

Scratch Building Cars (or anything)

Why:

1. It's challenging, and it's fun.
2. You get what you want, at least by the third try.
3. The N.M.R.A. Achievement Program. (Real men and women scratch build.)

Resources

1. The American Railroad Freight Car

John H. White Jr.

John Hopkins University Press

ISBN 0-8018-4404-5

2. The American Railroad Passenger Car (Part 1+2)

John H. White Jr.

John Hopkins University Press

ISBN 0-8018-2743-4 (Set of 2, paperback)

3. Train Shed Cyclicopedia

There are 70 plus volumes covering many different railroad related subjects and eras. I have found they are becoming difficult to acquire, so when you do come across one, grab it.

4. Take your pick: Favorite train book, magazine, historic photo, et. al.

I find the research as much fun as the building.

My must-have tools.

1. Scale rule.
2. #11 Blade.
3. Razor Saws.
4. Miter Box.
5. Pin Vise & Bits.
6. Sanding

blocks (most of mine are home made) 8. A Glass surface to cover your bench (most glues won't stick to glass; Surface is flat; you can align tools along the edge) 9. Some needle files. 10. An air brush 11. Several types of clamps (clothes Pins) 12. Some weights (hopefully one or 2 Square)

These are the tools I use all the time, and could not do without. It's a rather short list. I have found you don't need every tool in the world to be a successful builder. Just the ones you feel comfortable with.

Do I have more than the above list? Yes, but use them rarely.

Materials.

Wooden Car Era Frames

Styrene. It's not harmed by humidity or reasonable temperature change, more forgiving when dropped. It does, however, require texturing to mimic wood, but the "game" of making plastic look like wood is part of the fun.

Bodys.

What is the prototype made of? Textured V. Groove Styrene works very well, and has become my favorite material. Wood Scribed siding works well to, but can warp when painted. One slat at a time! Wood seems to work best. Thin Styrene strips will warp with even a small amount of glue.

Tanks.

Horizontal tank cars: Styrene. It is

more difficult to make wood look like steel than styrene. It is easier to impart rivets, and it bonds easier.

Vertical tank cars: wood. At least I prefer wood. Vertical tanks are used for Pickle Cars, early water cars and early oil cars. These tanks were oddly stained and colored, if at all, and wood work best to represent the prototype finish.

Frame and Body Details

Any detail that looks fragile, (hand grabs, ladders, brake airlines, brake wheels) should be in brass. Don't spend weeks on the little stuff just to have it fall off the first time you run.

Build Sturdy

Every car I've built has operated. Many have hit the floor at least once. If you only want a display or a contest model that is fine. But, it is so cool to watch a string of scratch built cars of your own making roll by!

My Construction Sequence

1. Body
2. Frame
3. Roof

Body: Make sure the parts are square. Align side walls and end wall back to back to ensure a good match. Take care the floor is level and square.

Frames: Build the frame to fit the body. It's much easier to fit the frame to the body than the other way round.
(Build flat cars)

Roofs

Because most of the cars I've built have removable roofs, I fit the roof last. If the roof is not removable you may want to build it as part of the body.

Finish

Paint the thing with what ever works for you. With the demise of Floquil, I have no suggestion as to a replacement.

Weathering

I very much like weathering with chalks. There are many earth tones, rust tones and blacks available. Scrape the chalk on to a piece of card stock and apply with an old paint brush. Over spray with Dull Cote and reapply as necessary.

A neat trick to make styrene look varnished wood: Spray styrene a "natural" wood shade. Work in some browns, reds and yellows with chalks. Over spray with Gloss coat. You will be amazed.

"Cheats"

Size is more important than scale. If a detail part says "S" scale but look o.k. in "HO", then it is right. The same is true of Doll House, military or ship building parts.

Round is more challenging than squares: tank ends, domes, vats. Look for stuff

J.

that is already round and might be repurposed.

Know what's out there. Railroad in all scales, military, boat and doll house, and any thing else you can think of.

Tar Paper: Try laundry Fabric softener. Dryer Sheets. Fron with spray starch. Paint surface to be covered and apply dryer sheet. Paint top, weather and overspray with Dull Cote.