

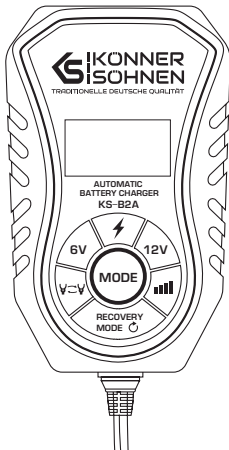
Please, read this manual
carefully before use!

Owner's Manual



Automatic Battery Charger

KS-B2A





Thank you for your purchase of **Könner & Söhnen®** products. This manual contains a brief description of safety, use and debugging. More information can be found on the official manufacturer's website in the support section: **konner-sohnen.com/manuals**

You can also go to the support section and download the full version of the manual by scanning the QR code, or on the website of the official importer of Könner & Söhnen products: **www.konner-sohnen.com**



We care about the environment, therefore, we consider it expedient to save paper and leave in print a short description of the most important sections.



Be sure to read the full version of the manual before getting started!



Manufacturer reserves the right to make alterations into the generators, which may not be reflected in this manual. Pictures and photos of the product may vary from its actual appearance. At the end of this manual, You may find contact information which you are free to use in case of any issues occurrence.

All data, specified in this operation manual is the most up to date for the moment of its publishing. The current list of service centers you can find at the website of official importer: **www.konner-sohnen.com**



ATTENTION - DANGER! Failure to follow the recommendations marked with this sign may lead to serious injury or death of the operator or third parties.



IMPORTANT! Useful information while operating the machine.

IMPORTANT SAFETY INSTRUCTIONS

1

To reduce the risk of a battery explosion, follow these instructions and those published by the manufacturer of the battery and any equipment you intend to use in the vicinity of the battery. Review the cautionary markings on these products and on the engine.

- Keep out of reach of children.
- Use the battery charger on LEAD-ACID, GEL and AGM-type as used in automobiles, light trucks, tractors, airplanes, vans, RVs, trolling motors, etc. This charger is not intended to supply power to low-voltage electrical systems, other than in a motor-starting application.



ATTENTION - DANGER! Do not use battery charger with dry cell batteries that are commonly used with home appliances. These batteries may burst and cause injury or damage to property.

- Use only attachments recommended or sold by the battery charger's manufacturer. Use of non-recommended attachments may result in a fire, electric shock or injury.
- Locate the battery charger's power cord so it cannot be stepped on, tripped over, or subjected to damage or stress.
- 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 professional for inspection and repair.
- Do not disassemble the charger. Take it to a qualified professional when service or repair is required.
- To reduce the risk of electric shock, unplug the charger from the outlet before attempting any maintenance or cleaning.
- Do not use an extension cord.
- Always charge the battery in a well-ventilated area.
- Do not set the charger on flammable materials, such as carpeting, upholstery, paper, cardboard, etc.
- NEVER smoke or allow sparks or flames in the vicinity of the battery or engine.









WARNING! Risk of explosive gas.

- Operate the charger as far away from the battery as DC charger cables permit.
- Do not expose the charger to rain or snow.
- NEVER charge a frozen battery.
- NEVER set a battery on top of the charger.
- NEVER place the charger directly above a battery being charged. Gases from the battery will corrode and damage the charger.
- NEVER touch the battery clamps together when the charger is energized.
- When disconnecting the battery charger, pull by the plug, not by the cord. Pulling on the cord may cause damage to the cord or plug.
- Do not operate the charger with a damaged cord or plug.
- NEVER allow battery acid to drip onto the charger.
- NEVER overcharge a battery.

- Wear complete eye protection and protective clothing when working near lead-acid batteries. Always have someone nearby for help.
- Wear complete eye protection and protective clothing when working near lead-acid batteries. Always have someone nearby for help.
- Have plenty of fresh water, soap and baking soda nearby for use, in case battery acid contacts your eyes, skin, or clothing. Wash immediately with soap and water and seek medical attention.
- If battery acid comes in contact with eyes, flush eyes immediately for a minimum 10 minutes and get medical attention.
- Neutralize any acid spills thoroughly with baking soda before attempting to clean up.
- Remove all personal metal items from your body, such as rings, bracelets, necklaces and watches. A battery can produce a short circuit current high enough to weld a ring to metal, causing a severe burn.
- Do not drop a metal tool onto the battery.
- If it is necessary to remove the battery from the vehicle to charge it, always remove the grounded terminal first.

Remove all cord wraps and uncoil the cables prior to using the battery charger.

Button	Function	Description
	FULL	Full CHARGED/MAINTAINING (green)
	CHARGING	CHARGING (yellow) LED lit: The charger is charging the battery. CHARGING (yellow) LED flashing: The charger is in abort mode.
	REVERCED	CLAMPS REVERSED (red) LED flashing: The connections are reversed.
6V	BATTERY	6V The current charging battery is 6V
12V	BATTERY	12V The current charging battery is 12V
	MAINTAINING	MAINTAINING (red) LED lit: the charger is in maintain mode.
	FUNCTION SWITCH	MODE BUTTON: Press and switch Charge and MAINTAINING Mode.
	POWER INDICATOR	POWER INDICATOR charger is connected to the power supply

See Troubleshooting for more information.

This battery charger is for use on a nominal 120 or 220 volt 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.

REALY DISPLAY: The battery voltage, power level and charging current.



Charger detects battery data and starts charging,
Battery data will be displayed after 5 minutes



No load output voltage
is 0 V



Battery voltage identifica-
tion display and real-time
voltage display



12V battery and
real-time power level
display as 18%



6V battery and
real-time current
display as 2.0A

NOTES: When charging, the voltage displayed in screen does not match the actual voltage of the charged battery, treatment methods as follows:

1. When charging, the identification of 12V battery is 6V. You can continue charging or turn off the power supply immediately and start the hard start charging operation ((press and hold the MODE key, connect the clamp to the positive and negative poles of the battery, and then connect the charger to AC power).)
2. When charging, the identification of 6V battery is 12V, stop charging immediately (the battery is broken), please replace the battery.



WARNING! A spark near battery may cause a battery explosion.



IMPORTANT! Do not start the vehicle with the charger connected to the AC outlet, or it could result in damage to the charger.

NOTE: 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 A BATTERY IN THE VEHICLE

1. Turn off all the vehicle's accessories.
2. Keep the hood open.
3. Clean the battery terminals.
4. Place the charger on a dry, non-flammable surface.
5. Lay the AC/DC cables away from any fan blades, belts, pulleys and other moving parts.
6. For a negative-ground vehicle (as in most vehicles), connect the charger's POSITIVE (RED) clamp to the POSITIVE (POS, P, +) battery post. Next, connect the charger's NEGATIVE (BLACK) clamp to the vehicle chassis or engine block, away from the battery.
7. For a positive-ground vehicle, connect the charger's NEGATIVE (BLACK) clamp to the NEGATIVE (NEG, N, -) battery post. Next, connect the charger's POSITIVE (RED) clamp to the vehicle chassis or engine block away from the battery. NEVER connect any clamps to the carburetor, fuel lines or sheet-metal body parts.
8. Connect the charger to an electrical outlet.
9. When charging is complete, disconnect the charger from the AC power, remove the clamps from the vehicle's chassis, and then remove the clamp from the battery terminal.

CHARGING A BATTERY OUTSIDE OF THE VEHICLE

1. Place battery in a well-ventilated area.
2. Clean the battery terminals.
3. Connect the POSITIVE (RED) clamp to the POSITIVE (POS, P, +) battery post.
4. Position yourself and the "negative post extension" cable as far away from the battery as possible, and connect the NEGATIVE (BLACK) clamp to the cable's free end.
5. Connect the charger to the electrical outlet.
6. Select the battery type and the charge rate.
7. When charging is complete, disconnect the charger from the AC power, disconnect the negative clamp, and finally the positive clamp.
8. A marine (boat) battery must be removed and charged on shore.

CHARGE RATE

The charger will automatically adjust the charging current, based on battery size, in order to charge the battery completely, efficiently and safely.

AUTOMATIC CHARGING MODE

When an Automatic Charge is performed, the charger switches to the maintain mode (see below) automatically after the battery is charged.

ABORTED CHARGE

If charging cannot be completed normally, charging will abort. When charging aborts, the charger's output is shut off and the CHARGING ⚡ (yellow) LED will flash. Do not continue attempting to charge this battery. Check the battery and replace, if necessary.

DESULFATION MODE

Desulfation could take 8 to 10 hours. If desulfation fails, charging will abort and the CHARGING ⚡ (yellow) LED will flash.

COMPLETION OF CHARGE

Charge completion is indicated by the CHARGED/MAINTAINING 🔌 (green) LED. When pulsing, the charger has switched to the maintain mode of operation.

REPAIR MODE (FLOAT-MODE MONITORING)

When the CHARGED/MAINTAINING 🔌 (green) LED is pulsing, the charger has started maintain 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.

REPAIRING A BATTERY

Press the  button and switch REPAIR Mode to repairing a battery. The charge and REPAIR both 6 volt and 12 volt batteries. Keep them full charge.

NOTE: The Repair 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 required.

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

- 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.
- 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 or around metal, or clipped to the cables.

SPECIFICATIONS

8

MODE	6V/DC	12V/DC
Rated output voltage	7.4V DC±0.2V	14.6V DC±0.2V
Rated output current	2A	
Rated input voltage	AC 210~240V / 50Hz	
Operating temperature	(-10°) - (+40°)	
Storage temperature	(-30°) - (+60°)	
Battery capacity, max	45 Ah	
Length of charger cable, cm	180	
Dimensions (LxWxH), mm	92.5x65x35	
Weight, kg	0.2	

ERROR CODES/TROUBLESHOOTING

9

ERROR CODES

Error code	Possible cause	Reason/solution
F01	The battery voltage is still under 5V (for a 6V), or 10V (for a 12V battery) after 2 hours of charging.	The battery could be bad. Have it checked or replaced.
F02	The connections to the battery are reversed.	The battery is connected backwards. Unplug the charger and reverse the connections to the battery.
F03	The battery was unable to reach the "full charge" voltage.	May be caused by trying to charge a large battery or bank of batteries on too low of a current setting. Try again with a higher current setting or have the battery checked or replaced.

Error code	Possible cause	Reason/solution
F04	The charger cannot desulfate the battery.	The battery could not be desulfated; have it checked or replaced.
F05	The charger was unable to keep the battery fully charged in maintain mode.	The battery won't 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.
F06	The charger detected that the battery may be getting too hot (thermal runaway).	The charger automatically shuts the current off if it detects the battery may be getting too hot. The battery could be bad. Have the battery checked or replaced.

TROUBLESHOOTING

Problem	Possible cause	Reason/solution
All four LEDs come on for 2 seconds, then turn off.	The charger is plugged into and AC outlet.	No Problem; this is normal
I cannot select a 6V, 12V setting.	The charger is equipped with Auto Voltage Detection, which automatically detects the voltage and charges the battery.	No Problem; this is normal
The CHARGING ⚡ yellow LED is flashing.	-The battery voltage is still below 10V (for a 12V battery) or 5V (for a 6V battery) after 2 hours of charging. (or) In maintain mode, the output current is more than 1.5A for 12 hours. -Desulfation was unsuccessful.	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 international manufacturer warranty is 1 year. The warranty period starts from the date of purchase. In cases where a warranty period is longer than 1 year according to local legislation, please contact your local dealer. The Seller of the product is responsible for granting the warranty. Please contact the Seller for warranty. If the product fails within the warranty period because of defects in workmanship, it will be exchanged for the same product or repaired.

The warranty card should be kept throughout the warranty period. In case of warranty card loss, a second one will not be provided. The Customer must provide the warranty card and proof of purchase when requesting any repair or exchange. Otherwise, the warranty service will not be provided. The warranty card attached to the product during sale should be correctly and fully completed by the retailer and customer, signed and stamped. In other cases, the warranty shall be deemed invalid.

Provide clean product to the service center. Parts that must be replaced are the property of the service center.



EC Declaration of Conformity

Nr. 121

The following products have been tested by us with the listed standards and found in compliance with the with the European Community Electromagnetic compatibility Directive (EMC) 2014/30/EC.

Manufacturer: DIMAX INTERNATIONAL GmbH
Address: Flinger Broich 203, 40235 Duesseldorf, Germany
Product: Battery charger "Könner & Söhnen"
Type / Model: KS-B2A

The statement is based on a single evaluation of above mentioned products. It does not imply an assessment of the whole production and does not permit the use of the test lab. logo. The manufacturer should ensure that all product in series production are in conformity with the product sample detailed in this report. The applicant should hold the whole technical report at disposal of the competent all the right.

Applied EC Directives: 2014/30/EC Electromagnetic compatibility Directive

Applied Standards: EN 55014-1:2021
EN 55014-2:2021
EN 61000-3-2:2019
EN IEC 61000-3-2:2019
EN 61000-3-3:2013/A1:2019



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P. Fomin

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GmbH
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We DIMAX INTERNATIONAL GmbH hereby declare that specified above conforms covering European Parliament and Council Directives, Electromagnetic compatibility Directive (EMC) 2014/30/EC of 26 February 2014. The CE mark above can be used under the responsibility of manufacturer. After completion of an EC declaration of Conformity and compliance with all relevant EC directives.

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