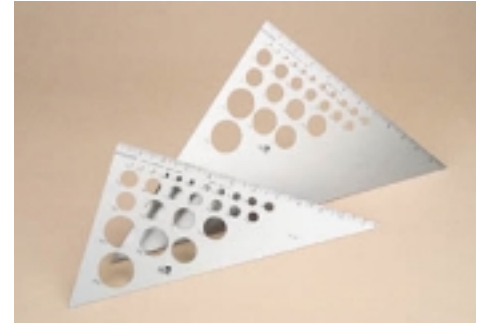


Bevel cuts are made at an angle to the face of a board and across its thickness. They're accomplished by tilting the Worktable (in the case of a MARK V) or the Saw Arbor (in the case of a tilting arbor saw) at an angle to one another. Some common examples would include cutting a bevel along the length of a ripped board's edge...a 45-degree bevel across the end of a wide piece of baseboard or similar molding...or a bevel that accompanies a miter for a shadow-box-style picture frame. The latter of these three is commonly referred to as a "compound miter".

- The most important factor when making a miter cut is getting your saw set up accurately. If you're off a half-a-degree or more, your workpieces won't join together properly. Three items that will make this set-up job easier include: (1) A set of Aluminum Triangles, comprised of a 45-degree model and a 30-degree/60-degree model. (2) an adjustable Protractor/Bevel that can be set to the exact angle you need, to within one-half a degree. (3) A plastic, see-through Angle Setter that slips over your Miter Gauge's Bar and allows you to set its face to a 90-degree, 45-degree, 30-degree or 22-1/2 degree angle without measuring.



Aluminum Triangles

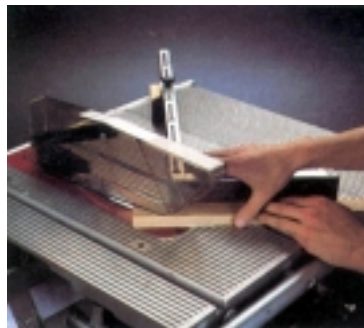


Protractor/Bevel



Angle Setter

- If you're only cutting 45-degree angles, an even better accessory is Shopsmith's Miter-Pro This ingenious device attaches to your Miter Gauge and features two angled faces that meet at an EXACT 90-degree angle. Just set your Miter Gauge at 45-degrees...cut your first corner against one edge and your second corner against the other. With this device, even if your Miter Gauge setting is off by a degree or more, your mating corners will ALWAYS fit together at a perfect 90-degree angle. You can't miss.



- **Bevel cuts** are usually rip cuts, made along the edge of a board for the purpose of joining the sides of a project together. An example might be a 4-sided or even octagonal, 8-sided post made of 3/4" or 5/4" thick stock for a front porch or gazebo. As explained above, another example might be the ends of wide moldings (such as baseboards, etc.). These cuts are made by tilting your worktable or sawblade arbor. There are devices available to help you set these angles very precisely. One such device is pre-set for 4, 5, 6, 8 or 12-sided bevel angles.



Bevel Cut Devise

- **Compound miters** are created by making a combination of a miter cut **and** a bevel cut. The result is a finished product (usually a picture frame) with sides that slope outward, giving the frame the appearance of added “depth”. These frames are typically referred to as “shadow box” frames. Peaked birdhouse roofs, fencepost tops and sloped-side plant containers are other examples of projects using this technique. The projects sides can “flare” out from 5-degrees to 90-degrees, depending on the “look” you want.

Making compound miter cuts involves setting your Miter Gauge at one angle – while tilting your saw table (or blade arbor) to another. These two angle settings are dependent on the number of sides to your project and the angle of “slope” you desire on your sides. For example, a 4-sided shadow box picture frame with the most common 60-degree slope angle requires a 49-degree Miter Gauge setting and a 20-3/4-degree table (or arbor) tilt.

A table of the required Miter Gauge and table (arbor) tilt angles is provided for 3, 4, 5, 6, 7 & 8-sided objects with tilt (or “slope”) angles from “0” to 90-degrees in 5-degree increments in Shopsmith’s textbook, *Power Tool Woodworking For Everyone*. We’ve also included it on the Shopsmith website for your convenience.

## Specialized Table Sawing Operations

Many specialized operations are performed with ordinary saw blades — their cuts guided by special jigs or fixtures that attach to your Miter Gauge, ride against your Rip Fence or slide in your Saw’s Miter Gauge slot. Here are just three examples of these operations:

- **Raised Panel Cutting** is the process of forming a shallow, beveled cut around the perimeter of a cabinet door with the purpose being to create an appearance that the center portion of the door is “raised” above the edges. This operation is performed with a conventional saw blade and your Saw Table (or Blade Arbor) tilted from 5-degrees to 15-degrees.



**Auxiliary Fence**

A high, Auxiliary Fence attached to your Table Saw’s Rip Fence can make this job simpler (and safer). However, for maximum safety, you should build a special panel-raising fixture to hold and guide your workpiece when making these cuts.

- **Cutting Tapers** Occasionally, it’s necessary to cut tapered workpieces. A couple of examples of these might be projects containing wedge-shaped panels...or tapered legs for tables. As a general rule, such tapered pieces are cut following the general procedures for ripping on the table saw. However, to establish the correct taper (and be able to duplicate it on multiple pieces), you’ll need a special Taper Guide. This device can be easily adjusted and locked into position to create a specific taper, then guided against your Rip Fence to move your workpiece through the cut.



**Taper Guide**

- **Tenon Cutting** This is a joinery operation whereby you create a tenon (or square peg) on the end of one board that then slips into a mortise (or square hole) on a mating board. One common example of this is the cutting of tenons on the ends of table apron boards that slip into mating mortises at the tops of the table legs.

To make these cuts, you need a special Tenoning Jig to hold your workpiece in a perfectly vertical (90-degree) position while you guide it through your cut.



**Tenoning Jig**

Most of the other specialized Table Sawing operations would qualify as *joint-cutting* procedures and would require special accessories or shop-made jigs and fixtures to perform. Many of these require the use of a Dado Blade Set or a Molding Head with specialized cutters. Among these would be (but not be limited to) Finger-Lap (or box) Joints, Half-Laps, Rabbits, Lapped Miters, Drawer Joints, Lock Corner Joints, etc. There are dozens of woodworking joints designed for special purposes. The list is virtually endless and far too lengthy to discuss in this article.

- **Dado Blades** are used to create dadoes (across the grain) or grooves (with the grain) in workpiece surfaces...primarily for joinery. Their purpose is to cut a much wider path than a conventional saw blade in order to save time and work. They are available in two different styles “Stacked” and “Wobble” style. Which you use is a simple matter of preference. Stacked Dado Sets are typically comprised of two outer blades and a series of special “chipper blades” that are assembled in varying configurations to make a variety of different width cuts. With this style blade set, “hairline” adjustments are made by inserting paper or plastic shims between the blades.



**Stacked Dado Set**



**Dado Shims**

- **Molding Heads** are thick, heavy steel or aluminum discs that attach to your Saw Arbor and accept a wide range of specialized profile cutters. These cutters can be used to create profiled joints (such as drop leaf table joints, cabinet stile/rail joints, tongue & groove joints, or glue joints) – or decorative surfaces on boards for special moldings. There are dozens of cutters available for Molding Heads. Here are some example profiles.

Molding Heads are designed primarily for cutting profiles in the **surfaces** of boards, while Shaper