



Your

Good kits make great guitars and offer plenty of real woodworking

BY STEVE SCOTT

SOURCES OF SUPPLY

We sampled four kits for dreadnought-style, steel-string guitars with spruce tops. All but one have rosewood backs and sides, and on most you can choose either a dovetailed neck or one that bolts to the body. The kits all remove at least two of the biggest lutherie pitfalls. First, the guitar sides are already bent to shape. Second, the fretboards come slotted in the proper places. Misplace a fret by even a small fraction and you'll hear the mistake every time you play. Regardless of price, look for a kit with thorough instructions (Stew-Mac's kits are

champs at this). Three of these kits offer all solid-wood construction, but price leader U.S. Guitar is the exception. Guitar-making instructor George Vondriska also likes a kit from Grizzly with a plywood back and sides that sells for \$85. "A great project to do with a kid," he says.

VIDEO WORKSHOP

To see George Vondriska's 19-part video series on building a guitar from a kit, become a member of FineWoodworking.com.

First Guitar

There are many functional and beautiful things that you can make as a woodworker, but perhaps none combines function and beauty as fully as an acoustic guitar.

The curved sides, inlaid top, and carefully fitted neck all pose satisfying challenges for the woodworker. And the finished piece is uniquely satisfying as well—as beautiful as fine furniture, but made to create music.

Still, many woodworkers who might otherwise try building a guitar are put off the project, thinking they'll need a host of specialized tools and new skills.

Enter the guitar kit. Several companies make kits that include all the components, materials, and instructions you need. The kits vary in their simplicity, but all of them remove some of the obstacles that might trip up the average woodworker.

In many

kits, for example, the guitar's sides are already bent, so there's no need to create large bending forms or a hot-pipe bending rig.

Guitar players especially might wonder whether a kit-build can match the fit, finish, and sound of a professionally built guitar. Devotees of kit-built guitars swear by the tone and playability of their instruments, even their flawed first efforts. And the building experience, they say, is addictive.

There's more to building from a kit than just gluing together pre-made parts, as I found out when I visited guitar-making instructor George Vondriska at his school outside Minneapolis (aboutwildearth.com). A kit builder must carefully handle a wide range of tasks, including setting the angle of the guitar's neck, locating and installing the bridge, adjusting the nut to set the height of the strings, and setting the inlaid binding around the guitar's top.

Tackle these tasks with patience and care and, when you're done, you'll have a beautiful musical instrument. And you might find you like guitar-making so much that you are ready to build one from scratch. It's not a long leap once you have a kit under your belt. This article will give you a taste of the process and offer some pointers on where to learn more.

Steve Scott is an associate editor.

Make music in your shop. Patient, careful work can transform a kit of parts like the one from Luthiers Mercantile (far left) into a handsome finished instrument like this sample from U.S. Guitar.



C.F. MARTIN & CO. martinguitar.com

Back is not glued up. Headstock is veneered, but not drilled. Features a pair of index pins to locate and secure the fretboard to the neck when gluing. Lightly illustrated instructions come in a 20-page book that wisely urges builders to seek additional sources of guidance. \$458.

LUTHIERS MERCANTILE INTERNATIONAL

lmil.com

Bracing material is left as raw stock for builder to cut and shape. Good instructions and video. Company offers lots of à la carte options, including kits that let you carve your own neck, bend your own sides, etc. \$591.

STEW-MAC

stewmac.com

Kit includes pre-cut cardboard molds to help simplify glue-up. Top is pre-routed for application of rosette. Kit yields "a very fine finished instrument," Vondriska says. 36 pages of instructions, full-size plan, 71-minute DVD video. \$489.

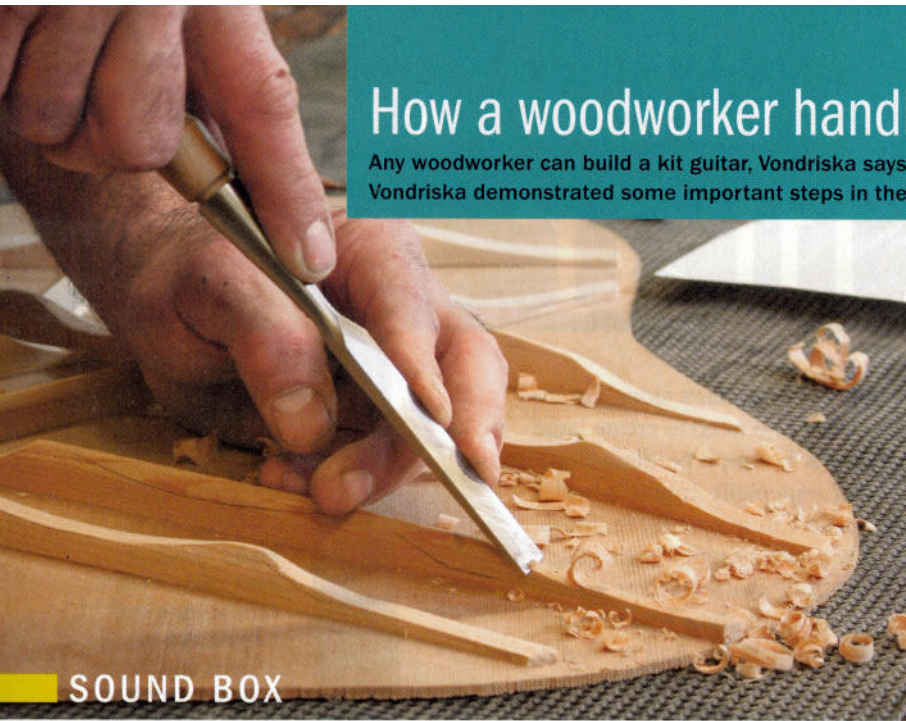
U.S. GUITAR

usguitarkits.com

Laminated sapele back and sides are pre-assembled. Bracing is shaped and pre-installed on top and back. Solid 39-page instruction booklet. "Good value for the dollar," Vondriska says. \$300.

How a woodworker handles the process

Any woodworker can build a kit guitar, Vondriska says. The keys are reading the instructions and taking your time. Vondriska demonstrated some important steps in the process using kits from U.S. Guitar.



SOUND BOX

Use a chisel to create great sound. A crucial step in "voicing" a guitar is to trim the softwood braces underneath the soundboard. Thinning the braces in a traditional scalloped pattern lets the soundboard resonate more freely. Some kits include templates to simplify this task.



How to avoid specialty clamps. Gluing up the sound box typically requires 25 to 30 luthier's spool clamps for even pressure around the top. Vondriska uses a few ordinary bar clamps and a guitar-shaped caul to distribute pressure.

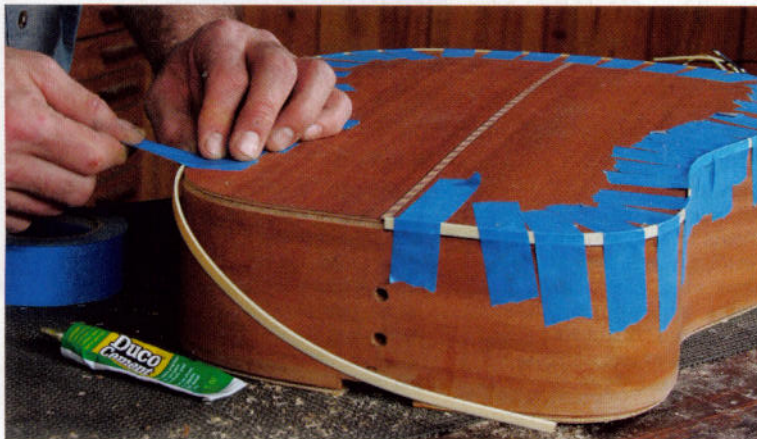


SHOPMADE FENCE

Single rounded point follows guitar's curves and creates a perfect rabbet.



The tools are familiar. After using a router to trim the top flush with the sides, clamp on a shopmade fence (above) and use a straight bit to cut a very shallow rabbet in the guitar's side. Next, use multipurpose household glue (Duco cement by Devcon; \$5) to attach the plastic binding that protects and hides the joinery. Blue painter's tape clamps the binding into the rabbet (below). When the glue dries, trim the binding flush with a card scraper (right).





NECK AND FRETBOARD

Don't fret. The spacing between frets is crucial to the guitar's sound, and especially easy to get wrong. So, even in advanced kits, the fingerboard is preslotted. Use a light dead-blow hammer to seat the frets.



Tip for attaching the fretboard. With the neck temporarily attached, Vondriska uses a length of elastic from an old inner tube as a clamp when gluing the fingerboard in place.



A crucial joint simplified, but only a little. In many kits, the neck attaches to the body with a couple of bolts instead of a dovetailed key. The dovetailed key is more traditional, but many makers use a bolt-on neck for ease of construction and repair. You may need to carefully sand the neck's heel to adjust the fit and ensure that the neck meets the body at the correct angle.

A SECOND OPINION

Starting from scratch is more rewarding

As a guitar-making instructor, I understand why a kit seems attractive to a first-time builder. A kit can help you avoid many of the steps and operations and can take dozens of hours off the time commitment.

But here's the trade-off: A kit's simplicity can limit your learning and sense of accomplishment. And, especially if you guide your project with the kit's instructions alone, the rewards won't be nearly as great.

If you're serious about building a guitar, I'd urge you to start from scratch. You may find the task to be the ultimate woodworking challenge, but it is definitely within your reach. I don't know who the world's best guitar-maker is, but I'm pretty sure he or she is working alone somewhere in a shop half the size of your garage.

Whether you build from scratch or from a kit, learn as much as you can about how to make a guitar play well. A great book that's helped many luthiers get started is *Guitarmaking Tradition and Technology* by William Cumpiano and Jonathan Natelson (Chronicle Books, 1994). It will guide you through important choices like soundboard thickness and the shaping of the neck.

Above all, remember this: Traditional guitar makers do not have or need a lot of tools or equipment. They have and need a lot of patience, determination, and woodworking chops.

In the end, the ultimate challenge offers the ultimate reward—a handsome, playable instrument that you built from start to finish.

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