**WARNING!**

This manual provides critical safety instructions on the proper setup, operation, maintenance, and service of this machine/tool. Save this document, refer to it often, and use it to instruct other operators.

Failure to read, understand and follow the instructions in this manual may result in fire or serious personal injury—including amputation, electrocution, or death.

The owner of this machine/tool is solely responsible for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training and usage authorization, proper inspection and maintenance, manual availability and comprehension, application of safety devices, cutting/sanding/grinding tool integrity, and the usage of personal protective equipment.

The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.

---

**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 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.
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CAUTION

For Your Own Safety Read Owner’s Manual
Before Operating Saw

a) Wear eye protection.
b) Use saw-blade guard and riving knife for every operation for which it can be used, including all through sawing.
c) Keep hands out of the line of saw blade.
d) Use a push-stick when required.
e) Pay particular attention to instructions on reducing risk of kickback.
f) Do not perform any operation freehand.
g) Never reach around or over saw blade.

USE THE QUICK GUIDE PAGE LABELS TO SEARCH OUT INFORMATION FAST!
INTRODUCTION
Woodstock Technical Support

This machine has been specially designed to provide many years of trouble-free service. Close attention to detail, ruggedly built parts and a rigid quality control program assure safe and reliable operation.

Woodstock International, Inc. is committed to customer satisfaction. Our intent with this manual is to include the basic information for safety, setup, operation, maintenance, and service of this product.

We stand behind our machines! In the event that questions arise about your machine, please contact Woodstock International Technical Support at (360) 734-3482 or send e-mail to: tech-support@shopfox.biz. Our knowledgeable staff will help you troubleshoot problems and process warranty claims.

If you need the latest edition of this manual, you can download it from http://www.shopfox.biz.

If you have comments about this manual, please contact us at:

Woodstock International, Inc.
Attn: Technical Documentation Manager
P.O. Box 2309
Bellingham, WA 98227
Email: manuals@woodstockint.com

Controls and Features

Figure 1. Model W1824 identification.
MODEL W1824
HYBRID TABLE SAW WITH EXTENSION TABLE

Product Dimensions

Weight.......................................................................................................... 404 lbs.
Width (side-to-side) x Depth (front-to-back) x Height................................. 58 x 36 x 40 in.
Footprint (Length x Width)........................................................................ 20 x 21-1/2 in.

Shipping Dimensions

Carton #1
Type........................................................................... Cardboard Box on Wood Skids
Content................................................................................................. Machine
Weight................................................................................................... 380 lbs.
Length x Width x Height..................................................................... 26 x 30 x 43 in.

Carton #2
Type............................................................................................. Cardboard Box
Content.................................................................................................... Fence
Weight.................................................................................................... 18 lbs.
Length x Width x Height......................................................................... 0 x 0 x 0 in.

Carton #3
Type............................................................................................. Cardboard Box
Content..................................................................................................... Rails
Weight.................................................................................................... 32 lbs.
Length x Width x Height......................................................................... 0 x 0 x 0 in.

Electrical

Power Requirement................................................................................. 110V or 220V, Single-Phase, 60 Hz
Prewired Voltage.................................................................................... 220V
Full-Load Current Rating........................................................................ 16A at 110V, 8A at 220V
Minimum Circuit Size.......................................................................... 20A at 110V, 15A at 220V
Connection Type..................................................................................... Cord & Plug
Power Cord Included................................................................................ Yes
Power Cord Length................................................................................. 6 ft.
Power Cord Gauge.................................................................................. 14 AWG
Plug Included.......................................................................................... Yes
Included Plug Type.................................................................................. 6-20 for 220V
Recommended Plug Type........................................................................ 5-20 for 110V
Switch Type......................................................................................... ON/OFF Push Button Switch w/Large Shut-Off Paddle
Voltage Conversion Kit........................................................................ X1824204-1 for 110V
### Motors

**Main**

- **Type**: TEFC Capacitor-Start Induction
- **Horsepower**: 2 HP
- **Phase**: Single-Phase
- **Amps**: 16A/8A
- **Speed**: 3450 RPM
- **Power Transfer**: Poly-V Belt Drive
- **Bearings**: Sealed & Permanently Lubricated

### Main Specifications

<table>
<thead>
<tr>
<th>Main Information</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Table Saw Type</strong></td>
<td>Hybrid</td>
</tr>
<tr>
<td><strong>Maximum Blade Diameter</strong></td>
<td>10 in.</td>
</tr>
<tr>
<td><strong>Arbor Size</strong></td>
<td>5/8 in.</td>
</tr>
<tr>
<td><strong>Arbor Speed</strong></td>
<td>3850 RPM</td>
</tr>
<tr>
<td><strong>Maximum Width of Dado</strong></td>
<td>13/16 in.</td>
</tr>
<tr>
<td><strong>Blade Tilt Direction</strong></td>
<td>Left</td>
</tr>
<tr>
<td><strong>Max Blade Tilt</strong></td>
<td>45 deg.</td>
</tr>
<tr>
<td><strong>Maximum Depth of Cut At 90 Degrees</strong></td>
<td>3-1/8 in.</td>
</tr>
<tr>
<td><strong>Maximum Depth of Cut At 45 Degrees</strong></td>
<td>2-3/16 in.</td>
</tr>
<tr>
<td><strong>Max Rip Right of Blade w/Included Fence &amp; Rails</strong></td>
<td>30 in.</td>
</tr>
<tr>
<td><strong>Max Rip Left of Blade w/Included Fence &amp; Rails</strong></td>
<td>12 in.</td>
</tr>
</tbody>
</table>

### Additional Blade Information

- **Included Blade Information**: 10” x 40T
- **Riving Knife/Spreader Thickness**: 0.100 in.
- **Required Blade Body Thickness**: 0.071 – 0.094 in.
- **Required Blade Kerf Thickness**: 0.102 – 0.126 in.
- **Rim Speed at Max Blade Diameter**: 10,100 FPM

### Table Information

- **Floor to Table Height**: 34 in.
- **Table Size with Extension Wings Width**: 55 in.
- **Table Size with Extension Wings Depth**: 27 in.
- **Distance Front of Table to Center of Blade**: 16 in.
- **Distance Front of Table to Blade At Maximum Cut**: 11-1/2 in.
- **Main Table Size Thickness**: 1-1/2 in.

### Fence Information

- **Fence Type**: Camlock T-Shape w/ Wraparound Rail-Mounting & HDPE Face
- **Fence Size Length**: 34-1/4 in.
- **Fence Size Width**: 3-1/8 in.
- **Fence Size Height**: 2-1/2 in.
- **Fence Rail Type**: Square Steel Tubing
- **Fence Rail Length**: 59-5/8 in.
- **Fence Rail Width**: 2 in.
- **Fence Rail Height**: 1-5/8 in.

### Miter Gauge Information

- **Miter Gauge Slot Type**: T-Slot
- **Miter Gauge Slot Size Width**: 3/4 in.
- **Miter Gauge Slot Size Height**: 3/8 in.
Construction

Table................................................................. Precision-Ground Cast Iron
Wings................................................................. Cast Iron; Phenolic w/Low Friction Surface
Cabinet.............................................................. Pre-Formed Steel
Trunnions............................................................. Cast Iron
Fence Assembly.................................................. Steel with HDPE Side Plates
Rails................................................................. Steel
Miter Guage Construction.................................. Aluminum
Guard................................................................. Steel and Clear Plastic
Body/Cabinet Paint............................................ Powder Coated
Arbor Bearings.................................................. Sealed & Permanently Lubricated

Other Related Information

Number of Dust Ports.................................................. 1
Dust Port Size........................................................ 4 in.
Compatible Mobile Base......................................... D2057A

Other

Country Of Origin .................................................... China
Warranty ............................................................. 2 Years
Approximate Assembly & Setup Time ...................... 1 Hour
Serial Number Location ......................................... ID Label on Cabinet
ISO 9001 Factory ..................................................... Yes
CSA Certified ......................................................... Yes

Features

Precision-ground cast iron table
Cast iron trunnions
4” dust port
T-slot miter gauge
Camlock T-shaped fence with HDPE face
Easy glide fence system
Powder coated paint
Quick-release riving knife and blade guard assembly
Knurled knobs for adjusting fence
Includes regular & dado blade table inserts
Device on blade guard allows enabling/disabling anti-kickback pawls
SAFETY
For Your Own Safety, Read Manual Before Operating Machine

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures—this responsibility is ultimately up to the operator!

⚠️ 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
This symbol is used to alert the user to useful information about proper operation of the equipment, and/or a situation that may cause damage to the machinery.

Standard Machinery Safety Instructions

OWNER’S MANUAL. Read and understand this owner’s manual BEFORE using machine. Untrained users can be seriously hurt.

EYE PROTECTION. Always wear ANSI-approved safety glasses or a face shield when operating or observing machinery to reduce the risk of eye injury or blindness from flying particles. Everyday eyeglasses are not approved safety glasses.

HAZARDOUS DUST. Dust created while using machinery may cause cancer, birth defects, or long-term respiratory damage. Be aware of dust hazards associated with workpiece materials, and always wear a NIOSH-approved respirator to reduce your risk.

WEARING PROPER APPAREL. Do not wear clothing, apparel, or jewelry that can become entangled in moving parts. Always tie back or cover long hair. Wear non-slip footwear to avoid accidental slips which could cause a loss of workpiece control.

HEARING PROTECTION. Always wear hearing protection when operating or observing loud machinery. Extended exposure to this noise without hearing protection can cause permanent hearing loss.

MENTAL ALERTNESS. Be mentally alert when running machinery. Never operate under the influence of drugs or alcohol, when tired, or when distracted.

DISCONNECTING POWER SUPPLY. Always disconnect machine from power supply before servicing, adjusting, or changing cutting tools (bits, blades, cutters, etc.). Make sure switch is in OFF position before reconnecting to avoid an unexpected or unintentional start.

DANGEROUS ENVIRONMENTS. Do not use machinery in wet or rainy locations, cluttered areas, around flammables, or in poorly-lit areas. Keep work area clean, dry, and well-lighted to minimize risk of injury.
APPROVED OPERATION. Untrained operators can be seriously hurt by machinery. Only allow trained or properly supervised people to use machine. When machine is not being used, disconnect power, remove switch keys, or lock-out machine to prevent unauthorized use—especially around children. Make workshop kid proof!

ONLY USE AS INTENDED. Only use machine for its intended purpose. Never modify or alter machine for a purpose not intended by the manufacturer or serious injury may result!

USE RECOMMENDED ACCESSORIES. Consult this owner’s manual or the manufacturer for recommended accessories. Using improper accessories will increase the risk of serious injury.

CHILDREN & BYSTANDERS. Keep children and bystanders a safe distance away from work area. Stop using machine if children or bystanders become a distraction.

REMOVE ADJUSTING TOOLS. Never leave adjustment tools, chuck keys, wrenches, etc. in or on machine—especially near moving parts. Verify removal before starting!

SECURING WORKPIECE. When required, use clamps or vises to secure workpiece. A secured workpiece protects hands and frees both of them to operate the machine.

FEED DIRECTION. Unless otherwise noted, feed work against the rotation of blades or cutters. Feeding in the same direction of rotation may pull your hand into the cut.

GUARDS & COVERS. Guards and covers can protect you from accidental contact with moving parts or flying debris. Make sure they are properly installed, undamaged, and working correctly before using machine.

NEVER STAND ON MACHINE. Serious injury or accidental contact with cutting tool may occur if machine is tipped. Machine may be damaged.

STABLE MACHINE. Unexpected movement during operations greatly increases the risk of injury and loss of control. Verify machines are stable/secure and mobile bases (if used) are locked before starting.

FORCING MACHINERY. Do not force machine. It will do the job safer and better at the rate for which it was designed.

AWKWARD POSITIONS. Keep proper footing and balance at all times when operating machine. Do not overreach! Avoid awkward hand positions that make workpiece control difficult or increase the risk of accidental injury.

UNATTENDED OPERATION. Never leave machine running while unattended. Turn machine off and ensure all moving parts completely stop before walking away.

MAINTAIN WITH CARE. Follow all maintenance instructions and lubrication schedules to keep machine in good working condition. An improperly maintained machine may increase the risk of serious injury.

CHECK DAMAGED PARTS. Regularly inspect machine for damaged parts, loose bolts, mis-adjusted or mis-aligned parts, binding, or any other conditions that may affect safe operation. Always repair or replace damaged parts, wires, cords, or plugs before operating machine.

MAINTAIN POWER CORDS. When disconnecting cord-connected machines from power, grab and pull the plug—NOT the cord. Pulling the cord may damage the wires inside. Do not handle the cord/plug with wet hands. Avoid cord damage by keeping it away from heated surfaces, high traffic areas, harsh chemicals, and wet or damp locations.

EXPERIENCING DIFFICULTIES. If at any time you are experiencing difficulties performing the intended operation, stop using the machine! Contact our Technical Support for help at (360) 734-3482.
Additional Safety for Table Saws

**HAND & BODY POSITIONING.** Touching a spinning saw blade will cause serious laceration or amputation injuries. Keep hands away from saw blade and out of blade path during operation, so they cannot slip accidentally into blade. Stand to side of blade path. Never reach around, behind, or over blade. Only operate at front of machine; never operate from rear or sides of saw.

**BLADE GUARD.** Use blade guard for all “through cuts” for which it can be used. (A through cut is an operation where blade cuts completely through the top of the workpiece.) Make sure the blade guard is installed and adjusted correctly; promptly repair or replace it if damaged. Always re-install blade guard immediately after operations that require its removal. Operating saw with blade guard removed greatly increases risk of severe laceration or amputation injuries from accidental blade contact.

**RIVING KNIFE.** Use the riving knife for all “non-through cuts” for which it can be used. (A non-through cut is an operation where the blade does not cut through the top of the workpiece.) Make sure the riving knife is aligned and positioned correctly; and promptly repair or replace it if damaged. Using the riving knife incorrectly will increase the risk of kickback or accidental blade contact.

**KICKBACK.** Kickback occurs when the saw blade ejects the workpiece back toward the operator. Know how to reduce the risk of kickback, and learn how to protect yourself if it does occur.

**FEEDING WORKPIECE.** Feeding workpiece incorrectly will increase risk of kickback. Never start saw with a workpiece touching blade; allow blade to reach full speed before cutting. Only feed workpiece against direction of blade rotation, from front of saw. Never pull workpiece from behind blade. Always use some type of guide (fence, miter gauge, sliding table or sled, etc.) to feed workpiece in a straight line. Never back a workpiece out of a cut or move it backwards or sideways after starting a cut. Feed cuts all the way through to completion. Never perform any operation “freehand” (making a cut without using a fence, miter gauge, or other guide). Never plunge cut.

**FENCE.** Make sure the fence remains properly adjusted and parallel with the blade. Always lock the fence in place before using. Using or adjusting the fence incorrectly will increase risk of kickback.

**PUSH STICKS/BLOCKS.** Use push sticks or push blocks whenever possible to keep your hands farther away from the blade while cutting; in the event of an accident these devices will often take damage that would have happened to hands/fingers.

**CUT-OFF PIECES.** Never use your hands to move cut-offs away from the blade while the saw is running. If a cut-off becomes trapped between the blade and table insert, turn the saw OFF and allow the blade to completely stop before removing it.

**BLADE ADJUSTMENTS.** Adjusting the blade height or tilt during operation increases the risk of crashing the blade and sending metal fragments flying with deadly force at the operator or bystanders. Only adjust the blade height and tilt when the blade is completely stopped and the saw is OFF.

**CHANGING BLADES.** Always disconnect power before changing blades. Changing blades while the saw is connected to power greatly increases the injury risk if saw is accidentally powered up.

**DAMAGED SAW BLADES.** Never use blades that have been dropped or otherwise damaged. Damaged blades can fly apart and strike the operator with shards of metal.

**DADO AND RABBET OPERATIONS.** DO NOT attempt dado or rabbeting operations without first reading those sections in this manual. Dado and rabbeting operations require special attention because they must be performed with the blade guard removed.

**CUTTING CORRECT MATERIAL.** Never cut materials not intended for this saw; only cut natural and man-made wood products, laminate covered wood products, and some plastics. Cutting metal, glass, stone, tile, etc. increases the risk of operator injury due to kickback or flying particles.
Kickback

Kickback is a high speed expulsion of the workpiece from the saw blade, which occurs when the saw blade grabs the workpiece instead of cuts it.

The danger of kickback is that it happens faster than the operator can react, so if the operator’s hands are in a bad position, they could get pulled into the blade. Also, kickback can cause serious impact injuries if the operator is struck by the ejected workpiece.

The lack of warning and high risk of injury from kickback makes it extremely important to: (1) avoid doing anything that will increase the risk of occurrence, and (2) work carefully to protect yourself in case it does occur.

Avoiding Kickback

- DO NOT cut a workpiece that is excessively warped or twisted. The workpiece must be able to slide across the table and fence in a stable manner without any rocking, rotating, or shifting—if any of these movements occur during the cut, kickback will likely occur. Workpieces that have minor warping must be cut with the cupped-side down against the table; the edge of the workpiece that is placed against the fence must be straight or straightened with a jointer.

- Never attempt freehand cuts. Always use the rip fence or miter gauge to support the workpiece. If the workpiece is not fed parallel with the blade, kickback will likely occur.

- Make sure the splitter or riving knife is aligned with the blade. A misaligned splitter or riving knife can cause the workpiece to catch or bind, increasing the chance of kickback. If you think that your splitter or riving knife is not aligned with the blade, check it immediately!

- Ensure that the rip fence locks parallel with the blade; otherwise, the chances of kickback are extreme.

- The splitter or riving knife maintains the kerf in the workpiece, reducing the chance of kickback. Always use the riving knife for all non-through operations, unless a dado blade is installed. Always use the splitter with the blade guard for all through cuts.

- Feed cuts through to completion. Anytime you stop feeding a workpiece in the middle of a cut, the chance of kickback is greatly increased.

- Keep the blade guard installed and in good working order. Only remove it when performing non-through cuts and immediately re-install the blade guard when finished. Remember, always use the riving knife for all non-through operations, unless a dado blade is installed.

- Make multiple, shallow passes when performing a non-through cut. Making a deep non-through cut will greatly increase the chance of kickback.

Protecting Yourself from Kickback

- Stand to the side of the blade during every cut. If kickback does occur, the thrown workpiece usually travels directly in front of the blade.

- Wear safety glasses or a face shield. In the event of kickback, your eyes and face are the most vulnerable part of your body.

- Never, for any reason, place your hand behind the blade. Should kickback occur, your hand will be pulled into the blade.

- Use a push stick to keep your hands farther away from the moving blade. If kickback occurs, the push stick will most likely take the damage that your hand would have received.

- Use featherboards or anti-kickback devices to prevent or slow down kickback.
ELECTRICAL

Circuit Requirements
This machine must be connected to the correct size and type of power supply circuit, or fire or electrical damage may occur. Read through this section to determine if an adequate power supply circuit is available. If a correct circuit is not available, a qualified electrician MUST install one before you can connect the machine to power.

A power supply circuit includes all electrical equipment between the breaker box or fuse panel in the building and the machine. The power supply circuit used for this machine must be sized to safely handle the full-load current drawn from the machine for an extended period of time. (If this machine is connected to a circuit protected by fuses, use a time delay fuse marked D.)

Full-Load Current Rating
The full-load current rating is the amperage a machine draws at 100% of the rated output power. On machines with multiple motors, this is the amperage drawn by the largest motor or sum of all motors and electrical devices that might operate at one time during normal operations.

Full-Load Current Rating at 220V ............... 8 Amps
Full-Load Current Rating at 110V ............. 16 Amps

Circuit Requirements for 220V (Prewired)
This machine is prewired to operate on a 220V power supply circuit that has a verified ground and meets the following requirements:

Circuit Type ............. 220V/240V, 60 Hz, Single-Phase
Circuit Size ......................... 20 Amps
Plug/Receptacle ......................... NEMA 6-20

Circuit Requirements for 110V
This machine can be converted to operate on a 110V power supply (details about voltage conversion can be found later in this manual). The 110V power supply circuit must have a verified ground and meet the requirements that follow:

Circuit Type ............. 110V/120V, 60 Hz, Single-Phase
Circuit Size ......................... 20 Amps
Plug/Receptacle ......................... NEMA 5-20

WARNING
The machine must be properly set up before it is safe to operate. DO NOT connect this machine to the power source until instructed to do later in this manual.

WARNING
Incorrectly wiring or grounding this machine can cause electrocution, fire, or machine damage. To reduce this risk, only an electrician or qualified service personnel should do any required electrical work on this machine.

NOTICE
The circuit requirements listed in this manual apply to a dedicated circuit—where only one machine will be running at a time. If this machine will be connected to a shared circuit where multiple machines will be running at the same time, consult a qualified electrician to ensure that the circuit is properly sized for safe operation.
Grounding Requirements

This machine MUST be grounded. In the event of certain types of malfunctions or breakdowns, grounding provides a path of least resistance for electric current to travel—in order to reduce the risk of electric shock.

Improper connection of the equipment-grounding wire will increase the risk of electric shock. The wire with green insulation (with/without yellow stripes) is the equipment-grounding wire. If repair or replacement of the power cord or plug is necessary, do not connect the equipment-grounding wire to a live (current carrying) terminal.

Check with a qualified electrician or service personnel if you do not understand these grounding requirements, or if you are in doubt about whether the tool is properly grounded. If you ever notice that a cord or plug is damaged or worn, disconnect it from power, and immediately replace it with a new one.

For 220V Connection (Prewired)

This machine is equipped with a power cord that has an equipment-grounding wire and NEMA 6-20 grounding plug. The plug must only be inserted into a matching receptacle (see Figure) that is properly installed and grounded in accordance with local codes and ordinances.

For 110V Connection (Must be Rewired)

A NEMA 5-20 plug has a grounding prong that must be attached to the equipment-grounding wire inside the included power cord. The plug must only be inserted into a matching receptacle (see Figure) that is properly installed and grounded in accordance with all local codes and ordinances.

Extension Cords

We do not recommend using an extension cord with this machine. Extension cords cause voltage drop, which may damage electrical components and shorten motor life. Voltage drop increases with longer extension cords and smaller gauge sizes (higher gauge numbers indicate smaller sizes).

Any extension cord used with this machine must contain a ground wire, match the required plug and receptacle, and meet the following requirements:

Minimum Gauge Size at 220V ............... 12 AWG
Maximum Length (Shorter is Better) ............. 50 ft.
Voltage Conversion

The Model 1824 is prewired for a 220V power supply, but it can be rewired to operate on a 110V power supply. To reduce the risk of electrocution, machine damage, or an electrical fire, this procedure must be performed by an electrician or qualified service personnel. The procedure involves moving terminal jumpers inside the motor junction box, replacing the machine circuit breaker, and replacing the plug on the power cord.

The required machine circuit breaker can be purchased from an authorized Shop Fox dealer. The required plug and receptacle can be purchased from your local hardware store or it may be provided by your electrician.

**Items Needed**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Phillips Screwdriver #2</td>
</tr>
<tr>
<td>1</td>
<td>NEMA 5-20 Plug</td>
</tr>
<tr>
<td>1</td>
<td>Circuit Breaker 20A (Part No. X1824204-1)</td>
</tr>
</tbody>
</table>

To convert the table saw to 110V, do these steps:

1. DISCONNECT TABLE SAW FROM POWER!

2. Open the motor junction box, then loosen the four screws indicated in Figure 4.

3. Remove the two center jumpers (they are stacked together), reposition them as shown in Figure 5, then re-tighten the four screws loosened in Step 2.

4. Close and secure the motor junction box.

5. Remove the START/STOP switch box from the switch mounting plate.

6. Replace the pre-installed 10A circuit breaker (see Figure 6) with the 20A circuit breaker, then re-install the switch box.

7. Replace the existing power cord plug with a NEMA 5-20 plug, according to the instructions and wiring diagram provided by the plug manufacturer.

**NOTICE**

This manual was current at the time of printing. However, if the motor wiring diagram provided on the inside of the junction box cover differs from this manual, always use the junction box cover wiring diagram. This should reflect any changes that may have occurred after printing.
## SETUP

### Unpacking

This machine has been carefully packaged for safe transportation. If you notice the machine has been damaged during shipping, please contact your authorized Shop Fox dealer immediately.

### Needed for Setup

The following are needed to complete the setup process, but are not included with the machine:

<table>
<thead>
<tr>
<th>Description</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety Glasses for Each Person</td>
<td>1</td>
</tr>
<tr>
<td>Degreaser or Solvent for Cleaning</td>
<td>Varies</td>
</tr>
<tr>
<td>Rags for Cleaning</td>
<td>Varies</td>
</tr>
<tr>
<td>Straightedge</td>
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</tr>
<tr>
<td>Level</td>
<td>1</td>
</tr>
<tr>
<td>Dust Collection System</td>
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<tr>
<td>4” Dust Hose</td>
<td>1</td>
</tr>
<tr>
<td>4” Hose Clamp</td>
<td>1</td>
</tr>
<tr>
<td>Another Person for Lifting</td>
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</tr>
<tr>
<td>Needle Nose Pliers</td>
<td>1</td>
</tr>
<tr>
<td>Wrench or Socket 17mm</td>
<td>1</td>
</tr>
<tr>
<td>Wrench or Socket 14mm</td>
<td>1</td>
</tr>
<tr>
<td>Wrench or Socket 10mm</td>
<td>1</td>
</tr>
<tr>
<td>Adjustable Wrench</td>
<td>1</td>
</tr>
</tbody>
</table>

The Model W1824 is a heavy machine. Serious personal injury may occur if safe moving methods are not used. To be safe, get assistance and use power equipment to move the shipping crate and machine.
Inventory

The following is a description of the main components shipped with the Model W1824. Lay the components out to inventory them.

**Note:** If you can’t find an item on this list, check the mounting location on the machine or examine the packaging materials carefully. Occasionally we pre-install certain components for safer shipping.

**Shipping Inventory:** (Figures 7-10)

<table>
<thead>
<tr>
<th>Qty</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cabinet Assembly</td>
</tr>
<tr>
<td>2</td>
<td>Extension Wings</td>
</tr>
<tr>
<td>1</td>
<td>Saw Blade 10” x 40T</td>
</tr>
<tr>
<td>1</td>
<td>Wrench 7/16” x 13mm</td>
</tr>
<tr>
<td>1</td>
<td>Arbor Wrench 24mm</td>
</tr>
<tr>
<td>1</td>
<td>Access Door</td>
</tr>
<tr>
<td>1 Each</td>
<td>Blade Guard Assembly &amp; Riving Knife</td>
</tr>
<tr>
<td>1</td>
<td>Push Stick</td>
</tr>
<tr>
<td>2</td>
<td>Handwheel Handles</td>
</tr>
<tr>
<td>1</td>
<td>Miter Gauge</td>
</tr>
<tr>
<td>1</td>
<td>Hex Wrench 6-Piece Set 2.5-8mm</td>
</tr>
<tr>
<td>1</td>
<td>Dado Table Insert</td>
</tr>
<tr>
<td>1</td>
<td>Fence Rail Tube 58” w/Scale</td>
</tr>
<tr>
<td>1</td>
<td>Rear Rail 53” (6-Holes)</td>
</tr>
<tr>
<td>1</td>
<td>Front Rail 53” (6-Holes)</td>
</tr>
<tr>
<td>1</td>
<td>Fence Assembly</td>
</tr>
<tr>
<td>1</td>
<td>Extension Table</td>
</tr>
</tbody>
</table>

**Hardware (Not Shown)**

- Cap Screws M5-.8 x 12 (Mag Switch) .......................... 2
- Lock Washers 5mm (Mag Switch) .................................. 2
- Flat Washers 5mm (Mag Switch) .................................. 2
- Flat Head Screws M8-1.25 x 35 (Front Rail/Tables) .... 6
- Flat Washers 8mm (Front Rail/Tables) ......................... 8
- Lock Washers 8mm (Front Rail/Tables) ....................... 6
- Hex Nuts M8-1.25 (Front Rail/Tables) ......................... 6
- Cap Screws M6-1 x 16 (Front Rail/Tube) .................... 5
- Flat Washers 6mm (Front Rail/Tube) ......................... 5
- Lock Washers (Front Rail/Tube) ............................... 5
- Hex Bolts M10-1.5 x 25 (Rear Rail/Table) ............... 2
- Flat Washers 10mm (Rear Rail/Table) .................... 2
- Lock Washers 10mm (Rear Rail/Table) .................. 2
- Hex Bolts M8-1.25 x 35 (Rear Rail/Wing/Ext Table) .. 4
- Hex Nuts M8-1.25 (Rear Rail/Wing/Ext Table) .......... 4
- Flat Washers 8mm (Rear Rail/Wing/Ext Table) ... 8
- Lock Washers 8mm (Rear Rail/Wing/Ext Table) ...... 4
Machine Placement

- **Floor Load:** This machine distributes a heavy load in a small footprint. Some residential floors may require additional bracing to support both machine and operator.

- **Working Clearances:** Consider existing and anticipated needs, size of material to be processed through the machine, and space for auxiliary stands, work tables or other machinery when establishing a location for your table saw.

- **Lighting:** Lighting should be bright enough to eliminate shadow and prevent eye strain.

- **Electrical:** Electrical circuits must be dedicated or large enough to handle amperage requirements. Outlets must be located near each machine, so power or extension cords are clear of high-traffic areas. Follow local electrical codes for proper installation of new lighting, outlets, or circuits.

Cleaning Machine

The table and other unpainted parts of your table saw are coated with a waxy grease that protects them from corrosion during shipment. Clean this grease off with a solvent cleaner or citrus-based degreaser. **DO NOT** use chlorine-based solvents such as brake parts cleaner or acetone—if you happen to splash some onto a painted surface, you will ruin the finish.

**WARNING**

*NEVER* clean with gasoline or other petroleum-based solvents. Most have low flash points, which make them extremely flammable. A risk of explosion and burning exists if these products are used. **Serious personal injury may occur if this warning is ignored!**

**CAUTION**

*ALWAYS* work in well-ventilated areas far from possible ignition sources when using solvents to clean machinery. Many solvents are toxic when inhaled or ingested. Use care when disposing of waste rags and towels to be sure they **DO NOT** create fire or environmental hazards.

**CAUTION**

MAKE your shop **“child safe.”** Ensure that your workplace is inaccessible to children by closing and locking all entrances when you are away. **NEVER** allow untrained visitors in your shop when assembling, adjusting or operating equipment.

**WARNING**

USE helpers or power lifting equipment to lift this machine. Otherwise, serious personal injury may occur.
Assembly

Assembly consists of installing minor components, the extension wings and table, fence rails, fence, and blade guard.

To assemble the table saw, do these steps:

1. Remove the shipping brace shown in Figure 11, then re-install the fasteners. Save the shipping brace for later machine transport.

2. Thoroughly clean the heavy-duty rust preventative off the gears inside the cabinet and coat them with an appropriate metal protectant (refer to Lubrication on Page 55 for the location of gears).

3. Pull the switch out of the cabinet cavity, then attach the access door by inserting the hinge pins into the hinge sockets shown in Figure 12.

4. Install the handles on the handwheels (see Figure 13).
5. Remove the (6) cap screws, flat washers, and lock washers from both sides of the main table.

6. Inspect the extension wings and main table mating surfaces for burrs or foreign materials that may inhibit assembly.

For a correct fit, the mating edges of the table and wings must be clean, smooth, and flat. If necessary, use a wire brush or file to remove any flashing, dings, or high spots.

7. While a helper holds the extension wings in place, attach them to the main table with the (6) M10-1.5 x 25 cap screws, 10mm lock washers, and 10mm flat washers removed in Step 5, as shown in Figure 14.

8. Place a straightedge across the extension wings and main table to make sure that the combined table surface is flat.

   – If the combined table surface is flat, skip to Step 9.

   – If the outside end of the extension wing tilts down, place one or more strips of masking tape along the bottom edge of the main table to shim the end of the extension wing up (see Figure 15).

   – If the outside end of the extension wing tilts up, place one or more strips of masking tape along the top edge of the main table to shim the end of the extension wing down (see Figure 16).

Note: After reinstalling wings, remove all excess masking tape with a razor blade.
9. Attach the front rail to the table and extension wings with (4) M8-1.25 x 35 flat head screws, 8mm flat washers, 8mm lock washers, and M8-1.25 hex nuts, as shown in Figure 17.

Note: Make sure the top of the rail is parallel with the table top surface along its entire length and below the miter slots before fully tightening the fasteners. This will ensure that the fence will ride evenly across the table top.

10. Attach the rear rail to the table with (2) M10-1.5 x 25 hex bolts, 10mm lock washers, and 10mm flat washers, as shown in Figure 18.

Note: As with the front rail, make sure the rear rail is parallel with the table top and below the miter slots before fully tightening the fasteners.

11. Secure the rear rail to the extension wings with (2) M8-1.25 x 35 hex bolts, (4) 8mm flat washers, (2) 8mm lock washers, and (2) M8-1.25 hex nuts, as shown in Figure 18.

12. Install the extension table between the front and rear rails with (2) M8-1.25 x 35 hex bolts, (2) M8-1.25 x 35 flat head screws, (8) 8mm flat washers, (4) 8mm lock washers, and (4) M8-1.25 hex nuts, as shown in Figure 19. Finger tighten the fasteners for now.

13. Place the straightedge across the main table, right wing, and extension table, make sure the extension table is even with other top surfaces, then fully tighten the fasteners.
14. Attach the fence rail tube to the front rail with (5) M6-1 x 16 cap screws, 6mm flat washers, and 6mm lock washers, as shown in Figure 20. Finger tighten the fasteners for now.

15. While standing in front of the fence rail tube, pull it toward you as far as possible, then fully tighten the fasteners installed in Step 14. This will help make sure there is enough room for the fence to slide.

16. Install the blade as instructed in the Blade Installation procedure on Page 27.

17. Place the fence assembly onto the fence rail tube, as shown in Figure 21.

18. Perform the Miter Slot to Blade Parallelism procedure as instructed on Page 60.

19. Perform the Fence Adjustments procedure as instructed on Page 65.

---

**WARNING**

If the table or fence is not properly aligned with the blade, the workpiece could bind during a cutting operation, which could result in kickback injuries. The miter slot and fence MUST be correctly aligned with the blade before continuing to Step 20.

20. Move the fence over so that it just touches the blade, and verify that the indicator line is directly over the zero line.

- If you need to correct the position of the indicator line, loosen the screws on the pointer window, adjust it so that the line is over the zero line on the scale (see Figure 22), then re-tighten the screws.

21. Install the blade guard as instructed in the Blade Guard Assembly procedure on Page 28.
22. Attach the switch to the bottom left-hand side of the front rail using (2) M5-.8 x 12 cap screws, (2) 5mm lock washers, and (2) 5mm flat washers (see Figure 23).

**Dust Collection**

*Recommended CFM at Dust Port: .......... 400 CFM*

Do not confuse this CFM recommendation with the rating of the dust collector. To determine the CFM at the dust port, you must take into account many variables, including the CFM rating of the dust collector, the length of hose between the dust collector and the machine, the amount of branches or Y’s, and the amount of other open lines throughout the system. Due to the numerous variables involved, we do not cover this calculation in this manual. If you are unsure of your system, consult an expert or purchase a good dust collection “how-to” book.

---

**CAUTION**

**DO NOT** operate this machine without an adequate dust collection system. This machine creates substantial amounts of wood dust while operating. Failure to use a dust collection system can result in short and long-term respiratory illness.

<table>
<thead>
<tr>
<th>Tools Needed</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust Collection System</td>
<td>1</td>
</tr>
<tr>
<td>Dust Hose 4”</td>
<td>1</td>
</tr>
<tr>
<td>Hose Clamps 4”</td>
<td>2</td>
</tr>
</tbody>
</table>

To connect a dust hose to the table saw, do these steps:

1. Fit a 4” dust hose over the dust port, as shown in Figure 24, and secure it tightly in place with a hose clamp.

2. Tug the hose to make sure it does not come off.

*Note: A tight fit is necessary for proper performance.*

*Tip: To make the job of attaching the dust hose easier, we recommend using the Model W1038 Quick Disconnect (see Figure 25). This will be especially helpful if the table saw is mounted on a mobile base.*

---

Figure 23. Switch installed.

Figure 24. Dust hose secured to the table saw.

Figure 25. Model W1038 Quick Disconnect.
Test Run

Once the assembly is complete, test run the machine to make sure it runs properly for regular operations.

The test run consists of verifying the following: 1) The motor powers up and runs correctly, and 2) the safety disabling mechanism on the switch works correctly.

If, during the test run, you cannot easily locate the source of an unusual noise or vibration, stop using the machine immediately, then review Troubleshooting on Page 72. If you still cannot remedy a problem, contact our Tech Support at (360) 734-3482 for assistance.

To test run the machine, do these steps:

1. Make sure you understand the safety instructions at the beginning of the manual, and verify that the machine is set up properly.

2. Ensure all tools and objects used during setup are cleared away from the machine.

3. Connect the machine to the required power source (see Page 10).

4. Verify that the machine is operating correctly by turning the machine ON.
   - When operating correctly, the machine runs smoothly with little or no vibration or rubbing noises.
   - Investigate and correct strange noises or vibrations before operating the machine further. Always disconnect the machine from power when investigating or correcting potential problems.

5. Turn the machine OFF.

6. Insert the switch disabling pin through the green ON button, as shown in Figure 26.

7. Press the ON button to test the disabling feature on the switch.
   - If the machine does not start, the switch disabling feature is working as designed.
   - If the machine starts, immediately stop it. The switch disabling feature is not working correctly. Call Tech Support for help.

Recommended Adjustments

For your convenience, the adjustments listed below have been performed at the factory and no further setup is required to operate this machine. However, because of the many variables involved with shipping, we recommend that you verify the following adjustments to ensure that this saw cuts safely and accurately. Step-by-step instructions for these adjustments can be found in the SERVICE section.

Adjustments that should be verified:

- Blade tilt stop accuracy (Page 58).
- Spreader/riving knife alignment (Page 63).
**OPERATIONS**

**General**

This machine will perform many types of operations that are beyond the scope of this manual. Many of these operations can be dangerous or deadly if performed incorrectly.

The instructions in this section are written with the understanding that the operator has the necessary knowledge and skills to operate this machine. **If at any time you are experiencing difficulties performing any operation, stop using the machine!**

If you are an inexperienced operator, we strongly recommend that you read books or trade articles, or seek training from an experienced table saw operator before performing any unfamiliar operations. **Above all, your safety should come first!**

**Basic Controls**

Use the following descriptions and refer to Figure 27 to gain an understanding of the basic controls of this table saw.

A. **Blade Height Handwheel & Lock.** Adjusts the blade height. To set the blade height, loosen the lock knob in the center of the handwheel, turn the handwheel to set the blade height approximately $\frac{1}{4}$" higher than the workpiece (for through cuts only), then re-tighten the lock knob.

B. **START/STOP Switch.** Starts and stops the motor. The START button has a hole through it that accommodates a pin to disable the switch against unauthorized usage.

C. **Fence Lock.** Secures the fence in place. After adjusting the fence to the desired width of cut, lock it in place by firmly pushing the fence lock down until it stops.

D. **Blade Tilt Handwheel & Lock.** Adjusts the blade tilt. Loosen the lock knob in the center of the handwheel, turn the handwheel to position the blade at the desired angle, then re-tighten the lock knob.

**CAUTION**

USE this and other machinery with caution and respect. Always consider safety first, as it applies to your individual working conditions. No list of safety guidelines can be complete—every shop environment is different. Failure to follow guidelines could result in serious personal injury, damage to equipment or poor work results.

**WARNING**

READ and understand this entire manual before using this machine. Serious personal injury may occur if safety and operational information is not understood and followed. DO NOT risk your safety by not reading!
Operation Overview

The purpose of this overview is to provide the novice machine operator with a basic understanding of how the machine is used during a typical operation, so the controls/components discussed later in this manual are easier to understand.

Due to the generic nature of this overview, it is not intended to be an instructional guide. To learn more about specific operations, read this entire manual, read "how to" books, and seek additional training from experienced machine operators.

To complete a typical operation, the operator does the following:

1. Examines the workpiece to make sure it is suitable for cutting.
2. Adjusts the blade tilt, if necessary, to the correct angle for the desired cut.
3. For “Through Cuts,” adjusts the blade height no more than $\frac{1}{4}$” higher than the thickness of the workpiece.
4. Adjusts the fence to the desired width of cut, then locks it in place.
5. Checks the outfeed side of the machine for proper support and to make sure the workpiece can safely pass all the way through the blade without interference.
6. Puts on safety glasses and a respirator. Locates push sticks/blocks if needed.
7. Starts the saw.
8. Feeds the workpiece all the way through the blade while maintaining firm pressure on the workpiece against the table and fence, and keeping hands and fingers out of the blade path and away from the blade.
9. Stops the machine immediately after the cut is complete.

Workpiece Inspection

Some workpieces are not safe to cut on this machine or may need to be modified before they can be safely cut.

Before beginning the cutting operation, inspect all workpieces for the following:

- **Material Type.** This machine is intended for cutting natural and man-made wood products, laminate covered wood products, and some plastics. Cutting drywall or cementitious backer board creates extremely fine dust and may reduce the life of the motor bearings. This machine is NOT designed to cut metal, glass, stone, tile, etc.; cutting these materials with a table saw greatly increases the risk of injury and damage to the saw or blade.

- **Foreign Objects.** Nails, staples, dirt, rocks and other foreign objects are often embedded in wood. While cutting, these objects can become dislodged and hit the operator, cause kickback, or break the blade, which might then fly apart. Always visually inspect your workpiece for these items. If they can’t be removed, DO NOT cut the workpiece.

- **Large/Loose Knots.** Loose knots can become dislodged during the cutting operation. Large knots can cause kickback and machine damage. Choose workpieces that do not have large/loose knots or plan ahead to avoid cutting through them.

- **Wet or “Green” Stock.** Cutting wood with a moisture content over 20% causes unnecessary wear on the blades, increases the risk of kickback, and yields poor results.

- **Excessive Warping.** Workpieces with excessive cupping, bowing, or twisting are dangerous to cut because they are unstable and may move unpredictably when being cut.

- **Minor Warping.** Slightly cupped workpieces can be safely supported with the cupped side facing the table or fence; however, workpieces supported on the bowed side will rock during the cut, which could cause kickback.
Non-Through & Through Cuts

Non-Through Cuts
A non-through cut is a sawing operation where the blade does not protrude above the top face of the wood stock, as shown in Figure 28.

Examples of non-through cuts include dadoes and rabbets. Non-through cuts have a higher risk of injury from kickback because the blade guard must be removed. However, the riving knife MUST be installed because it still provides some protection. When making non-through cuts with a dado blade, do not attempt to cut the full depth in one pass. Instead, take multiple light passes to reduce the load on the blade. A dado blade smaller than 10" will require removal of the riving knife, because the riving knife will be higher than the blade.

Through Cuts
A through cut is a sawing operation in which the workpiece is completely sawn through, as shown in Figure 29. Examples of through cuts are rip cuts, cross cuts, miter cuts, and beveled cuts. The blade guard assembly MUST be used when performing through cuts.

NOTICE
If you have never used this type of machine or equipment before, seek training from an experienced machine operator or read "how to" books before beginning any projects. Regardless of the content in this section, Shop Fox will not be held liable for accidents caused by lack of training.
Blade Size Requirements

When choosing a blade, make sure the blade size meets the requirements listed below. The thickness of the blade body and teeth can be measured with calipers or any precision measurement device.

**Blade Size Requirements:**
- Blade Diameter: 10"
- Body Thickness: 0.071"-0.094" (1.8-2.4mm)
- Kerf (Tooth) Thickness: 0.102"-0.126" (2.6-3.2mm)

**WARNING**
Using a blade that does not meet the specified blade size requirements presents a hazardous condition that could cause kickback, operator injuries, or properly damage. ALWAYS use a blade that meets the given blade size requirements.

Blade Selection

This section on blade selection is by no means comprehensive. Always follow the saw blade manufacturer’s recommendations to ensure safe and efficient operation of your table saw.

**Ripping Blade Features (Figure 30):**
- Best for cutting with the grain
- 20-40 teeth
- Flat-top ground tooth profile
- Large gullets for large chip removal

**Crosscut Blade Features (Figure 31):**
- Best for cutting across the grain
- 60-80 teeth
- Alternate top bevel tooth profile
- Small hook angle and a shallow gullet

**Combination Blade Features (Figure 32):**
- Designed to cut both with and across grain
- 40-50 teeth
- Alternate top bevel and flat, or alternate top bevel and raker tooth profile
- Teeth are arranged in groups
- Gullets are small and shallow (similar to a cross-cut blade), then large and deep (similar to a ripping blade)

Figure 30. Example of a ripping blade.

Figure 31. Example of a crosscut blade.

Figure 32. Example of a combination blade.
Laminate Blade Features (Figure 33):
- Best for cutting plywood or veneer
- 40-80 teeth
- Triple chip tooth profile
- Very shallow gullet

Thin Kerf Blade: A blade with thinner kerf than a standard blade. Since the spreader/riving knife included with this table saw is sized for standard blades, thin kerf blades cannot be used on this saw unless they meet the Blade Requirements specified in this manual; otherwise, they will increase the risk of kickback.

Dado Blades

Stacked Dado Blade (see Figure 34): Multiple blades are stacked together to control the cutting width. Stacked dado blades are more expensive than wobble blades, but typically produce higher quality results.

Wobble Dado Blade: A single blade mounted at a slight angle on an arbor hub. The blade angle is adjustable on the hub, and the width of the dado cut is controlled by the angle setting of the blade.

Figure 33. Example of a laminate blade.

Figure 34. Stacked dado blade.
Blade Installation

Properly installing the blade is critical to safe cutting operations that produce good results. Review this section, even if your blade came pre-installed.

To install the blade, do these steps:

1. DISCONNECT SAW FROM POWER!

2. Remove the table insert and blade guard/riving knife, depending on what is installed.

![CAUTION]

Before proceeding with the next step, wear leather gloves to protect your hands while handling and installing the blade.

3. Push the arbor lock in (see Figure 35) and turn the blade until it locks in place, then use the arbor wrench to loosen and remove the arbor nut, flange, and blade.

4. Slide the blade over the arbor with the teeth facing the front of the saw, as shown in Figure 36.

5. Re-install the arbor flange and the arbor nut, then tighten them against the blade with the wrenches included with the saw. DO NOT overtighten.

6. Re-install the table insert and blade guard/riving knife.

![CAUTION]
The arbor nut is self-tightening by design when a cut is made. When installing the blade, only tighten the arbor nut so that it firmly holds the blade in place. Overtightening the arbor nut may lead to nut and arbor failure which could cause metal debris to be thrown from the saw.

![Figure 35. Arbor lock location.]

![Figure 36. Order of blade component installation and teeth facing to the front.]
**Blade Guard Assembly**

The term "blade guard" refers to the assembly that consists of the clear polycarbonate shield, the spreader, and the anti-kickback pawls on each side of the spreader (see Figure 37). Each of these components have important safety functions during the operation of the saw.

**Guard**

The clear polycarbonate guard allows the operator to see the blade cut the workpiece during operation. This guard is designed to lift as the workpiece is pushed into the blade and remain in contact with the workpiece throughout the entire cut.

The guard reduces injury risk by providing a barrier around the blade that prevents accidental contact and contains flying wood chips.

To ensure that the guard does its job effectively, the guard must always be in the downward position against the table during idle operation, and the hinge mechanism must be maintained in good working condition so the guard can freely pivot up and down to accommodate the height of the workpiece and return to the table surface.

**Spreader**

The spreader is a metal plate that prevents the freshly cut pieces of the workpiece from pinching the backside of the blade and causing a kickback. It also acts as a barrier behind the blade to shield hands from being pulled into the blade if a kickback occurs.

**Blade Guard & Spreader Installation**

1. **DISCONNECT SAW FROM POWER!**

2. Install the standard table insert.

3. Slide the knurled knob out (see Figure 38), then rotate it so it engages the upper bracket.

4. Slide the blade guard spreader all the way down into the adjustment block, then rotate the knurled knob so it disengages the bracket and the locking pin engages the hole in the center of the spreader.

5. Tug the spreader upward to verify that it is locked and does not come out when pulled.
The blade guard, when properly installed, should be set up, as shown in Figure 39. It should pivot freely up and down, then return to the table in the resting position and completely cover the blade. It should also swing up high enough to accommodate the workpiece.

6. Adjust the flat head screws around the perimeter of the insert to make sure it is flush with the table (use a straightedge as a guide).

7. Swing one side of the blade guard up and out of the way.

8. Lift up on the right spreader pawl, and place a straightedge against the blade and the spreader, making sure the straightedge does not touch a blade tooth.

When properly aligned, the spreader will be in the "Alignment Zone," shown in Figure 40, and will be parallel with the blade.

— If the spreader is not inside the alignment zone and not parallel with the blade, then it needs to be adjusted. Perform the Spreader or Riving Knife Alignment procedure on Page 63.

Anti-Kickback Pawls
The anti-kickback pawls allow the workpiece to travel in only one direction. If the workpiece moves backwards, such as during a kickback, the pawls will dig into the workpiece to slow or stop it.

To work properly, the pawls must return to their resting position after pivoting up, as shown in Figure 41, and they must not be engaged in the arresting hooks.

If the pawls fail to return to the resting position, the pivot area may need to be cleaned or the spring may have been dislodged or broken and will need to be fixed/replaced.
Disabling Pawls
You might disable the pawls if you are concerned about them scratching a delicate workpiece, or if you believe that they will obstruct a narrow workpiece and cause feeding difficulty or loss of control. Use your best judgment before retracting the pawls, as they are provided for your safety.

To disable the pawls, do these steps:

1. DISCONNECT SAW FROM POWER!

2. Rotate one or both arresting hooks downward, then place the pawls on each of the hooks (see Figure 42).

Enabling Pawls
To enable the pawls, lift up on each pawl and move them outward and down until they both touch the table surface in the resting position, as shown in Figure 41 on the previous page.

When to Use the Blade Guard
The blade guard assembly MUST always be installed on the saw for all normal through cuts (those where the blade cuts all the way through the thickness of the workpiece). If the blade guard is removed for specific operations, always immediately replace it after those operations are complete.

When Not to Use the Blade Guard
The blade guard cannot be used on any non-through cuts (those in which the blade does not cut all the way through the thickness of the workpiece).

Sometimes the blade guard or its components can get in the way when cutting very narrow workpieces or other specialized cuts. Because the blade guard is provided to decrease your risk of injury, it should not be used if it gets in the way of making a safe cut. Use good judgment!

⚠️ CAUTION
We do not recommend disabling the pawls during normal operations unless absolutely necessary. In most situations, disabling the pawls will increase your risk of serious personal injury in the event of a kickback.

⚠️ CAUTION
The pawls are sharp and can quickly cut fingers and hands. Use caution, and wear leather gloves when handling the pawls to reduce the risk of injury.

⚠️ CAUTION
Whenever the blade guard and spreader cannot be used, the riving knife must be used to avoid the risk of the kerf binding on the blade and causing kickback.
Riving Knife

The riving knife works in the same manner as the spreader on the blade guard assembly. It is a metal plate that prevents the newly cut workpiece from pinching the backside of the blade and causing kickback.

The key difference between the spreader and the riving knife is that the riving knife mounts below the blade’s highest point of rotation, as shown in Figure 43.

The height difference between the riving knife and the blade allows the workpiece to pass over the blade during non-through cuts (those in which the blade does not cut all the way through the thickness of the workpiece).

The riving knife acts as a barrier behind the blade to reduce the risk of hands being pulled into the blade if a kickback occurs.

The riving knife must be spaced away from the blade, as shown in Figure 44.

Riving Knife Installation

The riving knife is installed in a similar manner to the blade guard and spreader. Refer to Blade Guard Assembly on Page 28 for installation instructions.

When to Use the Riving Knife

Use the riving knife for all non-through cuts made with a standard table saw blade (i.e., dadoes or rabbet cuts, and when using a tenoning jig), or when using a 10” diameter dado blade.

Also, use the riving knife for those special operations where the blade guard or its components get in the way of safe operation, such as with very narrow cuts.

When Not to Use the Riving Knife

Do not use the riving knife with a dado blade that has a diameter smaller than 10” in diameter. Otherwise, the riving knife height will exceed the blade height and the workpiece will hit the riving knife during the cut, forcing the operator into a dangerous situation of trying to turn the saw off with the workpiece stuck halfway through the cut.

In addition, although it is possible to use the riving knife for through-cutting operations, the blade guard assembly offers much more injury protection and risk reduction than the riving knife. Therefore, we strongly recommend that you use the blade guard assembly instead of the riving knife when making through cuts.
Ripping

Ripping means cutting with the grain of a natural wood workpiece. In man-made materials such as MDF or plywood, ripping simply means cutting lengthwise.

To make a rip cut, do these steps:

1. Review Preventing Kickback on Page 9 and take the necessary precautions to reduce the likelihood of kickback.

2. Inspect the board for soundness. You will need one straight edge of the workpiece to place against the fence when ripping. Also, if the workpiece is slightly cupped, always place the cupped side down on the table for stability.

3. DISCONNECT SAW FROM POWER!

4. Ensure that the blade guard/spreader is properly installed.

5. Set the fence to the desired width of cut on the scale.

6. Adjust the blade height so the highest saw tooth protrudes no more than \( \frac{1}{4} \)" above the workpiece.

7. Set up safety devices such as featherboards or other anti-kickback devices.

8. Rotate the blade to make sure it does not come into contact with any of the safety devices.

9. Re-connect the saw to power, then turn it ON and allow the blade to reach full speed.

   **Note:** The jointed edge of the workpiece must slide against the fence during the cutting operation.

10. Use a push stick to feed the workpiece through the saw blade, as shown in Figure 45, until it is completely beyond the saw blade.

---

**WARNING**

Never attempt to rip a workpiece that does not have one perfectly straight edge on it. Always place the straight edge against the rip fence. Failure to do this could result in kickback and serious personal injury.

**CAUTION**

Keep the blade guard installed and in the down position. Failure to do this could result in serious personal injury or death.

**CAUTION**

Turn OFF the saw and ALWAYS allow the blade to come to a complete stop before removing the cut-off piece. Failure to follow this warning could result in serious personal injury.
Crosscutting

Crosscutting means cutting across the grain of a natural wood workpiece. In other man-made materials, such as MDF or plywood, crosscutting means cutting across the width of the workpiece.

To make a crosscut using the miter gauge, do these steps:

1. DISCONNECT SAW FROM POWER!

2. Ensure that the blade guard/spreader is properly installed.

3. Move the rip fence aside and position the miter gauge in a miter slot, then adjust it to 90° from the blade.

4. Adjust the blade height so the teeth protrude no more than $\frac{1}{4}$" above the workpiece.

5. Inspect the workpiece for soundness. If the workpiece is slightly cupped, place the cupped face down on the table.

6. Slide the miter gauge near the blade and adjust the workpiece so the blade will cut on the waste side of the line.

7. Re-connect the saw to power, then turn it **ON** and allow the blade to reach full speed.

8. Hold the workpiece firmly against the face of the miter gauge (as shown in Figure 46), then ease the workpiece through the blade until it is completely past the saw blade.

Figure 46. Example photo of a crosscutting operation.
Miter Cuts

A miter cut is an angled crosscut. Miters are usually cut in the same manner as crosscuts, using the miter gauge and a predetermined mark on the workpiece.

To perform a miter cut, do these steps:

1. **DISCONNECT SAW FROM POWER!**

2. Ensure that the blade guard/spreader is properly installed.

3. Determine the angle of your cut. If the angle needs to be very precise, use a protractor to set the miter gauge to the blade.

4. Place the face of the miter gauge against the edge of the workpiece and place the T-slot bar across the face of the workpiece. Use the bar as a guide to mark your cut onto the workpiece, as shown in Figure 47.

5. Place the miter gauge back into the slot and hold the workpiece firmly against the miter gauge body. Slide the miter gauge near the blade and adjust the workpiece so the blade will cut on the waste side of the line.

6. Proceed to make the cut in the same manner as described in the Crosscutting procedure.

Blade Tilt Cuts

The blade can be tilted between 0° (perpendicular to the table) and 45°. This feature is used most often when cutting bevels, compound miters, or chamfers. Figure 48 shows an example of the blade when tilted 45° to the table.
Dado Cutting

Commonly used in furniture joinery, a dado is a straight channel cut in the face of the workpiece. Dadoes are "non-through" cuts that can be made with a dado blade or a standard saw blade. Figure 49 shows a cutaway view of a dado cut being made with a dado blade.

The included dado table insert must be installed and used when a dado blade is installed—unless a zero clearance table insert is used instead.

Dado Blade Installation

1. DISCONNECT SAW FROM POWER!
2. Remove the standard table insert, the blade guard assembly or riving knife, and the saw blade.
3. Attach and adjust the dado blade system according to the dado blade manufacturer's instructions.
4. Install the dado table insert.

⚠️ WARNING
Dado blades have a higher risk of kickback than normal blades because their larger size applies stronger forces to the workpiece. This risk increases relative to the depth and width of the cut. To minimize your risk of serious personal injury, ensure that stock is flat and straight, and make multiple light cuts (rather than one deep cut) to achieve the desired cutting depth.

Cutting Dados with a Dado Blade

Because dado blades are much wider than standard blades, they place a greater amount of force against the workpiece when cutting. This additional force increases the risk of kickback, requiring the operator to take additional steps when cutting to keep their injury risk at an acceptable level.

Figure 50 demonstrates the sequential process of making multiple, light cuts that get progressively deeper. The actual number of cuts used should be determined by workpiece hardness, total dado depth, and feed rate. In general, if you hear the motor slow down during the cut, you are cutting too deep or feeding too fast.

⚠️ WARNING
DO NOT make through cuts with a dado blade. Dado blades are only intended for non-through cuts. Failure to heed this warning could result in serious injury.

Figure 50. Example of cutting a dado with multiple light cuts, instead of one deep cut.
To cut a dado with a dado blade, do these steps:

1. **DISCONNECT SAW FROM POWER!**
2. Adjust the dado blade to the desired depth of cut.
3. Adjust the distance between the fence and the inside edge of the blade, as shown in Figure 51 on the previous page, to dado the length of a workpiece.
   - If dadoing across the workpiece, use the miter gauge and carefully line up the desired cut with the dado blade. DO NOT use the fence in combination with the miter gauge, which could result in the workpiece binding and kicking back.
4. Re-connect the saw to the power source.
5. Turn the saw **ON**. The blade should run smooth, with no vibrations.
6. When the blade has reached full speed, perform a test cut with a scrap piece of wood.
7. If the cut is satisfactory, repeat the cut with the actual workpiece.
Cutting Dados with a Standard Blade

A ripping blade (described on Page 25) is typically the best blade to use for cutting dados when using a standard blade, because it removes sawdust very efficiently.

To use a standard saw blade to cut dados, do these steps:

1. DISCONNECT SAW FROM POWER!
2. Mark the width of the dado cut on the workpiece. Include marks on the edge of the workpiece so the cut path can be aligned when the workpiece is lying on the table.
3. Raise the blade up to the desired depth of cut (depth of the dado channel desired).
4. Set up the saw for the type of cut you need to make, depending on if it is a rip cut (see Page 32) or crosscut (see Page 33).
5. Align the blade to cut one of the dado sides, as shown in Figure 52.
6. Re-connect the saw to the power source and turn the saw ON. Allow the blade to reach full speed, then perform the cutting operation.
7. Repeat the cutting operation on the other side of the dado channel, as shown in Figure 53.
8. Make additional cuts (see Figure 54) in the center of the dado to clear out the necessary material. The dado is complete when the channel is completely cleared out.

**CAUTION**

Always use push sticks, featherboards, push paddles and other safety accessories whenever possible to increase safety and control during operations which require that the blade guard be removed from the saw. ALWAYS replace the blade guard after dadoing is complete.


Rabbet Cutting

Commonly used in furniture joinery, a rabbet cut is an L-shaped groove cut in the edge of the workpiece. Rabbets can be cut with either a dado blade or a standard saw blade.

Rabbet cutting on the edge of the workpiece with a dado blade requires a sacrificial fence (see Figure 55). Make the sacrificial fence the same length as the fence and $\frac{3}{4}$" thick. Attach it to the fence with screws or clamps, making sure they are all secure and tight. Raise the blade into the sacrificial fence to the height needed.

Cutting Rabbets with a Dado Blade

1. DISCONNECT SAW FROM POWER!

2. Adjust the dado blade to the height needed for the rabbeting operation. When cutting deep rabbets, take multiple light passes to reduce the risk of kickback.

3. Adjust the fence and align the workpiece to perform the cutting operation, as shown in Figure 56.

4. Re-connect the saw to the power source and turn the saw ON. When the blade has reached full speed, perform a test cut with a scrap piece of wood.

--- If the cut is satisfactory, repeat the cut with the final workpiece.

WARNING

Dado blades have a higher risk of kickback than normal blades because their larger size applies stronger forces to the workpiece. This risk increases relative to the depth and width of the cut. To minimize your risk of serious personal injury, ensure that stock is flat and straight, and make multiple light cuts (rather than one deep cut) to achieve the desired cutting depth.
Cutting Rabbets with a Standard Blade

A ripping blade is typically the best blade to use for cutting rabbets when using a standard blade because it removes sawdust very efficiently. (See Page 25 for blade details.) Also, a sacrificial fence is not required when cutting rabbets with a standard blade.

To cut rabbets with the standard blade, do these steps:

1. DISCONNECT SAW FROM POWER!

2. Ensure that the riving knife and standard table insert are properly installed.

3. Mark the width of the rabbet cut on the edge of the workpiece, so you can clearly identify the intended cut while it is laying flat on the saw table.

4. Raise the blade up to the desired depth of cut (depth of the rabbet channel desired).

5. Stand the workpiece on edge, as shown in Figure 57, then adjust the fence so the blade is aligned with the inside of your rabbet channel.

   – If the workpiece is very tall, or is unstable when placed against the fence, lay it flat on the table and use a dado blade to perform the rabbet cut.

6. Reconnect the saw to the power source, then perform the cut.

7. Lay the workpiece flat on the table, as shown in Figure 58, adjust the saw blade height to intersect with the first cut, then perform the second cut to complete the rabbet.

---

**CAUTION**

DO NOT place a tall board on edge to perform a rabbet cut with a standard blade. Workpieces that are too tall to be properly supported with the fence can easily shift during operation and cause kickback. Instead, place the stock flat on the saw and perform the rabbet cut with a dado blade.

---

**Figure 57.** First rabbet cut with a single blade.

**Figure 58.** Second rabbet cut with a single blade.
Resawing

Resawing is the process of cutting a thick piece of stock into one or more thinner pieces. Although resawing can be done with a table saw, we strongly recommend that you use a bandsaw instead.

A bandsaw is the ideal machine for resawing, and resawing with one is fairly easy and safe. A table saw is not intended for resawing, and resawing with one is difficult and dangerous due to the increased risk of kickback from binding and deep cuts, and the increased risk of injury from having to remove the guard.

If you insist on resawing with a table saw, DO NOT do so without using a resaw barrier and wearing a full face shield. The following instructions describe how to build a resaw barrier and add an auxiliary fence to your standard fence, to reduce the risk injury from resawing on a table saw.

Note: To determine the maximum resawing height for this table saw, find the maximum blade height, then double it and subtract 1\(\frac{1}{8}\)".

Making a Resaw Barrier

The resaw barrier acts in tandem with the rip fence when resawing to provide tall support for the workpiece to minimize the probability of it binding against the blade and causing kickback.

Tools Needed:

<table>
<thead>
<tr>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table Saw ..........</td>
</tr>
<tr>
<td>Jointer and Planer ..................................... Recommended</td>
</tr>
<tr>
<td>Clamps ..................................................2 Minimum</td>
</tr>
<tr>
<td>Drill and Drill Bits..................................... As Needed</td>
</tr>
</tbody>
</table>

Components Needed for Resaw Barrier:

<table>
<thead>
<tr>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood* (\frac{3}{4})&quot; x 5(\frac{1}{2})&quot; x Length of Fence ....</td>
</tr>
<tr>
<td>Wood* (\frac{3}{4})&quot; x 3&quot; x Length of Fence................</td>
</tr>
<tr>
<td>Wood Screws #10 x 2&quot; ....................................4</td>
</tr>
<tr>
<td>Wood Glue ............................................. As Needed</td>
</tr>
</tbody>
</table>

* Only use furniture-grade plywood, kiln dried hardwood, or HDPE plastic to prevent warping.
To build the resaw barrier, do these steps:

1. Cut your wood pieces to the size specified above. If you are using hardwood, cut the pieces oversize, then joint and plane them to the correct size to make sure they are square and flat.

2. Pre-drill and countersink four holes approximately 3/8" from the bottom of the 5 1/2" tall wood piece.

3. Glue the end of the 3" board, then clamp the boards at a 90° angle with the larger board in the vertical position, as shown in Figure 59, and fasten them together with the wood screws.

Auxiliary Fence

The auxiliary fence is necessary if you are resawing a workpiece that is taller than it is wide. It should be no less than 1 1/2" shorter than the board to be resawn.

Components Needed for the Auxiliary Fence:
Wood* 3/4" x (Height) x Length of Fence .....................1

* Only use furniture-grade plywood, kiln dried hardwood, or HDPE plastic to prevent warping.

Tools Needed for the Auxiliary Fence:
Table Saw ..................................................1
Jointer and Planer ............................... Recommended
Clamps..................................................2 Minimum

To build the auxiliary fence, do these steps:

1. Cut the auxiliary fence board to size. If you are using hardwood, cut the board oversize, then joint and plane the board to the correct size to make sure the board is square and flat.

2. Unthread the fence face mounting hardware and remove the fence face from the fence assembly.

3. Place the auxiliary fence next to the fence face you removed in Step 1, mark the location of the nine mounting holes on the auxiliary fence, then drill the holes.

4. Use the mounting hardware you removed in Step 2 to attach the auxiliary fence. The end result should be similar to Figure 60.
Resawing Operation

The table saw motor is pushed to its limits when resawing. If the motor starts to bog down, slow down your feed rate. Motor overloading and blade wear can be reduced by using a ripping blade. Ripping blades are designed to clear the sawdust quickly.

Components Needed for Resawing:
Zero-clearance Table Insert ........................................1
Ripping Blade 10” .......................................................1
Clamps........................................................................2
Shop Made Auxiliary Fence ........................................1
Shop Made Resaw Barrier ..........................................1

To perform resawing operations, do these steps:

1. DISCONNECT SAW FROM POWER!

2. Remove the standard table insert and the blade guard assembly.

3. Install a ripping blade, install the riving knife, lower the blade below the table, then install a zero clearance table insert.

4. Attach the auxiliary fence and set it to the desired width from the blade.

Note: When setting the correct width, don’t forget to account for blade kerf and the inaccuracy of the fence scale while the auxiliary fence is installed.

5. Place the workpiece against the auxiliary fence and slide the resaw barrier against the workpiece, as shown in Figure 61. Now clamp the resaw barrier to the top of the table saw at both ends.

6. Lower the blade completely below the table, slide the workpiece over the blade to make sure it moves smoothly and fits between the resaw barrier and fence, then remove the workpiece.

7. Raise the blade approximately an inch, or close to half the height of the workpiece, whichever is less.

WARNING

The risk of kickback when resawing is high. Always stand to the side of the cutting path and wear a full face shield to prevent kickback injuries when resawing.

Figure 61. Example illustration of a resaw setup.
8. Plug in the table saw, turn it ON, and use a push stick or push block to feed the workpiece through the blade, using a slow and steady feed rate.

9. Flip the workpiece end for end, keeping the same side against the fence, and run the workpiece through the blade again.

10. If necessary to complete the operation, repeat Steps 7-9 until the blade is close to half of the height of the board to be resawn. The ideal completed resaw cut will leave an $\frac{1}{8}$" connection when the resawing is complete, as shown in Figure 62. Leaving an $\frac{1}{8}$” connection will reduce the risk of kickback.

11. Turn OFF the table saw, then separate the parts of the workpiece and hand plane the remaining ridge to remove it.

12. When finished resawing, remove the resaw barrier and auxiliary fence, then re-install the blade guard/spreader or riving knife and standard table insert.

**WARNING**

The danger of kickback increases relative to the depth of a cut. Reduce the risk of kickback by making multiple passes to achieve the desired depth of cut. Failure to follow these warnings could result in serious personal injury.

**WARNING**

Always use push sticks or push paddles to increase safety and control during operations which require that the blade guard and spreader must be removed from the saw. ALWAYS replace the blade guard after resawing is complete.

![Figure 62. Completed resaw operation.](image-url)
SHOP-MADE SAFETY ACCESSORIES

Featherboards

Easily made from scrap stock, featherboards provide an added degree of protection against kickback, especially when used together with push sticks. They also maintain pressure on the workpiece to keep it against the fence or table while cutting, which makes the operation easier and safer because the cut can be completed without the operator’s hands getting near the blade. The angled ends and flexibility of the fingers allow the workpiece to move in only one direction.

Making a Featherboard

This sub-section covers the two basic types of featherboards: 1) Those secured by clamps, or 2) those secured with the miter slot.

Material Needed for Featherboard:
Hardwood $\frac{3}{4}$" x 3" x 10" (Minimum) .......................1
Hardwood $\frac{3}{4}$" x 6" x 28" (Maximum) .......................1

Additional Material Needed for Mounting Featherboard:
Hardwood $\frac{3}{8}$" x (Miter Slot Width) x 5"L .....................1
Wing Nut 1/4"-20.................................................1
Flat Head Screw 1/4"-20 x 2" ..................................1
Flat Washer 1/4"-20 .............................................1

To make a featherboard, do these steps:

1. Cut a hardwood board that is approximately $\frac{3}{4}$" thick to size. The length and width of the board can vary according to your design. Most featherboards are 10"-28" long and 3"-6" wide. Make sure the wood grain runs parallel with the length of the featherboard, so the fingers you will create in Step 3 will bend without breaking.

2. Cut a 30° angle at one end of the board.

3. Make a series of end cuts with the grain $\frac{3}{8}$"-$\frac{1}{4}$" apart and 2"-3" long, as shown in Figure 63 (A). Alternatively, start cuts at 2"-3" deep, then make them progressively deeper, as shown in Figure 63 (B).

NOTICE

Cuts made across the grain result in weak fingers that easily break when flexed. When made correctly, the fingers should withstand flexing from moderate pressure. To test the finger flexibility, push firmly on the ends with your thumb. If the fingers do not flex, they are likely too thick (the cuts are too far apart).

Figure 63. Patterns for making featherboards.

NOTICE

Only Steps 1-3 are required to make a clamp-mounted featherboard. Refer to Page 46 for instructions on clamping the featherboard to the table.
4. Rout a $\frac{1}{4}'' - \frac{3}{8}''$ wide slot 4''-5'' long in the workpiece and 1''-2'' from the short end of the featherboard, as illustrated in Figure 64.

5. Cut a miter bar that will fit in the table miter slot approximately 5'' long (see Figure 65).

   **Tip:** Consider making the miter bar longer for larger featherboards—approximately half the length of the total featherboard—to support the force applied to the featherboard during use.

6. Drill a $\frac{1}{4}''$ hole in the center of the bar, then countersink the bottom to fit a $\frac{1}{4}''$-20 flat head screw.

7. Mark a 4'' line through the center of the countersunk hole in the center, then use a jig saw with a narrow blade to cut it out.

8. Assemble the miter bar and featherboard with a $\frac{1}{4}''$-20 x flat head screw, flat washer, and a wing nut or a star knob (see Figure 66). Congratulations! Your featherboard is complete.

   **Note:** The routed slot, countersunk hole, and the flat head screw are essential for the miter bar to clamp into the miter slot. When the wing nut is tightened, it will draw the flat head screw upward into the countersunk hole. This will spread the sides of the miter bar and force them into the walls of the miter slot, locking the featherboard in place.

   **Tip:** The length of the flat head screw depends on the thickness of the featherboard—though $1\frac{1}{2}''$ to 2'' lengths usually work.

9. Proceed to Mounting Featherboard in Miter Slot on the next page.
Mounting Featherboard with Clamps

1. DISCONNECT SAW FROM POWER!

2. Lower the saw blade, then adjust the fence to the desired width and secure it.

3. Place the workpiece against the fence, making sure it is 1" in front of the blade.

4. Place a featherboard on the table so all fingers point forward and contact the workpiece evenly (see Figure 67 for an example).

5. Secure the featherboard to the table with a clamp.

6. Check the featherboard by pushing it with your thumb to ensure it is secure.
   – If the featherboard moves, tighten the clamp some more.

7. Mount a second featherboard to the fence with another clamp, then repeat Step 6 to ensure it is secure (see Figure 67).

Mounting Featherboard in Miter Slot

1. DISCONNECT SAW FROM POWER!

2. Lower the saw blade, then adjust the fence to the desired width and secure it.

3. Place the workpiece evenly against the fence, making sure it is 1" in front of the blade.

4. Slide the featherboard miter bar into the miter slot, making sure the fingers slant toward the blade, as illustrated in Figure 68.

5. Position the fingered edge of the featherboard against the edge of the workpiece, so that all of the fingers contact the workpiece evenly. Slide the featherboard toward the blade until the first finger is nearly even with the end of the workpiece, which should be 1" away from the blade.

6. Double check the workpiece and the featherboard to ensure they are properly positioned, as described in Step 5. Then secure the featherboard to the table. Check the featherboard by hand to make sure it is tight.

**NOTICE**

The featherboard should be placed firmly enough against the workpiece to keep it against the fence but not so tight that it is difficult to feed the workpiece.
Push Sticks

When used correctly, push sticks reduce the risk of injury by keeping hands away from the blade while cutting. In the event of an accident, a push stick can absorb damage that would have otherwise happened to hands or fingers. Use push sticks whenever your hands will get within 12" of the blade. To maintain control when cutting large workpieces, start the cut by feeding with your hands then use push sticks to finish the cut, so your hands are not on the end of the workpiece as it passes through the blade.

Feeding: Place the notched end of the push stick against the end of the workpiece (see inset Figure 69), and move the workpiece into the blade with steady downward and forward pressure.

Supporting: A second push stick can be used to keep the workpiece firmly against the fence while cutting. When using a push stick in this manner, only apply pressure before the blade; otherwise, pushing the workpiece against or behind the blade will increase the risk of kickback (see Figure 69).

MATERIAL: Only use hardwood, sturdy plywood, or high-density plastic. Do not use softwood that may break under pressure or metal that can break teeth from the blade!

SANDING: Sand edges to remove rough edges and increase comfort.

SIZING: Push stick must be at least 15 3/4" long. Use 1/2" - 3/4" thick material.

Figure 69. Using push sticks to rip narrow stock.

Figure 70. Side view of push stick in-use.

Figure 71. Template for a basic shop-made push stick (not shown at actual size).
Push Blocks

When used correctly, a push block reduces the risk of injury by keeping hands away from the blade while cutting. In the event of an accident, a push block often takes the damage that would have otherwise happened to hands or fingers.

A push block can be used in place of or in addition to a push stick for feeding workpieces into the blade. Due to their design, push blocks allow the operator to apply firm downward pressure on the workpiece that could not otherwise be achieved with a push stick.

The push block design on this page (see Figure 74) can be used in two different ways (see Figure 73). Typically, the bottom of the push block is used until the end of the workpiece reaches the blade.

The notched end of the push block is then used to push the workpiece the rest of the way through the cut, keeping the operator’s hands at a safe distance from the blade. A push stick is often used at the same time in the other hand to support the workpiece during the cut.

Making a Push Block

Use this template to make your own push block.

Figure 74. Template for a basic shop-made push stick (not shown at actual size).
Narrow-Rip Auxiliary Fence & Push Block

There are hundreds of designs for specialty jigs that can be found in books, trade magazines, and on the internet. These types of jigs can greatly improve the safety and consistency of cuts. They are particularly useful during production runs when dozens or hundreds of the same type of cut need to be made. The narrow-rip auxiliary fence and push block system shown in this section is an example of a specialty jig that can be made to increase the safety of very narrow rip cuts.

**Material Needed for Narrow Rip Auxiliary Fence & Push Block**

Hardwood 3/4" x 3" x Length of Fence ....................... 1
Plywood 3/4" x 5 1/4" x Length of Fence ..................... 1
Wood Screws #8 x 11/2" ................................. 8

**Material Needed for Push Block**

Hardwood or Plywood 3/4" x 15" x 5 5/8" ...................... 1
Hardwood or Plywood 3/4" x 10" x 5"–9" .................... 1
Wood Glue .............................................. Varies
Wood Screws #8 x 1 1/2" ................................. As Needed

**Making a Narrow-Rip Push Block for an Auxiliary Fence**

1. Cut a piece of 3/4" thick plywood 5 1/4" wide and as long as your table saw fence; cut a piece of 3/4" thick hardwood 3" wide and as long as your table saw fence, as shown in Figure 75.

   **Note:** We recommend cutting the hardwood board oversize, then jointing and planing it to the correct size to make sure the board is square and flat. Only use furniture-grade plywood or kiln dried hardwood to prevent warping.

2. Pre-drill and countersink eight pilot holes 3/8" from the bottom of the 3" wide board, then secure the boards together with (8) #8 x 1 1/2" wood screws, as shown in Figure 76.

3. Using the 3/4" material you used in the previous steps, cut out pieces for the push block per the dimensions shown in Figure 77; for the handle, cut a piece 10" long by 5"–9" high and shape it as desired to fit your hand.

4. Attach the handle to the base with #8 x 1 1/2" wood screws, and attach the lip to the base with wood glue.

**Figure 75. Auxiliary fence dimension.**

**Figure 76. Location of pilot holes.**

**Figure 77. Push block dimensions and construction.**
WARNING

Keep the blade guard installed and in the down position. Failure to do this could result in serious personal injury or death.

Using the Auxiliary Fence and Push Block

1. Place the auxiliary fence on the table and clamp it to the fence at both ends, then adjust the distance between the auxiliary fence and the blade—this determines how wide the workpiece will be ripped (see Figure 78).

2. Install the blade guard, then secure the spreader pawls in the upright position, as shown in Figure 41 on Page 29, so they do not interfere with the push block lip.

3. Place the workpiece 1” behind the blade and evenly against the table and the auxiliary fence, as shown in Figure 79.

4. Turn the saw ON, then begin ripping the workpiece using a push stick for side support.

5. As the workpiece nears the end of the cut, place the push block on the auxiliary fence with the lip directly behind the workpiece, then release the push stick just before the blade.

6. Guide the workpiece the rest of the way through the cut with the push block, as shown in Figure 80.

CAUTION

Turn OFF the saw and allow the blade to come to a complete stop before removing the cut-off piece. Failure to follow this warning could result in serious personal injury.
Outfeed & Support Tables

One of the best accessories for improving the safety and ease of using a table saw is simply placing a large table (outfeed table) behind the saw to catch the workpiece (see Figure 81). Additionally, another table to the left of the saw (support table) can also help support large workpieces so they can be cut safely and accurately.

Crosscut Sled

A crosscut sled (see Figure 82) is a fantastic way to improve the safety and accuracy of crosscutting on the table saw. Most expert table saw operators use a crosscut sled when they have to crosscut a large volume of work, because the sled offers substantial protection against kickback when crosscutting.
ACCESSORIES

Table Saw Accessories

The following table saw accessories may be available through your local Woodstock International Inc. Dealer. If you do not have a dealer in your area, these products are also available through online dealers. Please call or e-mail Woodstock International Inc. Customer Service to get a current listing of dealers at: 1-800-840-8420 or at sales@woodstockint.com.

D2057—Heavy-Duty Mobile Base
Shop Fox® Heavy-Duty Mobile Bases are designed to give users a stable and mobile platform upon which to mount machinery and equipment having a variety of base sizes and weights. The heavy-duty casters are arranged on outriggers allowing the machine to sit as low as possible and yet be extremely stable. Swivel casters on two corners provide excellent maneuverability. The unique two-piece retractable feet use rare earth magnets to allow the adjustment knob to turn while the foot pad is tight to the floor.

W1727—1 HP Dust Collector
Specifications: • 1 HP, 110V/220V, single-phase motor • 800 CFM air suction capacity • 5.67” static pressure • One 4” intake hole • 9” balanced steel, radial fin impeller • 2.1 cubic feet bag capacity • 15¾” x 39¾” base on casters for portability • 2.5 micron bag filtration • Power coated paint for durability • 54½” height with bag inflated.

D2271—Shop Fox Roller Table
Use this versatile roller table wherever you need extra workpiece support. Features all-steel welded construction and measures 19” x 65”. Comes with 9 ball bearing rollers and has four independently adjustable legs for any leveling requirement. Adjustable in height from 6¾” to 4¾”. 1,000 lb. capacity!
W1104—Yellow Board Buddy® Pair
Feature clockwise turning wheels to maintain constant, even feeding pressure. If a kickback occurs, the wheels lock up and function as anti-kickback devices.

W1105—Green Board Buddy® Pair
Feature wheels that turn in both directions to function as bidirectional hold-downs.

W1104—Orange Board Buddy® Pair
Feature counterclockwise turning wheels to maintain constant, even feeding pressure. If a kickback occurs, the wheels lock up and function as anti-kickback devices.

D3096—Shop Fox Featherboard
Reduce the risk of kickback and achieve consistent feeding results with these Shop Fox featherboards. Fits standard 3/8” x 3/4” miter gauge slots.

D3122—Shop Fox Push Stick
This essential safety item keeps hands at a safe distance from blades and cutters while still maintaining control of the workpiece against machine fences. A true necessity when running narrow stock. The durable handle is designed for maximum control. Measures 13 1/2” overall. Super ergonomic design!

D3119—Board Straighteners™
These Board Straighteners™ allow a board with a curved or crooked edge to attach to a board with a known straight edge. This stable arrangement can then be used against a table saw fence, which in turn transfers a straight-line cut to the crooked board. Board Straighteners™ allow cutting a straight edge on boards that would otherwise be too dangerous to rip unaided.
MAINTENANCE

Schedule

For optimum performance from your machine, follow this maintenance schedule and refer to any specific instructions given in this section.

Daily Check:
- Inspect blades for damage or wear.
- Check for loose mounting bolts/arbor nut.
- Check cords, plugs, and switch for damage.
- Check for the proper function of the blade guard (see Blade Guard Assembly on Page 28).
- Check for any other condition that could hamper the safe operation of this machine.
- Wipe the table clean after every use—this ensures moisture from wood dust does not remain on bare metal surfaces.

Weekly Maintenance:
- Wipe down the table surface and grooves with a lubricant and rust preventive such as SLIPIT®.
- Vacuum dust buildup from the motor housing and trunnions.
- Clean the pitch and resin from the saw blade with a cleaner like OxiSolv® Blade & Bit Cleaner.

Monthly Maintenance:
- Check/tighten the belt tension (Page 56).

Cleaning

Cleaning the Model W1824 is relatively easy. Vacuum excess wood chips and sawdust, and wipe off the remaining dust with a dry cloth. If any resin has built up, use a resin dissolving cleaner to remove it. After cleaning, treat all unpainted cast iron and steel with a non-staining lubricant.

Occasionally it will become necessary to clean the internal parts with more than a vacuum. To do this, remove the table top and clean the internal parts with resin/pitch dissolver or mineral spirits and a stiff wire brush or steel wool. DO NOT USE WATER—WATER WILL CAUSE CAST IRON TO RUST.

Make sure the internal workings are dry before using the saw again, so that wood dust will not accumulate. If any essential lubrication is removed during cleaning, re-lubricate those areas.
Lubrication

It is essential to clean components before lubricating them because dust and chips build up on these components and make them hard to move. Simply adding more grease to them will not yield smooth moving components.

If you thoroughly clean the components in this section before lubricating them, the result will be silky smooth movement when turning the handwheels, which will result in much higher enjoyment on your part!

Use mineral spirits, shop rags, and a stiff brush when cleaning these components, then let them thoroughly dry before applying the lubrication.

Trunnion Slides

Clean out the front and rear trunnion slides with mineral spirits and a rag, then apply lithium grease into each groove. Move the blade tilt back-and-forth to spread the grease (see Figure 83).

Worm Gear, Bull Gear & Leadscrew

Clean away any built up grime and debris from the worm gear, bull gear, and leadscrew (see Figures 84-85) with a wire brush, rags, and mineral spirits. Allow the components to dry, then apply a thin coat of white lithium grease to them.
SERVICE

General

This section covers the most common service adjustments or procedures that may need to be made during the life of your machine.

If you require additional machine service not included in this section, please contact Woodstock International Technical Support at (360) 734-3482 or send e-mail to: tech-support@shopfox.biz.

Belt Service

The drive belt stretches slightly with normal use of the saw. Most of the stretching will happen during the first 16 hours of use, but it continues with time. If you notice that the belt is slipping, it will need to be tensioned. If the belt is cracked, frayed, or shows other signs of excessive wear, it will need to be replaced.

Items Needed

<table>
<thead>
<tr>
<th>Item</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hex Wrench 6mm</td>
<td>1</td>
</tr>
<tr>
<td>Replacement Ribbed V-Belt (Part No. X1824112)</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: The replacement ribbed V-belt can be purchased from your authorized Shop Fox dealer.

Tensioning Belt

1. DISCONNECT SAW FROM POWER!

2. Raise the blade completely, then open the motor access cover.

3. Loosen the motor mount cap screw shown in Figure 86, then pivot the motor up and down to make sure that it is loose.

4. Press down on the motor with one hand to keep the belt tension tight, then re-tighten the cap screw.

Figure 86. Motor mount cap screw.

WARNING

MAKE SURE that your machine is unplugged during all maintenance procedures! If this warning is ignored, serious personal injury may occur.
5. Press the belt in the center to check belt tension. The belt is correctly tensioned when there is approximately \( \frac{1}{4} \)" deflection as it is pushed with moderate pressure, as shown in Figure 87.

- If there is more than \( \frac{1}{4} \)" deflection when the belt is pushed with moderate pressure, loosen the cap screw, push the motor downward, then re-tighten the cap screw.

6. Close the motor access cover.

Replacing Belt
1. DISCONNECT SAW FROM POWER!

2. Lower the blade completely, then open the motor access cover.

3. Loosen the motor mount cap screw that secures the motor (see Figure 86 on the previous page) and lift the motor fully to remove tension on the belt. Re-tighten the cap screw to hold the motor in this position, then roll the belt off of the arbor and motor pulleys.

4. Install a new belt onto the pulleys, loosen the cap screw, then lower the motor. Use the blade elevation handwheel to raise the blade completely.

5. Press down on the motor with one hand to keep the belt tension tight, then tighten the cap screw.

6. Follow Step 5 in the previous Tensioning Belt procedure to check the V-belt tension.

7. Close the motor access cover.
Tilt Stop Collars

The table saw features stop collars that halt the blade tilt exactly at 45° and 90°. The stop collars have been set at the factory and should require no adjustments, unless you notice that your cuts are not accurate.

Note: The tilt scale reads "0" when the blade is 90° to the table.

Tools Needed

<table>
<thead>
<tr>
<th>Tool</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>90° Square</td>
<td>1</td>
</tr>
<tr>
<td>45° Square</td>
<td>1</td>
</tr>
<tr>
<td>Hex Wrench 4mm</td>
<td>1</td>
</tr>
</tbody>
</table>

Setting 90° Stop Collar

1. **DISCONNECT SAW FROM POWER!**

2. Raise the blade as high as it will go, then tilt it toward 0° until it stops and cannot be tilted any more.

3. Place a 90° square against the table and blade so it contacts the blade evenly from bottom to top, as shown in Figure 88. Make sure the square is not contacting a blade tooth.

   **Note:** If adjustments are made to the 90° stop collar in the following steps, make sure the tilt indicator arrow shown in Figure 89 points to the 0° mark on the scale when the table is at 90° with the blade. If it is not, loosen the button head screw that secures the indicator, then adjust it and re-tighten the screw.

   – If the blade is 90° to the table, then adjustments do not need to be made.

   – If the blade is not 90° to the table, adjust the 90° stop collar and proceed to the next step.

4. Tilt the blade away from 0° by about 5°, so there is room for the 90° stop collar to move.

5. Open the motor access cover, loosen the cap screws shown in Figure 90, then thread the 90° stop collar one turn away from the trunnion bracket. This will allow you to square the blade in the next step.
6. Place a square against the blade, as illustrated in Figure 88 on the previous page, then adjust the blade until it is perfectly square to the table.

7. Without turning the blade tilt leadscrew, finger-tighten the 90° collar against the trunnion bracket, then re-tighten the two cap screws to secure the collar position.

8. Repeat Steps 2-3 to verify that the collar adjustment you made was correct. When the adjustment is satisfactory, close the motor access cover.

Setting 45° Stop Collar
1. DISCONNECT SAW FROM POWER!

2. Raise the blade as high as it will go, then tilt it towards 45° until it stops and cannot be tilted any more.

3. Place a 45° square against the table and blade so it contacts the blade evenly from bottom to top, as shown in Figure 91. Make sure the square does not contact a blade tooth.

   — If the blade is 45° to the table, then adjustments do not need to be made.

   — If the blade is not 45° to the table, adjust the 45° stop collar and proceed to the next step.

4. Tilt the blade to 35° so the stop collar can move.

5. Open the motor access cover, loosen the cap screws on the 45° stop collar (see Figure 92), then turn the collar one turn away from the trunnion bracket. This will allow you to adjust the blade to exactly 45° in the next step.

6. Place a 45° square against the blade, as shown in Figure 91, then adjust the blade until it is exactly 45° to the table.

7. Without turning the blade tilt leadscrew, finger-tighten the 45° stop collar against the trunnion bracket, then tighten the two cap screws to secure the collar position.

8. Repeat Steps 2-3 to verify that the collar adjustment you made was correct. When the adjustment is satisfactory, close the motor access cover.
Miter Slot to Blade Parallelism

Your table saw will give the best results if the miter slot and the rip fence are adjusted parallel to the blade. If either of these are not exactly parallel, your cuts and your finished work will be lower in quality, but more importantly, the risk of kickback will be increased.

Tools Needed

<table>
<thead>
<tr>
<th>Tool</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjustable Square</td>
<td>1</td>
</tr>
<tr>
<td>Marker</td>
<td>1</td>
</tr>
<tr>
<td>Dead Blow Hammer</td>
<td>1</td>
</tr>
<tr>
<td>Hex Wrenches 3, 8 mm</td>
<td>1 Each</td>
</tr>
</tbody>
</table>

To adjust the blade parallel to the miter slot, do these steps:

1. DISCONNECT SAW FROM POWER!

2. Use the adjustable square to measure the distance from the miter slot to a carbide tip on the blade, as shown in Figure 93. Make sure that the face of the adjustable square is even along the miter slot.

3. With the end of the adjustable square just touching the carbide tip, lock the measurement bar of the square in place. Now, mark the tip of the carbide tip with a marker where you made this measurement.

4. Rotate the marked blade tip to the other end of the table insert.

5. Slide the adjustable square down to the other end of the table insert, and compare the distance from the marked blade tip to the end of the adjustable square, as shown in Figure 94.

   - If the blade tip measurement is the same on both sides, go to Step 11.

   - If the blade tip does not touch the end of the adjustable square in the same manner as in the first measurement, the table will need to be adjusted. Proceed to Step 6.
6. Remove the six button head cap screws that secure the rear trunnion access panel (see Figure 95), then remove the panel and open the motor access cover to reach the trunnions.

⚠️ CAUTION
The trunnion and motor assembly could fall and crush your hands or arms if the trunnion mounting cap screws are loosened too much during the following steps. DO NOT remove the cap screws that secure the trunnions to the table or loosen them more than 1½ turns!

7. To adjust the table, loosen the two cap screws that secure the rear trunnion to the underside of the table 1-1¹⁄₂ turns (see Figure 96), and slightly tap the trunnion with the dead blow hammer in the needed direction.

8. Tighten the two cap screws, then repeat Steps 2-5 to re-check the slot-to-blade parallelism.
   - If the measurement is the same from front-to-back, skip ahead to Step 11.
   - If the adjustments you made in Step 7 were not enough to adjust the miter slot parallel to the blade, continue to Step 9.

9. Loosen the two cap screws that secure the front trunnion to the underside of the table (see Figure 97) and tap the trunnion in a similar manner as you did in Step 7.

10. Tighten the two cap screws and recheck the miter slot-to-blade parallelism.
    - If the blade tip measurement is the same on both sides, continue to Step 11.
    - If the adjustments you made in Step 9 were not enough to adjust the miter slot parallel with the blade, continue adjusting the front and rear trunnions as needed until the miter slot and blade are parallel.
11. Tilt the blade to 45° and recheck the miter slot-to-blade parallelism.

- If the blade is still parallel with the miter slot, no additional adjustments need to be made. Skip ahead to Step 15.

- If the blade was parallel with the miter slot at 90° but not at 45°, continue to Step 12.

12. Depending on the result of Step 11, loosen the front or rear trunnion cap screws 1 1/2 turns and remove one shim from each side of that trunnion.

- If the distance of A is greater than B, remove one shim from each side of the front trunnion (locations #1 and #2 in Figure 98).

- If the distance of B is greater than A, remove one shim from each side of the rear trunnion (locations #3 and #4 on Figure 99).

13. Re-tighten the cap screws and re-check the blade-to-miter slot parallelism at 90° and 45°.

- If the distance of A and B are equal, no further adjustments need to be made.

- If the distances of A and B are not equal, repeat this entire procedure until they are.

14. Once the miter slot is adjusted parallel to the blade, make sure that mounting fasteners are secure.

15. Re-install the rear trunnion access panel and close the motor access cover.
Spreader or Riving Knife Alignment

Checking Alignment with Blade

The blade guard spreader and riving knife must be aligned with the blade when installed. If the spreader/riving knife is not aligned with the blade, then the workpiece will before forced sideways during the cut, which will increase the risk of kickback.

Tool Needed

<table>
<thead>
<tr>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Straightedge .....................................................1</td>
</tr>
</tbody>
</table>

To check the spreader/riving knife alignment, do these steps:

1. DISCONNECT SAW FROM POWER!

2. Raise the saw blade to the maximum height so you have easy working access.

3. Place the straightedge against the side of the blade and spreader/riving knife at the top and bottom, as illustrated in Figure 100. The spreader/riving knife should be parallel with the blade along its length at both positions, and in the “Alignment Zone,” as shown in Figure 101.

   - If the spreader/riving knife is not parallel with the blade and inside the alignment zone, then it needs to be adjusted. Proceed to the Adjusting Alignment instructions on the next page.

4. Remove the spreader/riving knife and place it on a flat surface and check to see if the spreader/riving knife lays evenly along its length.

   - If the spreader/riving knife does not lay evenly, proceed to Adjusting Bent Spreader/Riving Knife on the next page.
Adjusting Alignment
The spreader/riving knife mounting position can be adjusted into alignment with the blade using the cap screws on the spreader/riving knife "L" bracket.

Tools Needed

<table>
<thead>
<tr>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hex Wrench 5mm</td>
</tr>
<tr>
<td>Straightedge</td>
</tr>
</tbody>
</table>

To adjust the spreader/riving knife position, do these steps:

1. DISCONNECT SAW FROM POWER!

2. Remove the table insert.

3. Loosen the two cap screws on the "L" bracket (see Figure 102), then adjust the position of the "L" bracket as necessary to correctly align the spreader/riving knife with the blade and into the "Alignment Zone".

4. Re-tighten the two cap screws on the "L" bracket to secure the spreader/riving knife adjustment.

Adjusting Bent Spreader/Riving Knife

1. DISCONNECT SAW FROM POWER!

2. Remove the spreader/riving knife from the machine to straighten it. Check it to make sure it sits evenly on a flat surface.

   – If you cannot straighten it properly, replace it.
Fence Adjustments

There are four main adjustments for the fence: 1) Height off the table, 2) squareness, 3) parallelism with the miter slot, and 4) clamping pressure. These adjustments are interconnected and some repetition may be needed when adjusting.

Tools Needed

<table>
<thead>
<tr>
<th>Tool</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hex Wrench 6mm</td>
<td>1</td>
</tr>
<tr>
<td>Square</td>
<td>1</td>
</tr>
<tr>
<td>Felt-Tipped Marker</td>
<td>1</td>
</tr>
</tbody>
</table>

Height and Squareness

The fence should be adjusted high enough off the table so that it does not drag across the surface or allow wood chips to get caught between the fence and table. Also, the fence face must be square to the table in order to produce accurate cuts.

To check/adjust the fence height and squareness to the table, do these steps:

1. **DISCONNECT SAW FROM POWER!**

2. Remove the fence from the saw and place it on a flat surface.

3. Unscrew the front thumb knobs and set screws shown in Figure 103 until they are barely threaded into the fence flange.

4. Back out the rear set screws until they are just barely threaded into the fence flange (see Figure 103).

5. Install the fence onto the table.

6. Loosen the top lock nuts on the fence flange and the lock nut on the rear rail foot (see Figure 104).

7. Adjust the top set screws and rear foot set screw so there is approximately 1/16” clearance between the bottom of the fence and the table, front-to-back and side-to-side, then re-tighten the lock nuts.
8. Place a square on the table and against the face of the fence, as shown in Figure 105, to check if the fence is square to the table.

   — If the fence is square to the table, proceed to Parallelism & Clamping Pressure below.

   — If the fence is not square to the table, continue with Step 8.

9. Loosen the top lock nuts and adjust the top set screws (see Figure 105) to make the fence face 90° to the table, then re-tighten the lock nuts.

Parallelism & Clamping Pressure
Set screws on the rear side of the fence flange position the fence parallel to the blade and adjust the clamping pressure to hold your fence securely. Before starting this procedure, make sure the blade is parallel with the miter slot.

To adjust the fence parallelism and clamping pressure, do these steps:

1. DISCONNECT SAW FROM POWER!

2. Lock the fence in place, then tap the front side with your hand and check to see if it moved sideways over the table.

   — If the fence did not move, proceed to Step 6.

   — If the fence moved, remove it from the table and continue with Step 3.

3. Turn each rear set screw in 1/6th of a turn (see Figure 103 on the previous page).

4. Re-install the fence and repeat Step 3.
5. Slide the fence up against the right-hand edge of the miter slot, as shown in Figure 106, then lock it in place.

6. Examine how the fence lines up with the miter slot along its length.
   
   - If the fence and miter slot are flush from front to rear, as shown in Figure 106 (A), proceed to Step 9.
   
   - If the rear of the fence overlaps the miter slot, as shown in Figure 106 (B), the fence is misaligned. Proceed to Step 8.

7. Remove the fence, then alternately loosen and tighten the rear fence set screws in equal amounts to adjust the rear of the fence until it is parallel with the miter slot.

8. Loosen both front thumb knobs (see Figure 103 on Page 65). Tighten the set screws so they just touch the fence tube, back off the set screws 1/2 turn, then re-tighten the thumb knobs.

Optional Offset Fence Adjustment

Some woodworkers prefer to offset the rear of the fence 1/64" from the blade, as shown in Figure 107.

The reason for this wider gap at the back side of the blade is to help prevent the chance of kickback or the blade burning the workpiece because it may be inconsistent in width. However, the trade-off is less accurate cuts, and if the fence is placed on the other side of the blade for other table saw operations, the potential of workpiece burning or kickback can be increased. Whenever using a fence, make sure that if an offset has been adjusted in the fence alignment, you use the fence on the side of the blade where the offset creates the wide gap.
Miter Gauge Adjustments

The miter gauge is equipped with stop screws that allow you to easily adjust the miter gauge 0°–30° left, 90°, and 0°–45° right. The stop screws contact the shaft, which moves in or out of the way for adjustments.

Tools Needed

<table>
<thead>
<tr>
<th>Tool Description</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phillips Head Screwdriver</td>
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</tr>
<tr>
<td>90° Square</td>
<td>1</td>
</tr>
<tr>
<td>45° Square</td>
<td>1</td>
</tr>
<tr>
<td>30° Square</td>
<td>1</td>
</tr>
<tr>
<td>Wrench 8mm</td>
<td>1</td>
</tr>
</tbody>
</table>

Checking/Setting 90° Stops

1. DISCONNECT SAW FROM POWER!

2. Slide the miter gauge into the T-slot on the table, then adjust the gauge so the 90° stop screw rests against the sliding shaft.

3. Place the square evenly against the face of the miter gauge and the blade, as shown in Figure 108.
   - If the square touches the miter gauge and the blade (not the teeth) evenly at the same time, then it is square to the blade and the 90° stop is set correctly. No further adjustments are necessary.
   - If the square does not touch the miter gauge and blade evenly at the same time, then proceed to Step 4.

4. Loosen the hex nut (jam nut) that secures the 90° stop screw (see Figure 109), and adjust the stop screw until it is seated against the shaft while the square is evenly touching the miter body and the blade body, then tighten the hex nut.

5. Loosen the screw on the front of the miter bar, adjust the pointer to 0°, then tighten the screw.

Checking/Setting 45° Stops

Follow the same process with the 45° and 30° stops that you followed with the 90°, except using a 45° and 30° square or adjustable square to verify that the miter body is 45° and 30° to the blade, as shown in Figure 109.
Electrical Safety Instructions

These pages are current at the time of printing. However, in the spirit of improvement, we may make changes to the electrical systems of future machines. Study this diagram carefully. If you notice differences between your machine and these wiring diagrams, call Woodstock International Technical Support at (360) 734-3482.

**WARNING**

**SHOCK HAZARD.** Working on wiring that is connected to a power source is extremely dangerous. Touching electrified parts will result in personal injury including but not limited to severe burns, electrocution, or death. Disconnect the power from the machine before servicing electrical components!

**QUALIFIED ELECTRICIAN.** Due to the inherent hazards of electricity, only a qualified electrician should perform wiring tasks on this machine. If you are not a qualified electrician, get help from one before attempting any kind of wiring job.

**WIRE CONNECTIONS.** All connections must be tight to prevent wires from loosening during machine operation. Double-check all wires disconnected or connected during any wiring task to ensure tight connections.

**WIRE/COMPONENT DAMAGE.** Damaged wires or components increase the risk of serious personal injury, fire, or machine damage. If you notice that any wires or components are damaged while performing a wiring task, replace those wires or components before completing the task.

**MOTOR WIRING.** The motor wiring shown in these diagrams is current at the time of printing, but it may not match your machine. Always use the wiring diagram inside the motor junction box.

**MODIFICATIONS.** Using aftermarket parts or modifying the wiring beyond what is shown in the diagram may lead to unpredictable results, including serious injury or fire.

**CAPACITORS/INVERTERS.** Some capacitors and power inverters store an electrical charge for up to five minutes after being disconnected from the power source. To avoid being shocked, wait at least this long before working on these components.

**ELECTRICAL REQUIREMENTS.** You MUST follow the electrical requirements at the beginning of this manual when connecting your machine to a power source.

**EXPERIENCING DIFFICULTIES.** If you are experiencing difficulties understanding the information included in this section, contact our Technical Support at (360) 734-3482.

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**NOTICE**

The photos and diagrams included in this section are best viewed in color. You can view these pages in color at www.shopfox.biz.
Electrical Components

**Figure 110.** Motor capacitor location.

**Figure 111.** Motor junction box location.

**Figure 112.** Switch location.
Troubleshooting

This section covers the most common problems and corrections with this type of machine. **WARNING! DO NOT make any adjustments until power is disconnected and moving parts have come to a complete stop!**

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>POSSIBLE CAUSE</th>
<th>CORRECTIVE ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine does not start or a breaker trips.</td>
<td>1. Locking pin installed. 2. Blown fuse. 3. Wall circuit breaker tripped. 4. Power supply switched OFF or at fault. 5. Plug/receptacle at fault/wired wrong. 6. Motor connection wired wrong. 7. Wiring open/has high resistance. 8. Motor START/STOP switch at fault. 9. Start capacitor at fault. 10. Motor at fault.</td>
<td>1. Remove locking pin from START button. 2. Replace fuse/ensure no shorts. 3. Ensure circuit size is correct/replace weak breaker. 4. Ensure power supply is on/has correct voltage. 5. Test for good contacts; correct the wiring. 6. Correct motor wiring connections (see Page 70). 7. Check/fix broken, disconnected, or corroded wires. 8. Replace switch. 9. Test/replace if faulty. 10. Test/repair/replace.</td>
</tr>
<tr>
<td>PROBLEM</td>
<td>POSSIBLE CAUSE</td>
<td>CORRECTIVE ACTION</td>
</tr>
<tr>
<td>---------</td>
<td>----------------</td>
<td>-------------------</td>
</tr>
</tbody>
</table>
| Blade is not aligned with miter slot or fence. | 1. Blade is warped.  
2. Table top is not parallel to blade.  
3. Fence is not parallel to blade. | 1. Replace blade (see Page 27).  
2. Make miter slot parallel to blade (see Page 60).  
3. Make fence parallel to blade (see Page 66). |
| Blade does not reach 90°. | 1. 90° stop collar is out of adjustment.  
2. Sawdust stuck on stop collar. | 1. Adjust 90° stop collar (see Page 58).  
2. Clean sawdust off stop collar. |
| Blade hits insert at 45°. | 1. 45° stop collar is out of adjustment.  
2. Sawdust stuck on stop collar.  
3. Slot in insert is inadequate.  
4. Table out of alignment.  
5. Blade position is incorrect. | 1. Adjust 45° stop collar (see Page 59).  
2. Clean sawdust off stop collar.  
3. File or mill the slot in the insert.  
4. Align miter slot to the blade (see Page 60).  
5. Adjust blade position. |
| Board binds or burns when feeding through table saw. | 1. Dull blade.  
2. Blade is warped.  
3. Fence is not parallel to blade.  
4. Table top is not parallel to blade. | 1. Replace blade (see Page 27).  
2. Replace blade (see Page 27).  
3. Make fence parallel to blade (see Page 65).  
4. Make miter slot parallel to blade (see Page 60). |
## PARTS
### Cabinet & Table

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Trunnion & Switch Breakdown
# Model W1824 10" Hybrid Table Saw

## Trunnion & Switch Parts List

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Fence/Rails/Miter Gauge Breakdown
# Fence/Rails/Miter Gauge Parts List

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</table>
Safety labels warn about machine hazards and how to prevent machine damage or injury. The owner of this machine MUST maintain the original location and readability of all labels on this machine. If any label is removed or becomes unreadable, REPLACE that label before allowing the machine to enter service again. Contact Woodstock International, Inc. at (360) 734-3482 or www.shopfoxtools.com to order new labels.

### Label Placement

**WARNING**

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<thead>
<tr>
<th>REF</th>
<th>PART #</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>701</td>
<td>X1824701</td>
<td>BLADE GUARD LABEL</td>
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<tr>
<td>702</td>
<td>XLABEL-06A</td>
<td>GLASSES/RESPIRATOR LABEL</td>
</tr>
<tr>
<td>703</td>
<td>D3377</td>
<td>SHOP FOX NAMEPLATE</td>
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<tr>
<td>704</td>
<td>X1824704</td>
<td>MODEL NUMBER</td>
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<tr>
<td>705</td>
<td>X1824705</td>
<td>MACHINE ID LABEL</td>
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<tr>
<td>706</td>
<td>XLABEL-12</td>
<td>READ MANUAL LABEL</td>
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<tr>
<td>707</td>
<td>X1824707</td>
<td>TABLE SAW WARNING LABEL</td>
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<tr>
<td>708</td>
<td>XLABEL-07</td>
<td>DISCONNECT POWER LABEL</td>
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<tr>
<td>709</td>
<td>XLABEL-05</td>
<td>KEEP DOOR CLOSED LABEL</td>
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<tr>
<td>710</td>
<td>XLABEL-04</td>
<td>ELECTRICITY LABEL</td>
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<tr>
<td>711</td>
<td>X1824711</td>
<td>RIVING KNIFE CAUTION LABEL</td>
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<td>712</td>
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</table>
Warranty Registration

Name__________________________________________

Street ________________________________________

City __________________ State ___________ Zip ______________

Phone # __________________ Email ______________ Invoice # __________

Model # __________ Serial # __________ Dealer Name __________ Purchase Date __________

The following information is given on a voluntary basis. It will be used for marketing purposes to help us develop better products and services. Of course, all information is strictly confidential.

1. How did you learn about us?
   _____ Advertisement   _____ Friend   _____ Local Store
   _____ Mail Order Catalog   _____ Website   _____ Other:

2. How long have you been a woodworker/metalworker?
   _____ 0-2 Years   _____ 2-8 Years   _____ 8-20 Years   _____ 20+ Years

3. How many of your machines or tools are Shop Fox?
   _____ 0-2   _____ 3-5   _____ 6-9   _____ 10+

4. Do you think your machine represents a good value?   _____ Yes   _____ No

5. Would you recommend Shop Fox products to a friend?   _____ Yes   _____ No

6. What is your age group?
   _____ 20-29   _____ 30-39   _____ 40-49
   _____ 50-59   _____ 60-69   _____ 70+

7. What is your annual household income?
   _____ $20,000-$29,000   _____ $30,000-$39,000   _____ $40,000-$49,000
   _____ $50,000-$59,000   _____ $60,000-$69,000   _____ $70,000+

8. Which of the following magazines do you subscribe to?
   _____ Cabinet Maker   _____ Popular Mechanics   _____ Today’s Homeowner
   _____ Family Handyman   _____ Popular Science   _____ Wood
   _____ Hand Loader   _____ Popular Woodworking   _____ Wooden Boat
   _____ Handy   _____ Practical Homeowner   _____ Woodshop News
   _____ Home Shop Machinist   _____ Precision Shooter   _____ Woodsmith
   _____ Journal of Light Cont.   _____ Projects in Metal   _____ Woodwork
   _____ Live Steam   _____ RC Modeler   _____ Woodworker West
   _____ Model Airplane News   _____ Rifle   _____ Woodworker’s Journal
   _____ Modeltec   _____ Shop Notes   _____ Other:
   _____ Old House Journal   _____ Shotgun News

9. Comments:

________________________________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

WARRANTY

Woodstock International, Inc. warrants all Shop Fox machinery to be free of defects from workmanship and materials for a period of two years from the date of original purchase by the original owner. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, lack of maintenance, or reimbursement of third party expenses incurred.

Woodstock International, Inc. will repair, replace, or arrange for a dealer refund at its expense and at its option, the Shop Fox machine or machine part, which in proper and intended use has proven to be defective, provided that the original owner returns the product prepaid to an authorized warranty or repair facility as designated by our Bellingham, Washington office with proof of their purchase of the product within two years, and provides Woodstock International, Inc. reasonable opportunity to verify the alleged defect through inspection. If it is determined there is no defect, or that the defect resulted from causes not within the scope of Woodstock International Inc.’s warranty, then the original owner must bear the cost of storing and returning the product.

This is Woodstock International, Inc.’s sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant that Shop Fox machinery complies with the provisions of any law, acts or electrical codes. We do not reimburse for third party repairs. In no event shall Woodstock International, Inc.’s liability under this limited warranty exceed the purchase price paid for the product, and any legal actions brought against Woodstock International, Inc. shall be tried in the State of Washington, County of Whatcom. We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special or consequential damages arising from the use of our products.

Every effort has been made to ensure that all Shop Fox machinery meets high quality and durability standards. We reserve the right to change specifications at any time because of our commitment to continuously improve the quality of our products.
High Quality Machines and Tools

Woodstock International, Inc. carries thousands of products designed to meet the needs of today's woodworkers and metalworkers. Ask your dealer about these fine products:

- BROSSEY® Precision Stop Block
- THE REBEL®
- BOARD BUDDIES®
- PLANER PAL®
- SLICKPLANE®
- JOINTER PAL®
- DURASTICK®
- Rotacator®
- Gutmann®
- Junglee®
- PARROT VISE®
- PRO-STIK® Abrasive Belt & Disc Cleaner
- Accu-Sharp®
- ROMAN CARBIDE®
- STEELEX® FINE TOOLS
- STEELEX® PLUS
- SHOP FOX®

WHOLESALE ONLY

WOODSTOCK INTERNATIONAL, INC.
Phone: (360) 734-3482 · Fax: (360) 671-3053 · Toll Free Fax: (800) 647-8801
P.O.Box 2309 · Bellingham, WA 98227

SHOPFOX.BIZ