

YOUR FREE READER'S COMPANION

The Timber Framers' Field Pack

A companion to The Timber Frame & Post-and-Beam Building Bible · by Garrett Holloway

Thanks for picking up the book. This is the companion you tack to the shop wall and carry out to the sawhorses: a quick species and sizing reference so you order the right sticks, the cut-sheet proportions for the three joints that build a frame, the square-rule layout checklist that keeps your joints fitting on rough green timber, and a raising-day plan with the safety card that keeps everyone whole. Print it, fold it, keep it where you can see it while you work.

Carry one thing out of this whole book and let it be this: the joint does the work, not the nail. Cut your shoulders dead tight, reference every line off the same two faces, and the wood will hold up anything you ask of it. A frame you cut yourself and raised with your own crew is worth ten you paid someone else to build. — Garrett

Timber Species & Sizing Reference

The best species for your first frame is usually the sound, affordable, locally sawn softwood your regional mill cuts the most of. Order it green, order it a few inches long so you can trim past the end checks, and tell the sawyer you want the pith boxed (centered). Sizes below are nominal green dimensions, stout and forgiving for a small shed-to-pavilion frame.

Species	Working qualities	Where it shines	Typical post / beam sizes
Eastern white pine	Light, soft, cuts like cheese green, forgives a dull edge; stable and rot-resistant for a softwood	A first-timer's wood, every time. Spans a touch heavier, which means nothing on a shed	Posts 6x6, ties 6x8, plates 6x6
Douglas fir	Stronger softwood, still reasonable to cut, comes in big clear sizes	The workhorse of modern frames; a small step up in difficulty	Posts 6x6, ties 6x8 (slimmer if engineered)
White oak	Strong, heavy, lasts centuries; hard to cut, hard to lift, unforgiving of a soft edge	Traditional English/New England frames. Beautiful, but walk before you run	Posts 6x6 to 8x8, ties 6x8 to 8x8
Hemlock / spruce / larch	Sound, cheap, widely sawn; varies by mill, sight each stick hard	Budget frames where it's what's local and available	Size up a touch from pine for the softer grades
Southern yellow pine	Strong, heavy, resinous; cuts harder than white pine	Strong frames in the South where it's the local stick	Posts 6x6, ties 6x8

You don't get to be picky as a beginner, and you shouldn't be. Heartwood does the work where you can get it, the pith stays centered so checks stay small and harmless, and a long check running with the grain is the timber talking, not failing. Reject the twisted, punky, or knot-clustered stick at the yard, not after you've hauled it home.

Core Joinery Cut Sheets

A whole house frame might use only four or five kinds of joint, repeated over and over. Master these three and the rest is variation. The rule under all of them: shoulders carry the load in compression, the peg only keeps the joint from pulling apart. Tight shoulders, snug tenon, good peg, in that order.

Mortise & Tenon (the king of joints)

Element	Rule of thumb
Tenon thickness	About one third the timber thickness (a 2" tenon on a 6" timber, 2" of cheek each side)
Tenon length	Sized to seat shoulders tight; mortise bored a little deeper so the tenon never bottoms out
Shoulder	Dead tight and square — this is the surface that carries the load
Tenon cheeks	A hair narrow so it slides; the shoulder does the work, not the tongue
Lock	One peg for most small joints, two for big or critical ones

1. Lay the mortise out from your two reference faces; bore out the waste, then chop the cheeks and ends flat.
2. Cut the matching tenon back to the shoulder line; saw the cheeks, pare to the line, leave it snug.
3. Test-fit. The shoulders should kiss the post face flat with no gap before the tenon bottoms.

Brace (the triangle that stops racking)

Element	Rule of thumb
Angle	Usually 45 degrees, post to beam, turning the corner into a triangle
Length	Short — about 2'6" of 4x4 stock on a shed-size bent
Joint	Mortise & tenon at both ends, each pegged, with angled shoulders
Critical surface	The angled shoulders must seat tight — a brace works in compression, jamming the corner open against the wind

A loose brace does nothing. A tight one is iron. Put a brace in each top corner of each bent, often a pair, and never skip them to save cutting.

Scarf (splicing two sticks into one)

Element	Rule of thumb
When	Only when a plate or sill runs longer than any single stick you can buy or lift
Type for a beginner	Stepped lap (bladed scarf) — matching steps that hook together, pegged
Location (the rule that matters most)	Directly over a post, where load is least and support is most — never out in a span

Goal

The spliced timber should act, as near as possible, like one continuous beam

A scarf is always the weakest point in a long timber, so where you put it matters more than how you cut it. Over a post, every time. For your first shed, size your timbers so no scarf is needed at all — that's the right call.

Square-Rule Layout Checklist

Real green timber is never exactly its stated size, never quite square, often a little bowed. Square rule beats that by imagining a smaller, perfect timber hidden inside each rough one, and cutting all joinery to that perfect inner timber. It's the right method for a beginner: parts interchange, and you can lay each stick out by itself at the sawhorses. Run this list on every joint.

1. Pick two reference faces on the timber — the two best, straightest, squarest adjacent faces, usually the top and one side. Mark them clearly with a chalk swipe or scribed symbol so you never lose them.
2. True the reference faces up where the joint falls — plane or pare them flat and square to each other right at the joint, even if the rest of the stick stays rough.
3. Mark every line from those two faces, always, no exceptions. Mark one joint off the reference and its mate off the opposite face and you've built in an error the size of however off-square that timber is.
4. Square the shoulder line all the way around with a knife, riding the square against the reference face. It's the most important line on the joint.
5. Set a fixed offset (combination square or marking gauge) for the tenon cheeks and width, the same offset on every matching joint so the parts interchange.
6. Carry the lines across the end grain so you can see the tenon's full shape.
7. Mark your waste with a big X on every face. Every framer has sawn the wrong side of a line once. Mark it.
8. Strike each line once and clean. Knife not pencil for the cuts that matter. Sharp knife, true square, good light, patience.

Layout is quiet, fussy, unglamorous work, and it's where frames are won or lost. Get layout right and the cutting is almost relaxing, because you're just following lines.

Raising-Day Plan & Safety Card

Raising day is the best day and the most dangerous day in the whole project. A good raising is calm because it was planned. Plan the order, walk it through on the deck, and aim for boredom — you want it to go exactly as you pictured.

The plan, in order:

1. Brief the crew before anyone touches a timber. Show them the plan, name the one caller, assign positions, and teach the one command that overrides all others: stop.
2. Set every rope, pike, and block before the lift — never while a bent is in motion.
3. Block or cleat the base of the bent so it can't kick out, then pivot it up by hand for the first few feet.
4. Push it the rest of the way with pike poles, crew at the base steadying, a rope on the far side to control it over the top of its arc so it doesn't go past vertical.
5. Plumb and brace it the instant it's vertical — temporary braces to stakes or deck, checked with level or plumb bob — before anyone lets go or celebrates.
6. Raise the next bent the same way. With two up, plumb, and braced, present every length brace into its post mortise first — its upper tenon belongs to the plate, and once the plate is down there is no way to get it in. Then lower the plates onto the post tenons, catching the brace tenons as they come. Plumb the whole box, confirm with the bob, and only then peg it: a joint pegged crooked is an error locked in.
7. Remove temporary bracing only after the permanent frame can stand on its own.

Safety card — read it twice:

Rule	Why
Look up first. Nothing you raise or hold may come within 10 ft of an overhead power line	It is the only hazard of the day that kills instantly and at a distance — a wet rope conducts
One caller. Everyone takes commands from one voice; anyone may call stop	Three people shouting is a raising headed for trouble
Enough crew for the weight. Size it so nobody carries more than about 60 lb (27 kg)	Too few hands is how bents fall on people. Short of bodies, go mechanical
No hand goes into a joint with a timber coming down onto it	No exception is worth a finger
Never stand under a suspended load, or in line with a come-along cable	A cable or a stake that lets go releases all of it at once, along its own line
Fall protection above 6 ft (OSHA 1926.501): guardrail, net, or harness on a 5,000 lb anchor	The shed ridge is about 11 ft 6 in off the ground — nearly twice the threshold
Hard hats, stout boots, gloves for rope and pike crews	Heavy timber and dropped tools don't forgive a bare head

Never stand in the fall path of a bent	Work from the sides. The pike crew is the exception, and their protection is pole length: poles must be longer than the bent is tall — 12 ft for the 8 ft bent
Never reach into a joint that's raised but not yet pegged	An unpegged joint can come apart
Brace every bent plumb before raising the next	No exceptions for being in a hurry
Don't raise in wind	A flat bent is a sail
A charged phone, a first-aid kit, and one person who knows the site address by heart	Write the address on the kit. The moment you need it, nobody remembers it
Keep children and onlookers well back	A raising is a working site, not a stage

That's the pack. What to build first: a simple 8x10 timber-frame shed — four 6x6 posts on a rectangular ring of 6x6 sills, two bents tied across the top with 6x8 ties, a knee brace in each top corner, four more braces down the length, two 6x8 plates and a plain gable roof. It's thirty-four timbers and a few dozen joints, all of them joints in this pack, cuttable in a weekend or two and raisable in a morning with a few friends. If you can build that shed, you can build a pavilion, a barn, eventually a house — the skills are identical, only the size changes. When you've stood up your first frame and it's casting its first shadow on the ground, I'd love to hear about it. In a couple of emails I'll tell you how a quick word from you helps this book reach the next nervous beginner standing over a stack of timber, wondering if they can do this. They can.

Cut to the line,
Garrett Holloway