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Boxcars from Aristo-Craft, LGB and USA Trains

Three Chinese... Page 23

A new American freight car from LGB, made in China, gives the impulse for a comparison. Because Aristo-Craft and USA Trains both produce in China and for some time have similar box cars in their product line. Are they able to compete with their quality and detailing?

Admittedly, at first glance the three boxcars don't share much more than the yellow colour and the overall length of approx. 550mm. However to answer the question "who builds the better product in China?" the materials and the construction are more important than the likeness of the cars. The purpose of this review is to point up the unique qualities of the three products. The differences are considerable - and according to our experience - typical, because each manufacturer has his own product philosophy.

The review candidates are a 53ft boxcar from Aristo-Craft and a 50ft boxcar each from LGB and USA Trains. The Aristo car lacks a true prototype for the RailBox scheme. However it represents an accurate model of an Evans (Evans Products, Council Bluffs, Iowa) boxcar built in 1970. LGB models their product after a RailBox car of the first series built in 1974/75. It was manufactured by the American Car & Foundry Co., just like the double door car from 1959. All the cars are scaled to 1:29, the mismatch used to represent standard gauge on 45mm track. The scale isn't noted on any of the packaging. Only Aristo-Craft applies their "Gauge 1" logo.

Dimensions.

Unfortunately even extensive searches produced only pictures of the prototypes, but no detailed dimensional information or technical drawings. Reference dimensions were gleaned from the interior dimensions of the prototype cars which is part of the lettering. The length of the cars is within 2 to 5mm.

The width of the Aristo car is correct, the USA Trains version is slightly too wide. On LGB's car there must be a lettering error since "IW 5-5" would mean 5ft5", but it would need to be somewhere between 8 and 9ft. The body which measures 111mm on the outside appears too wide. We will omit scoring the dimensions.

Car body

Aristo's car makes a solid impression which is confirmed when grabbing and knocking the added parts.

The ladders, stir ups and the brake wheel on the car ends are made of plastic, but in such a sturdy fashion that they should survive derailments and collision without problem. The grab irons and steps are made of sturdy brass wire. Nothing should break off. The doors with the finely detailed hardware are not moveable but fit perfectly into the side walls.

LGB's car doesn't just appear robust, it is robust. That goes for the massive walls, which appear to be too thick, as well as the thick doors which can be opened. The

door rails are much oversized. The fine handles are made of flexible plastic with cutting flash, assembled in a crooked fashion and not impressive.

The ladders and the grab irons on the car ends have been mounted one rib too high. The purpose of the pocket, in lieu of the center buffer, is unfathomable, more so since all the other new US cars from LGB lack this "feature". The part is simply put: plain ugly and superfluous. The black screws which hold the roof in place look equally displaced. The yellow floor features wide boardseven in the interior.

USA Trains features the same detailing as a very well-executed HO model and leaves the other two models in the dust. The car body uses long chrome plated screws which reach from floor to roof. This allows for thin side walls, one of the screws is visible if both doors are opened, also visible is the fine grain of the floor boards. Only distraction are two spots of slightly molten floor where the air tank is attached from below. Ladders, roof walks and grab irons are very precisely modeled in plastic, but can withstand considerable pressure. Only the stir ups at the car ends may not survive collisions in the long run. Only this model features brake hose valves and a cut lever for the coupler, even if they have no operating function.

The underbody is nicely detailed on all the models and includes almost complete brake gear replications.

Trucks

The Aristo trucks are made of a tough plastic and include three stiff, working springs in each side frame. The journals feature brass bushings for the steel axles with the plastic wheel bodies. The axle ends carry simulated roller bearing covers which turn along with the axle. The plastic wheels are almost 2mm undersize, have some enclosed injection moulding swirls, run slightly out of round and have the typical ribbed backs which are used for cooling on the prototype wheels. All in all a good impression and the correct type of truck for the car.

Lehmann's trucks can only be called toys. They are a mix of Bettendorf and Barber trucks, very simplified and feature a noticeable moulding flash. Mounted on the car they rotate in any direction, which makes setting the car on to track more difficult. The toy-like plastic wheels are 1.5mm too small and have a slight wobble. The steel axles are inserted into the side frames, no journal bushings. Since this car calls for modern 70t trucks, one does best to fit the Aristo trucks instead, however those, together with the metal wheel sets will set you back extra dollars. LGB could have developed new, correct trucks for a completely new car, without much additional expenditure; especially since the same trucks also belong under the Hopper and the Tanker, as well as a multitude of other modern US freight cars. For model railroaders the trucks are an imputation and a good reason not to buy the car.

The USA Trains car features metal wheel sets which weigh 83g each. The correct Bettendorf trucks are made of a very tough plastic which is visually barely discernible from metal. The springs are simply imitations and the wheel sets rotate in the side frames without any noticeable wobble or out of round. The high weight and true wheels of the correct diameter provide for good running qualities.

None of the cars has a three point equalization system. and kingpin distances of 430 to 450mm certainly require track that is reasonably level in the transverse. However we didn't encounter derailments during our tests, even tight 600mm radii (R1) were negotiated. The friction coefficient of these long cars in tight curves is considerable, we also noticed that the brake gear on the Aristo car interferes. Radii smaller than 900mm (3ft) should generally be avoided.

Couplers

The couplers of these cars are mounted on the truck draw bars. The LGB and USA Trains products have LGB couplers. Aristo-Craft has its own make of coupler and adds ones which are LGB compatible. USA Trains adds its own couplers - and as a sample a 300mm length of their brass track. A further feature: the underbody has a pre-drilled mounting plate for the installation of Kadee #830 couplers.

On LGB's car one first needs to remove the useless coupler pocket and keeper. Aristo provides a smaller mounting plate which is intended for the smaller Kadee #820. Most likely the Kadee #831 can be mounted on any of the draw bars. However for visual and operational reasons with longer trains we would recommend body mounting of the couplers and a minimum radius of 1200mm (4ft).

Paint and lettering

Aristo's car body is of yellow plastic and faultlessly painted/lettered in black, yellow and silver. However this type of car was never a RailBox car and using different paint schemes should be considered.

LGB's car also features yellow plastic which is painted a yellow that is too rich. The roof is painted silver-metalic with a rather coarse pigmentation. The black door had a scratch. The yellow handrails are unpainted and bound to get brittle after lengthy exposure to sunlight. The lettering is very good, but the first series of cars had the black information fields located to the left of the intertwined blue and red logo.

We couldn't ascertain if the USA Trains car ever ran in this scheme. The car body has a flat yellow paint finish inside and out, the silver parts are cleanly painted and free of coarse pigmentation. The lettering is very clean but has too much sheen on the sidewalls.

Summing up

Aristo-Craft discontinued the standard metal wheels for cost reasons, but still offers a mostly prototypical Evans boxcar, albeit in the, for this car incorrect, RailBox livery. The fixed doors need not be a drawback, especially since they are very nicely detailed and fit very well. As far as sturdiness is concerned it is just as good

as the LGB product. A good deal for model railroaders who like variety and appreciate the sturdiness in the garden.

LGB's car is a real disappointment: incorrect yellow, incorrectly detailed car ends, superfluous coupler pockets, really noticeable roof fastening screws and fantasy trucks add up to a big minus. A bit more care would have let this new item become a model, more so since the design prototype, developed in the USA, certainly looked very promising. On the other hand it is hard to surpass the sturdiness of the car body and the functioning doors. The overall execution appears crude, slightly bungled and not well proportioned. Recommended for operators and toy train aficionados who place emphasis on sturdiness, play value and nice colour in the train.

The undisputed favourite among the Chinese trio is the USA Trains 50ft boxcar, since it has details a plenty and because of the wide doors, a high play value. The provisions for easy mounting of Kadee couplers is an additional plus. The always recommendable metal wheel sets justify the higher price and one gets 300mm of track to boot. Hard to do better with a product, definitely the item for indoor layouts and those model railroaders with high standards and an appreciation for high quality.

Friedhelm Weidlich / HJ

Aristo-Craft Evans

Technical Specifications

Length without buffers:	568mm
Length over buffers:	610mm
Largest width:	112mm
Max height	
above railhead:	157mm
Minimum radius:	600 mm
but better:	900mm
Weight:	1.25 kg
Kadee Coupler	820, 831

Pluses and Minuses

↑	Sturdy car
↑	Good detailing
↑	Brass journal bearings
↓	Unconvincing plastic wheels
↓	Non-opening doors.
↓	Paint scheme un-prototypical for this type of car

Ratings

Aristo-Craft Evans 53 ft boxcar
"Railbox" Item # 50015
Scale: 1:29 Gauge: 45mm

Scale:	N/A
Detailing:	●●●●
Paint and Lettering:	●●●●●●
Running Gear:	●●●●
Production Quality:	●●●●●
Operation Reliability:	●●●●●●
Instruction Manual:	●●●●
Value (Benefit:Price):	●●●●●

Our ratings: ●●●●● is excellent
● is poor

LGB Railbox

Technical Specifications

Length without buffers:	554mm
Length over buffers:	580mm
Largest width:	118mm
Max height	
above railhead:	166mm
Minimum radius:	600 mm
Weight:	1.25 kg
Kadee Coupler	831

Pluses and Minuses

↑	Sturdy car
↑	Opening doors
↓	Completely incorrect trucks
↓	Slight wobble in wheel sets
↓	Clumsy assembly method for roof with black screws
↓	Wrong detailing of car ends

Ratings

LGB 50 ft Railbox box car
Item# 40930
Scale: 1:29 Gauge: 45mm

Scale:	N/A
Detailing:	●●●
Paint and Lettering:	●●●●●
Running Gear:	●
Production Quality:	●●●●●
Operation Reliability:	●●●●●●
Instruction Manual:	-
Value (Benefit:Price):	●●●●

Our ratings: ●●●●● is excellent
● is poor

USA Trains 50 ft Boxcar

Technical Specifications

Length without buffers:	550mm
Length over buffers:	575mm
Largest width:	116mm
Max height	
above railhead:	161mm
Minimum radius:	600 mm
Weight:	1.55 kg
Kadee Coupler	830

Pluses and Minuses

↑	Exceptional detail
↑	Easy rolling metal wheel sets
↑	Wide opening doors
↑	Kadee 830 ready
↑	Includes 300mm of track
↓	Delicate corner stir ups

Ratings

USA Trains 50 ft box car "UP"
Item# 300159
Scale: 1:29 Gauge: 45mm

Scale:	N/A
Detailing:	●●●●●●
Paint and Lettering:	●●●●●●
Running Gear:	●●●●●●
Production Quality:	●●●●●●
Operation Reliability:	●●●●●
Instruction Manual:	●●●
Value (Benefit:Price):	●●●●●●

Our ratings: ●●●●● is excellent
● is poor

Captions to pictures:

Page 23 (top). Plenty of room for a load of double bass (from L to R) Aristo, USA Trains and LGB.

Page 23 (bottom) Railbox (vintage 1977) on the Crowsnest Pass line, AB Canada (2004/09/23).

Page 24 (top). Old and New: The LGB Railbox car is fairly modern. The USA Trains 4 door 50 footer is an Oldie.

Page 24 (center) The Aristo Evans 53 footer, with correct trucks and non-opening, but finely detailed doors.

Page 24 (bottom). The underbody detailing is good on all the cars (Top to bottom): LGB, USA, Aristo. A brakeline interferes with the Aristo trucks in tight R1 curves. LGB's trucks swivel any which way.

Page 25 (top). Details on the USA Trains car.

Page 25 (bottom). On the left the

correct USA Trains trucks, on the right LGB's fantasy creation.

Page 26 (top) Doors. Aristo's non-opening at the top, next is LGB's hefty but sturdy opening door, note the black screw in the side wall. The USA Trains double doors, perfect for fork lift loading.

Page 27 The roofs. Finely detailed roof walk on the USA 50 footer, coarse pigmentation paint job on the LGB roof, Aristo roof with fine pigments.

The Serusso Springs Railways... Page 42

Susan and Ross Piper create a garden railway in California's sunny hills. More than 350 miniature trees and countless plants, a stream, rocks and ground cover in garden railway scale provide the backdrop for scenes, which Sue arranges with much love. The structures are scratch built and give the well kept garden a unique atmosphere.

We first discovered garden railroading while on vacation during the summer of 1996. A quick stop at a toy store in search of souvenirs for the grandchildren produced an LGB brochure about G scale trains in the garden. Model trains had always been fascinating to me, unfortunately they were always given to my brother. This was my opportunity.

Family discussions and negotiations began immediately. Ross was soon convinced to jump onboard. After a little research, a 110 square foot layout quickly took shape. My first engine was a Christmas gift from Ross. The LGB Helena has a special place in our train cabinets. The first mail order of mini trees from another state was scary. We still have many of those trees.

A garden railway is never big enough

The most important lesson we learned from that first venture was that your layout is never big enough!

After eight years and four expansions, our Serusso Springs Railway is a 65 foot long, 875 square foot railroad consisting of four lines. The 500 feet of LGB track, powered by Bridgewater transformers and controlled by an Aristo-Craft walk-around. All lines are automatically run by VCS Realroad electronics, making it possible to run seven trains at once, all stopping and starting at predesignated locations. Our favorite times are when we can just sit back and relax, whether with guests or just the two of us, and watch the trains run on their own.

Our railway's emphasis is on the garden, with over 350 miniature trees and shrubs. The many types of ground covers mingle together for a more natural effect. All plants are kept to scale with constant vigilance.

Many curves... Indication of an organically grown layout

We love that our railway is always growing and changing. Nothing is ever stagnant or boring. A gopher attack becomes an opportunity to redo an area or introduce a new type of plant I've become interested in. When your scenery is alive, there is always a new challenge waiting.

Some concessions to the track layout were necessary because of our focus on the plants. Extra space between tracks was needed to accommodate the atmosphere we were looking for. The track configuration weaves around more than usually found to allow for a less regimented feeling. Individual areas are given to rocks, plantings and scenes, rather than turntables, rail yards or industrial facilities. The track is set on a 2" x 6" pretreated wood base, rather than being floated on ballast, to allow my walking on the track for the necessary maintenance of the many trees, shrubs and ground covers.

The first buildings used are kit built plastic. The past two years have given us the opportunity to expand our options and resources of materials. With Ross always mixing my cement, I have made tunnel portals and bridges of real hand-cut stone. Members of our local Garden Railway Club discovered a new building material of dense foam. Ross assembled several buildings which I carved and painted to simulate rock and used brick. The material is great to work with. We anticipate replacing any remaining plastic buildings with scratch built ones in the near future.

Headroom for the giraffe

speeder. The track of the tourist line intersects the mainline twice.

Page 43 (bottom). The ghost town of Turtle Flats awaiting the next load of tourists.

Page 19 (bottom) And this is what the CAD designer sees on his computer

The most exciting new automated feature we have is a wooden drawbridge that Ross designed and built. Its originating necessity stems from my circus drovers' caboose, with the giraffe poking his head out the window of the cupola, that would not fit through the underpass in the newest part of our layout. The only choices were removing my giraffe, totally unacceptable, or Ross coming up with an operating drawbridge. Some men just have a real talent for understanding what is important!

Through our activities in the San Diego Garden Railway Society, we have found that more women are becoming interested in garden railroading. Many say they are anxious for the men in their family to hurry and get the track in and running so they, the women, can begin their participation. It's really much better for the ladies to be involved in the early basic design stages. They should plan ahead for large enough spaces for plantings, maintenance access wherever required and good soil to provide nourishment, not DG unless only a few trees are planned. I have personally found that when the women actually help with the digging of ditches and shoveling of dirt, the men are much more receptive to their ideas.

Ross and I feel so fortunate to have found this exciting hobby to share that utilizes and challenges both of our previous experiences and knowledge, Ross' in construction and electronics, mine in construction, gardening, arts and crafts. We have been welcomed in homes of strangers with whom our only link is our garden trains. In turn, we have had guests from all over the United States, and others from England and New Zealand to visit our home and layout. What great fun we have!

Sue Piper

Captions to pictures:

Page 42 Big catch from a small lake. Almost time to head home and fry some fish.

Page 43 (top) Ghost Town is the change point to a sightseeing tour with the

display.

Page 20 (top). Slightly confusing at first glance, the domes and pipes on the boiler in front of the cab. Also modeled the water level indicator (orange part on the tank). There is plenty of Know-How in the design and tooling development

Page 44 (top) Sue's experience with miniature plants pays off: A superb harvest scene.

Page 44 (bottom) "It's a boy!" The reverend arrives in a horse drawn carriage, while a train passes nearby. The building is made of dense styrofoam. Ross built it and Sue engraved the stone work and applied the paint.

Page 45 (top) The Speeder arrives with load after load of tourists at the ghost town.

Page 45 (center & bottom) A rich harvest from California's fields. From giant squash loaded in gondolas and hauled by a Porter, to freshly squeezed grapes that needs inspecting.

Page 46 (top) The diminutive Chloe,

with a sightseeing coach in tow, picks up ghost town tourists.

Page 46 (center) Whiling the time away with a game or a tune.

Page 46 (bottom) Passengers are ready to board at Serussos' whistlestop station.

Page 47 (top) Bridge, train and fisher men in the California sunshine.

Page 47 (bottom left) Is there gold in the creek? Well, there's always hope!

Page 47 (bottom right) The giraffe riding the caboose exceeds the clearance and necessitated a drawbridge.

Page 48 (top) A freight passes the miners' cabins which sit beside a creek cut its way into the Lava rock. The cabins are

made of hand engraved and painted Styrofoam.

Page 48 (bottom) Sue built the portal stone by stone, she even included a light. Just as eye catching are the expert plantings.

Page 49 (top) The boy waits impatiently for his kite to be untangled. The figures are carefully hand painted and the kite is scratch built.

Page 49 (bottom left) What a disaster: the moonshiner's still blew up. Soot and grime all over him, luckily the four legged helper is on the way.

Page 49 (bottom right) The young man is anxiously waiting for the evening train to take him to the city.

HJ

Prototype

The lime stone quarry at Blaustein... Page 54

The accompanying pictures, which have never been published before, document a small industrial railway at Ehrenstein which is part of Blaustein, Würtemberg on June 18, 1971. The line ran between the quarry and the processing plant of the Terrazzo- & Kalksteinmehl-Werk Hilsenbeck & Co.

Who is this crazy, plant manager Josef Holzwarth probably asked himself when I took pictures of the industrial railway. !974 saw the end of operations of the railway, to be replaced by a conveyor of much larger capacity. In 1979 Hilsenbeck & Co. was amalgamated with the neighbouring Ulmer Weisskalkwerke, since the raw materials could no longer be extracted, because of conflicts with other community interests.

Since Ulmer Weisskalk has ceased to exist and the quarry has been rehabilitated and re-cultivated, not a trace remains of the industrial line. All the technical information has vanished and not even the year of construction for the "Home Made" engine could be determined. Even prior to that construction the line connected the

quarry at the "Schinderwasen" with the processing plant, the two were separated by a busy regional road, the Deutsche Bundesbahn line Ulm - Sigmaringen-Donaueschingen and the small "Blau" river. By 1971 a conveyor belt had replaced the road crossing, which fed intermediate silos after the stone had been crushed and sorted according to quality. Of special value was the pure white stone, which was crushed to smaller Terrazzo sizes (for the building industry and for filtering in drink water plants) as well as ground to fine flour (used in paint production). The inferior qualities would be used for road construction as well as fertilizer production.

The railway would haul the small side dump cars, loaded with lime sorted according to colour, passing below the DB mainline to the processing plant. Since there was a hefty incline after the underpass and no "off-the-shelf" electric engines available for 600mm gauge, Max Hilsenbeck, the owner of the plant and a professional engineer, recalled his studies at Munich's technical university and

designed his own engine. This engine could haul 14 loaded side dump cars and replaced the electric engines produced by Esslingen Machine Works, which could haul 6 cars at the most. The diesels produced by Jung, as well as the ones from Diema, were also no match.

When Josef Holzwarth, who much later became plant manager, joined the company as an apprentice, the curiosity engine was already in existence, most likely built during WWII or right after it. The engine had a controller similar to a streetcar's with 6 notches each for forward and reverse, as well as two brake notches.

The operator needed to repeatedly lower the contact pole by tugging on a rope, in order to avoid snagging the contraption in the rudimentary overhead wire. As an eighteen year old, picture taking rail fan I also noticed that the empty side dumps would very easily derail.

By the way, the electric landed on the scrap heap.

Friedhelm Weidelich / HJ

Captions to pictures:

Page 54 (top). Crushed stone is loaded from the intermediate sorting silos into the side dump cars. At right is the operator shed for the filling station, behind it a large

storage shed and in the distance the quarry.

Page 54 (bottom) The emptied side dump cars are shoved back to be loaded again. On the right is the switchman tower of the DB.

Page 55 (top left). Loaded cars at the filling station, a Diema engine takes care of the switching

Page 55 (top right). The "Home Made" engine with the practical power pole. The silos in the background contain

finished product, on the right is part of the rock washing facility, the piping across the track carries the used water to the settling lagoons.

Page 55 (center left) The electric approaches the bridge across the "Blau" river, hauling a cut of loaded side dump cars to the processing plant.

Page 55 (center right) The side dump of the car is lifted with a crane and the load dumped into a crusher. Note the FRR turntable below the side dump car.

Page 55 (bottom left) "Home Made" powered by 220V switching with the Ulmer Weisskalkwerke in the background.

Page 55 (bottom right) a small diesel produced by Jung, Jungental sporting a small warningbell.

HJ

A step by step How-To article

RE- PAINTING THE F3-A DIESEL ... Page 60

North American garden railroaders quite often "incorporate" their own railroad and design a suitable livery of their own. Europeans will also benefit from Bob Whipple's instruction on the repainting of an engine. The principle and method remains the same, regardless if it's a prototype paint scheme or a freelanced one.

The F3-A diesels of the late 40's and early 50's were rated as having 1500 horse power. They were all produced by one of the largest diesel manufacturers in the U.S., the General Motors, Electro-Motive Division. Many U.S. Railroads ordered them to replace their old and tired steam locomotives. The age of the diesel for freight and passenger service was born.

Two of these F3-A's (CNJ #56 & 57) have been refurbished and currently run on a tourist line in Jim Thorpe, Pennsylvania..

The F3-A diesel has, over the years, become a favorite with model train hobbyist in all scales, including "G" scale or Garden Scale, as it is sometimes referred to. One large scale manufacturer, USA Trains, is the only producer of this F3-A model.

Only the most popular road names and paint schemes become available. The small railroads colors and paint designs never get produced. Many manufactures produce an "un-decorated" version to satisfy its customers that tackle a project like this. Some of us just get tired of our road name selection in a few years. We "re-do" the paint and graphics to make that "special" diesel that will never be produced. A "one of a kind", so to speak. This is exactly what I did to my Pennsylvania Railroad (PRR) F3-A. I changed it's road- name and it's color .

Why I Repainted my F3-A?

When I first started in "G" scale 15 years ago I wanted to model the Pennsylvania Railroad (PRR) because it was the major railroad here in South Jersey. Plenty of PRR engines and diesels became available and I was very happy. Many other road names were also available, all with multi colored paint jobs. Photos of these other diesels looked great in the garden . PRR's color are so dull and unattractive (Brunswick Green) that I started to seek variations of motive power or, change time periods just to get color on my engines. The 1:1 CNJ F3's- were delivered as tangerine/orange and deep navy blue to match the Baldwin DRX-64-2000hp, double-ender diesels that were delivered in 1946. By the mid-1950's they were both re-painted olive green with yellow stripping. The tangerine/orange and deep navy blue ,while pretty, showed the dust and dirt too much.

In this article I will take you through the 10 steps I took to strip, re-paint and add new graphics to my PRR F3-A to transform it into a CNJ (Central Railroad of New Jersey) F3-A. I made mine #53. The CNJ F3-A units were numbered 50-59.

Step 1 - Disassembly

It's always a new adventure disassembling a locomotive and, this F3 was no exception. Every locomotive is different. Just find the main screws and remove the shell from the base. You can, but it's not recommended, go through these following steps with the locomotive intact but, handling it may become a problem after you start and you'd wish you had removed the shell.

Once the shell is removed you can pop out the windows and remove all extras that

you don't want painted. (Horn, grab irons, railings etc.)

Step 2 - Stripping off graphics.

Graphics come in different forms. Some are ink and some are paint. It's really hard to tell. There are many methods to remove graphics. There are liquid paint removers that will remove all ink and paint from the model. It will completely strip it down to the plastic.

Some of these products take time and a large volume is needed to give your model a bath. It's very messy. There are 3 methods that I have used in the past that have worked really well for me. Automotive break fluid, ELO (Easy lift off) and denatured alcohol.

Denatured alcohol on a rag and some rubbing removed most of the F3-A's graphics. The PRR heralds were removed with ELO. The old stripes and heralds MUST be removed or they will show through on the new paint job All of the original lettering on the fuel tanks were kept.

Step 3 - Bath Time

As you can see the denatured alcohol leaves a light colored residue on the shell. Handling also leaves oils from your fingers and hands on the model. Making sure that you removed all electronics from the shell. You must give the shell a bath in warm water and a few drops of dish detergent. I just let it soak for 15 minutes or so making sure the sides, front and top are washed well. You can use a soft rag or sponge if you like. After washing rinse with cool water and let it air dry.

Step 4 - Painting Part 1

With the CNJ colors so dark I didn't prime the shell. Based on the color of the model you are re-painting and making determines if you "should" or, "should not" prime. It's your decision. With my main color being gloss navy blue, (Painter's Touch- Gloss "Navy Blue" spray paint) I gave the entire shell 2 coats of paint. I waited one hour between coats. I also masked all graphics that I was going to keep from the factory paint job. The number boards and headlight were also masked.

I use a block of Styrofoam and insert all grab irons, horns and, other items that need to be painted. This is the easiest method I have found to paint these things evenly.

Step 5 - Masking & Painting Part 2

After waiting 24 hours I was ready to add the gloss orange color to the shell. (Painter's Touch- Gloss "Real Orange" spray paint) Using photos of the F3-A's at Jim Thorpe, Pa. as reference, I masked the areas I didn't want orange.

Using regular blue painter's masking tape I ran the tape from back to front. I slightly curved the tape as I ran it toward the nose of the F3-A to create the desired curve needed to duplicate the prototype. There are model masking tapes available made of plastic that produce razor sharp separation but, they are expensive and they are small rolls. I've have success using the blue painter's tape on other models and saw no need to use the plastic tape for this paintjob.

After my "Mask-Up" was complete I added taped newspaper to my masking to shield all blue paint. I then sprayed my gloss orange on the exposed areas. Again, I waited an hour before adding a second coat.

Step 6 - The Unveiling

This is the exciting part, removing the tape. I'm just as anxious as a Hollywood

Captions to pictures:

Page 60 (bottom). There's always a way: Bob used an original CNJ coffee cup to determine the shades of the CNJ colours.

plastic surgeon removing the bandages from a starlet's nose. The results are close to perfect. Some touch-up or clean up may be required. I do this now, before I continue.

Step 7 - Adding the decals.

Now this is the reason for the "gloss" paint. Decals adhere better on a shiny surface. The graphics are few on this model making it an easy job.

The decals are cut as close as possible to the printing. This makes for an invisible application. The decals a just dunked in warm water with a drop of dish detergent and allowed to rest a few more seconds on the side of the dish. The detergent loosens surface tension on the water and makes it wetter. Using the decal water I wet the model where the decal will be applied. Once again using a photo of the prototype I slide the decal from the backing paper and position it with a hobby knife or a soft brush. Using a corner of a paper towel I absorb all droplets of water that may be around the decal.

After doing this for each decal on ONE side allow it to completely dry before doing the other side. You could mishandle your model and ruin a decal. The small "F" on the lower front indicates the front of the diesel. The decal here is placed over a rivet. I use a product called Walther's "SOLVASET" to make the decal snuggle down over the rivet. I also applied it on the side herald. Note the wrinkling, which is normal until it dries.

The Jersey Central Lines herald decal on the nose was slightly cut to allow for the door handle. This area was also treated with SOLVASET to produce the "painted around the handle" look.

Stan Cedarleaf made the decals for this project. His web site is below.

<http://gold.mylargescale.com/StanCedarleaf/WebPageDecals/CustomDecalsx.html>

Page 61 Chassis and body are separated, the windows detached. Now one can start removing the decals. Denatured alcohol gets rid of the white residues.

Step 8 - Flat Finish

Before I re-inset the windows I spray the entire body with Testor's DULL-COTE. This flattens the finish to a more realistic appearance and coats and protect the decals. One complete coat is all that is needed. DO NOT add two coats.

Step 9 Re-assembly

Reinstall or re-glue all of the parts (windows, horns, railings etc.) that you removed from the shell and reverse Step 1's process. Use the correct screws in the correct holes or there will be damage to your engine. Also make sure that you plug in all of the plugs for lights and smoke units before you close it up.

Step 10 - Photo Finish

Be proud and take a photo of your new paint job. Here is a photo of my "not so new" NEW CNJ F3-A diesel on a cold winter's day..

In Closing

I didn't work on the F3-A full time. It was over a 3 week period that it was completed. Just take your time, and follow the steps above. You'll end up with a great looking locomotive, whatever road name you choose.

In The Future

My next project is to re-paint my PRR F3-A "B" unit to match my CNJ F3-A. (that is what's behind the PRR F3-A in the first photo)

I took this reference photo of the CNJ "B" at Winslow Junction in Winslow, NJ in 2002.

You'll end up with a great looking locomotive, whatever road name you choose.

Bob Whipple

Page 62 (top) After a thorough cleaning of the body, the headlights and number boards are masked. The blue paint needs to be completely dry prior to masking for the application of orange.

Page62 (bottom) Bob uses a piece of Styrofoam to hold the grab irons and horns. Note: this only works with non-solvent paints!

Page 63 (top) Two CNJ F3-A units at Jim Thorpe, PA 1993/10/10
Weathered CNJ B-unit at at Winslow Junction, 2002

Page 63 (bottom) The decals are softened in luke warm water and Solvaset is used to make them set properly on the body. Dullcote is used to make them less obtrusive and to seal the surface.

A digital R/C link using DECT technology

Funky Funky... Page 66

A small handheld controller - Made in Switzerland - makes use of the DECT technology and is compatible with the LENZ DCC controls or any other DCC system that uses Loconet to communicate.

The unit was developed by Mathias Manhart, a Swiss garden railroader who was not impressed by the available radio link DCC controllers.

The unit uses the same DECT (Digital Enhanced Cordless Telecommunications) technology as millions of cordless telephones. The DECT-module is manufactured by Siemens and brings a very high reliability factor to the radio link. Neither I nor a friend of mine have ever encountered any glitches in the bi-directional communication between the handheld and the base or the Intellibox (made by Uhlenbrock). If used indoors the unit will generally function across several floors, through walls and doors. Outdoors the reach is up to 300m (close to 1000 ft.) under ideal conditions.

The transmitter is enclosed in a standard case with a rotary speed control knob (similar to the Intellibox), 17 buttons and a small LCD display. The handheld is powered by two 1.5V batteries

(conventional or rechargeable). The base requires a power supply with 8 - 20V AC or DC. The connectors to either the LENZ system or the Loconet are at the back of the base station. The handheld automatically detects which of the systems is being used. Several LEDs at the front of the base station serve as status indicators.

Using the handheld in conjunction with an Intellibox enhances the features of that unit in as much as functions F9 through F12 are made available. Very conveniently a separate button is used for each of "Lights" and F1 through F12. The buttons used for special functions can be configured as momentary or latching.

Very similar are the features when used with a LENZ unit. All functions are supported with the exception of programming on the program track. Of course programming on the main is supported.

On the whole the routines are similar enough that even those who are changing from one system to the other, or are using both systems intermittently will find it easy to adapt.

Generally speaking using the "Funky" will take very little practice. For instance one only needs to push two buttons prior

to selecting an engine address, giving very rapid access for control. Those who like even quicker access can store up to three engine addresses in the controller and can call them up with one button. In addition the handheld can be used to operate decoder controlled turnouts and signals. The same applies to calling up routes stored in the Intellibox.

Up to four handhelds can be connected to one base station and operated simultaneously in parallel mode.

There are more user friendly features included - a sign that This Manhart is a practicing model railroader and "not just" an electronic and programming expert.

The "Funky" has minimal commercial distribution. Manhart produces small series as the orders warrant and uses the grape vine to spread the word on the features of the product. His website <http://www.beathis.ch> has a full write up with all the information on the "Funky".

The current series, which should be available as we go to press, will have an added feature: the LCD will be lit, a big plus for operating in the dark..

Klaus-Gerd Schoeler / HJ

Captions to pictures:

Page 66 (top). The "Funky" handheld uses DECT technology for radio communication and works with the LENZ

and Uhlenbrock Intellibox DCC system or systems that use Loconet.

Page 66 (bottom) the base station which connects to the DCC control unit.