

## BYRNES MODEL MACHINES

# 4-inch table saw

Designed & built by modelers for modelers

Let's admit it: one of the great things about a hobby is having all the specialized tools you get to buy. I bet that most of you still remember the thrill of bringing home your first Dremel tool or airbrush. I am now thrilled to tell you about what may be the ultimate woodworking tool for all who fancy themselves as model builders.

Ask any woodworker which one power tool is indispensable in their shop and I'll wager that most would immediately tell you the table saw. With a table saw, you can accomplish an endless variety of tasks. Cross-cuts, rips, miters, dados, rabbets, coves, complex joinery, tapers and more are all standard fare for a table saw. The only problem is that a traditional 10-inch table saw is much too big for many home workshops and a bit coarse for many model projects. Several years ago, Jim Byrnes had that dilemma and, fortunately for the rest of us, he had the drive and talent to do something about it.

A machinist by trade and ship modeler by avocation, Byrnes was not satisfied with any of the small tabletop saws available at the time. Instead, he designed and built a saw with the capabilities and functionality required for his plank-on-frame ship models. A few friends realized what he had done and asked to buy their own. They inevitably spread the word and, soon, Byrnes found himself in the table-saw-making business.

### CLOSE INSPECTION

This saw comes ready to run and is constructed almost entirely of CNC-machined aluminum and steel components. The fit and finish and attention to detail are impeccable. The steel rip fence rides on two, hardened stainless-steel rails and can quickly be positioned to the left or right of the blade or removed completely. The included miter gauge can be pinned in 15 discrete positions or locked at any angle between



### SPECS

**OVERALL DIMENSIONS:** 12x18x6 7/8 in. (WxDxH)

**TABLE:** 12x10x3/8 in. (WxDxT)

**MOTOR:** 1/3hp 120V AC 60Hz, 2 amps

**BLADE RPM:** 3,450

**CUTTING CAPACITY:** 15/16 in.

**BLADE ARBOR:** Non-tilting, 3/8-in. flanged to 1/2 in. and 20mm

### AVAILABLE

**ACCESSORIES:** Miter gauge extension fence, rip fence extension, rip taper jig, extended rip fence, miter extension, micrometer stop, carbide blades (24T .046 kerf and 36T .055 kerf), 80T slitting blades (.020, .030, .040 kerf), replacement belt, zero-clearance insert, blade adapter for non-0.5" arbor blades.

**PRICE:** \$440; accessories from \$5-\$60

them. When it has been pinned, this gauge is so accurate that radially aligning six pieces cut as 60-degree wedges doesn't reveal any perceptible gaps that would indicate an error. Two slots milled in the table allow you to use it on either side of the blade.

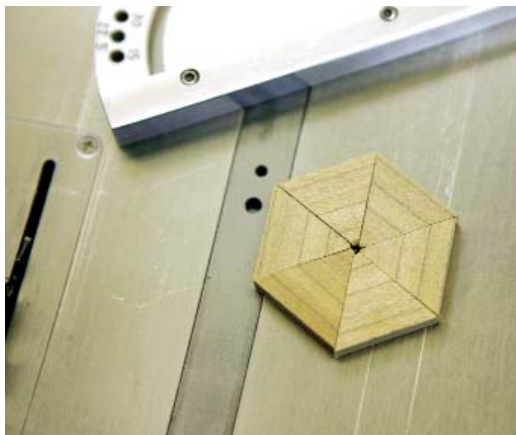
The 1/3 hp induction motor provides plenty of torque for cutting up to 3/4-inch-thick hardwood. No; you can't jam a thick piece of walnut, rock maple, or oak through the blade as fast as you can with a larger saw, but just a little patience will reward you with stock that has been cut extremely smoothly and is burn-free. Such results demand absolute stability; to that end, the 3/8-inch arbor rides in sealed bearings mounted in trunions machined out of 1/2-inch aluminum stock with the blade fixed at 90 degrees to the table surface. The saw runs quietly and without vibrating. My family has yet to complain, and I regularly use it late into the night with them sleeping just a few feet above my workbench.

### ACCESSORIES

A Plexiglas blade guard comes mounted on the saw. It works quite well,

and I use this one a lot more than I do the one for my 10-inch table saw. Still, though, there are times when any blade guard simply gets in the way. For these instances, the guard can easily be lifted clear and even tucked out of the way between the motor and the table without actually being removed. This welcome feature makes it easy to quickly restore the guard as soon as appropriate for maximum safety.

The rip fence is 1 inch wide and 1/8 inch thick. This provides a stable, low-profile



Held together, these six wedges show no gapping, testament to the accuracy of the sliding miter gauge.



This Starrett micrometer head can be positioned to provide precise control of the fence to one one-thousandth of an inch.

## BYRNES MODEL MACHINES 4-INCH TABLE SAW



**No tricks, save a very precise cut. Yes, you can actually read *Fly RC* through a slice of balsa wood.**



guide that helps to keep your fingers clear of the blade. When it's needed, an aluminum auxiliary fence can quickly be attached to bring the total fence height to  $\frac{3}{4}$  inch.

Not to be overlooked, the new rip taper guide is very handy for tapering spar ends



**I milled these pieces of poplar and cut these precise test lap joints in just a few moments while making a vacuum forming frame.**

and cutting precise dihedral joiners (among other similar pieces). Its scale indicates tapers up to 30 degrees and guides against the stock rip fence.

Perhaps one of the neatest accessories is the Starrett micrometer stop that's used to adjust the fence position. This accessory allows you to reposition the fence quickly and easily with a level of accuracy and precision that rivals industrial milling tools. With the micrometer stop, I was able to repeatedly slice 0.005-inch-thick sheets off the face of a  $\frac{3}{4}$ -inch balsa block. At this dimension, you can actually read your favorite RC magazine through the wood quite easily. This accessory shines when it's time to accurately adjust the width of spars and longerons for models of any size.

### DUST COLLECTION

There's no getting around the fact that cutting wood creates dust, even with narrow kerf blades. A collection port on the right side allows you to attach a shop vac to keep your work area clean. The saw base is open, so if you prefer a quieter operation late at night, you can also let the dust accu-

mulate under the saw and periodically vacuum it up for a quick cleanup.

### CONCLUSION

Byrnes Model Machines 4-inch table saw offers a level of precision and accuracy far beyond any other woodworking tools I have used. In just a few short months, I have used it while working on indoor micro-models, helicopters, park flyers, sport models, ARFs and a scratch-built  $\frac{1}{4}$ -scale project. I have also used it while building a vacuum-forming machine and tooling and even on some wooden fittings for our kitchen cabinets! It is not possible to cover all the features and benefits of this remarkable tool in such a small space, but rest assured that you will be seeing much

more of this saw in future articles. As it has quickly become the favorite tool in my shop.

Yes, with a base price of \$440, it seems undeniably expensive. Looking beyond the price, though, soon reveals this tool and its accessories to be a remarkable value. I have never made such accurate, clean cuts, whether working with the softest balsa or with hardwood. This saw is so well designed and constructed, so simply "right," that I am fully confident that few will ever exercise the 1-year warranty. This is a tool to be treasured and passed down through the generations. Rolls-Royce co-founder Sir Henry Royce once exclaimed that "The quality remains long after the price is forgotten." I couldn't have said it better myself. 🌟

### Links

**Byrnes Model Machines,**  
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