in Maintain Mode.

Problem	Solution
Battery clamps do not spark when touched together.	• No problem; this is a normal condition.
All three LEDs come on for 2 seconds, then turn off.	• No problem; this is normal.
The charger will not turn on when properly connected.	• Check for open fuse or circuit breaker supplying AC outlet. • Check power cord and extension cord for a loose fitting plug. • Unplug the charger and reverse the clamps. (The charger will not detect reversed connections when the battery voltage is less than 2 V) • Have battery checked.
I cannot select a 6 V or 12 V setting.	• No problem; this is normal.

Problem	Solution
The red  LED is lit.	• The battery may be defective. Make sure there are no loads on the battery. If there are, remove them. If there are none, have the battery checked or replaced. • The battery may be defective. Have battery checked or replaced. • The battery may be overheated. If so, allow the battery to cool. The battery may be too large or have a short-circuit. Have battery checked or replaced. • The battery capacity is too low or the battery is too old. Have it checked or replaced. • The battery will not hold a charge. May be caused by a drain on the battery or the battery could be bad. Make sure there are no loads on the battery. If there are, remove them. If there are none, have the battery checked or replaced.

Specifications

Model Number:	AB104
Input Voltage:	120 V~, 60 Hz, 0.54 A
Output Voltage:	6 V ⎓, or 12 V ⎓, with Auto Voltage Detection
Output Current Rating:	2 A @ 6 V and 12 V ⎓

Battery Charging Times

Application	Battery size	Charging Time (Hours) 2 A	6 A	8 A	10 A
Strength sports	6 Ah	6	2	1.75	1.5
	32 Ah	15	5	4.5	4
Automotive	300 CCA	12	4	3.5	3
	1000 CCA	30	10	8.5	7
Marine	50 Ah	15	5	4.25	3.5
	105 Ah	33	11	9.5	8

NOTICE Times are based on a 50% discharged battery and may change, depending on the age and condition of the battery.

Feedback and Help

Love it? Hate it? Let us know with a customer review.

AmazonBasics is committed to delivering customer-driven products that live up to your high standards. We encourage you to write a review sharing your experiences with the product.

- **amazon.com/review/review-your-purchases#**
- **amazon.com/gp/help/customer/contact-us**

Frequently Asked Questions

What is the Amazon Basics AB104 Battery Charger?

The Amazon Basics AB104 Battery Charger is a device designed to charge rechargeable batteries. It is compatible with various battery sizes and types.

What types of batteries can the Amazon Basics AB104 Battery Charger charge?

The Amazon Basics AB104 Battery Charger can charge AA, AAA, and 9V rechargeable batteries. It is not suitable for charging non-rechargeable batteries.

How many batteries can the Amazon Basics AB104 Battery Charger charge at once?

The Amazon Basics AB104 Battery Charger can charge up to four batteries at a time. It has individual charging slots for each battery.

Does the Amazon Basics AB104 Battery Charger come with batteries?

No, the Amazon Basics AB104 Battery Charger is sold separately and does not typically come with rechargeable batteries. You will need to purchase the batteries separately.

Is the Amazon Basics AB104 Battery Charger compatible with different brands of rechargeable batteries?

Yes, the Amazon Basics AB104 Battery Charger is compatible with most standard AA, AAA, and 9V rechargeable batteries, regardless of the brand.

Does the Amazon Basics AB104 Battery Charger have built-in safety features?

Yes, the Amazon Basics AB104 Battery Charger incorporates safety features such as over-charge protection and reverse polarity protection to prevent damage to the batteries or the charger.

Can the Amazon Basics AB104 Battery Charger charge both NiMH and NiCd batteries?

Yes, the Amazon Basics AB104 Battery Charger is designed to charge both NiMH (Nickel Metal Hydride) and NiCd (Nickel Cadmium) rechargeable batteries.

How long does it take for the Amazon Basics AB104 Battery Charger to fully charge batteries?

The charging time of the Amazon Basics AB104 Battery Charger depends on the capacity and condition of the batteries being charged. It is recommended to refer to the battery manufacturer's instructions for specific charging times.

Does the Amazon Basics AB104 Battery Charger have an indicator to show the charging status?

Yes, the Amazon Basics AB104 Battery Charger has LED indicators for each battery slot. These indicators show the charging status of each individual battery.