ATTACH YOUR RECEIPT HERE
Serial Number _____________________  Purchase Date ______________________

Questions, problems, missing parts? Before returning to your retailer, call our customer service department at 1-877-888-1880, 8:30 a.m. – 8:00 p.m. EST (Monday – Friday) & 10:00 a.m. – 6:00 p.m. EST (Saturday and Sunday).
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⚠️ 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, cement, and other masonry products.
  - Arsenic and chromium from chemically-treated lumber.
- Your risk from these exposures varies, depending upon how often you do this type of work. To reduce your exposure to these chemicals:
  - Work in a well-ventilated area.
  - Work with approved safety equipment, such as 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 or eyes or to lie on the skin may promote absorption of harmful chemicals.
SAFETY INFORMATION

PRODUCT SPECIFICATIONS

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>SPECIFICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Input</td>
<td>120V~, 60Hz, 10A</td>
</tr>
<tr>
<td>No Load Speed</td>
<td>11000-28000/min</td>
</tr>
<tr>
<td>Collet Capacities</td>
<td>1/4&quot;</td>
</tr>
</tbody>
</table>

Please read and understand this entire manual before attempting to assemble or operate this product. If you have any questions regarding the product, please call Hammerhead customer service at 1-877-888-1880, 8:30 a.m. – 8:00 p.m. EST (Monday – Friday) & 10:00 a.m. – 6:00 p.m. EST (Saturday and Sunday).

WARNING

The operation of any power tool can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning power-tool operation, always wear safety goggles or safety glasses with side shields and a full-face shield, when needed. We recommend using a wide vision safety mask over eyeglasses or standard safety glasses with shields. Always use eye protection marked to comply with ANSI Z87.1.

DANGER

People with electronic devices, such as pacemakers, should consult their physician(s) before using this product. Operation of electrical equipment in close proximity to a heart pacemaker could cause interference or failure of the pacemaker.

Know the Tool

To operate this tool, carefully read this manual and all labels affixed to the router before using it. Keep this manual available for future reference.

Some of the following symbols may be used on this router. Please study them and their meaning. Proper interpretation of these symbols will allow you to operate the tool better and more safely.
SAFETY INFORMATION

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DEFINITION</th>
<th>SYMBOL</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>V</td>
<td>Volts</td>
<td>$n_0$</td>
<td>No-load Speed</td>
</tr>
<tr>
<td>A</td>
<td>Amps</td>
<td>$/\text{min}$</td>
<td>Revolutions or reciprocations per minute (rpm)</td>
</tr>
<tr>
<td>Hz</td>
<td>Hertz</td>
<td>$\square$</td>
<td>Class II tool</td>
</tr>
<tr>
<td>W</td>
<td>Watts</td>
<td>$\sim$</td>
<td>Alternating Current</td>
</tr>
<tr>
<td>!</td>
<td>Caution</td>
<td><img src="image" alt="Caution" /></td>
<td>Always wear safety goggles or safety glasses with side shields and a full face shield when operating this product.</td>
</tr>
<tr>
<td><img src="image" alt="Book" /></td>
<td>Read the instructions</td>
<td><img src="image" alt="UL Listed" /></td>
<td>This symbol designates that this tool is listed by Underwriters Laboratories, to United States Standards.</td>
</tr>
</tbody>
</table>

**IMPORTANT:** This tool should only be serviced only by a qualified service technician.

**IMPORTANT SAFETY INSTRUCTIONS**

**SAVE THESE INSTRUCTIONS**—This manual contains important safety and operating instructions for router Model HAPR100.

**DANGER**

To reduce the risk of fire or electric shock, carefully follow these operating instructions.

**GENERAL POWER TOOL SAFETY WARNINGS**

**WARNING**

Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below 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.
SAFETY INFORMATION

Work area safety
- Keep work area clean and well lit. Cluttered or dark areas invite accidents.
- 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.
- Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

Electrical safety
- 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.
- 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.
- Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- 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.
- 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.
- 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.

Personal safety
- 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.
- Use personal protective equipment. Always wear eye protection. Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.
- 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 energising power tools that have the switch on invites accidents.
SAFETY INFORMATION

- 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.

- Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.

- Dress properly. Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.

- 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.

- Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles. A careless action can cause severe injury within a fraction of a second.

Power tool use and care

- 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.

- 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.

- Disconnect the plug from the power source and/or remove the battery pack, if detachable, 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.

- 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.

- Maintain power tools and accessories. 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.

- Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.

- 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.
SAFETY INFORMATION

• Keep handles and grasping surfaces dry, clean and free from oil and grease. Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

Service

• 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.

SAFETY INSTRUCTIONS FOR ROUTERS

• Hold the power tool by insulated gripping surfaces only, because the cutter may contact its own cord. Cutting 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 your hand or against the body leaves it unstable and may lead to loss of control.

ADDITIONAL SAFETY INSTRUCTIONS

• Always wear a dust mask and ear protection when using this power tool.

• Only use bits that are designed for this router.

• Only use sharp bits that are not chipped or cracked. Blunt bits will cause stalling.

• Secure small pieces of wood firmly before working. Never hold them in your hand.

• Keep hands away from the cutting area.

• Before starting the router, check that the bit is firmly positioned and secured in the collet.

• Do not exceed the maximum indicated rotation speed of the bit.

• Routing operations must always be performed against the direction of rotation (bit-rotation) of the bit.

• The bit must be running at full speed before it is lowered to the workpiece.

• When operating the router, always hold the handles firmly with both hands. Always ensure that your footing is secure when working.

• Be prepared for the reaction torque of the router, particularly if the bit becomes jammed in the workpiece.

• When a plunge-cutting operation is completed, release the handle to allow the router to slide back to its initial position.

• Familiarize yourself with your working area, and be alert for possible hazards that you may not hear due to the noise of the router.
SAFETY INFORMATION

- **Allow sufficient run-down time for bit after turning the router off.** Wait for it to come to a complete stop before removing it from the workpiece.
- **Never slow the router down with your hands.**
- **Do not touch the bit immediately after operation.** It may be extremely hot and could burn you.
- **Never stop the router by applying lateral pressure to the bit.**
- **Do not force the router.** It will do a better job if you allow it to work at its intended speed.
- **Avoid cutting nails and screws.** Inspect timber before cutting, and remove all nails and screws.
- **Protect your hearing. Wear appropriate personal hearing protection during use.** Under some conditions and duration of use, noise from this product may contribute to hearing loss.

PREPARATION

Before attempting to use the Router, familiarize yourself with all of its operating features and safety requirements.
PACKAGE CONTENTS

A

P

Q

D

E

F

O

S

K

L

M

U

T

V

10.0AMP PLUNGE ROUTER
<table>
<thead>
<tr>
<th>PARTS</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Fine adjustment knob</td>
</tr>
<tr>
<td>B</td>
<td>Wrench storage</td>
</tr>
<tr>
<td>C</td>
<td>Handle</td>
</tr>
<tr>
<td>D</td>
<td>Locking lever</td>
</tr>
<tr>
<td>E</td>
<td>Depth rod</td>
</tr>
<tr>
<td>F</td>
<td>Depth stop turret</td>
</tr>
<tr>
<td>G</td>
<td>Spindle lock button</td>
</tr>
<tr>
<td>H</td>
<td>Knob for edge guide</td>
</tr>
<tr>
<td>I</td>
<td>Chip shield</td>
</tr>
<tr>
<td>J</td>
<td>Plunge lock lever</td>
</tr>
<tr>
<td>K</td>
<td>ON/OFF switch</td>
</tr>
<tr>
<td>L</td>
<td>Collet nut</td>
</tr>
<tr>
<td>M</td>
<td>Dust extraction adaptor</td>
</tr>
<tr>
<td>N</td>
<td>Base plate</td>
</tr>
<tr>
<td>O</td>
<td>Lock-off button</td>
</tr>
<tr>
<td>P</td>
<td>Depth-of-cut scale</td>
</tr>
<tr>
<td>Q</td>
<td>Depth indicator</td>
</tr>
<tr>
<td>R</td>
<td>Edge Guide</td>
</tr>
<tr>
<td>S</td>
<td>Variable-speed Dial</td>
</tr>
<tr>
<td>T</td>
<td>1/4&quot; Collet</td>
</tr>
<tr>
<td>U</td>
<td>Wrench</td>
</tr>
<tr>
<td>V</td>
<td>Centering pin</td>
</tr>
</tbody>
</table>
1. Installing/removing the router bit

To install the bit

   a) Unplug the router.
   b) Rotate the chip shield to flat.
   c) Place the router upside down on a smooth, flat surface.
   d) Keep the spindle lock button depressed and rotate the spindle until the spindle lock fully engages.
   e) Loosen the collet nut using the wrench provided. Insert the shank of the router bit into the collet chuck assembly as far as it will go, then back the shank out until the cutters are approximately 1/8" to 1/4" away from the collet nut face. To ensure proper gripping of the router bit and minimize run-out, the shank of the router bit must be inserted at least 5/8". Keep the spindle lock button depressed and use the wrench provided to tighten the collet nut.
   f) Release the spindle lock.
   g) Rotate the chip shield back to its original vertical position before operation.

To remove the bit

⚠️ **CAUTION: Burn hazard. The router bits get hot during use. Allow sufficient time for the bit to cool before replacing it.**

   a) Keep the spindle lock button depressed.
   b) Loosen the collet nut using the wrench provided and remove the bit.
   c) Release the spindle lock.
2. Coarse adjusting the depth of cut

The depth of cut is the distance between the depth rod and the depth stop turret. The depth rod and the depth stop turret are used to control cutting depth as follows.

   a) Unplug the router.
   b) Loosen the locking lever so that the depth rod can be moved freely.
   c) Push down the plunge lock lever anti-clockwise and plunge the router down until the router bit touches the workpiece, then lock the router in position by releasing the plunge lock lever.
   d) Press the depth rod with one hand, then move the depth indicator to zero position on the scale with the other hand.
   e) Move the depth rod until the depth indicator attains the desired cutting depth on the scale, and secure the depth rod in position by firmly tightening the locking lever. At this moment, you will see there is a gap between the depth rod and turret, this gap is your desired routing depth.

**NOTE:** To avoid make a mistake, it is recommended to use the lowest step for setting final routing depth.

**To make a cut:**

— Plug the router into an electrical outlet

Push down the plunge lock lever anti-clockwise, guide the router downward with your two hands, until the depth rod touch the turret. Release the lock lever so that the router has been fixed in your desired cutting depth.

— Turn on the router (See later related section). make a cut.
— Once finish your cutting task, Push down the plunge lock lever anti-clockwise, guide the router with your two hands, let the router go back to its original position.
3. Fine adjusting the depth of cut

The router is equipped with a fine adjustment mechanism, which can be used after the plunge lock has been set at any plunge position and provides precise adjustment of the router bit position for unmatched accuracy.

a) To use the fine adjustment, turn the fine adjustment knob clockwise to lower the router bit or counterclockwise to raise it.

b) To allow precise settings, the fine adjustment knob is graduated in Imperial increments, each line is equal to (1/256”).

c) Each complete revolution of the fine adjustment knob adjusts the plunging depth by approximately 5/64”. The fine adjustment mechanism has a total adjustment range of 1/2”, which is restrained between the two indicating arrows on the back of the housing.

NOTE: Whenever the fine adjustment is used, be certain that the index marker (on the back of the housing) is positioned between the two indicating arrows to ensure enough travel in the desired direction after the router is plunged into position.

NOTE: When the router is plunged to maximum depth or is fully retracted to the top of the plunge position, the fine adjustment knob cannot move the motor further down or up, as the full extension of travel has been reached. Similarly, the fine adjustment knob cannot lower the bit when the depth rod is tightened against the depth turret.

NOTE: To be certain that your depth settings are as desired, you may want to make test cuts in scrap material before beginning work.
4. Deep cuts

Use the depth stop turret to change among different depths without changing the depth rod settings.

The most common use of this feature is making successively deeper cuts to achieve a final depth of cut that is too deep to accomplish in a single pass. Each of the steps progresses by 1/4" (6 mm) increments. The 3 steps represent a total of 3/4" (18 mm) with a full 360° rotation of the turret.

5. Switch on and off

The variable-speed control feature allows the motor speed to be matched to the cutter size and material hardness for an improved finish and extended bit life.

The variable-speed dial is used to adjust the speed of the router. Turn the dial to increase or decrease the speed of the tool. Position “1” selects the slowest speed and position “6” selects the fastest speed. Choose the applicable cutting speed according to the bit diameter and the material being cut.

⚠️ WARNING: It is recommended to select the desired speed before your operation, do not change speed during operation.
Variable Speed selection Chart

<table>
<thead>
<tr>
<th>CUTTING-BIT DIAMETER</th>
<th>DIAL SETTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>up to 1/2 in</td>
<td>5-6</td>
</tr>
<tr>
<td>1/2 to 3/4 in</td>
<td>3-4</td>
</tr>
<tr>
<td>3/4 to 1-1/2 in</td>
<td>1-2</td>
</tr>
</tbody>
</table>

Reduce the speed when using extra large bits (with a cutting diameter 1 inch or greater) or heavy cutting bits. Changing the rate of feed can also improve the quality of the cut.

<table>
<thead>
<tr>
<th>DIAL SETTING</th>
<th>RPM</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>11000</td>
<td>Non-ferrous metal, hardwoods, larger diameter cutting bits</td>
</tr>
<tr>
<td>2</td>
<td>14000</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>18000</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>22000</td>
<td>Softwoods, plastics, countertops, smaller diameter cutting bits</td>
</tr>
<tr>
<td>5</td>
<td>25000</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>28000</td>
<td></td>
</tr>
</tbody>
</table>

HAPR100 comes with a collet (Φ1/4”), This collet is only used for the cutting bits with 1/4 inch shank.

⚠️ WARNING: Make sure use only rotary cutting bits of the correct shank diameter for the collet mounted on the router.

⚠️ WARNING: Make sure use only rotary cutting bits suitable for the speed of the tool. The rotational speed marked on the cutting bits must exceed the maximum speed of the router.

The speed charts above indicate the relationship between speed settings and the cutting application. Exact settings are determined by operator experience and reference, and also by recommendations made by manufacturers of cutter bits.
6. On/off switch

The router is equipped with a lock-off button to avoid unintentional starting.

To switch on, depress the lock-off button and squeeze the on/off switch.

To switch off, release the on/off switch.

7. Dust extraction adaptor

Dust extraction prevents large accumulations of dust, high concentrations of dust in the ambient air, and facilitates disposal.

a) To attach, position as shown and secure adapter to base with the screws provided.

b) For long periods of working with wood or for commercial use on materials that produce dust that is detrimental to health, the router is to be connected to a suitable external dust extraction device.

⚠️ CAUTION: When using dust extraction, be sure that the vacuum cleaner is out of the way and secure so that it will not tip over or interfere with the router or workpiece.

⚠️ CAUTION: The vacuum hose and power cord must also be positioned so that they don’t interfere with the router or workpiece.

c) Turn on vacuum cleaner before routing process.

NOTE: Empty the vacuum cleaner as necessary.
8. Routing with the edge guide
a) Insert the edge guide rods through the holes in the base plate.
b) Slide the edge guide to desired width and fasten it with the knobs for the edge guide.
c) Guide the router with uniform feed and sideward pressure on the edge guide along the edge of the workpiece.

9. Routing circular arc profiles
a) Firstly reverse the edge guide and fasten the centering pin with the nut as illustrated.
b) Insert the edge guide rods through the holes in the base plate.
c) Pierce the centering pin into the marked centre of the circular arc.
d) Guide the tool with consistent feed across the workpiece.
10. Feeding the Router

The secrets to professional routing are a careful set-up for the cut, selecting the proper depth of cut, knowing how the cutter bit reacts in your workpiece, and the rate and direction of feed of the router.

a) Direction of Feed-External Cuts

Feeding the bit from left to right will cause the bit to pull the router towards the workpiece.

If the router is fed in the opposite direction (right to left), the rotating force of the cutter bit will tend to throw the bit away from the workpiece. This is called “Climb-Cutting.” “Climb-Cutting” may cause loss of control, possibly resulting in personal injury. When “Climb-Cutting” is required (e.g., backing around a corner), exercise extreme caution to maintain control of the router.

The high speed of the cutter bit during a proper feeding operation (left to right), results in very little kickback under normal conditions. However, if the cutter bit strikes a knot, an area of hard grain, or a foreign object, “Kickback” may result. Kickback may damage your workpiece and could cause you to lose control of the router, possibly causing personal injury. Kickback is always in the opposite direction of the clockwise cutter bit rotation, or counterclockwise.

To guard against and help prevent Kickback, plan your set-up and direction of feed so that you’re always keeping the sharp edges of the cutter bit biting straight into uncut wood. Always inspect your workpiece for knots, hard grain, and foreign objects.

⚠️ WARNING: Kickback causes the power tool to jerk back toward the user, causing possible loss of control and serious injury. Always take precautions against kickback as described in the operator’s manual.
**b) Direction of Feed - Internal Cuts**

When making an internal cut, such as a groove, dado, or slot, always have the guide you are using with the router (edge guide, straight edge, or board guide) on the right-hand side of the router as you make the cut.

When the guide is positioned on the right hand side of the router, the router travel should be from left to right and “counterclockwise” around curves (see figure 10b).

This counterclockwise action around the curve could cause “Climb cutting”. Always be alert and exercise extreme caution to maintain control of the router when making this type of cut around curves.

When the guide is positioned as shown in figure 10c, the router travel should be from left to right and clockwise around curves.

If there is a choice, the set-up in figure 10b is easier to use, but there is the possibility of “Climb Cutting” around curves. In either case, figure 10b or figure 10c, the sideways thrust of the router cutting is always against the guide, as is proper.

**WARNING:** Always securely clamp the workpiece in place, and keep a firm grip on the router base with both hands at all times. Failure to do so could result in loss of control causing possible serious personal injury.
11. Feed rate

The proper rate of feed depends on several factors: the hardness and moisture content of the workpiece, the depth of cut, and the cutting diameter of the bit. When cutting shallow grooves in soft woods such as pine, you may use a faster rate of feed. When making deep cuts in hardwoods such as oak, you should use a slower rate of feed.

a) Feeding too fast

Clean and smooth cuts can only be achieved when the cutter bit is rotating at a relatively high speed, taking very small bites and producing tiny, clean cut chips.

Forcing the feed of the cutter bit forward too rapidly slows the rotation speed of the cutter bit, and the bit takes larger bites as it rotates. Bigger bites mean bigger chips and a rough finish. This forcing action can also cause the router motor to overheat.

Under extreme force-feeding conditions, the rotations can become so slow and the bites become so large that chips become partially cut off, causing splintering and gouging of the workpiece.

The router will make clean, smooth cuts if it is allowed to run freely without the overload of forced feeding. You can detect forced feeding by the sound of the motor. Its usual high-pitched whine will sound lower and stronger as it loses speed. Holding the router against the workpiece will also come more difficult.

b) Feeding too slow

When you feed the cutter bit too slowly, the rotating cutter bit does not cut into new wood rapidly enough to take a bite. Instead, it scrapes away sawdust-like particles. This scraping produces heat, which can glaze, burn, and mar the cut in the workpiece and, in extreme cases, overheat the cutter bit.

When the cutter bit is scraping instead of cutting, the router is more difficult to control as you feed it.
With the reduced load on the motor caused by the slow feed, the cutter bit has a tendency to bounce off the sides of the cut in the workpiece, producing a cut with a rippled finish instead of clean straight sides.

12. Routing tips
   a) For best control and results, always allow the router to reach completely to the speed setting (as the setting using the speed dial) before bringing the bit cutter into contact with workpiece, always move the router so that the bit cutter exits from the workpiece before switching off the router. Operating in this manner will prolong switch and motor life and will greatly increase the quality of your work.
   b) Always use router bits with the shortest cutting length necessary to produce the desired cut. This will minimize router bit chatter.
   c) Always be sure the collet chuck is tightened securely before use.
   d) Soft materials require a faster feed rate than hard materials.
   e) The router may stall if improperly used or overloaded.
   f) Reduce the feed rate to prevent possible damage to the tool.
   g) To be certain that your depth and speed settings provide the desired results, test the settings by routing some scrap material before routing the actual workpiece.
   h) If the router is hard to control, heats up, runs very slowly or leaves an imperfect cut, consider these causes:
      • Wrong direction of feed — hard to control.
      • Feeding too fast — overloads motor.
      • Dull bit — overloads motor.
      • Cut is too large for one pass — overloads motor.
      • Feeding too slow — leaves friction burns on work.
      i) When routing deep cuts, it is best to make multiple progressively deeper cuts rather than trying to rout the full depth in one pass. The appropriate depth of cut will depend on the type of material and the type of cutter being used.
CARE AND MAINTENANCE

WARNING: Always disconnect the device before performing any adjustment or maintenance operation. If the replacement of the supply cord is necessary, this has to be done by the manufacturer or his agent in order to avoid a safety hazard.

Disconnect from the power supply immediately if the supply cord is damaged. Take care not to expose this tool to the rain.

If the carbon brushes need to be replaced, have this done by a qualified repair person (always replace the two brushes at the same time).

1. Cleaning

Avoid using solvents when cleaning plastic parts. Most plastic parts are susceptible to damage from various types of commercial solvents and may be damaged by their use. Use clean cloths to remove dirt, carbon dust, etc.

2. Lubrication

All the bearings in this tool are lubricated with a sufficient amount of high grade lubricant for the life of the unit under normal operating conditions, therefore no further lubrication is required.

EXTENSION CORDS

WARNING: If an extension cord is necessary, a cord with adequate size conductors that is capable of carrying the current necessary for your tool must be used. This will prevent excessive voltage drop, loss of power or overheating. Grounded tools must use 3-wire extension cords that have 3-prong plugs and receptacles.

NOTICE: The smaller the gauge number, the heavier the cord.

RECOMMENDED SIZES OF EXTENSION CORDS 120 VOLT ALTERNATING CURRENT TOOLS

<table>
<thead>
<tr>
<th>Tool’s Ampere Rating</th>
<th>Cord Size in A.W.G</th>
<th>Wire sizes in mm²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cord length in feet</td>
<td>Cord length in meters</td>
</tr>
<tr>
<td>3-6</td>
<td>25 18 16</td>
<td>0.75 0.75 1.5 2.5</td>
</tr>
<tr>
<td></td>
<td>50 16 16</td>
<td>0.75 1.0 2.5 4.0</td>
</tr>
<tr>
<td></td>
<td>100 16 16</td>
<td>0.75 1.0 2.5 4.0</td>
</tr>
<tr>
<td></td>
<td>150 16 16</td>
<td>1.0 2.5 4.0</td>
</tr>
<tr>
<td>6-8</td>
<td>25 18 16</td>
<td>0.75 0.75 1.5 2.5</td>
</tr>
<tr>
<td></td>
<td>50 16 16</td>
<td>0.75 1.0 2.5 4.0</td>
</tr>
<tr>
<td></td>
<td>100 16 16</td>
<td>0.75 1.0 2.5 4.0</td>
</tr>
<tr>
<td></td>
<td>150 16 16</td>
<td>1.0 2.5 4.0</td>
</tr>
<tr>
<td>8-10</td>
<td>25 16 16</td>
<td>0.75 0.75 1.5 2.5</td>
</tr>
<tr>
<td></td>
<td>50 16 16</td>
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</tr>
<tr>
<td></td>
<td>100 16 16</td>
<td>0.75 1.0 2.5 4.0</td>
</tr>
<tr>
<td></td>
<td>150 16 16</td>
<td>1.0 2.5 4.0</td>
</tr>
<tr>
<td>10-12</td>
<td>25 16 16</td>
<td>0.75 0.75 1.5 2.5</td>
</tr>
<tr>
<td></td>
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<td>0.75 1.0 2.5 4.0</td>
</tr>
<tr>
<td></td>
<td>150 16 16</td>
<td>1.0 2.5 4.0</td>
</tr>
<tr>
<td>12-16</td>
<td>25 14 12</td>
<td>1.0 2.5 4.0</td>
</tr>
<tr>
<td></td>
<td>50 12 -</td>
<td>2.5 4.0</td>
</tr>
<tr>
<td></td>
<td>100 12 -</td>
<td>4.0 -</td>
</tr>
<tr>
<td></td>
<td>150 12 -</td>
<td>- - -</td>
</tr>
</tbody>
</table>
Troubleshooting

Suspected malfunctions are often due to causes that the users can fix themselves. Therefore, check the product using this section. In most cases the problem can be solved quickly.

⚠️ WARNING: Only perform the steps described within these instructions! All further inspection, maintenance and repair work must be performed by an authorised service centre or a similarly qualified specialist if you cannot solve the problem yourself!

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Cause</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>The router does not work</td>
<td>Plug is not plugged into the power source.</td>
<td>Plug the cord into the power source.</td>
</tr>
<tr>
<td></td>
<td>The carbon brushes have worn out completely.</td>
<td>Remove the brush caps, and replace the old brushes with new ones.</td>
</tr>
<tr>
<td>The router does not reach full power</td>
<td>Extension cord not suitable for operation with this product</td>
<td>Use a proper extension cord</td>
</tr>
<tr>
<td></td>
<td>Power source (e.g. generator) has too low voltage</td>
<td>Connect to another power source</td>
</tr>
<tr>
<td></td>
<td>Air vents are blocked</td>
<td>Clean the air vents</td>
</tr>
<tr>
<td>The surface of the workpiece is not smooth after cutting</td>
<td>The bit is dull.</td>
<td>Change to a sharp bit.</td>
</tr>
<tr>
<td></td>
<td>Routing at an inappropriate bit speed</td>
<td>Select an appropriate bit speed.</td>
</tr>
</tbody>
</table>
WARRANTY

This Router is warranted to the original purchaser from the original purchase date for 24 Months, Hammerhead consumer portable power tool models will be free from defects in material or workmanship for a period of ninety days if the tool is used for professional use. Please retain your receipt.

This router is warranted to the original user to be free from defects in material and workmanship. If you believe that the router is defective at any time during the specified warranty period, call HAMMERHEAD support at 1-877-888-1880 to speak with a customer service agent. This warranty does not cover: (1) Part failure due to normal wear or tool abuse; (2) any parts have been altered or modified by anyone other than an authorized HAMMERHEAD personnel.

This warranty excludes bits, bulbs and accessories. This warranty gives you specific legal rights, and you may also have other rights that vary from state.

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