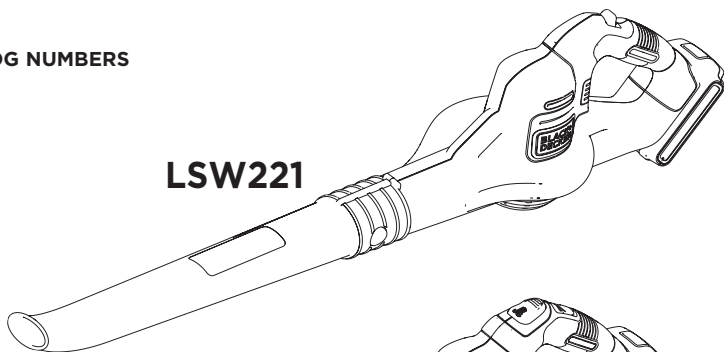


BLACK+ DECKER™

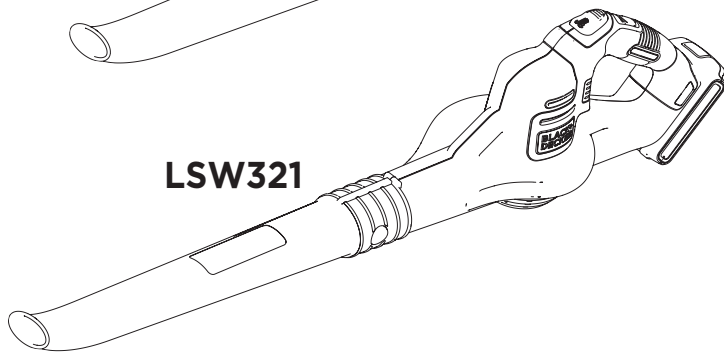
20V MAX* LITHIUM SWEEPER INSTRUCTION MANUAL

CATALOG NUMBERS

LSW221



LSW321



Thank you for choosing BLACK+DECKER!

PLEASE READ BEFORE RETURNING THIS PRODUCT FOR ANY REASON.

SAVE THIS MANUAL FOR FUTURE REFERENCE.

*Maximum initial battery pack voltage (measured without a workload) is 20 volts. Measured under a workload, nominal voltage is 18.

SAFETY GUIDELINES - DEFINITIONS

It is important for you to read and understand this manual. The information it contains relates to protecting YOUR SAFETY and PREVENTING PROBLEMS. The symbols below are used to help you recognize this information.

⚠ DANGER: Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING: Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION: Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

NOTICE: Used without the safety alert symbol indicates potentially hazardous situation which, if not avoided, may result in property damage.

IMPORTANT SAFETY WARNINGS & INSTRUCTIONS

⚠ WARNING: TO REDUCE RISK OF INJURY:

- Before any use, be sure everyone using this unit reads and understands all safety instructions and other information contained in this manual.
- Save these instructions and review frequently prior to use and in instructing others.
- Do not point unit discharge at self or bystanders.
- Keep long hair and loose clothing away from openings and moving parts.

⚠ WARNING: When using an electric tool, basic safety precautions should always be followed to reduce risk of fire, electric shock, and personal injury, including the following.

⚠ WARNING: Some dust created by this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- compounds in fertilizers
- compounds in insecticides, herbicides and pesticides
- arsenic and chromium from

chemically treated lumber

To reduce your exposure to these chemicals, wear approved safety equipment such as dust masks that are specially designed to filter out microscopic particles.

READ AND UNDERSTAND ALL INSTRUCTIONS BEFORE USING THIS APPLIANCE.

GENERAL SAFETY WARNINGS AND INSTRUCTIONS FOR ALL TOOLS

- **READ** and follow all instructions.
- **A BATTERY OPERATED UNIT** with integral batteries or a separate battery

pack must be recharged only with the specified charger for the battery. A charger that may be suitable for one type of battery may create a risk of fire when used with another battery.

- **USE BATTERY OPERATED UNIT ONLY** with specifically designated battery pack. Use of any other batteries may create a risk of fire.
- **AVOID** accidental starting. Be sure switch is in the locked or off position before inserting battery pack. Carrying units with your finger on the switch or inserting the battery pack into a unit with the switch on invites accidents.
- **DO NOT** use unit if switch does not turn it on or off. A unit that cannot be controlled with the switch is dangerous and must be repaired.
- **DISCONNECT** battery pack from unit or place the switch in the locked or off position before making any adjustments, changing accessories, or storing the unit. Such preventative safety measures reduce the risk of starting the unit accidentally.
- **ALWAYS WEAR EYE PROTECTION** – Wear safety glasses or goggles at all times when this unit is in use. Also use face or dust mask. Safety glasses are available at extra cost at your local Black+Decker Service Center or authorized service facility.
- **DO NOT** place outlet of sweeper near eyes or ears when operating.
- **STORE IDLE UNITS.** When not in use, the unit should be stored in a dry, high or locked-up place - out of reach of children.
- **DON'T OVERREACH.** Keep proper footing and balance at all times.
- **MAINTAIN UNIT WITH CARE.** Keep unit clean for best and safest performance. Follow instructions for proper maintenance.
- **DO NOT** attempt to repair the sweeper. To assure product safety and reliability, repairs, maintenance, and adjustments should be performed by Black+Decker

service centers or authorized service centers, always using Black+Decker replacement parts.

- **DO NOT** operate sweeper in a gaseous or explosive atmosphere. Motors in these units normally spark, and the sparks might ignite fumes.
- **AVOID DANGEROUS ENVIRONMENTAL CONDITIONS** – Do not use electric units in damp or wet locations. Don't use the unit in the rain.
- **STAY ALERT** - Watch what you are doing. Use common sense. Do not operate unit when you are tired.
- **USE THE RIGHT UNIT** – Do not use this unit for any job except that for which it is intended.
- **USE EXTRA CARE** when cleaning on stairs.
- **DO NOT** allow to be used as a toy. Close attention is necessary when used by or near children. Not recommended for use by children.
- **DO NOT** attempt to clear clogs from unit without first removing battery.
- **USE ONLY** as described in this manual. Use only manufacturer's recommended attachments.
- **DO NOT** put any objects into openings. Do not use with any opening blocked; keep free of dust, lint, hair and everything that may reduce air flow.
- **KEEP** hair, loose clothing, fingers, and all parts of body away from openings and moving parts.
- **DO NOT** immerse any part of the unit in liquid.
- **DO NOT** handle charger, including charger plug, and charger terminals with wet hands.
- **KEEP CHILDREN, BYSTANDERS AND ANIMALS AWAY** from the work area a minimum of 30 feet (10 meters) when starting or operating the unit.
- **INSPECT THE AREA** before using the unit. Remove all debris and hard objects such as rocks, glass, wire, etc. that can ricochet, be thrown, or otherwise cause injury or damage during operation.
- **USE ONLY** charger supplied by the manufacturer to recharge.
- **EXERCISE CARE** in handling batteries in order not to short the battery with conducting materials such as rings, bracelets and keys. The battery or conductor may overheat and cause burns.
- **DO NOT OPEN OR MUTILATE** the batteries. Released electrolyte is corrosive and may cause damage to the eyes or skin. It may be toxic if swallowed.
- **DO NOT CHARGE** the unit outdoors.

⚠ WARNING: To reduce the risk of electrical shock; do not expose to rain, do not use on wet surfaces. Store indoors.

SAVE THESE INSTRUCTIONS.

SYMBOLS

The label on your tool may include the following symbols. The symbols and their definitions are as follows:

V.....	volts
A.....	amperes
Hz.....	hertz
W.....	watts
min.....	minutes
~ or AC.....	alternating current
== or DC.....	direct current
n ₀	no load speed
ⓘ.....	Class I Construction
⊕.....	earthing terminal (grounded)
⚠.....	safety alert symbol
Ⓚ.....	Class II Construction (double insulated)
.../min or rpm.....	revolutions or reciprocation per minute
🧴.....	Use proper respiratory protection
📖.....	Read instruction manual before use
👁.....	Use proper eye protection
👂.....	Use proper hearing protection

IMPORTANT SAFETY INSTRUCTIONS FOR BATTERY CHARGERS

SAVE THESE INSTRUCTIONS: This manual contains important safety instructions for battery chargers.

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

⚠ WARNING: **Shock hazard.** Do not allow any liquid to get inside charger.

⚠ CAUTION: **Burn hazard.** To reduce the risk of injury, charge only designated **BLACK+DECKER** batteries. Other types of batteries may burst causing personal injury and damage.

⚠ CAUTION: Under certain conditions, with the charger plugged in to the power supply, the charger can be shorted by foreign material. Foreign materials of a conductive nature such as, but not limited to, steel wool, aluminum foil, or any buildup of metallic particles should be kept away from charger cavities. Always unplug the charger from the power supply when there is no battery pack in the cavity. Unplug charger before attempting to clean.

⚠ WARNING: DO NOT attempt to charge the battery pack with any chargers other than the ones in this manual. *The charger and battery pack are specifically designed to work together.*

- These chargers are not intended for any uses other than charging designated **BLACK+DECKER** rechargeable batteries. *Any other uses may result in risk of fire, electric shock or electrocution.*
- Do not expose charger to rain or snow.
- Pull by plug rather than cord when disconnecting charger. *This will reduce risk of damage to electric plug and cord.*
- Make sure that cord is located so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress.
- Do not use an extension cord unless it is absolutely necessary. *Use of improper extension cord could result in risk of fire, electric shock, or electrocution.*
- Do not operate charger with damaged cord or plug — have them replaced immediately.
- Do not operate charger if it has received a sharp blow, been dropped, or otherwise damaged in any way. *Take it to an authorized service center.*
- Do not disassemble charger; take it to an authorized service center when service or repair is required. *Incorrect reassembly may result in a risk of electric shock, electrocution or fire.*
- Disconnect the charger from the outlet before attempting any cleaning. *This will reduce the risk of electric shock. Removing the battery pack will not reduce this risk.*
- NEVER attempt to connect 2 chargers together.
- The charger is designed to operate on standard household electrical power (120 Volts). Do not attempt to use it on any other voltage.

EXTENSION CORD

Make sure your extension cord is in good condition. When using an extension cord be sure it is heavy enough to carry the current your product will draw. An undersized extension cord will cause a drop in line voltage resulting in loss of power and overheating. The following table shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.

- An extension cord must have adequate wire size (AWG or American Wire Gauge) for safety. *The smaller the gauge number of the wire, the greater the capacity of the cable, that is 16 gauge has more capacity than 18 gauge. When using more*

than one extension to make up the total length, be sure each individual extension contains at least the minimum wire size.

Volts	Minimum Gauge for Cord Sets				
	Total Length of Cord in Feet				
120V	0-25	26-50	51-100	101-150	
240V	0-50	51-100	101-200	201-300	
Ampere Rating		American Wire Gauge			
More Than	Not Than				
0	- 6	18	16	16	14
6	- 10	18	16	14	12
10	- 12	16	16	14	12
12	- 16	14	12	Not Recommended	

SAVE THESE INSTRUCTIONS IMPORTANT SAFETY INSTRUCTION FOR BATTERY PACKS

⚠ WARNING: *For safe operation, read this manual and manuals originally supplied with tool before using the charger.*

The battery pack is not fully charged out of the carton. Before using the battery pack and charger, read the safety instructions below. Then follow charging procedures outlined.

READ ALL INSTRUCTIONS

- Do not incinerate the battery pack even if it is severely damaged or is completely worn out. *The battery pack can explode in a fire. Toxic fumes and materials are created when battery packs are burned.*
- Do not charge or use battery in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. *Inserting or removing the battery from the charger may ignite the dust or fumes.*
- If battery contents come into contact with the skin, immediately wash area with mild soap and water. *If battery liquid gets into the eye, rinse water over the open eye for 15 minutes or until irritation ceases. If medical attention is needed, the battery electrolyte for Lithium-Ion batteries is composed of a mixture of liquid organic carbonates and lithium salts.*
- Contents of opened battery cells may cause respiratory irritation. *Provide fresh air. If symptoms persist, seek medical attention.*

⚠ WARNING: *Burn hazard.*

Battery liquid may be flammable if exposed to spark or flame.

- Charge the battery packs only in **BLACK+DECKER** chargers.
- DO NOT splash or immerse in water or other liquids. *This may cause premature cell failure.*
- Do not store or use the tool and battery pack in locations where the temperature may reach or exceed 105°F (40°C) (such as outside sheds or metal buildings in summer).

⚠️ WARNING: *Never attempt to open the battery pack for any reason. If battery pack case is cracked or damaged, do not insert into charger. Do not crush, drop or damage battery pack. Do not use a battery pack or charger that has received a sharp blow, been dropped, run over or damaged in any way (i.e., pierced with a nail, hit with a hammer, stepped on). Damaged battery packs should be returned to service center for recycling.*

⚠️ WARNING: **Fire hazard. Do not store or carry battery so that metal objects can contact exposed battery terminals.** *For example, do not place battery in aprons, pockets, tool boxes, product kit boxes, drawers, etc., with loose nails, screws, keys, etc. Transporting batteries can possibly cause fires if the battery terminals inadvertently come in contact with conductive materials such as keys, coins, hand tools and the like. The US Department of Transportation Hazardous Material Regulations (HMR) actually prohibit transporting batteries in commerce or on airplanes (i.e., packed in suitcases and carry-on luggage) UNLESS they are properly protected from short circuits. So when transporting individual batteries, make sure that the battery terminals are protected and well insulated from materials that could contact them and cause a short circuit.*

NOTE: *Lithium-Ion batteries should not be put in checked baggage.*

STORAGE RECOMMENDATIONS

1. The best storage place is one that is cool and dry away from direct sunlight and excess heat or cold.
2. Long storage will not harm the battery pack or charger.

CHARGING PROCEDURE

BLACK+DECKER chargers are designed to charge BLACK+DECKER battery packs in 3-4 hours depending on the pack being charged.

1. Plug the charger into an appropriate outlet before inserting the battery pack.
2. Insert the battery pack into the charger.
3. The green LED will flash indicating that the battery is being charged.
4. The completion of charge is indicated by the green LED remaining on continuously. The pack is fully charged and may be used at this time or left on the charger.

Recharge discharged batteries as soon as possible after use or battery life may be greatly diminished. For longest battery life, do not discharge batteries fully.

LEAVING THE BATTERY IN THE CHARGER

The charger and battery pack can be left connected with the green LED glowing

indefinitely. The charger will keep the battery pack fresh and fully charged.

IMPORTANT CHARGING NOTES

1. Longest life and best performance can be obtained if the battery pack is charged when the air temperature is between 65°F and 75°F (18°- 24°C). DO NOT charge the battery pack in an air temperature below +40°F (+4.5°C), or above +105°F (+40.5°C). This is important and will prevent serious damage to the battery pack.
2. The charger and battery pack may become warm to touch while charging. This is a normal condition, and does not indicate a problem. To facilitate the cooling of the battery pack after use, avoid placing the charger or battery pack in a warm environment such as in a metal shed, or an uninsulated trailer.
3. If the battery pack does not charge properly:
 - a. Check current at receptacle by plugging in a lamp or other appliance
 - b. Check to see if receptacle is connected to a light switch which turns power off when you turn out the lights.
 - c. Move charger and battery pack to a location where the surrounding air temperature is approximately 65°F - 75°F (18°- 24°C).
 - d. If charging problems persist, take the tool, battery pack and charger to your local service center.
4. The battery pack should be recharged when it fails to produce sufficient power on jobs which were easily done previously. DO NOT CONTINUE to use under these conditions. Follow the charging procedure. You may also charge a partially used pack whenever you desire with no adverse affect on the battery pack.
5. Foreign materials of a conductive nature such as, but not limited to, steel wool, aluminum foil, or any buildup of metallic particles should be kept away from charger cavities. Always unplug the charger from the power supply when there is no battery pack in the cavity. Unplug charger before attempting to clean.
6. Do not freeze or immerse charger in water or any other liquid.

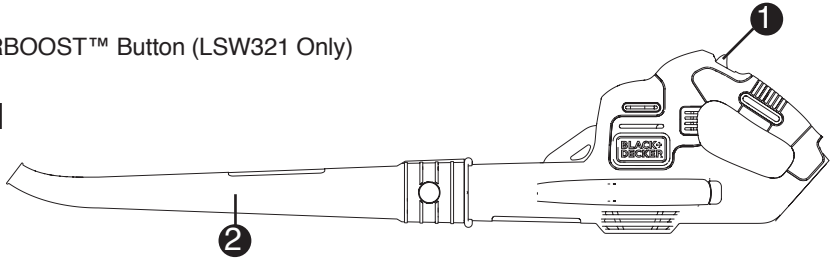
⚠️ WARNING: **Shock hazard.** *Do not allow any liquid to get inside charger. Never attempt to open the battery pack for any reason. If the plastic housing of the battery pack breaks or cracks, return to a service center for recycling.*

SAVE THESE INSTRUCTIONS

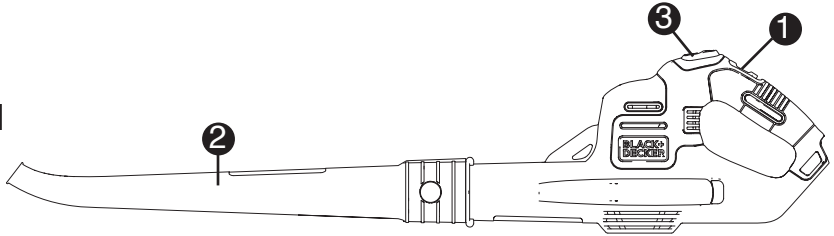
FUNCTIONAL DESCRIPTION

1. On / Off Switch
2. Tube
3. **POWERBOOST™** Button (LSW321 Only)

LSW221



LSW321



This product can accept any of the batteries and chargers listed in the chart below.

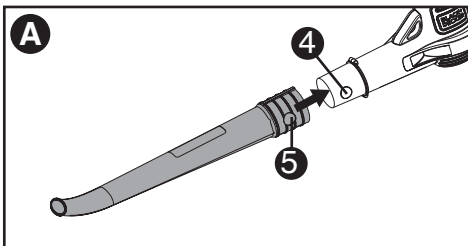
LI-ION Battery Packs and Chargers

Description	Cat. #
Batteries: LI-ION	LBX20 LBXR20 LBXR2020
Chargers:	LCS200 LCS1620

TUBE ASSEMBLY

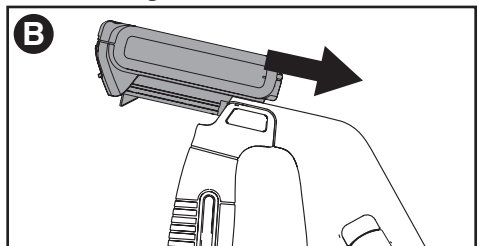
NOTE: Ensure the sweeper is switched off and the battery is removed before attaching or removing the sweeper tube. The tube must be assembled to the housing before use.

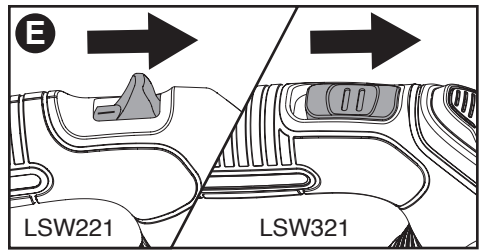
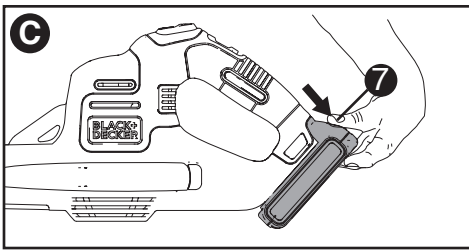
- To attach the tube to the sweeper, line up the tube with the sweeper housing as shown in **figure A**.
- Push the tube into the sweeper housing until the lock button (4) engages the lock hole (5) in the tube.



INSTALLING / REMOVING BATTERY PACK

- **TO INSTALL BATTERY PACK:**
Insert battery pack into tool until an audible click is heard as shown in **figure B**. Make sure battery pack is fully seated and fully latched into position.
- **TO REMOVE BATTERY PACK:**
Depress the battery release button (6) in the back of the battery pack and pull battery pack out of tool assembly as shown in **figure C**.

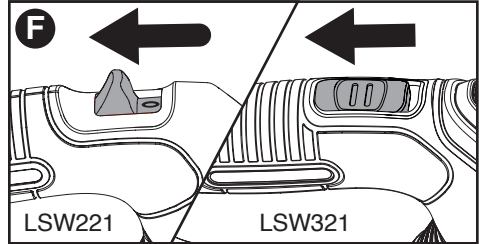
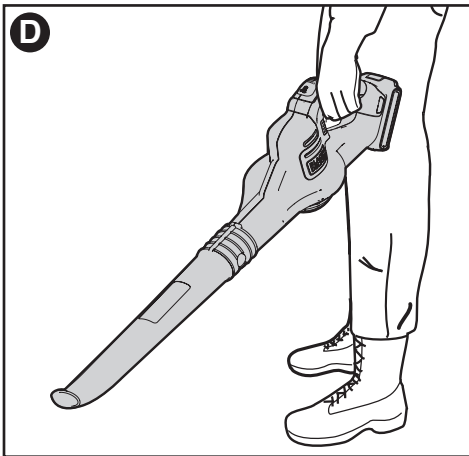




OPERATION

⚠ CAUTION: Always wear safety glasses. Wear a filter mask if the operation is dusty. Use of gloves, long pants and substantial footwear is recommended. Keep long hair and loose clothing away from openings and moving parts. **THIS SWEEPER IS FOR HOUSEHOLD USE ONLY.**

- Hold the sweeper with one hand as shown in **figure D** and sweep from side to side with the nozzle several inches above the ground. Slowly advance keeping the accumulated pile of debris in front of you.



POWERBOOST™ FEATURE

The **POWERBOOST™** feature (3) is located on the LSW321 tool handle as shown in **figure G**. It allows you to optimize the tools performance and boost the power as needed.

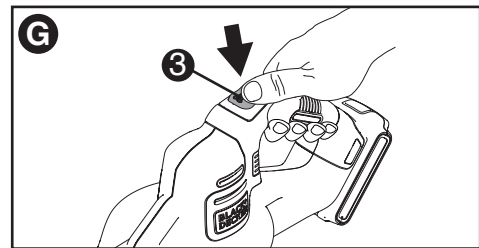
- Switch the sweeper on.
- To activate the “Boost” mode, press and hold the **POWERBOOST™** button down.
- To deactivate the “Boost” mode, release the **POWERBOOST™** button.
- Operate in “Normal” mode for most sweeping needs. (Longer runtime will be achieved.)
- Activate “Boost” mode as needed to clear heavy or wet debris.

SWITCHING ON AND OFF

⚠ WARNING: USE BOTH HANDS TO GRIP THE PRODUCT FIRMLY WHEN SWITCHING ON.

⚠ CAUTION: DO NOT POINT UNIT DISCHARGE AT SELF OR BYSTANDERS.

- To switch the sweeper on, slide the on/off switch forward as shown in **figure E**.
- To switch the sweeper off, slide the on/off switch back as shown in **figure F**.



ACCESSORIES

- Recommended accessories for use with your tool are available from your local dealer or authorized service center.

⚠ WARNING: The use of any accessory not recommended for use with this tool could be hazardous.

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	POSSIBLE SOLUTION
•Unit will not start.	• Battery not installed properly.	• Check battery installation.
	• Battery not charged.	• Check battery charging requirements.
•Battery will not charge.	• Battery not inserted into charger.	• Insert battery into charger until green LED appears.
	• Charger not plugged in.	• Plug charger into a working outlet. Refer to “Important Charging Notes” for more details.
		• Check current at receptacle by plugging in a lamp or other appliance.
		• Check to see if receptacle is connected to a light switch which turns power off when you turn out the lights.
	• Surrounding air temperature too hot or too cold.	• Move charger and tool to a surrounding air temperature of above 40 degree F (4.5°C) or below 105 degree F (+40.5°C).

The RBRC® Seal

The RBRC® (Rechargeable Battery Recycling Corporation) Seal on the nickel cadmium, nickel metal hydride or lithium-ion batteries (or battery packs) indicates that the costs to recycle these batteries (or battery packs) at the end of their useful life have already been paid by BLACK+DECKER. In some areas, it is illegal to place spent nickel cadmium, nickel metal hydride or lithium-ion batteries in the trash or municipal solid waste stream and the Call 2 Recycle® program provides an environmentally conscious alternative.

Call 2 Recycle, Inc., in cooperation with BLACK+DECKER and other battery users, has established the program in the United States and Canada to facilitate the collection of spent nickel cadmium, nickel metal hydride or lithium-ion batteries. Help protect our environment and conserve natural resources by returning the spent nickel cadmium, nickel metal hydride or lithium-ion batteries to an authorized BLACK+DECKER service center or to your local retailer for recycling. You may also contact your local recycling center for information on where to drop off the spent battery. RBRC® is a registered trademark of Call 2 Recycle, Inc.