

# **KING TOOLS & EQUIPMENT**

## **OPERATORS INSTRUCTIONS AND PARTS LIST**



**VARIABLE SPEED  
SCROLL SAW  
MODEL # 1741-0**

King Tools & Equipment Inc., 1255 Acacia Street, Ontario, CA 91761

# READ INSTRUCTIONS BEFORE OPERATING

## SAVE THIS INSTRUCTION BOOK

Thank you for purchasing your King Scroll saw. With the proper care and operation you will enjoy years of trouble free service from your King Scroll saw. Please read this instruction manual and follow the directions carefully. You need this instruction book for operating instructions and the parts list. Keep it in a safe dry place. Staple your sale receipt to the front of the book in case you need it for warranty reasons.

### Warning:

The instructions and warnings in this instruction book can not cover every situation. The operator must use common sense and caution when operating this machine

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THIS PRODUCT IS WARRANTED AGAINST DEFECTS IN MATERIAL AND MANUFACTURING WORKMANSHIP FOR A PERIOD OF ONE YEAR. CONSUMABLE PARTS SUCH AS PULLEY BELTS, MOTOR BRUSHES, BULBS, ETC ARE NOT COVERED UNDER THE WARRANTY. WE HAVE STRICT QUALITY CONTROL STANDARDS. HOWEVER, SOMETIMES A PRODUCT MAY GET SHIPPED THAT DOES NOT MEET OUR QUALITY STANDARDS. IF YOU HAVE A PRODUCT THAT DOES NOT PERFORM PROPERLY IN THE FIRST 30 DAYS YOU CAN TAKE IT BACK TO THE RETAIL STORE WHERE YOU BOUGHT IT FOR A REFUND OR REPLACEMENT. AFTER 30 DAYS IT MUST BE SHIPPED TO KING AT THE FOLLOWING ADDRESS. BEFORE YOU RETURN THE PRODUCT CALL FOR AN AUTHORIZATION NUMBER. IF ALL YOU NEED IS A PART, THAT CAN BE SHIPPED TO YOU, NO CHARGE UNDER WARRANTY. IF YOU ARE MAKING A RETURN OR ORDERING A REPLACEMENT PART PROOF OF THE DATE OF PURCHASE WILL BE REQUIRED. RETURN SHIPMENTS MUST BE SENT POSTAGE OR UPS PAID.

KING TOOLS & EQUIPMENT CUSTOMER SERVICE  
800-950-5464 OR 909-930-6588

SHIP TO: KING TOOLS & EQUIPMENT  
1255 ACACIA ST., ONTARIO, CA 91761

PRODUCTS RETURNED WILL BE REPAIRED AT NO CHARGE IF THEY ARE UNDER WARRANTY AND HAVE NOT BEEN MODIFIED OR ABUSED. ONCE REPAIRED THEY WILL BE RETURN POSTAGE PAID. IF THERE IS A CHARGE FOR ANYTHING YOU WILL BE CONTACTED WITH AN ESTIMATE. REPAIRS MUST BE PAID IN ADVANCE BY CREDIT CARD

## SPECIFICATIONS

Motor _____	120v 60 Hz 1.1 amp 1725rpm, 120V, 60Hz
No Load Speeds _____	400-1600 SPM
Throat Depth _____	16"
Blade Length _____	5", Pin Type
Max. Depth of Cut _____	2-1/12"
Table Angle Settings _____	0 to 45 degrees
Overall Dimensions _____	24.5"L x 11"W x 15.5"H
Weight _____	35 lbs

## IMPORTANT SAFETY INFORMATION

### WARNING:

Certain hazards are involved with the operation of all machinery. Always exercise caution and respect for the machine. Follow all the SAFETY RULES to avoid personal injury and damage to property.

- 1) READ THE INSTRUCTION MANUAL CAREFULLY. Learn the machines applications and limitations as well as the specific potential hazards unique to the machine.
- 2) DO NOT REMOVE SAFETY GUARDS. Keep the guards in good working order.
- 3) GROUND THE MACHINE. If the machine is equipped with a 3 prong plug. It should be plugged into a 3 prong electrical socket. Never remove the ground pin on the plug.
- 4) ADJUSTMENT TOOLS MUST BE REMOVED BEFORE OPERATION. Make sure hex keys, wrenches, sockets, etc are removed before starting the machine.
- 5) CLEAN IS SAFE. Keep the work area clean and neat. Avoid clutter that could cause an accident.
- 6) DON'T WORK IN A DANGEROUS ENVIRONMENT. Don't use machines in a wet, dark or slippery area.
- 7) CHILD PROOF THE WORKSHOP AREA. Lock the area, turn the power off, unplug the machines.
- 8) KEEP AWAY. Don't let children or visitors near the machines when they are in operation.
- 9) DON'T USE FORCE. The machine is designed to work at its own capacity. Don't force it to do something it was not designed to do.
- 10) WEAR PROPER CLOTHING. Loose clothes, gloves, neckties, bracelets may get caught in moving parts. Non slip shoes are recommended. Long hair should be contained.
- 11) WEAR EYE PROTECTION. Wear impact resistant safety glasses when operating the machine. Regular eye glasses are not impact resistant.
- 12) WEAR EAR PLUGS. Protect your hearing by wearing ear plugs when operating loud noisy machines.
- 13) DON'T OVER REACH. Keep your balance at all times.
- 14) KEEP TOOLS IN GOOD CONDITION. Keep the blades sharp and clean. Follow the maintenance instructions.
- 15) ALWAYS DISCONNECT THE MACHINE. Unplug the machine before servicing the machine or changing the accessories.

- 16) DAMAGE INSPECTION. Before operating the machine check it for damage. If a guard is damaged replace it. If a moving part or major component is damaged have a qualified technician inspect it and replace it if necessary.
- 17) DO NOT STAND ON THE MACHINE. Do not stand on the machine as it may cause damage or tip over.
- 18) NEVER OPERATE THE MACHINE. Never operate the machine under the influence of drugs or alcohol.
- 19) KEEP THE LIGHTS ON. Make sure the work area is well lit, bright and not in a shadow.

## SAFETY RULES FOR SCROLL SAW

**WARNING:** This machine must not be modified or used for any purpose other than for which it was designed.

- 1) DO NOT OPERATE. You should not operate this machine unless you are thoroughly familiar with drilling machines and drilling techniques.
- 2) Do not operate the machine until it is completely assembled.
- 3) Read and understand the operators manual before operating the machine.
- 4) Make sure the proper electrical regulations are followed and the machine is grounded.
- 5) Before turning the machine on make sure it is secured firmly to the work bench
- 6) Avoid overloading. If the speed drops decrease pressure at once.
- 7) Always use the correct blade and speed for the material you are cutting. If the blade stops during operation turn the machine off at once.
- 8) Before cutting, adjust the drop foot to ride on the surface of the piece you are cutting. This keeps the work piece from jumping up and down.
- 9) Hold the work piece firmly when cutting. The action of the blade cutting can cause it to kick out, which could cause damage to the work piece.
- 10) Make sure the work piece is free of nails or staples
- 11) Give the blade 15 seconds to cool off before you touch it after you turn the saw off. The blade gets hot.
- 12) Make sure the blade is firmly and properly installed before using the machine.
- 13) Make all adjustments to the machine with it turned OFF.
- 14) Never leave the saw running while unattended.

# GET TO KNOW YOUR SCROLL SAW

## 1) LASER GUIDE POWER SWITCH.

The saw has a Laser Guide that helps you cut straighter and more accurate cuts. It can be turned on by pressing this button.

## 2) ON/OFF SWITCH & VARIABLE SPEED CONTROL.

Pull the switch upward to turn the saw on. Turn it clockwise to increase the speed. Turn counter clockwise for slower speeds.

## 3) LED WORK LIGHT SWITCH.

Press this button to turn on the powerful LED work light.

## 4) THROAT PLATE.

Remove this plate when changing the blade. The plate should always be in place when using the saw

## 5) DUST EJECTION PORT.

Attach a wet dry vacuum hose to this Dust Ejection Port and vacuum out the dust.

## 6) BEVEL SCALE.

This is your degree setting for angle cuts up to 45 degrees.

## 7) BEVEL ADJUSTMENT KNOB.

This knob locks the table in the desired angle.

## 8) WORK TABLE.

Your work surface.

## 9) DROP FOOT.

This should always be adjusted to rest on the top of the work piece

## 10) UPPER BLADE CLAMP KNOB.

This holds the blade in place. The lower blade clamp is under the table.

## 11) DUST BLOWER.

Blows the dust off your work piece. Adjust it so it blows at the point the blade hits the work piece.

## 12) LASER ADJUSTMENT KNOB.

This is used to position the guide beam.

## 13) DROP FOOT ADJUSTMENT.

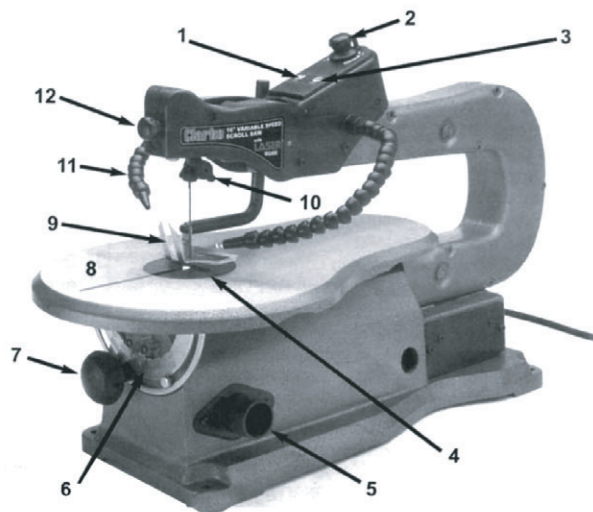
This is the adjustment knob to lock or loosen the drop foot position.

## 14) QUICK RELEASE TENSION LEVER.

For loosening or tightening the blade tension when changing the blade.



FIG 1



## SET UP STEPS TO GET STARTED

### INSTALLING THE BLADE.

**WARNING! Unplug the machine from the power source and turn the switch to the off position before installing the blade. The teeth of the blade should always point down.**

- 1) Remove the throat plate by pressing upward on it from under the table.
- 2) Lift up the tension release lever. Fig. 2
- 3) Make sure the slots on the upper and lower blade clamps are slightly wider than the thickness of the blade by turning the blade clamp knob counterclockwise.

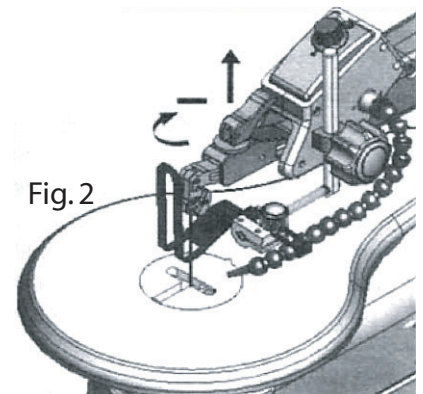
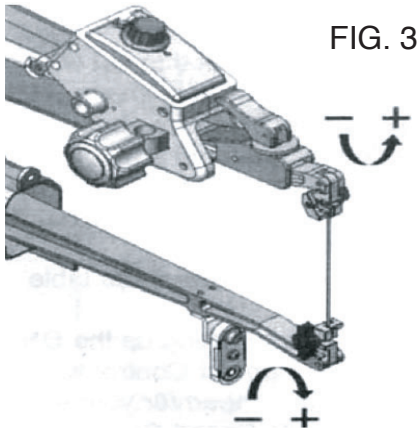


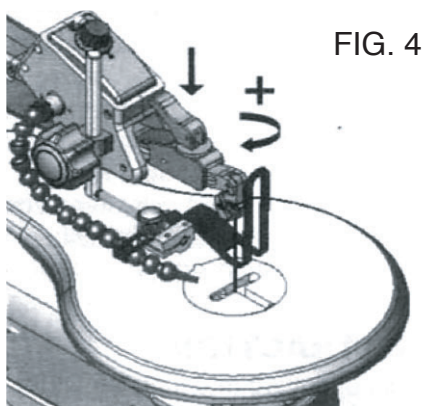
Fig. 2



- 4) With the blade teeth pointing down and the teeth facing the front of the saw, insert the blade in the lower blade clamp slot. Pull up on the blade to make sure the pins are secure in the slot. While pulling up on the blade tighten the lower clamp by turning the lower blade clamp knob clockwise. ( Fig. 3)



- 5) Now insert the other end of the blade into the top slot. Turn the quick release tension lever clockwise to tighten the tension on the blade.
- 6) When the blade is secure turn the upper blade clamp knob clockwise to secure the blade.
- 7) Lower the quick release lever ( Fig. 4) and replace the throat plate



## DROP FOOT ADJUSTMENT

The drop foot holds your work in place and prevents it from lifting off the table. Proper drop foot adjustment will prevent vibration and give you a better cut.

- 1) Loosen the drop foot adjustment knob (Fig 13) so the adjustment bar can be moved up and down.

- 2) Place your work piece on the table and lower the drop foot until it touches the work piece. Do not put pressure on the work piece with the drop foot.
- 3) Make sure the left and right side of the drop foot are evenly touching the work piece. If it is not touching evenly adjust it as follows:
  - A) Using the Allen wrench that came with the saw, loosen the drop foot angle screw (Pt #66)
  - B) Change the angle of the drop foot until both sides are evenly touching the work piece.
  - C) Tighten the drop foot angle screw.
- 4) Tighten the drop foot adjustment knob.

## TABLE ADJUSTMENT

The table tilts 0-45 degrees right and left. This is great for bevel cuts. To adjust the table follow these steps.

- 1) Loosen the drop foot adjustment knob and raise the drop foot away from the table.
- 2) Loosen the bevel adjustment knob.
- 3) Tilt the table to the desired angle and align the red line on the scale indicator with the line on the bevel scale.
 

**Note:** The bevel has preset notches for the most common angles.
- 4) Tighten the bevel adjustment knob.

## DUST EXTRACTION

Dust will accumulate in the saw. To remove it, hook up a hose from a wet/dry vacuum to the dust extraction port and turn the vacuum on.

## MOUNTING SAW TO A WORKBENCH

- 1) Using the base of the saw as a template, mark the bench through the holes in the saw base. Drill holes in the bench.
- 2) A rubber or foam pad between the saw and the base is recommended to reduce noise and vibration. ( Pad not included)
- 3) Bolt the saw to the bench using Bolts, Washers and Nuts.

## WORK LIGHT AND LASER GUIDE LASER GUIDE

- 1) The saw must be turned on for the Laser and Work lights to operate. Pull up on the ON/OFF switch.
- 2) Press the Laser switch on top of the saw.

- The Laser guide must be adjusted to accurately sight the cut. Turn the Laser adjust knob counterclockwise to loosen. Then adjust the Laser. Turn the Laser adjust knob clockwise to tighten.

**WARNING!**

Adjusting the Laser must be done while the saw is running. Be careful not to get fingers or clothing near the blade.

**WARNING!**

- \* Never aim the laser beam at a person or pet.
- \* Do not stare at the laser beam more that 25 seconds
- \* Make sure the surface the beam is aimed at is not reflecting the beam at a person or pet.
- \* Only turn the laser beam on when the work piece is in place.

**WORK LIGHT**

- When the machine is on press the light button on top of the saw. You can adjust the flexible arm of the light.

**SAW OPERATION**

**WARNING:** Read and understand the following instructions in this book before operating the saw.

- The saw will cut wood, plastic and non-ferrous materials. Be sure to choose the correct blade for your work. See the following Blade Chart for suggestions.
- Make sure the teeth of the saw blade are pointing downward.
- Press the work piece against the table but not against the blade.
- Pull the ON/OFF switch up.
- Choose the right speed for the material you are cutting. NOTE: high speeds are for wood and lower speeds for non-ferrous metals.

- When needed, turn the LED work light and Laser guide on to improve visibility and accuracy.
- Push the edge of the work piece into the blade after the saw has come to full speed.
- Adjust the dust blower to keep the work area clean.
- Keep the work area clean. Remove cut pieces as they are cut. Turn the machine off to safely remove the pieces.
- When you are finished turn the saw off. Never leave the saw running unattended.

**WARNING!** Never get your fingers to close to the blade.

**SCROLL SAW BLADE CHOICES**

Normally harder and thinner material require finer saw teeth and higher speeds. Thicker and softer material requires slower speeds. Your saw uses a 5" pin type blade and there are a wide variety of blades available. Narrow blades are for intricate cuts and wide blades are for straight cuts. See the blade chart below.

**BLADE INFORMATION:**

- Scroll saw blades wear out and must be replaced frequently. They stay sharp for 1/2 hour to 2 hours depending on the material you are cutting.
- You will get best results when cutting wood that is 1 inch or less. Thicker wood must be cut very slowly.
- When choosing a blade consider the following:
  - \* Very fine narrow blades are used to cut thin material (1/4" 6mm or less).
  - \* Most blade package state the size and type of material the blade is intended to cut.
  - \* Narrow blades cut tighter circles. Wide blades are for straight cuts.

**BLADE CHOICE CHART**

TEETH / INCH	WIDTH	THICKNESS	SPEED/STROKES PER MINUTE	MATERIAL CUT
10	0.110" 2.8mm	0.020" .5mm	1200-1600	Popular size for cutting hard and soft woods 3/16" (4.8mm) up to 2" (50mm). Plastics, paper, felt, etc.
15	0.110" 2.8mm	0.020" .5mm	600-1200	Wood, plastics, extremely thin cuts on materials 3/32" (2.4mm) to 1/2" ( 13mm) thick
18	0.095" 2.4mm	0.010" 3mm	400-600	For tight radius work in thin materials 3/32" (2.4mm) to 1/8" ( 3mm) wood, veneer, fiber, ivory, plastic, etc.

# MAINTENANCE

## WARNING!

Always turn the machine off and remove the plug from the power source before maintaining your saw.

## GENERAL MAINTENANCE:

A coat of paste wax on the work table will make the wood glide over it smoothly.

## ARM BEARINGS:

Lubricate the arm bearings after every 50 hours of use.

- 1) Turn the scroll saw on its side
- 2) Squirt a generous amount of SAFE20 oil around the shaft end and bronze bearings
- 3) Let the oil soak in overnight
- 4) Next day repeat the process for the other side

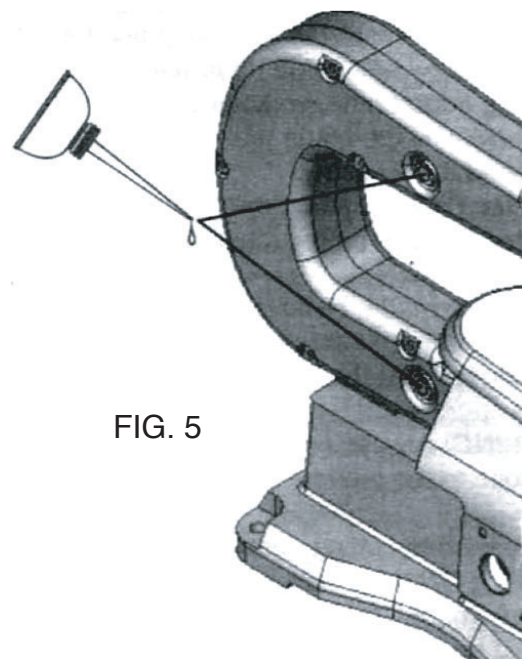


FIG. 5

# TROUBLE SHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
BREAKING BLADES	<ol style="list-style-type: none"> <li>1) Wrong tension</li> <li>2) Too much feed pressure</li> <li>3) Wrong blade type</li> <li>4) Twisting blade in wood</li> </ol>	<ol style="list-style-type: none"> <li>1) Adjustable blade tension</li> <li>2) Reduce feed rate</li> <li>3) Refer to suggested blade type chart-replace blade</li> <li>4) Avoid side pressure on blade</li> </ol>
MOTOR WILL NOT RUN	<ol style="list-style-type: none"> <li>1) Defective power cord/plug</li> <li>2) Defective motor</li> </ol>	<ol style="list-style-type: none"> <li>1) Replace power cord</li> <li>2) Call KING customer service</li> </ol>
EXCESS VIBRATION ( THERE IS ALWAYS SOME)	<ol style="list-style-type: none"> <li>1) Improper mounting</li> <li>2) Unsuitable mounting surfaces</li> <li>3) Loose table</li> <li>4) Loose motor mounting</li> </ol>	<ol style="list-style-type: none"> <li>1) Firmly mount saw to work bench</li> <li>2) Mount saw on flat stable surface</li> <li>3) Tighten table lock knob</li> <li>4) Tighten motor lock knob</li> </ol>

## PARTS LIST

Part No.	Description	Part No.	Description
1741 -0001	Metal switch guard	1741 -0047	Spring Washer 6
1741 -0002	Hex Nut M4	1741 -0048	Hex Socket Cap Head Screw M6x25
1741 -0003	On/Off Switch & Variable Speed Control Knob	1741 -0049	Saw Table
1741 -0004	Switch Plate	1741 -0050	Dust Port
1741 -0005	On/Off Switch & Variable Speed Control	1741 -0051	Hex Socket Cap Head Screw M4x10
1741 -0006	Right Switch Box	1741 -0052	Tooth Washer 4
1741 -0007	Cross Recessed Pan Head Screw M5x8	1741 -0053	Cross Recessed Pan Head Screw M5_45
1741 -0008	Strain Relief	1741 -0054	Hex Nut M6
1741 -0009	Arm Housing Set	1741 -0055	Cross Recessed Pan Head Screw M5_55
1741 -0010	Oil Bushing	1741 -0056	Cross Recessed Pan Head Screw M5_50
1741 -0011	Blade Tension Set	1741 -0057	Bellows
1741 -0012	Arm Upper	1741 -0058	Bellows Lock
1741 -0013	Arm Lower	1741 -0059	Left Switch Box
1741 -0014	Hexagon fit bolts M6	1741 -0060	Cross Recessed Pan Head Screw M4_50
1741 -0015	Blade Tension Knob	1741 -0061	Adjustment Level-Link
1741 -0016	Spring-type straight pins-Slotted_3_16	1741 -0062	Adjustment Level Lock Knob
1741 -0017	Washer 8	1741 -0063	Saw Dust Blower
1741 -0018	Limited bolt	1741 -0064	Adjustment Level
1741 -0019	Spring-type straight pins-Slotted_4_22	1741 -0065	Tooth Washer 5
1741 -0020	Spring-type straight pins-Slotted_4_16	1741 -0066	Hex Socket Cap Head Screw M5x10
1741 -0021	Blade Clamp Knob	1741 -0067	Blade Storage
1741 -0022	Spring Washer 4	1741 -0068	Drop Foot
1741 -0023	Blade Adapter	1741 -0069	Mushroom head break mandrel blind rivets
1741 -0024	Tensioning lever	1741 -0070	Plate Cover
1741 -0025	Spring	1741 -0071	Base
1741 -0026	Blade Adapter clamp	1741 -0072	Hex Socket Cap Head Screw M6x16
1741 -0027	Blade	1741 -0073	Bolt M6x16
1741 -0028	Link Board	1741 -0074	Motor
1741 -0029	Hex Nut M5	1741 -0075	Hex Socket Set Screw M8x8
1741 -0030	Power Cord	1741 -0076	Eccentric
1741 -0031	Hex Socket Cap Head Screw M4x16	1741 -0077	Bevel Scale
1741 -0032	Spacer	1741 -0078	Hexagon fit bolts M6
1741 -0033	Link	1741 -0079	Large Washer 6
1741 -0034	bearing 625ZZ	1741 -0080	Table Lock Knob
1741 -0035	Radial Spherical Plain Bearing	1741 -0081	Ball
1741 -0036	Bearing Retainer	1741 -0082	Spring
1741 -0037	Pan Head Tapping Screw ST4.2x8	1741 -0083	Cross Recessed Pan Head Screw M4_16
1741 -0038	Spring Washer 5	1741 -0084	Scale Indicator
1741 -0039	Hex Socket Cap Head Screw M5x25	1741 -0085	Throat Plate
1741 -0040	Hex Socket Cap Head Screw M5x20	1741 -0086	LED Lamp
1741 -0041	Pan Head Tapping Screw ST4.2x10	1741 -0087	Pan Head Tapping Screw ST2.9x8
1741 -0042	PCB Box Cover	1741 -0088	Pan Head Tapping Screw ST4.2x16
1741 -0043	PCB (43-1,43-2 included)	1741 -0089	Laser connection
1741 -0044	Cross Recessed Pan Head Screw M4_10	1741 -0090	Bolt M6x12
1741 -0045	PCB Box	1741 -0091	Laser Adjustment
1741 -0046	Washer 6	1741 -0092	Laser



# PARTS DIAGRAM

