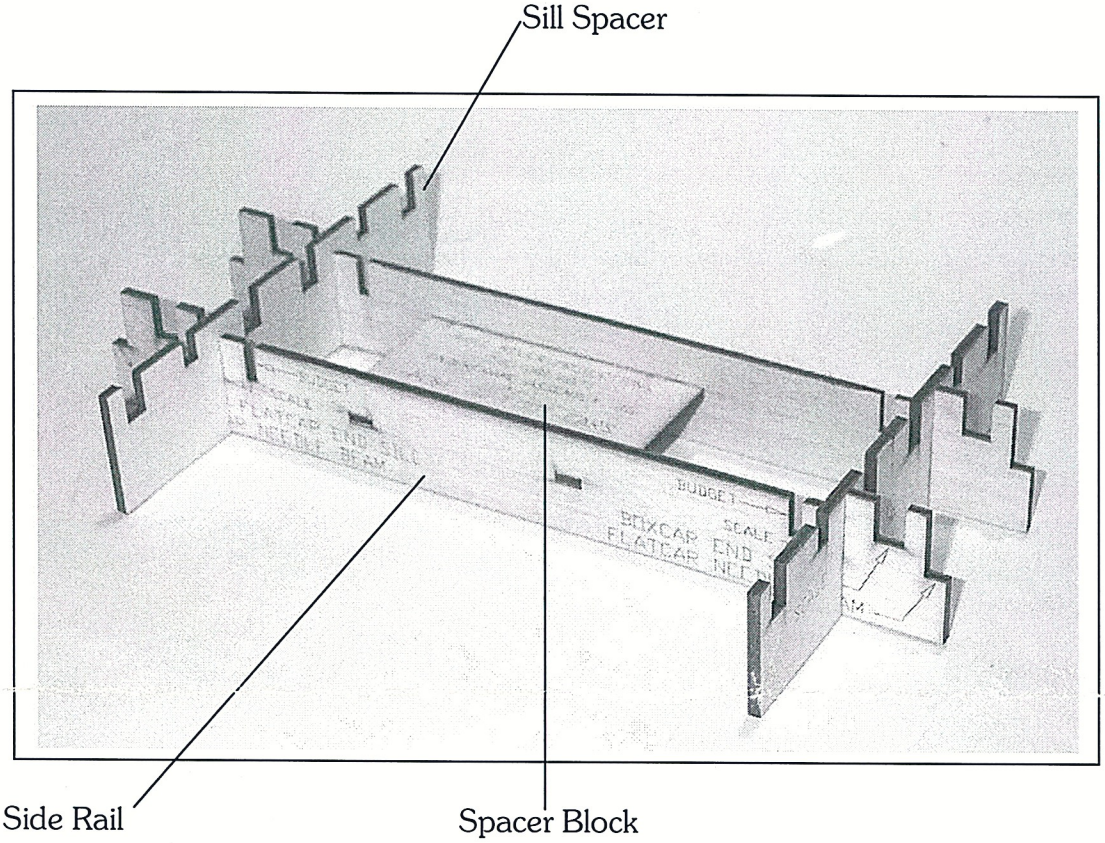
Fall River Productions

F&CC Assembly Jig

Jig Parts Identification Sheet



If you are building the F&CC box car project from Curt Johnson and Jeff Saxton, use the dimensions for the sill members from the kit instructions, or use the plywood sub floor for the dimensions. If you are scratch building a car, either box or flat, use the following dimensions as a guideline unless you prefer to use your own:

	"Scale"	"Budget"
Side/center sills	¼" x ½" x 17 9/64"	(all sills) ¼" x ½" x 17 9/64"
Intermediate sills	3/16" x 3/8" x 17 9/64"	N/A
End sills	¼" x ½" x 4 ¾"	¼" x ¼" x 4 13/32"
Needle beams	3/16" x 3/8" x 4 13/32"	3/16" x 3/8" x 4 13/32"
Decking	3/32" x ¼" (or 5/16") x 4 ½"	3/32" x ¼" (or 5/16") x 4 ½"

Just a reminder; "scale" is a relative term here since these jigs utilize strip wood available from most local hobby shops and do not rely on the modeler having to obtain custom cut scale lumber. It has more to do with appearance. If there are enough requests, we will develop sill spacers for these jigs to handle scale lumber sizes such as those found in Hartford Products kits.

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F&CC Underframe Assembly Jig
for
AC&F 30' box cars and flat cars

These jigs were developed to assist the modeler during the assembly of an underframe for either the F&CC (AC&F) 30' box car or flat car. By rotating the jigs end for end, either the box car or flat car underframe can be built. Labels have been scribed into the side rails to indicate where the various parts go when assembling either type of car.

The initial design concept for these underframe assembly jigs came from Vance Bass of FH&PB Railroad Supply (www. nmia.com/~vrbass/fhpb). He has graciously allowed us to market them, and we are in the process of developing assembly jigs for his kits, and some of the Hartford Products kits as well (www.hartfordpr.com).

Jig Assembly:

- When assembling the jig, make sure any scribed lettering on the parts faces either <u>out</u> or <u>up</u>, depending on the location of the part. -

1) Glue the side rails to the spacer block as shown in Photo 1.

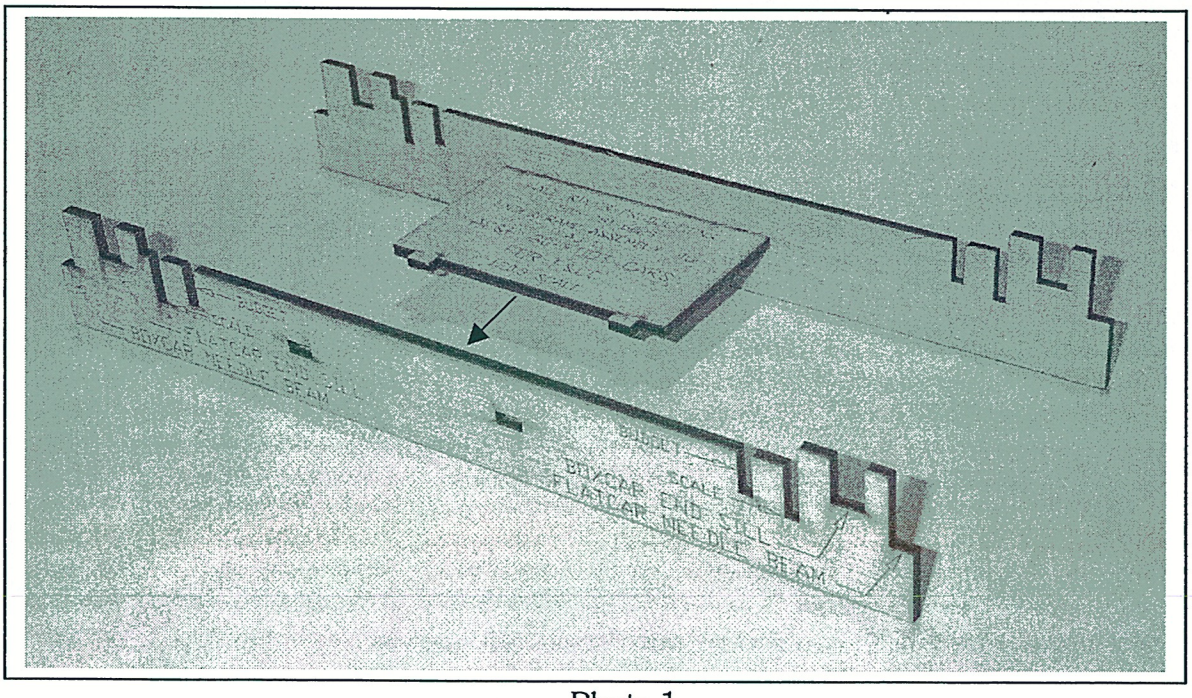

Photo 1

2) Decide which type of underframe you would like to build, then slide the appropriate sill spacers into the correct slots in the side rails. The "budget" spacers go in the inner slots, and the "scale" spacers go in the outer slots. See photo 2. The slots are identified on the side rails.

These sill spacers are designed to accept the common strip wood sizes available from most hobby shops (3/32", 1/4" and 3/16" strip wood). The spacers can be glued in place if you are going to use the jigs to build only one type of car, or left removable to allow the jigs to be used for either type of car.

No matter which type of car you choose to build, the sill spacers must always be <u>fully</u> inserted into their slots in the side rails with the bottoms of all parts <u>flush</u>. The longitudinal sills and end sills will not line up properly if all the parts of the jigs are not flush.

The type of plywood used in these jigs is somewhat inconsistent in thickness from sheet to sheet. We have tried to pick a slot size that is a compromise to provide a reasonable slide fit of the parts. Sometimes the fit can be very tight or even slightly loose, depending on the sheet thickness. If the fit is loose, try inserting a piece of paper between the parts when sliding the sill spacers into the side rails.

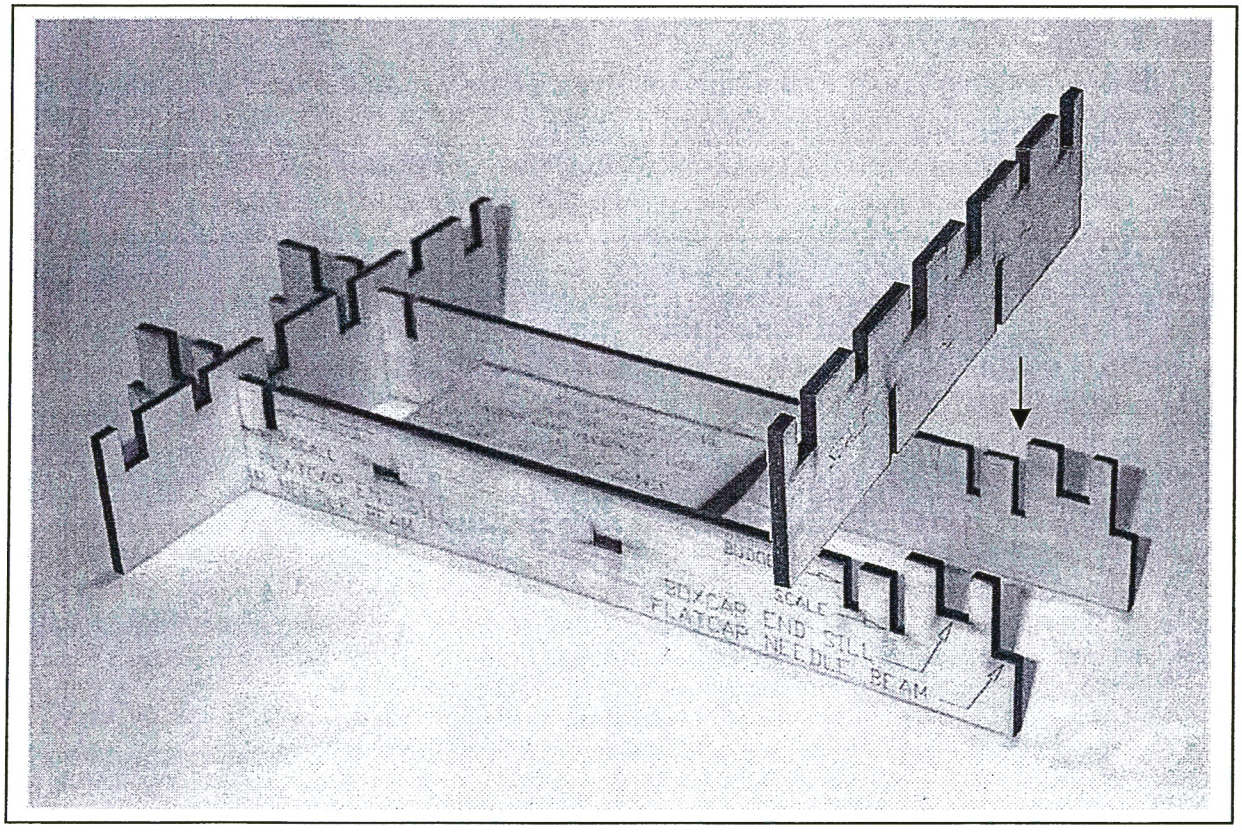

Photo 2 – Shown with "scale" sill spacers

Underframe Assembly:

PLACE THE JIGS ON A FLAT SURFACE. DURING ASSEMBLY OF THE UNDERFRAME, PRESS DOWN ON ALL THE FRAME MEMBERS OCCASIONALLY TO MAKE SURE THEY ARE FIRMLY SEATED IN THEIR SLOTS. OTHERWISE, THE FRAME WILL NOT BE SQUARE OR LEVEL. USE WEIGHTS IF NECESSARY UNTIL THE GLUE DRIES.

1) Make a center mark on one of the end sills.
2) Place the end sill in its slot in the jig side rails
3) Align the center mark on the end sill with the center line mark on the sill spacer. See photo 3.

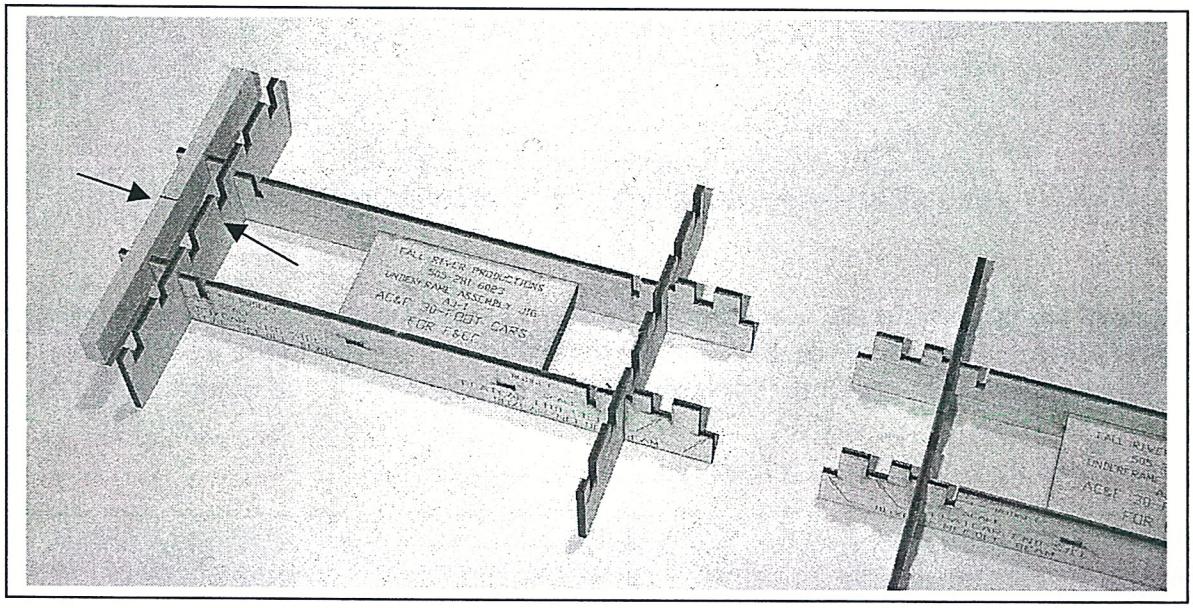

Photo 3 – Center marks on end sill and jig.

4) Apply glue to one end of one of the side sills.
5) Place it in its slot in the jigs.
6) Slide it towards the end sill until it touches.
7) Remove any glue that squeezes out.
8) Repeat for the remaining longitudinal sills.
9) Let the glue dry thoroughly. Use weights if necessary to make sure the frame is flat while the glue dries.
See photo 4.

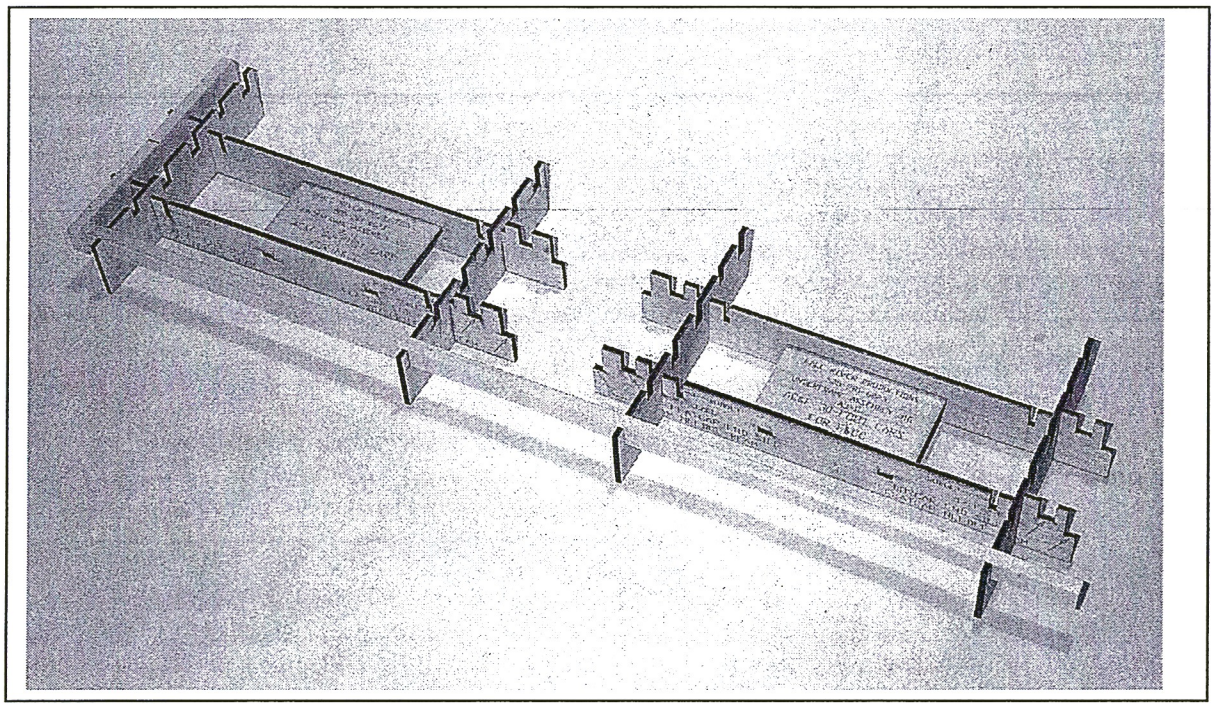

Photo 4 – End sill and one side sill in place. Repeat for remaining long sills.

10) Slide the jig without the end sill outward from the center of the underframe just far enough to allow the second end sill to be placed in its slot in the jig side rails. Use the end sill to check that the longitudinal sills are square and all the same length. Remove the end sill from the jig, slide the jig out of the way, and true long sills up with a sanding block if necessary. See photo 5.

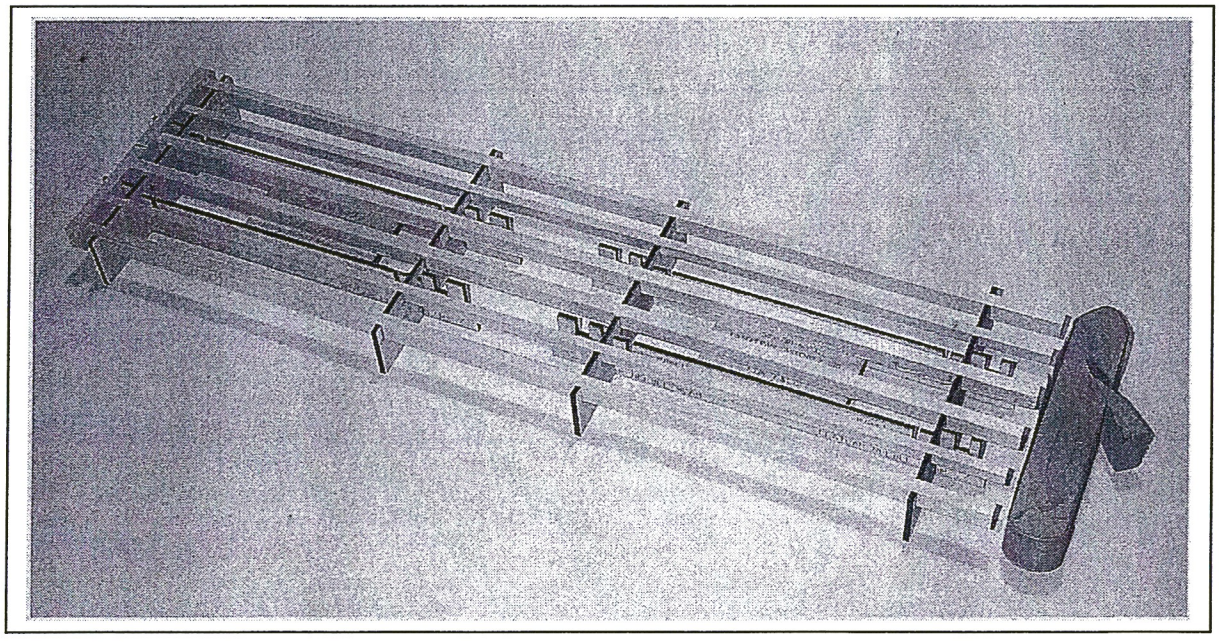

Photo 5 – Sills trued up with sanding block. Jig slid out of the way.

11) Make a center mark on the second end sill.
12) Slide the jig out far enough to place the end sill in its slot in the side rails.
13) Align it with the center line mark on the sill spacer as in step 3 above.
14) Place glue on the end of each longitudinal sill.
15) Slide the jig back towards the center until the end sill touches the longitudinal sills. See photo 6.

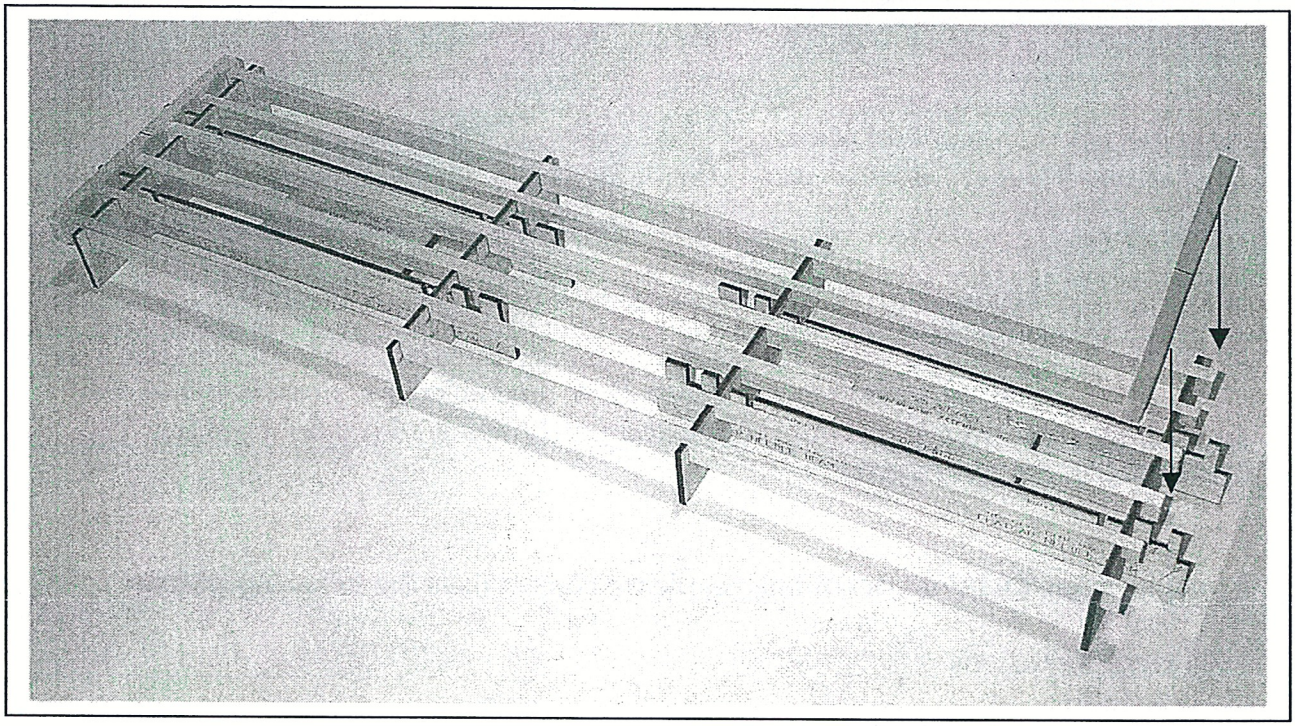

Photo 6 – 2nd end sill ready to be placed in position

16) Remove the excess glue that squeezes out.
17) Allow the underframe to dry thoroughly. Use weights if necessary to keep the frame flat while the glue dries.
18) Use the ledges to locate the needle beams, and glue them in place.

Photo 7 on the next page shows the completed frame (minus the needle beams) ready for the superstructure to be added.

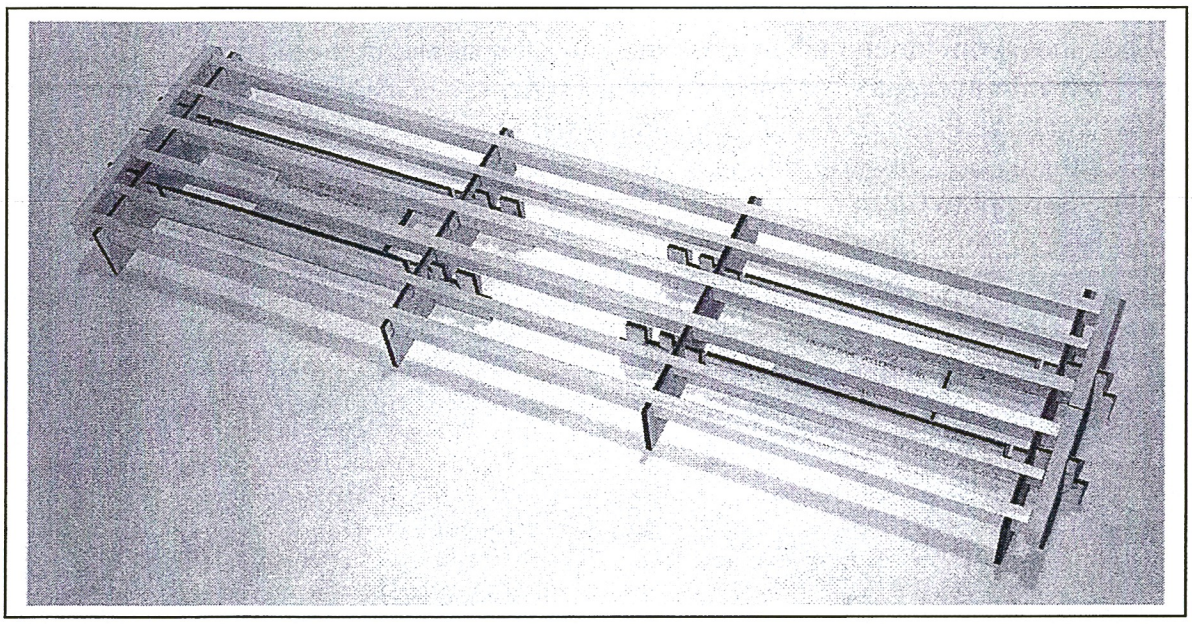

Photo 7 – Completed underframe. Vance Bass assembled the underframe in this photo in less than 10 minutes from strip wood purchased at a local hobby shop. The needle beams are not shown.

If you have any questions or comments, please contact us at the following address.

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Thank you,

John D. Clark, owner
Fall River Productions
3/31/01