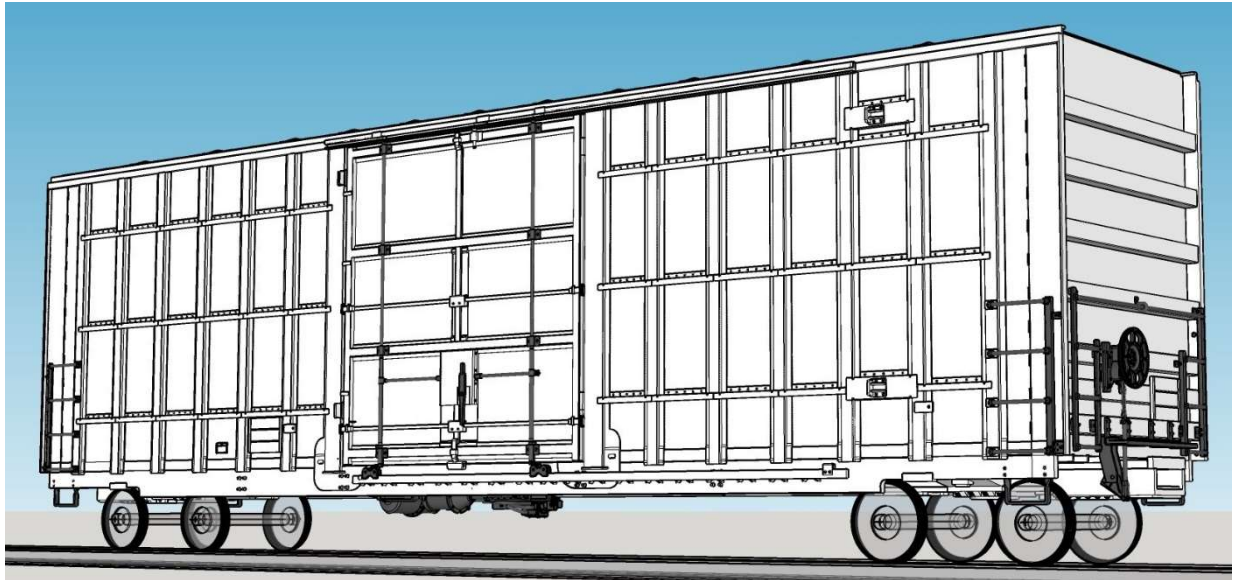


TTX F Box Hicube Box Car

BENN CENTRAL SHOPS and
Smoky Mountain Model Works
Instructions



Parts List

Gray

- 1 car body – sides and roof
- 1 car floor
- 2 car ends – A and B end
- 2 draft gear boxes
- 8 short Kadee screws
- 4 long Kadee screws
- 2 Kadee 802 couplers (without draft gear boxes)
- 3 bronze phosphor wires
- 1 decal sheet

Black

- 2 brake platforms – A and B end
- 3 end ladders with cross bar
- 2 'lefthand side' ladders
- 2 'righthand side' ladders
- 3 'lefthand side' door rods
- 3 'righthand side' door rods
- 4 door handles
- 2 brake wheels
- 1 underbody brake equipment
- 2 brake wheel housing with chain and clevis
- 6 stirrups

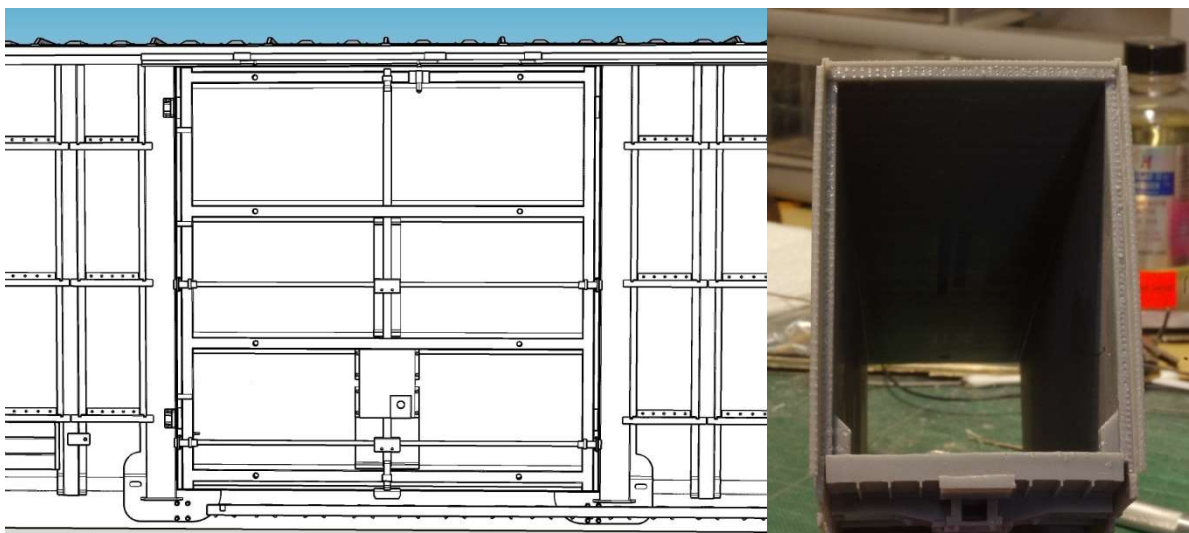
General

1. Inventory parts to make sure all are included. The part count where extra parts are included may vary. The above list is what was included in the kit that was randomly opened to be assembled to create these instructions.
2. The body and floor have an A and B end. There are an A and a B end for the car ends and end platforms.
3. Remove 'print supports' from the underside of the floor. See picture. There may be print supports on the underbody brake equipment, draft gear boxes, and other parts.
4. Carefully cut, scrape and/or sand lumps from the black parts. These lumps are artifacts from printing.
5. Test fit parts before installing. There are a few fit issues that were not discovered until after printing was completed.
6. The black detail parts defied uniform consistent printing and some are kinky and curved; extra parts are included in case they are needed. Sort and use the best ones. Some work arounds or other measures may be required.
7. Drill (#68) the detail part receptor dimples so they are a little deeper. Not all the resin drained from them.
8. CA glue between gray parts may be nearly instantaneous depend upon type and how much glue is used. It is nearly impossible to separate parts after the glue has cured. Use Canopy 560 glue, if time is needed to position parts.

Assembly

The following order of steps need not be followed exactly.

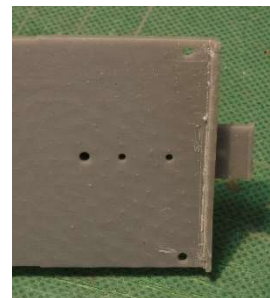
1. Inspect the car body. One end of the cars has lots of little protrusions that are the remnants of removed supports. Scrape these off and smooth the surface before installing the car end. There are a few other areas of the body where there are artifacts from printing. On the thin edge of the roof on the same end of the protrusions: remove these very gently because it is too easy to remove too much material. On the opposite



end car roof there are some lumps to be removed and sanded smooth. The husky rib on one side of the door (opposite the end with all the protrusions) there are some protrusions that stick out from the radius edge of the rib. There are some supports imbedded in the crack between the door and rib. These need to be distinguished from attached printed details – see drawing above.

2. Install the A and B ends to their respective ends of the car body. See next step before attaching the ends.

3. Cut a notch into each corner of the inside face of the up-turned edge before attaching the floor. See picture. Screw the floor to the body with the 8 short screws. Make sure the A and B ends are installed at their respective ends. Make sure the floor is flush with the ledge on the body interior. The floor can be installed after the next step because once the floor is installed it will not be possible to set the car exactly vertically upright.

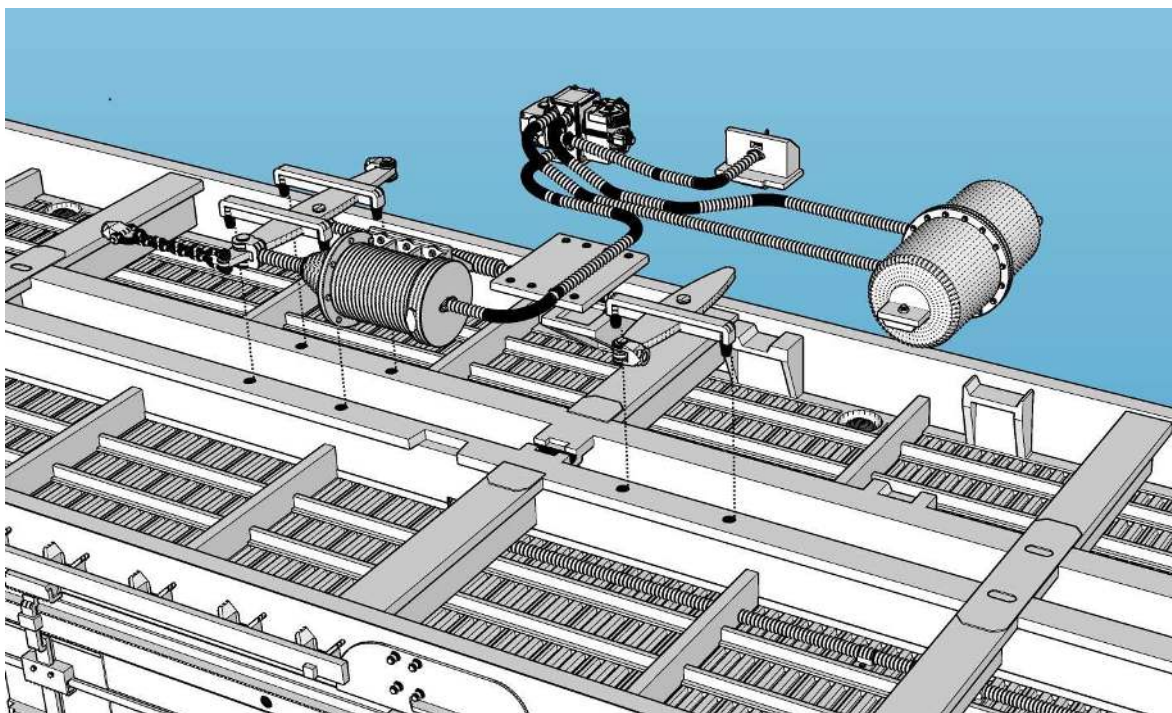


4. Install the end ladders. Pick the best two of the three provided. The top cross bar is a tad short.
 - A. One can install and imagine the car already has some wear and tear because the outer standards will bend slightly to the center. Remove the mounting pins from only the ends of the top cross bar. Glue the bottom of the ladders first and glue the rest of the ladders working up. Glue the center pin of the top bar and then glue the ends.
 - B. For the new car look remove all the mounting pins **except the center pin of the top cross bar**. Glue the top center pin to its dimple. Then glue the cross bar ends and work down the car end to install the rest of the ladders.

5. Install the brake wheel housing, chain and clevis. Attach the housing first and then the clevis to the floor end.
6. Install the side end ladders. These are very tight fits. The fit can be loosened by slightly expanding the diameter of the dimples.
7. Install the end platforms end to their respective ends. The ends might have to be squeezed and stiffened with a spot of glue so that they are at a right angle to the car.



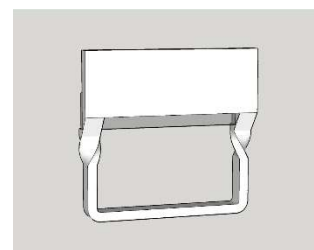
8. Install underbody brake gear. Once the car is nearly finished the bronze phosphor rods can be cut to length and attached to the 2 lever and chain ends. There are dimples into which the rods can be inserted.



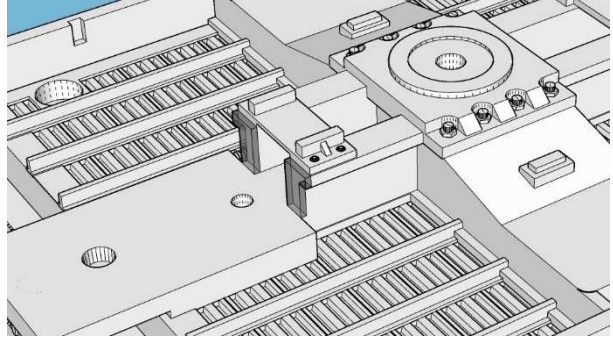
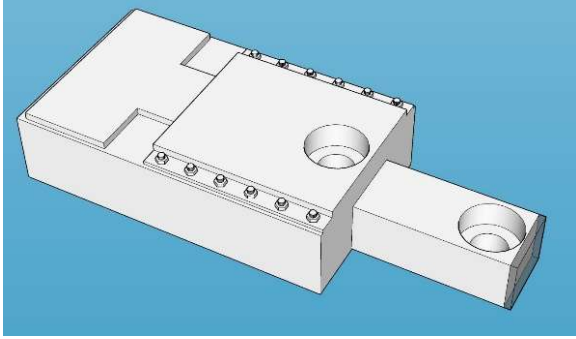
9. Install the door rods. These were the most frustrating pieces to print consistently. Some fit exactly while others are too short – primarily the part of the rod between the top two mounting plates. Perhaps the best solution is to splice a short length of rod from the spares into the top section.

10. Install the brake wheel into the brake housing.

11. Install the stirrups. The stirrup tabs might be too long depending on if the floor is completely pressed against the body ledge. Shorten the tab by filing the interior edge of the tab so that the stirrup opening height is increased.



12. Install the draft gear with Kadee 802 and spring (not provided) using the 4 long screws. The end tab on the draft gear is too long. Cut or file off the tab end so that the end is just a smidge beyond the countersink hole for the screw head. Also trim the end of the center beam flush with the edge of the bridging bracket. Other slight sanding of the tab sides may be necessary to slide the tab into the end of the center beam. Because the centering stud is too wide, widen the opening in the couple shank until the coupler freely slides back and forth.



13. See the pictures below for the paint scheme and decal location. There are many pictures online for additional reference.
14. Decals are made to install over the top and sides of the ribs. There are irregular jogs in some of the lettering where it drapes over the ribs. The white rectangles are for the white tops of the end.



Suggestions for Applying Thin-Film Decals

These are not ALPS-printed decals but you should still treat them with care. Avoid sliding metal objects (rulers) across the characters and excessive flexing of the sheet.

Use a gloss overcoat on your model and allow to dry completely before applying decals. Use a fresh X-Acto® #11 blade to cut decals, angling the blade toward the center of the decal while cutting. This will taper the decal's edge and make it less visible. It is reported that the decal lettering can be smudged by resting the hand on the sheet while cutting. Use a sheet of waxed paper between your hand and the sheet if handling is necessary.

The black decal text is easy to read. Fold a paper towel four times to form a thick pad and dampen with tap water. Find the area of the decal sheet you want to cut (refer to prototype photos), place that section on the dampened pad and press down until some of the moisture transfers through the blue backing paper. Cut out the desired area and follow typical decal processing, outlined below.

Fill a shallow dish with water. Float the decal face up on the water's surface and place on a dry paper towel to absorb excess water. The late Bob Harpe had a trick for decal setting solution. Fill a small bottle with 40% Walther's Solvaset®, 40% distilled water, and balance with 70% Isopropyl Alcohol (used to break the surface tension). While the decal is floating in a shallow dish of water, brush this mixture in the area to be decaled. It should lay smooth and not bead up. Slide the decal off the paper backing into the puddle of setting solution, slowly letting the decal push the excess solution ahead as it is positioned.

Move the decal into the final position using a toothpick or equally dull tool to avoid tearing. When mostly dry, poke any air bubbles with a pin or tip of a sharp blade and re-apply the 40/40/20 solution. Repeat this until all bubbles are removed. Lastly, brush on full-strength Solvaset® across the surface of the decal, then let dry thoroughly. Use water and a Q-tip to remove excess decal glue. Allow to thoroughly dry before applying the 2nd overspray of "Dupli-Color Acrylic Lacquer", followed by a coat of "Rustoleum Frosted Glass" to dull the finish.