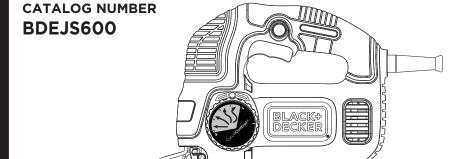
# BLACK+ DECKER<sub>™</sub>

### VARIABLE SPEED ORBITAL JIG SAW

**INSTRUCTION MANUAL** 



Thank you for choosing BLACK+DECKER!
PLEASE READ BEFORE RETURNING THIS PRODUCT FOR ANY REASON.

SAVE THIS MANUAL FOR FUTURE REFERENCE.

### 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.

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

 $\triangle$  **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 Power Tool Safety Warnings

AWARNING: 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.

### JIG SAW SAFETY WARNINGS

- Hold power tool by insulated gripping surfaces, when performing an operation where the cutting accessory may contact hidden wiring or its own cord. Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
- Use clamps or another practical way to secure and support the workpiece 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.
- Use extra caution when cutting overhead and pay particular attention to overhead wires which may be hidden from view. Anticipate the path of falling branches and debris ahead of time.
- When cutting pipe or conduit ensure that they are free from water, electrical wiring, etc.

⚠WARNING: Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known 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 chemicallytreated lumber (CCA).

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.

AWARNING: ALWAYS use safety glasses. Everyday eyeglasses are NOT safety glasses. Also use face or dust mask if drilling operation is dusty. ALWAYS WEAR CERTIFIED SAFETY EQUIPMENT:

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

AWARNING: 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.

### 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
$\sim$ or AC	alternating current
	direct current
n <sub>0</sub>	no load speed

### **FUNCTIONAL DESCRIPTION**

- 1. Variable speed switch
- 2. Lock-on button
- 3. Saw blade locking lever
- Shoe
- 5. Dust extraction port
- "CurveControl™" dial

### **ASSEMBLY**

⚠WARNING: Laceration Hazard. 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.

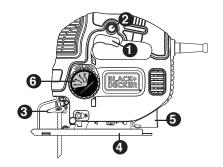
### FITTING THE SAW BLADE (FIGURE A)

- Hold the saw blade (7) as shown, with teeth facing forward.
- Push the locking lever (3) away from the shoe (4).

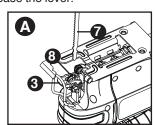
UClass I Construction				
(grounded)				
⊕earthing terminal				
⚠safety alert symbol				
□Class II Construction				
(double insulated)				
/min or rpmrevolutions or				
reciprocation per minute				
Read instruction manual before use				
⊕Use proper eye protection				
O				
€				
SFPM surface feet per minute				
SPMStrokes per minute				

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

Vol	ts	Minimum Gage for Cord Sets Total Length of Cord in Feet					
120			0-25	26-50	51-100	101-150	
240	V		0-50	51-100	101-200	201-300	
AmpereRating							
More		Not more		American Wire Gage			
Tha	ın	Than	I				
0	-	6	18	16	16	14	
6	-	10	18	16	14	12	
10	-	12	16	16	14	12	
12	-	16	14	12	Not Re	commended	



- Insert the shank of the saw blade into the blade holder (8) as far as it will go.
- Release the lever.



### CONNECTING A VACUUM CLEANER TO THE TOOL (FIGURE B)

- Slide vacuum nozzle (9) into the dust extraction port (5) as shown.



**USE** 

AWARNING: To reduce the risk of injury, never use the tool when the saw shoe is loose or removed.

### ADJUSTING THE SHOE PLATE FOR BEVEL CUTS (FIGURE C)

The shoe plate can be set to make either a straight cut or a left or right bevel cut at an angle of 45°.

Loosen the two screws (10).

- Pull the shoe (4) forward, rotate the shoe to the left or right and push it back into the 45° location.

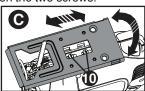
Tighten the two screws.

### To reset the shoe plate for straight cuts:

- Loosen the screws.

- Pull the shoe forward, rotate to the center and push it back into the 0° location.

- Tighten the two screws.



Switching On and Off

- To switch the tool on, press the variable speed switch (1). The tool speed depends on how far you depress the switch.

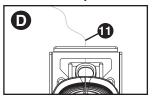
- For continuous operation, press the lock-on button (2) and release the variable speed switch. This option is available only at full speed.

- 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.

### How to Use the Sightline® Feature (figure D)

Use a pencil to mark the cutting line.

- Position the jig saw over the line (11). Viewing from directly above the jig saw the line of cut can be easily followed.

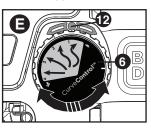


### SETTING THE DESIRED CUTTING MODE (CurveControl™) (FIGURE E)

This jig saw is equipped with four cutting actions, three orbital and one straight. Orbital action has a more aggressive blade motion and is designed for cutting in soft materials like wood or plastic. Orbital action provides a faster cut, but with a less smooth cut across the material. In orbital action, the blade moves forward during the cutting stroke in addition to the up and down motion. NOTE: Metal or hardwoods should never be cut in orbital action.

### To adjust the cutting mode:

- Turn the CurveControl™ dial (6) so the desired setting lines up with the dot (12) above the dial.
- Position 1 is non-orbital cutting.
- Positions 2, 3, and 4 are orbital cutting.
- The aggressiveness of the cut increases as the lever is adjusted from 1 to 4, with 4 being the most aggressive cut.



### HINTS FOR OPTIMUM USE General

 Use a high speed for wood, a medium speed for aluminum and PVC and a low speed for metals other then aluminum.

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

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

- 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.

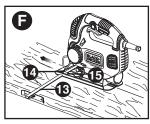
- Spread a film of oil along the intended

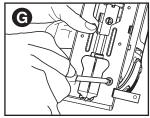
line of cut.

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

### Attaching Rip Fence (figure F & G)

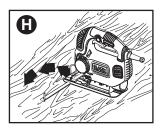
- Insert rip fence into slots of shoe with the cross bar (13) facing down as shown in figure F.
- Place screw (14) into hole in bottom of shoe.
- Align clamp bar (15) over screw with lipped edge facing down and pointing towards the rear of the saw.
- Using a phillips screwdriver, run the screw into the threaded hole in the bar clamp as shown in **figure G**.
- Adjust to width of cut and tighten screw.





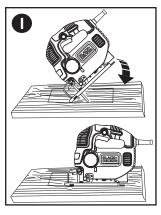
### Circle Cutting (FIGURE H)

- Insert rip fence into slot on the right side of saw shoe with cross bar facing up.
- Adjust rip fence so that distance from blade to hole in cross bar is the desired radius and tighten screw.
- Place saw so that center of hole in cross bar is over center of circle to be cut (make pocket 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 into exact center of circle to be cut. Using rip fence as a pivot arm, begin cutting circle.



### **Pocket Cutting (FIGURE I)**

A pocket cut is an easy method of making an inside cut. The saw can be inserted directly into a panel or board without first drilling a lead or pilot hole. In pocket cutting, measure the surface to be cut and mark clearly with a pencil. Next tip the saw forward until the front end of the shoe sits firmly on the work surface and the blade clears the work through its full stroke. Switch the tool on and allow it to attain maximum speed. Grip the saw firmly and lower the back edge of tool slowly until the blade reaches its complete depth. Hold the shoe flat against the wood and begin cutting. Do not remove blade from cut while it is still moving. Blade must come to a complete stop.



#### **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 organizations, always using identical replacement parts.

#### **ACCESSORIES**

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

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

### **TROUBLESHOOTING**

<u>Problem</u>	Possible Cause	Possible Solution	
Unit will not start.	<ul><li>Cord not plugged in.</li><li>Circuit fuse is blown.</li></ul>	Plug tool into a working outlet.     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	
	Cord or switch is damaged.	center or authorized servicer.)  • Have cord or switch replaced at BLACK+DECKER Service Center or Authorized Servicer.	