The Trolleyville Times

August 2009

Check the Custom Traxx Summer Special for powering certain HO s

The Con-Cor HO Scale Ready-to-Run Electroliner !

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In late June, Con-Cor began releasing their HO scale model of the Chicago, North Shore & Milwaukee Electroliner. These two trains, 801-802 and 803-804, provided premium service from Chicago to Milwaukee until the lines demise in 1963. Con-Cor went to great lengths to educate each buyer on the spectacular nature of this train. The trains were featured in the October and November 1982 issues of Trains Magazine and the folks at Con-Cor thoughtfully included both articles with the unit. Briefly, the two trains were built in 1940 by Saint Louis Car Company and introduced to the public in February 1941. They ran until 1963 and then were sold for $3,200 each to the Philadelphia Suburban Transit (PST) for limited stop service on the Norristown Line, which was the only PST line that was standard gauge. They were re-named the Liberty Liners with the names Independence Hall (803-804) and the Valley Forge (801-802) replacing their old 800 series numbers. They were eventually retired in December 1977. After allowing both trains to rust away at 69th Street and be attacked by the local vandals, the Southeastern Pennsylvania Transportation Authority (SEPTA) finally decided to put the trains up for bid in 1981 with the 803-804 going to the Rockhill Trolley Museum in Pennsylvania and 801-802 going to the Illinois Railway Museum in Union, Illinois. Con-Cor's founder, Jim Conway often rode these trains as a young boy and teenager. Custom Traxx' founder George Huckaby rode the first PST Libertyliner revenue trip out of 69th Street in Philadelphia in 1964.

Upon receiving our model of the 801-802, we were in awe of the box with the striking photo of the Electroliner on the cover. We wanted to frame the box and hang it on the wall. Then we opened the box and went through all the prototype data provided by Con-Cor along with professionally developed instructions. It would be a week before we would actually take the four-unit train out of its carefully packaged box and test run it.

Another surprise was the wealth of information about the trains graciously provided by Con-Cor. We did not know of proposals to add another coach to the train, making it five units. There are more items like that in the information provided. Do not fail to completely read all the information provided!

So finally, we opened the box and started to put the four units together. You will really want to make sure to have thoroughly read the section **"Assemble the Electroliner on the Track to Prepare for Operation".** located on the tenth page. There is also a complete set of instructions on the Con-Cor website. Read the entire instruction page from cover to cover before starting. The assembly is easy once you get the hang of it.

The A-Car performs as "locomotive" and is the only unit with two trucks attached. Only the front truck is powered. It is capable of running by itself so perform steps A) and B). After this it gets a little tricky. Get a really strong desk or shop bench light so that you will be able to have great visibility between the cars. Line up the metal "T" post on the C-Car, the lounge unit, with the plastic "C" slip on the A-Car. At the same time ensure that the eight pin male plug slides into the 8 pin female plug on the C-Car and then push the two units together. Because the eight pin plugs swivel for curves, they are sometimes hard to line up. Berne Gerod developed a very simple procedure. He fashioned a piece of card stock or plastic about .5 X 2.0 inches. After determining which way the male plug is canted, slowly push to bring it into alignment with the female plug. Then, push until the pins have entered partway and aligned, withdraw the cardstock and complete the

The Illinois Terminal 450-457 series PCC from IHP!

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In 1949, Saint Louis Car Company delivered eight double end PCC cars to the Illinois Terminal Railroad. These Westinghouse electrically equipped cars were purchased to modernize the local service from Granite City, Illinois to Saint Louis, Missouri. The PCC cars only remained in service for nine years, completing their last runs in June 1958. In 1960, all eight cars were sold to Bierman Iron & Metal Company (BIMCO) where they literally rusted away before being finally scrapped in 1964. Fortunately, in December of that same year, car 450 was acquired by the Ohio Railway Museum and car 451 was sold to the Connecticut Electric Railway (Warehouse Point). These eight cars are the only PCC cars ever built in North America with only one door on each side. They were also the only PCC cars delivered with trolley retrievers instead of the standard trolley catchers and kept them throughout their service lives.

Car 453 is shown above in the Granite City yards while still in service.

Imperial Hobby Productions (IHP) displayed many new unpowered kits at the May 2009 East Penn Meet, among them being an HO scale unpowered model of this car. One of our reporters obtained one of these kits and began to evaluate it. Last month we published our review of the IHP HO scale model of the 1946 Shaker Heights Pullman PCC cars, series 71-95, after which the manufacturer complimented our reporter. We completed our review of the Illinois Terminal 450-457 series PCC kit just in time for this edition. Assembling this model resulted in many unexpected challenges which we documented for the benefit of our readers. This review is substantive and for that reason is provided as an enclosure. Next issue, we will be reviewing, the third IHP HO scale model of the Philadelphia Kawasaki Light Rail Vehicle. These remarkable vehicles have been in service for almost 30 years in West Philadelphia.

Custom Traxx Special for IHP HO scale Trolley Modelers!

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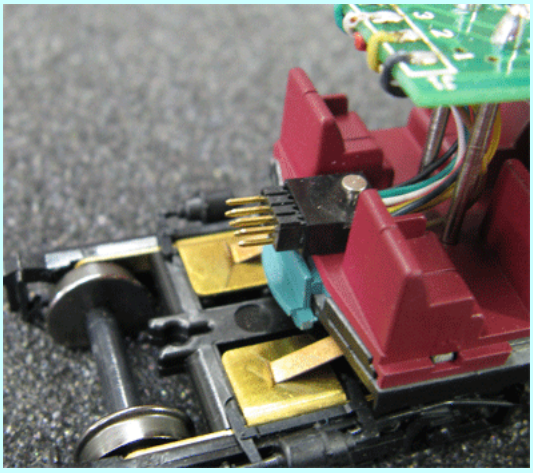
In support of efforts by the Southern California Traction Club (SCTC) and the East Penn Traction Club (EPTC) to encourage development of kit building skills in the traction portion of the model railroading hobby, effective July 1, 2009, Custom Traxx will be offering customers the opportunity to finish available Imperial Hobby Productions (IHP) shells with items in our inventory including trolley poles, Bowser drives and authentic decals to finish the kits at substantial savings. If you have purchased any of the IHP shells/kits listed below since May 15, 2009 and can provide a copy of the invoice, there are some great savings for modelers. This special sale is scheduled to end on August 31, 2009 so check with their web site for the particulars!

coupling. Take care, as the pins are small and bend easily. He tested each coupling as he went along to ensure he had a correct coupling. He also told us that describing it took longer than joining the four units.

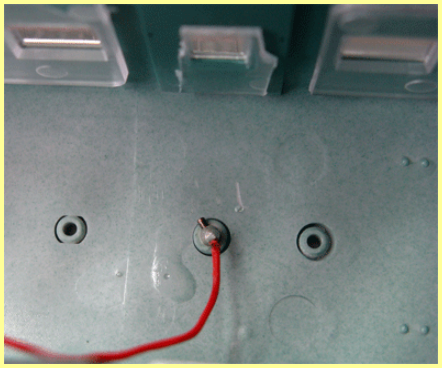


If you can see any of the pins between the diaphragms, after the units are you may not be correctly connected. Please the two units on the track. If they are connected correctly, the interior lights will be illuminated in the C-Car.

We placed the two units on the track and ran them in the two-rail DC mode. This is a smooth quiet-running unit which glided around the SCTC test track. It started moving steadily, without jerks or hesitations, at 2.0 volts. Our first problem came when we decided to let the poles ride on track the overhead wire. As soon as we came to our 12" radius curve the pole dewired. The poles all have adequate spring pressure and the shoes are in accordance with NMRA specification S-5. But we noticed that there was excessive resistance to the swivel of the pole. At the same we noticed that we could not remove the pole from the roof of the car. We checked the poles on the C-Car, B-Car and D-Car and felt similar resistance. We knew that we would have to change the poles anyway as the SCTC does not allow cars to run on their modules with poles that cannot be removed from the roof without car disassembly. Changing the dip switch in the A-Car from track to overhead wire would require us to disassemble the "A" unit anyway, so we continued to assemble the train and couple the A-Car and C-Car to the B-Car. Here we met another problem. During assembly one of the body current wipers, clearly shown in the first photo in this article, had become wedged under its contact plate on the truck. We removed the screw holding the truck and very carefully dislodged it, reformed it and re-installed the truck. We had much difficulty getting the eight-pin male plug on the C-Car to line up with the female plug on the B-Car. But eventually we made it happen. This is where good lighting is essential so you can see between the two units looking from the top down. Hooking the final D-Car was relatively easy by this time and we were ready to run our train on the Southern California Traction Club test track.

***[Electroliner,** from column 1]*

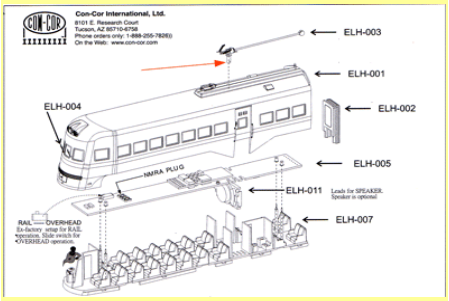
First, when using the toothpicks, ensure that the toothpick is wedging itself between the chassis and the windows, NOT the windows and the car body. If the latter happens, the chassis will not budge. In fact, you will be actually locking it in. Again use an intense light and watch carefully where your toothpick is going. When all the required toothpicks are in the right place, the chassis just pops out. Once we finally got the A-Car apart and this is NOT a snap, everything became clear, especially the trolley pole issues. Con-Cor partially replicated a very successful trolley pole design instituted by Model Tramway, Fairfield Traction Models and S. Soho many years ago. The pole assembly consisted of two pieces. The first was the trolley pole, with springs and NMRA S-5 wheel turning on a 1mm spindle which plugged into a roof mounted brass sleeve. This allowed a wire to be attached to the brass sleeve and allow the pole to swivel unimpeded. The Con-Cor pole combined both items into one single assembly and attached the wire to the combined assembly and this wire, at first, seemed to provide an impediment to the free swiveling of the trolley pole base. It turned out that if one could get a small drop of plastic compatible oil between the pole base and the shell, this would improve the poles ability to swivel dramatically. Unfortunately, this is done better from the inside of each unit. Shown in the next photo is the red wire which connects the trolley pole to the circuit board in each car.



To operate on the SCTC modules, we would be have to replace all these poles, install SCTC1 trolley pole bushings and most likely Miniatures by Eric HT-P2 poles with trolley shoes. The club also prefers to use .020" steel spring wire for trolley poles versus the .032" brass used in the provided poles.

Note: It is recommended for this application, that you use one of the original 5.3mm long SCTC1 bushings or cut the current 9.5mm SCTC1 down to 3.5mm to avoid contact with the printed circuit boards in the various Electroliner units. For more about the SCTC1, click here!

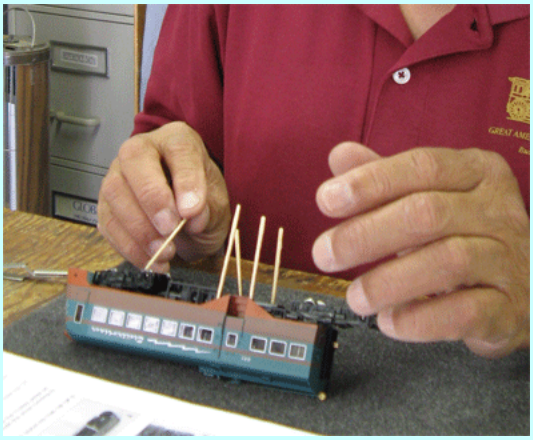
We removed the trolley pole by simply removing the pin in the Con-Cor trolley pole base on the underside of the roof and desoldering the wire from the circuit board. note on the first page of the supplied instructions, there is a hole shown in the bottom of the trolley pole base.



If you are fortunate, you can just pull that pin from the pole base, Remove the wire soldered to the base and and the entire pole assembly can be removed. In our experience, only one of the four poles came out that easy way. We had to cut the other three out as the pins would not budge. We removed the pole assembly from the "A" unit, cemented in our SCTC1 and resoldered the wire from the circuit board to it. We then moved the dip switch to the overhead position and reassembled the unit. After

Since we do not yet know which Train Control Systems (TCS) decoder to use, the train was operated in the DC/analog mode. The train just runs smoothly and effortlessly. As soon as John McWhirter saw it running he said "...Wow...What a Train... I wish we still had trains like that..." The train effortlessly glided around our 9" radius curves and seemed to get smoother and quieter as it ran, if you could consider that possible. The club certified our Electroliner 801-802 in two-rail operation at 45.1 scale miles per hour at 7.0 volts. Then we tried to run the train in reverse and that is where there are two issues. While the train runs in reverse well, it did not like the smaller radius curves in reverse as well as it did running forward. First, the front truck of the D-Car would derail a lot on curves. Second, with the A-Car pushing the train, the slack between the units is less and the rubber diaphragms interfere with each other to a greater extent. This reduces the radius of curves that the unit will traverse without a derailment. Without major modifications to the unit, the second problem can not be corrected but the first problem can be corrected by adding weight to the D-Car. The correct amount of weight is still under evaluation but it seems to be in the neighborhood of .5 ounce. There is room under the front platform ahead of the front truck or you could add some metal people figures into the seats. We started by adding 1/4 ounce of weight in two pieces right behind the pilot. We will resume testing after the conversion to overhead wire operation because that is how the train will be operated.

Now it was time to disassemble the A-Car to try overhead wire operation. This is where you need to carefully read the section **"Removing the Body from the "HO" Electroliner Locomotive"** , located on the ninth page. One thing we learned is to use **round** toothpicks not the flat ones. You are about to experience out the fantastic engineering used on this car. We are very familiar with the integrity of the supplier in China who made these cars and we are not at all surprised.



Watching the assemblers at work while I was in China in April 2008 tipped me off on how to disassemble these units. These people know how to assemble and disassemble delicate items such as these in their sleep.

*[See **Electroliner,** column 2]*

installing our test HT-P2 trolley pole, the "A" unit ran smoothly and flawlessly.

One could also place a drop of plastic compatible oil between the pole base and the shell from the underside and improve the poles ability to swivel dramatically. We noted that dramatically improved the ability of the provided pole assembly to track on the overhead wire. It also will save you a lot of problems if you go further and disassemble the D-Car, C-Car and B-Cars. The D-Car comes apart just like the A-Car except that you do not have the weight of the power chassis to help you get the chassis out of the shell. The C-Car and B-Car are really difficult to get apart without damaging, breaking or scratching something. We did all three trying to get the C-Car apart. We want to emphasize that this is a very difficult job requiring loads of patience. So the bottom line is that if you don't have to take the units apart .....**don't** unless you are patient, and have good lighting. We store the completed train on one of A-line storage boxes. It is always handled with two hands, each hand holding two units.

But at the end of the day(s), after we had replaced the poles, reassembled each of the units and get them back together both electrically and physically, we placed our Electroliner on the test track of the Southern California Traction Club and certified the unit at 45.1 scale miles per hour. The unit ran perfectly under overhead wire and will be a featured at the next club showing. Our model Electroliner ran through the SCTC test track 9" radius curves with the A-Car, the powered unit, pulling but would not do that with the A-Car pushing. All four trolley poles collect current so the train can be operated from overhead wire with one or two poles. As press time, we trying to find the appropriate TCS decoder to insert into the unit. Information was not available from either TCS or Con-Cor so we sent our unit to TCS to assist them in deciding the best decoder for this train. Suppliers working together usually achieve the best results. The Electroliner is a fantastic addition to the HO model railroading and traction field. We just may acquire a model of 803-804 when 801-802 returns from Pennsylvania.....

Bowser San Francisco PCC Now In Production !

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On Thursday, July 23rd, the final production samples of the San Francisco PCC car arrived at both Bowser Manufacturing in Montoursville, PA and the Custom Traxx testing facility in Los Angeles, CA. All cars have been going though their tests and will negotiate 9" radius curves with ease. Prior to obtaining these cars, preliminary samples and pre-production samples had been received in May 2009 and July 2009, respectively and each group of samples had issues that we required modification. These cars all have eight-wheel electrical track pickup in both two-rail and overhead wire modes. Even the brass power pick-up bars behind the wheels have been blackened, eliminating the toy look from the trucks. These cars have the smoothest, quietest Bowser drives experienced, even the motor mounts have been cushioned. The car has operating headlights, taillights and dash lights in the DC mode. The car is DCC ready and when a decoder is added, the car has interior lights and an illuminated front destination sign. The two undecorated cars in the rear of the photo below are these vehicles. All the cars in the photo use the Bowser traction drive and are under various stages of testing by selected members of the Southern California Traction Club and the East Penn Traction Club. Expect these cars very soon at your local dealer. Don't wait too long or they will be all gone. They are real beauties!!