

Complete Assemble Instructions for the Wright Trak® Southern caboose

The time to begin construction on your new Wright Trak Southern caboose has finally arrived. I hope you were as glad to receive your model as I was to get mine. Gary has produced for us a very fine model from which to work and the end results will be worth every minute you spend building, detailing, painting and decaling this fine model.

Each of you has a set of instructions that came with your model. In this project we will use these instructions, but we may also vary the steps to reach the finished model. Although not as expensive as a brass model of the same quality, each of us has spent our hard earned money to purchase this model. I suggest that you work slowly and carefully so as not to make mistakes which will damage the looks of the model or render the model useless. I will be working ahead of you to prevent problems that you might encounter and thus saving you having to purchase extra parts or an entire new model. I will be taking scans of each step and will present detailed instructions for each step that it takes to build this model.

I will be building both the as-built and rebuilt versions of the Southern cab in this project. If you see a step number by itself, this will mean the instructions will pertain to both models. If you see a step number followed by "as-built" or "rebuilt", it will pertain to only that particular version. I hope to be able to keep these steps separate so as not to cause any confusion.

Step 01)

Begin by looking at the scan for step 01 that may be found in the files section. Carefully remove all flashing from the cab windows and other areas of the model. I suggest using a new # 11 X-ACTO blade so as to prevent having to add any extra pressure to these areas and causing damage.

Step 02)

Carefully remove the two end sills from the casting web and attach to the caboose walkways. Please be very careful removing these end sills as they are very delicate toward their centers and they will break if pressure is applied to them. NOTE: I realize everyone has his or her favorite types of adhesives, but I would highly recommend using Cyanopoxy to build this caboose. I have used it on several of Gary's products and it does an excellent job of bonding the detail parts together.

The Cyanopoxy kit also contains a "de-bonder" so that if you make a mistake, you'll be able to unglue the two parts and then be able to reset them in their correct places. You will note that there are 19 different holes to be drilled in both ends of the caboose.

There are 4 # 80 holes on the end sills, 6 # 80 holes for the curved platform handrails, 5 #77 holes on the edge of the platform for the end railings, 4 #80 holes for the two grabs at the top of the rear wall and 4 # 80 holes for the flag holders.

I suggest you mark each hole with a sharp pin and then drill each hole with a # 80 drill bit unless noted in note 2 below. Do not go larger than a #79 bit as we will be installing .012 brass wire in these holes.

NOTE 1: These two holes, one each for the grab iron support, needs to be moved in six scale inches from their location toward the door. The location included on the model is very difficult to work with when you go to add this part so I chose to move these holes inward to make them easier to work on.

NOTE 2: There are five holes to be drilled on the platform floor. Mark these holes with a sharp pin and drill with a # 77 as they will hold the stainless steel end railings which are a bit larger than the .012 brass wire. There are two holes near the cab wall and will be difficult to drill vertically if you don't use a long drill bit. I found that .015 steel piano wire will make a good drill for these holes and will probably be easier to find than the long drill bits needed to drill these holes.

Cut a short piece of .015 piano wire and file a sharp angle on one end for use as a drill bit. This length of wire should be just long enough to be held in the pin vice and still drill thru the floor of the cab. I've done this on all of my Wright Trak models and it's worked well for me. If you can find long shank .012 bits, then I would suggest using them instead..

Step 02A)

Drill two (2) # 80 holes in each upper corner for the flag holders supplied in the Wright Trak model. See the scan for this step.

Step 03)

The new Kadee # 78 coupler just begs to be used on this new Wright Trak caboose and with only a minor modification, it can and will be used.

Carefully, very carefully, remove just enough, ie. "sliver", resin from both sides of the existing coupler pocket. Test fit as you go and be sure not to remove more material than needed. The # 78 pocket should fit right up to the end sills when properly fitted.

Step 04)

Bend and install the four grab irons seen in the scan. Cement in place with Cyanopoxy and allow to dry.

On all of these cabs that I've built, I've found it easier to install all of the wire grab irons first and then paint the model as this prevents the paint from becoming scratched while test fitting each and every one of these custom cut pieces of wire. The yellow color will cover the red without any problem.

Step 05 as built)

Drill the proper size hole for the smoke jack. Do not glue in place yet.

Step 05A (rebuild)

Drill the proper size hole for the smoke jack. Also drill the proper size hole for the antenna. This hole should be on the same roof panel as the smoke jack and located approx. half way between the roof peak and the roof edge. Do not glue in place yet.

Step 06)

Remove the flashing from the cab roof and smooth out any defects you may see. Now is a good time to wash these parts before we join them together. Wash the roof, body and other resin detail parts in 70% alcohol. Spend some time doing this so as to remove the release agent used on these kits.

Next, wash the model and it's parts in warm water and a mild dishwashing liquid. Use a hair dryer to remove the excess water. Set the roof on the body and very carefully and make sure that the distance between AB equals the distance between CD.

This step will insure that the end railings sit in a vertical position when they are added to the model. The smoke jack should go on the end of the cab with two portholes. Cement the smoke jack to the hole in the roof and then cement the roof to the body and allow to dry.

Add the flag holders to the four corners with Cyanopoxy (see scan at right).

Step 07)

For the rebuilt cabs only. The toilet water fill is located 39 1/2 " from the bay and is 18" above the bottom of the cab side. This part is installed on the same side as the generator grill. Measure the distances shown and then draw a square box the size of the water fill cover. Now drill several # 77 holes within this square and connect them with a sharp # 11 blade. Square hole for a tight fit.

Step 07A)

Glue water fill cover in place and allow to dry. Be sure that the you have the proper top and bottom on this part. This part slopes in from bottom (shallow) to top (deeper).

NOTE** The corner grabs included in the caboose kit are too short to look correct, so we'll make a set of our own in these steps.

Step 8)

Cut four sections of the .012 brass wire and bend accordingly to form the two corner grabs found on each end. Thread this wire thru the S/S brace and cement in place.

Step 9)

Carefully install the four semi-circular grabs into the appropriate holes being careful not to kink any portion of this wire. Glue in place and allow to dry completely.

Step 9A)

Cut four sections of .012 brass wire 1" long. Now, make bends at the ends of this wire of 90 degrees, 1/8" long. Carefully bend this formed wire around the tip of your finger to form a semi-circular grab iron.

Step 10)

Remove the roof walk from the S/S fret and remove any rough edges. Carefully bend the angles on the roof platforms and test for the proper fit. Also bend down the two supports on each platform and check for proper fit.

Step 10A)

After obtaining the proper fit for the supports and platforms, glue the walkway in place with Cyanopoxy or your favorite ACC type adhesive. Allow to dry completely.

Step 11)

Carefully remove the window shades from the S/S fret and remove any rough edges.

***** Please note that there are three different sizes for the shades, so pay close attention as to where each size goes. Very carefully make a perfect 90 degree bend on both ends of each window shade.***

Step 11A)

Very carefully attach the different shades to their proper locations using Cyanopoxy. I would suggest using the tops of each window as a guide to getting the shades straight. Use only one or two very small drops of Cyanopoxy to first attach each shade and then go back and add more adhesive to the underneath of each shade to make sure each one is securely attached.

I have discussed the colors of the Southern cabs with a couple of close friends and modelers and have come to believe that there was a color difference between the early, as built cabs and the later, rebuilt cabs. The early, as built cabs seemed to be a reddish orange color while the later, rebuilt cabs seemed to be a darker, deeper red color.

The Wright Trak model, being produced of resin, will have to be painted/primed with Modelflex or one of the other water based paints for the paint to remain on the model while it is being handled. I have used Scalecoat II on one of these models and found that it will not adhere to the resin as well as I would have liked it to.

Step 12) This is a scan of the early version, as built cab. This model was shot with Modelflex CB&Q Chinese Red and looks pretty good. You will notice the "orangish/red" tint in this scan and I think it would be a good choice of colors for this version of the cab.

Step 12A) This scan shows the later, rebuilt version of Gary's cabs. This model was shot with Modelflex CB&Q Chinese Red and then repainted with Scalecoat II Bright Caboose Red. I chose this color for my model as it is my favorite red color and my other cabs were painted using this color and they turned out as I wanted them to.

NOTE: I have painted several of these resin kits with Modelflex and then repainted them with Scalecoat II and have seen no harmful side effects (to the cabs) from doing so. I would suggest using this procedure if you choose to use any of the Scalecoat or Floquil colors to paint your models.

I have discussed the colors of the Southern cabs with a couple of close friends and modelers and have come to believe that there was a color difference between the early, as built cabs and the

later, rebuilt cabs. The early, as built cabs seemed to be a reddish orange color while the later, rebuilt cabs seemed to be a darker, deeper red color.

The Wright Trak model, being produced of resin, will have to be painted/primed with Modelflex or one of the other water based paints for the paint to remain on the model while it is being handled. I have used Scalecoat II on one of these models and found that it will not adhere to the resin as well as I would have liked it to.

Step 13)

This scan shows the decaled, as built version of the Wright Trak model.

Step 13A)

This scan shows the decaled, rebuilt version of the Wright Trak model.

Step 14)

In scan 14, you will notice two sets of brake rod assemblies. The top one has not been bent, the bottom one has. Carefully, using a good, sturdy set of long nose pliers, bend the slack adjuster over the assembly until it sits flat in the position shown. The slack adjuster lacks a bend line so work slowly so as not to break this part or bend it crooked.

Step 14A)

Drill and tap the bolsters for 2-56 screws. Work slowly and carefully so as to drill these hole straight and in the middle of the bolster holes. Drill the other six holes shown with a # 77 drill bit.

Step 14B)

Lay the brake rod assembly on the under frame and mark the two areas that need the .015 pads. Glue a pad under the rectangular box and a strip for the clevis. These pads will keep the entire assembly straight and level under the frame. Next, glue the assembly to the under frame and allow to dry.

Step 14C)

Mask the area shown in red and paint the remainder of the under frame in a flat black color.

Step 14D)

I did not spend a lot of time and effort on detailing the underframe for the SR cab as you can tell. These parts are very seldom seen and I really do not have a lot of info on the placement of these parts. I do know that the detail parts you see in the scan are painted red so I painted these parts with Modelflex CB&Q Chinese Red and installed them in place using .015 brass wire to peg them to the floor. If any of you on the list have drawings of the underframe detail parts and locations for these parts, please post them to the files section of the list.

We are to the point in this project where we will be working on detail parts that will definitely have an impact on the looks of your Southern caboose. Although not overly complicated or tricky to do, these steps will require some precise measuring, bending and painting. **Please do not rush**

these steps as we are beginning to see the light at the end of the tunnel as this project is rapidly coming to fruition and when these steps are connected to the previous steps, you will be proud that you took your time and completed each step as well as you could.

Step 15)

In scan 15 you will see a bending diagram for the brake wheel support. Cut each support from the SS etching and remove any flashing left from these cuts. Lay the supports on a flat surface with the smooth side UP. Very carefully, using the measurements found on the scan, measure for each bend. I suggest using a semi dull X-ACTO blade to scratch the measurements onto the stainless steel parts. Be sure to mark BOTH legs of the supports as you will need to bend both sides at the same places and same time. Measure the first two bends from the top down and then measure the two bottom bends from the bottom up. This will leave you with the 44" shown in the drawing. Do not include the mounting pins in your measurements, but rather from the bottom of the support legs. Hold your pliers across both bends at the same time and maintain pressure until the bend has been made. If your support moves, it will more than likely be crooked. If you cannot see both marks when the pliers are applied, STOP and remark for the bend.

Step 15A)

This scan shows the brake wheel support and the brake wheel housing after painting. The brake wheel housing should be centered on the flat area of the support and the bottom even with the bottom opening of the support.

Please do not attempt these steps if you are unclear about these instructions and do not glue any parts in place as they are very difficult to remove and reposition without damaging the brake wheel support. I am more than willing to answer any question you may have concerning these steps.

This step is not difficult, but as was stated in the previous steps, you will need to work slowly when bending the stainless steel parts and pay close attention to where the bends are made. **Please do not attempt this step without the aid of two quality pairs of pliers as the stainless steel, even as small as the part may seem, is very strong and some smaller parts will distort if not held tightly and bent slowly.**

Step 16)

You will notice three sets of letters in this scan, A and B, CD and EF. Holding the frame above A, bend the small square inward until it is 90 degrees to the frame. Do the same for letter B. These squares will support the round drum and handle when completed. Now, slowly bend positions C and D outward to the angle shown.

Do not over bend, but do make an angle here. We may have to adjust this bend when the brake support is added as the two pieces are supposed to mate where they meet. (Let's hope they do!!)

Next, holding the end railing at position E, VERY CAREFULLY bend the cross support with your other pair of pliers. Bend only a few degrees out at a time and then move to position F and bend a few degrees out.

Return to position E and bend a few more degrees and so on and so on. DO NOT attempt to make the 90 degree bend at one time as you will distort the entire frame. Trust me!! After you have made these bends in the end railings, paint them with your choice of paint and allow to dry.

Step 17)

Remove the four splash guards, four reflector discs, eight window frames, two reflector disc handles and two rerail frog hooks from the SS fret. Carefully remove any spurs or jagged edges on these parts, especially the window frames as these will be a tight fit when they are applied.

Paint the window frames, two discs and rerail frog hooks the same red you used to paint the caboose body. Paint the splash guards and two discs Reefer Yellow and allow to dry. The splash guards will need to be painted on both sides, but the window frames and rerail frog hooks only need to be painted on one side.

Now would be a good time to paint the end railings Reefer Yellow if you haven't already done so. Allow to dry.

The best way to prep the S.S. parts for painting to lay the SS parts on a sheet of 400 wet/dry sandpaper and sand in a circular motion to give some "tooth" to the smooth SS metal surface.

Wipe clean with 70% alcohol. If you're shooting a light color as we are, Reefer Yellow, spray a light coat of primer or a light gray color on each surface to be painted. Darker colors don't require a primer as they will cover well themselves. Fragile parts, such as the end railings, should be left on the SS fret and sanded while still attached to the fret. This will prevent unwanted bending of these parts. Other larger, flat parts may be removed from the fret to do the sanding.

Step 18)

Assemble the four corner steps by gluing the two SS steps into each step housing. Paint yellow and allow to dry.

Step 19)

Paint all of the grab irons and railings with Reefer Yellow. Please note that the round window port holes on the as-built cabs are also painted yellow. Install the SS window frames on the rebuilt version of this cab. Also (not shown) glue the marker light to the roof of the rebuilt cab.

Step 20)

Install the completed corner steps with Cyanopoxy and all to dry. Please note the position of the corner step and make sure it is set inward and flush with the inside of the shell housing.

Q: Bob, in the one photo, you point out a small projection on the end sill in the rebuilt cab and no projection on the sill of the as built cab. That looks like it was done prior to painting the whole cab. Since I'm behind on this project I haven't dealt with it in modeling. Did you mention removing this projection prior to painting or should I edit my list of steps to remember to remove before painting? It looks in Step 12 as if you didn't remove it.

A: Dave, The "projection" you speak of is the coupler lift bar support. I, once again, looked at some of the as-built cabs and noticed they all had a different setup for this lift bar than the rebuilt units. It seems that the as-built cabs had their coupler lift bars mounted just above the rear deck

and are mounted in two round supports. We will, on the as-built cabs, add lift rings to support the coupler lift bars and we'll also have to bend our own lift bars for these cabs.

Q: So we can trim off that coupler lift bar support prior to painting for the as-builds?

A: That's correct. Remove this support if you are modeling the as-built versions of the Southern cab.

Step 21)

I deviated a bit from Gary's kit instructions in this step and I think what I did made a tremendous difference in the appearance of this cab. The kit instructions say to add the window frames BEFORE you paint the model and glue the windows from the inside of the shell afterwards, but in this case I painted the model and window frames separately.

When I first received my model from Gary, I noticed how deep the window cut outs appeared and was wondering if the glass and frame would fit on the outside instead of adding the windows from the inside to prevent having a gap the width of the shell. Well, I tried it and in my opinion it looks great!! There is no gap and if you're careful with the glue, you can have some very nice looking windows on your model.

Carefully measure and cut ten (10) square windows and four (4) rectangular windows from clear .010 plastic. Using diluted (with water) Micro Kristal Klear from Microscale (or your favorite product), very carefully apply it sparingly it to the window being worked on. Now, install the clear windows, pressing the edges with a tooth pick or the handle of a small paint brush. Move to the next window allowing the first one to dry. Install all windows now including those on both cab ends.

Next, using Cyanopoxy***, and applying with the tip end of a short section of .010 brass wire, place a very small drop in the four (4) corners of the window frame being added. Now, slide the window frame into place using a sharp toothpick. Next carefully press the window frame into place making sure all four (4) sides are seated evenly. Install all window frames in place at this time and make any touch ups that are needed. Allow to dry completely.

If you have worked carefully and slowly, you should have a cab full of very nice looking windows that would please any conductor having to spend his day watching his train.

*** I suggest using Cyanopoxy here simply because it will not fog the clear plastic windows as some ACC types have been known to do. Please apply sparingly.

Step 22)

Thoroughly wash the interior and it's detail parts in 90% alcohol and then with warm water and a mild dish washing liquid. Dry with your favorite hair dryer. Install the stove, sink, coal box lid, conductor's desk and the four chair backs. I tilted these backs at a 60-degree angle to resemble the seats found in the SR cabs.

The interiors of the Southern cabs were a light gray color and the color I used is Modelflex SP Lark Light Gray, product number 16-35. Now, paint the chair backs, conductor's seat and stove flat black. Set aside and allow to dry.

Step 23)

In this step we will add the windows and window frames to the rebuilt version of the WrightTrak SR caboose. I chose to once again deviate from the kit instructions and cut my own windows from .010 clear plastic sheet. Measure the four square windows and cut four windows to fit.

There are two ways to do this. First, and the way I chose, is to cut the windows to fit into the recess on the outside of the cab. This method requires you to be more accurate in making your measurements, but I think the results are well worth the time and effort.

The second method is to cut the windows and fit them on the inside of the body shell. I suggest that you use Cyanopoxy to secure the clear windows in place as this adhesive will not fog the clear plastic.

Next, after the windows are in place, carefully glue the SS window frames in place. Be sure you test fit each frame and make sure you know how and where each frame will be positioned. This step will prevent you from getting unwanted glue on the body shell. Install all window frames and allow to dry.

Step 24)

Carefully line up the slits in the end reflectors and glue the two sides together making sure that no cement gets in the slit. There should be one yellow side and one red side. When completely dry, place the handle in the top hole in the support and slide the end reflector onto the handle.

Now position the tip of the handle into the bottom hole. I would suggest that you secure the tip of the handle with a drop of Cyanopoxy to prevent it from coming loose and falling out. The reflector should spin on the handle if it has been installed correctly. Install the end railings, but do not glue in place.

Now, carefully place the brake wheel support onto the rear of the cab by sliding the brake wheel under the horizontal brace. Do not bend or remove the two locating tabs found at the bottom of the brake wheel stand, as we will use these tabs as locators for the position for the brake wheel stand.

- Note 1: Notice the position of the upper rung found on the brake wheel stand.
- Note 2: Notice that the horizontal brace should rest on top of the brake wheel assembly.
- Note 3: Note the position of the two splashguards.
- Note 4: Do not bend or remove the two locator tabs found at the bottom of the brake wheel stand. The two tabs should rest on the bottom ridge of the end sill when glued in place.
- Note 5: Note the position of the bottom and top of the ladder.

Step 24A)

Test fit the angle of the brake wheel stand and the bend in the end railings. You may have to remove the end railings and re-bend to achieve a good, close joint between these two parts, but be sure to do so before you cement any parts in place. If you are satisfied with the fit between these parts, glue the end railings in place making sure the two outer posts are in a 90-degree

position (straight up and down) in both directions. Next, slide the brake wheel stand in place and glue to the fascia plate and to the bottom of the end sill. Next, glue the ladder in place and allow to dry. Next, glue the two splashguards to the end railings as shown in scan 24 and 24A. Finally, glue the brake wheel stand to the end railing and set aside to dry. Now, turn the caboose around and repeat the last two steps to the other end of your caboose.

Step 25)

Carefully insert the painted interior into the body shell and make sure it fits without distorting the caboose shell. Next, slide the underframe into place and make sure it fits correctly. You may have to notch the four truck bolsters where the semi-circular grab irons fit into the shell and the coupler pad ends might need to be filed to fit flush into the shell floor. When satisfied with the fit of these parts, carefully glue the underframe to the shell in no more than four places and use the glue sparingly in case you ever need to reenter the shell some reason. If you choose to use the # 78 coupler and coupler pocket, carefully remove a tiny sliver of resin from both sides of the coupler pocket to allow for the width of the coupler housing. DO NOT force the coupler in place as the resin will split in this area. Next, while holding the coupler pocket in place, drill the correct size hole for the longest screw included in the # 78 kit. Now install both couplers. Next, install the trucks of your choice. The trucks included in the kit are correct for this version of the Southern cab and they are very nicely done and will operate well.

Step 25A)

Install the bellcranks of your choice in the end sills of the cab. I chose to use the one found on the Tichy brake set supplied in the caboose kit as it looked to be more accurate and because it's plastic. Carefully drill a # 66 hole into the bottom center of the brake wheel housing and insert(DO NOT GLUE) the plastic chain found on the Tichy parts. Next, glue the connecting rod to the bellcrank and allow to dry. Next, pull the chain down to meet the rod and glue together as shown in the scan. Allow to dry completely. Bend the coupler cut lever as shown and install in place using two eyebolts as supports. Paint the chain with Modelflex Railroad Tie Brown and then paint the connecting rod, bellcrank and cut lever with CB&Q Red. Flip the caboose around and complete the other end. Glue the six bay window supports and rerailers in place and paint with Modelflex CB&Q Red. Allow to dry.

Step 26C)

This scan shows a top side, 3/4 view of the completed and weathered model as it would appear after bringing up the end of many coal and freight trains. It was my intention to make the caboose appear as if it has been used, but not abused as the Southern Railway kept their equipment on the rails, but also kept them in tip top running condition.

Step 26E)

This scan shows the model in a 3/4 side view with completed weathering. The model was sprayed with Modelflex RR Tie Brown on the underframe and on the very bottoms of the cab sides and platform ends. Modelflex Flat Black was applied to the roof. Champ decal solution was then applied using Q-Tips (per the Jim Six method) to remove some of the weathering so as to make the cab appear that crews had been climbing on the ladders, platforms and roof. I cut and applied masking tape to each one of the windows and shot two thin coats of Scalecoat Flat to seal the weathering. After this paint had time to dry, the masking tape was removed.

Step 27)

Glue the end railings and brake wheel support in place making sure the railings are in a 90 degree position. Carefully slice a "sliver" from both sides of the coupler pockets so the KD # 78 couplers will fit in the pocket.

Step 28)

Install the cab interior or weights in place. Install the underframe and tack in place making sure the coupler pads are level with the underneath of the caboose floor. Add the three bay window triangular supports on both sides of the cab. Carefully remove the inside bearing from the KD truck and install the generator making sure it is lined up with the axle.

Step 29)

Add the brake chain and connecting rod as shown. Allow to dry and then paint as shown. Install the KD # 78 couplers with the hardware included in the coupler kits. Install the cut levers and paint as shown.

Step 30) This shows the completed model without weathering.

Steps 31 and 31A)

These scans show the completed caboose with a moderate amount of weathering. Of course, the amount you add is left up to you.

This concludes the assembly of both versions of the WrightTrak® Southern caboose.

END