

## Intended use

Your Black & Decker battery charger is designed to charge lead acid batteries. This product is intended for household, consumer use only.

## Safety instructions

### General power tool safety warnings



**Warning!** When using mains-powered appliances, basic safety precautions, including the following, should always be followed to reduce the risk of fire, electric shock, personal injury and material damage.

- ◆ Read all of this manual carefully before using the appliance.
- ◆ The intended use is described in this manual. The use of any accessory or attachment or the performance of any operation with this appliance other than those recommended in this instruction manual may present a risk of personal injury.
- ◆ Retain this manual for future reference.

### Using your appliance

Always take care when using the appliance.

- ◆ Do not immerse the appliance in water.
- ◆ Use in a dry location only. Do not allow the appliance to become wet.
- ◆ Do not open body casing. There are no user-serviceable parts inside.
- ◆ The appliance is not to be used as a toy.
- ◆ Do not operate the appliance in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.
- ◆ To reduce the risk of damage to plugs and cords never pull the cable to remove the plug from a socket.

### Safety of others

- ◆ 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.

### After use

- ◆ When not in use, the appliance should be stored in a dry, well ventilated place out of the reach of children.
- ◆ Children should not have access to stored appliances.

- ◆ When the appliance is stored or transported in a vehicle it should be placed in the boot or restrained to prevent movement following sudden changes in speed or direction.
- ◆ The appliance should be protected from direct sunlight, heat and moisture.

### Inspection and repairs

- ◆ Before use, check the appliance for damaged or defective parts. Check for breakage of parts, damage to switches and any other conditions that may affect its operation.
- ◆ Do not use the appliance if any part is damaged or defective.
- ◆ Have any damaged or defective parts repaired or replaced by an authorised repair agent.
- ◆ Never attempt to remove or replace any parts other than those specified in this manual.

### Power cord safety



**Warning!** Never alter the ac cord or plug. If it will not fit, have a proper outlet installed by a qualified electrician. Improper connection may result in an electric shock.

### Specific safety instructions for battery chargers

The following symbols are marked on the appliance:



**Warning!** To reduce the risk of injury, the user must read the instruction manual.



**Warning!** This appliance is double insulated; therefore no earth wire is required. Always check that the power supply corresponds to the voltage on the rating plate.



Do not use the tool in wet conditions or expose it to rain.



Do not incinerate the batteries.



**Warning!** Explosive gasses. Prevent flames and sparks. Provide adequate ventilation during charging.

Read these instructions before use:

- ◆ If the supply cord is damaged, it must be replaced by the manufacturer or an authorised Black & Decker Service Centre in order to avoid a hazard.

- ◆ Never attempt to charge non-rechargeable batteries.
- ◆ Have defective cords replaced immediately.
- ◆ Do not expose the battery charger to water.
- ◆ Do not open the battery charger.
- ◆ Do not probe the battery charger.
- ◆ Never allow the red and black clamps to touch each other or another common metal conductor. This could cause damage to the appliance and/or create a spark/explosion hazard.

### Additional safety instructions for batteries



**Warning!** Never attempt to charge a frozen battery.

- ◆ Under extreme conditions, battery leakage may occur. When you notice liquid on the batteries, carefully wipe the liquid off using a cloth. Avoid skin contact.
- ◆ In case of skin or eye contact, follow the instructions below.



**Warning!** Battery fluid is a diluted sulphuric acid and may cause personal injury or damage to property. In case of skin contact, immediately rinse with water. If redness, pain or irritation occurs seek medical attention. In case of eye contact, rinse immediately with clean water and seek immediate medical attention.

- ◆ When disposing of batteries, follow the instructions given in the section "Protecting the environment".
- ◆ Add distilled water in each cell until the battery acid reaches the level specified by the battery manufacturer. This helps to purge excess gas from the cells. Do not overflow. For a battery without cell caps (maintenance free), carefully follow the manufacturer's charging instructions.
- ◆ Study all the battery manufacturer's specific precautions, such as removing or not removing cell caps while charging, and the recommended charging rates.
- ◆ Make sure that the initial charging rate does not exceed the battery manufacturer's requirement.



**Warning!** Risk of explosive gas mixtures. 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 each time, before using your battery charger, you read this manual and follow the instructions exactly.

- ◆ Use of an attachment not recommended or sold by Black & Decker may result in a risk of fire, electric shock, or injury to persons.
- ◆ An extension cord should not be used unless absolutely necessary. Use of an improper extension cord could result in a risk of fire and electric shock, and will void the warranty.

### Personal safety

- ◆ Wear complete eye protection and suitable clothing to give protection from contact with battery fluid.
- ◆ Avoid touching the eyes while working with a battery. Acid, acid particles or corrosion may get into the eyes.
- ◆ 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 cause a severe burn.
- ◆ Be extra cautious to reduce the risk of dropping a metal object onto the battery. This might cause sparks or short circuit the battery or other electrical part, which can cause an explosion.

### Preparation before charging

- ◆ The appliance must only be connected to a 12V (6cell) or 6V (3 cell) lead-acid battery. Before charging, confirm that the voltage of the battery is 12V or 6V by referring to the label on the battery or from the information available relating to its application e.g. car user manual.
- ◆ The appliance is capable of maintaining a battery with a capacity upto 100 Ah.
- ◆ Do not use the appliance 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.



**Warning!** Explosive gas may be vented from lead acid batteries when charging. Make sure that the area is well ventilated and remove any sources of ignition when conducting charging procedures.

- ◆ Position the battery charger as far away from the battery as the leads will allow. The battery charger contains switches that may create a spark.
- ◆ Do not place the battery charger above or stand the battery charger on top of the battery.
- ◆ Explosive gases may collect near the ground. Locate the battery charger as high as possible above ground level.
- ◆ Do not use power tools in the charging area.
- ◆ Do not smoke or have a naked flame in the charging area.
- ◆ Follow the instructions for connecting and disconnecting the battery charger leads or battery terminals.

Vehicles may have electrical and electronic systems (e.g. engine management systems, mobile phones) that may be damaged if subjected to high starting voltages and voltage peaks. Before connecting the appliance to the vehicle, read the vehicle's owner's manual to confirm that external charging is allowed.

- ◆ Follow these instructions and those published by the battery manufacturer and vehicle manufacturer.
- ◆ Only connect and disconnect the dc output clamps after removing the supply cord from the electric outlet. Never allow clamps to touch each other.
- ◆ Check the polarity of the vehicle battery terminals before connecting the appliance. Always disconnect the negative (black) cable first: followed by the positive (red) cable.

When charging a battery installed in the circuit follow the manufacturers instructions for accessing the battery and the following:

- ◆ Do not charge the battery while the engine is operating.
- ◆ Be aware that engine components e.g. the coolant fan may start automatically. Keep hands and body away from engine components and position the battery charger and cables to prevent contact.
- ◆ Make sure that the battery charger and the cables are located to prevent damage from closure of doors and engine compartment covers.
- ◆ Make sure that the connections can be made without touching the metal body or components adjacent to the battery.
- ◆ When using this appliance in proximity to the vehicle's battery and engine, stand the appliance on a flat, stable surface and be sure to keep all clamps, cords, clothing and body parts away from moving parts of the vehicle.
- ◆ If it is necessary to remove the battery from the vehicle to charge or to clean the terminals, make sure that all accessories in the vehicle are switched off, so as not to cause a spark.
- ◆ To reduce the risk of electric shock, disconnect the appliance from any power source before attempting maintenance or cleaning. Turning off controls without disconnecting the appliance will not reduce this risk.

## Features

This tool includes some or all of the following features.

1. Charge voltage selector switch
2. Charging indicators
3. Battery clamps
4. Ring terminals
5. DC accessory plug
6. In-line connector

## Connecting the battery charger

When all the preparations for charging and personal safety have been completed, proceed as follows:

- ◆ For most automotive and similar applications the battery charger may be connected to the battery while it is connected to the dc circuit. If this is acceptable follow the instructions given in "Charging a battery installed in the circuit".
- ◆ If the battery must be disconnected from the circuit before charging, follow the instructions given in "Charging a battery disconnected from the circuit".

**Warning!** A marine (boat) battery must be removed and charged on shore. To charge it on-board requires equipment specially designed for marine use.

## Charging a battery installed in the circuit.

Incorrect connection, battery short circuit, location of battery and location of the battery charger may create a hazard.

Make sure that adequate preparation has been made before proceeding.

**Warning!** If the battery posts cannot be accessed or the battery charger clamps will contact the bodywork or components adjacent to the battery, the battery must be removed before charging. Follow the manufacturer's instructions to remove the battery.

Check the polarity of the battery posts. A positive (POS, P, +) battery post usually has a larger diameter than the negative (NEG, N, -) battery post.

Follow the manufacturers' instructions to remove any insulating covers from the battery posts.

Connect the positive (red) clamp from the battery charger to the positive (POS, P, +) post of the battery.

Connect the negative (black) clamp from the battery charger to the negative (NEG, N, -) post of the battery.

When disconnecting the battery charger from the battery, always:

- ◆ Switch off and unplug the battery charger.
- ◆ Remove the negative (black) clamp first.
- ◆ Remove the positive (red) clamp last.
- ◆ Refit any insulating covers to the battery posts.

## Charging a battery disconnected from the circuit.

**Warning!** Incorrect connection, battery short circuit, location of battery and location of the battery charger may create a hazard. Make sure that adequate preparation has been made before proceeding.

If the battery is not already removed from the circuit, follow the manufacturers' instructions to remove the battery before charging.

Check the polarity of the battery posts. A positive (POS,P, +) battery post usually has a larger diameter than the negative (NEG, N, -) battery post.

Connect the positive (red) clamp from the battery charger to the positive (POS, P, +) post of the battery.

Connect the negative (black) clamp from the battery charger to the negative (NEG, N, -) post of the battery.

When disconnecting the battery charger from the battery, always:

- ◆ Switch off and unplug the battery charger.
- ◆ Remove the negative (black) clamp first.
- ◆ Remove the positive (red) clamp last.
- ◆ Refit any insulating covers to the battery posts.

## Use

### Connecting the appliance with the battery clamps (fig. A)

**Warning!** Always disconnect the ac plug from the ac mains socket before connecting or disconnecting the appliance to or from the battery.

**Warning!** Never connect any of the accessory leads together as this will cause a hazard. The accessory leads should only ever be connected to the in-line connector (6).

- ◆ Connect the battery clamps (3) to the battery charger with the in-line connector (6).
- ◆ The appliance's output leads have colour-coded battery clamps (3) (red-positive and black-negative). These connect directly to the corresponding connectors on the battery terminals.
- ◆ Follow the steps outlined in "Safety instructions" at the front of this manual.
- ◆ Insert the ac plug of the battery charger into an ac mains socket.

### Connecting the appliance with the ring terminals (fig. A & B)

**Warning!** Always disconnect the ac plug from the ac mains socket before connecting or disconnecting the appliance to or from the battery.

**Warning!** Never connect any of the accessory leads together as this will cause a hazard. The accessory leads should only ever be connected to the in-line connector (6).

- ◆ Connect the ring terminals (4) to the battery charger with the in-line connector (6).
- ◆ The output leads have crimped, colour-coded ring terminals (4) (red-positive and black-negative). The ring terminals (4) connect directly to the corresponding connectors on the battery terminals.
- ◆ Remove the nuts from the bolts of the battery terminal's connectors (fig. B).

- ◆ Install the red ring terminal (4) to the bolt of the positive battery terminal connector and replace the nut.
- ◆ Install the black ring terminal (4) to the bolt of the negative terminal connector and replace the nut.
- ◆ Insert the ac plug of the battery charger into an ac mains socket.

### Connecting the appliance with the dc accessory plug (fig. A)

**Warning!** Always disconnect the ac plug from the ac mains socket before connecting or disconnecting the appliance to or from the battery.

**Warning!** Never connect any of the accessory leads together as this will cause a hazard. The accessory leads should only ever be connected to the in-line connector (6).

- ◆ Connect the dc accessory plug (5) to the battery charger with the in-line connector (6).
- ◆ Insert the dc accessory plug (5) into the vehicle's dc accessory outlet.
- ◆ Insert the ac plug of the battery charger into an ac mains socket.

### Charging Indicators

- ◆ Red LED (2) - bad connection, the battery is not able to accept charge or a reverse polarity connection has been detected.
- ◆ Flashing green LED (2) - good connection and the battery is charging.
- ◆ Solid green LED (2) - the battery is fully charged.

When the appliance is properly connected, the yellow LED will illuminate, indicating that the smart circuit is functioning to assess the status of the battery. This procedure may take up to 2 minutes if the battery voltage is lower than 12.8 Volts.

The appliance is fully automatic; it will power on when needed and power off when the battery is fully-charged.

The appliance has built-in circuit protection which guards against overcharging or short circuits.

### Charging the battery (fig. C)

- ◆ Slide the charge voltage selector switch (1) to the 6V or 12V position as required.
- ◆ Leave the appliance on.
- ◆ Monitor the battery from time to time.

**Note:** A clicking sound may occur during the charging process, this is normal.

- ◆ When the solid green LED is lit, the battery is fully charged.
- ◆ Remove the ac plug from the ac mains socket.
- ◆ Remove the charging leads from the battery.

## Troubleshooting

If the appliance is not charging:

- ◆ Check that the battery charger is properly connected to a live 230 Vac outlet (the LED will illuminate).
- ◆ Check that the correct charging voltage has been selected for the battery being charged.
- ◆ If the voltage of the battery to be charged has fallen below 3.75 Volts, the battery cannot be charged with this battery charger.

## Maintenance

Your Black & Decker appliance has been designed to operate over a long period of time with a minimum of maintenance. Continuous satisfactory operation depends upon proper care and regular cleaning of your appliance.

**Warning!** Before performing any maintenance on corded/cordless appliance/tool:

- ◆ Disconnect the ac plug from the ac mains socket.
- ◆ Regularly clean the appliance using a soft cloth. For stubborn marks the cloth may be made damp.
- ◆ Do not use abrasive cleaners.
- ◆ Do not immerse the appliance in water.

## Replacing the fuse in the dc accessory plug (fig. C)

- ◆ Disconnect the ac plug from the ac mains socket.
- ◆ Disconnect the dc accessory plug from the appliance.
- ◆ Remove the plastic cap (7) and centre pin (8) by turning anti-clockwise.
- ◆ Replace the fuse with one of the same size and type (5 amp)
- ◆ Replace the centre pin (8) and plastic cap (7) by turning clockwise.

## Mains plug replacement (U.K. & Ireland only)

If a new mains plug needs to be fitted:

- ◆ Safely dispose of the old plug.
- ◆ Connect the brown lead to the live terminal in the new plug.
- ◆ Connect the blue lead to the neutral terminal.

**Warning!** No connection is to be made to the earth terminal.

Follow the fitting instructions supplied with good quality plugs.

Recommended fuse: 3 A.

## Protecting the environment



Separate collection. This product must not be disposed of with normal household waste.



Separate collection of used products and packaging allows materials to be recycled and used again. Re-use of recycled materials helps prevent environmental pollution and reduces the demand for raw materials.

Local regulations may provide for separate collection of electrical products from the household, at municipal waste sites or by the retailer when you purchase a new product.

Black & Decker provides a facility for the collection and recycling of Black & Decker products once they have reached the end of their working life. To take advantage of this service please return your product to any authorised repair agent who will collect them on our behalf.

You can check the location of your nearest authorised repair agent by contacting your local Black & Decker office at the address indicated in this manual. Alternatively, a list of authorised Black & Decker repair agents and full details of our after-sales service and contacts are available on the Internet at: [www.2helpU.com](http://www.2helpU.com)

## Technical data

		BDV090	(type 1)
Input voltage	$V_{ac}$	230	
Rated input	W	25	
Output voltage	$V_{dc}$	6.0 / 12.0	
Output current	A	1.0	
<b>Max. battery capacity</b>	Ah	100	
Weight	kg	0.4	

Should you find one day that your Black & Decker product needs replacement, or if it is of no further use to you, do not dispose of it with household waste. Make this product available for separate collection.

## Guarantee

Black & Decker is confident of the quality of its products and offers an outstanding guarantee. This guarantee statement is in addition to and in no way prejudices your statutory rights. The guarantee is valid within the territories of the Member States of the European Union and the European Free Trade Area.

If a Black & Decker product becomes defective due to faulty materials, workmanship or lack of conformity, within 24 months from the date of purchase, Black & Decker guarantees to replace defective parts, repair products subjected to fair wear and tear or replace such products to ensure minimum inconvenience to the customer unless:

- ◆ The product has been used for trade, professional or hire purposes;
- ◆ The product has been subjected to misuse or neglect;
- ◆ The product has sustained damage through foreign objects, substances or accidents;
- ◆ Repairs have been attempted by persons other than authorised repair agents or Black & Decker service staff.

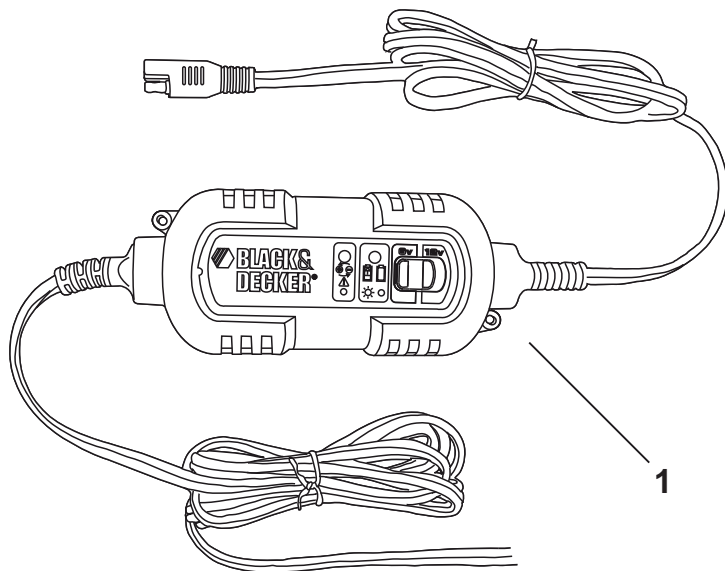
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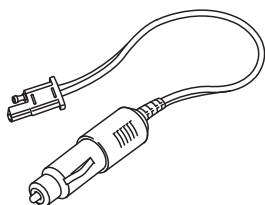




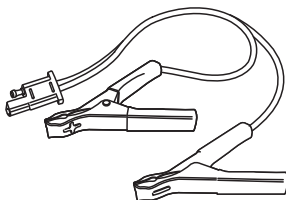
Partial support - Only parts shown available  
Nur die aufgeführten teile sind lieferbar  
Reparation partielle - Seules les pieces indiquees sont disponibles  
Supporto parziale - Sono disponibili soltanto le parti evidenziate  
Solo estan disponibles las peizas listadas  
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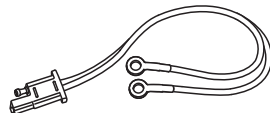
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3



4



ENGLISH

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