Accu-Slice ® Manual

A Band Saw Wood Slicing Accessory

Accu-Slice System with MagJig Accessory Clamps

Made in USA

Patent Pending 2016

Scientific Instrument Services

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Ringoes, NJ 08551

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www.sisweb.com/wood

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Dear Woodworker:

Thank you for your purchase of the Accu-Slice Band Saw Jig.

The Accu-Slice Band Saw Accessory was designed and developed by a wood crafter and the engineers and scientists at Scientific Instrument Services and is 100% manufactured in the SIS machine shop in the United States.

The Accu-Slice was developed in order to provide a safer method of resawing and slicing wood on the band saw including cutting veneers, cutting small pieces and odd shapes of wood for segmented wood turning, inlaying, intarsia and other intricate cutting not easily accomplished in the past. The plan was to do all of the above while keeping my fingers as far from the saw blade as possible. In developing the Accu-Slice over a two year period, 8 prototypes were made, each one improving over the previous generation in appearance, function and reliability.

The Accu-Slice System consists of an indexing table, a rail and a carriage with roller bearings to which the wood is attached – much like a system used in a saw mill for cutting boards. The indexing system permits the accurate and repeatable cutting of pieces of wood as thin as 0.010" thick. The cut pieces are dimensionally accurate to within +/- 0.002" over its entire length and from top to bottom.

When using the Accu-Slice System, the finished cuts on the band saw are cleaner and smoother than normal slicing using the band saw fence. This is because the wood is fixed in position on the Accu-Slice carriage and not subject to changes in hand pressure against the band saw fence or band saw blade drift that is normally seen in conventional resawing.

We hope you enjoy your Accu-Slice and find it valuable in producing your projects. We are always open to suggestions to further improve this product and provide additional carriages and jigs to increase its capabilities.

You are welcome to post your finished projects completed with the Accu-Slice on our web site.

Thank you again for becoming an Accu-Slice user.

John Manura
Founder of SIS and a lifetime Woodworker

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Safety Rules

As with any wood working machine, there are hazards with the use of the equipment and extreme caution is required to prevent injury. The Accu-Slice was developed to minimize these risks, but the operator must still follow normal safety procedures when operating the Accu-Slice on the band saw. At no time when the band saw is operating should the operator place his fingers or any body parts in proximity of the band saw blade. When adjusting the Accu-Slice, the band saw should be turned off and the band saw blade must not be moving. However if standard safety procedures are ignored, personal injury may result. If you have any questions as to the installation or operation of the Accu-Slice, please contact SIS at the address below.

Please Read and Adhere to the following rules before operating the Accu-Slice on your band saw:

1. Keep the working area on and around the band saw clean
2. Be sure that the adjusting tools, other tools and wood scraps have been removed from the work area
3. Provide adequate lighting for the work area of the band saw
4. At all times keep your fingers and other body parts clear of the band saw blade
5. Do not wear loose clothing, jewelry, gloves or other items
6. Use a dust mask or respirator when operating the band saw
7. Use a dust vacuum collector with the band saw
8. Use a face shield, safety glasses or other eye protection when operating the system
9. Turn off the power to the band saw when setting up the Accu-Slice or when making any adjustments
10. If the band saw is to be left unattended, turn off the power to the saw
11. Always operate the band saw with sharp and clean band saw blades
12. Do not modify the Accu-Slice in way. Any modification will be done at the operators risk and will void any warranty or liability.
13.

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Limited Warranty

The Accu-Slice System sold by Scientific Instrument Services (SIS) carries a one-year limited warranty from the date of shipment. SIS guarantees that all new Accu-Slice systems sold to be free from manufacturing defective workmanship, parts, materials and accessories. SIS will replace or repair any parts determined to be defective by SIS at no charge. Any defective parts must be returned to SIS for evaluation. If the item is deemed to be defective due to abuse, mishandling or lack of maintenance, the customer will assume responsibility for the cost to replace or repair the damage part plus all related shipping charges.

This limited warranty does not apply to any natural disasters, acts of terrorism, normal wear, lack of maintenance and cleaning, damage caused by an accident, operator neglect, misuse or abuse of the system or alterations or modifications made to the system by others.

SIS is not responsible for additional tools, such as the band saws, sold by other manufacturers and used in conjunction with the Accu-Slice. It is the responsibility of the user of the Accu-Slice to understand the safe operation of the woodworking machinery and procedures in accordance with the standards provided by the equipment manufacturer.

Technical support to install or operate the Accu-Slice is available from SIS during normal business hours Monday thru Friday.

Patent Licenses and Infringements.

Accu-Slice® is a registered trademark of SIS.

Patent Pending for Accu-Slice.

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Specifications of the Accu-Slice

	ACS-17	ACS-21	ACS-24
For Band Saw Table Width	14” - 17”	18” - 21”	22” – 26”
Band Saw Miter Slot Width	0.75”	0.75”	0.75”
Rail Length	36”	36”	36”
Other lengths available 48”, 60” and 72”			
Standard Carriage			
Length	12”	12”	12”
Height	4”	4”	4”
Roller Bearings	3	3	3
Other Accessory Carriages available			
Indexing System			
Distance travel per full turn	0.050”	0.050”	0.050”
Major graduations	0.005”	0.005”	0.005”
Minor graduations	0.001”	0.001”	0.001”
Accuracy of the Indexer	+/- 0.002”	+/- 0.002”	+/- 0.002”
Index Table Dimensions			
Length (does not include rail)	19.5”	23.5”	27.8”
Width	12”	12”	12”
Height (without carriage)	2”	2”	2”
Height (with carriage)	7”	7”	7”
Weight (pounds)	<15	<16	<17

Features of the Accu-Slice

Wood to be sliced on the band saw is attached to the carriage on the Accu-Slice using either double sided tape or hot melt glue. The wood can then be cut on the band saw by pushing the carriage assembly through the rotating band saw blade. Since the wood is attached firmly to the carriage the resulting cuts are smooth and clean.

Features

- Safer Resawing of Wood– Fingers are not near the band saw blade

- Carriage and Rail System – much like a log saw mill

- Smooth Band Saw Cuts – cuts require no planing and little or no sanding
    - The Smoothest and Cleanest Cuts you have ever seen from a Bandsaw
    - Roller Bearings on the Carriage provide for smooth cuts
    - Linear Roller Bearing on the Guide Bars provide for smooth table movement with long bearing lifetime

- Dial In Dimensional Thickness of Wood to be Cut
    - Indexer permits accurate and repeatable thickness cuts of wood – accuracy better than +/- 0.002”
    - Reproducible Cuts for cutting multiple slices of wood
    - Course adjustment for fast setup
    - Fine adjustment for accurate wood thickness

- Flexibility of the System – Interchangeable Rails and Carriages
    - Longer Rails of various lengths for resawing boards up to 48” long
    - Various length and Style Carriages for different applications
    - Easy Installation and Removal from the bandsaw
    - System Requires Minimal Maintenance

- Applications of the Accu-Slice
    - Resawing – Cutting thin veneers and making book matched panels
    - Cutting Small Irregular shaped pieces of wood
    - Cutting Round segmented discs
    - Cutting Thin layers for Inlaying
    - Special cuts for Intarsia or other projects

- Accessories
    - MagJig Accessory Clamps
    - Carriage Stops and other accessories

- 100% Made in the USA in our own CNC Machine Shop

Description of the Accu-Slice

The Accu-Slice was developed in order to provide a safer method of resawing wood on the band saw including cutting veneers, cutting small pieces and odd shapes of wood, slicing round discs for segmented wood turning, and other intricate cutting not easily accomplished in the past. The goal is to keep the operators hands as far away as possible from the band saw blade and to provide for smooth clean cuts from the band saw.

Three models of the Accu-Slice are currently available depending on the width of your band saw table top. The basic model is for band saws with table widths 17” and smaller. This size fits most of the 14” band saws including the Jet and Laguna. Other models of the Accu-Slice are available for the larger tables (See page 4)

Thin rings cut from the segmented disc

Thin strips cut from wood blocks

The Accu-Slice can be used for resawing boards and to cut thin strips of wood for making the feature strips for segmented woodturning projects. It can also be used to cut thin rings from round segmented rings.

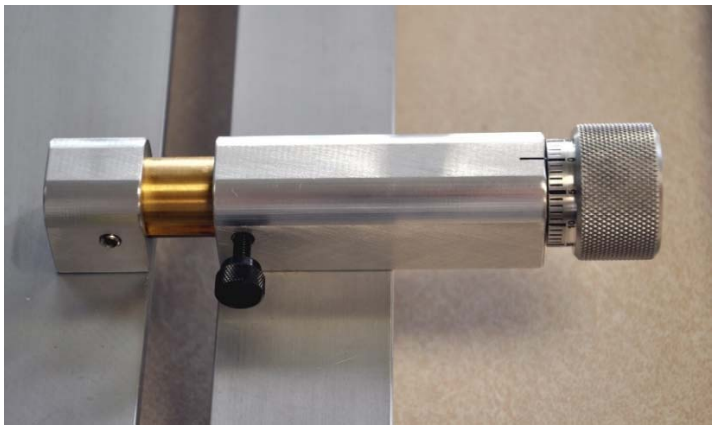
The Accu-Slice System consists of three components – The Index and Table System, the Rail and the Carriage Assembly. The system operates much like a wood saw mill in which the wood or board to be cut is attached to a carriage which slides on a rail through the band saw blade. This provides for clean and smooth cuts and at the same time provides for greater safety for the operator since his hands are not near the band saw blade.

As an accessory, MagJig 95 clamps are available for the Accu-Slice. They are not part of the standard package and must be purchased separately. The MagJig kit consists of two MagJig 95 clamps with all the mounting hardware required to attach to the Accu-Slice table. Holes for mounting these clamps have already been machined into the Accu-Slice table. The purpose of the MagJig clamps is TP further reduce vibration of the band saw to provide for even smoother band saw cuts with the Accu-Slice.

With conventional band saw resawing, the wood is both pushed against the band saw fence and also at ninety degrees through the band saw blade. Any change in hand pressure or hand repositioning results in saw marks on the cut piece of wood. This does not occur with the Accu-Slice. In addition the operation is much safer with the Accu-Slice since the operators fingers are far removed from the band saw blade. For a demonstration visit our web site at:

www.sisweb.com/wood

Table with Index System and Rails



Accu-Slice Index Table **Indexing System**

The Index Table mounts to the band saw table via a miter bar that locks into the band saw table with 3 quarter turn locking nuts.

The Indexing System consists of a revolving index wheel with major graduations at five thousandths increments (0.005”) and minor graduations at 0.001” increments. Each full revolution of the indexing wheel advances the wood to be cut fifty thousandths of an inch (0.050”) which is the normal kerf size of many band saw blades, such as the Timber Wolf ½” blades used in our demos. The accuracy and repeatability of the index system is better than +-0.002”. Wood can be sliced down to 0.010” thick with the Accu-Slice as shown in our demos on our website.

Index Table with 36” rail attached

The standard rail provided with the Accu-Slice is 36” long. Interchangeable rails of other lengths (48”, 60” and 72”) for cutting longer pieces of wood are easily and quickly installed on the indexing table via mounting screws.

Carriage Assembly

The standard carriage assembly consists of a 90 degree angle bracket, 12” long x 4” high. Normally a 6” x 12” sacrificial fence made of wood, MDF or plastic is attached to the carriage L-bracket with ½” wood screws. This fence is screwed to the aluminum L bracket and acts as a support to which the wood to be cut is attached. Its purpose is to prevent the operator from inadvertently cutting into the aluminum L bracket. The wood to be cut is attached to this sacrificial fence using either double sided tape or hot melt glue. Our preference has been to use the double sided tape.

Carriage with Sacrificial Fence attached

Carriage base showing the 3 roller bearings

On the bottom of the carriage assembly are attached 3 roller bearings. The roller bearings consist of an inner ball bearing with a polycarbonate plastic outer wheel. These roller bearings slide on the rail to provide for a smooth even cut of your wood pieces. One of the roller bearings is adjustable to enable you to adjust the tightness of the carriage travel on the rail due to operator preference or due to system wear.

Additional carriage assemblies for other applications are available as described in the accessories page of this manual. For example carriages for longer pieces of wood are available.

For cutting longer pieces of wood (greater than 24” in length) it is recommended that the 24” carriage or multiple carriages be mounted onto the rail and joined together with a longer sacrificial fence. This will provide for smoother cuts of these longer boards. The boards to be cut should not extend past the end of the sacrificial fence in order to achieve the best cuts.

Installation Hardware

An accessory package of hardware is also included in the standard package. It consists of six ¾” wood screws for mounting the sacrificial fence to the carriage and three hex head bolts to mount the rail to the indexing table.

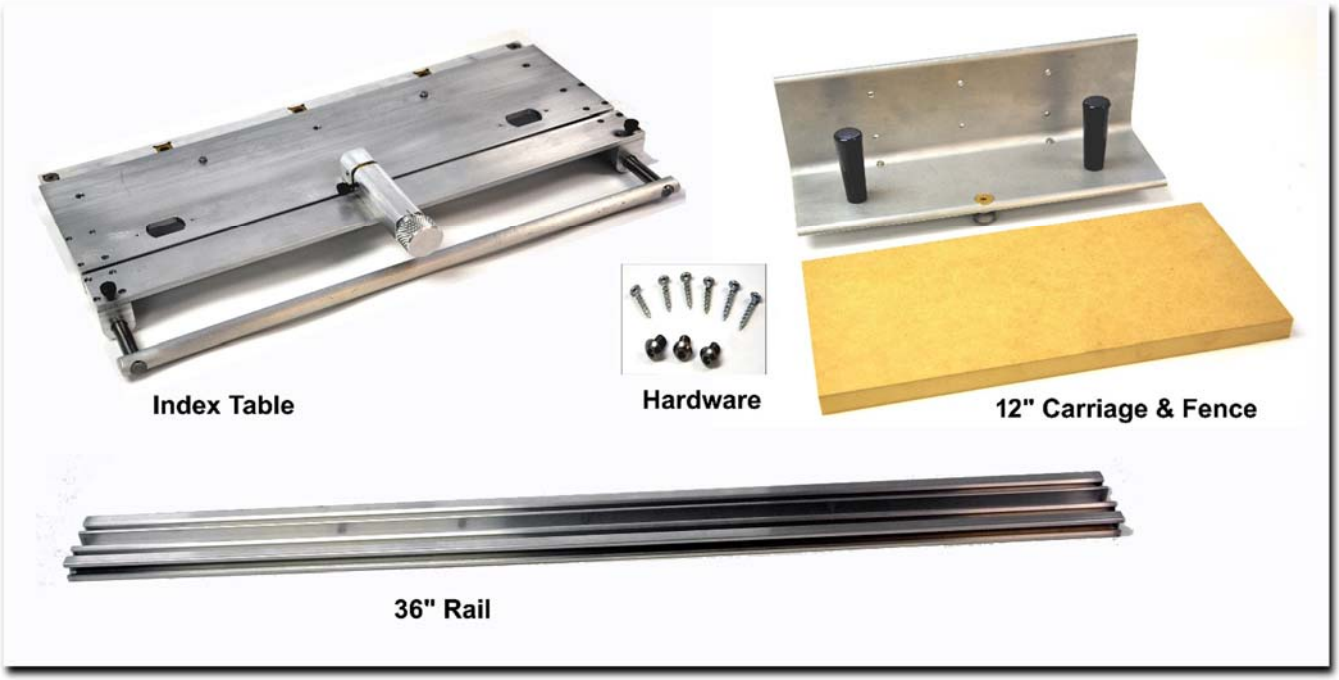
MagJig Clamps

For even smoother cuts on the band saw, 2 MagJig clamps are available as an accessory for the Accu-Slice. These clamps firmly attach the Accu-Slice table to the band saw table after the board thickness has been dialed in and the wood is ready to be cut. The MagJig clamps further reduce the vibration of the band saw resulting in the smoother cuts. Holes for mounting these clamps have been machined into the Accu-Slice table top, and the two MagJig clamps are easily installed with the mounting spacers and screws included with this accessory kit.

The Complete Accu-Slice System with Accessory MagJig Clamps Installed

Installation of the Accu-Slice

After unpacking the Accu-Slice and its components check to be sure that all the parts have been received. You should have 3 major components plus a packet of assembly hardware:



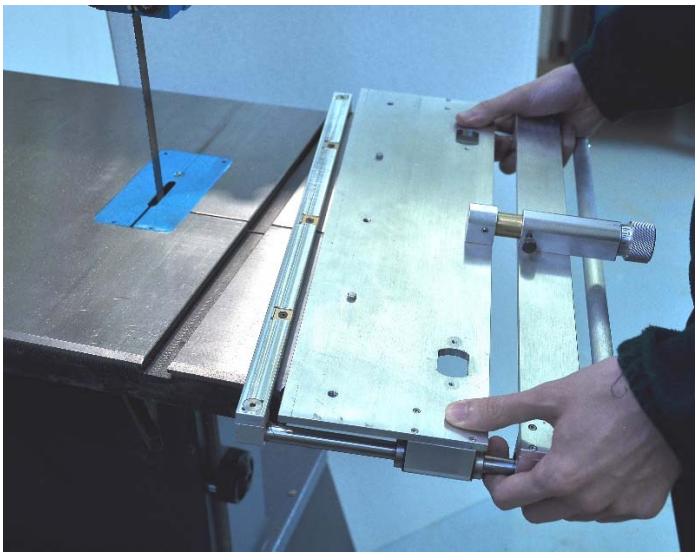
1. 36” Long Aluminum Extrusion Rail
2. 12” Aluminum L Bracket Carriage with Roller Bearings & MDF Fence
3. Indexing Table with Miter Bar and Indexing System
4. Package of Assembly Screws and Hardware

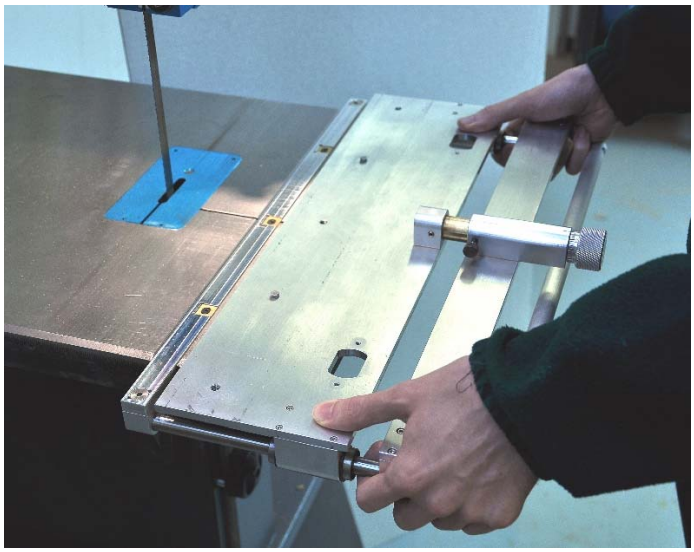
Tools Required. The only tools required for the assembly are two Allen wrenches used to tighten the locking nuts in the miter bar and to attach the rail to the index table and a Phillips screwdriver used to attach the sacrificial fence to the Carriage L Bracket assembly. The tools shown are not included with the system.

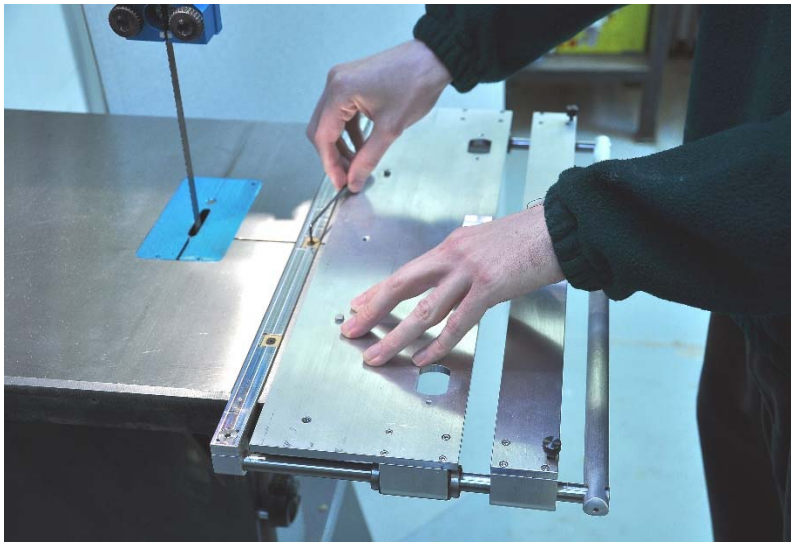
A complete video of the installation process is located on our web site at:

www.sisweb.com/wood

Step 1 – Attach the Indexing table onto the band saw table.





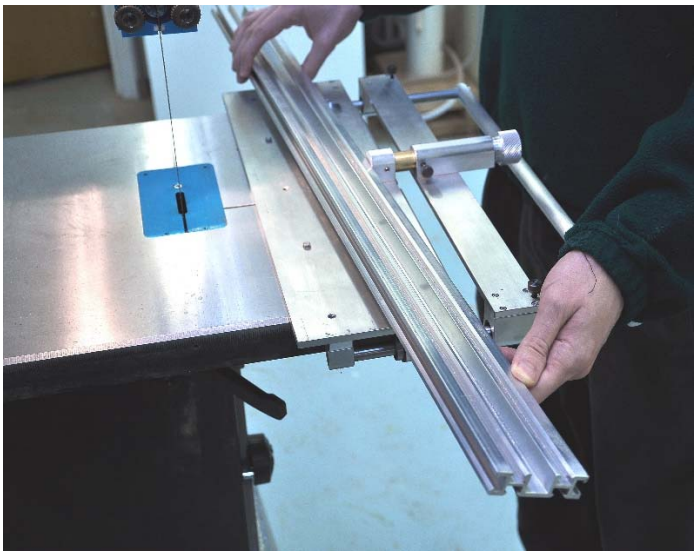


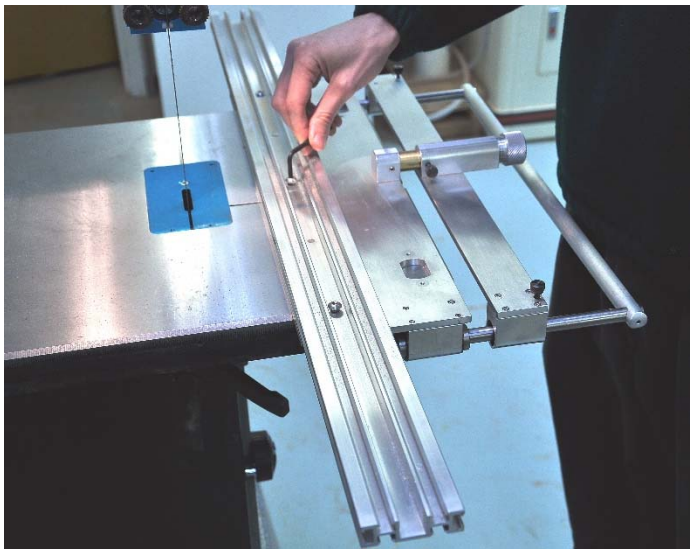
The two guide bars on the Accu-Slice should be positioned on the outside edges of the table. If the band saw fence is in place, the left guide bar should be positioned between the left edge of the table and the band saw fence and fence hardware. The band saw fence may interfere with the installation of the Accu-Slice which will require the removal of the band saw fence. In the above photos, the band saw fence on our Laguna Bandsaw was removed.

Align the miter bar over the band saw table and slide it into the miter slot in the band saw table. If the miter bar is not visible, it may be necessary to loosen the two course tightening knobs on the indexing table and slide the assembly toward you until you can see the miter bar. Make sure that the miter bar slides easily into the slot and the table rests flat onto the band saw table. While holding the indexing system flat against the band saw table, tighten the quarter turn locking nuts in three places on the miter bar to fasten the system to the band saw table.

WARNING: Do not turn these locking nuts more than a quarter turn with the Allen wrench. They have been factory set to the correct depth. Turning them more than a quarter turn will not give them more holding power and could damage these locking nuts.

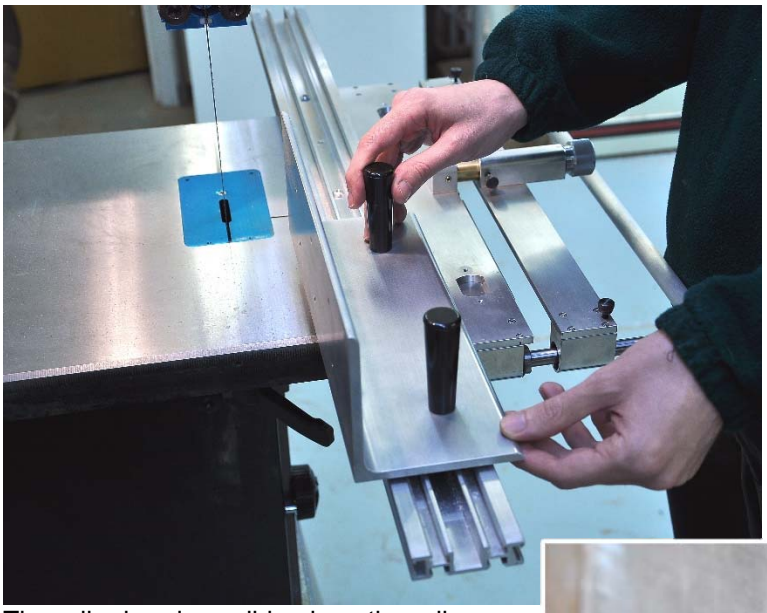
Step 2 – Attach the Rail to the Indexing Table





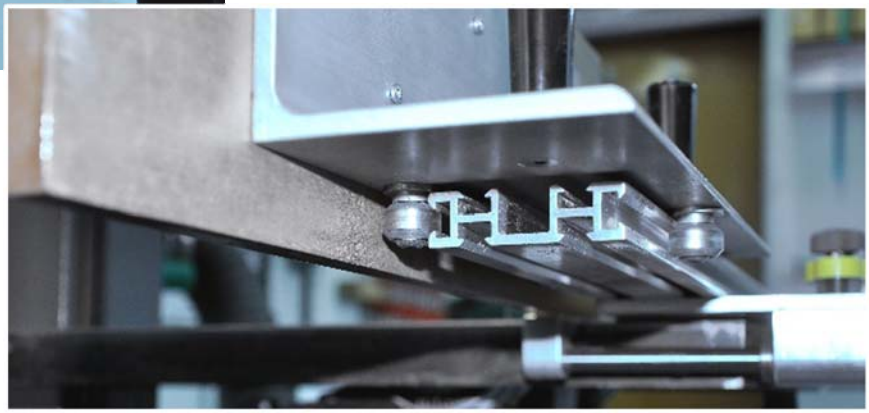
Center the rail over the indexing table and carefully position the rail onto the index pins on the index table. Screw in place using the three screws from the accessories package with an allen wrench. Additional rails of various lengths are available for applications requiring a longer rail such as cutting longer lengths of wood. The rails are easily and quickly interchanged.

Step 3 – Attach the Carriage Assembly onto the Guide Rail and Adjust



Slide the Carriage Assembly onto the Guide Rail by aligning the roller bearings into the slots on the sides of the guide rail. It should slide easily onto the rail. Check for tightness of the bearings.

The roller bearings slide along the rail



To obtain the smoothest cuts, you do not want the L-Bracket Carriage to be able to rock back in forth on the rail. The front roller bearing can be tightened to provide for a tight smooth running of the carriage assembly on the rail. This bearing has been factory set but it may require adjustment due to wear.

Slide the carriage assembly off the rail and then using an Allen Wrench loosen the Allen nut on the underside of this third single roller bearing. Then slide the carriage assembly back onto the rail. Turn the large brass nut on the carriage assembly top plate to the desired tightness. While holding this nut in place, slide the carriage assembly off the rail and then tighten the Allen screw on the third roller bearing. If necessary repeat this operation until you have the desired tightness.

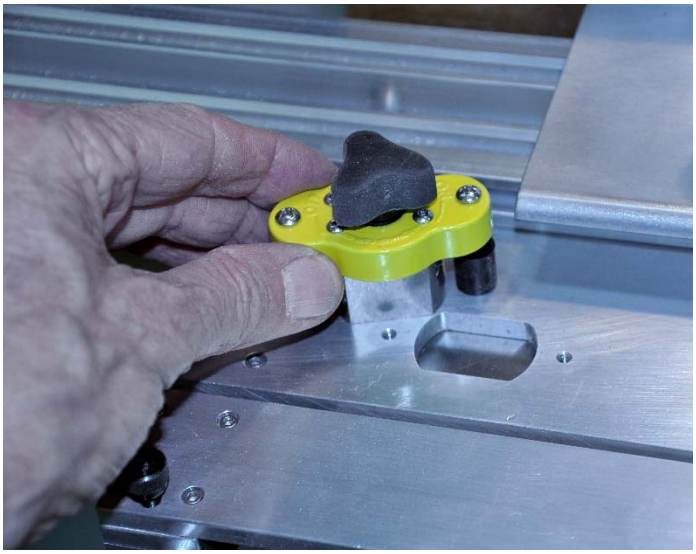
We have found the ideal tightness to be such that the carriage assembly moves with a little force, but will not slide off if the entire assembly is tilted. With age and use it may be necessary to retighten the roller bearings.

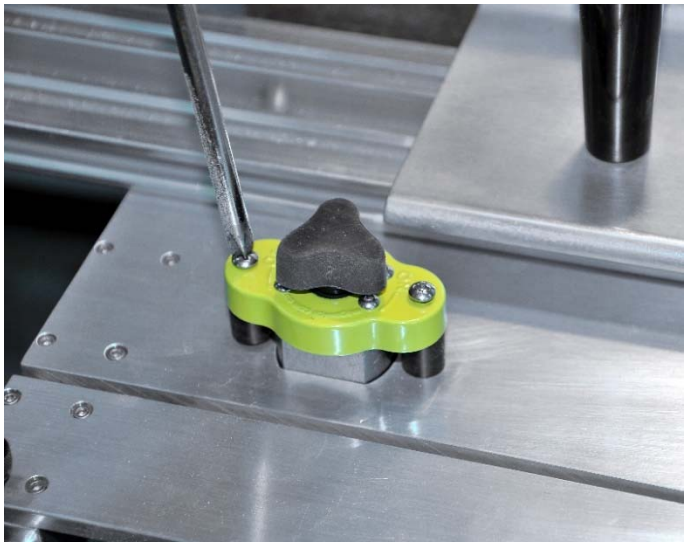
Step 4 – Attach the Sacrificial Fence to the Carriage Assembly

Attach the sacrificial fence included with the system to the L-bracket carriage assembly using the 6 wood screws included in the accessories package. The sacrificial fence edge should ride on the band saw table. If you prefer, a sacrificial fence of your own design can be substituted. You can use plywood, MDF or plastic to make substitute fences. If a wood or MDF fence is used it may be preferable to seal the surface of the wood with shellac or sanding sealer to provide a smoother surface for better adhesion of the double sided tape used to hold your wood in place. Sealing this surface also provides for easier removal of the double sided tape.

It may be necessary to square your band saw table against the sacrificial fence. Follow your band saw standard procedures for this adjustment.

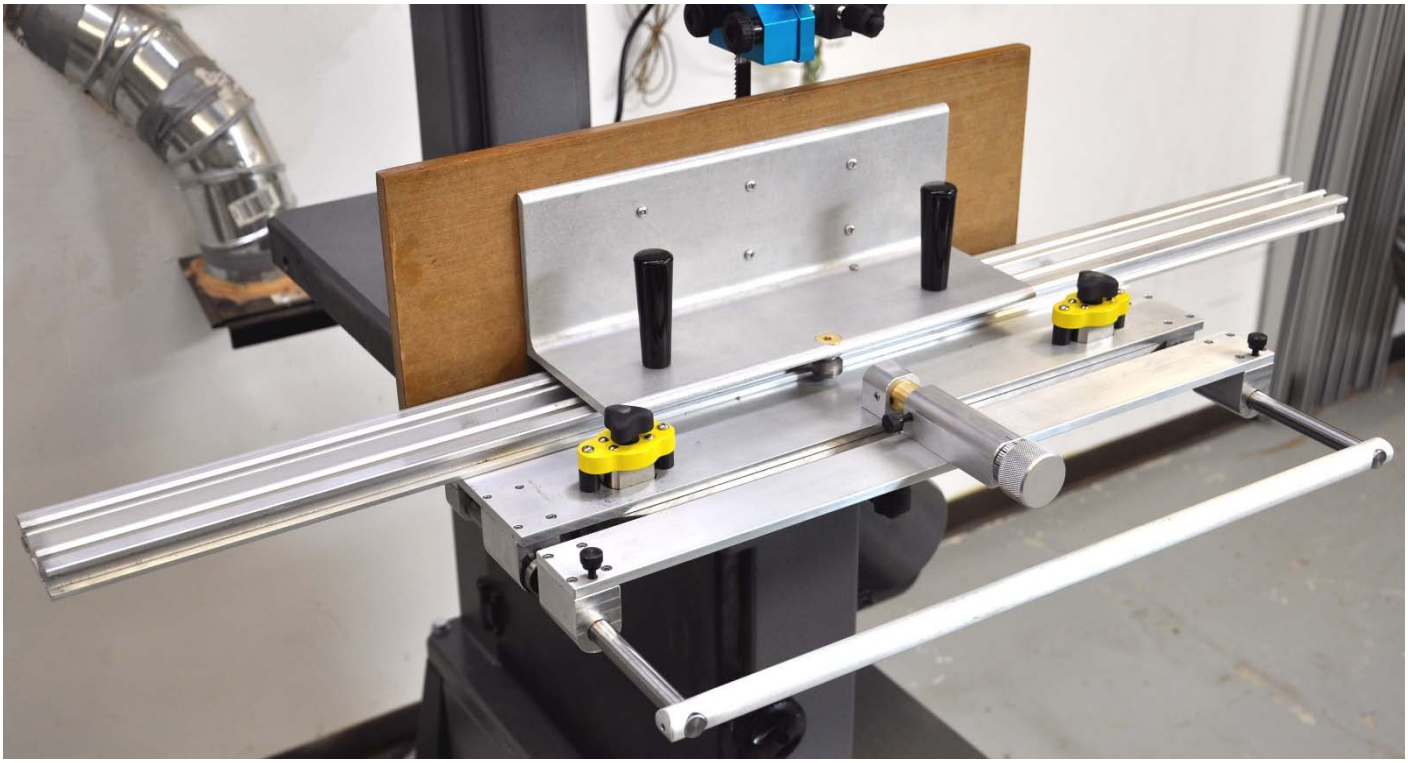
Step 6 – MagJig Accessory Clamps





For even smoother cuts on the band saw, 2 MagJig clamps are available as an accessory for the Accu-Slice. These clamps firmly attach the Accu-Slice table to the band saw table after the board thickness has been dialed in and the wood is ready to be cut. The MagJig clamps further reduce the vibration of the band saw resulting in the smoother cuts. Holes for mounting these clamps have been machined into the Accu-Slice table top, and the two MagJig clamps are easily installed with the mounting spacers and screws included with this accessory kit.

The Installation is now complete and the system is ready to operate.



Accu-Slice with 36” rail and 12” carriage mounted on the band saw

Step 6 – Removal of the Accu-Slice

To remove the Accu-Slice from the band saw, all that is required is to loosen the three Allen screws on the miter bar and lift the entire assembly off the band saw table. It is recommended that the carriage be removed from the Accu-Slice before it is removed from the band saw to avoid the carriage falling off the rail and becoming damaged.

Step 6 – Band Saw Blade Selection

The greater the number of teeth per inch, the smoother the cut. However the blade selection is also based on what thicknesses of wood you will be cutting with the Accu-Slice system. For resawing of boards 4” thick and larger, you will need to use a blade with 4 to 6 teeth per inch. For resawing of boards 1” to 3” we normally use blades of 6 to 8 teeth per inch. For cutting of segmented discs and other small wood pieces, we normally use blades of 8 to 10 teeth per inch. Finally for cutting wood segments for segmented wood turning, we normally use blades of 10 to 14 teeth per inch.

Also we normally use blades of the rake tooth design. Also because we are only cutting straight cuts, our preference is to use half inch wide blades. We typically use the Timberwolf rake blades which have a thickness or kerf of 0.050”

Band Saw Blade Selection

Wood thickness	Teeth per Inch
Segmented discs	10 - 14
Less than 1"	8 - 10
1" to 3"	6 - 8
4" and Larger	4 - 6

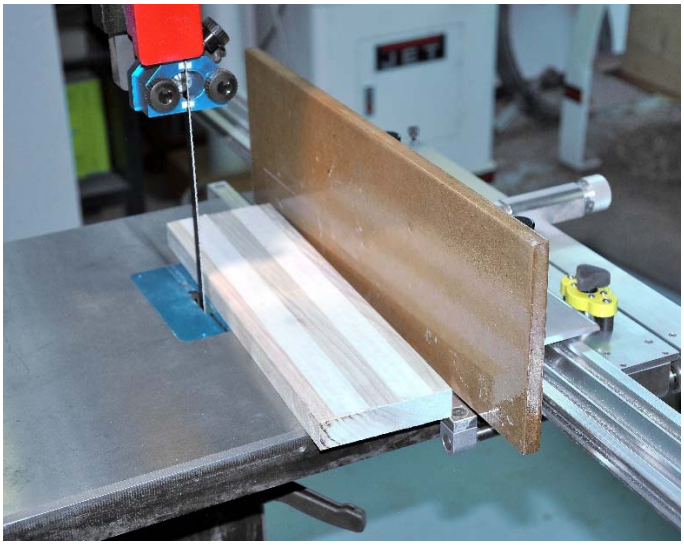
Operation of the Accu-Slice

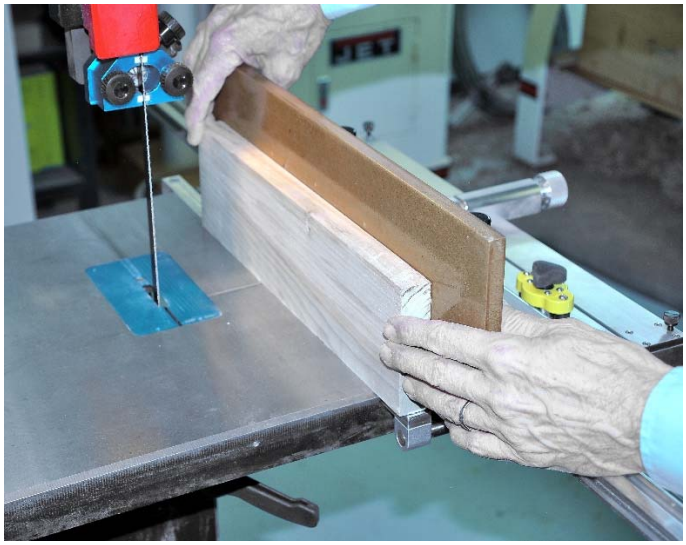
Examples of the operation of the Accu-Slice system to cut wood for various applications are demonstrated on our web site at:

www.sisweb.com/wood

Attach the Accu-Slice system onto the band saw table as described above. Slide the L-bracket carriage assembly onto the guide rail.

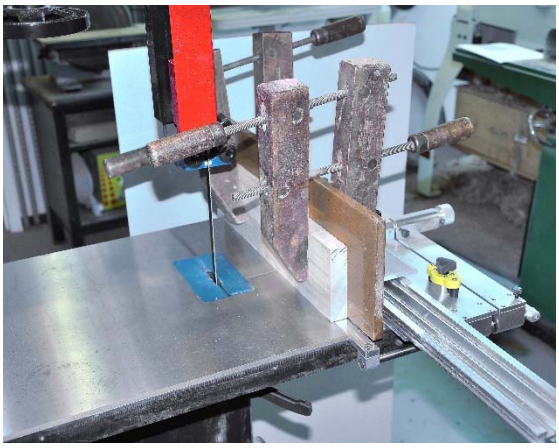
Step 1 – Mounting the Wood Sample to be cut





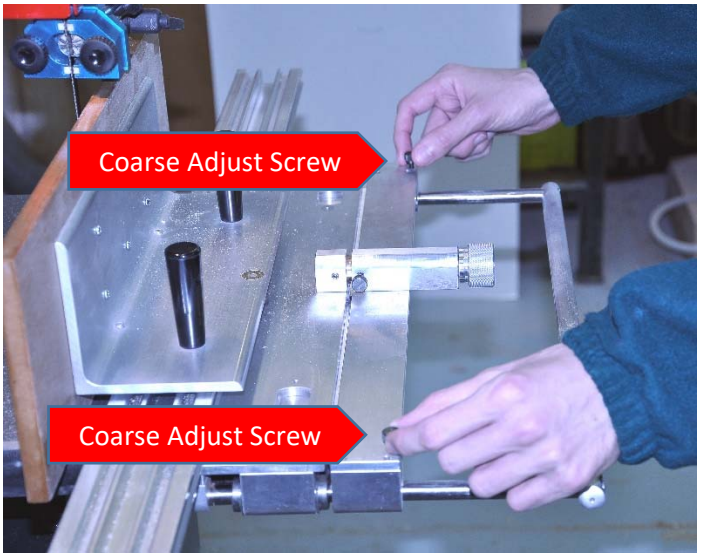
The wood pieces are normally attached to the sacrificial fence on the carriage assembly using double sided tape or hot melt glue. We have found that the preferred method is using double side tape, but for applications such as long boards we have supplemented the tape with some hot melt glue to make sure the wood is securely attached to the fence. We have also on occasion eliminated the sacrificial fence and attached the wood piece directly onto the aluminum L-bracket with screws. However this is not the usual preferred method since you are losing 1/8 to ¼” of wood due to the screws.

Make sure all surfaces of the sacrificial fence and the wood piece are clean and free of dust. Attach a piece of double sided tape to the wood board to be cut. Attach the taped wood piece to the sacrificial fence. It is recommended that the wood piece be centered on the sacrificial fence. The wood piece to be cut must be flat and not warped in order to assure good contact for the double sided tape between the wood and the sacrificial fence. Otherwise the wood may pull away from the sacrificial fence during cutting and result in non parallel surfaces of your sliced boards.

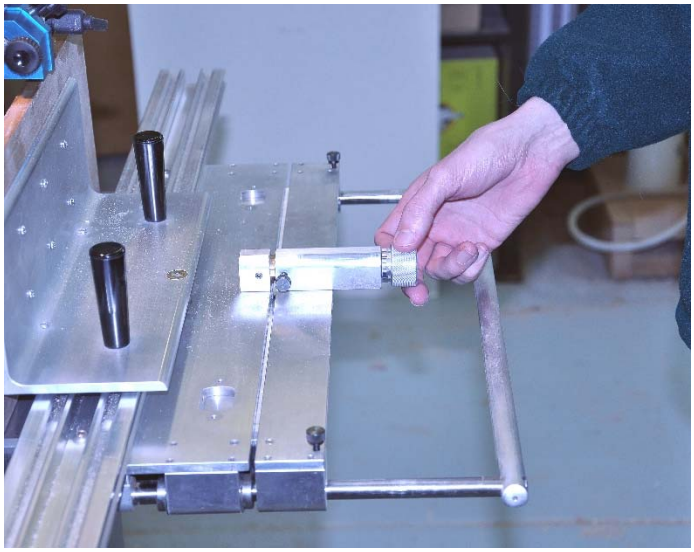


It is recommended that a clamp is used to temporally clamp the wood to the Accu-Slice fence and set the tape. This only needs to be done for 15 – 60 seconds to better adhere the wood and tape to the fence. The clamp is then removed before beginning cutting.

Step 2 – Initial setup



Loosening the two course adjust screws



Dial in the wood position with the indexer wheel

Loosen the two table coarse adjust screws – the two small knobs for the rough positioning. Also make sure the locking screw on the indexing system is loose and if the MagJig clamps are installed they are not activated. Turn the index knob counter clockwise until the gap between the two aluminum bars is less than a quarter inch. Turn the index knob clockwise until it reads 0 on the knob index. This is to give you a starting point for future indexing.

Slide the main table to position the wood piece near the band saw blade. You want to position it such that you will be cutting off 0.010” to 0.020” of wood from your wood piece. The purpose of this cut is just to square off the end of the board and to give you a clean, smooth and square surface for your first piece of wood to be cut. This will assure that subsequent cuts will produce perfectly parallel sides on your sliced boards.

Tighten the two course adjusting knobs on the Accu-Slice and the Indexing lock screw. If you are using the MagJig clamps, they should also be turned on at this time.

Step 3 – Cut off the first surface end of the board

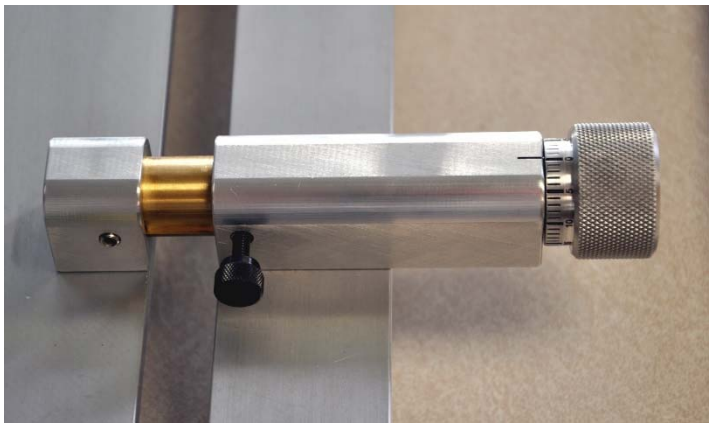
After everything has been adjusted as stated above and the two coarse adjusting knobs have been tightened you are ready to cut your wood. Make sure the wood piece is not touching the band saw blade.

Turn on the band saw and dust collection system. Slowly slide the carriage assembly with your wood sample into the band saw blade to cut your wood. We have found that the slower you push the wood into the band saw blade, the smoother the cut. You can cut faster, but the quality of the cuts will be poorer. We have also found that you can use a finer tooth band saw blade than you would normally use for cutting. We have had good results with the Timber Wolf 6 to 10 teeth per inch blades which are 0.5” wide.

After the cut has been completed, turn off the band saw and remove the scrap of wood. Slide the carriage assembly back to its starting position with the wood not touching the blade but on the tooth side of the blade.

Step 4 – Cutting your first piece of wood

Loosen the locking screw on the Accu-Slice indexer and loosen the two MagJig clamps. Turn the index knob clockwise one full turn. This will provide for a repositioning of your wood sample by 0.050” which is the blade kerf dimension for the Timber Wolf blades mentioned above. If your band saw blade has a different kerf, you will need to adjust your index wheel position accordingly.

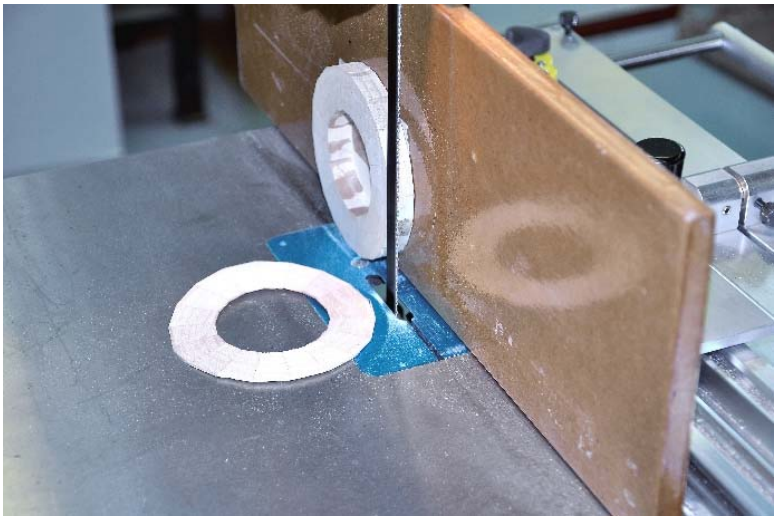


Next turn the index wheel clockwise to your required thickness of wood. To achieve a wood thickness of 0.050” turn the index knob one full revolution. To achieve a 0.100” thickness of wood turn the index knob two full revolutions. To achieve other thicknesses of wood, turn the index knob index the appropriate amount on the index wheel knob.

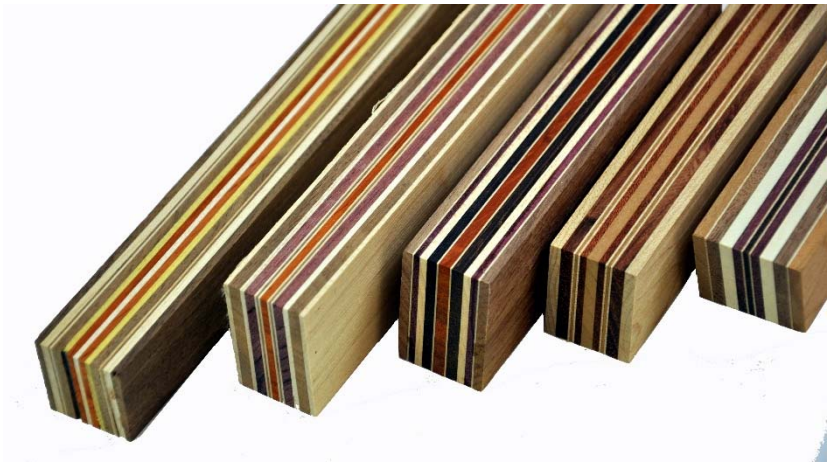
Warning: If you overshoot your position and then turn the index knob counter clockwise you will encounter some backlash. To overcome this continue to turn the index knob counter clockwise about a quarter turn and then turn it back clockwise again to your required position.

After the dimensional thickness of the wood has been set, lock the indexer knob and tighten the two MagJig clamps. Once again start the band saw and cut your wood by pushing the carriage assembly through the band saw blade.

Repeat the operation until your wood has been exhausted or you have your required wood pieces. Use care not to cut the sacrificial fence.



In a likewise manner you can also slice irregular shaped wood or round discs such as those used in segmented wood turning.



Example of various species of wood, sliced to various thicknesses using the Accu-Slice and then glued together to produce laminated boards that will be used to make feature rings in a segmented wood project.

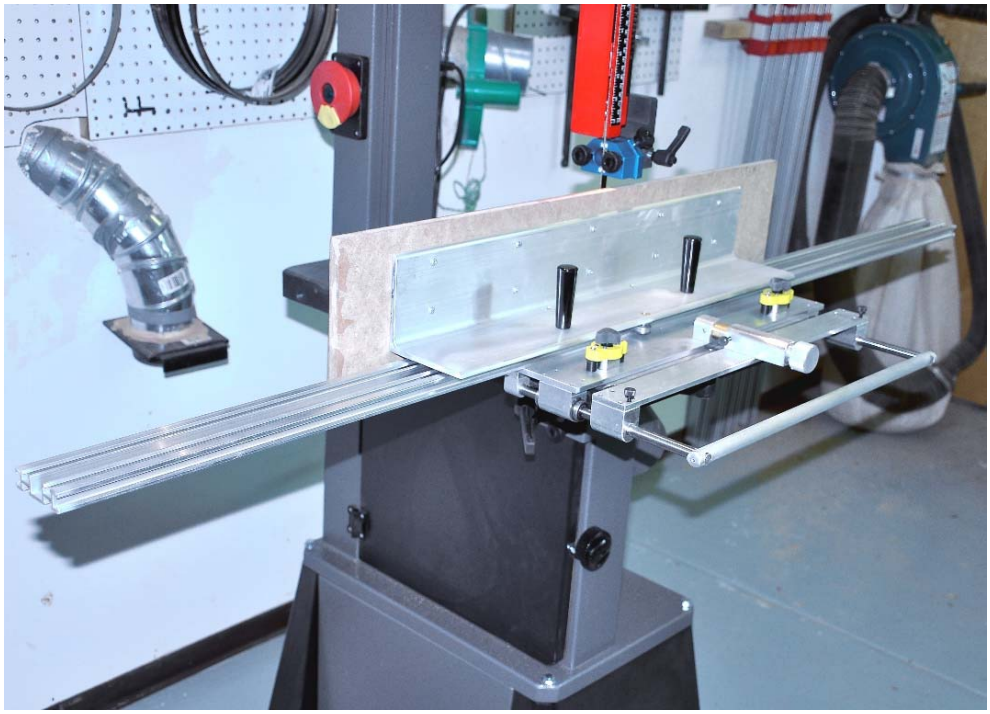
Changing the Rails

The standard rail supplied with the Accu-Slice is 36” long. With this rail you can cut wood pieces up to 24” long. To cut longer pieces of wood we have made available alternate lengths of rails from 36” up to 72” long. Keep in mind that in order to use these rails to cut the longer pieces of wood you might need a longer carriage assembly or multiple carriages.

The rails can easily be changed. There is no need to buy another system. The rail is aligned on the index table with two alignment pins and held in place using three screws. Changing the rail only takes a few minutes.

First slide the carriage assembly off the guide rail and set aside. Remove the existing rail by loosening and removing the two mounting screws on the rail and then lifting the rail straight up and clear of the guide pins. Do not twist or turn the rail or you might damage these guide pins.

Align the new guide rail over the alignment pins and drop into position. Reinsert the mounting screws and tighten.



Accu-Slice System with the 60” rail and 24” Carriage

Accu-Slice Carriages

A number of different carriages for specific applications are available for the Accu-Slice. Below we describe a few, and additional types and sizes are in development and will be available in the future.

L Bracket Carriage

This is the basic carriage assembly provided with the Accu-Slice. It is 12” long with a 4” high fence. It is used for cutting strips of wood, slicing discs of wood for segmented wood turning, and other applications where a straight cut parallel to the band saw is required. We currently supply a 12” and a 24” long carriage. Additional lengths and other sizes may be available in the future.

24” carriage with 30” sacrificial fence installed

For applications such as cutting long pieces of wood such as in resawing longer boards with the longer guide bars, either the 24” carriage or two or more of these carriages can be used in parallel. For this application a single longer sacrificial wood fence would straddle the two carriage assemblies.

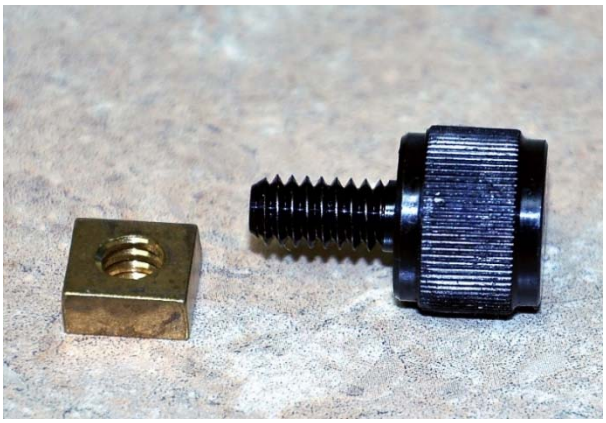
Accessories for the Accu-Slice

Some additional accessories are currently available from SIS or other vendors for the Accu-Slice. In addition to those listed below, check our web site for any updates.

MagJig 95 Clamps

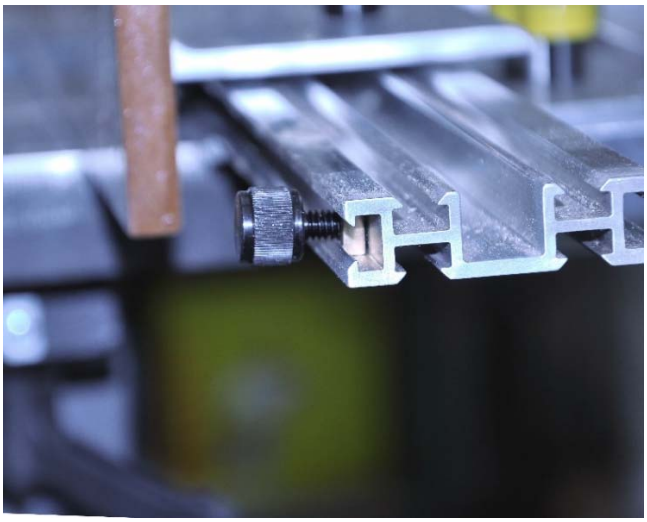
A MagJig 95 Clamp Package is available as an accessory for the Accu-Slice. The MagJig clamps further reduce the vibration of the band saw resulting in the smoother cuts. Holes for mounting these clamps have been machined into the Accu-Slice table top, and the two MagJig clamps are easily installed with the mounting spacers and screws included with this accessory kit. The MagJig Clamp package is comprised of two MagJig 95 clamps, 4 spacers and 4 attachment screws.

Guide Stop

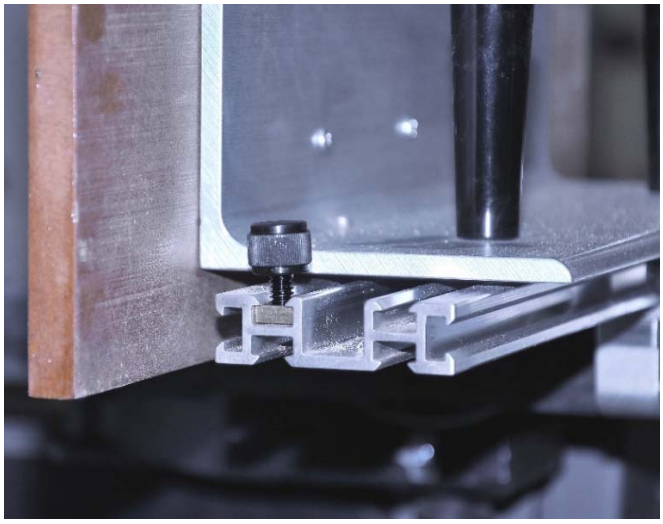


The Guide Stap is attached to the end of the guide rail to limit the travel of the carriage assembly. You can use this stop to prevent the carriage from traveling off the end of the guide rail.

The Guide Stop consists of a nut which slides into the channel on the rail and a thumb locking screw.



Guide Stop mounted to stop on the carriage plate



Guide Stop mounted on the rail edge to stop on The roller bearing – this give several more Inches of carriage travel on the rail

Maintenance and Service of the Accu-Slice

The Accu-Slice should require minimal service.

Periodically dust off the system to remove any saw dust from the components especially the index screw, the roller bearings and the slots in the guide rail. It is important that these components be kept clean.

The roller bearings may pick up some aluminum from the guide rail or become contaminated with saw dust with use and need to be cleaned. This can most easily be accomplished by washing them with a damp or wet clean cloth. Do not use paint thinner, acetone of lacquer thinner since the roller bearing surfaces are plastic. Replacement bearings are available from SIS.

It may be necessary to periodically adjust the roller bearings on the carriage assembly as described in the setup procedures. With age, use, and wear the roller bearings may become loose and need to be adjusted to keep your carriage assembly tight on the guide rail.

How to achieve the smoothest cuts with the Accu-Slice

The Accu-Slice produces much finer and smoother cuts when cutting or resawing wood mounted to the Accu-Slice carriage as compared to resawing or cutting wood with the standard fence on the band saw. The resulting cuts on the band saw with the Accu-Slice require no planing and normally require little or no sanding.

However to achieve the smoothest and cleanest cuts the following steps can be taken.

Band Saw Maintenance

1. Band Saw Blade Selection – The greater the number of teeth per inch, the smoother the cut that will be achieved. Rake tooth style blades are recommended for the best cuts. We have routinely used the Timberwolf blades in our shop. See page 15 for the chart on band saw blade selection.
2. Band Saw Tire Maintenance – Vibration on the band saw effects the smoothness of your cuts. Therefore it is important that the tires on the band saw wheels be kept clean. It may be necessary to take off the band saw blade and clean the tires on the band saw wheels. If the tires are in poor condition they should be replaced.
3. Band Saw Blade Guides – The band saw blade guides also need to be maintained. Any build up on bearing guides or contamination on the guides will cause vibration of the band saw blade affecting the smoothness of the cuts. The guides should be as close to the blade as possible.
4. Feed Speed – The slower the feed of the wood into the band saw blade, the cleaner the cut on the wood. We normally feed at a rate of about 4 to 6 inches per minute.

Accu-Slice System

5. Mounting the Accu-Slice – When mounting the Accu-Slice onto the band saw table, the indexing system should be held flat against the band saw table and held down snugly as the miter bar locks are tightened. These miter bar locks should be seated firmly into the miter bar channel.
6. When cutting longer boards, it is best to use a long carriage or preferably multiple carriages mounted on the rail with a longer sacrificial wood fence spanning these multiple carriages. The wood being cut should not extend past the end of the sacrificial fence in order to achieve the optimum finishes on the cuts.
7. Additional Clamps – Finally to achieve the smoothest cuts you can add some MagJig clamps to hold down the back side of the Accu-Slice to the front of the band saw table as described previously. This is more critical when cutting larger and thicker pieces of wood. We have also used spring clamps for this application. You do not need much clamping pressure, just enough to minimize vibration of the Accu-Slice on the band saw table.

Replacement Parts for the Accu-Slice

The Accu-Slice has been 100% designed and manufactured in the United States at our machine shop in Plumsteadville, PA. Therefore we have 100% of all the parts and components you might need for your Accu-Slice system due to wear or damage. Below are listed the part numbers and descriptions of the various configurations and parts of the Accu-Slice system and the parts the might need replaced. If what you need is not listed, give us a call.

Part No	Description
	Systems - 36" rail & 12" Carriage
ACS-17	Standard Accu-Slice System for up to 17" tables AS1017 Index table, AST36 36" Rail. ASCL12 12" Carriage
ACS-21	Medium Accu-Slice System for up to 21" tables AS1021 Index table, AST36 36" Rail, ASCL12 12" Carriage
ACS-24	Large AccuSlice System for up to 24" tables AS1024 Index table, AST36 36" Rail, ASCL12 12" Carriage
	Systems - 60" rail & 24" Carriage
ACS-17-24	Standard Accu-Slice System for up to 17" tables AS1017 Index table, AST60 60" Rail. ASCL24 24" Carriage
ACS-21-24	Medium Accu-Slice System for up to 21" tables AS1021 Index table, AST60 60" Rail. ASCL24 24" Carriage
ACS-24-24	Large AccuSlice System for up to 24" tables AS1024 Index table, AST60 60" Rail. ASCL24 24" Carriage

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	Index Tables
AS1017	Index Table for up to 17" Tables
AS1021	Index Table for up to 21" Tables
AS1024	Index Table for up to 24" Tables
	Rails
ASR36	36" Rail
ASR48	48" Rail
ASR60	60" Rail
ASR72	72" Rail
	Carriage Assemblies
ASCL6	L Carriange - 6"
ASCL12	L Carriange - 12"
ASCL24	L Carriage - 24"
ASFP12	Flat Plate Carriage - 12" x 12"
	Accessories
AS1105	MagJig Clamp Set with Mounting Hardware
AS1101	Guide Stop
	Spare Parts
AS1100	Bearing Wheels