

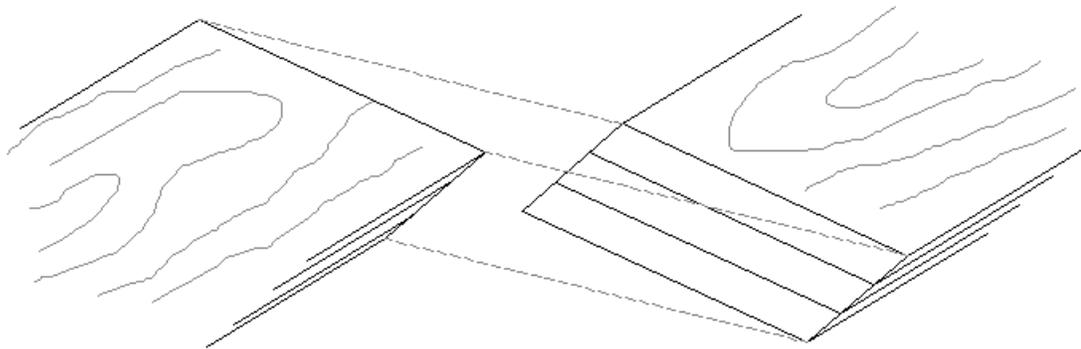
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# Scarfig Plywood

by Jeff Spira

All Spira International Easy-To-Build boat designs may be built without using scarf joints in the plywood. A simple butt joint backed up by a 6-inch-wide butt block made of the same thickness of plywood as the ply being joined, glued and screwed in-place as described in the Ply-On-Frame Construction Manual will be amply strong for any ply joints called out. However, some builders prefer to scarf the plywood. It makes for a thin, elegant joint that is as strong as the native material and probably more importantly, with the same bending characteristics, so that the joint bends consistently and makes a fairer curve along the side or bottom of a the boat.

Typically, scarf joints for plywood are 8:1, that is to say, they are 8 times as long as the plywood is thick, so for a 1/4-inch-thick piece of ply, the joint should be 1/4 x 8 or 2" wide, for a 1/2 inch thick ply panel, the joint is 1/2 x 8 or 4 inches wide, and so on.



There are many ways to cut the scarf this. Accomplished woodworkers often use a block plane and can often fit it up quickly. This is a learned skill though, and for those of us who are a bit more craftsmanship challenged (and I include myself in this group – I just don't do it often enough to stay sharp,) there are two much easier methods. The first involves the use of a belt sander. All you need to do is clamp one panel

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upside down and the width of the joint away from the first so that you can create a ramped surface 16 times the thickness of each panel (2 - 8 : 1 scarfs made simultaneously) Use the belt sander to make the joint and keep an eye of the ply laminations, keeping them straight to get a good square and properly tapered joint, like in this picture:



You can also make a simple tool to cut scarfs using a Skill saw. The Gudgeon Brothers used to make a metal one, but I haven't seen one in many years. I don't know if they're still in production, but one of my customers made one from wood that is just as effective as the commercially made one:



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Once you have the scarf cut made, apply a good waterproof wood glue (epoxy, polyurethane, or liquid nails) and clamp until set up. Wax paper will prevent the scarfed joints from sticking to your clamps or bench top. Some builders like to use two nailed boards, one on either side as a clamping aid. These days with the gap filling capabilities of modern glues, I just tend to lay down a layer of wax paper above and below the joint, lay a board over the joint, and stack bricks, paint cans or other heavy items I can find as an improvised clamp until the glue cures fully.

