Cutting scale lumber was never a problem for me. The problem was that, when I ran out of a size that I needed, resetting the saw fence precisely to the former dimension was a lot of time-consuming work. And even after trying to set the fence to the size I needed, most of the time it was still a little bit off. I decided that a fixture for my table saw was the way to go to get accurate scale lumber.

Because every table saw is different, I can’t give you the dimensions of several parts of the fixture, including the size of the Masonite needed, the miter-gauge slide, and the length of the fence. My saw was my father’s and is about 65 years old. You will have to figure out these sizes on your own, but it’s not difficult.

The first thing I did was to cut a piece of ¼” Masonite the size that I needed. The slot for the miter gauge on my saw is ¾” wide x ½” deep. I bought a piece of flat, iron stock, ¼” x ¼”, and cut it to the length of my miter-gauge slot. You could just use a piece of hardwood to fit your slot instead of the metal bar. Next, I put...
Scale lumber can be easily and accurately cut when using this simple fixture on your table saw.

The author used Plexiglas for his spacers, but any suitable material could be used. The spacers are slotted to fit over the carriage bolts.

To set the adjustable fence, the appropriate number of spacers are inserted on the right side of the fixed fence before the wingnuts are tightened.
some double-stick tape on the bar and placed it in the slot, tape side up, and shimmed it up so that it was a fraction higher than the surface of the table. I placed the Masonite on the table, making sure that the front edge was square to the table, then I pressed it down to stick it to the tape and bar. I then drilled two #7 holes from the bar side, through the Masonite, threaded the bar with a ¼-20 tap, and countersunk the Masonite. Using ¼-20 x ½" countersink screws, I screwed the bar to the Masonite. Next, I clamped a small piece of wood onto the back edge of the table of the saw as a stop so the fixture would always be in the proper position (see the drawing). Placing the finished piece on the table saw with the bar in the slot, and with the saw blade in the lowest position, I turned the saw on. I slowly raised the blade so that it cut through the Masonite, leaving a slot I could measure from.

Next, I cut two pieces of ¾" x 2" hardwood the front-to-back length of the table saw, to be used as the fences. On one of the pieces, I bored two holes the depth and width of the head of a carriage bolt, then drilled two 5⁄16" holes through both pieces to accept the bolts.

Now I was ready to attach the fences to the Masonite. In a sense, there are two fences; one is adjustable, using the spacers, while the other is fixed to the Masonite. There must be enough room between the fixed fence and the adjustable one for the wingnut, nut, washers, and the maximum size lumber you intend to cut, plus a little extra for loosening the wingnuts.

On mine, I figured that 24" scale lumber was going to be the widest I would need. Anything wider could be cut without the fixture. I calculated that 1" in my scale (1:22.5) equals .044". I wanted to be able to cut in 2" increments, so I needed spacers that were about two scale inches, or .088" (.09", rounded off). I did not want dressed-lumber sizes. I happened to have some Plexiglas that I could use as spacers that was .097", which would be equal to 23⁄16" in 1:22.5 scale. For spacers, you could use any material—from cardboard to wood—that is the right dimension for your scale. I was satisfied with using the Plexiglas for my spacers, even though it was a little more than two scale inches.
I would need 12 spacers in all (24" divided by 2”). I cut all the material I was going to use for the spacers the full size of the fence so that, when I tightened the thumbscrews, there would be even pressure on all surfaces. I slotted the Plexiglas spacers so they could be dropped in over the bolts. Next, I assembled the fences with all spacers inserted for the maximum size lumber, making sure the wingnuts were tight up against the stationary fence (see the drawing for the nut/bolt/washer arrangement). After I set it up, leaving room to loosen the wingnuts, I removed the spacers, and re-tightened the wingnuts. Placing the adjustable fence against the saw blade, as if I were cutting zero-size lumber, I squared up the fences and marked the stationary fence’s position. I then placed double-stick tape on the bottom of the stationary fence, lined it up on the mark, and screwed it in place.

When I first designed the fixture, I worried that I would be misplacing the spacers, so I thought about making a storage box that I could attach to the fixture. But, as I was using the fixture to cut my scale lumber, I found that it was easier just to drop the unused spacers on the other side of the fixed fence. It was a great place to store them, and I didn’t need to loosen the wingnut as much each time I needed to change sizes. One other thing I did was to round the top edge of the Plexiglas because I kept nicking my finger on the sharp edge while turning the wingnuts.

To use the fixture, I first determine the thickness of the cut (in scale inches) that I want to make. Then I loosen the wingnuts between the two fences, slide the adjustable fence to the right, and drop the correct number of spacers over the bolts on the right side of the stationary fence. Then I tighten the wingnuts, and the moveable fence will be accurately set.

I found that using a thin-kerf blade worked best and saved a lot of wood. I did not come up with a guard for the fixture, so be sure to use a push stick when getting close to the saw blade. I also raise and lower the blade to the height of the lumber I am cutting so that there is less of a chance of getting cut.

I hope that you will try making this fixture. You’ll be surprised at how much time you will save cutting scale lumber.