THE EVENTS ISSUE

ISSUE 10 - Fall 2011

RAILBRICKS™

BRICK RAILROADING MAGAZINE

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Fana'Briques 2011
National Train Show

Building Superliner® Cars with Benn Coifman

RAILBRICKS

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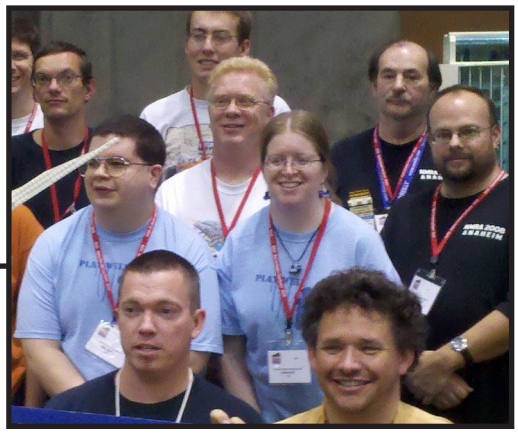

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ALL ABOARD!

My family and I recently took a weekend trip to the White Mountains of New Hampshire. As part of our end-of-summer outing, I thought it would be fun to stop by Clark's Trading Post, a small roadside tourist trap that I had visited with my parents years ago when I was small. Clark's claim to fame is their bear show, which has been a part of the attraction since the early 1930s. Admittedly, the reason we visited was to let my three year-old daughter see the bears. To my surprise, we were treated to much more.

The entrance to the Trading Post's park is made up to look like an old railroad station. On the opposite side of the fence, I could see an old steam locomotive and a few open-air passenger cars. As a part of the attraction, the owners run a short excursion train through "wolfman" territory. The surprising part was that the locomotive wasn't just any steamer. It is one of approximately four fully restored and running Climax geared locomotives in the country! My railroad enthusiasm went into high gear. As soon as our hands had been stamped by the ticket-taker, I scooped up my daughter and headed for the train.

While most of the visitors were busy watching the antics of the actor playing the part of the backwoods wolfman as he "attacked" the train, I was watching the pistons, smoke, and steam of the Climax. From the vantage point of my second ride (one ride just wasn't enough), I could see the gear-shaft turning below the machine, and the locomotive's wheels running along the track. I could feel the heat of the wood-fired boiler, and hear the high-pitched whistle as the engineer signaled our presence. The engineer's smile was as big as mine when he noticed me watching the machine instead of the show.

The gateway between "wolfman" territory and the visitor's park was another surprise. As the train rounded a corner, we rattled through a restored covered bridge. The original bridge, I found out later, was built in 1904, and had stood in East Montpelier, Vermont, until the Clarks bought it in the mid-1960s and moved it to their park. The bridge was every bit as beautiful as the locomotive. Built specifically with steam locomotives in mind, the peak of the roof was vented by a raised cupola. The timbers were thick, and the iron reinforcing rods seemed to hum as we crossed. A few years ago I built a LEGO® version of a very similar bridge. I was pleased to see that the interior details that I had obsessed over were present in the prototype. Even better, I noticed details that hadn't been in my reference photos. I made

Instructions, Challenges, and Tips & Tricks have been categorized into the following levels:

Beginner

Intermediate

Advanced

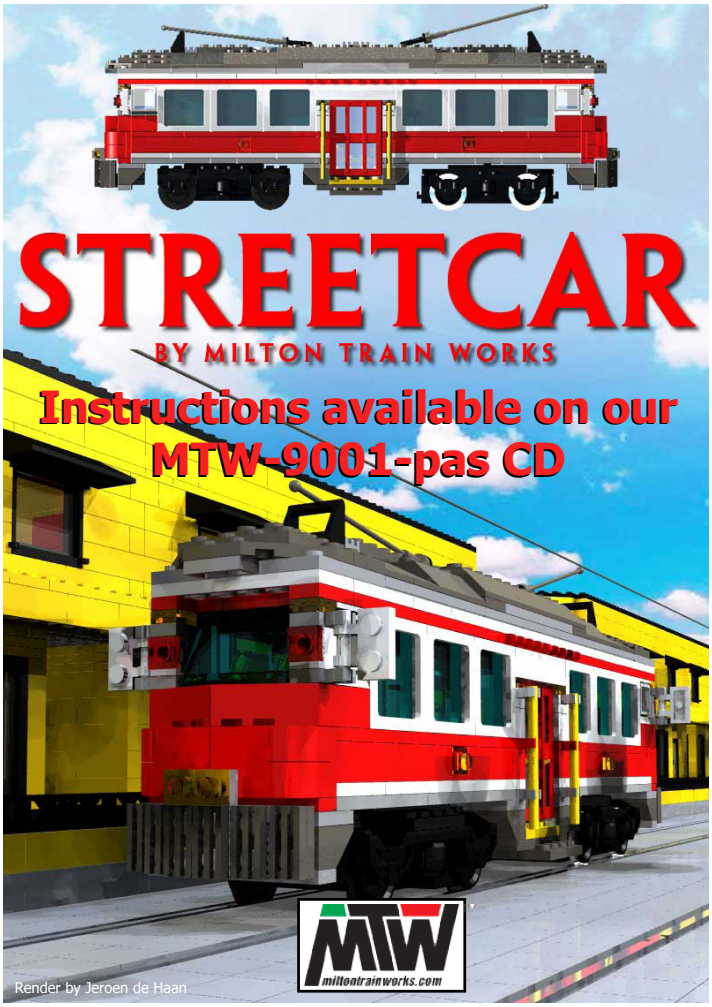
a few mental notes, and started thinking about what parts I will need to upgrade my covered bridge.

While the Climax locomotive was beautiful, watching its pistons and gears made me start thinking about what Technic parts could be used to build one. While trundling through the bridge, I was reminded of the bricks and slopes I had used on my model version; even the wolfman's costume, complete with tattered hat, made me wonder what minifig torsos and accessories I have in my collection.

New modelers often ask "What can I do to become a better builder?" One thing is to challenge yourself to look at real-life items in terms of buildable components. A locomotive can be broken down into gears and axles, a building into bricks and plates. Inspiration can come at any time, and some of the best treasures are sometimes kept in the least-expected places.

Enjoy the latest issue of RAILBRICKS!

-Elroy



Have an idea for RAILBRICKS? Here are some guidelines for getting your article published in an upcoming issue.

Who may submit an article?

Anyone may submit articles for consideration by the RAILBRICKS staff. Submitted articles are reviewed and, if suitable, used in future issues of RAILBRICKS magazine.

People submitting articles do not need to be professional level writers. RAILBRICKS is a magazine for fans, by fans. We welcome articles from enthusiasts who build, collect, and play with LEGO® trains. When we evaluate articles, we look for quality in the content and the basic writing style. We also evaluate any photos that accompany the submission. Every article to be published is edited by the RAILBRICKS staff to increase readability if needed, and while basic grammar and spelling are expected, perfection is not necessary.

What sort of articles may be submitted?

Any material related to the creation, display, or collecting of LEGO® trains is welcome. This includes articles about prototype trains or railroading locations that may spark inspiration, overviews of models that have been created, or step-by-step instructions for train models. While our focus is LEGO® trains, articles about related items, such as modifying track with non-LEGO® elements, are also welcome. We are also interested in the overall LEGO® train community, so articles about events, people, or clubs are also encouraged.

How long should articles be?

Submissions should be long enough to cover the article's topic, but short enough to hold the attention of the reader. In general articles should be between 750 to 3,000 words in length, and include any photographs or images that will accompany the text. In addition to images, any sort of source material that was used during the writing of the article, such as website URLs or book titles, should be included in order to give readers additional resources should they decide to read more about the topic outside of RAILBRICKS.

What if an article is over 3,000 words?

3,000 words is a guideline. If you have an idea for an article that may be over 3,000 words, please send us an outline or summary. We may decide that the idea warrants the extra space, or the article may be a good candidate for being printed in installments across multiple issues.

How should articles be prepared?

Articles should be typed in either a text document or e-mail, and should use proper grammar, punctuation, and spelling.

How are articles submitted?

Completed articles may be e-mailed to *submissions@railbricks.com*. The text of the article may either be in the body of the e-mail, or added as a file attachment (MicroSoft Word, OpenOffice Writer, text file, etc). Images to be included with the article should be submitted as separate attachments, and clearly named.

We can accept images in JPG, GIF, PNG, or TIFF formats. High resolution images, 300 DPI at least, are preferred as they will reproduce better than lower resolution images.

When will my article be printed?

Accepted articles will be included in future issues of RAILBRICKS. When the article is published depends on a number of factors including the amount of content already available to be printed, themes of specific articles, and article length. In short, there is no way to determine exactly when an article will be appear.

Does everything that gets submitted get published?

Unfortunately, no. While we will make an effort to publish what we can, it is not always possible to include everything.

Are authors compensated for their printed articles?

No one is paid for RAILBRICKS, including the editorial and writing staff. RAILBRICKS is an all-volunteer project, and as such, authors are not paid for the use of their material. Articles used by RAILBRICKS remain the property of their authors.

Brickworld 2011

By Jordan Schwarz, Photos by Jordan Schwarz & Cale Leiphart

Brickworld™ celebrated its fifth anniversary this past June. As one of the largest and longest-established LEGO® fan conventions in the United States, Brickworld takes place each June at the Westin Chicago North Shore in Wheeling, Illinois, just north of Chicago.

This was my third consecutive year attending Brickworld, and it was interesting to see how the convention has evolved with time. This year's convention was about the same size as last year in terms of the number of registered attendees - about 900 - and the number of public visitors, numbering at least 7,000. Brickworld coordinators made some changes to this year's registration process to keep the number of registrants in check. 900 attendees have no trouble filling up all of the display areas, parking lots, and hotel rooms at the Westin. Beyond this number, things begin to feel a little cramped, so the coordinators made a wise decision to cap the number of "full" registrations this year.

This year, Brickworld featured as its keynote speaker Mr. Adrian Jones, the general manager of LEGOLAND® Florida. Mr. Jones gave a lively presentation and Q&A about the LEGO Group's newest theme park, slated to open in October 2011 and situated in central Florida on the grounds of the former Cypress Gardens theme park. Mr. Jones emphasized that the new LEGO® park would preserve the beauty of the old gardens while adding many LEGO-themed attractions in several phases over the next few years. Mr. Jones repeatedly emphasized that the target age range for LEGOLAND Florida would be children 2-12 years old. Still, many AFOLs present seemed eager to see the new park, if only to gain more complete experience of all things LEGO-related. In other notes, Mr. Jones seemed to imply that there was currently a certain lack of accommodations near the new LEGOLAND park, and deals to secure new hotels and dining options were currently being negotiated.

In terms of LEGO train club layouts, PennLUG was well represented, and Nate Brill's impressively large seaport made an appearance. Nate also designed a stunning 8-wide version of the New York Central's famous 20th Century Limited matched train-set. That model received this year's "Best Train" award. As usual, the Northern Illinois LEGO Train Club brought a large and varied club layout, with such perennial favorites as the Harry Potter and Indiana Jones themed sections. Another large layout was that of Joe Ellenbecker, who brought a realistic 6-wide version of the Union Pacific's DD35 dual-diesel electric locomotive. Joe's layout was also the home of the train races, a big hit with the younger builders who raced strings of boxcars around Joe's big loop. Never have I seen so many derailments occur on a LEGO train layout...

Right: Nate Brill's 20th Century Limited, winner of the 2011 Brickworld "Best Train" award.

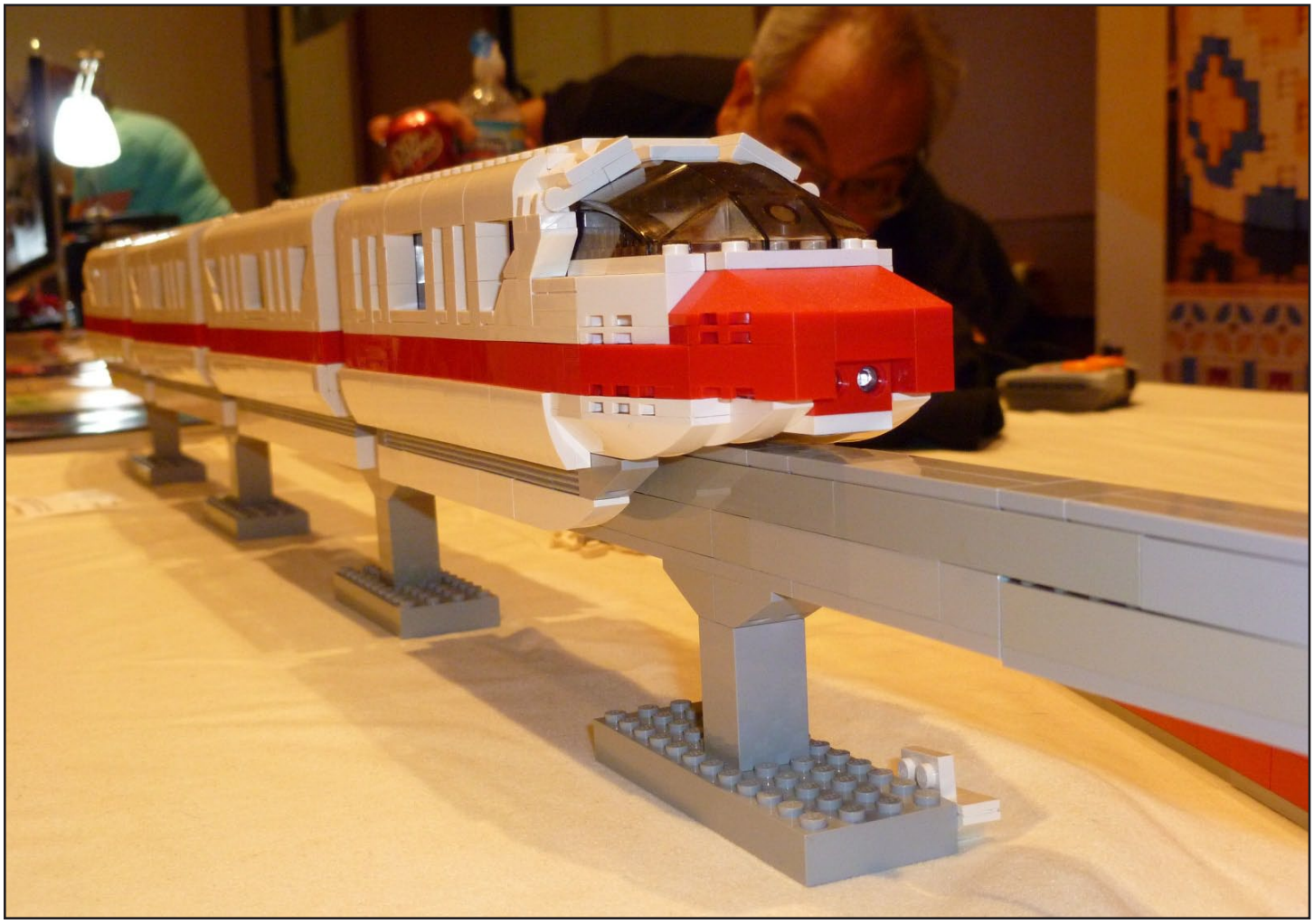
Ironically, another great train turned up on a display that received the "Best Sea Vessel" award - Nate Flood's U-595 U-boat in dry-dock. This was probably my favorite MOC from the entire show; with its fabulous cutaway U-boat and a richly detailed dry-dock backdrop, complete with German steam train. Taken together, these elements made for a perfectly composed diorama.

This year's Trains Roundtable discussion started with Jim Foulds of the LEGO community team taking some questions from the train community. From this discussion (and others over the course of Brickworld), I gleaned that the LEGO Group is trying to gauge what level of interaction to have in the fan community and how much involvement it should have in fan conventions such as Brickworld. It seems that there is a fine balance, as some fans want more interaction with the LEGO Group while others seek greater autonomy. This problem is compounded by the ever-larger number of LEGO fan conventions, which frustrates the LEGO Group's attempts to contribute uniformly to each convention.

As a result, the LEGO Group seemed a little less involved in Brickworld 2011 than in years past. Jim Foulds and set designer Jamie Berard were the TLG representatives in attendance. Event attendees received a generous LEGO Store discount, and some exotic Pick-a-Brick elements were made available at area LEGO Brand Retail stores.

Jim Foulds also spoke about the evolving LUGBULK program which allows LUGs to purchase elements in mass quantities. Much like the situation with fan conventions, LUGBULK is an evolving phenomenon and one that grows in scale each year. Jim highlighted that the LUGBULK program has been a success, but it also presents logistical challenges. Quantities of elements requested through LUGBULK can quite often exceed available warehouse inventories, and LEGO

Below: Joe Meno watches his brick-built monorail and track.



has to initiate new molding runs to supply the parts ordered. This takes quite a while, hence the long lead times associated with LUGBULK orders. The LUGBULK process should improve with time, as TLG gets adjusted to the logistics of LUGBULK.

For the second half of the Trains Roundtable, Mike Fetsko and Eric Olson of ME Models gave a comprehensive overview of their new "METal Rails" track system and talked about ideas for future products. Earlier this year, ME Models rolled out a new 9V-compatible track system with straight rails made from extruded aluminum. Future product offerings are currently in the works, including the much-awaited wide radius curves. These will require a different manufacturing process such as casting, and Mike and Eric discussed some of the technical aspects of how their products are made. They also revealed that over the long term, they hope to release a complete line of rail modeling products - tracks, motors, and a means to supply power. The full architecture of this system is currently evolving, but it sounds like the guys from ME Models have exciting things on the horizon!

As a returning Brickworld attendee, it was great to see some old friends as well as new faces. If anything, it seems that Brickworld is attracting a younger crowd each year; the convention is becoming popular with Teen Fans of LEGO, and this year's display brought several impressive TFOL models that rivaled builds by the best adult builders. Although the interests of AFOLs and TFOLs differ, it is encouraging to see the LEGO hobby appealing to new builders. Today's TFOL builders will form the basis of the AFOL community in a matter of years.

On my first visit to Brickworld, I was captivated by the amazing MOCs. There were LEGO models of scope, scale, and detail beyond what I ever thought possible. It is both inspiring and humbling to witness

Below: Nate Flood's U-595 U-boat dry-dock scene.

Above: Joe Ellenbecker's 6-wide Union Pacific DD35 dual-diesel electric locomotive.

the collective creativity of the LEGO fan community. On return visits, I find that some of this novelty wears off. You know to expect fabulous LEGO creations, and these conventions never disappoint. For me, the more times I visit a particular convention, the focus becomes not the MOCs but the people that I get to see there. It is not unlike a family reunion, where once a year, distant relatives (related by brick, as opposed to blood, in this case) come out of the woodwork to meet each other. AFOL conventions like Brickworld are great, not only because of the MOCs and bricks but because of the people that such events bring together.

Overall, Brickworld 2011 was similar to the conventions of years past. The Brickworld organizers have honed their craft over the years and know how to deliver a solid LEGO fan convention experience for visitors and exhibitors alike. In fact, the organizers announced that Brickworld has signed on for another five years at the Westin in Wheeling. So, if you missed it this year, don't worry; Brickworld will be around for years to come.

Jordan's Top Picks from Brickworld 2011:

MOCs: Nate Flood's U-595 diorama struck me as extraordinarily well done. Eurobricks did a great job with their monorail-themed space base, which included a Maersk train monorail. Joe Meno brought another monorail running on nifty homegrown track. TFOL Rocco Buttliere's microscale renditions of world skyscrapers were top notch. As for returning MOCs, I always like seeing Cale Leiphart's steam engines and Brian Williams' Indiana Jones layout.

Lodging: The Westin is always a great deal if you can get the Brickworld discounted room rate; about half of what it usually goes for. Book early, as discounted rooms seem to fill up quickly.

Dining: Lunch at Pete Miller's Restaurant, across the street from the Westin. Who knew that a ritzy, expensive steakhouse would offer a top-notch lunch for under $10 on weekdays? Alas, the excellent Claim Jumper restaurant near Brickworld went out of business. I would not recommend any of the restaurants located on the Westin property.

Nearby Non-LEGO Things to Do: There's a beautiful nature trail behind the Westin that runs along the Des Plaines River. Make sure to wear bug spray! And the mall at Northbrook Court is very nice (and has a LEGO store). Other than that, there isn't much else near the hotel... but who needs other things to do when there's a LEGO convention in town?

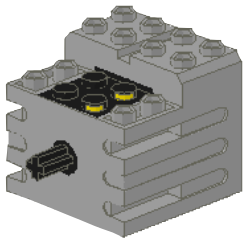
Left: Nate Brill's container ship and harbor scene.

Right: Eurobricks' Maersk monorail rides through their space-themed layout.

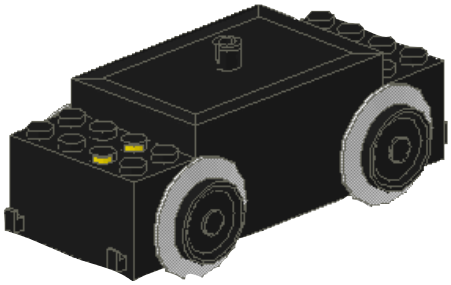
Are Trains Becoming Technic?

Article by Didier Enjary
Pictures and Photos courtesy of BrickLink and BrickShelf

I don’t know if this is the case for everyone, but for me "Technic" is a very specific set of LEGO® parts and models. "Technic" elements are parts with axles, pins and holes. Beams, gears and connectors are Technic parts. Bricks, plates, tiles and slopes, unless Technic-ally modified, are not. They are System parts. I have to underline that the LEGO Company does not make such a differentiation.

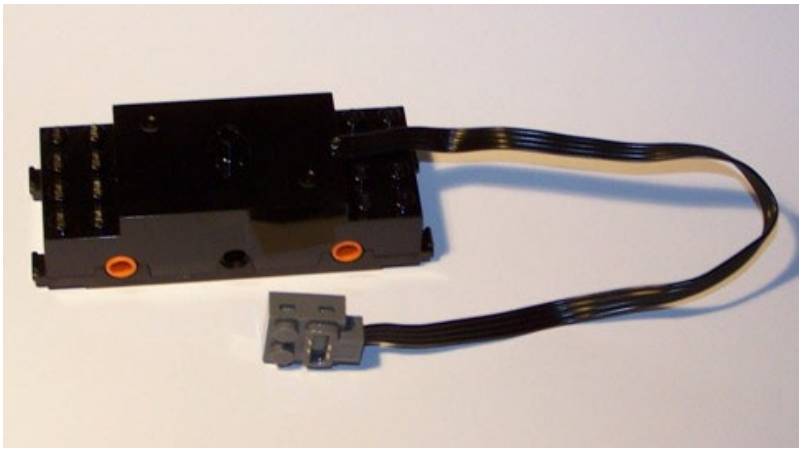


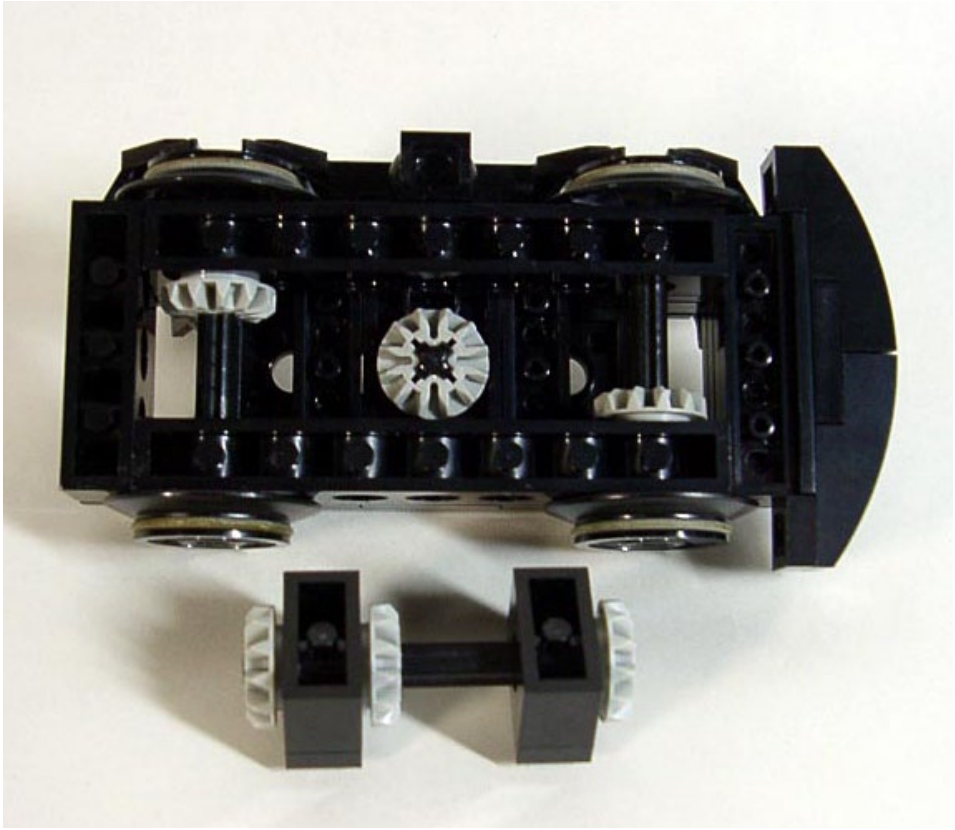
Technic models make heavy use of Technic parts. For me, Train is not Technic. Trains had their own 9V System motor, different from the 9V Technic motors.



But things are changing. The new train motor comes without wheels, and you can attach any part in an axle hole. The train wheels have an axle hole. Train wheels are Technic parts.

"Train wheels are Technic parts."





This minor change does not make trains Technic models. As previously said, Technic models make heavy use of Technic parts. That is not the case here. However, the new motor and wheels are not the only Technic parts that an official LEGO train model can use.

The idea to motorize LEGO trains with Technic parts (motor, beams, gears and axles) is not a new one. Basically, it consists of a gear train incorporated in the wheel truck (bogie) as demonstrated by Brickshelf user BUCHI[1]. The wheels are driven through the truck's vertical axis by a motor placed in the engine's body.

To implement this in the space of a regular LEGO train truck, a 4x8 box, is tricky. Moreover, the mechanical design of this build has an intrinsic flaw. A side effect - a torque between the truck and train base - causes derailments on switches. However, with this method of Technic-ally motorizing LEGO trains, you are not limited to two-axle train motors and you can create a variety of axle configurations. You can even use all kinds of larger wheels, such as those from third-party companies like Big Ben Bricks[2].

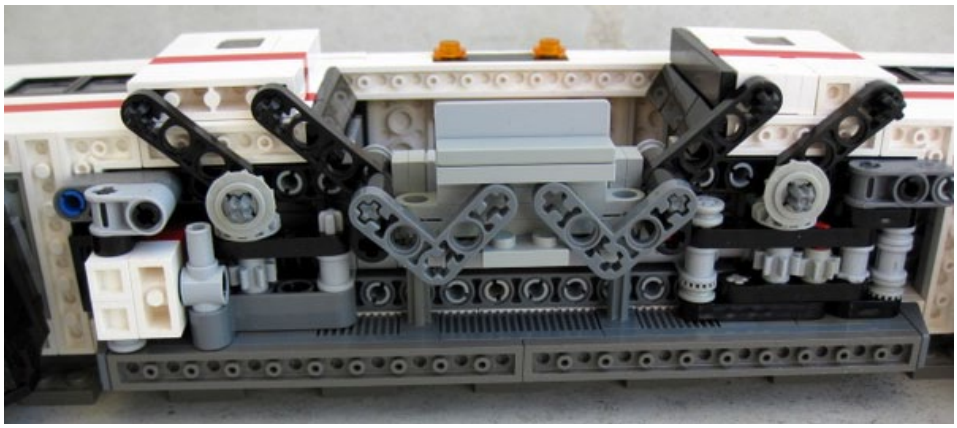
Technic motorization is not easy to set up, and may appear unusable for modern trains, but it is an interesting idea for steam trains where the truck is not articulated. The Emerald Night Train (#10194) is to this day the unique example of such a Technic-ally motorized LEGO train endorsed by The LEGO Company.

So, you can motorize a train with Technic parts. But that does not make the train a Technic model. Technic is all about function.

Esben Kolind[3] agrees, and shows us how to build a train with automatic doors which open at the station[4]. This function uses Technic parts, such as axles, gears and usual connectors, but more impressively, makes use of the universal joint to operate all the doors with one single motor, in a very compact and hidden mechanism.

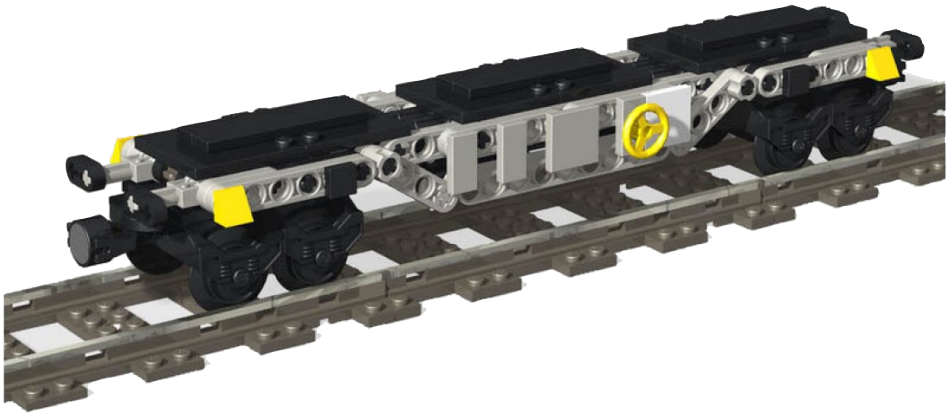
"Technic is all about function."

In fact, Esben has long been a supporter of functions in trains, as demonstrated here on a previous sliding-door study, integrating PF lights, motorized doors and folding step [5].



Still, the train is not a Technic model. Technic is also about structure. Trains are made of plates and bricks, not from beams and liftarms. But some people are open-minded (at least more than I used to be). That is the case of Tim Gould, who once shared this flat car, the instructions for which can be downloaded from the RAILBRICKS website [6]).

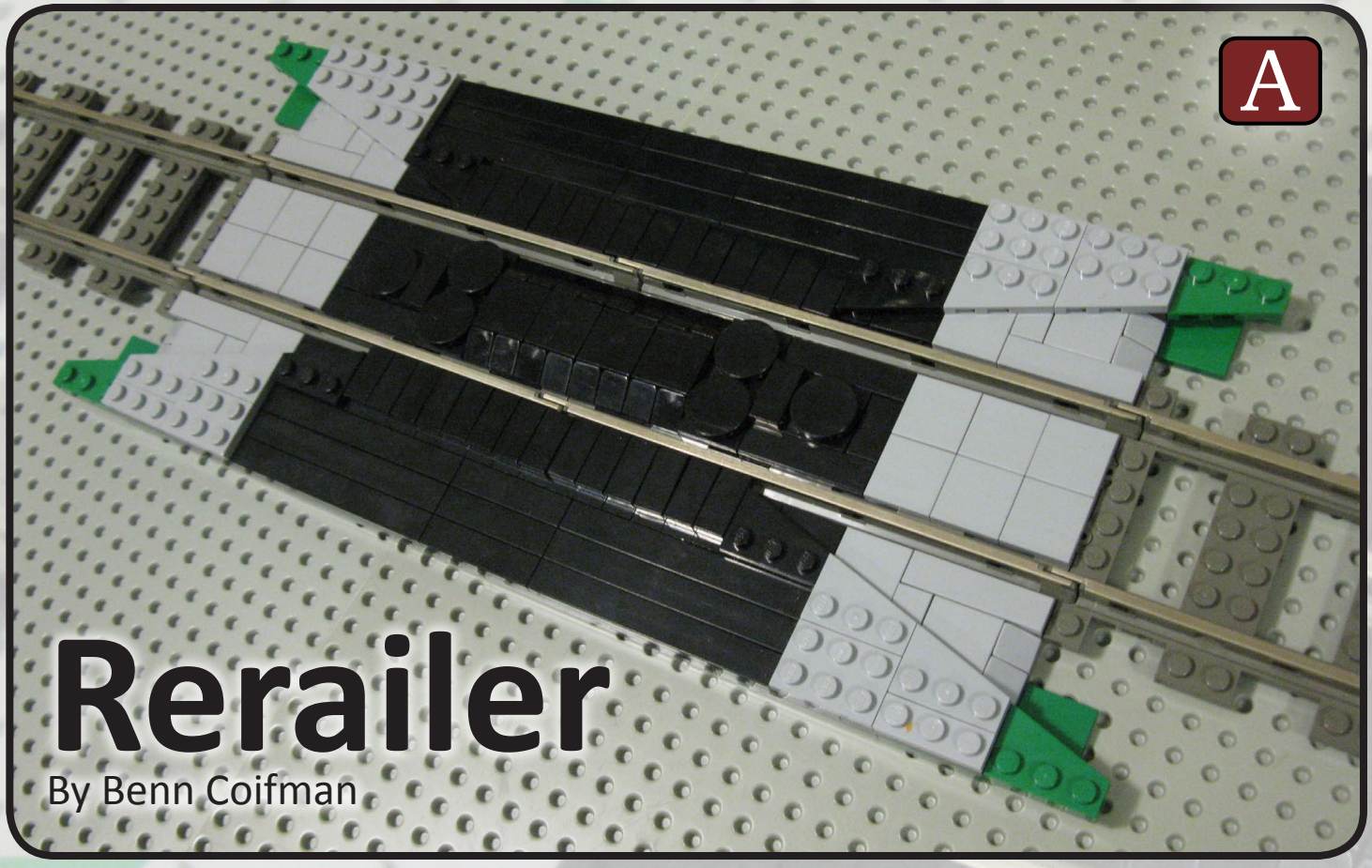
From the Bill of Material, it is seen that almost 75% of the parts are of the Technic kind (only 6 different parts have studs). The result is quite convincing, and is as realistic as a LEGO model can be, and it is a true Technic model.



Examples of everything Technic are out there: structure, function, and motorization. A LEGO Technic train is possible even at the width of 6, though I do not think this is an easy task. Technic models are, in general, bigger than the usual 6 or even 8 wide train - and I do not think the theme will become mainstream. I do know, however, that creativity and imagination are limitless.

"A LEGO Technic train is possible..."

[1] RC Train used Power Function., http://www.brickshelf.com/cgi-bin/gallery.cgi?f=284050
[2] Big Ben Bricks, http://www.bigbenbricks.com/
[3] Esben Kolind, http://www.brickshelf.com/cgi-bin/gallery.cgi?m=esbenkolind
[4] Intercity train with automatic sliding doors, http://www.brickshelf.com/cgi-bin/gallery.cgi?f=468684
[5] Esben Kolind, LEGO® PFS commuter, http://www.youtube.com/user/esbenkolind#p/u/5/2s4yFDAOhHA
[6] Freight Wagon Build Instructions, http://railbricks.com/instructions/freight-wagon/



Rerailer

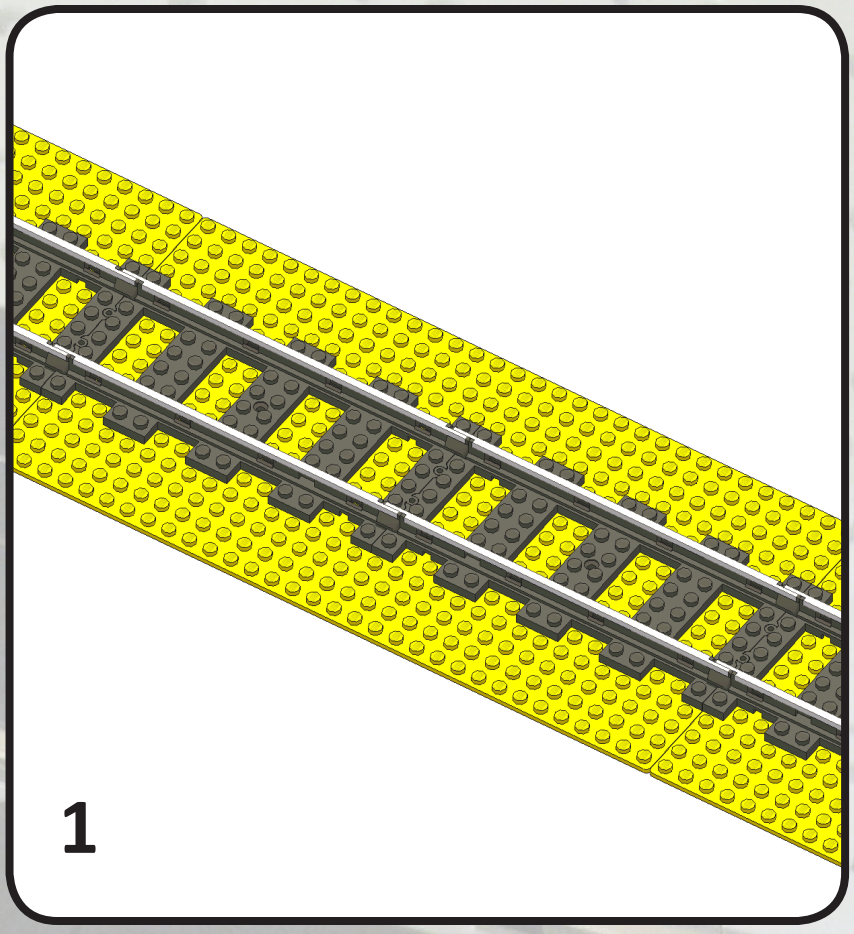
By Benn Coifman

Last year, at a show, I watched one of my trains bump along after derailing. It fell off the table before I could get to it. While I recovered all of the pieces and rebuilt, the event got me thinking about the rerailers all over the HO train set I had while I was growing up. Inevitably, these became crossings for toy cars. It was not until many years later that I came to appreciate the eloquence of the rerailer design. I've tried to borrow the fundamental features of rerailers from the model railroad world, while camouflaging it as a grade crossing. For clarity in the instructions, I've used blue for the road instead of black.

As a derailed wheel-set approaches the rerailer, it will first hit the wedge plates on the outside of the rails. They will push the truck back in line with the track. By the time the truck reaches the 2x2 round tile, the wheel inside the rail should be between the tile and the rail. At this point, the features inside the rails take over pulling the wheels in line. The 1x2 tiles outside the rail lift the outside wheel to be even with the top of the rail, while the paired 2x2 round tiles inside give a tight pinch to pull the truck back on track. Failing that, the sequence of cheese bricks will continue the pressure, until hitting the second pair of 2x2 round tiles for one last pinch on to the track.

It is VERY IMPORTANT with this design to slide the 1x2 tiles flush against the rail. If there is any gap, the rerailer will not work. There are many modifications you can make to this basic design- for example, building the rerailer in just one color if you are not trying to camouflage it. There are also tricks you can do to improve the efficiency. For example, extending the tiles another 2 to 3 studs along the track beyond those shown in this design will help the wheels slide in response to the wedge plates.

I have had about 95% success with this design in tests on the floor. I have found that light-weight two-axle cars are more likely to derail, and have not yet tested the design thoroughly with steam engines, or the newer Technic axle-mounted wheels.



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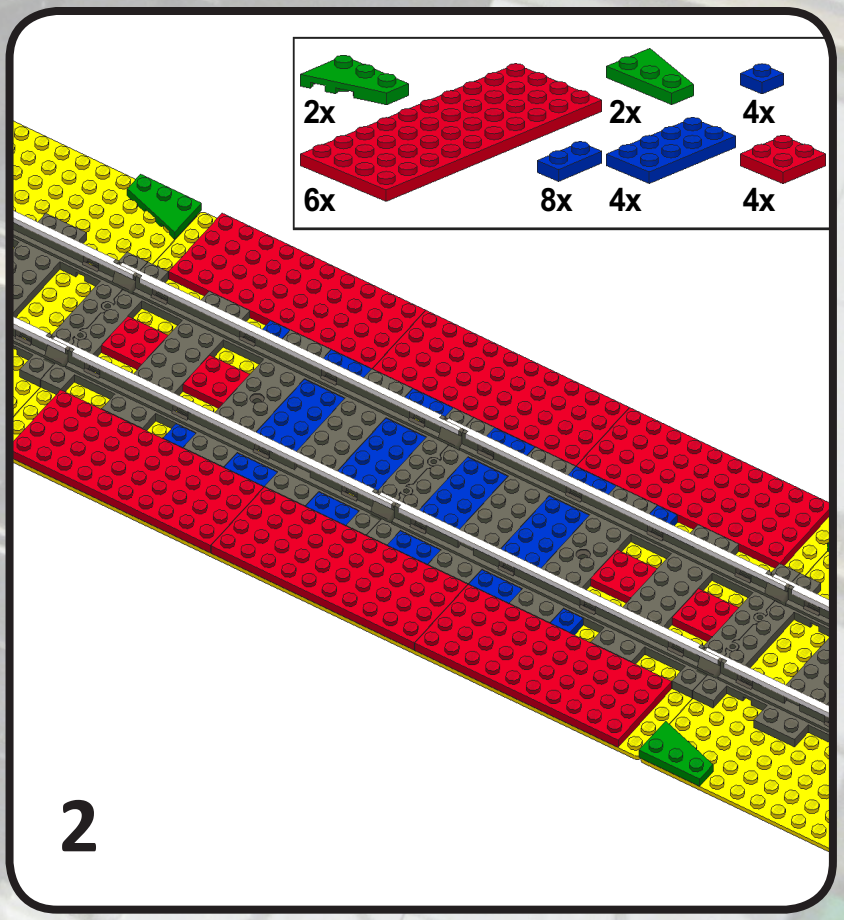

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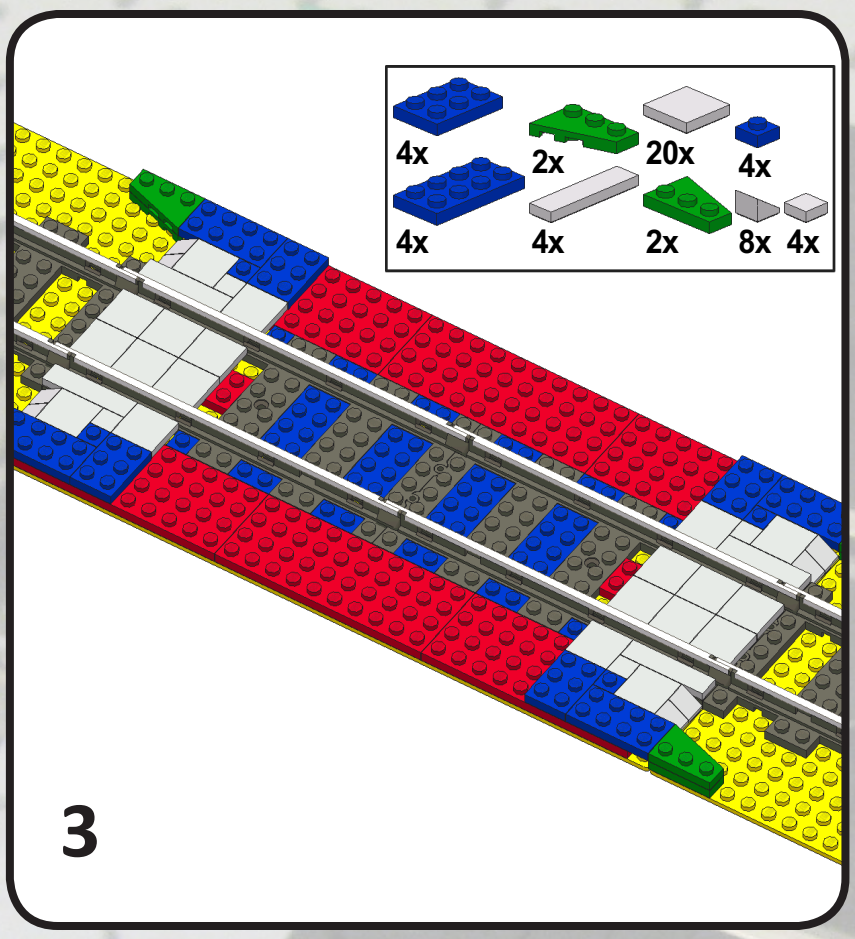
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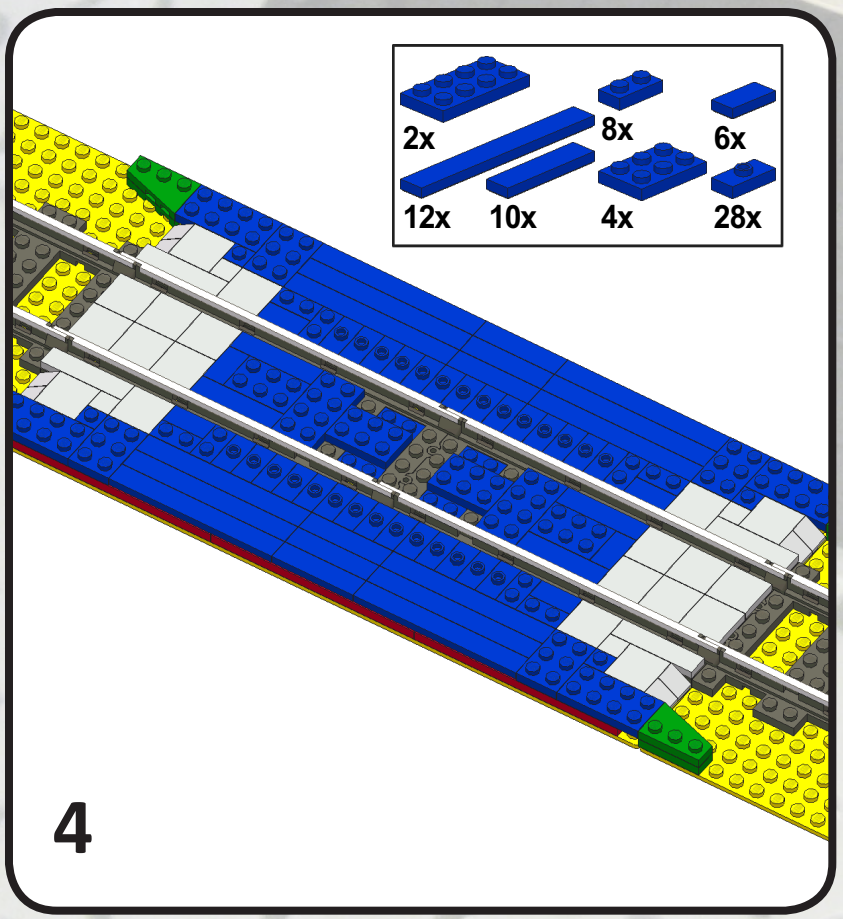
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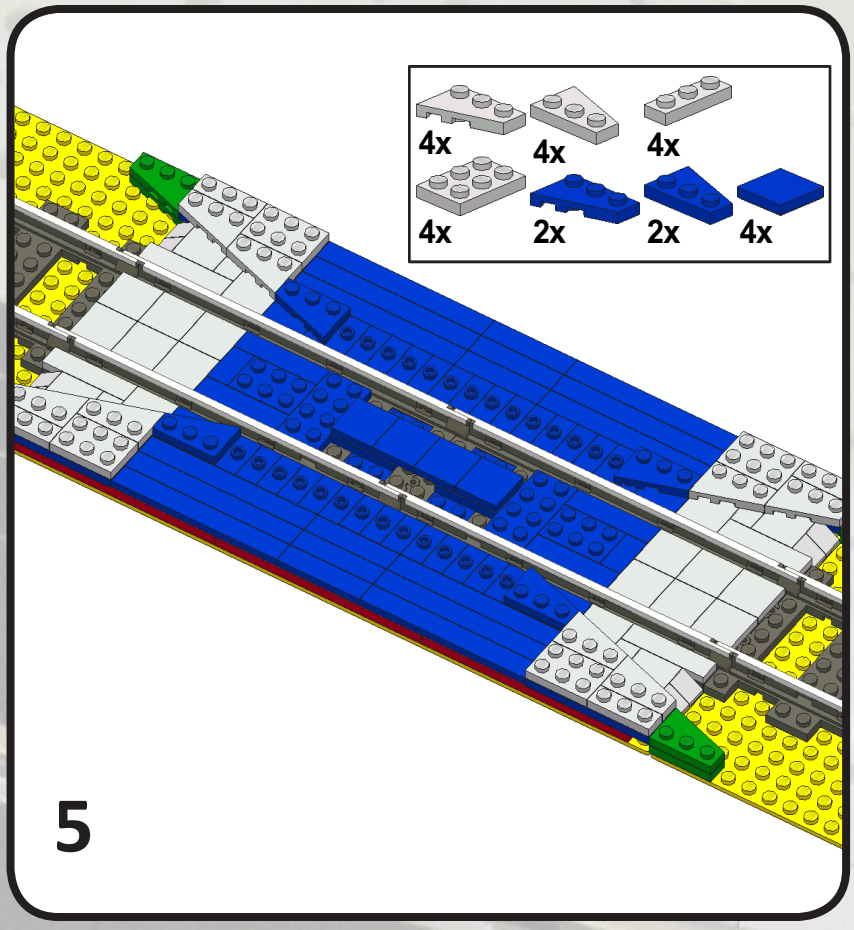

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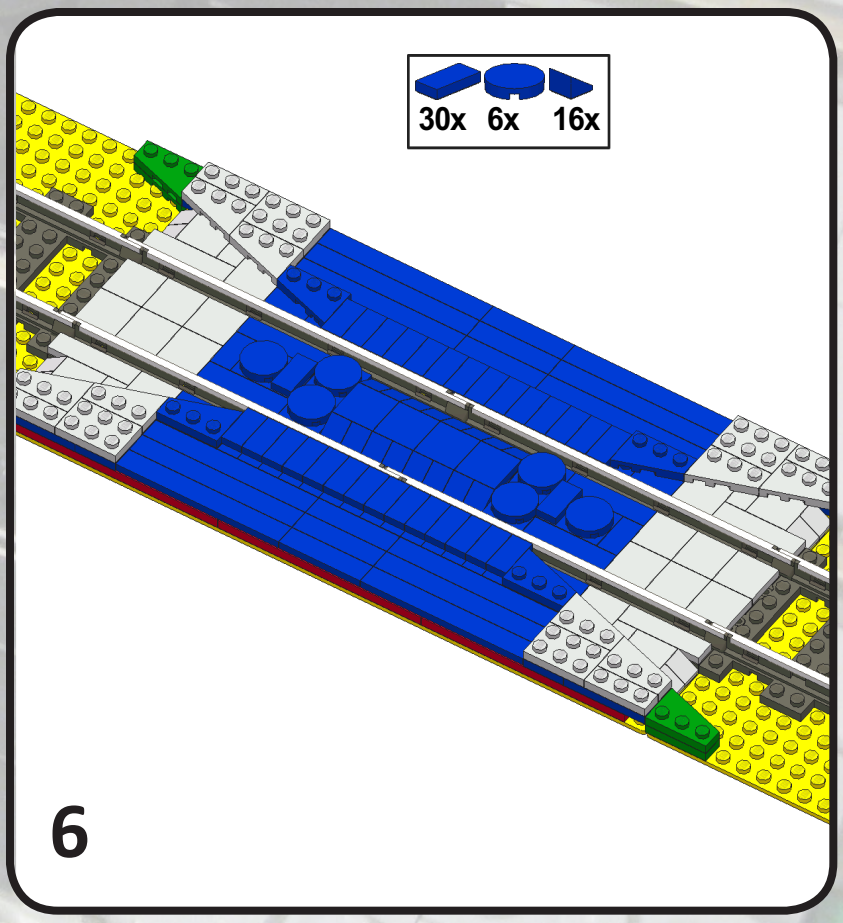

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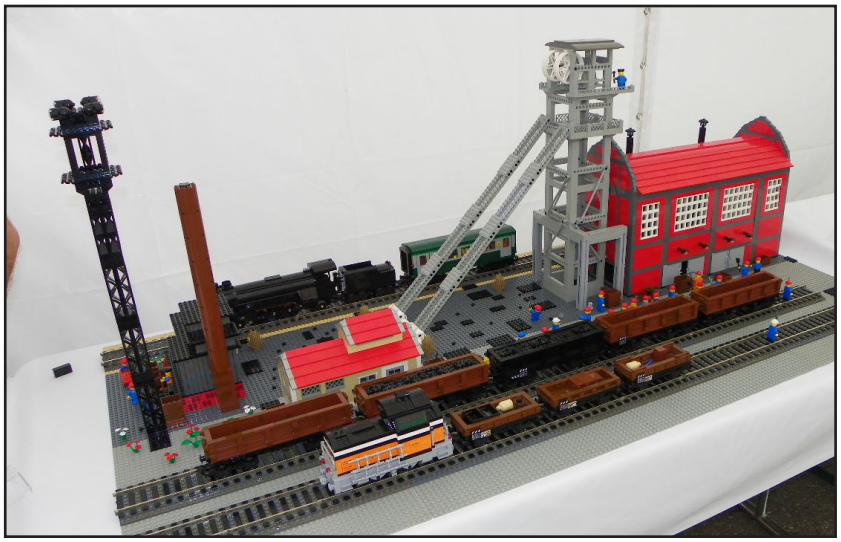
Fana'Briques 2011

Article and Photos by Didier Enjary

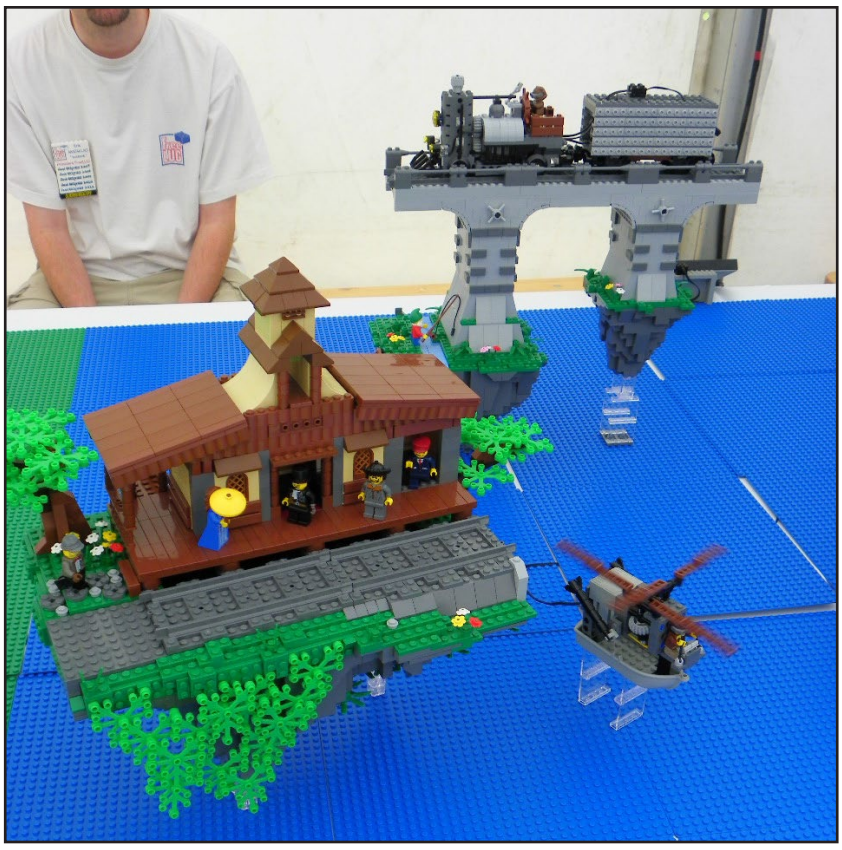
Since 2006, French AFOLs each year have organized a LEGO® exhibition in Rosheim, a few miles away from the German border, near Strasbourg. This year's edition reached impressive figures, with about 90 exhibitors from 6 different countries, 120 volunteers and 8300 visitors (to be compared with the 5000 inhabitants of the city) over 3 days.

The usual GBCies, giant Technic cranes and Star Wars ships were part of the show. The giant map of Europe project by Tobias Reichling was also there, appealing to both young and old, but the most noticed item was, for sure, the minifig-size cathedral of Köln made of 1 million parts. In addition, trains were everywhere. Let us have a tour.

LEGO Europe Map (seen from North, heading South)



Two FreeLUG members had trains on exhibit. Eric Letang displayed a diorama featuring a coal mine and its track line, with a modern diesel shunter and its brown cars, inspired by a model from the RB catalog, and a steam train, a personal rendition of the Emerald Night in black livery.



Erik Amzallag presented a work-in-progress of his Steam Punk train layout (station, bridge), floating on rocks. He presented a final version a week later at Japan Expo, Paris [1].

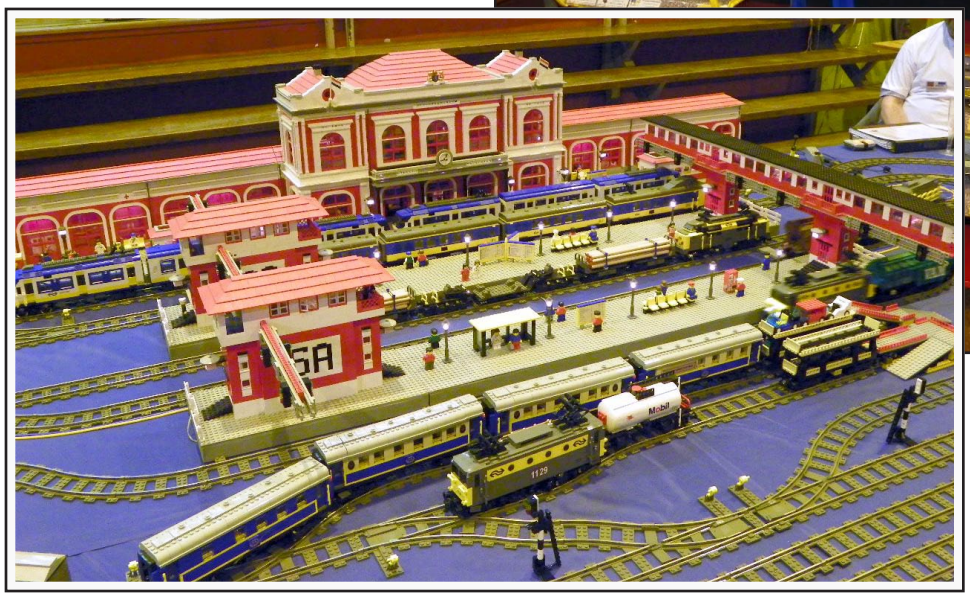
[1] http://railbricks.com/index.php/blog/train-is-in-the-air/

The guys from Switzerland had a large city layout featuring various trains.

As the theme of the exhibition this year was firefighting, SwissLUG members demonstrated the minifig firefighters' courage with this train wreck involving gasoline-filled tanks.

BlokBricks.nl, well known for its custom models, not only went with a complete collection of engines and cars but also with a rendition of the Spoorwegmuseum[2]. Well done!

[2] http://www.spoorwegmuseum.nl/home.html



Gerard Salden, a builder from The Netherlands, seems to be in love with France. He has built the French-born TGV (high speed train) in the most eye-catching liveries.

Pierre Normandin, LEGO Designer, not only brought with him the Maersk train he designed, but also offered one of his Cargo Trains, set 3677 [3] released in September, for an auction. It ended up in a 250 euros bid (approx. 360 dollars)! Pierre can smile; his Maersk train is a best-seller at LEGO.

LEGO Designer Pierre Normandin, with LEGO France representatives.

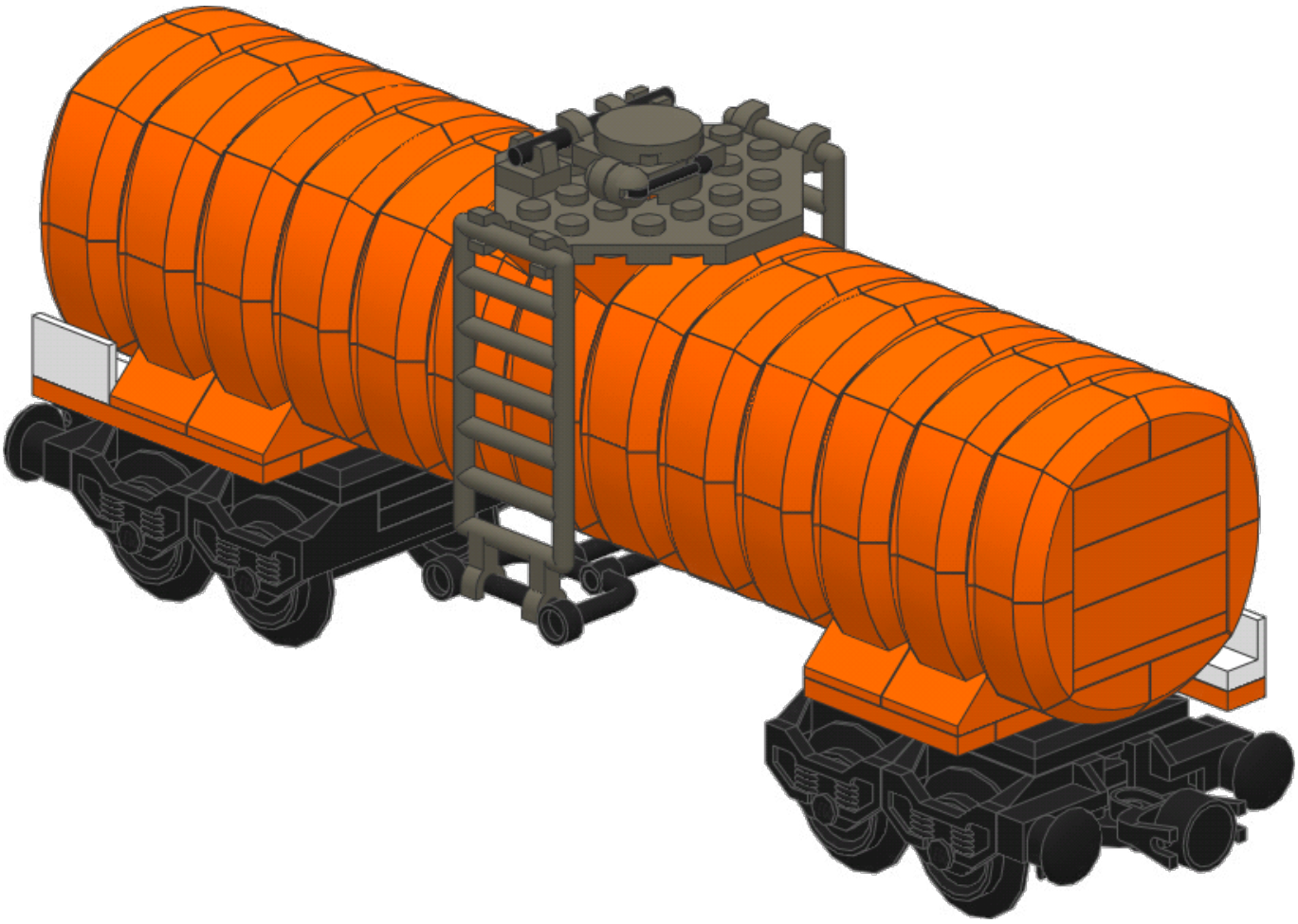
[3] http://railbricks.com/index.php/blog/lego-3677/

Jean-François Chassaigne, from Belgium, is a former railroad modeler who has found more fun with LEGO. At Fana'Briques this year, he presented a LEGO rendition of Mariembourg's roundhouse, with steam engines by Vincent Meeuw.

This creation will feature in a larger and collaborative project - with BeLUG and FreeLUG members - around the station and yard of Treignes and Mariembourg. It will include a roundhouse and water tower.

Daniel Dax is a young builder from Luxembourg and MBFR member. He reproduces rolling stock from his country, which can be highly diversified as Luxembourg is in the heart of western Europe. He has a studded and colourful style, just like LEGO.

Visit Fana'Briques Online at http://www.fanabriques.fr

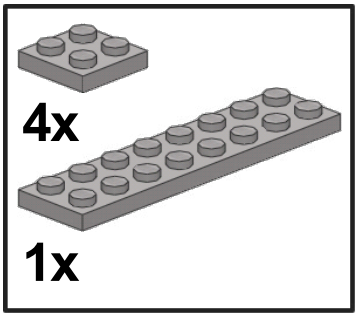


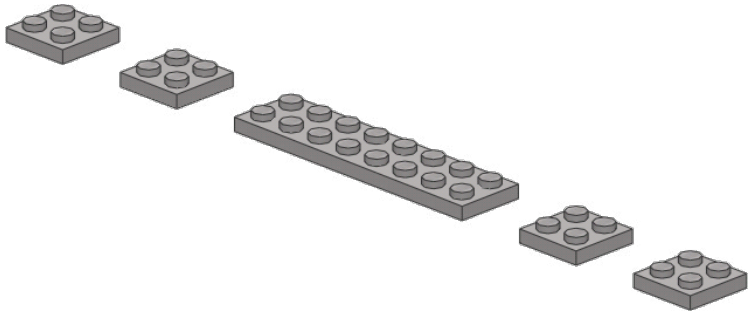
Corrugated Tank Car A

Instructions by Anthony Sava

Inspired by the designs of Casey Mungle, James Mathis, and the original design of David VinZant.

1





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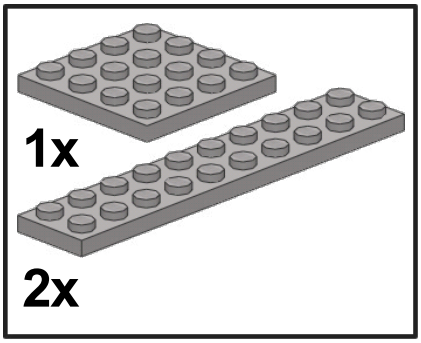

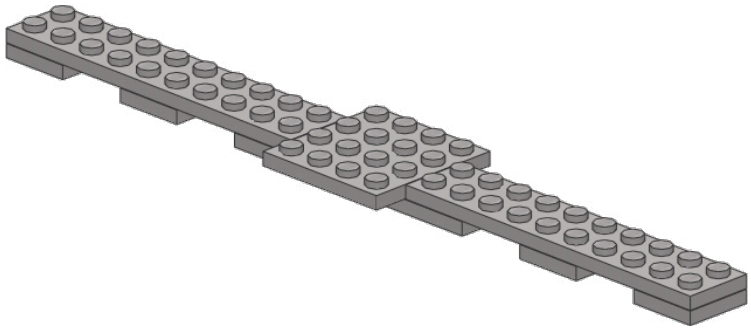

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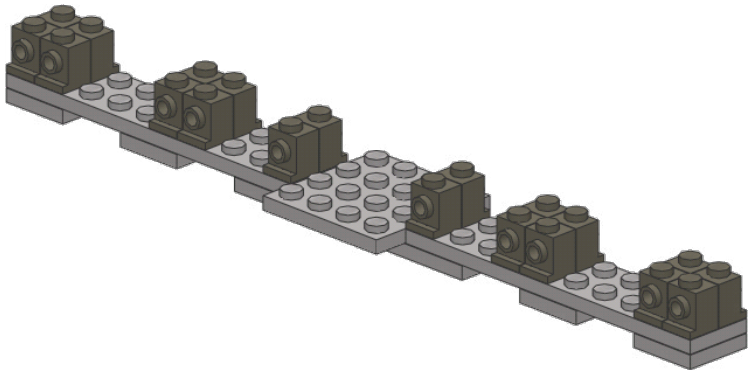

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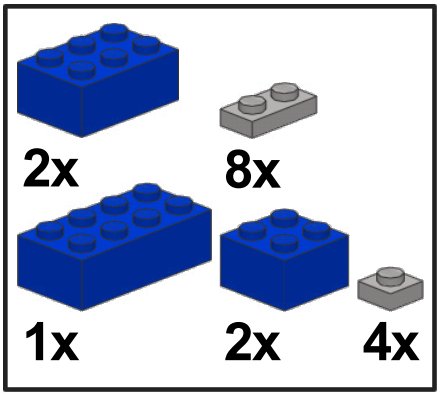

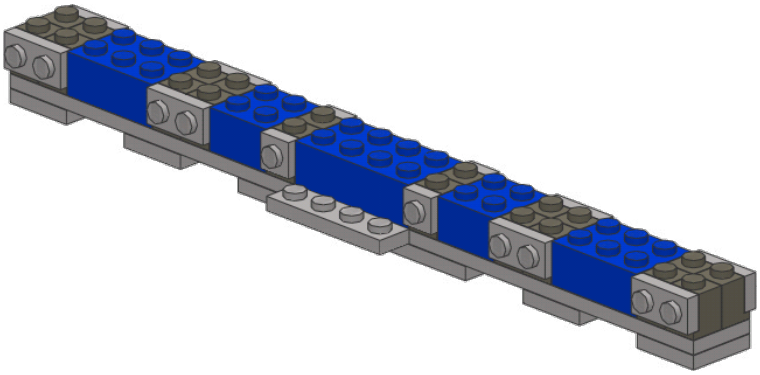

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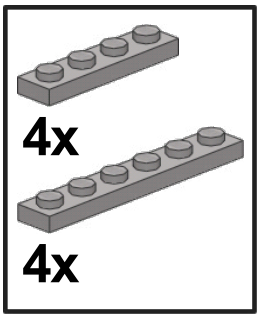

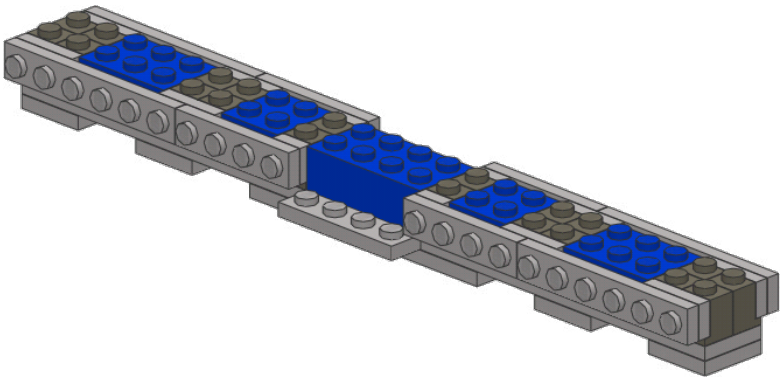

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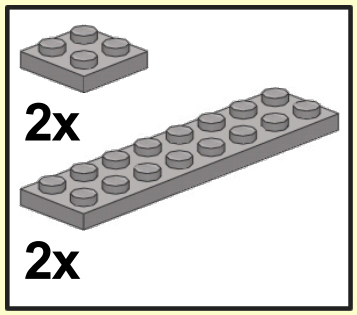

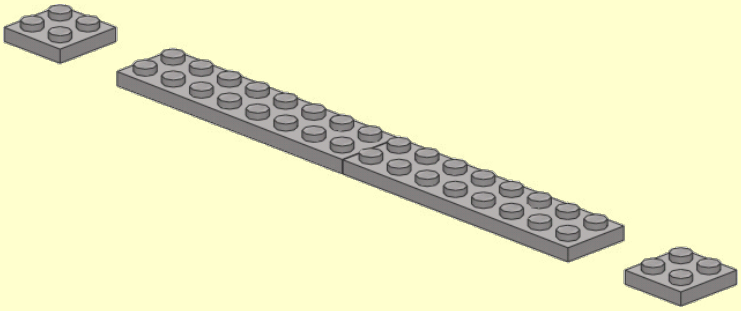

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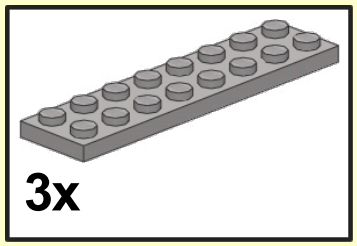

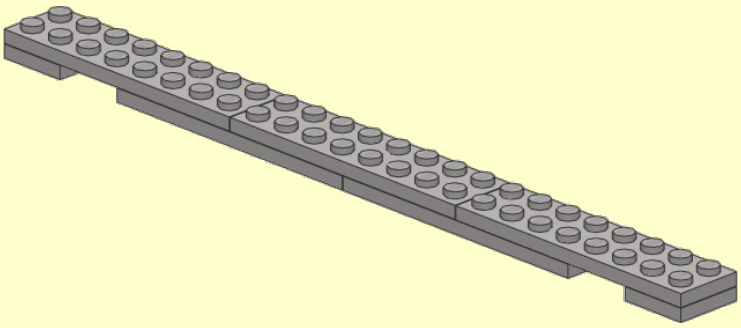

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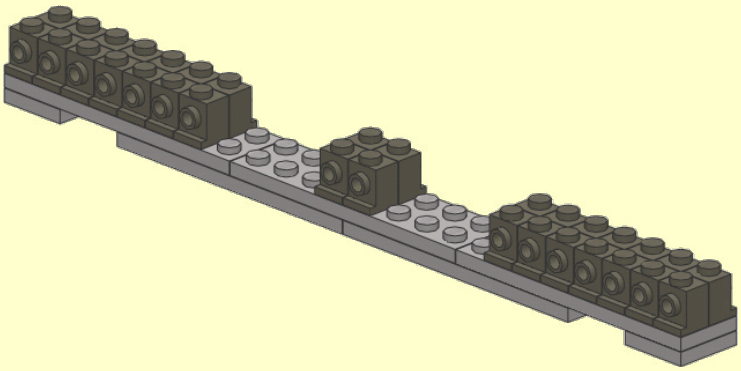

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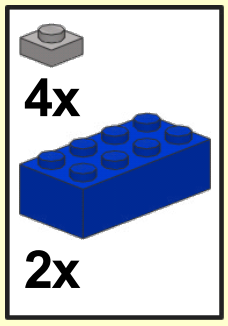

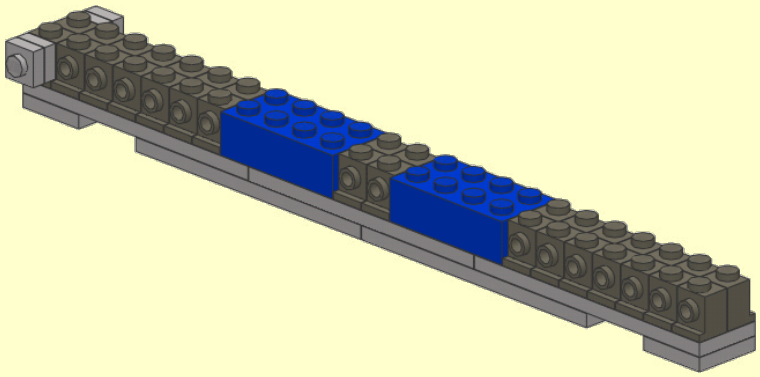

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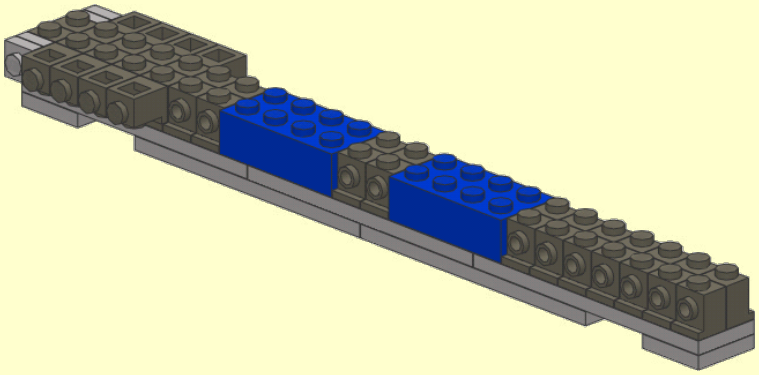

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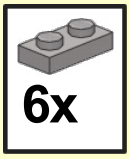

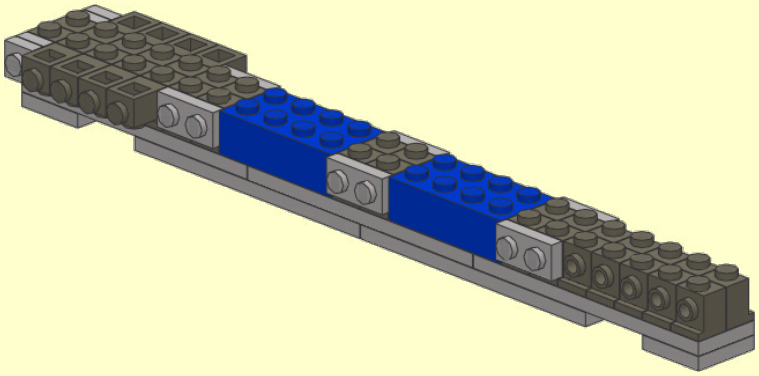

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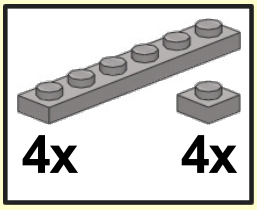

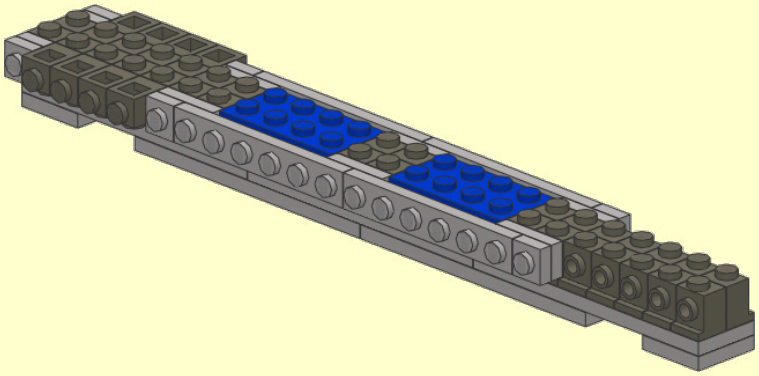

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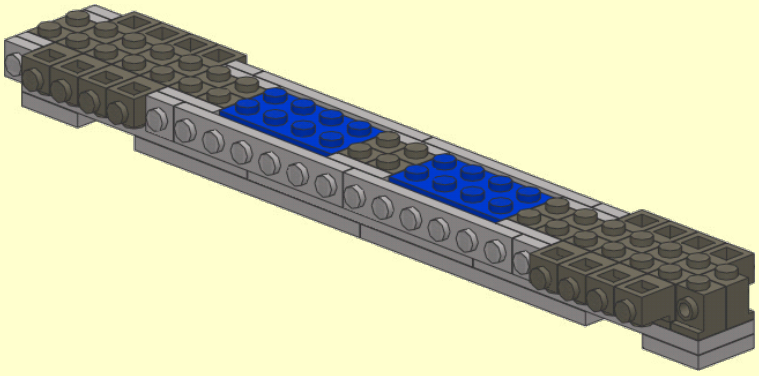

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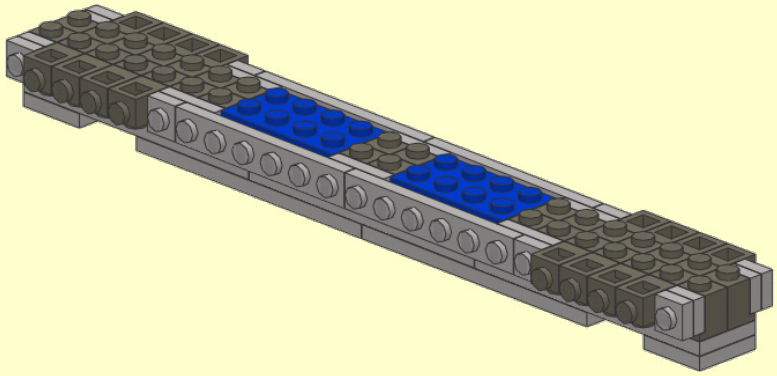

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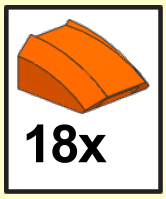

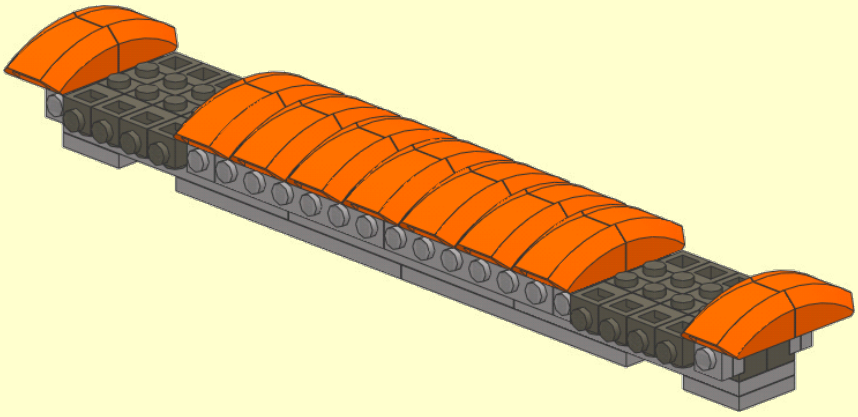

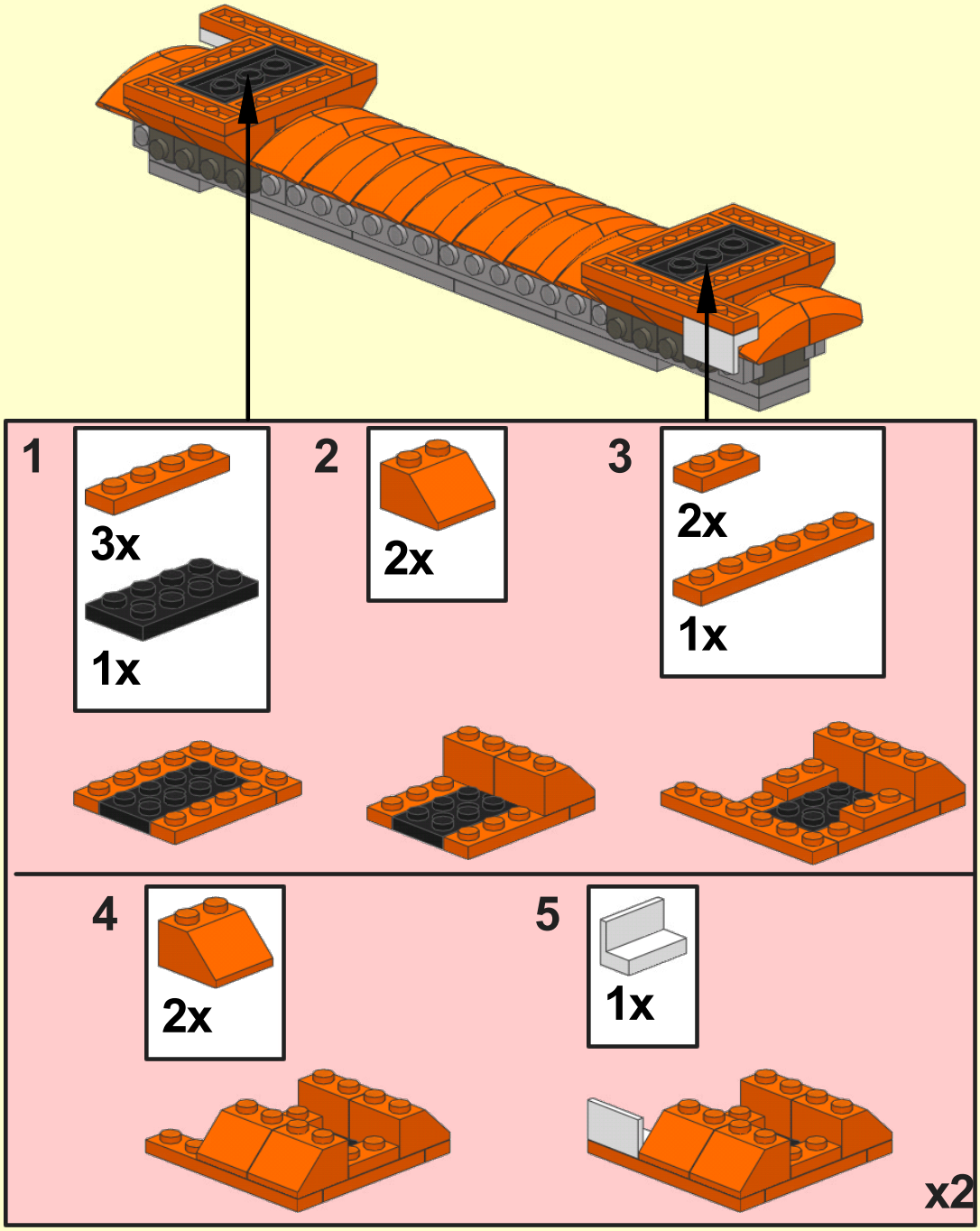
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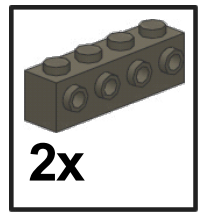

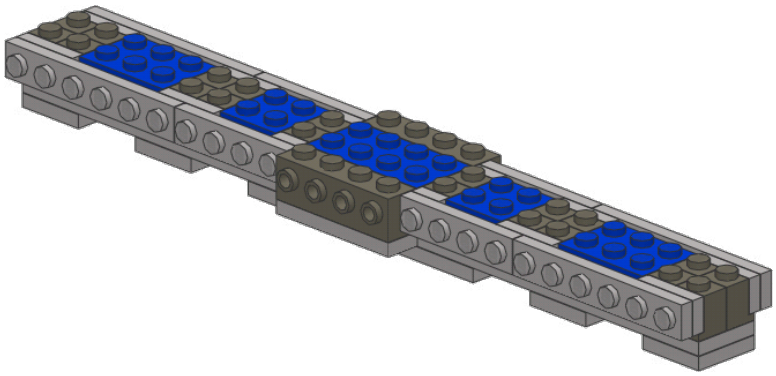

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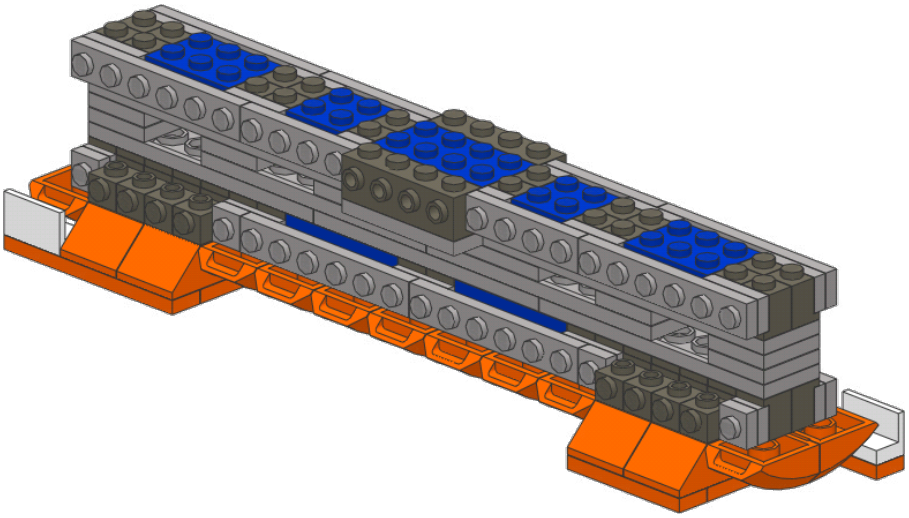

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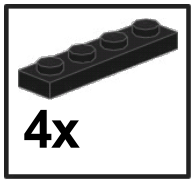

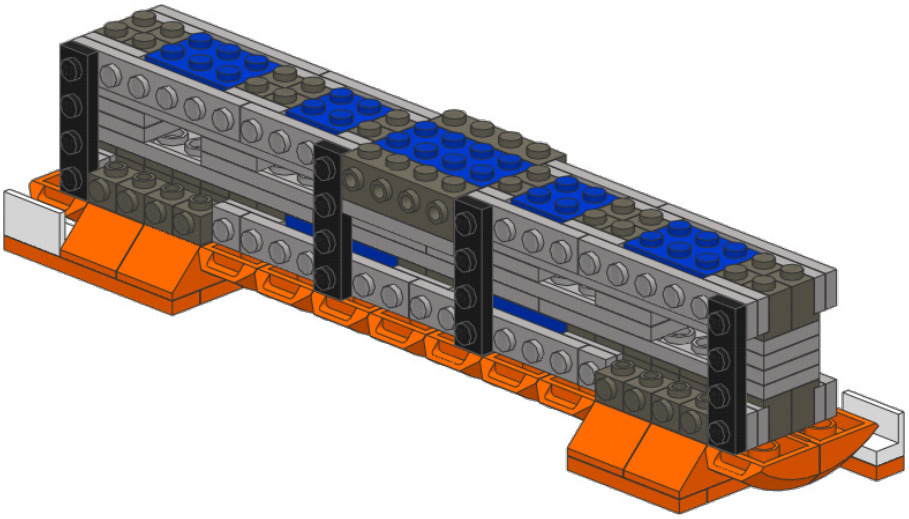

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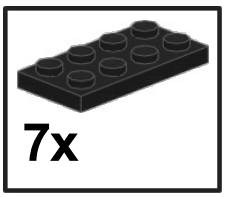

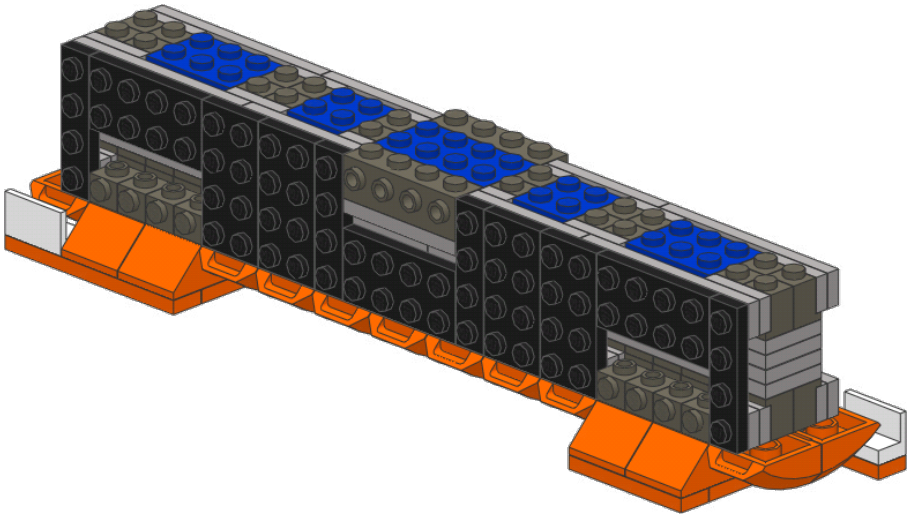

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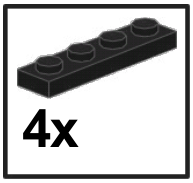

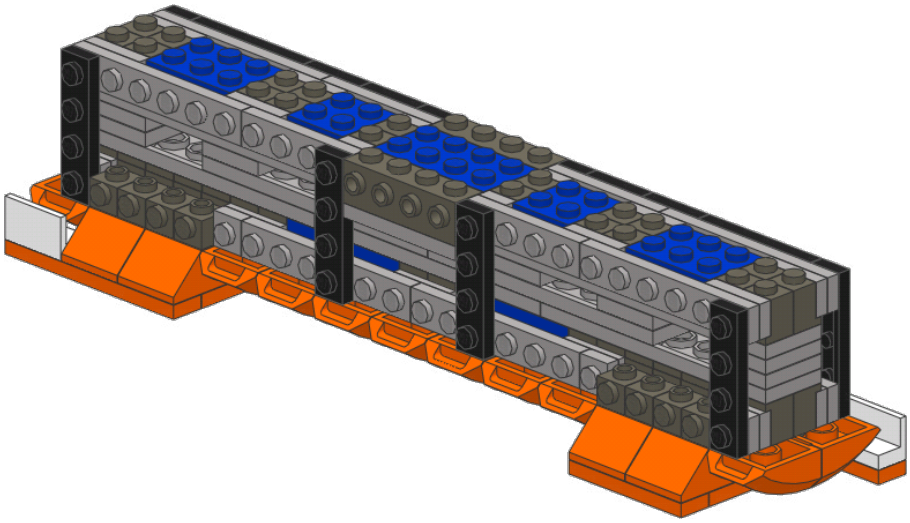

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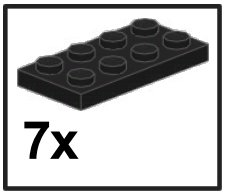

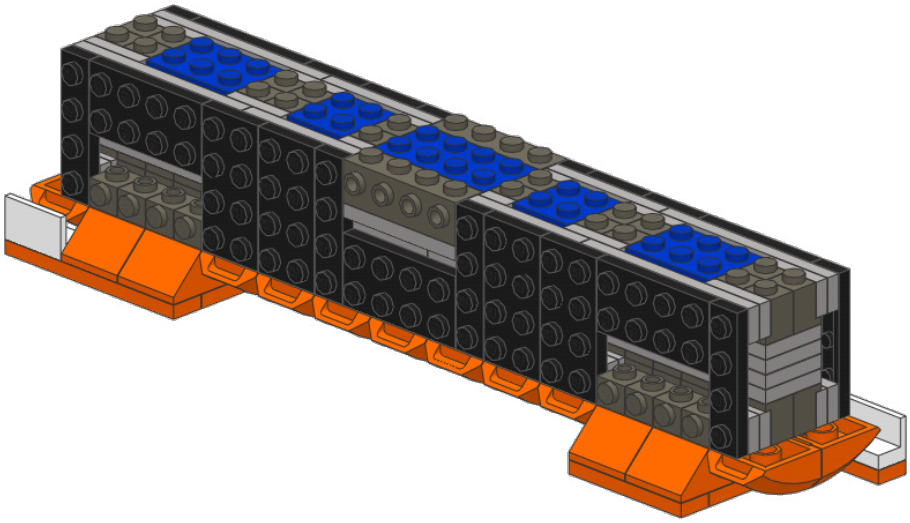

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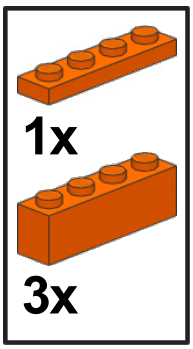

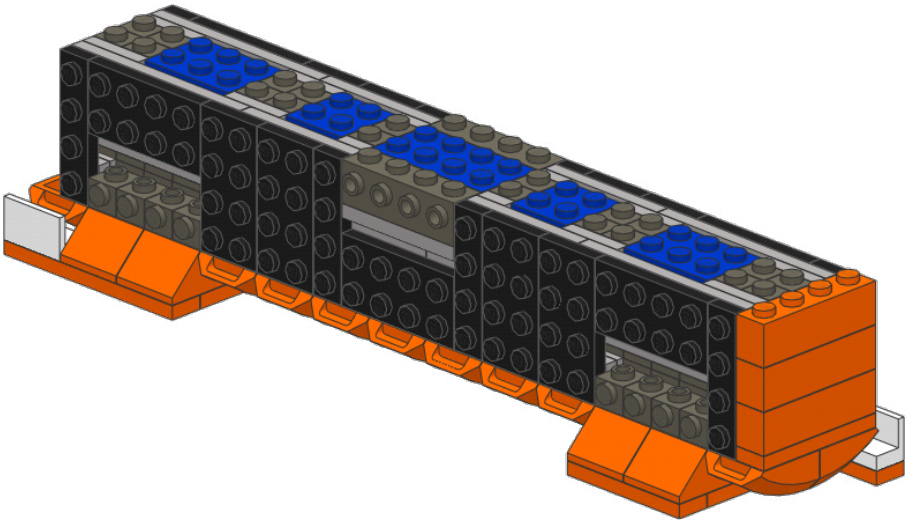

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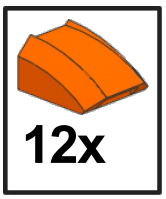

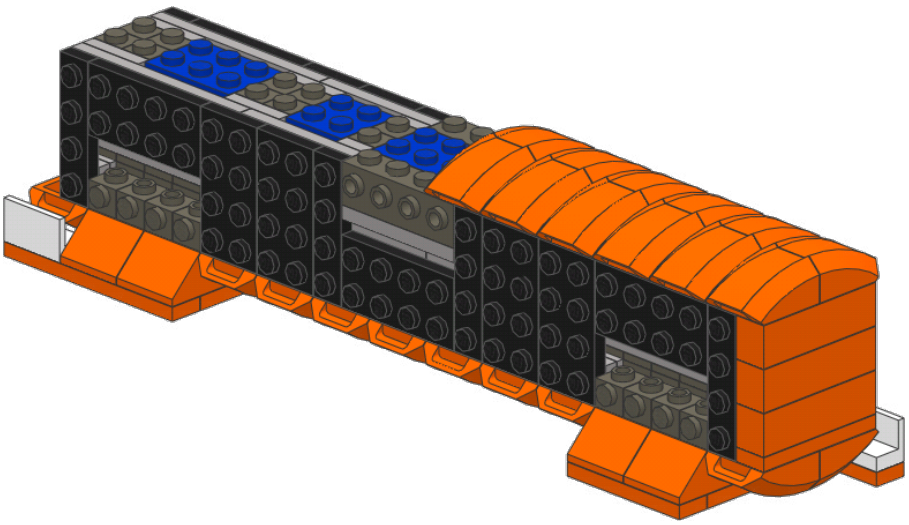

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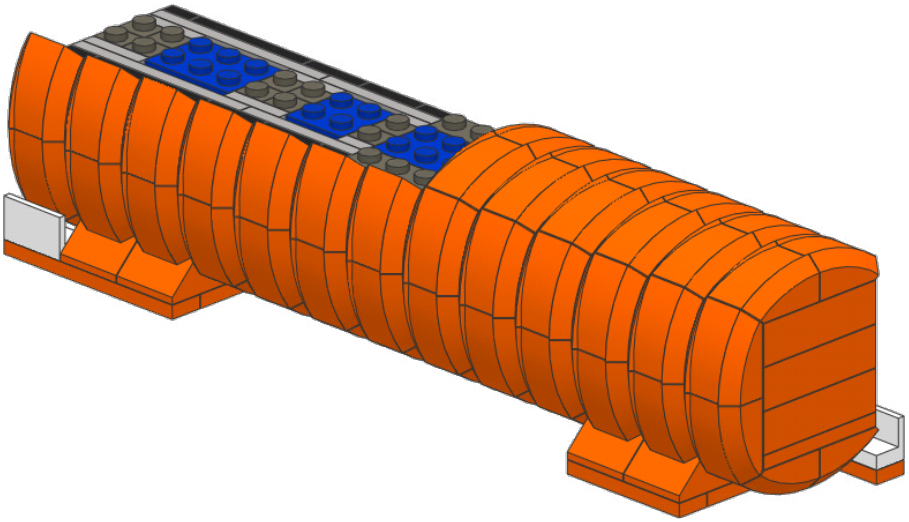

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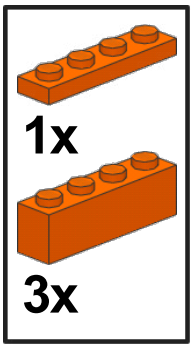

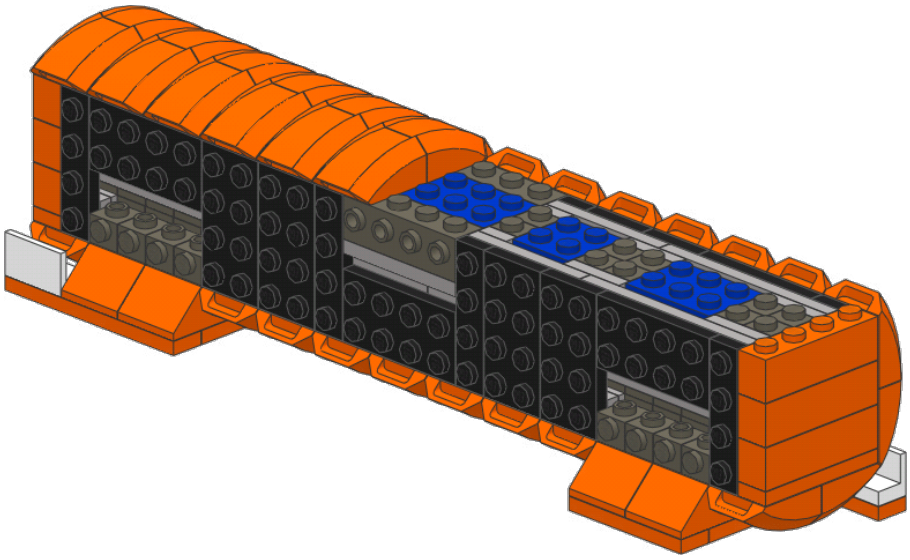

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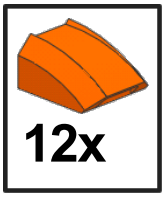

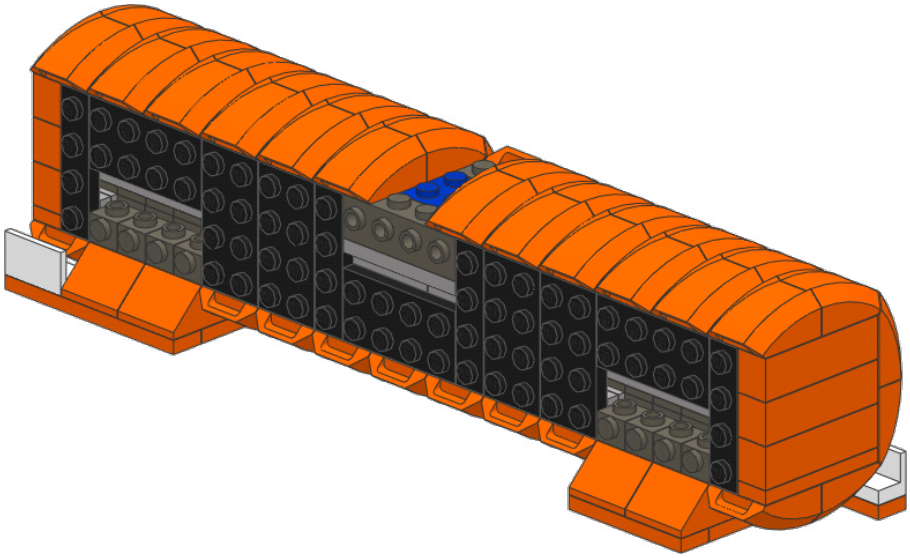

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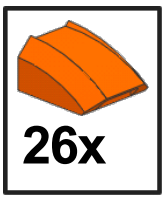

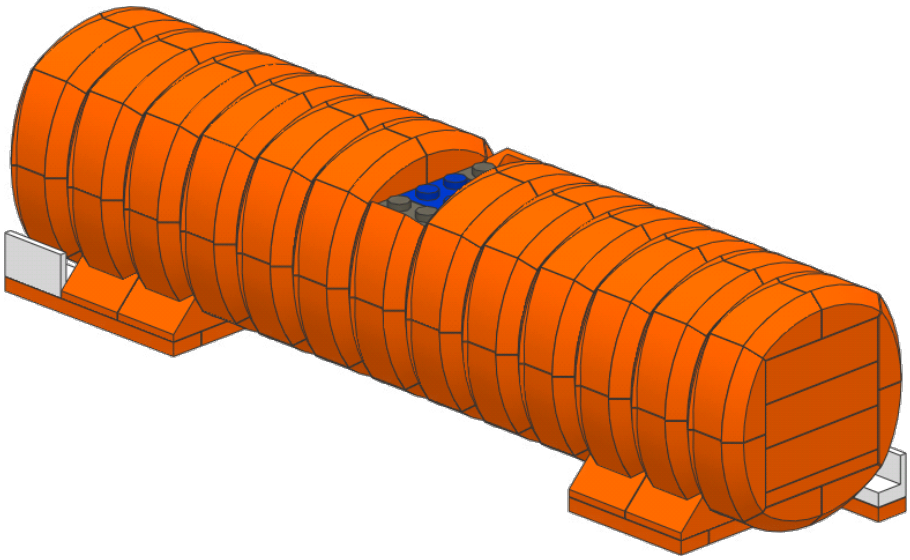

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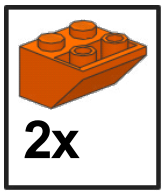

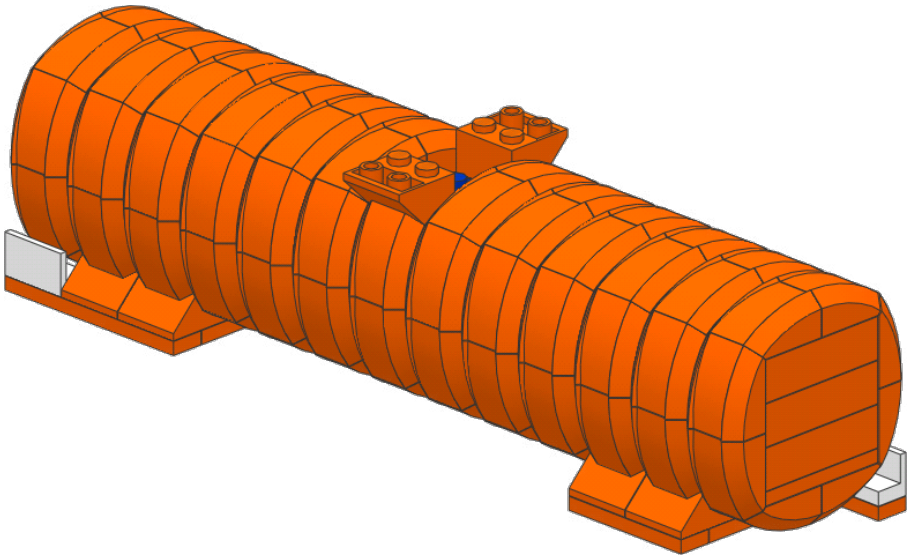

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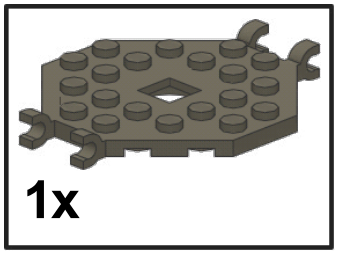

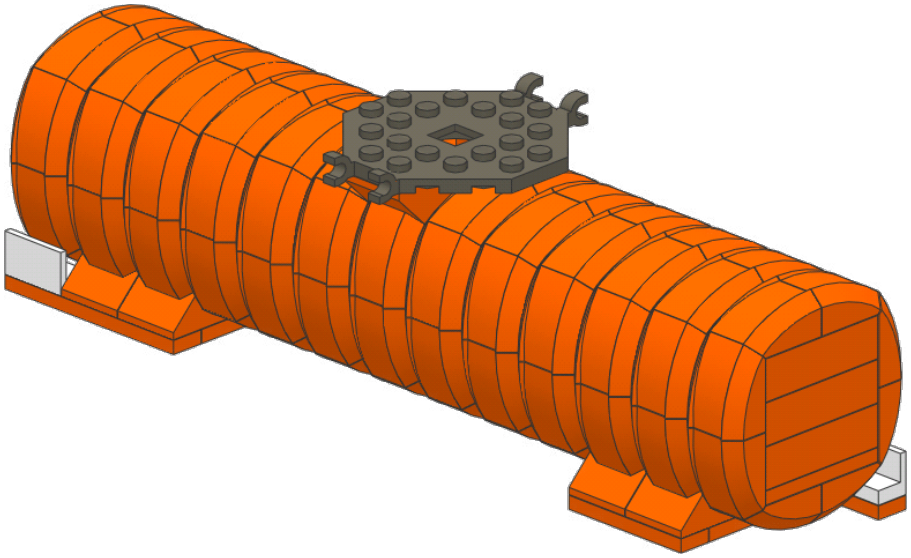

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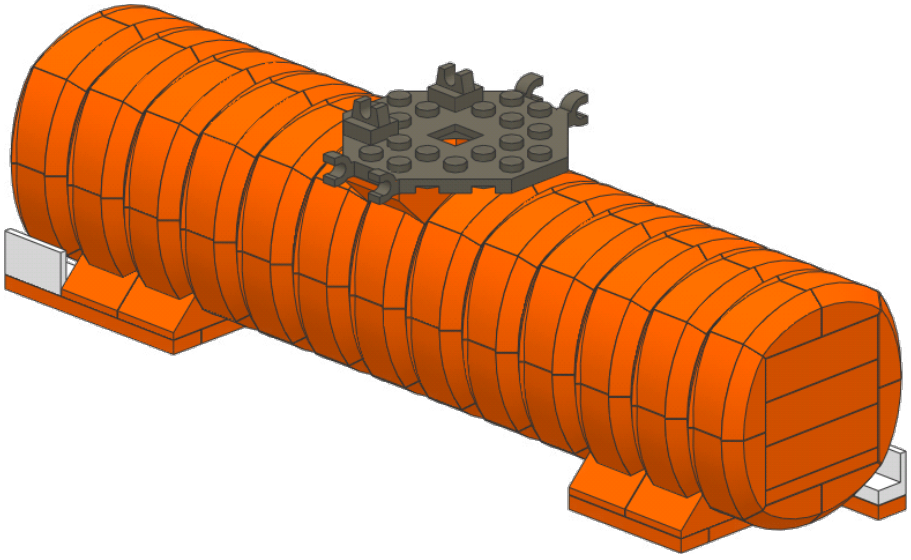

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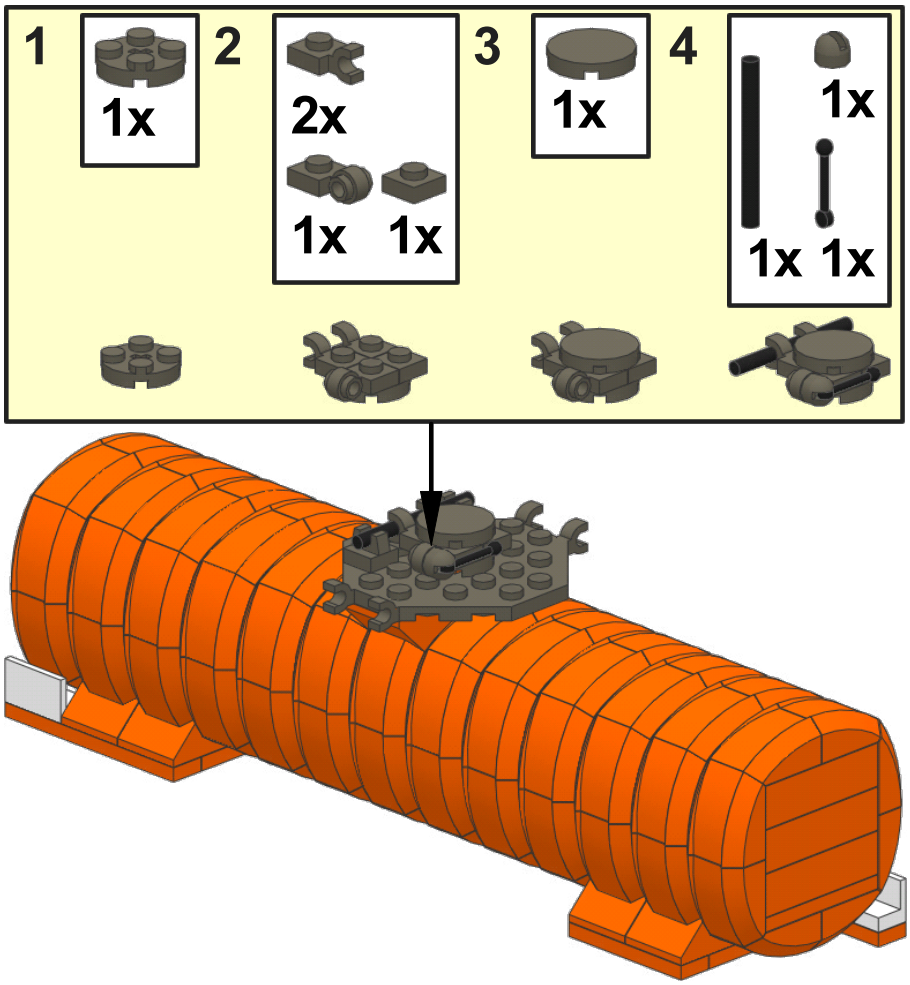

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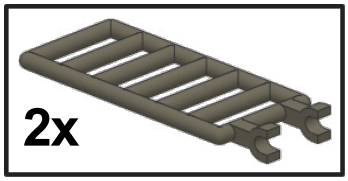

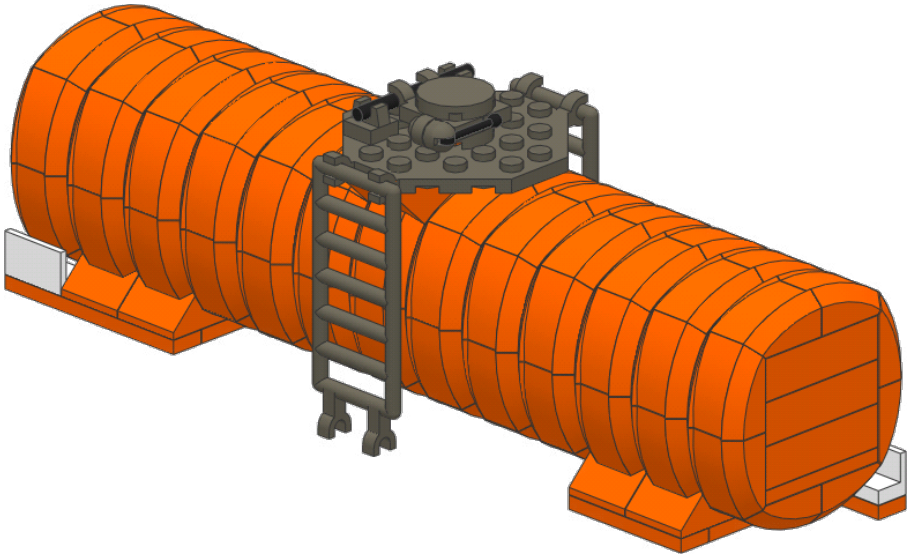

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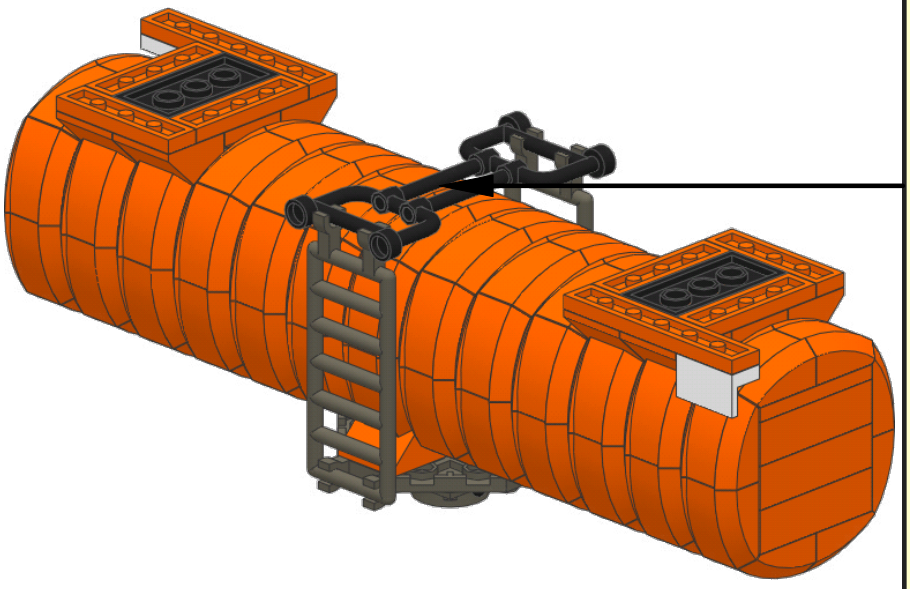

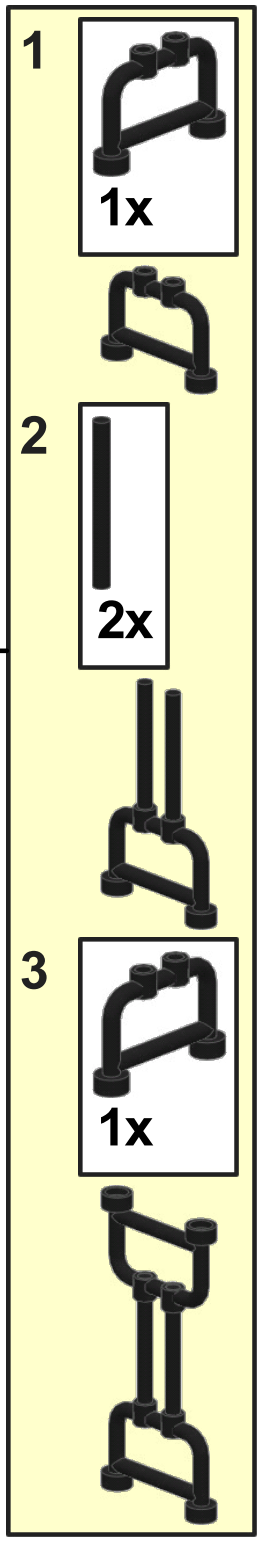

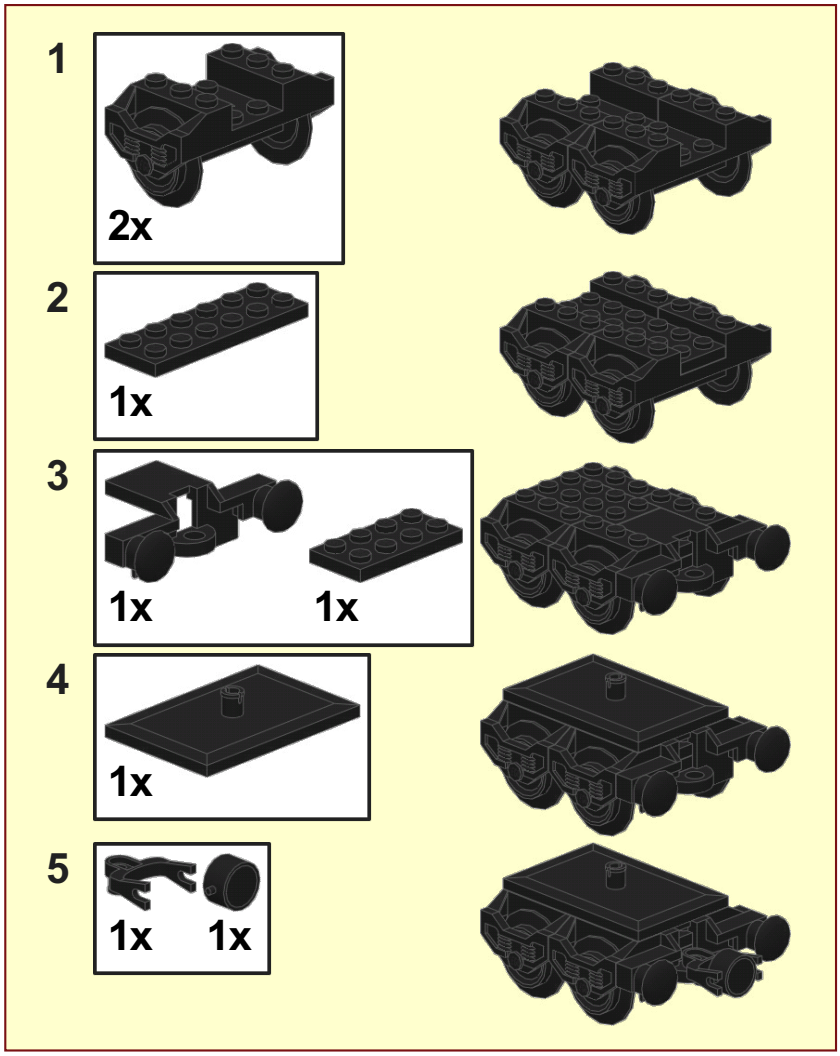

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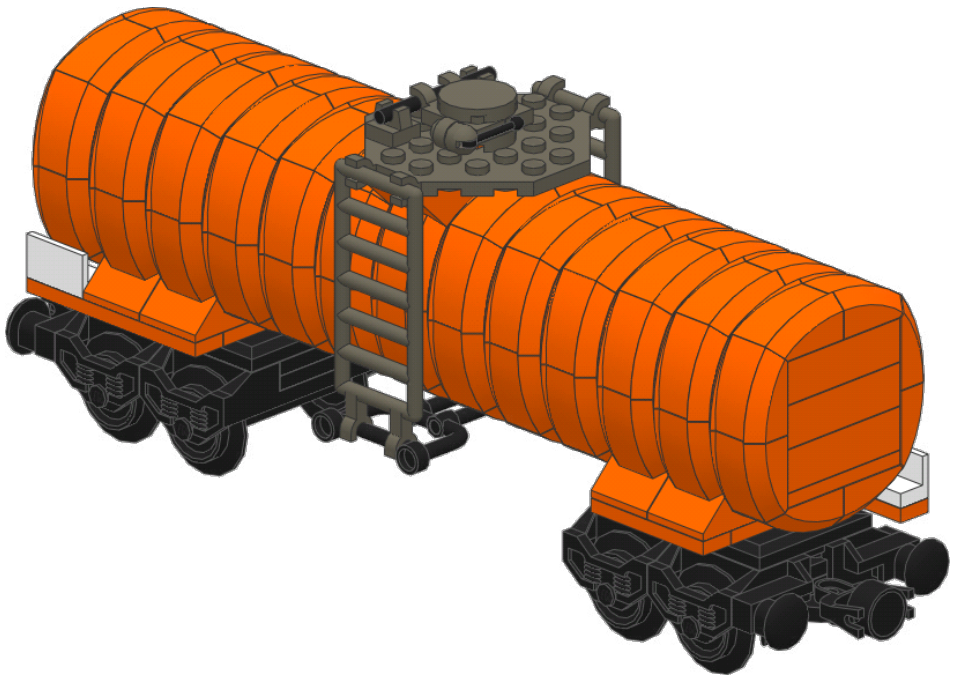


Superliner

By Benn Coifman

I have wanted to build an Amtrak® train for some time. I have fond memories of the Superliner® cars, so last fall I set out to build a set of my own.

The Superliner cars were built to replace the large fleet of heritage cars inherited from the predecessor railroads, most of which dated to the 1950s. The original design was an improvement on the Budd built Hi-Level cars used on the Santa Fe, which were perhaps the most advanced passenger cars in the U.S. prior to the formation of Amtrak 40 years ago. Some of the Santa Fe cars still remain in Amtrak service with the Superliners. Like the Hi-Level cars, the Superliners are double-decker. Most have passenger space on both levels. The passage between cars is on the top level.

The first series of Superliner cars were built by the Pullman Standard Co. and they were the last cars the company built before closing up shop in the early 1980's. To honor the end of the Pullman era, the final Series I car was a sleeping car named the "George M. Pullman". Series II Superliner cars were subsequently built by Bombardier Transportation with only minor changes from the Pullman designs.

I chose to model the Phase 3 paint scheme, when most Amtrak trains were pulled by F40's. James Mathis's Superliner design was among the best I knew of, but I wanted to move away from the expensive baseplate and I thought that the club car windows that wrap over the roof would be among the most challenging features to design. After seeing Bill Ward's F40 I was convinced that making an attractive model of the locomotive would be doable, so I did not put any further thought into the locomotives until after the cars were complete.

I set about searching the web for lots of photographs, sketches, and information about the Superliner cars. The actual cars are The actual cars are 10 ft. x 85 ft. x 16 ft. Translating that into bricks, they would be 6 x 51 x 8 using 6-wide as a fixed constraint. At this scale the coach windows would be about three studs wide and one brick tall. Tweaking the dimensions to be easier to work with, I settled on a 52-stud long car design with windows that are 4 studs wide and 4 plates tall. Except for being a hair too tall, the dimensions of these models are proportionate to the prototype. I wanted the cars to be able to handle all standard LEGO track geometries, which they do, though the center of

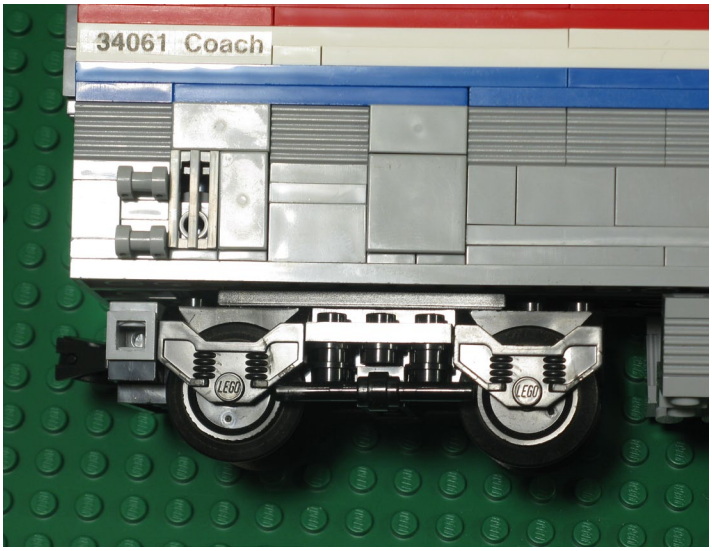
the car crosses the inside rail on curves. If one used 8-wide and extended the length another 16 studs, the car height and window dimensions I used would also be proportionate, but the cars would be too long to handle standard LEGO curves.

I did most of my design in MLCad, though over the course of the design I built about a dozen small mockups to get the scale and features right (see photo of examples). I first designed a sleeping car, then the club car, and then built the two in real bricks to test clearances and choose between two diaphragm designs. The only change I had to make was to move the grab irons one stud in from the end of the car to facilitate clearance on curves. With cheese bricks, the club car windows were easier than anticipated, but the zigzag in the club car stripe would be a bigger challenge. I contemplated brick-built solutions, but ultimately settled on stickers to retain the structural strength of the model. I then went back to round out the set with a diner, coach and coach-baggage. Window and door placements were sometimes constrained by the 1x2 profile bricks. The car roofs were enabled by my club's LUGBULK purchase.

The car design has several subtle features used to better capture elements of the prototype. The diaphragms are much thinner than found on LEGO sets. They are about 1/3 the width of the car, and the end doors are not flush with the bulkhead; they are set in half a stud. The bottom of the car sides are tapered inward, for a streamlined effect and to break up the boxy appearance that LEGO is prone to at this scale. Various access doors are highlighted with half-plate offsets.

The cars are designed to couple with the diaphragms touching, as shown in a detail photo. Of course the train cannot easily negotiate curves like this. My primary solution is to insert a loose magnet between cars to get the necessary one-stud spacing. But anticipating that I may someday find myself at a show without any spare magnets, I added an extra mounting point so that I could shift any truck out by one stud. Finally, I did not yet know how I would propel the train, so I designed the trucks to be interchangeable with a 9v motor in case I needed extra power. The trucks themselves were also a tradeoff. I wanted to keep the lower friction of the standard LEGO wheel holder, while still conveying the trapezoidal shape of the real trucks. My solution was to add a light saber bar to form the bottom of the trapezoid.

The next challenge was figuring out the zigzag on the club car. One has to be a little adept with a graphics program to undertake my solution. I settled on using Ink Jet Decals for windows (as in glass windows, not



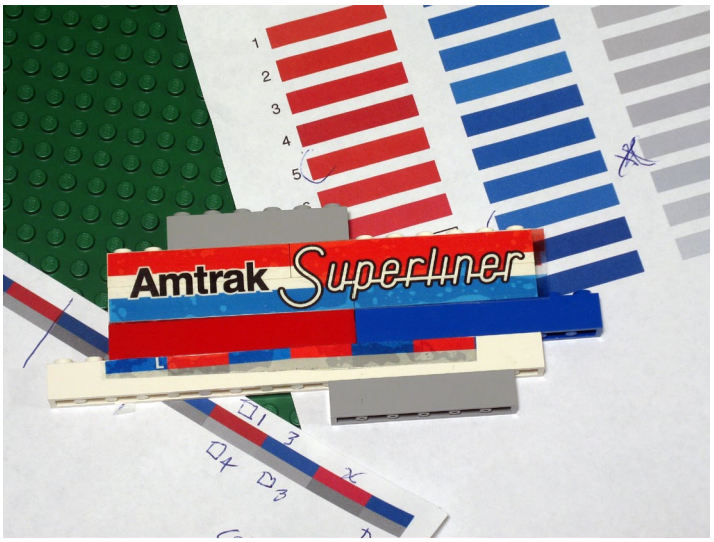
the OS - I used Avery 53212, though other brands are available). These stickers are transparent and they can easily be repositioned. I wanted a red, white and blue stripe on a gray background. Since the gray bricks would have shown through the stickers, I built the area in white and would mask the edges in gray. This process required measuring the size of my printout to ensure it matched that of the LEGO bricks, and matching colors from my printer with actual LEGO bricks. Since I was going this far for the club car, I decided to also use this technique to do the Superliner logo on the rest of the cars. Surprisingly, finding a good shot of the Superliner logo was particularly challenging. Since the decal paper is over $1 per sheet, I used paper printouts for my first attempt at matching the colors, as shown in the top right of my color match picture. Light behaves differently when bouncing off white LEGO, so the resulting colors on the decals were too washed out, as seen on the Superliner logo in the center of my color match picture. So I resorted to making test strips of much darker colors, printing them to decals, and applying them to Lego, as shown on the bottom of the color match picture. Once I found sufficiently close colors, I printed off a decal sheet to fill the waiting white spots on the cars (remember, it needs to be hand cut).

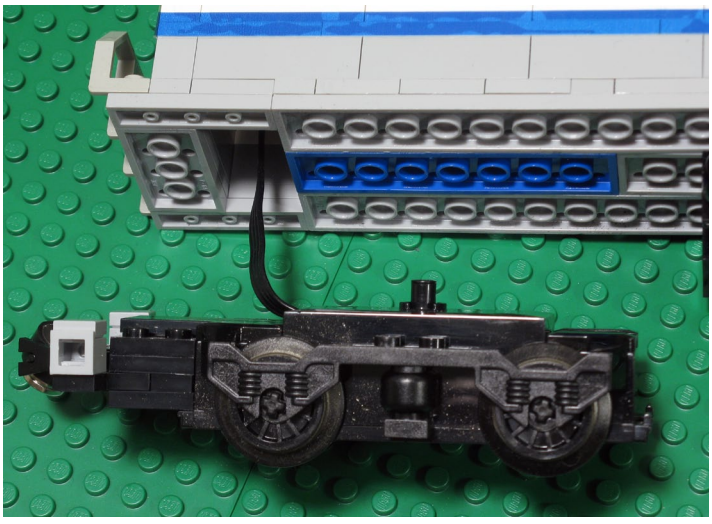
With the cars built, my attention turned to the locomotives. About the same time that I was starting on the locomotives, the PF train motors became available individually. So I decided to aim for a design that could use either PF or 9v motors. The PF option limited how much fancy SNOT work I could do on the inside of the car body. I wanted to get all of the major roof details, so that defined the size of the model. In practice they should actually be a few studs shorter to be proportionate. For the stripe I wanted to build studs-up around most of the engine but studs-forward on the nose. This choice constrained me to five plates tall for the stripe and meant stickers all the way around

the locomotive, which in turn further limited how much SNOT work I could do on the sides. With all of the detail on the roof, I was happy with the tradeoff.

Since these locomotives were my first venture into the PF train motors, I decided to build that option first. The IR receiver is hidden in the cab behind the windshield of the lead unit; as a result, you have to be standing in front of the train to control it. I put a battery inside and two motors below. One nice advance over the RC train motor is the integrated wire: as illustrated, the rear truck has a layer of plates and tiles holding the coupler where the older train motors would have had a power connection. As a result, the two motors can be oriented the same way. This eliminates the need for a pole reverser switch to power the second motor. I was sufficiently pleased with the PF operation that I have yet to try it with 9v, though mind you I've tweaked the train and locomotives for optimal running (see, e.g., *The Long Haul* in RAILBRICKS #2).

With seven cars and two engines the train was about 12 feet long. Everything looked great and seemed to run fine on my small test track at home; of course the train stretched around three sides of the loop. That is where the next problem kicked in. The train was always in three curves on my test track, making the motors work extra hard. After about 10 min of running the IR receiver overloaded and would drop out. After cooling down for a second or two it woul d kick back in at full power, usually with enough force to break the magnetic coupler between cars. So I put in super-magnets as a safety net to keep the train from pulling apart if this problem occurred. I then built a much larger loop at home and it ran without problems for





several hours. I have since run it at two shows, all using the standard Lego curves. The impacts of the curves are very noticeable with the long cars. At the most recent show the layout was rectangular, so sometimes the train would be in two curves; other times the train would be on strictly straight track. It was a delicate balance to have enough power to get through the pair of curves without subsequently blasting off the track at the end of the long straightaway. I had to set my speed based on how fast I wanted the train to be going at the end of the long straightaway, at which point it ran great for several hours.

I made a few more discoveries along the way. The fact that a pair of PF train motors can overload the IR receiver tells me that they can deliver a lot of oomph. My PF train motors appear to be at least as powerful as the old 9v motors. The new PF motors come with clear bands on the wheels. At least so far these bands do not appear to have the same slipping problem found in the earlier motor wheels.

It was a fascinating experience researching the Superliners and coming up with some neat tricks and discoveries while building the train set. Happy 40th, Amtrak!

National Train Show

LEGO Trains take over the NMRA!

By Russell Clark

Upholding the yearly tradition, LEGO® Trains made another very successful showing at the National Model Railroad Association (NMRA) National Train Show (NTS). The NTS is the largest model train show in the country, and moves to a different city every year. It is held in conjunction with the NMRA National Convention, and is held the final weekend of the convention. The 2011 NTS took place July 8-10 in Sacramento, CA at the Sacramento Convention Center. Approximately 36 AFOLs, representing four clubs, made the trip. The LEGO display took up a total area of 55' x 40' and took 18 hours to set up.

The anchor layout was provided by the San Francisco Bay Area LEGO Train Club (BayLTC). This layout was approximately 20' x 30' and featured urban, suburban, industrial, recreational, farming, and yard scenes. One of the highlights of the layout was the 30' long downtown area featuring twin 30' long monorail lines running up and down Main Street. Connecting this layout to another part of the display was a 10' model of the San Francisco Bay Bridge with a microscale model of the Japanese Battleship Yamato sailing out from underneath.

One member of the Southern California LEGO Train Club (SCLTC) participated in the show, providing a downtown block on the BayLTC layout as well as some miscellaneous structures and rolling stock. At the other end of the bridge was a 10' x 12' overflow layout with extra running trains and yard space. Providing a safe return for the LEGO trains was the Puget Sound LEGO Train Club (PSLTC). One of their members provided a 5' x 6' layout featuring a Main Street area and orange-groves.

Providing their own independent layout was the local club, the Sacramento Area Brick Builders (SacBB). This unique layout ran 4.5v, 12v, and remote control trains exclusively, and featured many Classic Town scenes from the old 6000 LEGO Idea Book. It was a kick to see both the Maersk Train and Metroliner running on 12v! Also part of this approximately 8' x 10' layout were urban, suburban, downtown, and recreational scenes, a fountain with real running water, a Castle village scene, and a really nice Transcontinental Railroad "Golden Spike" diorama.

Wednesday and Thursday were setup days. Though there were a couple of hours Friday morning for setup, the media were expecting fully setup & running trains by Thursday night. Boy, did the AFOLs take it to the wire! They had to be out at 8:30 Thursday night, and must have finished at 8:29. As an unofficial tradition, several AFOLs went to Buca di Beppo for dinner on Wednesday night.

Friday morning was the official media day. There were several TV stations on hand with numerous on-air appearances by the LEGO trains including a live interview with BayLTC's Russell Clark, the LEGO Display Coordinator, for 'Good Day Sacramento'. The crowds were steady throughout the day. Once people learned there was a local LEGO club in Sacramento, SacBB fielded many questions and handed out a lot of contact information.

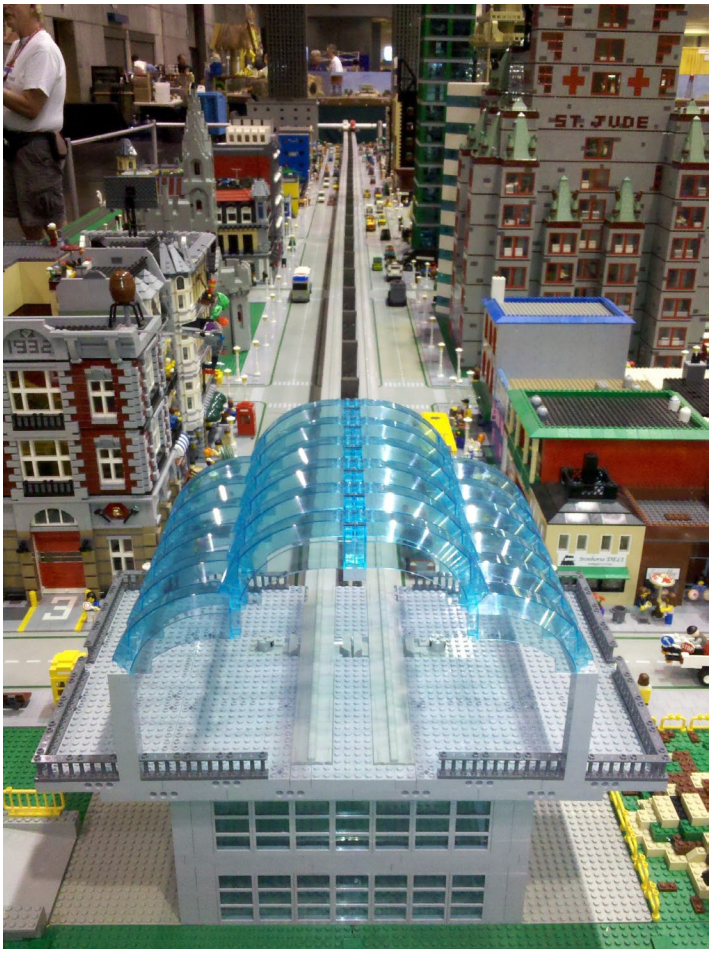
Crowds surrounded the layouts all day Saturday. It was another full day of interacting and answering questions. Saturday night was also the AFOL pizza party. Everyone met at a local pizza parlor for dinner and enjoyed an all-you-can-eat pizza and salad buffet. Goodies

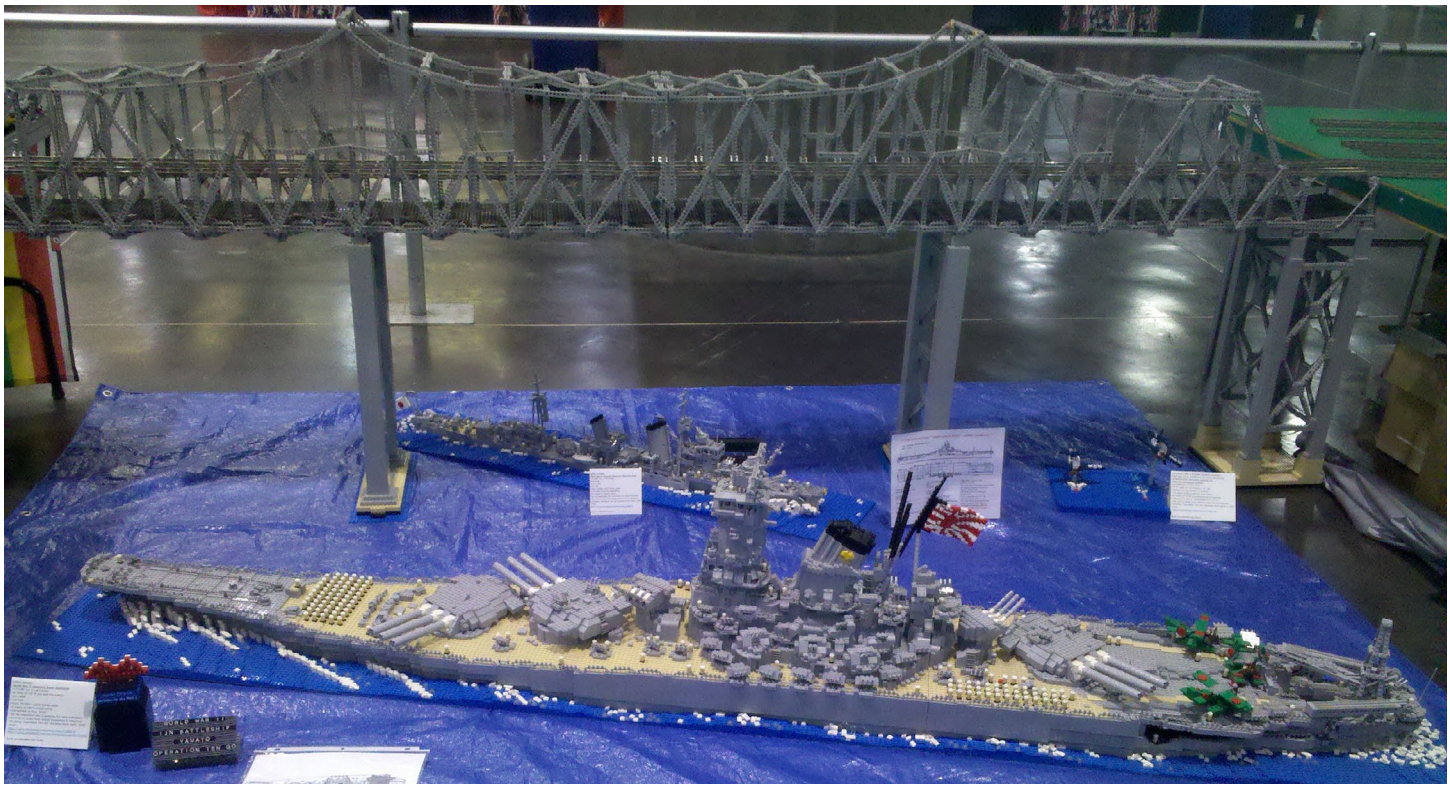
provided by LEGO were randomly distributed to very happy show attendees, and some were distributed to each participating club. Also available to attendees, for a nominal fee, was the traditional engraved souvenir 1x8 event brick.

The crowds continued to pour in on Sunday, the final day of the show. By the end of the day there were many happy, but exhausted, LEGO fans ready to go home and rest their feet. What took 18 hours to set up was quickly packed up within 3 hours. The public attendance for the three days was somewhere in the neighborhood of 22,000. The NMRA were very pleased and were already asking if there was a local LEGO club in their next city.

On the model railroading side of things, Tiffeny Nervig of SCLTC and Russell Clark of BayLTC both received the NMRA Golden Spike Award. This is usually the first and easiest step in pursuing the NMRA Achievement Program. All LEGO train fans should check out this program and try out for this award. Several other AFOLs have already been awarded the Golden Spike.

Next year the NMRA NTS travels to Grand Rapids, MI. Following that it will be in Atlanta, GA in 2013, Cleveland, OH in 2014, and Portland, OR in 2015. Are you ready?



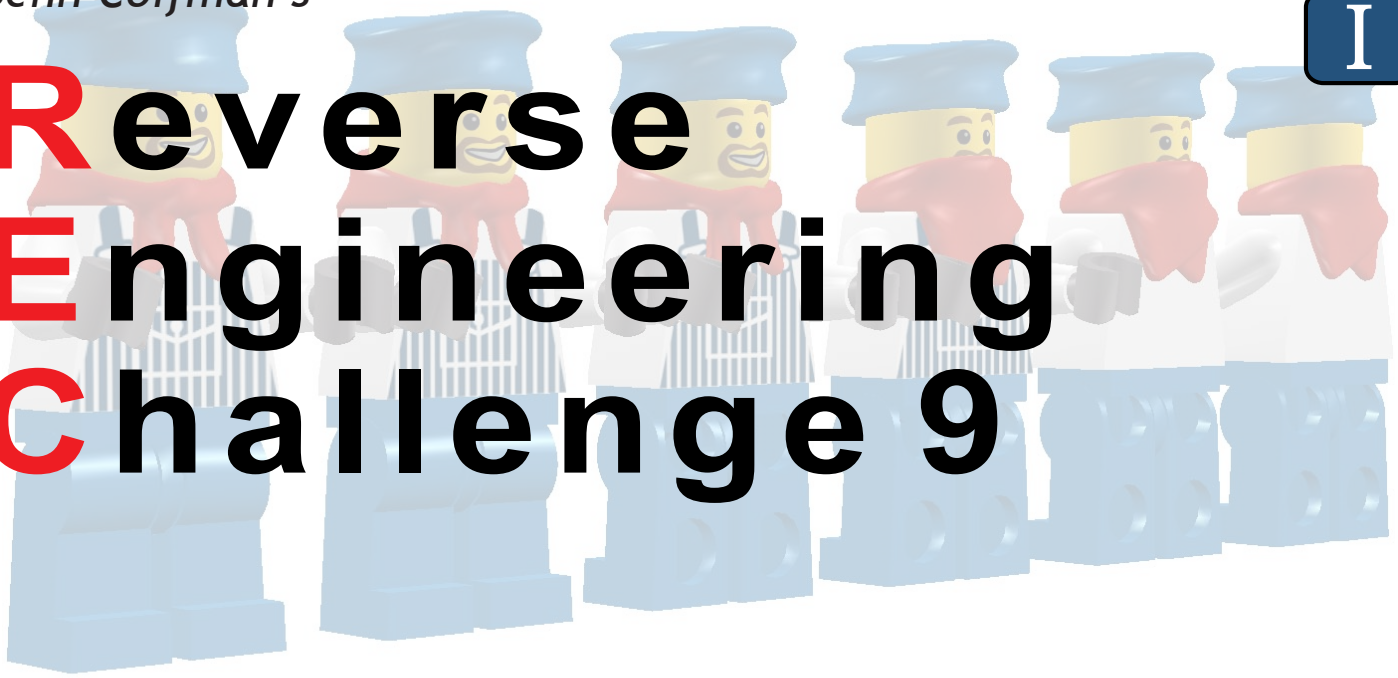



BAY AREA TRAIN CLUB
Bay Area
LEGO® Train Club
PUGET SOUND
LEGO TRAIN CLUB


MAERSK
MAERSK

Benn Coifman's

Reverse Engineering Challenge 9



This column seeks to challenge readers to look around at other builders' work and tease out how they achieved a specific effect; an important skill as you wander off the instruction sheet and into your own creations. The last challenge has gone unanswered. It remains open and we will not reveal the solution until we have a winning submission.

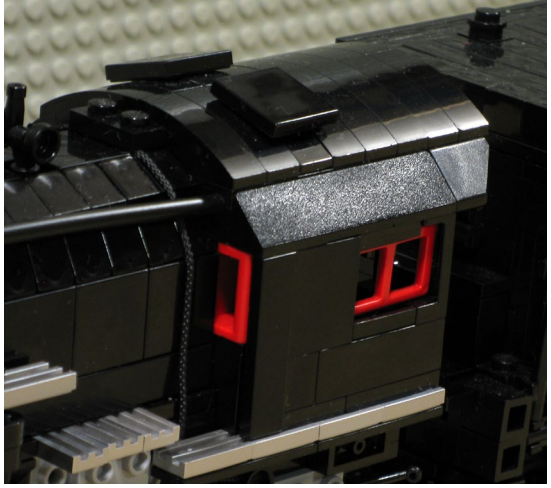
The Superliner cars featured on page 39 of this issue have a tapered bottom section, as shown in the photo. Your challenge is to build this taper, including the door in the side of the car.

Submit your solution to challenge@railbricks.com, with the title "REVERSE ENGINEERING CHALLENGE 9" in ldraw format, or provide sufficient digital photos on how to construct the feature. Judging will begin on December 1st, and will continue until we are ready to release the next issue. Be sure to get your submission in by the opening date for full consideration. If you build a physical model, you can use more common colors. Be sure to include your name and contact information.

The editorial staff will select the best design from all of the buildable submissions. The winner will receive a "RailBricks Challenge" engraved brick. If one of our readers is able to solve this challenge we will publish the solution in the next issue. In the event that none of the entries are able reproduce the feature by the deadline, this challenge will remain open until someone is able to solve it.

All submissions become the property of RAILBRICKS. By submitting an entry you will allow us to print your submission in whole or in part.

REC Reveal



We have a winner! Michael Huggins solved the very challenging opening steam engine cab windows that were first presented in Issue 7. The reveal is below. The largest difficulty is working out a means to hold the top of the window in. This solution uses an inverted door rail to get the necessary half-stud lateral offset.

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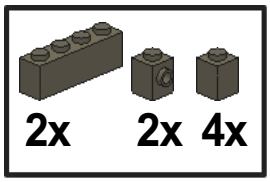

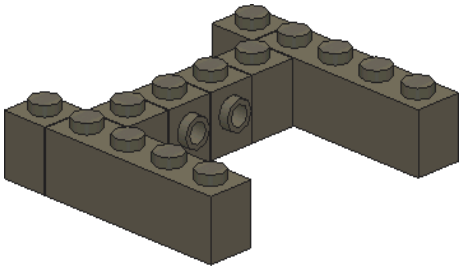

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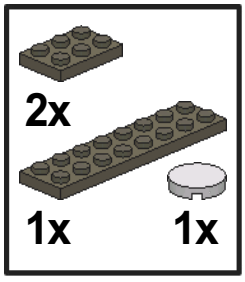

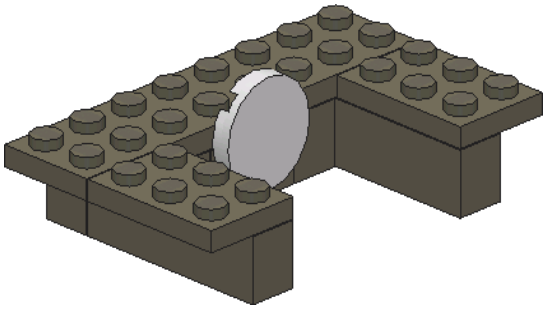

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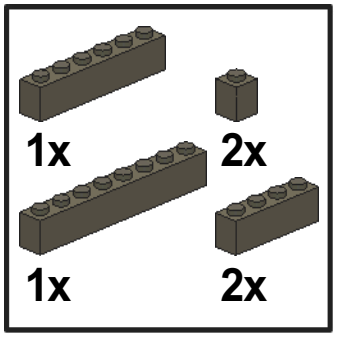

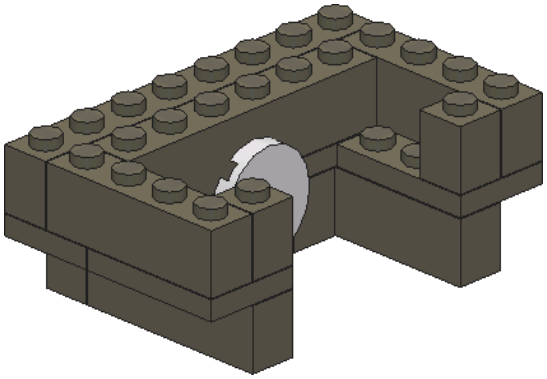

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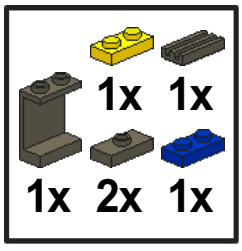

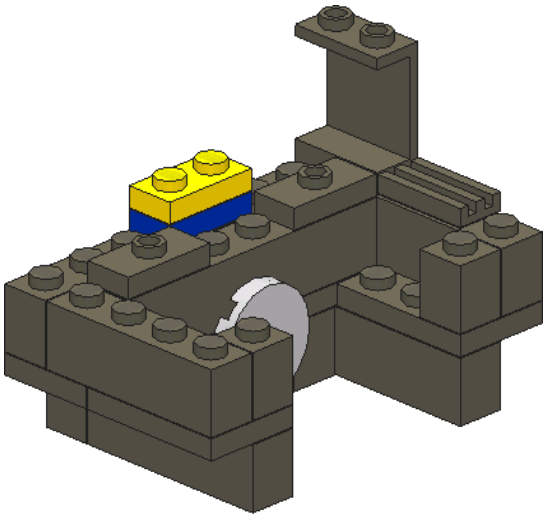

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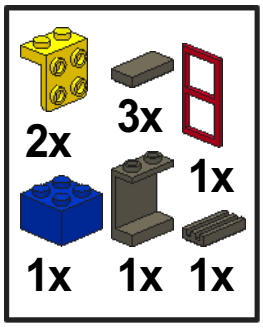

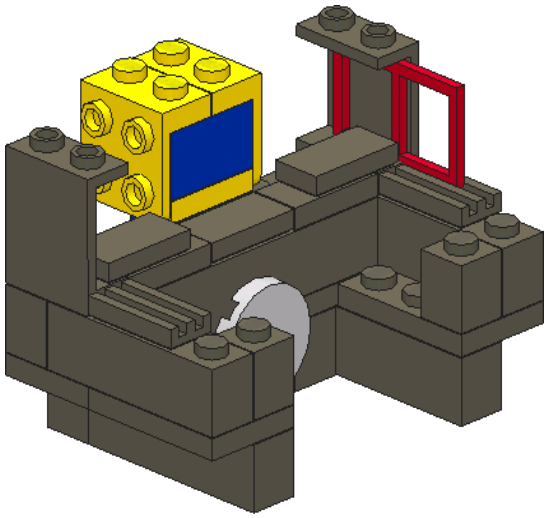

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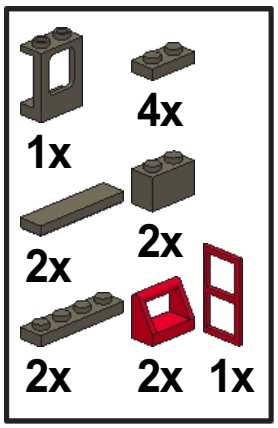

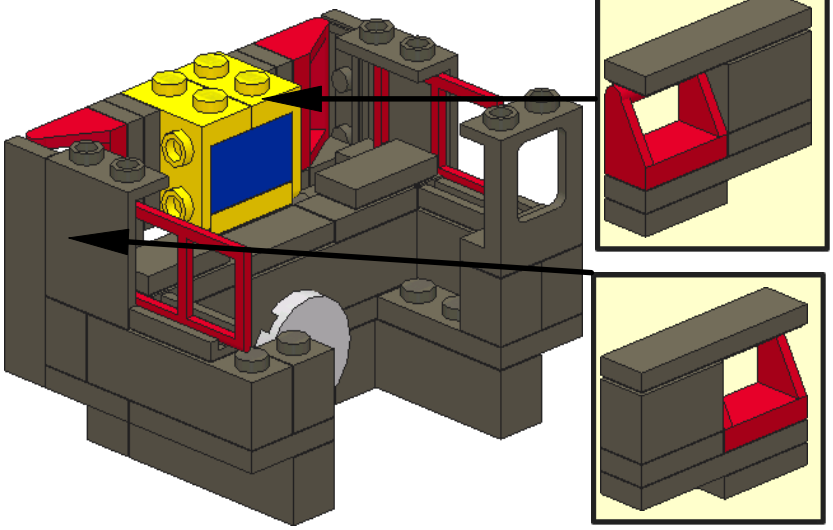

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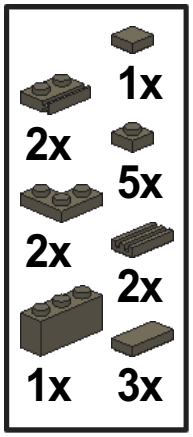

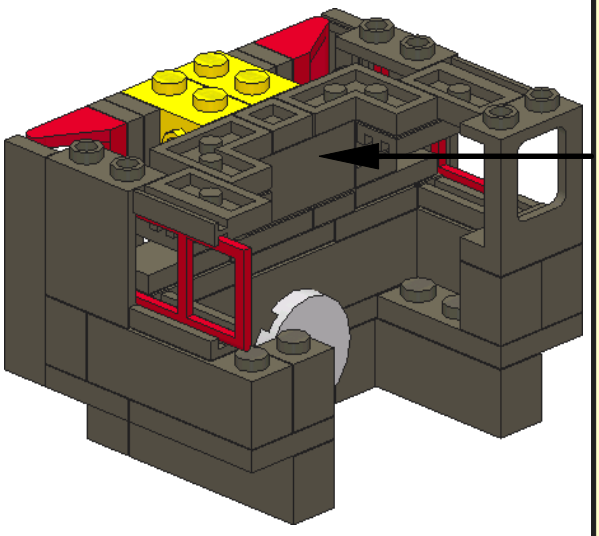

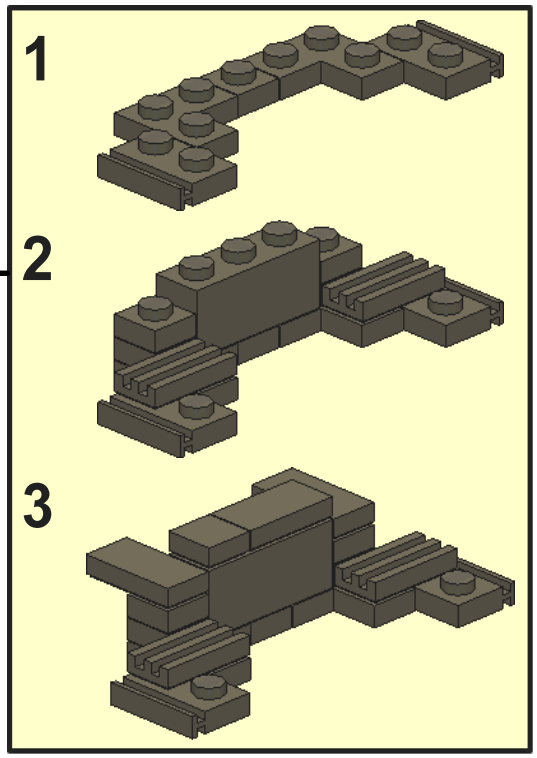

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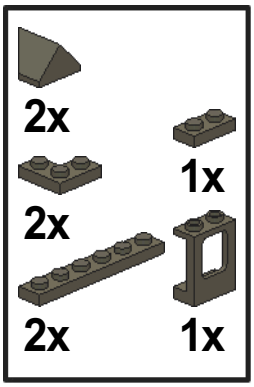

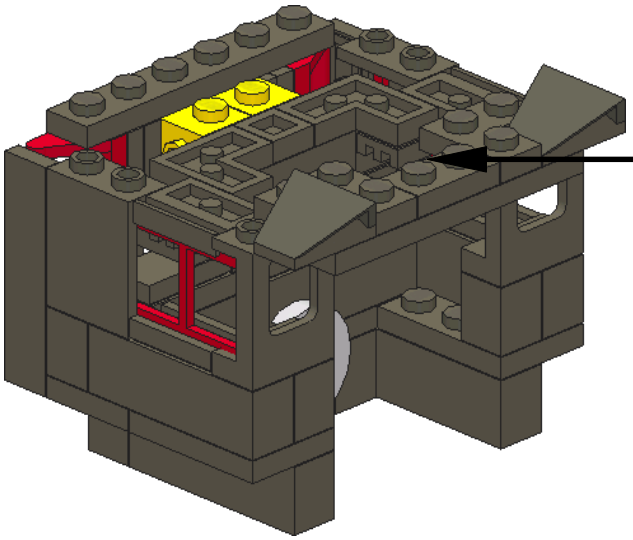

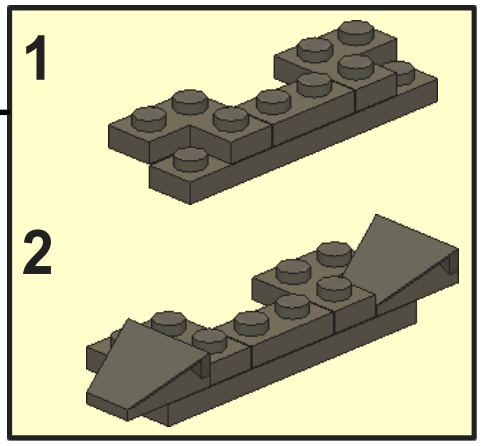

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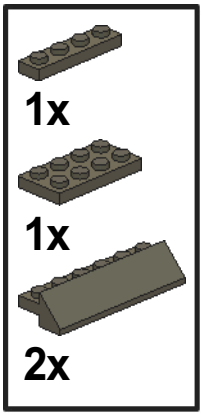

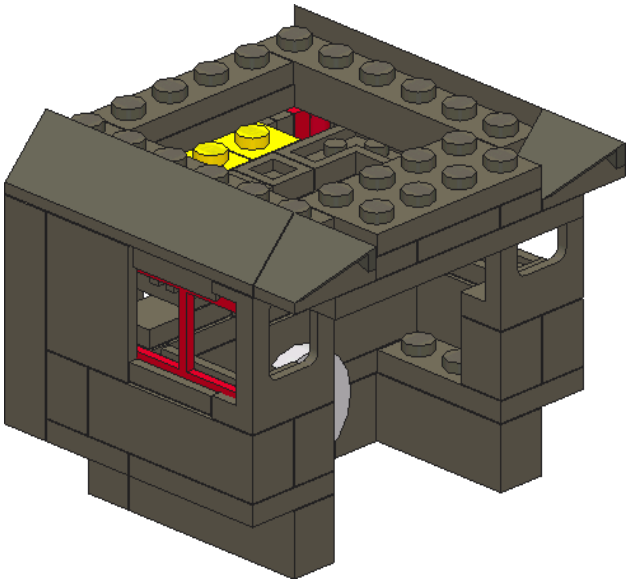

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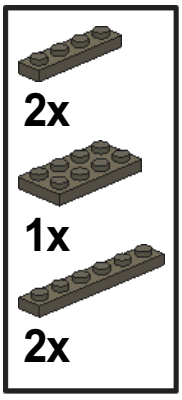

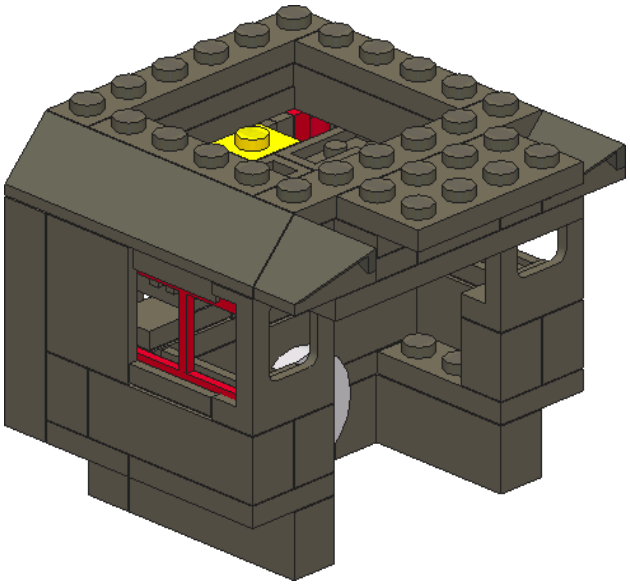

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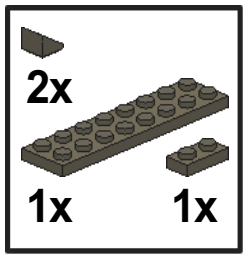

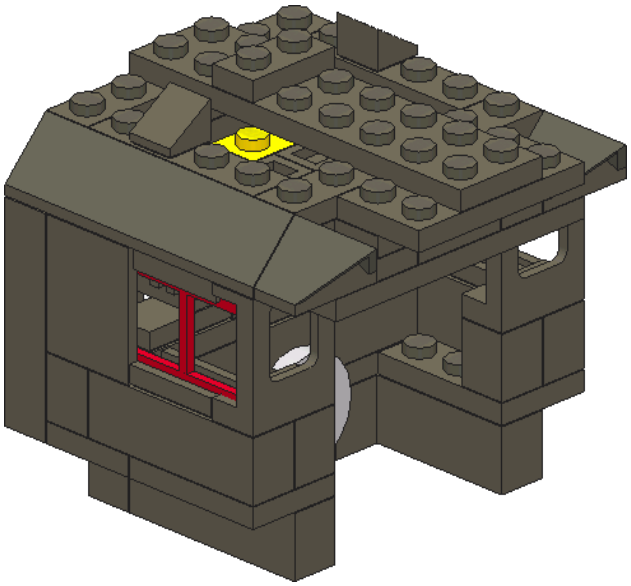

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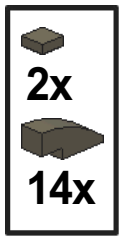

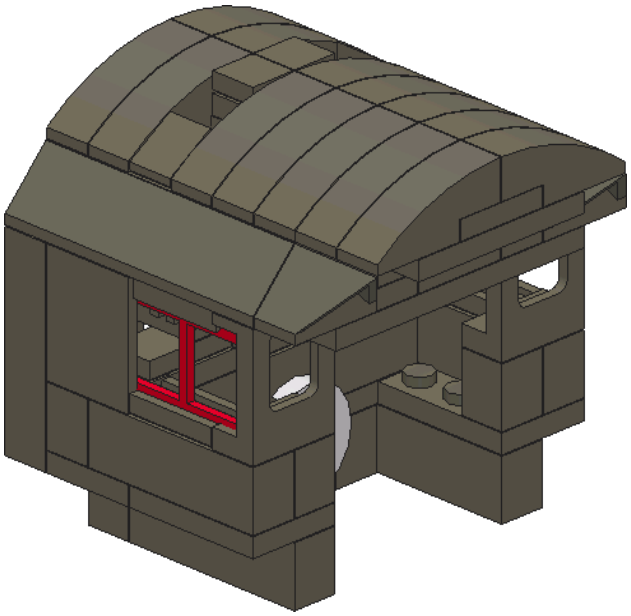

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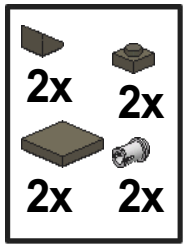

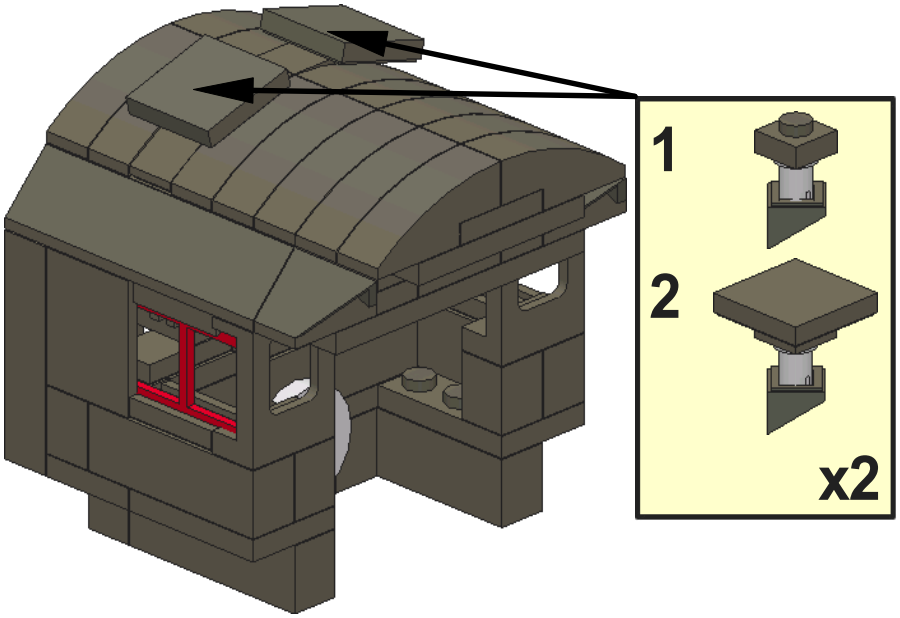

TRAINSPOTTING

FR Fairlie by Geoff Abell (http://www.flickr.com/photos/67422568@N04/6135984475/in/photostream/)

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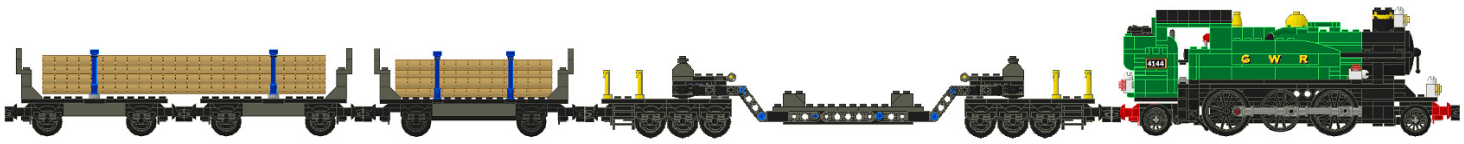

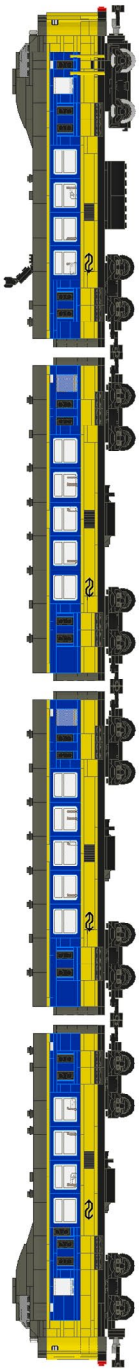

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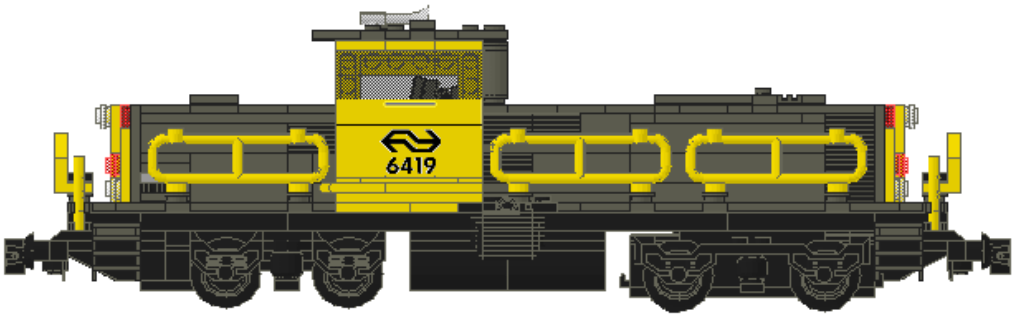

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Sets complete with all parts, stickered box, colourfull building instruction (mostly printed, some on CD), list of parts and stickers/decals. All models also available without parts.

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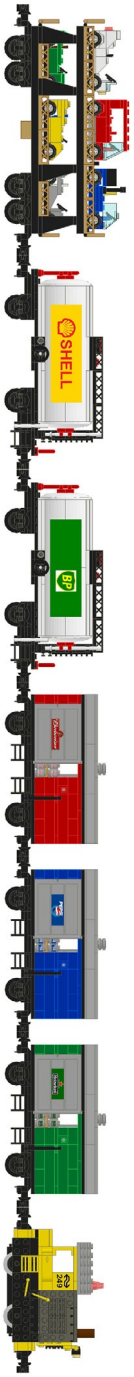

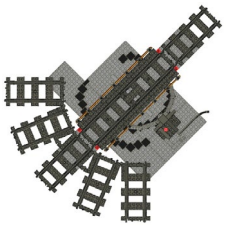

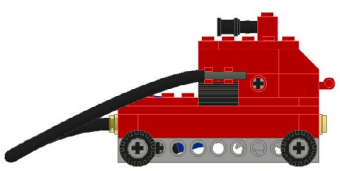

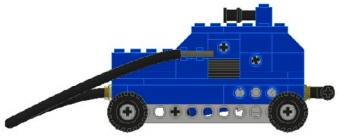

Email:
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