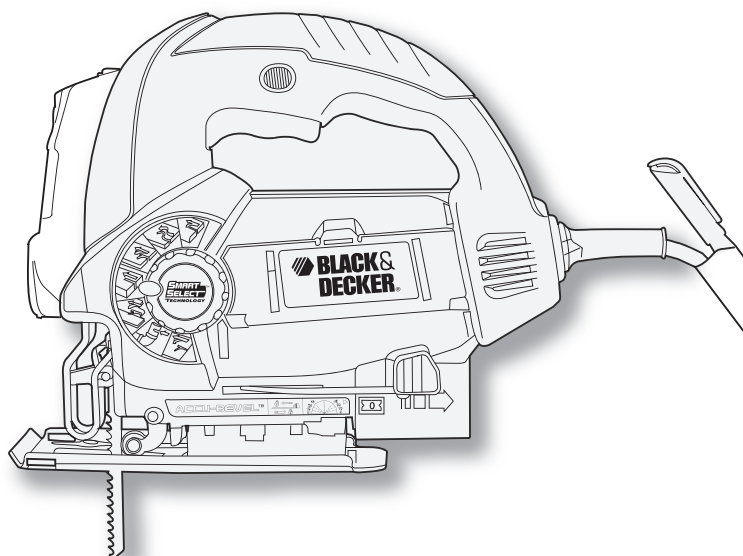


BLACK & DECKER®

LINEFINDER™ Orbital Jigsaw

INSTRUCTION MANUAL

Catalog
Number
JS670V



Thank you for choosing Black & Decker! Go to www.BlackandDecker.com/NewOwner to register your new product.

PLEASE READ BEFORE RETURNING THIS PRODUCT FOR ANY REASON:

If you have a question or experience a problem with your Black & Decker purchase, go to

WWW.BLACKANDDECKER.COM/INSTANTANSWERS
for instant answers 24 hours a day.

If you can't find the answer or do not have access to the internet, call 1-800-544-6986 from 8 a.m. to 5 p.m. EST Mon. - Fri to speak with an agent.

Please have the catalog number available when you call.

SAVE THIS MANUAL FOR FUTURE REFERENCE.

VEA EL ESPAÑOL EN LA CONTRAPORTADA.

POUR LE FRANÇAIS, VOIR LA COUVERTURE ARRIÈRE.

INSTRUCTIVO DE OPERACIÓN, CENTROS DE SERVICIO Y PÓLIZA DE GARANTÍA.
ADVERTENCIA: LÉASE ESTE INSTRUCTIVO ANTES DE USAR EL PRODUCTO.

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.

General Safety Rules

⚠ WARNING: Read all safety warnings and all instructions.
Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE
The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

1) WORK AREA SAFETY

- a) **Keep work area clean and well lit.** *Cluttered or dark areas invite accidents.*
- b) **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** *Power tools create sparks which may ignite the dust or fumes.*
- c) **Keep children and bystanders away while operating a power tool.** *Distractions can cause you to lose control.*

2) ELECTRICAL SAFETY

- a) **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** *Unmodified plugs and matching outlets will reduce risk of electric shock.*
- b) **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** *There is an increased risk of electric shock if your body is earthed or grounded.*
- c) **Do not expose power tools to rain or wet conditions.** *Water entering a power tool will increase the risk of electric shock.*
- d) **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** *Damaged or entangled cords increase the risk of electric shock.*
- e) **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** *Use of a cord suitable for outdoor use reduces the risk of electric shock.*
- f) **If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply.** *Use of a GFCI reduces the risk of electric shock.*

3) PERSONAL SAFETY

- a) **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** *A moment of inattention while operating power tools may result in serious personal injury.*
- b) **Use personal protective equipment. Always wear eye protection.** *Protective equipment such as dust mask, nonskid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.*
- c) **Prevent unintentional starting. Ensure the switch is in the off position before connecting to power source and/ or battery pack, picking up or carrying the tool.** *Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.*

- d) **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
 - e) **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
 - f) **Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewelry or long hair can be caught in moving parts.
 - g) **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.
- 4) POWER TOOL USE AND CARE**
- a) **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
 - b) **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
 - c) **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
 - d) **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
 - e) **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
 - f) **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
 - g) **Use the power tool, accessories and tool bits, etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.
- 5) SERVICE**
- a) **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

SPECIFIC SAFETY RULES

- **Hold power tools by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord.** Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator.
- **Use clamps or another practical way to secure and support the work piece to a stable platform.** Holding the work by hand or against your body leaves it unstable and may lead to loss of control.
- **Keep hands away** from cutting area. Never reach underneath the material for any reason. Hold front of saw by grasping the contoured gripping area. Do not insert fingers or thumb into the vicinity of the reciprocating blade and blade clamp. Do not stabilize the saw by gripping the shoe.
- **Keep blades sharp.** Dull blades may cause the saw to swerve or stall under pressure.
- **When cutting pipe or conduit** ensure that they are free from water, electrical wiring, etc.
- **Allow the motor to come to a complete stop before withdrawing the blade from the kerf (the slot created by cutting).** A moving blade may impact the workpiece causing a broken blade, workpiece damage or loss of control and possible personal injury.
- **Never hold work in your hand, lap or against parts of your body when sawing.** The saw may slip and the blade could contact the body causing injury.
- **Keep handles dry, clean, free from oil and grease.** This will enable better control of the tool.
- **Clean out your tool often, especially after heavy use.** Dust and grit containing metal particles often accumulate on interior surfaces and could create an electric shock hazard.

- **Do not operate this tool for long periods of time.** Vibration caused by the operating action of this tool may cause permanent injury to fingers, hands, and arms. Use gloves to provide extra cushion, take frequent rest periods, and limit daily time of use.

⚠ **WARNING:** Do not cut fiber cement siding, cement backer board or other concrete and masonry materials.

⚠ **CAUTION: To reduce the risk of eye injury while using the UV light:**

- Do not point UV light at bystanders.
- Turn off UV light when changing blade.
- Do not use UV light as a flash light.
- Do not stare into UV light
- Jig saw should not be used by any photo sensitive individual or any individual who has been subjected to a photo sensitive agent. (eg. Like during eye exam)
- Use extra caution when cutting concave reflective work pieces to prevent incidental UV light reflection towards your eyes or the eyes of bystanders.

⚠ **WARNING: Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:**

- lead from lead-based paints,
- crystalline silica from bricks and cement and other masonry products, and
- arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

- **Avoid prolonged contact with dust from power sanding, sawing, grinding, drilling, and other construction activities. Wear protective clothing and wash exposed areas with soap and water.** Allowing dust to get into your mouth, eyes, or lay on the skin may promote absorption of harmful chemicals.

⚠ **WARNING: Use of this tool can generate and/or disperse dust, which may cause serious and permanent respiratory or other injury.** Always use NIOSH/OSHA approved respiratory protection appropriate for the dust exposure. Direct particles away from face and body.

⚠ **CAUTION: Wear appropriate hearing protection during use.** Under some conditions and duration of use, noise from this product may contribute to hearing loss.

⚠ **WARNING: ALWAYS use safety glasses. Everyday eye glasses are NOT safety glasses. Also use face or dust mask if cutting operation is dusty. ALWAYS**

WEAR CERTIFIED SAFETY EQUIPMENT:

- ANSI Z87.1 eye protection (CAN/CSA Z94.3)
- ANSI S12.6 (S3.19) hearing protection
- NIOSH/OSHA/MSHA respiratory protection

SYMBOLS

The label on your tool may include the following symbols.

V..... volts	A..... amperes
Hz..... hertz	W..... watts
min..... minutes	~alternating current
== direct current	n ₀ no load speed
☐ Class II Construction	⊕ earthing terminal
⚠ safety alert symbol	.../minrevolutions or reciprocations per minute

USE OF EXTENSION CORDS

Make sure the extension cord is in good condition before using. Always use the proper size extension cords with the tool – that is, proper wire size for various lengths of cord and heavy enough to carry the current the tool will draw. Use of an undersized cord will cause a drop in line voltage resulting in loss of power and overheating. For proper size cords see chart below.

Volts	Minimum Gauge for Cord Sets				
	Total Length of Cord in Feet				
120V	0-25	26-50	51-100	101-150	
	(0-7,6m)	(7,6-15,2m)	(15,2-30,4m)	(30,4-45,7m)	
240V	0-50	51-100	101-200	201-300	
	(0-15,2m)	(15,2-30,4m)	(30,4-60,9m)	(60,9-91,4m)	
Ampere Rating		American Wire Gauge			
More Than	Not more 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		

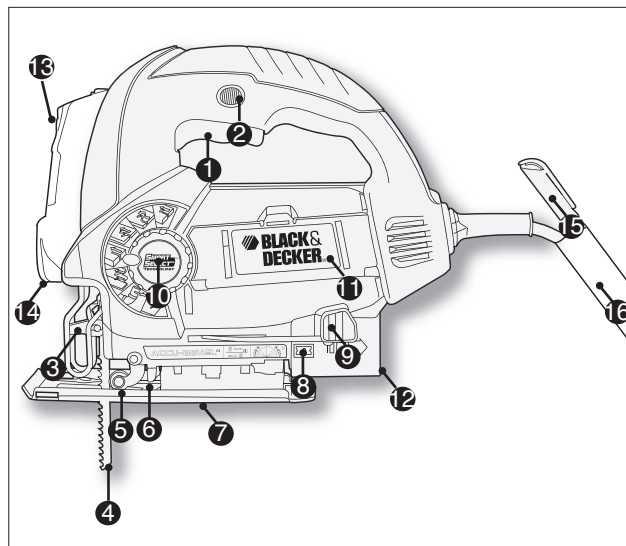
MOTOR

Be sure your power supply agrees with nameplate marking. 120 Volts AC only means your tool will operate on standard 60 Hz household power. Do not operate AC tools on DC. A rating of 120 volts AC/DC means that you tool will operate on standard 60 Hz AC or DC power. This information is printed on the nameplate. Lower voltage will cause loss of power and can result in over-heating. All Black & Decker tools are factory-tested; if this tool does not operate, check the power supply.

SAVE THESE INSTRUCTIONS

Functional Description

1. Variable speed switch
2. Lock-on button
3. Saw blade locking lever
4. Saw blade
5. Saw blade support roller
6. Dust blower
7. Shoe plate
8. Bevel angle window
9. Shoe plate beveling lever
10. "Smart Select™" knob
11. Saw blade storage compartment
12. Dust extraction port
13. UV light On/Off button
14. UV light
15. Highlighter marking pen
16. Pen storage

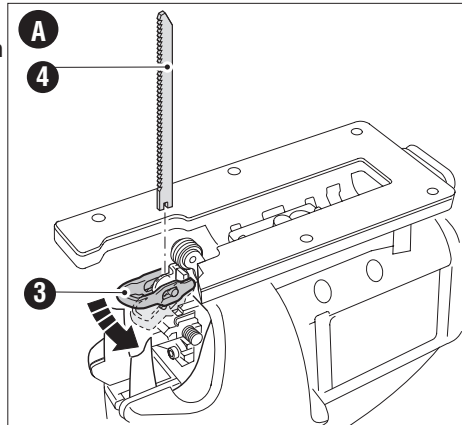


OPERATION

⚠ WARNING: Before attempting any of the following operations, make sure that the tool is switched off and unplugged and that the saw blade has stopped. Used saw blades can be hot.

Blade Installation (fig. A)

- Hold the saw blade (4) as shown, with teeth facing forward.
- Push the saw blade locking lever (3) downward.
- Insert the shank of the saw blade into the blade holder as far as it will go.
- Release the lever.
- Check to ensure blade is secure before cutting.



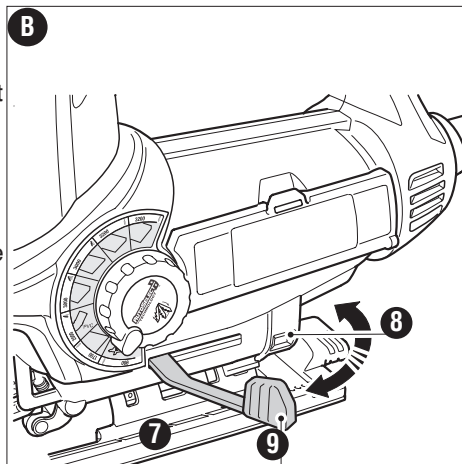
Adjusting the shoe plate for bevel cuts (fig. B)

⚠ WARNING: Never use the tool when the saw shoe is loose or removed.

The shoe plate can be set to a left or right bevel angle of up to 45°.

To set the bevel angle:

- Pull the shoe plate beveling lever (9) out away from the saw to unlock the shoe plate (7) as shown in **figure B**.
- Slide the shoe plate (7) forward to release it from the 0° positive stop position.
- The shoe can be beveled to the left or to the right and has detents at 15°, 30° and 45° (**figure C**).
- Set the plate to the desired bevel angle.

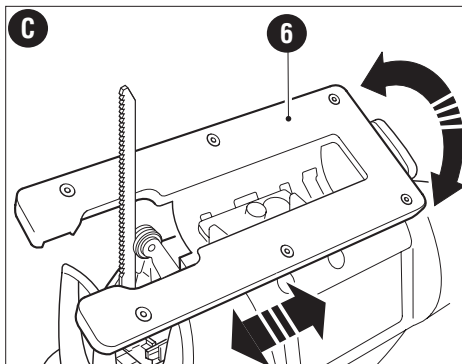


As you set the shoe angle the amount of degrees can be read through the bevel angle window (8). Use a protractor to verify angle accuracy.

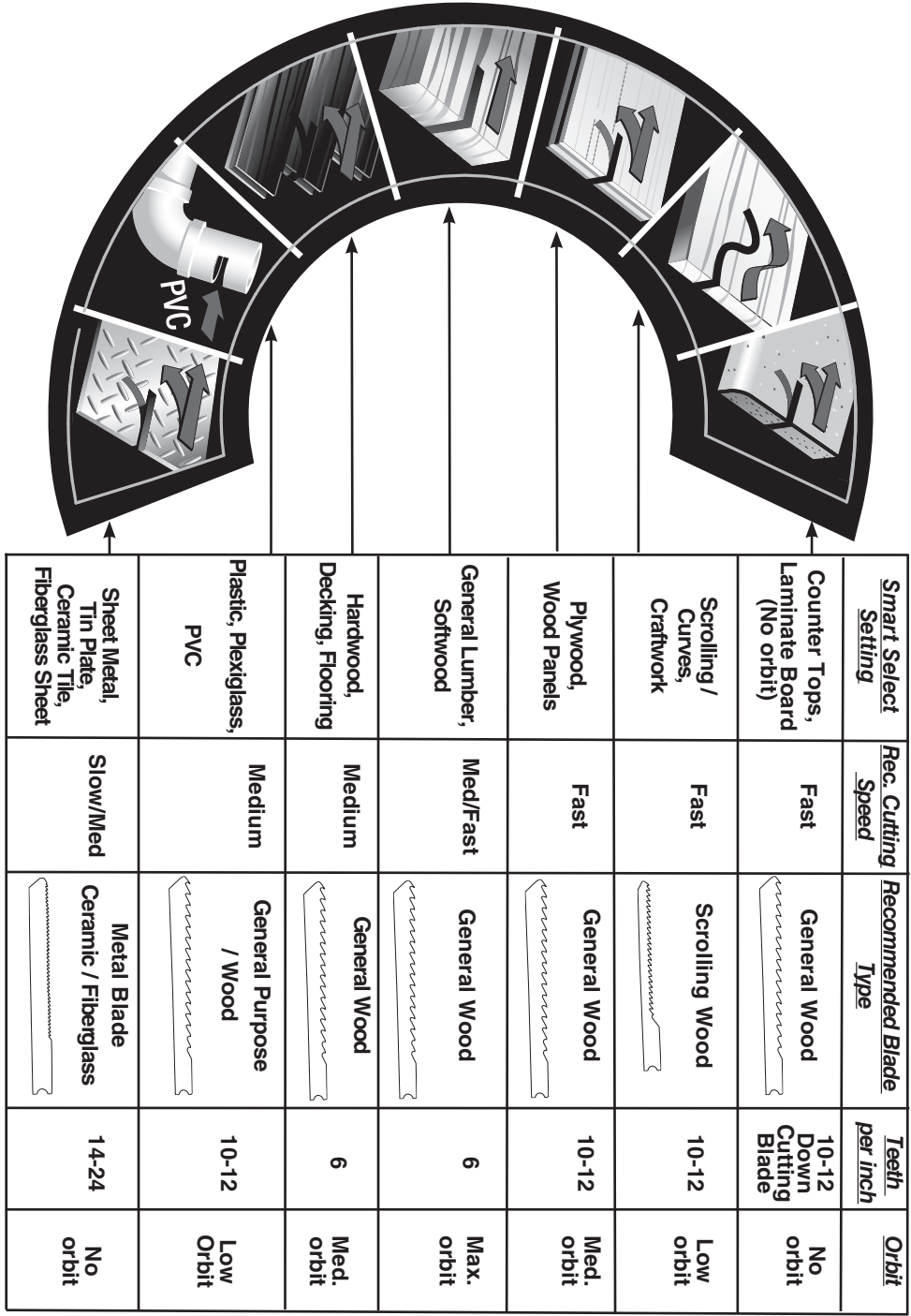
- Push the shoe plate beveling lever (9) back towards the saw to lock the shoe plate (7).

To reset the shoe plate for straight cuts:

- Pull the shoe plate beveling lever (9) out away from the saw to unlock the shoe plate (7) as shown in **figure B**.
- Rotate shoe plate to an angle of approximately 0° and then pull shoe plate backwards to engage the 0° positive stop.
- Push the shoe plate beveling lever (9) back towards the saw to lock the shoe plate (7).



SMART SELECT™ CUTTING CHART



Switching on and off

- To switch the tool on, press the variable speed switch (1).
- For continuous operation, press the variable speed switch (1), press the lock-on button (2) and release the variable speed switch.
- To switch the tool off, release the variable speed switch. To switch the tool off, when in continuous operation, press the variable speed switch once more and release it.

Variable Speed Control

Variable speed is controlled through the variable speed switch (1). The tool speed depends on how far you depress the switch. For best results, start your cut by gently squeezing the trigger (slow speed) and gradually speed up (squeeze trigger more) as you move through your cut.

Setting the desired cutting mode (Smart Select)(fig. D)

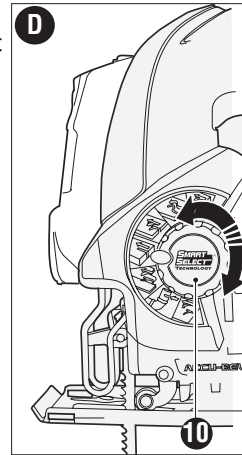
To select the proper orbital action for the type of material that you are cutting, follow the steps below:

Step 1 - Turn the dial (10) as shown in **figure D** to the appropriate icon. Refer to the chart on page 7 for descriptions of the 7 different positions.

Step 2 - Insert the proper blade based on the chart mentioned above.

Step 3 - Perform the cut.

NOTE: These settings are initial recommendations. Your application may work best with different settings. Test these positions on similar material prior to making finished cut and adjust selections for desired results.



Blade storage (fig.E)

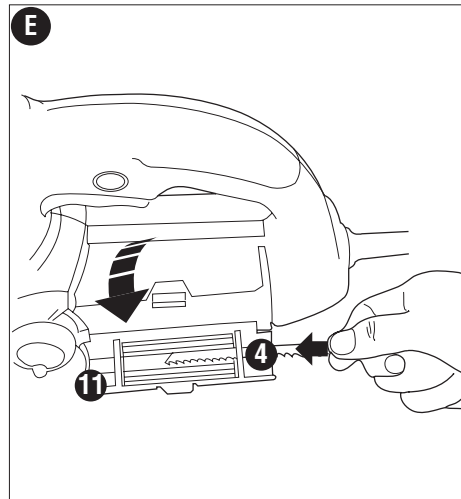
A blade storage compartment (11) is built-in to the side of the saw.

To open the storage door:

- Grasp the tab at the top of the door and pull outward.

The blades slide in and out of the compartment.

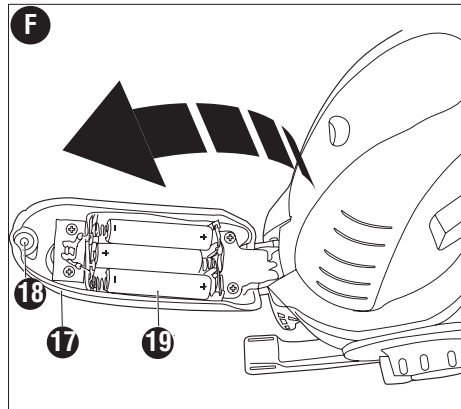
⚠ **CAUTION:** Close door securely before operating saw.



Operating the UV Module (figure F, G & H)

Installing the batteries (figure F)

- Pivot the UV module door (17) away from the jig saw by removing the screw (18) and pulling the door forward.
- Insert three new 1.5 Volt AAA alkaline batteries (19), making sure to match the (+) and (-) terminals correctly.
- Close the UV module door and replace the screw.

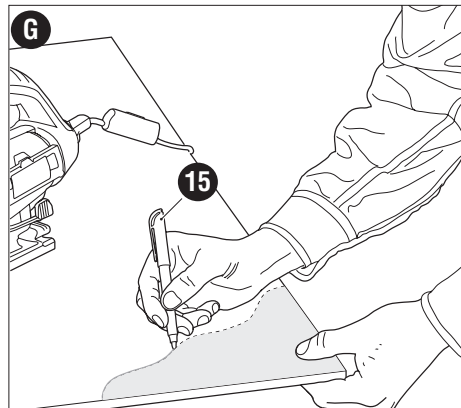


Using the UV light (figure G & H)

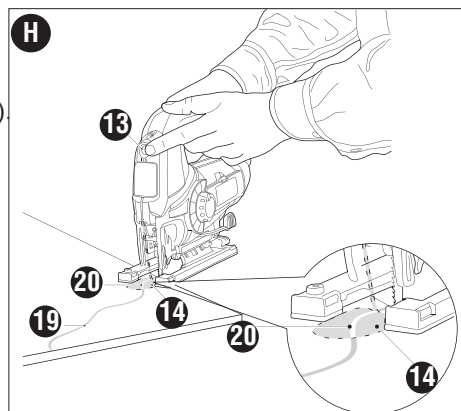
The UV module projects a UV light which illuminates a highlighter line drawn on the surface of the workpiece.

To use the UV light:

- Mark your intended cutting line using the highlighter marking pen (15) as shown in figure G.



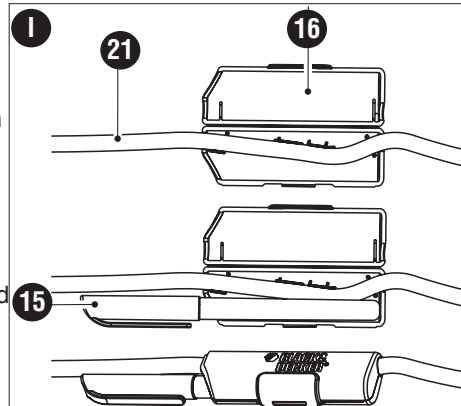
- Switch the UV light (14) on by pressing the button (13).
- To switch the UV light (14) off, press the button (13) again.
- Position the jig saw over the cutting line (19). Viewing from directly above the jig saw, the line of cut will be illuminated (20) by the UV light (14) and can be easily followed.



Highlighter Pen Storage (figure I)

- The highlighter marking pen (15) stores in the pen holder (16).
- The pen holder (16) can be opened and attached anywhere on the cord (21) as shown in **figure I**.
- To move the pen holder, unlock the hinge and open the holder.
- Remove from cord and place anywhere up or down the cord.

NOTE: Should you need to replace the highlighter marking pen (15) it can be replaced with a standard yellow highlighter found at office supply stores (fine tip recommended).



Connecting a vacuum cleaner to the tool

A hose adaptor (not supplied) is available at extra cost through your nearest Black & Decker service center. Insert the hose adaptor into the opening at the back of the saw. Connect a vacuum cleaner hose (not supplied) to the hose adaptor.

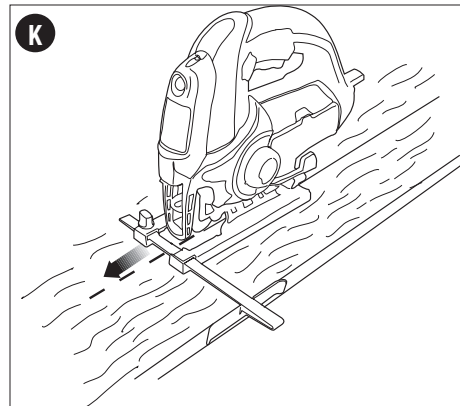
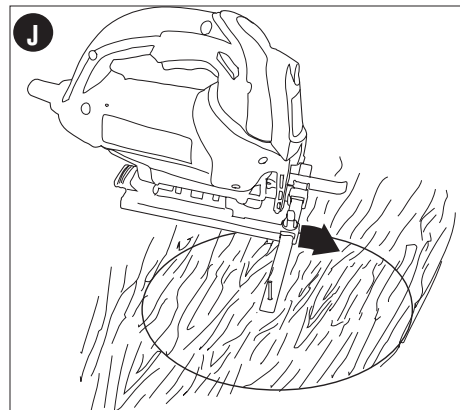
Rip & Circle Cutting

Ripping and circle cutting without a pencil line are easily done with the rip fence and circle guide (available at extra cost).

Using the screw supplied with the accessory guide, position as shown in **figure J** and thread the screw into the shoe to clamp the fence securely.

When circle cutting, adjust rip fence so that distance from blade to hole in cross bar is at the desired radius and tighten screw. Place saw so that hole in cross bar is over center of circle to be cut (drill hole for blade or cut inward from edge of material to get blade into position). When saw is properly positioned, drive a small nail through hole in cross bar. Using rip fence as a pivot arm, begin cutting circle. For circle cutting, the cross bar should be up, as shown in **figure J**.

When ripping, slide the rip fence under the screw from either side of the saw. Set the cross bar at desired distance from blade and tighten screw. For ripping, the cross bar should be down and against the straight edge of the workpiece as shown in **figure K**.



HINTS FOR OPTIMUM USE

Sawing laminates

As the saw blade cuts on the upward stroke, splintering may occur on the surface closest to the shoe plate.

- Use a fine-tooth saw blade.
- Saw from the back surface of the workpiece.
- To minimize splintering, clamp a piece of scrap wood or hardboard to both sides of the workpiece and saw through this sandwich.

Sawing metal

- Be aware that sawing metal takes much more time than sawing wood.
- Use a saw blade suitable for sawing metal.
- When cutting thin metal, clamp a piece of scrap wood to the back surface of the workpiece and cut through this sandwich.
- Spread a film of oil along the intended line of cut for easier operation and longer blade life. For cutting aluminum, kerosene is preferred.

⚠ WARNING: Fire Hazard. Do not use vacuum adapter when cutting metal. Metal filings will be hot and may cause a fire.

TROUBLESHOOTING

Problem	Possible Cause	Possible Solution
• Unit will not start.	• Cord not plugged in.	• Plug tool into a working outlet.
	• Circuit fuse is blown.	• Replace circuit fuse. (If the product repeatedly causes the circuit fuse to blow, discontinue use immediately and have it serviced at a Black & Decker service center or authorized servicer.)
	• Circuit breaker is tripped.	• Reset circuit breaker. (If the product repeatedly causes the circuit breaker to trip, discontinue use immediately and have it serviced at a Black & Decker service center or authorized servicer.)
• Shoe plate is loose.	• Cord or switch is damaged.	• Have cord or switch replaced at Black & Decker Service Center or Authorized Servicer.
	• Retaining screw loose.	• Loosen the screw closest to the blade on the underside of the shoe plate. Tighten the screw farthest from the blade by turning counterclockwise (left hand thread) Reminder: The bevel lever must be in the closed position. Tighten the screw closest to the blade.
• UV light will not come on.	• Batteries weak.	Replace batteries.
	• Batteries inserted incorrectly.	Reinsert batteries making sure they match the (+) and (-) terminals.

For assistance with your product, visit our website www.blackanddecker.com for the location of the service center nearest you or call the BLACK & DECKER help line at **1-800-544-6986**.

MAINTENANCE

Use only mild soap and damp cloth to clean the tool. Never let any liquid get inside the tool; never immerse any part of the tool into a liquid.

IMPORTANT: To assure product SAFETY and RELIABILITY, repairs, maintenance and adjustment should be performed by authorized service centers or other qualified service personnel, always using identical replacement parts.

ACCESSORIES

Recommended accessories for use with your tool are available from your local dealer or authorized service center. If you need assistance regarding accessories, please call: **1-800-544-6986**.

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

SERVICE INFORMATION

All Black & Decker Service Centers are staffed with trained personnel to provide customers with efficient and reliable power tool service. Whether you need technical advice, repair, or genuine factory replacement parts, contact the Black & Decker location nearest you. To find your local service location, refer to the yellow page directory under "Tools—Electric" or call: **1-800-544-6986** or visit **www.blackanddecker.com**

FULL TWO-YEAR HOME USE WARRANTY

Black & Decker (U.S.) Inc. warrants this product for two years against any defects in material or workmanship. The defective product will be replaced or repaired at no charge in either of two ways.

The first, which will result in exchanges only, is to return the product to the retailer from whom it was purchased (provided that the store is a participating retailer). Returns should be made within the time period of the retailer's policy for exchanges (usually 30 to 90 days after the sale). Proof of purchase may be required. Please check with the retailer for their specific return policy regarding returns that are beyond the time set for exchanges.

The second option is to take or send the product (prepaid) to a Black & Decker owned or authorized Service Center for repair or replacement at our option. Proof of purchase may be required. Black & Decker owned and authorized Service Centers are listed under "Tools-Electric" in the yellow pages of the phone directory.

This warranty does not apply to accessories. This warranty gives you specific legal rights and you may have other rights which vary from state to state or province to province. Should you have any questions, contact the manager of your nearest Black & Decker Service Center. This product is not intended for commercial use.

LATIN AMERICA: This warranty does not apply to products sold in Latin America. For products sold in Latin America, check country specific warranty information contained in the packaging, call the local company or see the website for warranty information.

FREE WARNING LABEL REPLACEMENT: If your warning labels become illegible or are missing, call **1-800-544-6986** for a free replacement.

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Towson, MD 21286
U.S.A.



See 'Tools-
Electric'
– Yellow Pages –
for Service &
Sales

