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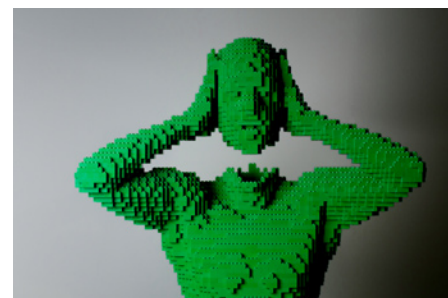
Frontcover by Antti Hakala

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Editorial

By Car_mp

HispaBrick Magazine® 019 is here and the truth is that I stand before you with a mixture of joy and concern. The joy you always feel when you finish your "work" and the result is more than you expected when you started. Concern that the previous number, 018, has so far been the most successful issue of all, with over 35,000 downloads, and to maintain that level, issue after issue, seems difficult to us. Anyway it is our duty to try to maintain your interest in what we do.

About the LEGO® world, there is little news. Once the major toy fairs have finished we already know which sets will be the flagships of the company for the year 2014, in the absence of the typical LEGO surprises and that occasionally provide the extra spark. It looks like LEGO Star Wars is now on a break while waiting for the new film, which has probably led to a couple of interesting reissues, a new Sandcrawler and AT-AT. Chima introduces new tribes and Friends goes to the jungle and to the world of Disney princesses. Ah, I forgot, two new trains, my favorite is one the freight train.

Regarding 2013, it seems it has been another good year for the company, of which I think we all are glad. LEGO Friends is still a bestseller occupying the top spots in the list of best seller sets of 2013. The rate at which new sets of this theme are released can be, in my opinion, a problem for fans trying to collect this line.

In this issue of the magazine we wanted to do a kind of homage to the best release of LEGO this year, and no, it is not a set, it's The LEGO Movie. Few releases of the company have been so successful, with both the public and the critics in its favor.

Apart from this, like all the previous issues, great collaborations and lots of work and effort. Free and without advertising. I hope you like it. You know where to find us to tell us how well or how badly we've done.

#

XII Collectors Fair at Mungia

LEGO® exhibition by HispaBrick Magazine®



April 26 - 27

POLIDEPORTIVO MUNICIPAL

Saturday

Sunday

10:30-14:30 & 16:30-20:30

10:00-14:30

Organizado
por



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Colabora



Technic Snowspeeder

By Antti Hakala

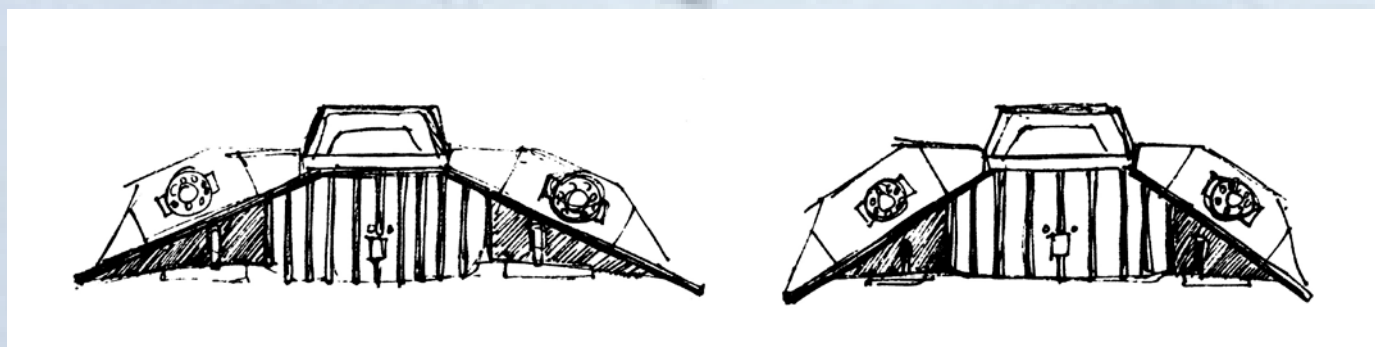
My name is Antti Hakala or "drakmin" on internet. This is a short story of my recent LEGO® project: Snowspeeder.

I like to create. I like turning ideas into reality. I have designed and built furniture, speakers and computer cases. Building LEGO is a nice cleaner version of all the other DIY hobbies. No fear of sawdust, metal waste or dirty hands, just some bricks to step on :) Therefore my interest in LEGO is not the bricks themselves but the easy system for bringing most ideas alive.

In the LEGO world I've always been more interested in building Technic than System. When released, the new studless Technic instantly got my imagination working and I realised I could build System looking models using only Technic. I try to achieve scale model looks and still have the ordinary Technic functions. My snowspeeder is a good example of this "Technic purist" way of achieving smooth surfaces and not losing functions.

I usually choose what to build based on what other builders haven't done already. For some reason I try to avoid cars, I find their shapes maybe too hard to be recreated perfectly. When googling Star Wars ships and LEGO I didn't find any Technic built snowspeeders and decided to give it a go.

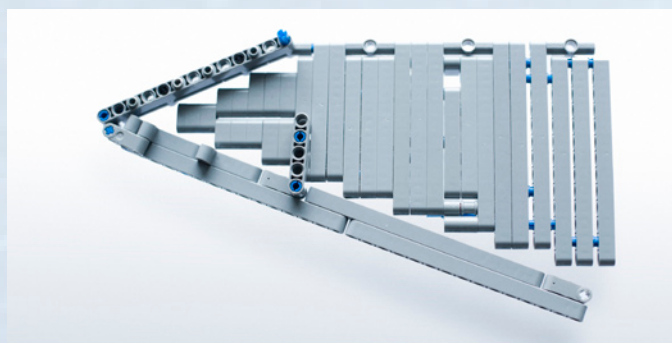
The first step of this project was to gather reference images. Maybe the most unique aspect of this snowspeeder is the fact that the Star Wars films had two different looking models. One where actors could fit in and another for the flight scenes. These two models have pretty different geometry and shape so I needed to make a choice which one to build. I ended up mixing both to have a fast looking sleek overall shape and still some space for interior. Too much interior space in this model would have led to a too steep wing angle and a slightly blunt overall shape. In the end I got a nice looking model though it could have used a bit more interior space for adding some more cockpit details. Maybe mechanically adjustable seats would have been cool to have.



Quick study of different wing angles

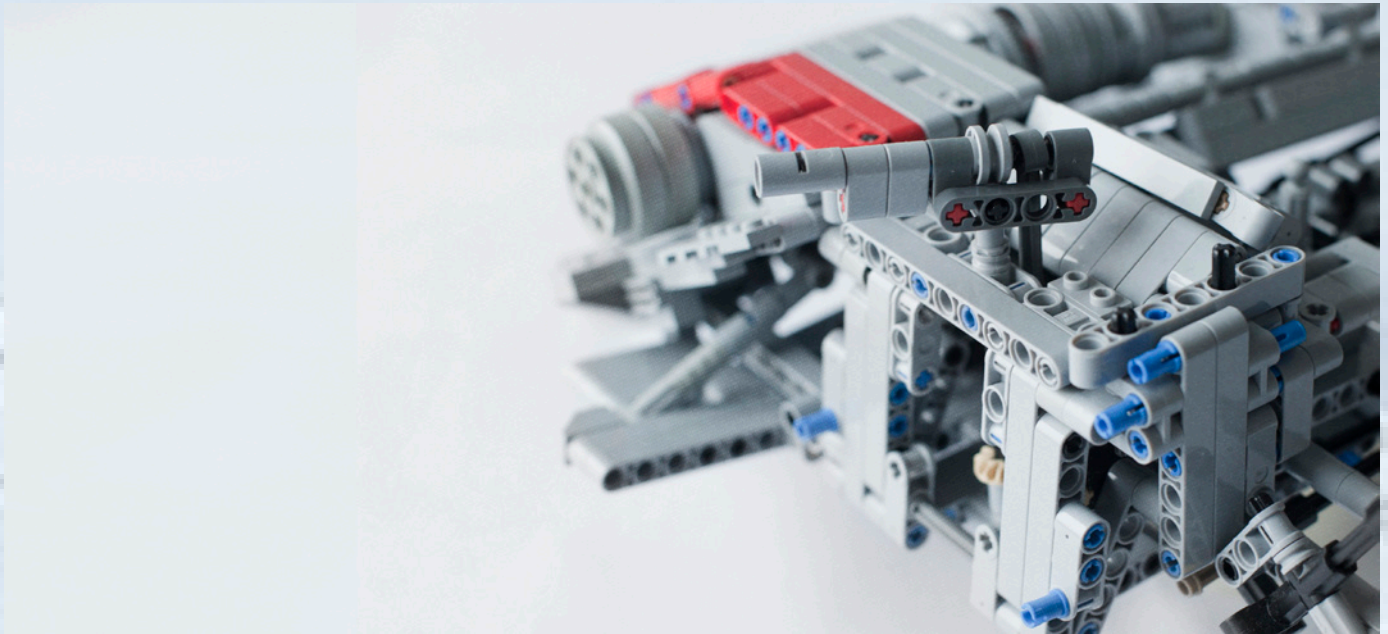
This ship has a lot of triangular areas on the hull which are rather hard to make gapless with Technic. Filling the gaps is also kind of a balancing with clean looking brick placement and the amount of see through holes left. I think I found a pretty good balance on this scale.

All my building seems to be balancing things so the next balance to find is the looks versus the amount of functions. My building style is iterative and I learn by making mistakes. First I sketch some of the hardest shapes to get the minimum size and scale of the build. Then I try to fit in some functions and continue again with the outer body. Usually everything needs to be started from zero multiple times and built totally differently to overcome problems. The most common problem is to have the outer shell for the looks take up too much space from the functions. I use Technic liftarms on their side and many times my models also need a skeleton to keep the shell intact. I find building from large and rough lines towards small details the best method.



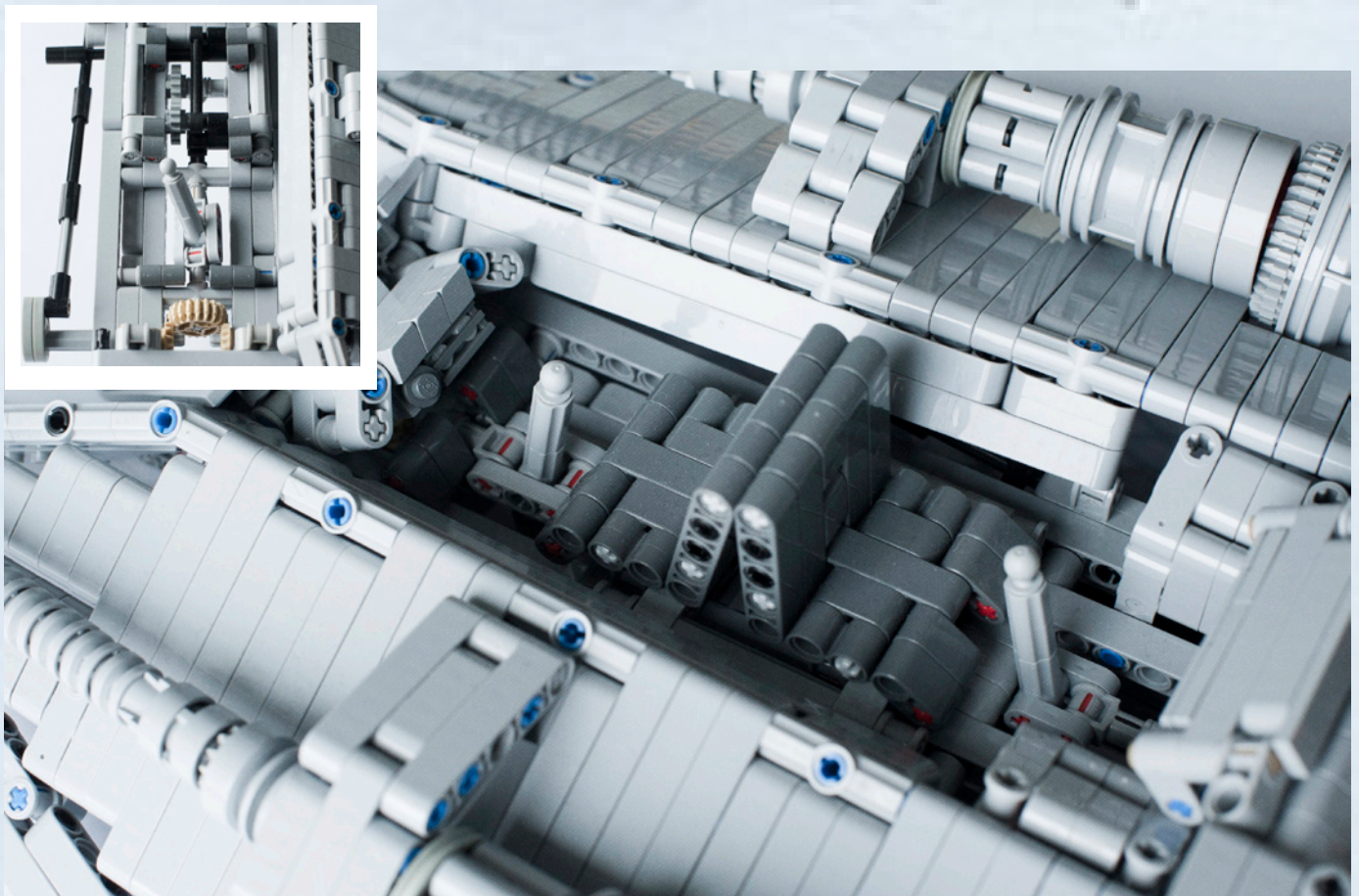
Here's a section of wing. It doesn't look like much on its own but it gives an idea of my building style

Usually I have more functions planned than what I can actually manage to fit in in the end. On this snowspeeder I originally wanted to have a cockpit opening mechanism. Unfortunately all the solutions I was able to find affected the look of the cockpit opening part too much and I had to dump it. Also, the rear harpoon mechanism got a bit bigger than planned which didn't help :) The function I'm most pleased with is the rear harpoon since I was able to add both pan and tilt. Panning was easy to build but the tilt mechanism took some time to fit in the limited space. I also wanted the tilt mechanism to be practically invisible from the outside of the model.



Pan and tilt harpoon. Smallest and least visible tilt mechanism I was able to design

In official LEGO® Technic sets I dislike functions that are placed to be used outside of the cockpit of the model. That's why I place control sticks inside the cockpit to actuate functions of a model. It's closer to reality and easier for imagining flying the ship yourself :)

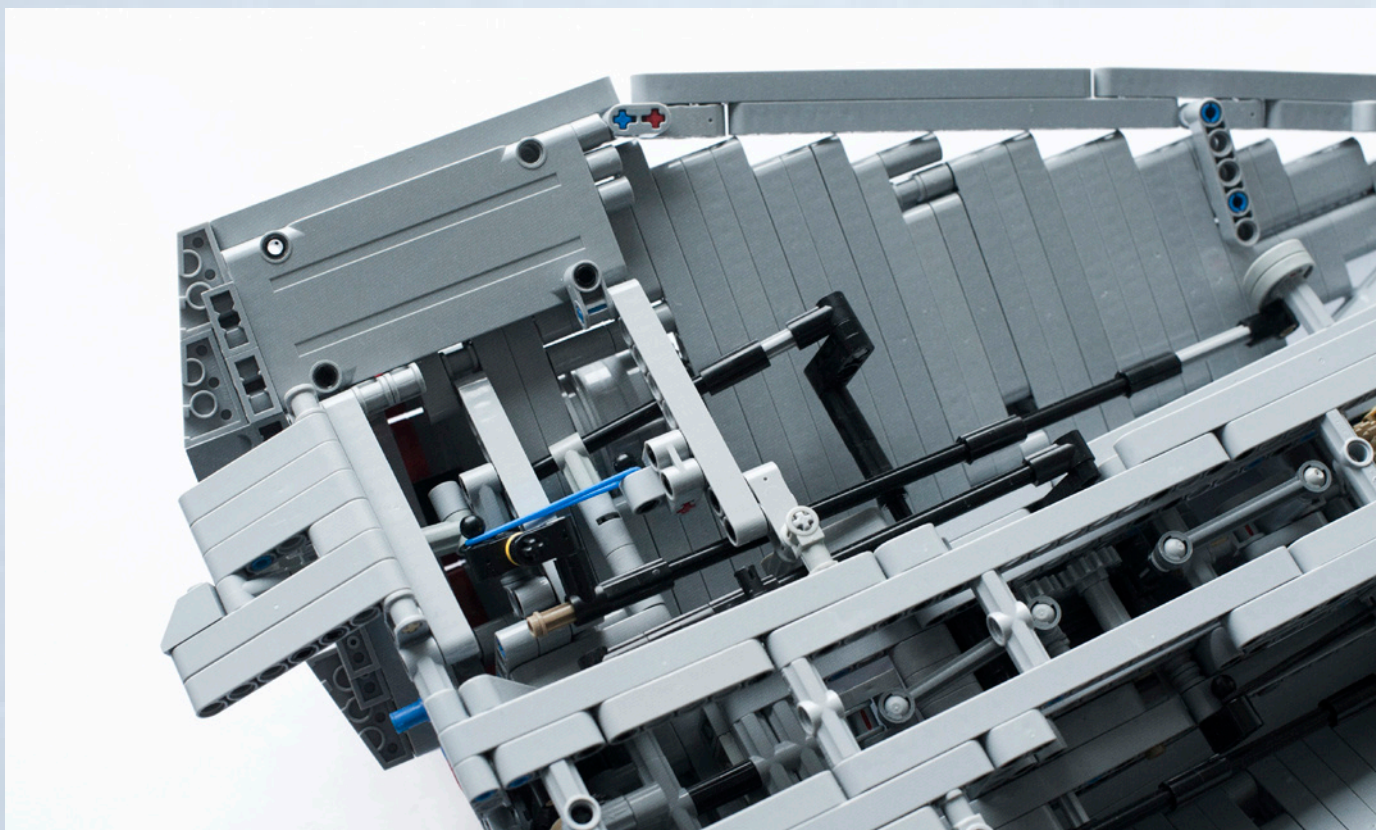


Controls, 2 pieces of x-y joysticks

The single hardest area to build accurately, the cockpit opening canopy. Biggest flaw left is the absence of solid roof area.



This image shows a bit how airbrakes get their "power" from joysticks. There's basically one rod per function, almost like an old airplane.



First iteration finished in 2011.



As you can see, I was not satisfied with the first snowspeeder I built. I started once from complete zero and finally got the look right. The first speeder was also missing lower air brakes and tilt of the harpoon. Now I can say this is the best I can do on this specific scale.

#



Tiger's Nest Monastery

By Anuradha Pehrson

Greek columns, Roman arches, clay houses, stone palaces, early dwellings made by man to modern structures and buildings, Architecture from around the world, is a subject that fascinates me. I admire works of architects like Palladio, Gaudi, Hunterwasser to name a few. They are people that have pushed the boundaries and thought outside the box.

Building with LEGO® started as a hobby and has turned into a passion. Bringing these two together was only natural.

As I had no formal training in Architecture, building in LEGO was a good way for me to express my own designs & ideas and, since I could build my own designs, I dove deeper and deeper into Architecture as a subject. Each of these interests helped the other grow.

I grew up in India; there wasn't a lot of LEGO available at that time. Around age 7-8 someone gifted me with a LEGO set. It was one of those LEGO system sets that had three different options for building a house. I built all three and then went on to build many more with a few design changes here and there. Having just this one set laid the groundwork for building different things with limited pieces.

My dark ages started around age 12 and lasted 20 years.



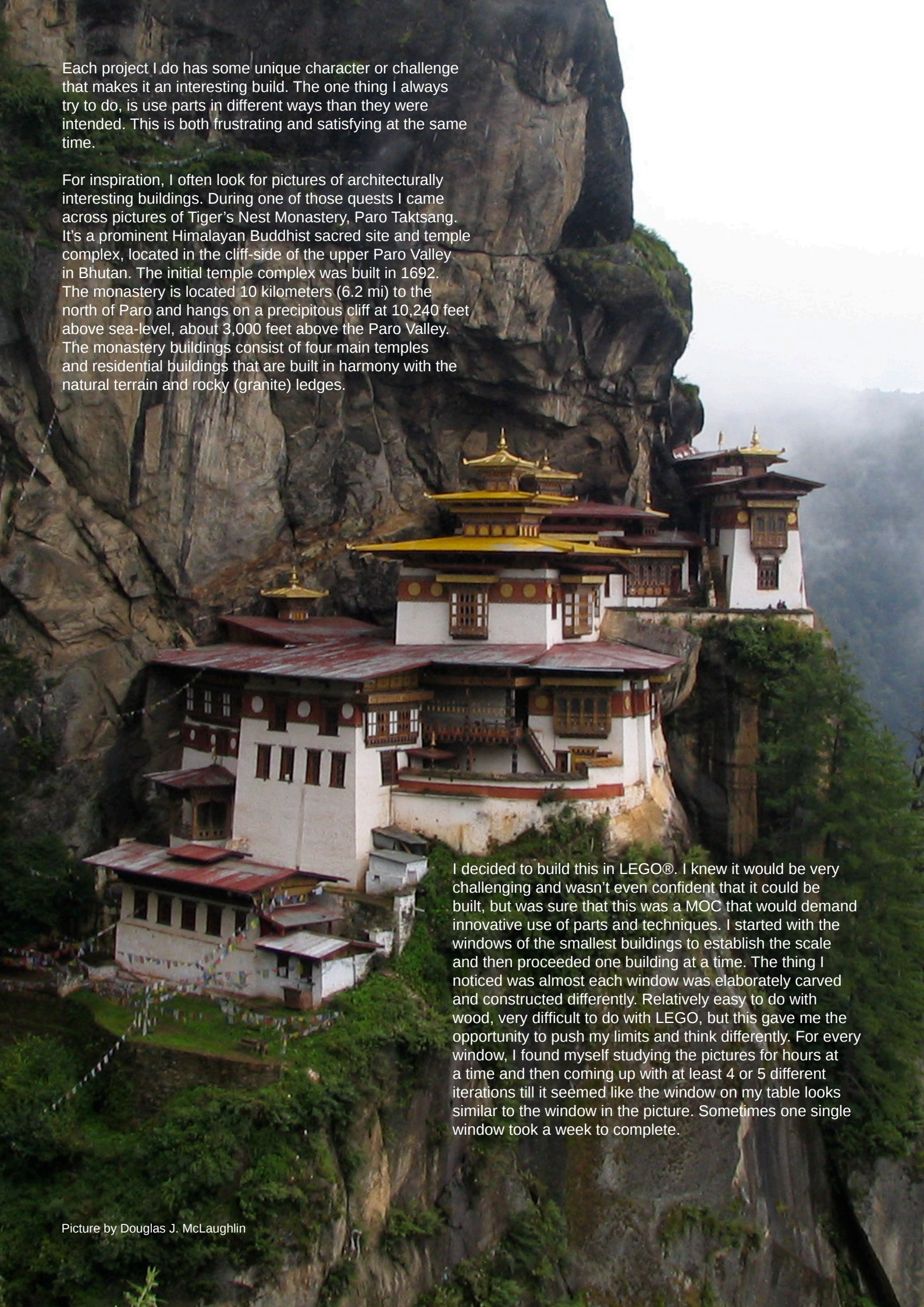
I moved to the US (Seattle) in 2001. I had to find my bearings in a new country where the people and the culture were very different. The food was bland and it was raining all the time. One day, walking down the street I saw a FAO Schwarz and in the window there were boxes and boxes of LEGO. I had found something of my old life that I loved, in this strange new land.

I built by myself for a few years not knowing that there is a huge AFOL community worldwide. In 2004 I accidentally came across BrickCon. My first reaction at the show was 'Wow, this is an actual hobby. Adults across the world built with LEGO, I'm not crazy'

At BrickCon I found out about Sealug. The next month I went for my first Sealug meeting and took a small MOC; a house made in the South Indian Architectural style. It had a swing set in the front yard and a small tree with white flowers. Almost everyone at the meeting appreciated this MOC, which was a little surprising to me because these were the same people who had built all the fantastic stuff I had seen at BrickCon. Then I was told that the tree technique had never been done before. I was elated. My first experience being with this group was Great! They were very warm and friendly, and instantly made me feel welcome. This was important to me, especially being female and a foreigner. To me it seemed like I've found my planet, my people, my tribe. :)

Each project I do has some unique character or challenge that makes it an interesting build. The one thing I always try to do, is use parts in different ways than they were intended. This is both frustrating and satisfying at the same time.

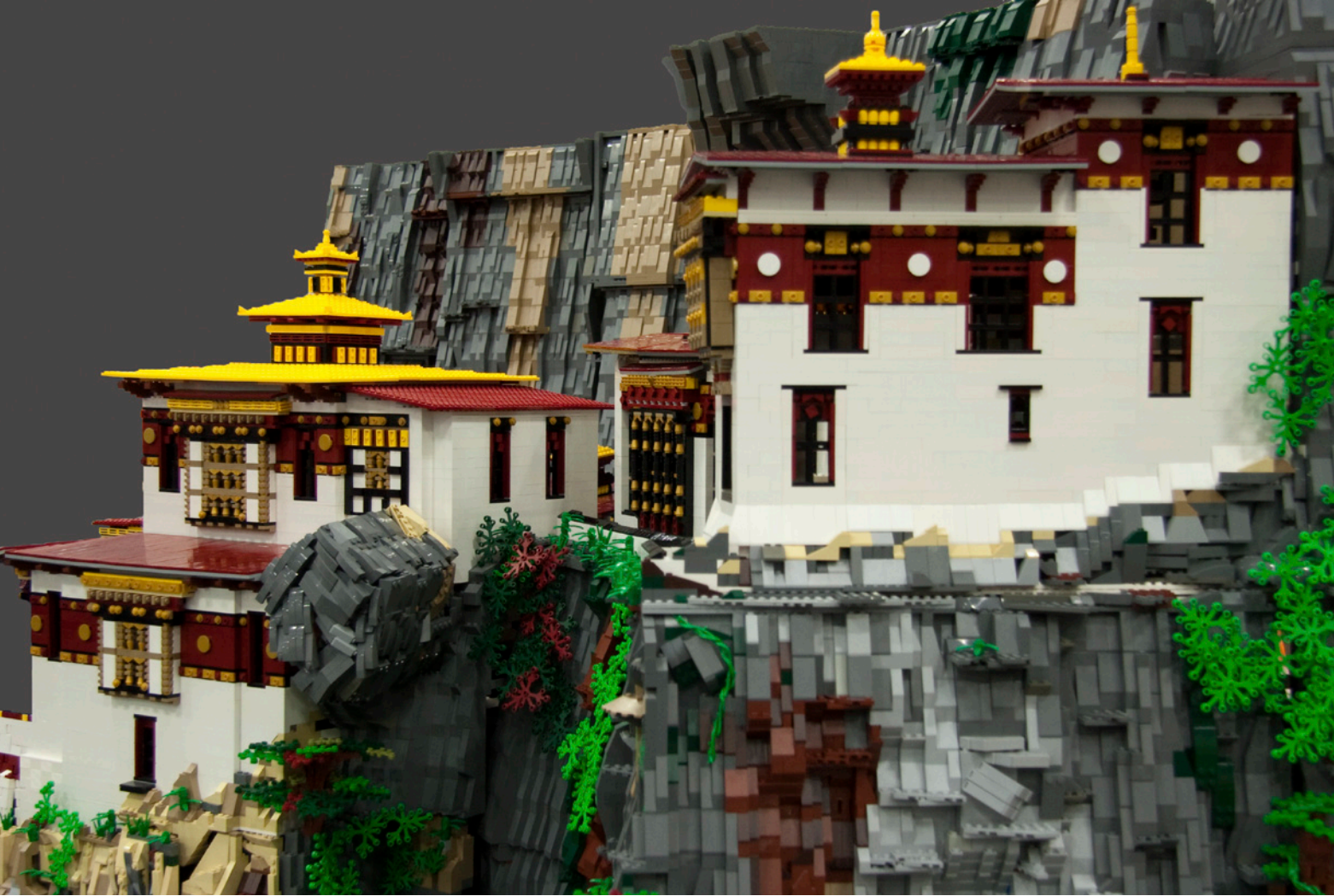
For inspiration, I often look for pictures of architecturally interesting buildings. During one of those quests I came across pictures of Tiger's Nest Monastery, Paro Taktsang. It's a prominent Himalayan Buddhist sacred site and temple complex, located in the cliff-side of the upper Paro Valley in Bhutan. The initial temple complex was built in 1692. The monastery is located 10 kilometers (6.2 mi) to the north of Paro and hangs on a precipitous cliff at 10,240 feet above sea-level, about 3,000 feet above the Paro Valley. The monastery buildings consist of four main temples and residential buildings that are built in harmony with the natural terrain and rocky (granite) ledges.



I decided to build this in LEGO®. I knew it would be very challenging and wasn't even confident that it could be built, but was sure that this was a MOC that would demand innovative use of parts and techniques. I started with the windows of the smallest buildings to establish the scale and then proceeded one building at a time. The thing I noticed was almost each window was elaborately carved and constructed differently. Relatively easy to do with wood, very difficult to do with LEGO, but this gave me the opportunity to push my limits and think differently. For every window, I found myself studying the pictures for hours at a time and then coming up with at least 4 or 5 different iterations till it seemed like the window on my table looks similar to the window in the picture. Sometimes one single window took a week to complete.







Another difficult thing to replicate was this massive rock jutting out. First, building a rock in that shape and making it stable was tough and then actually attaching it to the main structure was an engineering challenge. My husband, who is a great moral support, helped me here.

The next difficult part was the rock work and setting the buildings in a way that it seemed like they were built on the mountainside. This required a lot of technic beams and pins, duplo bricks and finally as time and money became an issue, cardboard boxes and plywood sheets.

The final challenge was to bring it all together and transport it to BrickCon. The table in my house wasn't big enough for it, so the first time it would come together was at the show. When I got to the show I noticed more than expected number of sections had broken. It took me around eight hours to set it up, rebuild and reconnect everything, but the end result was very satisfying to me, personally, and I'm grateful to God for being able to complete and display this MOC.

The dimensions are about 7 feet x 4 feet and 3 feet high. It took almost nine months to complete and there are roughly 150,000 parts in it.

#






4 THE FU

text - Raphael Granas
formatting - Henry Oberholtzer

An outsider to our hobby might be overwhelmed by all the themes and categories. Beyond the usual Castle, Space, and Town, there are other less known genres like microscale, trains, WWII, mosaics, or mecha. Even less known subcategories include Vic Vipers, and sculptures - then there's dollhouses and Ice Planet. The rarer, more obscure the interest; the more of a



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shut-in hipster the enthusiast is (aren't we all, though?). One of those literally tiny categories, wedged in somewhere between steampunk and Bonktron, is the so-called "4-wide car" - four studs wide, as scales in car building are generally classified in stud width. The readers of Hispabrick may be unfamiliar with them.

A little history, then: technically, building cars in 4-wide has been commonplace since the production of 420 Police Car, way back in 1973. Many people in the community fondly remember this set, and rightly so. It had a minimalist look to it, a sort of honesty which one doesn't find in today's colorful selection, which permanently inducted it into the LEGO® set hall of fame, right beside 6835 Saucer Scout and 375 Castle (also mystically known as "The Yellow Castle"). 420 and its endearingly goofy Town derivatives were what most hobbyists thought of when they heard "4-wide car".



Among a small group of people, however, "4-wide" has come to resemble TLG's Tiny Turbos line, a subtheme of the once-popular Racers theme (now defunct). Introduced in 2005, the 4-wide Tiny Turbos (or TTs, as they are called) were intended to snatch away a chunk of the toy/model car market, which they did, for six years until their discontinuation in 2011. We worried our future possibilities would be limited, but TLG never lets us down in supplying new parts every year, Tiny Turbos or not. We - the 4-wide fanatics - started on MOCpages. It is largely due to the community of nine-year-olds posting slightly modified Tiny Turbos there that the general adult LEGO fan community had come to regard the theme with disdain. I was one of these junior enthusiasts before being taught, hopefully with success, by the few who knew how to do the theme justice. We migrated from MOCpages to flickr, as many were doing around 2008-ish. It is here that something must be said about my friend Adam Janusick. Not only did he come up with the fictional universe around which most in the community build their cars, he was always the most prolific 4-wide builder, and acted as a preservationist of the theme when no one else was inspired enough to build anything.

1973

Tommy Nuñez





Dylan Denton

I was requested to do a sort of guide on how to build a 4-wide car. Well, truth be told, I really don't think there is some straightforward guide on how to build them! It's really the same as building mechas, castles, or space: it's all about using your creativity, and breaking the rules, if there are any, is encouraged. Building in 4-wide is especially similar to other small scales. You have to find more complex solutions to problems that would be easier to solve in scales with more room. Though for a long time the standard "template" for a 4-wide was a pair of 2x2 axles connected by a 2x6 plate, usually with 1x4 brackets at the ends, we managed to break out of that habit and head to more creative, complex platforms that would support prettier designs.

2014

Since the possibility of building detailed engines and interiors in 4-wide is rather negligible (except perhaps to the limitlessly talented Tommy Nuñez), it's the design standpoint of the build that takes center stage. Unlike in larger scales, where the focus tends to be the entire package, 4-wides are forced to sacrifice functionality for design, and thus may not appeal to builders who like their creations to move and make sounds and do things. I've always loved design though, especially the automotive-related. Hearing and reading about how people create stunning works of art out of metal, glass and wood fascinates me. I have no clay, tools, ovens, wood, glass or metal to work with, so I try to translate my ideas "in the brick", as people say. Unorthodox and inaccurate, 4-wide LEGO® cars are hardly the perfect medium, but it's great fun seeing one's ideas come together in that form.



Adam Janusick

My favorite design to date is the Sentinel, a personal luxury coupe inspired by the Buick Riviera. The reason I like it so much is that it has some semblance of the design elements agreeing with each other - that is, to me there's no visual conflict anywhere on the car. The 1x2 curved slope is used on it a lot, spreading to the sides on the hood in an imitation of a 1920s racecar, and on the back window and trunk lid to give it a sweeping look. Cheese slopes sit on the sides and act as the headlights, which are at the same level at the opposite ends. I like the idea of a design having a visual cherry-on-the-icing, an element which stands out from the rest and acts as the figurehead. That is the grille, the two cheese graters dropping down from the tip of the front like the prow of a large boat. To me, all these parts make it look rather Art Deco, with the combination of flat planes and curves, and the bit of elegant decoration that are the rims. That's how I see this model.

Many people think that there's not that much to it, that it takes a relatively short time to build a 4-wide. It's not always the case. The Snöwfox, for example, was steadily perfected over three months. That is, they sat on my desk and occasionally I'd look at them knowing that they were almost there but they needed that something which I would inevitably stumble upon later. As much time as I waste on them, my works still aren't as good as the ones from the community (included on the opposite page). The red car in the grimy garage was very heavily inspired by 1980s sports cars, with its Ford RS2000-esque spoiler, Pontiac Fiero-esque roofline, and the clever nod to '80s LEGO sets with the front fenders. The murder of crows below it depicts the dynamic, athletic shapes of modern track cars and their derivatives. Last but not least is the stunning gray car, whose knife-y edges are inspired by Cadillac's recent Art & Science design language.

These creations represent what can be created in this scale. Four years ago or so Dylan Denton fit a miniature engine in a 4-wide, a little red off-roader. Three years later he was wondering how to make minute details such as mirrors or velocity stacks. Building in 4-wide improves one's skills faster than Barney Oldfield, and I've dabbled in many other themes. And some practice building small makes one's larger-scale creations infinitely better than otherwise. Having the philosophy of cramming things into tiny spaces is valuable no matter what you build, and yet, many people think building small is limiting. Actually, it's true! - but when you do build something good, it's much more rewarding.

And isn't that what it's all about?

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A DESIGN SHOULD HAVE A VISUAL
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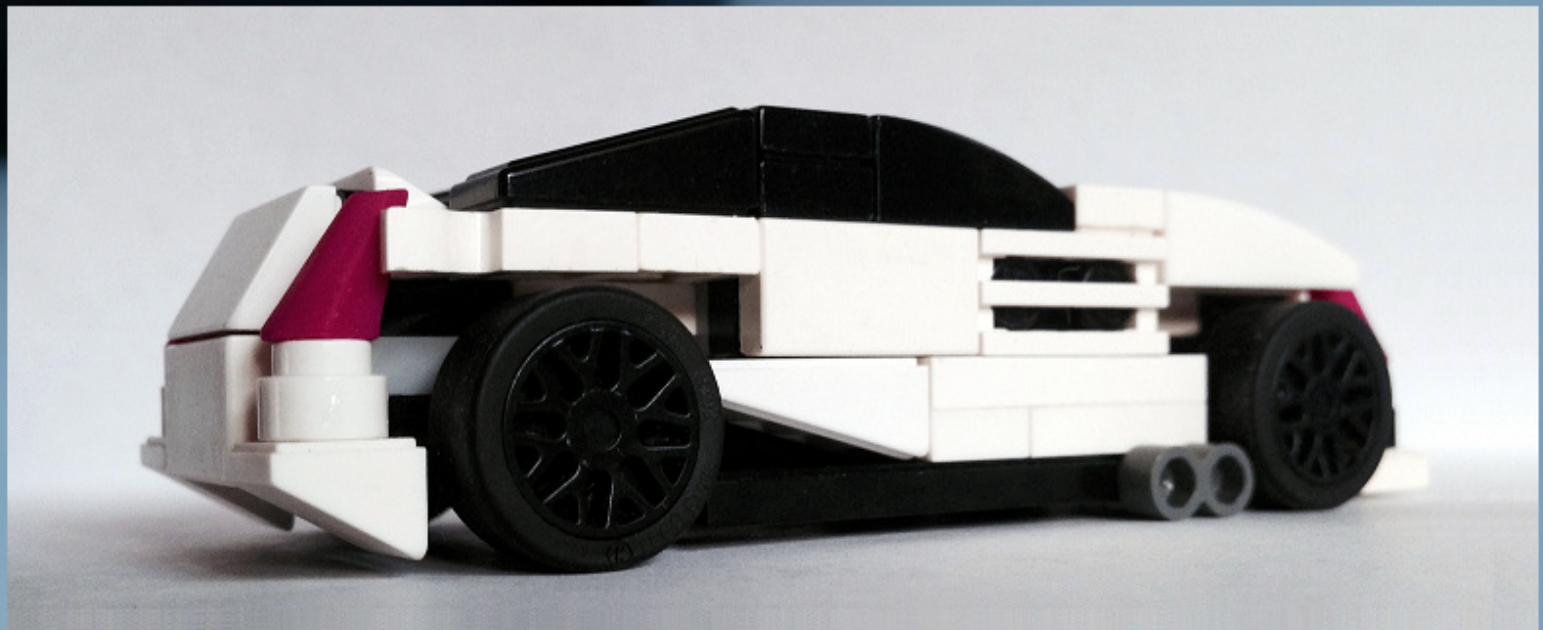




ADAM JANUSICK



DYLAN DENTON



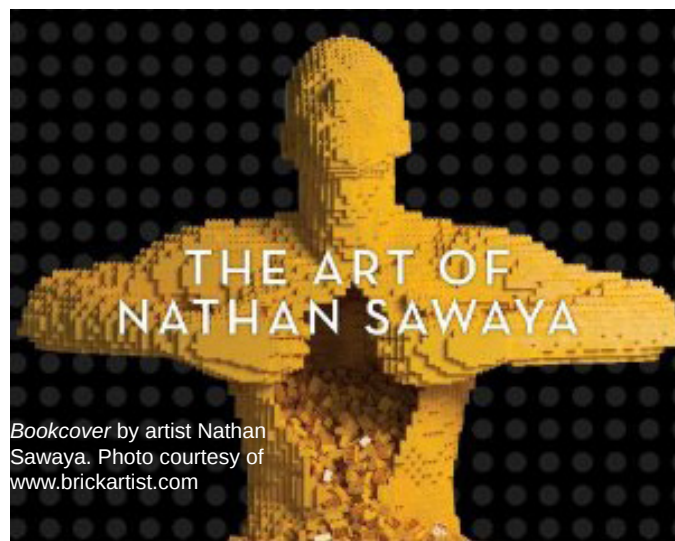
TOMMY NUÑEZ



Interview: Nathan Sawaya

By HispaBrick Magazine®

Photos courtesy of www.brickartist.com



Bookcover by artist Nathan Sawaya. Photo courtesy of www.brickartist.com

In this issue we bring you an interview with one of the most popular LCP (LEGO® Certified Professional). His exhibitions and sculptures appear regularly in the worldwide media and are a clear example of art created with LEGO.

HBM: How did you get started with LEGO bricks?

NS: I had a variety of creative toys growing up, including LEGO bricks. My parents encouraged creativity. When I was ten years old, I asked for a dog, but when I couldn't get a dog, I built a life-size dog out of LEGO bricks. That might have been the first time I realized that you didn't have to build what was on the front of the box. I could let my imagination go wild.

It was later in life, when I was sculpting out of other media that I thought about this childhood toy. I started experimenting with LEGO bricks as an art medium, and it worked. The toy I loved as a child, became the tool I used to create art.

HBM: What made you leave behind a career as a lawyer to start building with LEGO bricks professionally?

NS: I wanted to be happy. After long days at the law firm and I needed a creative outlet. So, I would come home and build sculptures and post photos of them to my website – brickartist.com. Then came a day when the site crashed from too many hits and I thought "okay, there might be something in this" and that's when I became a full-time freelance artist. For my entire life, art has been necessary. It is indispensable to me, but not only for personal happiness, but I believe that art is

not optional to the welfare of society as a whole.

HBM: Do you use other media, aside from LEGO, to express your art?

NS: Yes, over the years I have sculpted out of different media, including clay, wire, bottle caps, even candy, but in the end I am happiest when I'm using LEGO bricks to express myself.

HBM: What obligations does being a LEGO Certified Professional entail? What advice would you give our readers should they be considering becoming a LCP?

NS: It is a bridge to better communication between me and the company. I am still an independent artist. I buy all of my bricks. I just buy more of them than most.

To any aspirational artists, continue to express yourself creatively. Follow those moments and see where they lead you. Jump carefully and slowly, but definitely jump. Once you take that leap you can open up an entire new world.

HBM: What is the main source of inspiration for your work?

NS: I am inspired by many things and inspiration comes from everywhere. I always carry a sketch pad with me so that I am able to jot down ideas. As I am fortunate enough to travel quite a bit, I find inspiration in the many experiences I have in different countries and different cultures. The world is an amazing place full of endless possibilities.



Gray by artist Nathan Sawaya. Photo courtesy of www.brickartist.com

HBM: What are the main aesthetic and structural limitations when creating something with LEGO® bricks?

NS: There are very few. I believe I can build anything I can think of out of LEGO bricks. That is why it is such a great medium for creating art.

HBM: How do you solve structural issues to let your work support so much weight?

NS: I work out the design and engineering of each piece in advance to maintain both safety and beauty of the work. My father is a civil engineer so perhaps there is something inherited there.

HBM: What is more complicated, representing facial features or creating complex geometrical shapes?

NS: Anytime I am using rectangular bricks to represent something, be it facial features or geometrical shapes, there are always many different challenges. Just making curves is a challenge when using rectangular bricks. But that is the real fun of this art form, in taking those rectangular bricks and making them look like something else.

HBM: How much time goes into preparation before you start building?

NS: The amount of time that goes into a sculpture depends on the size and complexity of the piece. Each work of art has different amounts of prep time. A fair amount of time is spent on preparing how the piece will come together.

HBM: Do you make many changes "on the go"?

NS: Yes. There are times when I am working on a sculpture and it doesn't look right. I will chisel apart large portions of a sculpture and make changes on the go.

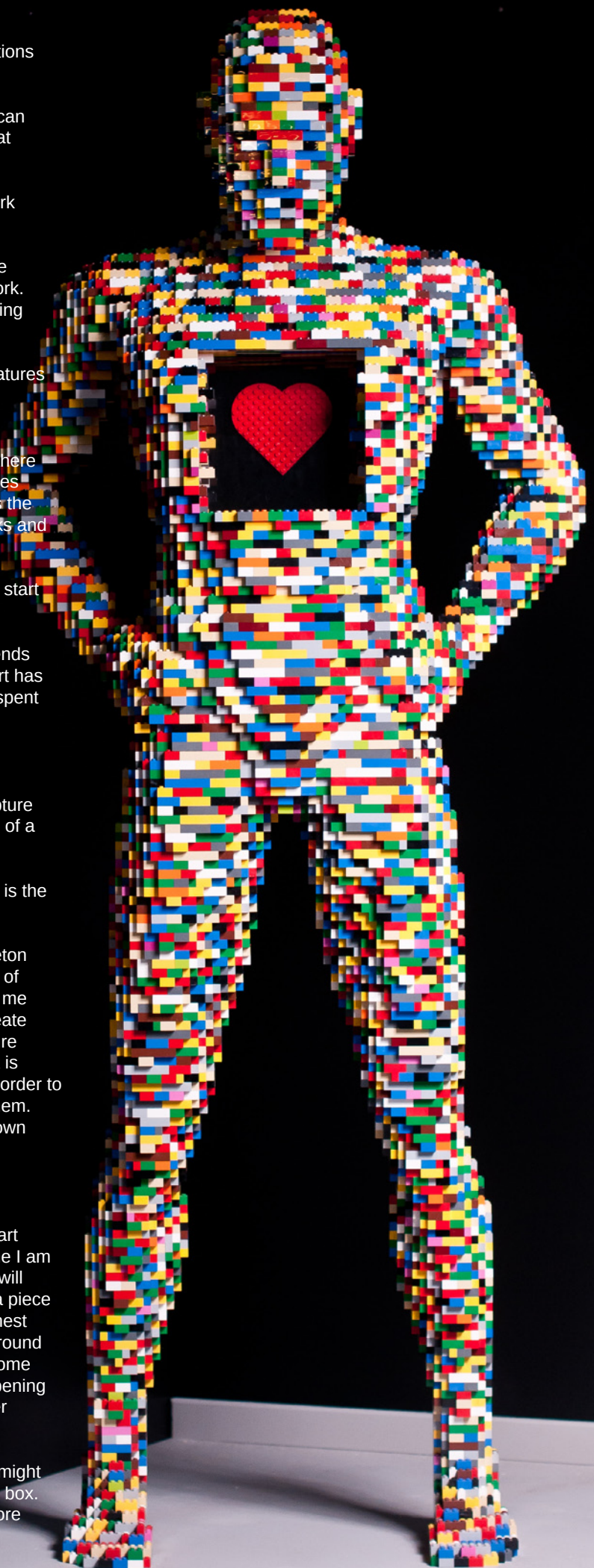
HBM: What is the largest model you have made? What is the smallest?

NS: The largest sculpture was actually a dinosaur skeleton that is currently touring as part of my exhibition, The Art of the Brick. It measures over twenty feet long, and it took me an entire summer to build. The idea behind it was to create a sculpture that would appeal to kids. I want to make sure that there is something for everyone in the shows and it is important to me that my artwork is accessible to kids in order to open their eyes to the art world, and hopefully inspire them. The smallest sculpture was a tree I made out of one brown brick and one green brick.

HBM: What is your favourite sculpture?

NS: It is difficult to pick a favorite sculpture. I put my heart and soul into them. I am most excited about the next one I am working on, but you will have to wait and see what that will be. I think the most iconic sculpture in the exhibition is a piece titled Yellow which depicts a human figure tearing his chest open while thousands of yellow LEGO bricks spill out around him. This piece really resonates with people. It has become part of pop culture. People relate to the messages of opening oneself up to the world, while also appreciating the inner struggle of the figure.

But if I am to choose a sculpture that personifies me, it might be Gray, where a figure is tearing itself out of a big gray box. This piece seems to sum up my transitions in life, as I tore



XRay by artist Nathan Sawaya. Photo courtesy of www.brickartist.com



away from my past doings as a lawyer to find myself as an artist.

HBM: Do you use other materials in your work in addition to LEGO?

NS: Yes, depending on what I am trying to say with the piece. There are times I have incorporated, wood, glass and other media.

HBM: Do you have any future projects you can tell us something about?

NS: I have plans for future works, but you will have to wait and see. Currently I am preparing works for a new exhibition. However, I don't like to talk about the specifics of my next project until I am ready to reveal it completed and ready to be experienced as a whole. For sneak peeks you can follow me on twitter and Instagram at @NathanSawaya.

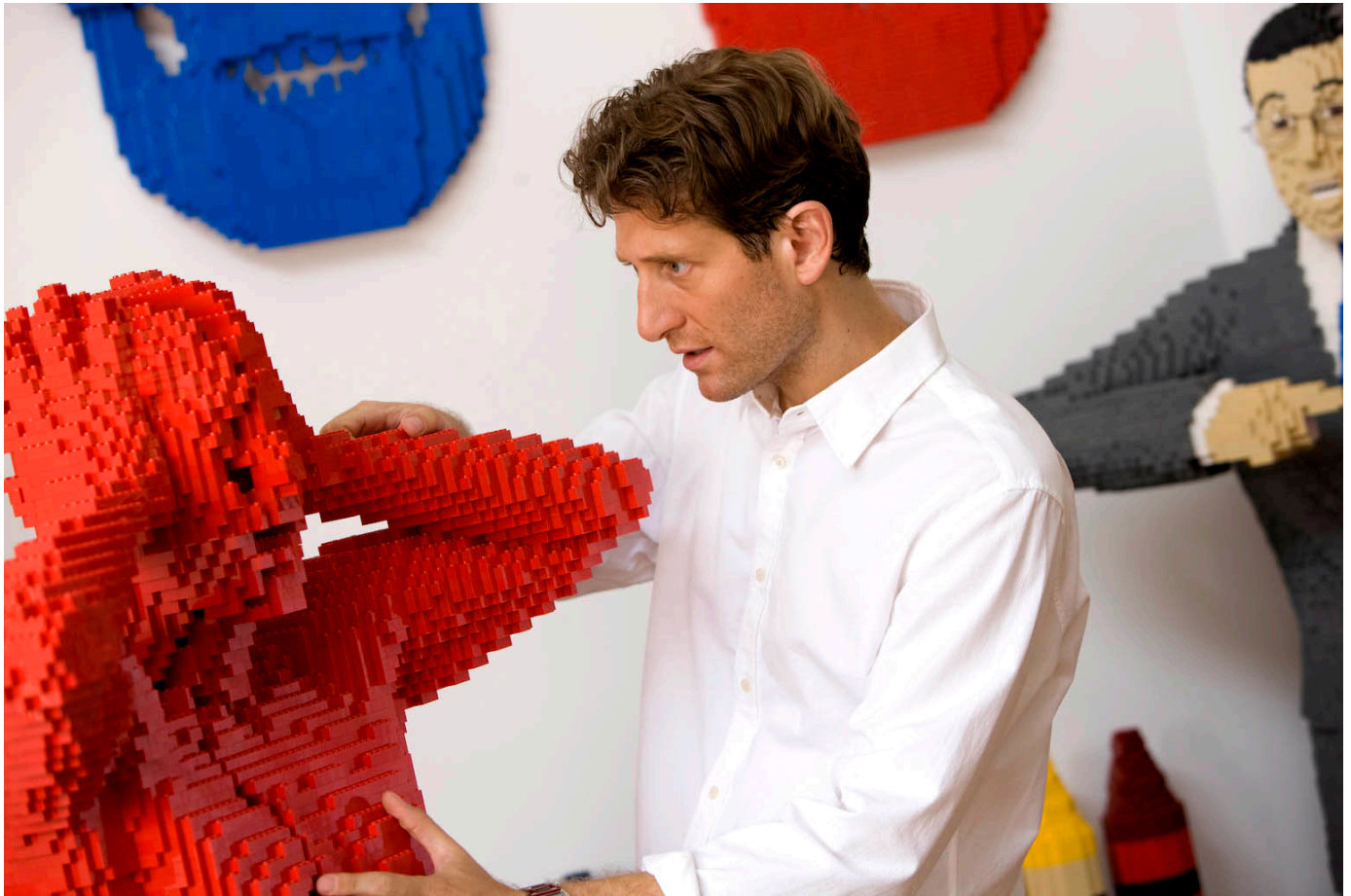
HBM: How do you see the evolution of the AFOL (Adult Fan of LEGO®) phenomenon over the last couple of years?

NS: I don't know if there has been an evolution, or if it has just become more well-known and accessible. I think there have always been adult fans of the LEGO toy, but now more and more of them are making themselves known.

HBM: What do you think of the increase in new parts and colours in the LEGO palette over the last couple of years?

NS: As an artist who works with LEGO bricks, I enjoy the palette of the bricks that are available, and if that palette increases, it just adds new colors for me to work with.





Hugman by artist Nathan Sawaya. Photo courtesy of www.brickartist.com

HBM: Tell us about your latest exhibition.

NS: I have several exhibitions that tour the globe. Currently The Art of the Brick is on display in the US and Europe, with others to come. Keep checking brickartist.com for dates and location.

I enjoy seeing reactions to my work. People can connect to my artwork on a different level because it is made out of this simple toy that they likely have at home. It makes the art very accessible.

HBM: Tell us about your collaboration with Art Revolution.

NS: Art Revolution is my new way of giving back. Art Revolution is an organization promoting art for happiness, health and education. The Foundation's mission is to advocate the importance of art in everyday life and to raise awareness and funds to put art supplies in kids' hands, to fund programs that put arts education back into America's schools and to support organizations that conduct art therapy for the ill and elderly. Its key message, "art is not optional," is driven by the alarming devaluation of the arts in today's schools and communities. With so many educational institutions cutting back on arts-related programs due to budgets and state mandates, our children are not getting the creative inspiration, drive and knowledge that art education offers. Art Revolution wants to change that. To join the Art Revolution visit artrevolution.org.

Nathan's social media information:

Facebook: <https://www.facebook.com/thebrickartist>

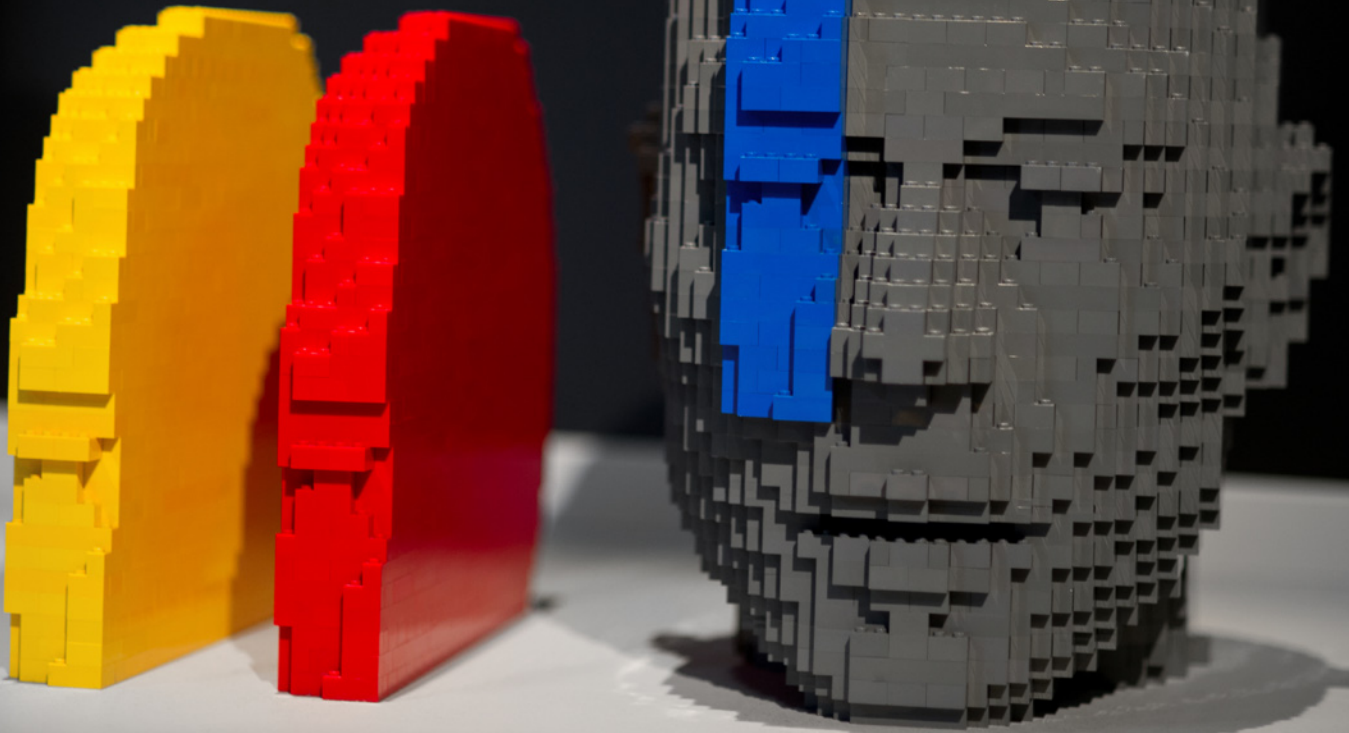
Twitter: [@nathansawaya](https://twitter.com/nathansawaya)

Instagram: [@nathansawaya](https://www.instagram.com/nathansawaya)

Google+: <https://plus.google.com/108552899116267186327/posts>

Pinterest: www.pinterest.com/nathansawaya/

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Courage-within by artist Nathan Sawaya. Photo courtesy of www.brickartist.com



The Land of the Rising Brick (I)

By *Iluisgib*

Pictures by *Iluisgib* and *Delia Balsells*

Whenever I go on holiday I try to include some small LEGO® related activity, mainly to enjoy it, but always trying to find an interesting topic to be able to tell you..

Last summer I had the great fortune to be able to visit Japan, a country and a culture that have attracted me for many years and that I had not had the chance to visit before. Taking advantage of the incredible patience of Delia (my wife), I decided to investigate the world of LEGO in Japan. To this end, aside from visiting the "public" options the country offers (basically the stores and the Discovery Center in Tokyo), I had several meetings with relevant people in the LEGO and AFOL community in the land of the rising sun.

Normally there is no problem in contacting AFOLs in Europe or the USA. There is an extensive network of AFOLs that allows you to reach the person you want more or less easily. But how to organise a series of meetings in Japan from Barcelona without knowing anyone there?. Once again the CEE Team, specifically Jan Beyer, lend me a hand in this complicated task. He put me in contact with Nathan Bryan, an American who is passionate about Japanese culture and who, on one of his trips, decided to never go back.

Nathan was an excellent host and he organised a meeting with fans in Osaka, coordinated another meeting with fans in Tokyo as well as a meet up with Kazuhumi Okazaki, Marketing Manager for LEGO Japan.

Since I was surprised to find an outsider who was so integrated in the LEGO fan community in Japan, I asked him to answer a few questions to get to know him better and get a perspective of how people experience their passion for the LEGO brick.

HispaBrick Magazine: How did you start with LEGO?

Nathan Bryan: I started with some basic sets in the early 70s and loved them so much that my Dad took me to Denmark in the late 70s to visit Billund to visit LEGOLAND. We met a LEGO employee and he took us on a special trip to visit the LEGO Factory. I still have the Minifig that they let me pick out parts for to build!

HBM: How did you come to Japan?

NB: Along with LEGO I had been interested in Origami (paper folding) from an Origami book my Grandfather gave me when I was 5 years old. As a teenager I got very interested

in Japanese history and martial arts and came over the first time in 1985 as a High School Exchange Student. I came back during college and then after graduating came back the third time and have stayed ever since.

HBM: Is LEGO a recognized brand in Japan?

NB: Yes very much so.

HBM: How did you get in contact with the LEGO Community in Japan?

NB: Over the years I had always picked up a LEGO set or two to build with but when I had sons it gave me a whole new reason to buy more LEGO (for them of course!) When I started seriously building I started looking on the internet for LEGO topics and found a whole worldwide community of LEGO fans! I found out about BrickJournal and contacted Joe Meno to see if he wanted any articles written about LEGO in Japan. He was very supportive and from that I started contacting many people in the LEGO community here to conduct interviews for writing articles.

HBM: Which is your current involvement?

NB: I still write articles (although not as many as I need to find time to do!) and have also translated many articles that other Japan AFOLs have written for BrickJournal.

HBM: What is the objective of brickzen.com?

NB: I started that to provide information about LEGO in Japan in English and worldwide LEGO news in Japanese, but I haven't been updating it much.....

HBM: Could you tell us something about the AFOLs in Japan?

NB: There are many solo builders that just build and post pictures of their models on the internet. Recently some user groups have started to form to put together small events. LEGO theme and Toy Theme Cafes have opened and become meeting places. Hopefully there will be some larger events in the coming years to really show people what you can do with LEGO blocks.

HBM: Which are the main differences between American and Japanese AFOLs?



NB: I haven't met many American AFOLs, but I think a main thing is that in Japan as I mentioned above there are many builders that like to build alone and just post pictures of their work. AFOLs in other countries seem more interested in gathering in groups to build and display their MOCs. I think that is changing here in Japan though and more people are building together and meeting in person.

HBM: Is it difficult for an occidental AFOL to become integrated with Japanese fans?

NB: Not at all. All of the Japan AFOLs that I have met are very open and welcoming. And in any large group there are bound to be a couple of people that speak English, and even if they don't, having a Love of Building with LEGO® is more than enough to become friends and even communicate!

After many emails during 6 months (thank you for your patience Nathan), we managed to organise an agenda that fitted my needs and didn't interfere excessively in the plans Delia and I had for visiting the country.

Our trip started on August 6. We flew to Tokyo-Narita by way of Moscow. I was fortunate enough to be able to buy the 2012 airlines set (4442 - Glider) on the plane, which I think is rather nicer than the 2013 set. the trip had started well :)

The first two days of our trip were spent doing some serious tourism, completely unconnected to LEGO bricks. Kyoto is a very recommendable city. It is relaxing to walk through Gion, the most traditional neighbourhood of Kyoto, as well as exciting to meet a Geiko or a Maiko (Geiko apprentice), which is becoming harder and harder to see. When we least expected it we saw a Maiko and (discretely) enjoyed seeing her clothes, hair and exquisite walk while she interacted with others.

ENCOUNTER WITH AFOLS IN OSAKA

On the third day of our trip we went to Osaka. The contrast with Kyoto is total as Osaka is a modern commercial city. As a matter of fact it is the ultimate shopping city in Japan. We





had arranged a meet-up with Nathan on August 9 at 5pm and he was going to take us to an AFOL meeting of the Osaka University LEGO® Club.

The Osaka University LEGO Club has 40 members, 10 of whom are university students whereas the other 30 are amateur builders. Kanna Nakayama explained the activities they carry out.:

“We do mainly two types of activities:
We organise construction lectures at the Science Café for the general public. We (the university students) take some LEGO models and we plan lectures to teach the audience about mechanics, mathematics, programming, etc... These sessions at the science café are called “LEGO-Café”
We exhibit MOCs during the University Festival. The university students are backstage personnel and the amateur builders are exhibitors and interpreters.”

Kanna also explains how the group got started and how they are organised:

“First, my partner and I were included in the official project of the University of Osaka and we got a lot of money! the project is the Science Café using LEGO bricks in order to teach mechanics and electronics..
After organising several lectures the public wanted to not only learn, but also see some LEGO models. Then my partner and I got the University and the LEGO Community together. Some voluntary amateur builders joined us to help out.
Now the relationship between students and builders is a win-



win relationship.

The students can exhibit their LEGO bricks, learn how to build and buy and they learn how to explain mechanics with LEGO bricks (communication skills).

The amateur builders can show their work periodically to many more people than they can online.”

Nathan came to pick us up at our hotel and we went to the meeting place, a bar dedicated to LEGO that had opened just a month earlier in Osaka. The bar is on the first floor, which is quite common in Japan. Due to the massification and the lack of space you can find many shops on different floors in any building.

When we came in there were already some fans talking to each other. We were received very cordially and started to talk as if we had known each other all our lives. As far as LEGO is concerned, the first thing that drew my attention was a small table at the back of the bar with many MOCs. That is when I discovered the first characteristic of the Japanese AFOLs. Since they don't have a place for their club nor tend to have event like the ones we know in Europe, they take their MOCs to their meetings to share them with the others..

The models were very diverse and extremely detailed. The construction techniques they use maximise detail compared to size, especially due to lack of space in their homes. They built a small model to celebrate our visit: the reproduction of two football players, Shinji Kagawa and Fernando Torres, with a Japanese and Spanish flag respectively and the outfits of their national teams. All the models were interesting for different reasons, because they represented Japanese culture, because they represented comic or movie, or simply because they were excellent reproductions of everyday objects, like a watermelon, or musical instruments. I added my little grain of salt to the exhibition by bringing along my microscale reproduction of the Sagrada Familia, which later gave to Nathan to thank him for all his efforts which made our visit possible.

There were a total of 14 AFOLs at the meeting. On the Japanese side: Kanna Nakayama, Tomoyuki Wakata, Moko Lego, Nobuo Miki, Takuya Harajo, Ryota Fujikawa, Kozue Watanabe, Shota Ushiba, Keisuke Yoshida, Satoshi Yagi, Satoshi Ohsako, Hisashi Nagai y Nahtan Bryan. On the Spanish side... :)

After chatting for a while we saw food was being served. Any good meeting, accompanied by good traditional food becomes a luxury. Unfortunately we couldn't enjoy the meal 100% as our stomachs were still suffering from the Jet lag, but I can assure you that everything we tasted was delicious.

During the meal I noticed another curious detail that I absolutely loved. In order to distinguish the drinks of the participants, they build small models which they place on their glass to set them apart. What a simple and efficient method!!! We talked to one after another of the AFOLs and we learned about the many differences in how we live our hobby.

We spend a little over 2 hours with the fans in Osaka. A short time to be honest. We had to leave in mid meeting and we were really sorry since we really felt comfortable among these AFOLs, but our friend Megūmi Nakashima was waiting for us at the Osaka station to take us to our next ‘compulsory’ visit: the Clickbrick shop. Of course we took a group photo before we left and Keisuke Yoshida (the AFOL who made the musical instruments) was kind enough to give me a musical note made with LEGO, to identify my glass (it is now part of my treasures). From my side, and to thank the AFOLs for their kindness I



gave them each a small traditional gift from Catalonia (the region I live in): a “Caganer”, a Christmas stall figure in a somewhat scathological pose, which is supposed to bring good luck.

THE CLICKBRICK SHOPS

Megūmi was another of the “sufferers” who helped us prepare our trip and she organised a visit to Clickbrick for our first

encounter after which we had dinner in the same shopping mall. We took a train at the station and after a transfer and some 25 minutes on the train we arrived to the shopping mall. It wasn't very hard to find the shop as it had a large white sign with the Clickbrick and LEGO® logos that stood out among the other signs.

We went into the shop and our first impression was that that it wasn't much different from a LEGO Store, with the collection of available sets, minifigs and “pick-a-brick” elements, keyrings... The only thing that was different up to that moment were the maxifigs used to decorate the place. These are different from the ones we know here. The proportions are somewhat different and there are many more models. It all changed when we arrived at the “wear” zone. The Clickbrick shops have unique t-shirts that cannot be bought anywhere else in the world. The designs go from very simple extremely complex and colourful. The problem is the sizes. In general, Japanese sizes are smaller than the European ones. It took quite some effort to find my size (L-XL), but I finally managed to buy a couple of them and Delia also got one (little by little she is coming over to “the dark side of the brick” :D). There was also keyring engraving service so we made our respective keyrings engraved with our names in Japanese and Megūmi in European characters...

Next up was dinner (white rice and a salad, to stabilize our stomachs) and then back to the hotel where I started to organise my purchases of the day.

After this intense day we had a rest of four days, as far as LEGO was concerned, during which we visited Osaka, Kobe and Itadori-Seki, a small rural village where the parents of another Japanese friend, Maiko Nagaya, run a small hotel.

This is where the first part of this article ends. In the next issue of HispaBrick Magazine I will tell you about the different activities we did in Tokyo, like a visit to the LEGOLAND Discovery Center, and the Japanese LEGO offices, or a marvelous encounter with AFOLs in the capital of Japan.
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Interview: Dr. Robert Carney

By HispaBrick Magazine®

Dr Robert Carney is known worldwide for his numerous castles made with LEGO® bricks. From 1986 to present he has built more than 140 historical castles from many European countries. Some of them are small keeps or strongholds with a main tower, but many others are massive constructions with several curtain walls, many towers and many kinds of military and civilian buildings.

HispaBrick Magazine: Who is Robert Carney?

Dr Robert Carney: Hello to you all! I am a 71 year old retired dermatologist, born in Iowa in the midwestern USA. I practiced in downstate Illinois for 37 years before retiring at the end of June 2011.

HBM: Dr Carney, What is the origin of your fondness for LEGO castles?

Dr. RC: This is a complicated question: In 6th grade in grammar school, I played the part of Hugh the serf in the class play - and my lifelong attachment to things medieval was born. LEGO did not exist anywhere when I was a child,

and not in the USA until I was almost 30 years old with two small sons and a daughter. We bought early LEGO sets for our children, built myriad houses, airplanes, cars, etc. until the children outgrew their LEGO, leaving it at home with Papa, who continued to build a bit now and then...but in 1986 LEGO Group marketed the Black Falcon's Fortress with D-shaped towers guarding the entrance, and suddenly I know I could recreate almost any castle in the world with LEGO!

HBM: You have built many castles of several European countries. How do you choose the castles to build?

Dr RC: My initial focus was on castles that I thought were particularly attractive and which might be recreated in LEGO. My main source of information and pictures was books about castles in English, which meant they usually favored English castles. But I copied material (pictures and plans - always in black & white - on every castle I could find in a library - all organized alphabetically by country. When my castles appeared on the World Wide Web, suddenly I had feedback, like architectural plans for the renovation of Ballytarsna in County Tipperary, Ireland, and photographs of the courtyard

of Castel Marrecio in Bolzano, Italy from the then curator. The outside interest and assistance has been irresistible -- so I've modelled castles both famous and obscure - but they're all castles that were prepared for war.

HBM: In the building process of your castles, Do you make computer designs or any kind of drawings or plans?

Dr RC: Very early in my design years, I evaluated LDraw as a possible design tool, but it was too tedious. Thus I've always done my plans and elevations on 1/8" graph paper, taping sheets together for large projects, all done in pencil since I erase a lot.

HBM: You have built more than 140 castles. They need a lot of parts, and you dismantle the last castle in order to get pieces for the next one. But, do you have any permanent assembled castle?

Dr RC: No castles. It would be too difficult to choose favorites. My Tomb of Nefertari in the Valley of the Queens in Egypt is the only model I'm considering keeping, since it's very educational for both children and adults, and displays the actual ancient Egyptian artwork.

HBM: Which is the most challenging castle you have built? Why?

Dr RC: Excellent question! Since LEGO is most naturally a square/rectangular medium, any construction in other shapes is a challenge - and many castles were built atop irregular rock formations, making them a challenge to recreate. Other

castles are unusual shapes due to the whim of the owner or architect (e.g. Caerlaverock in Scotland or Thoury in France). Neuschwanstein was a huge challenge in part because it needed to be built in sections so it could be transported long distances.

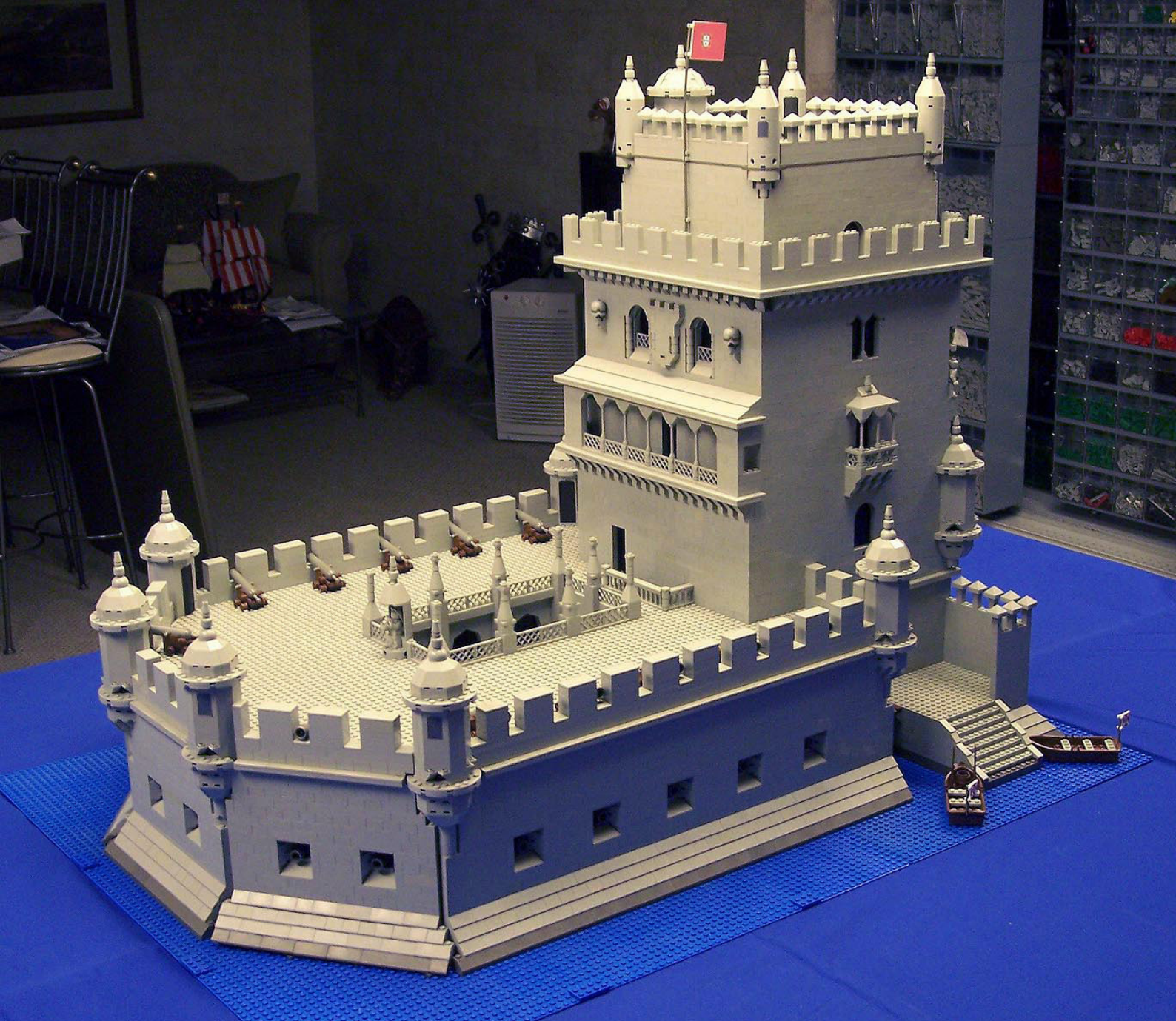
HBM: Do you have any favorite castle? And what about your Spanish castles?

Dr RC: I would have to say that my two favorites are Schloß Neuschwanstein in Bavaria and the Torre de Belém in Lisboa's harbor. Neither fit my usual pattern of "medieval castle prepared for war". Neuschwanstein being a palace and Belém a cannon fort, but both are so beautiful that they were a joy to design and build. I love the simple majesty of Almourol and long to rebuild Fuensaldaña or other Spanish castles similar to it. And of course La Mota is a flat out awesome castle!

HBM: In the last years we have seen a lot of new parts related to castle (new doors, panels, modified bricks, slopes, wedges...), is there any castle you would like to rebuild using the new parts?

Dr RC: As you've doubtless noticed, my 141 castles include a number of larger rebuilds. Probably the only one rebuilt to date due to "new LEGO" was Craigievar in Scotland, which I redid using the same plan and elevations as soon as tan [sand yellow] panels became available. More important in rebuilds is owning more LEGO and having better pictures and other information so I can rebuild both larger and better. That said, parts like the 30° 1 x 1 x 2/3 slope have been in huge help in new projects.





HBM: Have you ever been required/commissioned to build a castle for a museum or exhibition hall?

Dr RC: No. Several people, owners and interested parties, have asked to buy the model, but not only would gluing and shipping be a real chore, there is a limited supply of old light gray LEGO® available since it is no longer made, and I need it for future projects.

HBM: Have you ever been involved in collaborative dioramas or projects with your castles?

Dr RC: So far as I know, castle collaborations are all done using interchangeable modules and are by nature “fantasy castles” which I do not build. I suppose a collaboration might be possible on a huge castle (e.g. the Alhambra, Malbork in Poland or the Krak des Chevaliers in Syria) but so far as I know no such attempt has been made to date.

HBM: Have you ever think about building fictional castles, like those ones shown on movies or TV series (Lord of the Rings, Camelot, Hogwarts...)

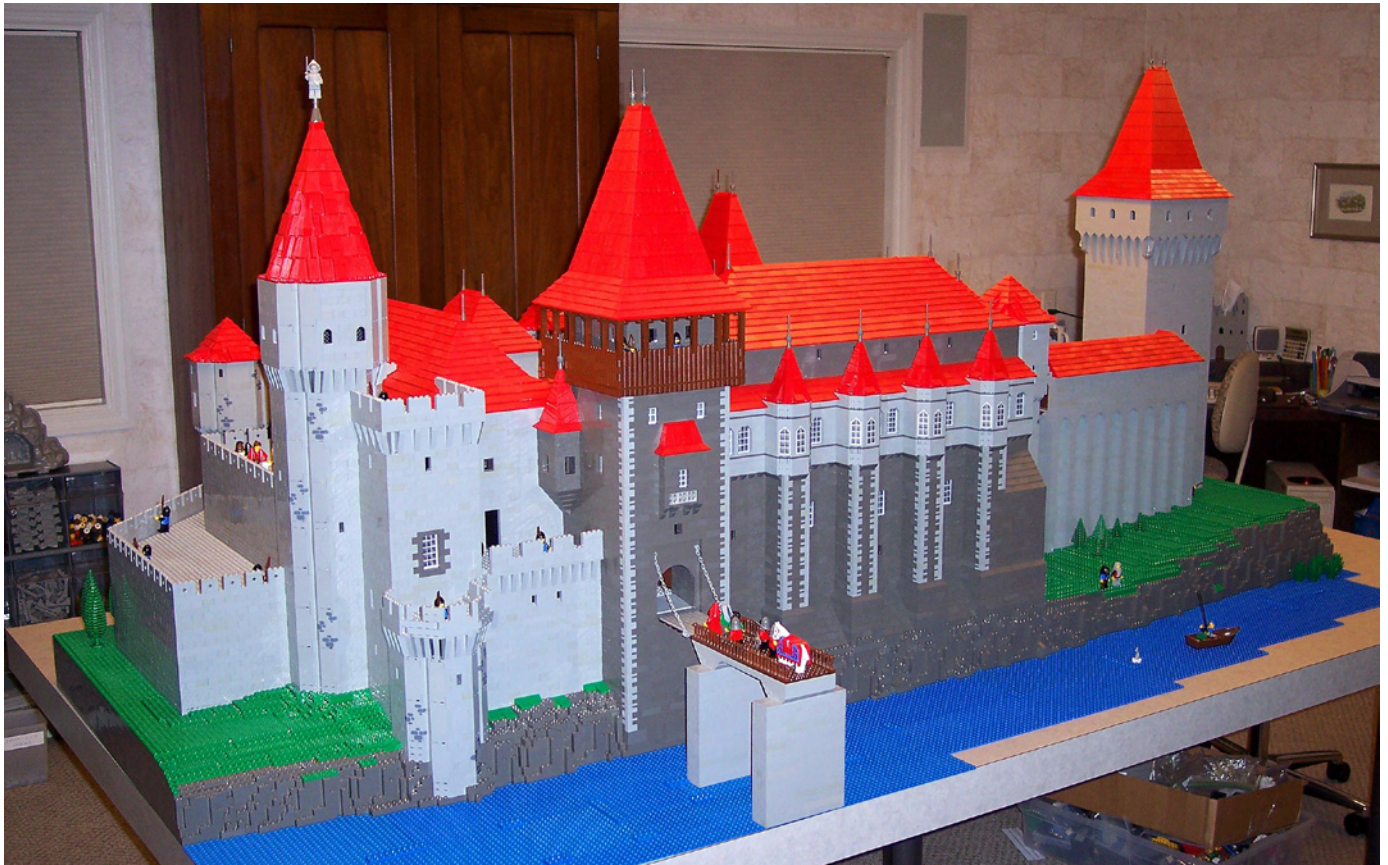
Dr RC: Oh, I think about it a lot, but I have more real castles to choose from than I can ever build, so I suspect it will not happen. There are plenty of AFOLs building wonderful fantasy castles.

HBM: Do you follow last years castle sets from LEGO? What's your opinion about them?

Dr RC: I have always liked the castles that LEGO has offered beginning with the 1978 classic yellow castle, which I bought incidentally. My only real complaint is that the battlements have never protected the minifig guardians very well, and I've always wanted a 5 x 2 arch [for a 3-stud wide arched door]. But we now have two Moorish arches which is a very nice addition.

HBM: Apart from castles, what are the LEGO themes you are most interested in?

Dr RC: I love my Egyptian tomb and have designed (but not built) others. I have built every car of the 1953 Santa Fe Super Chief passenger train that ran for years between Chicago and Los Angeles, and the entire 9-car train from Toy Story



3. And I assist with the design of the 4H projects of Justin Rice, who just turned 16. He had built beautiful models of the Arc de Triomphe du Carrousel and Eiffel Tower in Paris, the Lincoln Memorial in Washington D.C., etc. I hope (with some encouragement from me and others) his love of LEGO building will continue into adulthood.

HBM: Could you tell us something about your next project?

Dr RC: While I expect several castles to be built in the interim,

I am most concentrating at the moment on my castle for BrickWorld 2014 in Chicago, Illinois. I'm designing and hoping to build the Castillo di Torrechiara near Parma, Italy. It is a awesome fortress.

Visit Robert Carney castles at: <http://carneycastle.com/index.htm>
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The Minifig: A Cult Object (I)

By Iluisgib

Minifigs: Iluisgib

Maybe because I started to play with LEGO® when I was 6 years old (in 1980), I am unable to imagine LEGO without minifigures. According to the company, it is the second most important design in the history of LEGO, after the brick itself (although I believe that at the moment it surpasses the brick as our collaborator Arqu medes so brilliantly showed in his last Desmontados).

The minifig has become a cult object and there are now many people who collect them by theme, for their beauty or their scarcity.

In this article I want to focus on the minifigs that are object of desire for many collectors, because they exist in limited numbers or because they are simply outside the established sales circuits.

Promotional minifigs

In the article on polybags (see HispaBrick Magazine 015) I introduced the subject of these minifigs, as they tend to come in a small plastic bag, as promotional sets.

The craziness started in 2007 when someone in marketing (with a cruel strain) thought up the idea of randomly adding a chrome-gold C-3PO to 10,000 Star Wars sets to celebrate the 30th anniversary of the first film. This promotion was available only in the USA, causing considerable angry reactions from fans in other parts of the world. The minifig instantly turned into a much desired object by thousands of LEGO and/or Star Wars® fans around the world. There are reports of fans with electronic scales, searching for boxes that weighed a little more to find the much sought after treasure. The prices in the secondary market are scandalous as the minifig is currently being sold around 370€.





The character in question is the famous protocol droid who appears in all 6 films with a gold coloured chroming. As the chroming process was carried out with the minifig assembled, if you lift its arms you can see the colour of the unchromed plastic. This, however, does not make the minifig less interesting.

In 2009 the alarms went off again, when the promotion was repeated, this time with a chrome Darth Vader (actually it is black metallic paint), again in the USA. It is Vox Populi that this second minifig had a wider distribution, reaching other countries through local offices and rumour has it that production was considerably more extensive than the theoretical 10,000 units. As a matter of fact, on the C-3PO gab you can read: "Congratulations You have found 1 of 10000 Limited Edition LEGO® C-3POs!" This is not the case with the Darth Vader which makes it hard to know how many were produced. Anyway, the prices on the secondary market are much lower, which appears to indicate there are many more available.

In 2010 someone at LEGO appears to have learned it was not a done thing to play with the feelings of fans around the world and the two minifigs that were available that year were distributed much more extensively. The White Bobba Fett and the Chrome Stormtrooper could be obtained by spending a certain amount in selected shops. The Chrome Stormtrooper had already appeared in 2009 as a magnet to commemorate the 10th anniversary of LEGO Star Wars™, but either because of the packaging or because of the price, collectors prefer the 2010 polybag, even though in principle it is the same minifig.



Finally, in 2011, the distribution of exclusive Star Wars minifigs became universal (at least in part). The Shop at Home promotion "May, the 4th" offered the possibility of getting an exclusive minifig, spending 55€ on Star Wars products. In 2011 there was the Shadow ARF Trooper, in 2012 the TC-14 and in 2013, the Han Solo (Hoth).

For now I'm only talking about Star Wars minifigs, but there have been more... In 2012 the Super Heroes theme from Marvel and DC Universe was launched, and as many will know, the variety of characters is enormous, which means LEGO has a lot of aces up its sleeve in its battle to prevent avid collectors from ever completing their collections ;

This first year brought the Hulk minifig, an exclusive of Shop at Home. As opposed to the extremely muscled version in set #6868, in this promotional bag hulk appears at minifig scale. In 2013 there was one exclusive minifig: Jor-El™, Superman's father and one of the main characters in the new film about this superhero (The Man of Steel).

In addition to promotion related to licenses, there have been others related to "core" LEGO products. Two examples are the MAX minifig, the LEGO Club mascot, and the LEGO Universe Astronaut. The first can be obtained registering a child for the LEGO Club at a LEGO Store, LEGOLAND or LEGOLAND Discovery Center. The second was obtained by pre-ordering the LEGO Universe game.

In 2013 there was a curious novelty. The toy store chain R, originally from Denmark, and present in Germany, Finland, Norway and Sweden distributed an exclusive minifig





representing the mascot from its logo. The most curious (and alarming) thing is that this minifig does not only have exclusive decoration, but a new piece that was specifically made for it: the hat. In addition, the BR logo is printed on it. Is this the beginning of minifigs à la carte starting at a certain volume?

Another recent the pack with 3 minifigs, a limited edition of 500 that is made for each inauguration of a LEGO® Store around the world. These are three more or less common minifigs onto which the name of the town and the year of inauguration is printed. The packaging is standard, but has an exclusive and different front for each store on which the serial number of the pack appears also.

Exclusive Minifigs from Books

It was a pleasant surprise and the start of many products that include a LEGO minifig as a gift. In 2009, Dorling Kindersley Ltd. (DK) published the book LEGO Star Wars™: The Visual Dictionary. The book reviews all the LEGO Star Wars sets to date. When the information about the book became available the surprise was it includes a previously unreleased minifig: Luke Skywalker Celebration. It is the reproduction of Luke Skywalker in the last scene of Episode IV, in which Princess Leia gives Luke and Han Solo a medal for destroying the Death Star. The minifig comes on the cover of the book in a special container.



After this first book, it is usual to find minifigs in DK books about LEGO. For example, in the LEGO Star Wars Character Encyclopedia the minifig is Han Solo Celebration, which matches the Luke Skywalker minifig from the previous book.

The world of Harry Potter follows the same lead. The book LEGO Harry Potter Characters of the Magical World contains a Harry Potter minifig in party costume. LEGO Harry Potter Building the Magical World includes another version of the main character of the saga, Harry Potter Yule Ball Attendee, which is a special dress for the Yule Ball, an event which is celebrated in the Triwizard tournament.

The Superheroes don't escape this trend either and the book LEGO DC Universe Super Heroes: Batman Visual Dictionary contains the Batman Electro Suit, a Batman with a special suit that allows you to solve part of the Batman video game.

So far we have talked about licensed minifigs, but in more general themes LEGO also has exclusive minifigs, like the LEGO NinjaGO Character Encyclopedia which comes with a Green Ninja ZX, or the LEGO Minifigures Character Encyclopedia, the book that reviews the 10 first Collectible minifig series, which adds a toy soldier to the 161 available minifigs (including Mr. Gold).

During the last quarter of 2013, DK published a new book, dedicated to the history of the minifig, which will include no less than 3 minifigs.

Exclusive minifigs from video games

Another fashion that emerged recently, maybe as a result of the launch of LEGO universe, is offering minifigs for pre-ordering a LEGO video game. In 2012 there were numerous examples, like Lex Luthor (30164) with the game LEGO Batman 2: DC Super Heroes. Another example is the Elrond minifig (5000202) with the pre-order of the game LEGO Lord of the Rings, or Chase McCain (5000281) with the game LEGO CITY Undercover.

The thing is that in order to get the minifig you need to spend money on a video game you may not be interested in or which, even if you have a video console, is not for the platform you use. For example, the game LEGO CITY Undercover is only available for the NINTENDO platform. Imagine the headache I get each time I see one of those minifigs, as I only have a Sony PSP for which no new games are developed.

Exclusive Minifigs from Films

Not only are video games a source of minifigs. Last year the film LEGO Star Wars "The Padawan Menace" was released on DVD and Blu-Ray, and the Blu-Ray version came with an exclusive minifig of Han Solo as a child. I can tell you I was particularly annoyed the minifig comes only with the Blu-Ray version as many people don't own this kind of device (yes, it may sound unbelievable, but there are still people in the world without a game console...). It is a shame you need to buy a Blue-Ray you are never going to watch just to get a minifig. After this first movie there have been two more: LEGO Star Wars "The Empire Strikes Out" and LEGO Batman: The Movie. With the first one you get a new version of Darth Vader with a celebration medal. This figure is linked to the contents of the film. With the other one, although it is a Batman film, the minifig is Clark Kent, the secret identity of Superman.

#



Vintage Review: Jennifer Clark's Skid Steer Loader

By Jetro

Pictures by Jennifer Clarke

Studless appears to have completely replaced studded builds in Technic – there is still the odd Scale Model inspired build that combines bricks and beams, but sometimes it feels like any complex and life-like build needs beams (either that or there are fewer and fewer builders who still have a reasonable assortment of Technic Bricks).

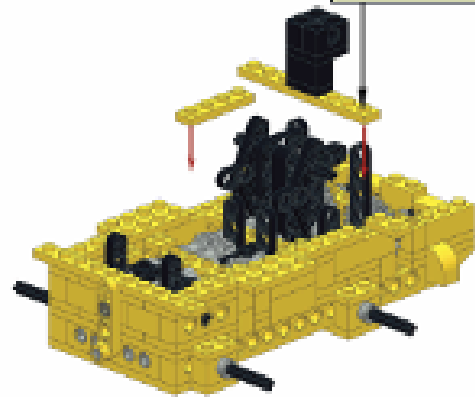
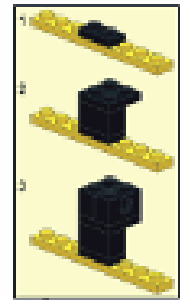
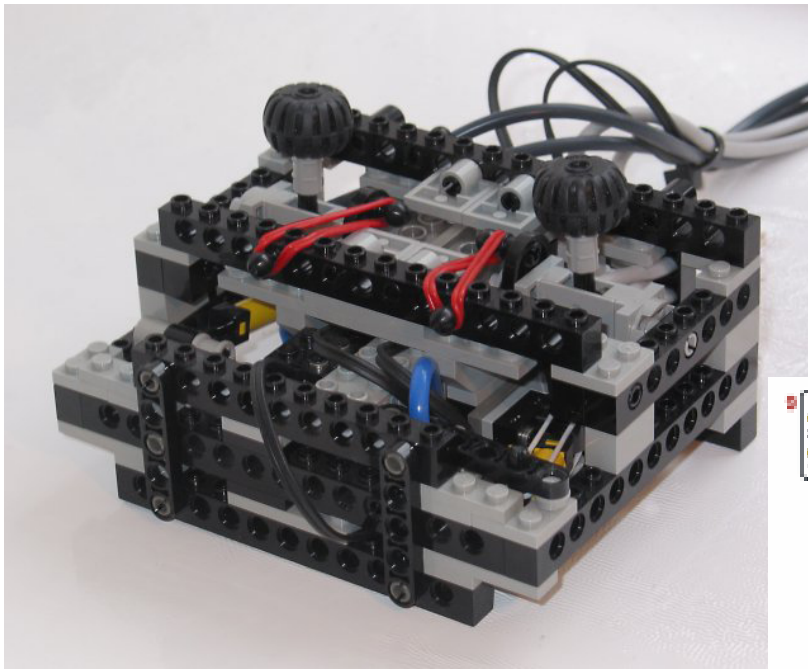
The Skid Steer Loader I'm reviewing in this article is a nice reminder of everything that was and is possible with "old" LEGO® Technic. Of course the MOC was built by one of the undisputed masters of "vintage" LEGO Technic: Jennifer Clark. She documented the model extensively on her website [\[1\]](#), from concept and use of the original machine to the individual elements of her fully functional MOC and remote control.



You can see it in action here:

<http://www.youtube.com/watch?v=MjTeViZdyEY&list=PLLHu5hFzgyvFDvdiAKHOMBzACA9sOGSL5>





The description is very well documented and makes for an interesting and attractive read and includes several videos of both the original machine and the MOC. Taking the original web page to the next level, Jennifer has worked together with Eric Albrecht to create high quality building instructions for this model. In addition to the MOC itself and the control unit, the building instructions also include an optional grab attachment and updated information about the real model and the building/designing process of the MOC. You can get the instructions for a small fee at www.guinemodels.com/skidsteer.htm

The model was scaled approximately to Technic Fig size, taking the balloon tyres as the starting point. The drive train was built in such a way as to keep the model as compact as possible while at the same time using the motors as counterweight at the back of the Loader in much the same way as in the original it was inspired on. The MOC combines 9V and Pneumatics and while the boom is operated by a pneumatic cylinder that is proportionally much shorter than the hydraulic cylinders on the original model (a limitation of the LEGO® system) the path of the boom is remarkably accurate.

The improved remote incorporates a small compressor for the Pneumatics in the model, including pressure limit switch as well as two controls for the electrically powered skid steer mechanism. Despite the fact that the controller is physically attached to the MOC, the model is easy to control and is fun to operate.

If you already have an (extensive) LEGO Technic collection or simply want to know how many parts you miss to be able to build this model you can download a complete parts inventory from the webpage dedicated to the MOC, but I recommend you visit Rebrickable. The Skid Steer Loader (Pneumatic Bobcat) model has been uploaded to this platform and once you log in and upload your parts collection it will indicate exactly which parts you are missing and even help you find them. The link for this MOC is rebrickable.com/mocs/jenniferclark/skid-steer-loader-pneumatic-bobcat

[1] www.guinemodels.com

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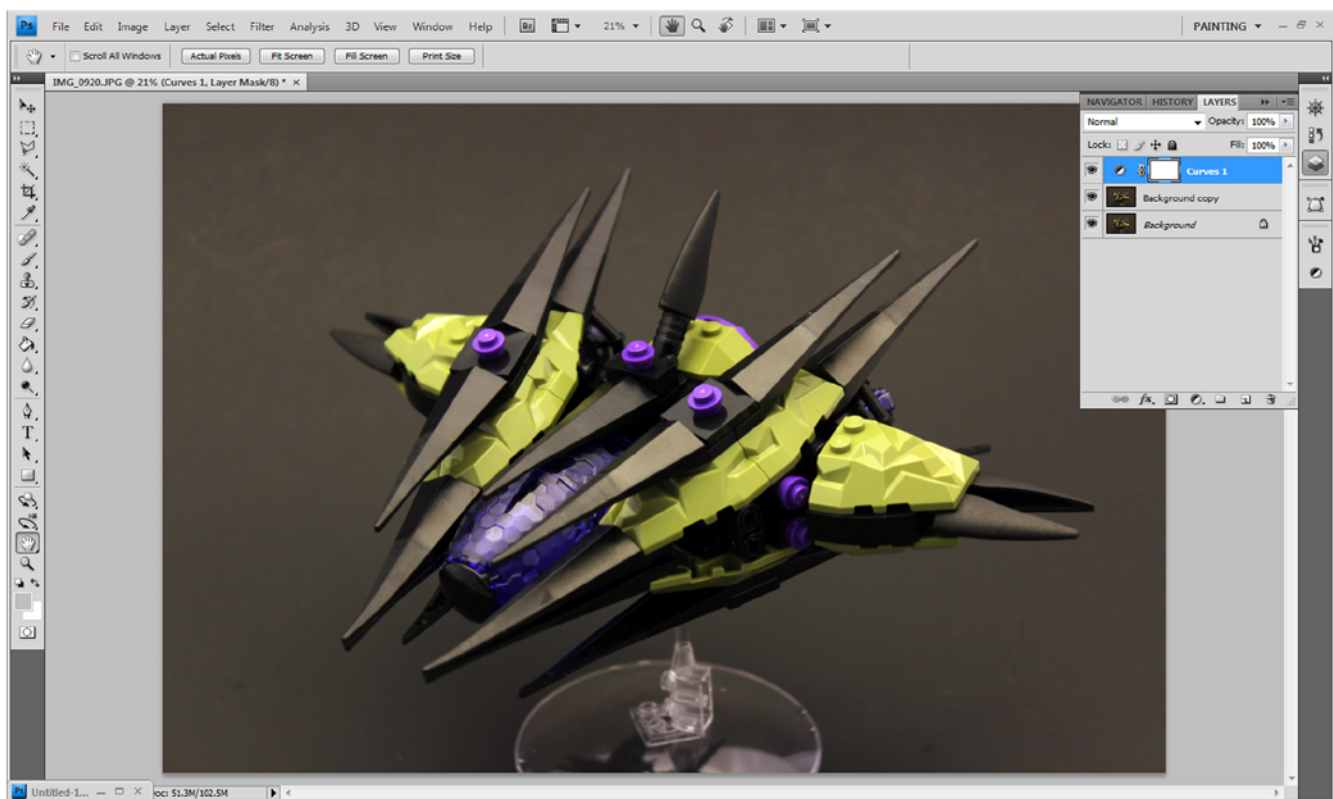
Editing

By Tyler (Legohaulic)

Adjustment Layers

We bring you a short tutorial on how to perform with some of the most useful retouching effects with Photoshop. You need to have a basic knowledge of Photoshop and, of course, there are more ways to get the same results and this is just one way to do it.

The first step I take is to duplicate the original layer so that I have something to revert back to should I need it. I then create new adjustment layers for all the changes I will be making. This allows me to go back and edit these adjustments as individual layers instead of it being permanent. I always start off with creating a Curves layer adjustment. You can almost always use the “Auto” adjustment and it will adjust it for you. Sometimes it does not work as well on some images. If that’s the case, the Curves can be adjusted manually.

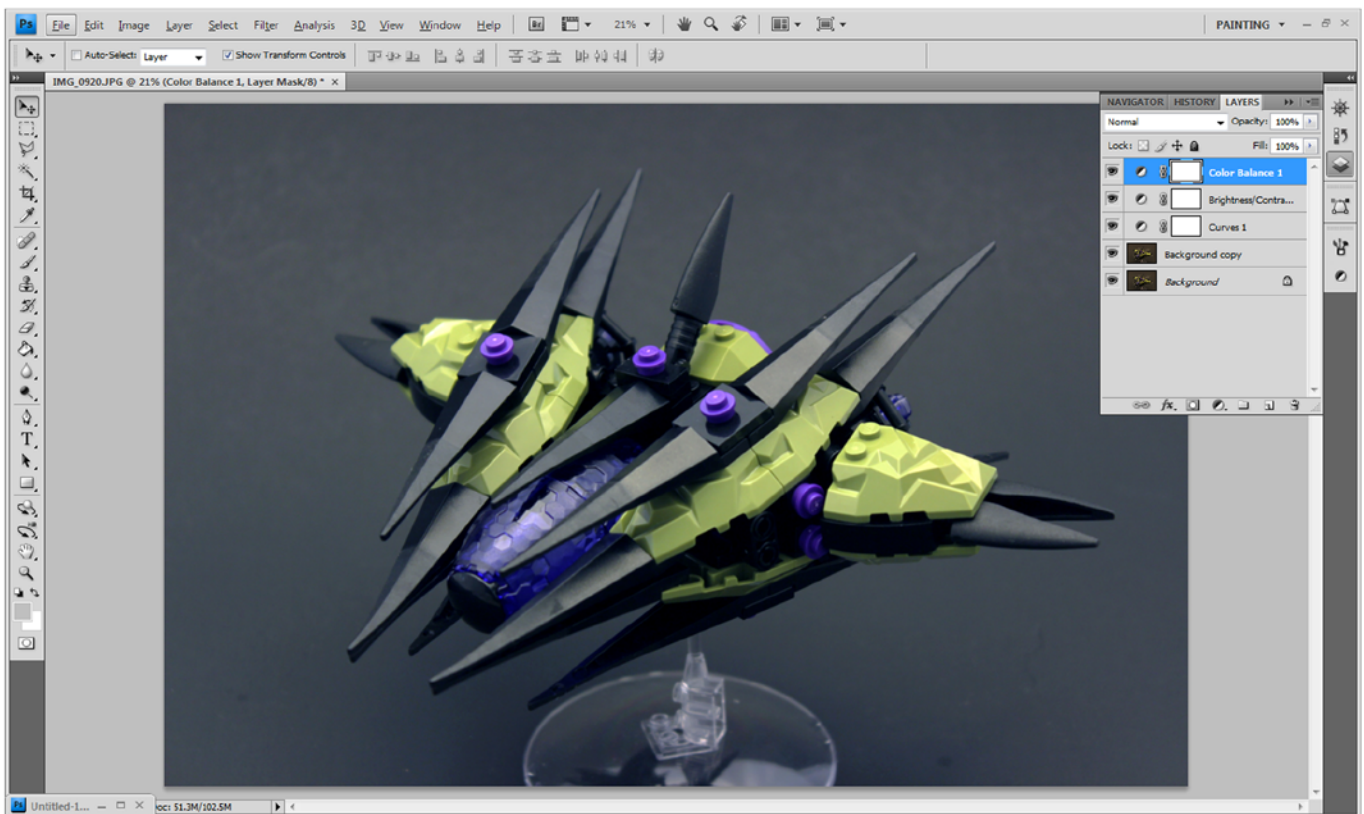


The editing process is really where the magic happens. Making small adjustments to the curves, levels, colors and contrast can really bring your model to life.

Knowing the look that you want to achieve in the final photo is important to know before you even start shooting.



Starting Image



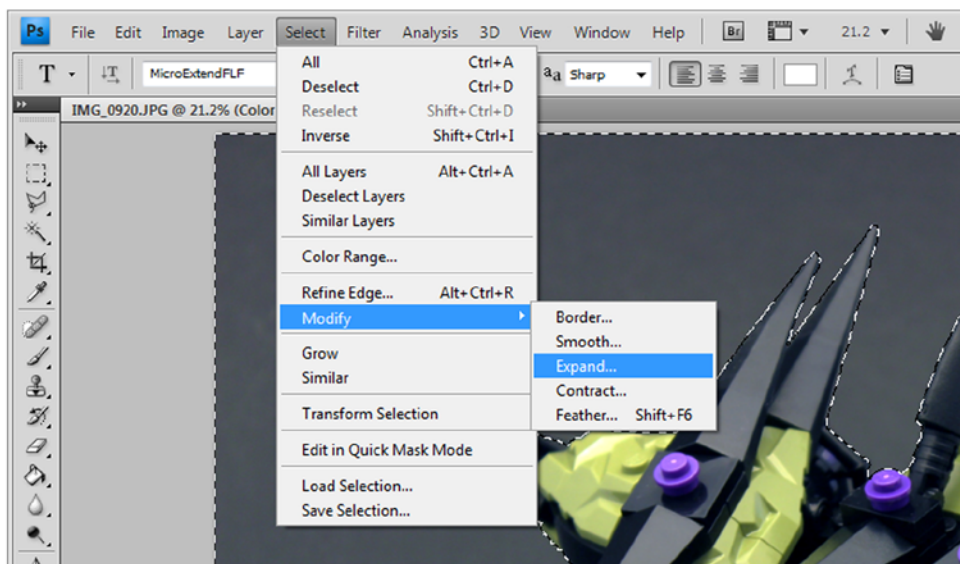
Ordinarily I would create a Levels adjustment layer to bring up the blacks. But they are already very dark so I ignored the Levels adjustment. I then added an adjustment layer for Brightness and Contrast and brought the Contrast down.

Possibly the most important step in editing is the Color Balance. I create a Color Balance adjustment Layer and start moving the sliders. The raw image was a bit too warm and I wanted a very cold looking image. So I added more blue, green and cyan. I also did this to the shadows and highlights of the image to make sure that everything stays unified in color.

Editing

Background Removal

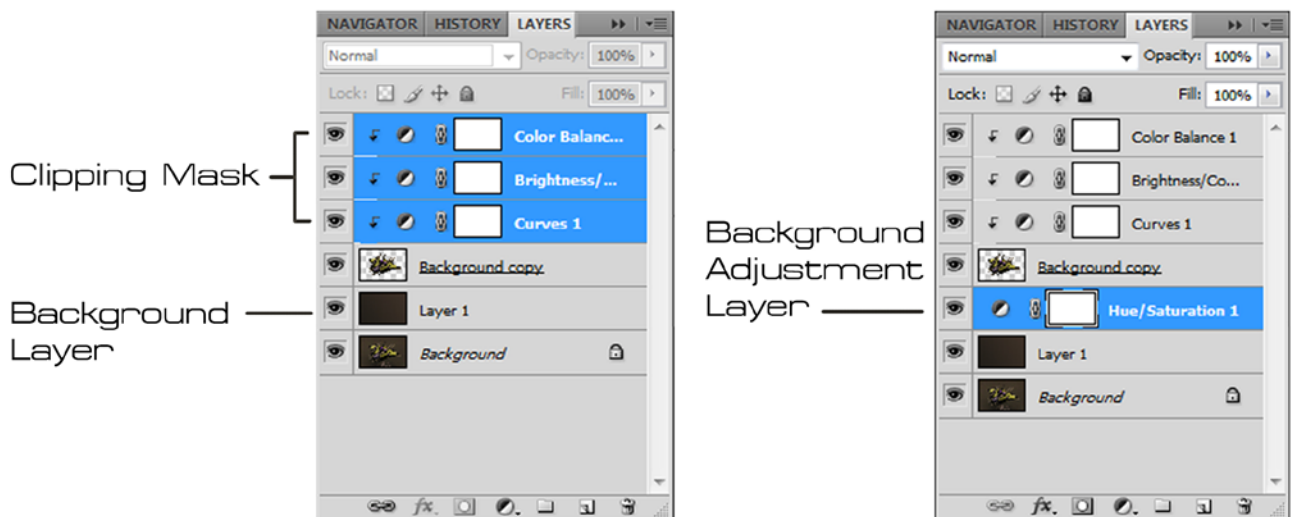
I often use the Magic Wand tool to select as much of the background as I can. You can adjust the tolerance as needed for the image you are working on. For this image, I had my tolerance set at 15. Some of the model may be selected but that is okay. Once you have selected as much as you can with the Magic Wand, you can use the Polygonal Lasso to refine your selection. Holding the Shift key will allow you to add to your current selection and holding the Alt key will let you subtract from it. I zoom in and use these to make sure I have clean selection around the model.



Once you have your selection go to, Select > Modify > Expand. I like to expand the selection by 2 pixels. After that I will, Select > Modify > Feather, and feather the selection by 1 pixel. This will cut into the model slightly but feather it just enough to avoid the jagged edge or the “halo” that sometimes is a result of selecting the background out of the model.

Many people frown upon using the Magic Wand tool for selecting things. By itself, it is a poor tool to use, but when combined with other tools, it can be incredibly useful.

Working in the highest resolution you can is the best option. You can always make something smaller when you are finished.



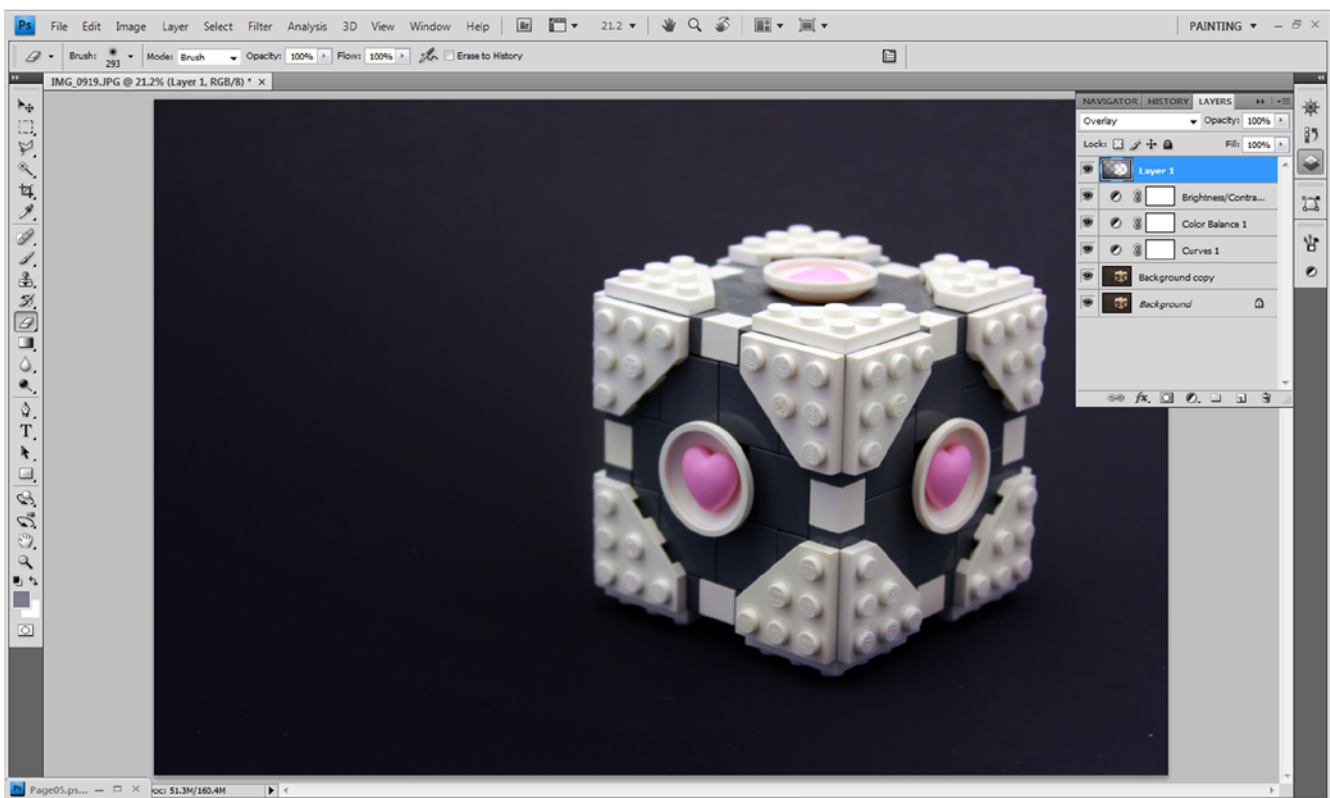
My next step after deleting the background is to create a new layer underneath the layer with the model on it. I also select my adjustment layers and create a Clipping Mask so that they will only affect the model and not the background. On my new layer I like to create a gradient using the darkest and lightest tones of the original image. I can then create a separate adjustment layer for the background that will allow me to adjust the hue, saturation or color to whatever I want.

You could also change the background to any image you want. With the model being on its own layer, you can also move it around the page or duplicate it to make an entire squadron.



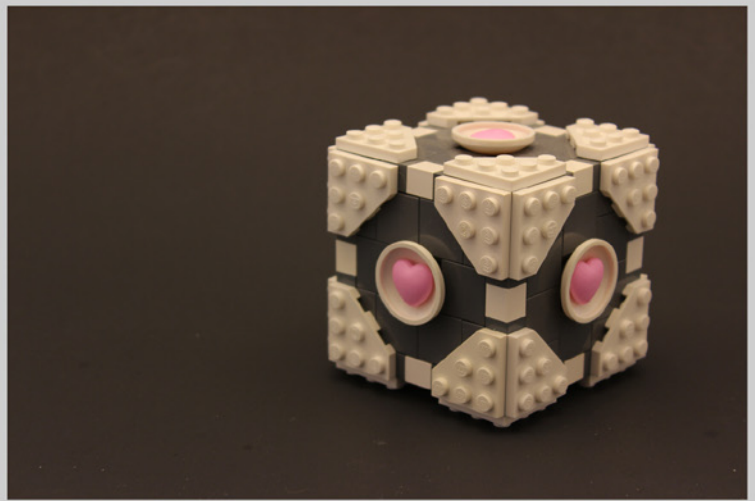
Editing

Background Removal (Cont.)



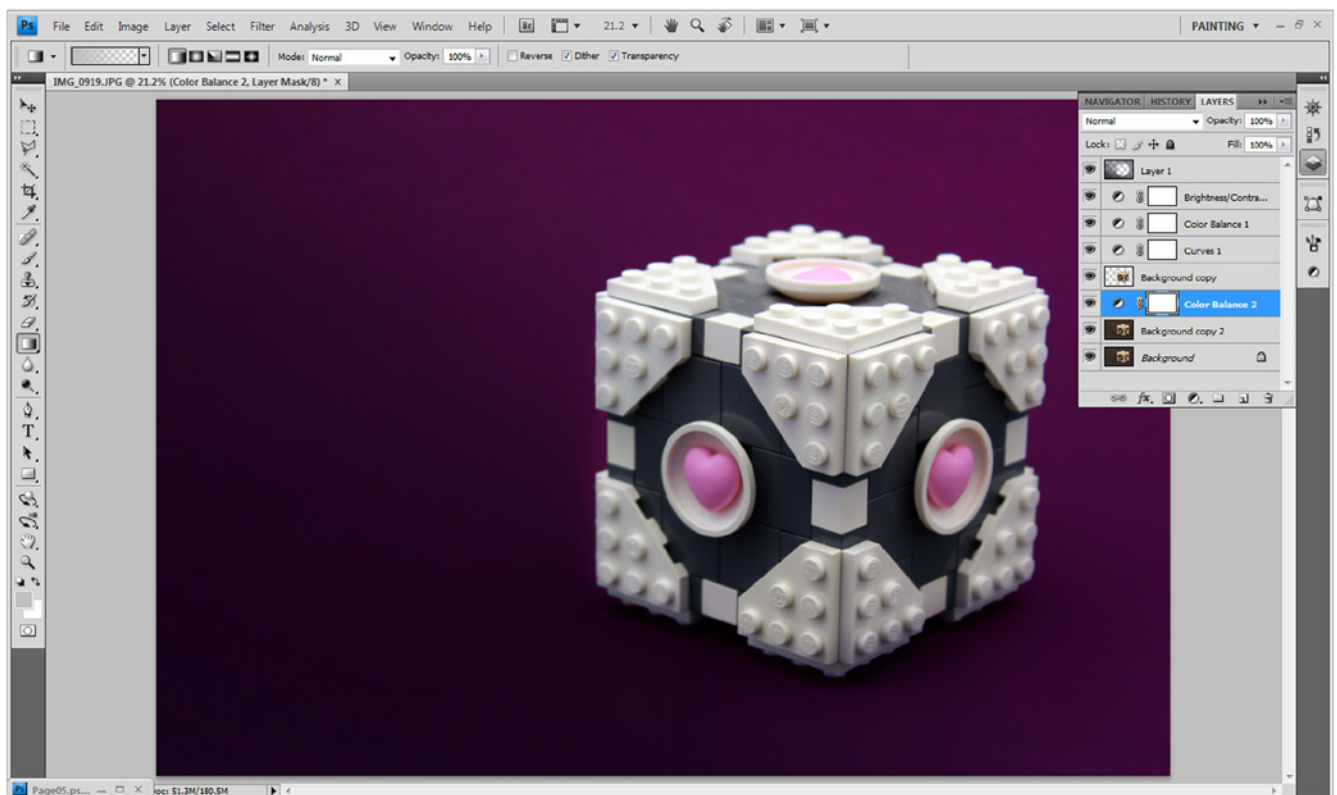
After adding adjustment layers to the image, I create a new layer on top of everything. I set this layer to Overlay. Using the gradient tool, (set to Foreground to Transparent) I pick colors from the background and begin adding gradients towards the model. I like to determine which area is brighter and enhance the brightness by adding a lighter color. I can then make the opposite side darker. This will overlap the model which can look good sometimes. If you do not like it, you can simply erase with a soft edge brush or select around the model to remove the gradient overlap.

Models that are sitting on the background material can be tricky to remove or clean up since there will be a shadow beneath the model.



Starting Image

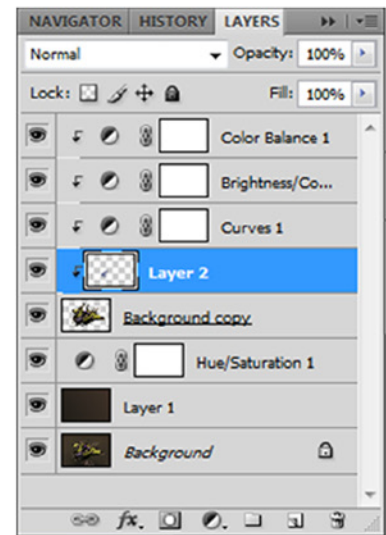
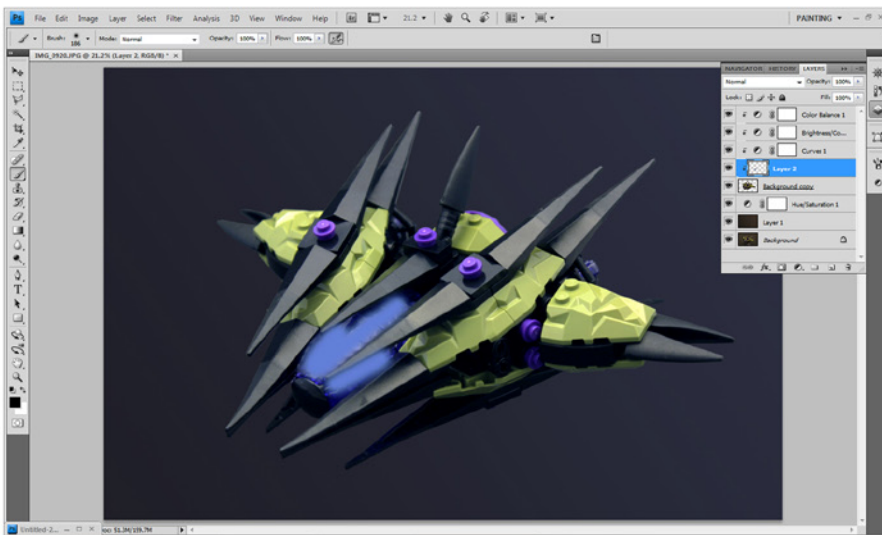
You can even take it a step further if you want to change the color of the background. Simply select the background (including the model's shadow) and remove it. Duplicate the original layer beneath it, and add color balance adjustment to the new layer. You can now change the colors of the background without changing the colors of the model. You can also add other adjustments if you wish to change the brightness or saturation.



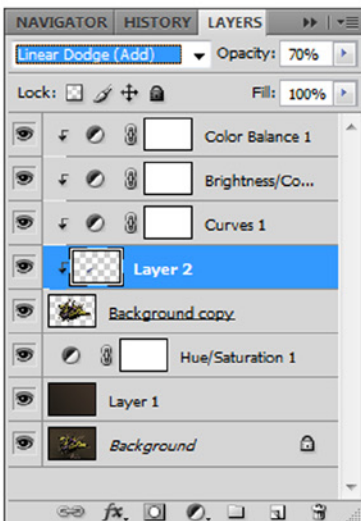
Little spots or dust particles can easily be removed with the Spot Healing Brush Tool.

Editing

Adding Effects

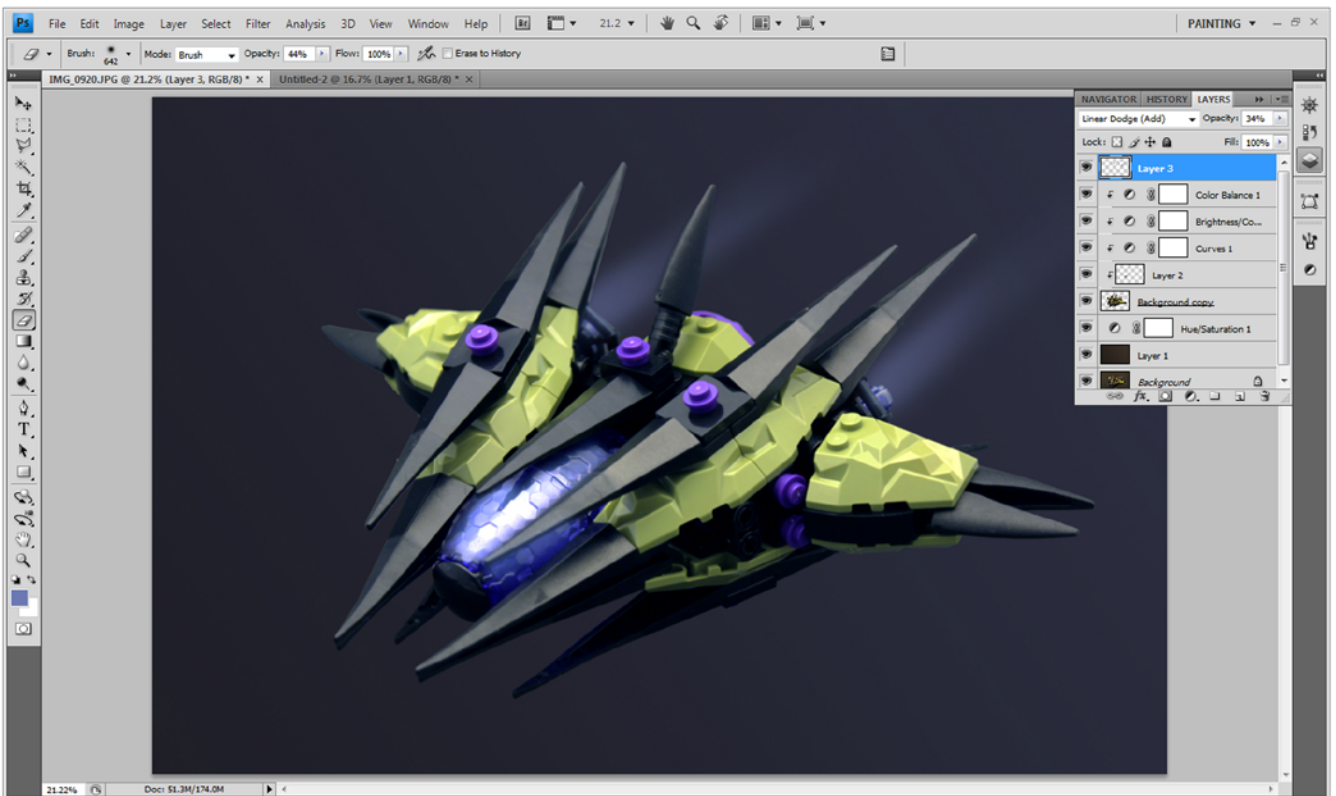


To add glow to things like the canopy, I started with a new layer right on top of my model layer. I sampled a color of the windscreen and used a soft edge brush to paint over what I wanted to glow. You can then set the layer's blend mode to Linear Dodge and reduce the Opacity of the layer to suit your liking.



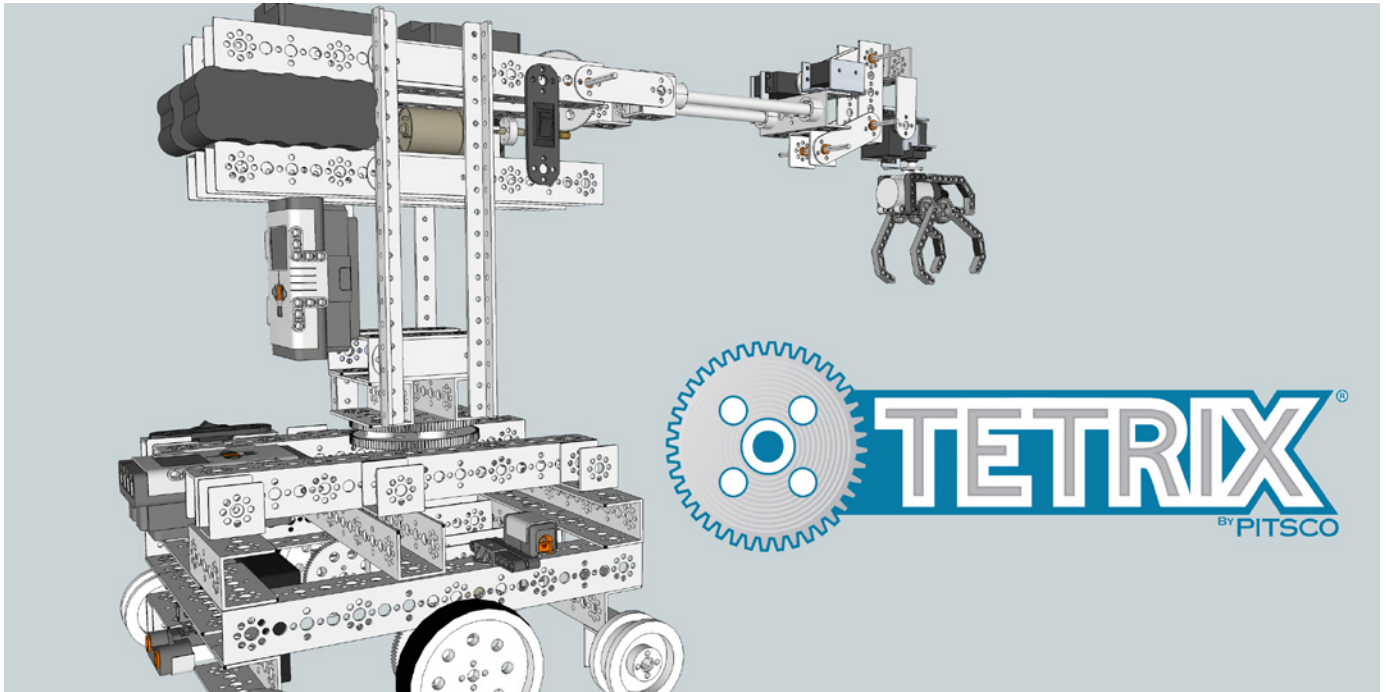
Effects can be fun as long as they add to the model and do not detract from it. My goal in adding most effects is not to make it obvious. If something notices the effects first and the model second, I have overdone it. Subtlety is the best route to take in adding effects.

Effects could even include adding atmosphere or smoke to an image. Adding things in front of and behind the image creates more depth.



Adding engine effects is done almost the same way. However, you will need to make sure that you are working on a new layer that is not part of the clipping mask. Again, I picked a color of the model and painted two straight lines (holding shift + mouse click). I changed the blend model of the layer and the layer opacity. I could then erase them back with a soft edge brush at a low opacity to make them fade out. Using these same techniques you could add laser effects, debris, or countless other effects.

#



TETRIX with LEGO® MINDSTORMS NXT

By Diego Gálvez

Through various articles in this magazine we have learned about different robotics sets like LEGO® MINDSTORMS NXT or LEGO WeDo.

But what happens when you want to design and build prototypes that need to be especially robust due to their intended application?

When you want to build prototypes that have functionalities that are related to a “harsh” working environment, the elements that come in the aforementioned sets may be of little use as they are mostly made of plastic. The prototype will need a more robust structure that makes it look more like a real life application.

For this kind of application there is TETRIX, which works together with LEGO MINDSTORMS NXT and expands its capacities and area of application, allowing for the design of more robust prototypes.

What is TETRIX?

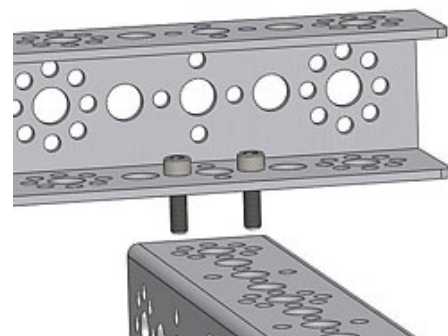
We could define TETRIX as a Metallic Construction System that expands the possibilities of using LEGO MINDSTORMS NXT in more demanding environments as far as robustness and size are concerned.

TETRIX pieces are made of structural aluminium with a pattern of holes that allows them to be interconnected. It has metallic gears, motors, servo motors, omniwheels, controllers, etc.

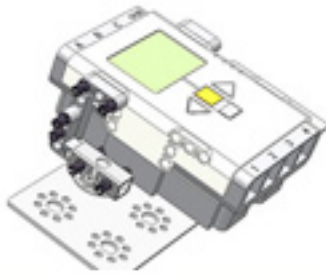


Building

Structural elements are jointed using screws and bolts, which allows for stronger and more robust builds.



The following image shows how the NXT is attached to the metallic structure.



Electronic Elements

DC Motor

- 12 V / DC
- Torque: 21 Kg/cm



Servomotor

- 4.8 – 6V
- Torque: 7.5 Kg/cm



Battery

- 12 V
- 300 mAh



DC Controller

- Allows you to connect 2 DC motors.



Servomotor Controller

- Allows you to connect up to 5 servo motors.



Connection Cables

- These connect the electronic components.



Programming

TETRIX can't function by itself; to make the servo motors and DC motors in this set run you need to use the NXT programmable brick.

The motors included in the TETRIX set can be programmed using two different platforms.

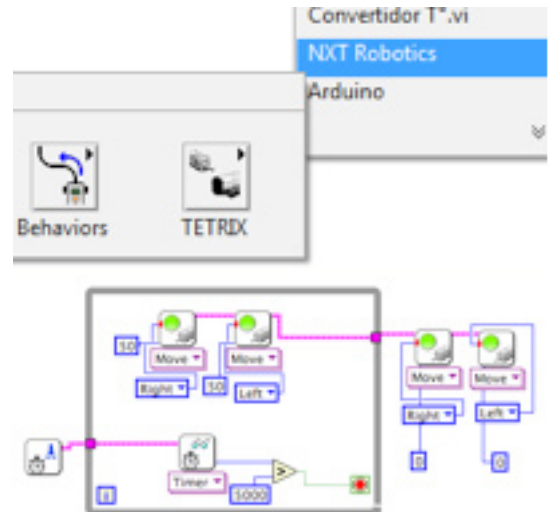
NXT-G

The standard programming environment for LEGO® MINDSTORMS NXT allows for the inclusion of control blocks for DC and Servo motors from the TETRIX set.



Labview

The best option for programming TETRIX elements is the Labview programming software. When installing the LEGO MINDSTORMS NXT pack for Labview the programming blocks for TETRIX are also installed.



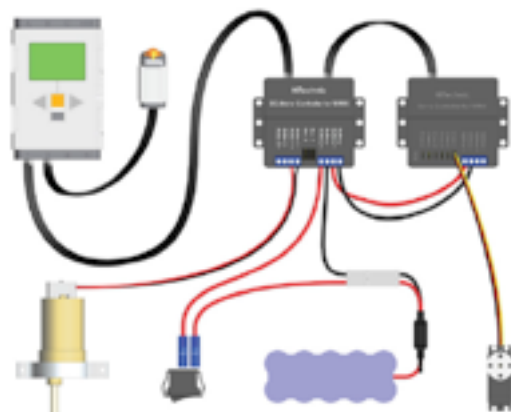
Another option is to use ROBOTC. Contrary to the two previously mentioned programming languages which are visual, this last option is a text based programming language.

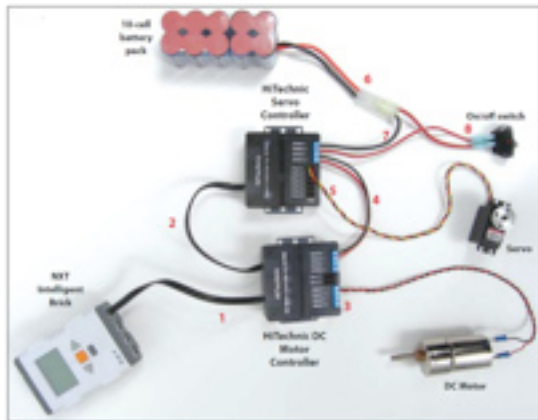
Connections

In order to be able to use the TETRIX motors (DC and Servo), these must be connected to the NXT brick, but not directly; this connection is established through the controller of each respective motor type.

Controllers can be connected to any of the sensor ports on the programmable NXT brick.

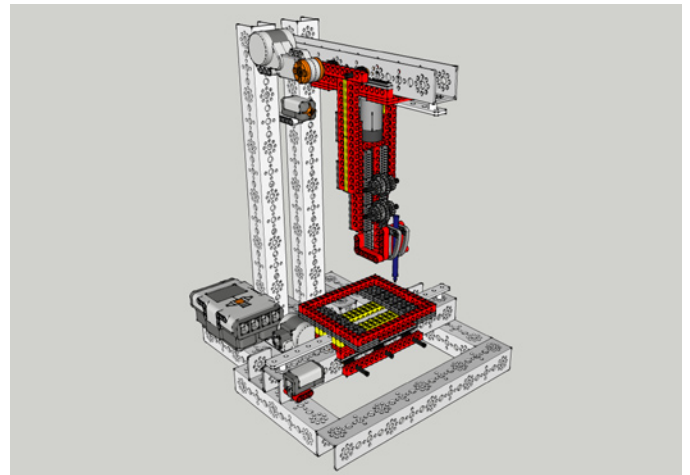
They also need to be connected to a 12V battery which the motors draw their power from.





CNC Machine

Built using LEGO as well as TETRIS parts. In this case TETRIS has been used only for the structure as the movement is done with LEGO MINDSTORMS motors. You can watch a video of this machine at: http://www.youtube.com/watch?v=LPh_NTyJL9g

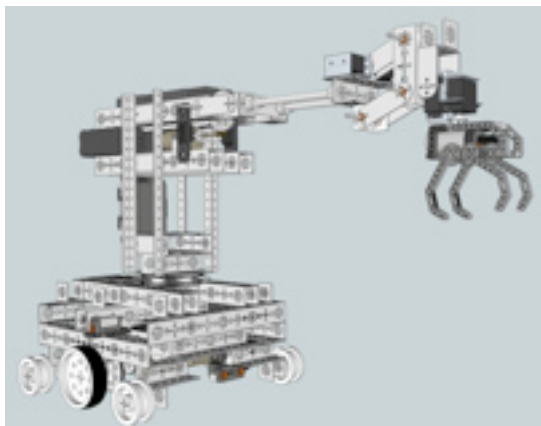


Applications

The following are a few applications of the TETRIS set in conjunction with LEGO® MINDSTORMS NXT.

Robotic Arm

The robotic arm you can see in the picture uses 2 servo motors and 3 DC motors. In addition it uses a Power Functions/WeDo motor to open/close the claw.

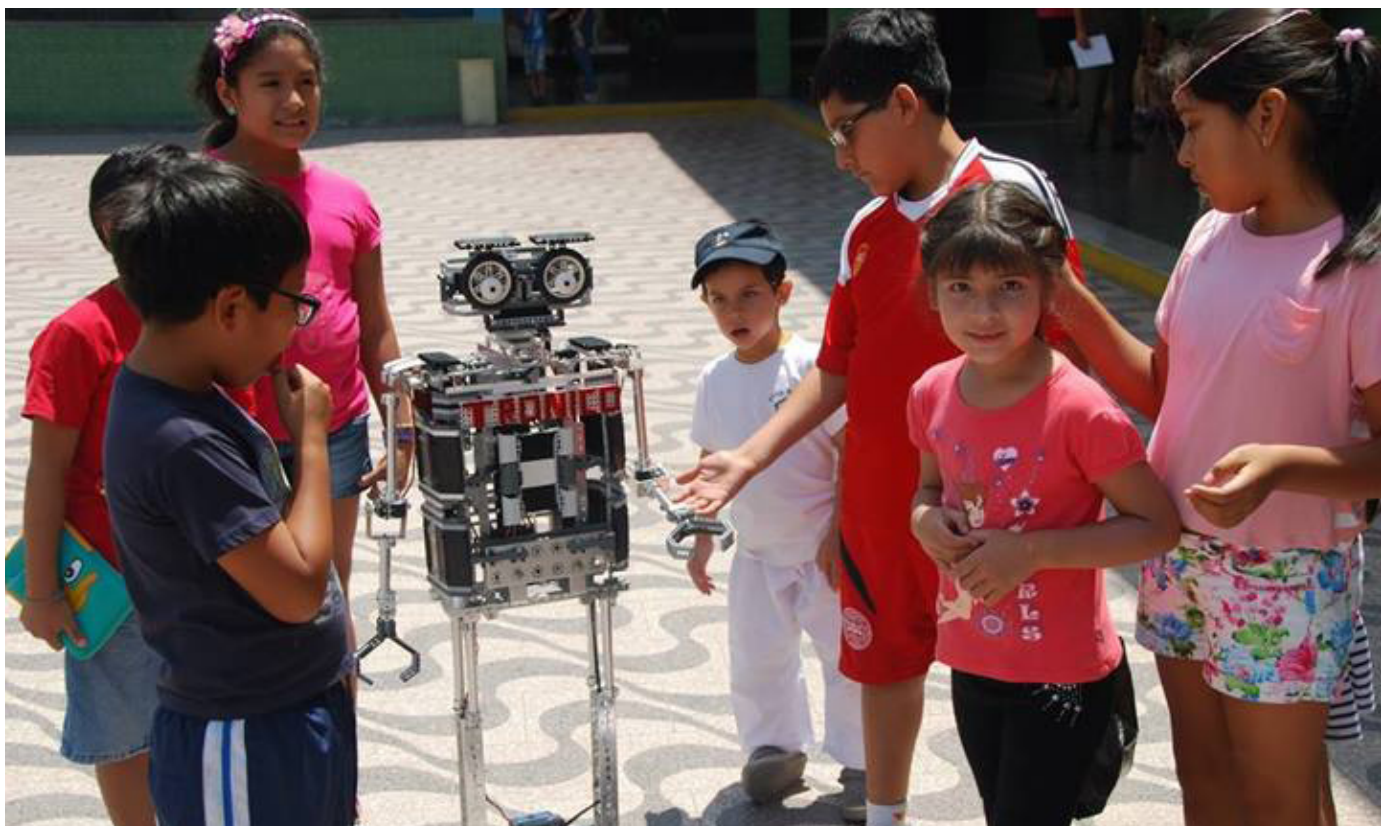


Humanoid Robot

Using the structural elements of the TETRIS set you can build much larger and more stable constructions like a life-size humanoid robot.

The program was created in Labview. 2 DC motors allow the robot to move, 3 servo motors control the movements of the joints of the arms and neck and finally a Power Functions/WeDo motor to turn the eyes.

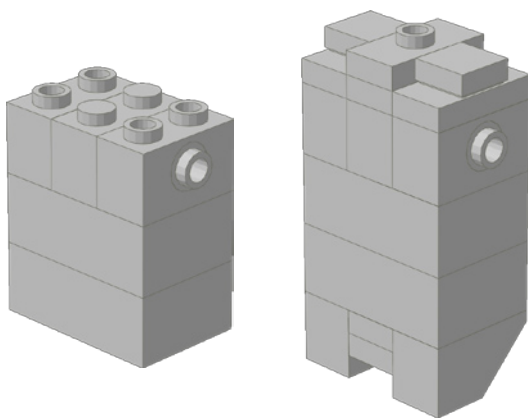
On the website notjustbricks.blogspot.com you will find multimedia materials (images and videos) of the creations of the author, some of which come with building instructions. #



Miniland Building: MINILAND Character Build

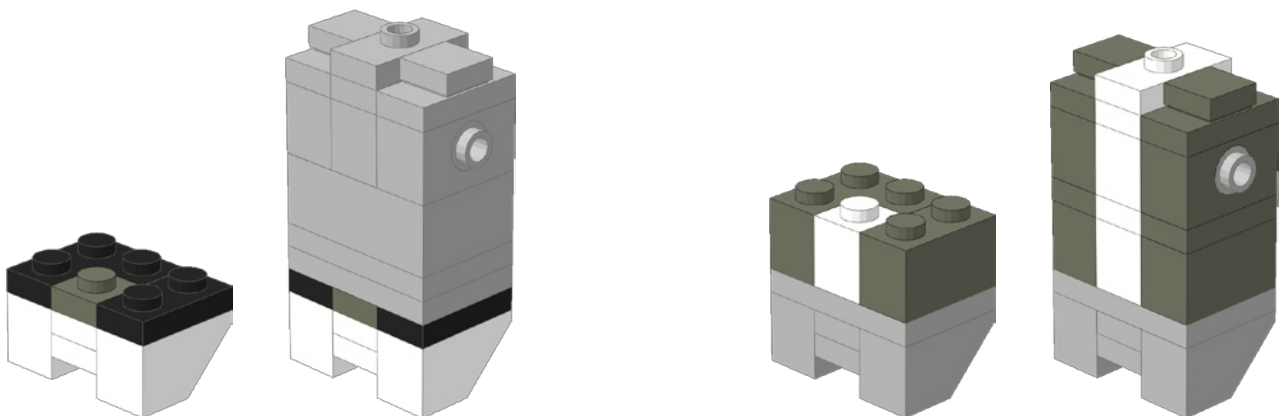
Extended GuideLines Part II - The Body

By Didier Enjary

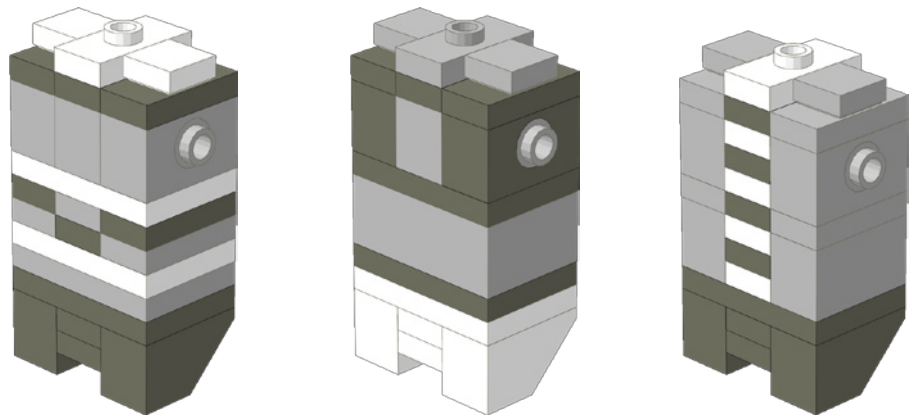


The torso is the central part of MINILAND characters. We will first consider it as a parallelepiped of 2x3 studs on 3 bricks high. For the sake of clarity for the rest of the presentation, we will add connections for the arms (half-Technic pins), the junction with the head (jumper plate) and the upper legs (the inverted slope bricks). In the forthcoming articles, other possibilities will be described in regard to these particular elements. All dimensions can be adapted to represent children, teenagers or overweight people.

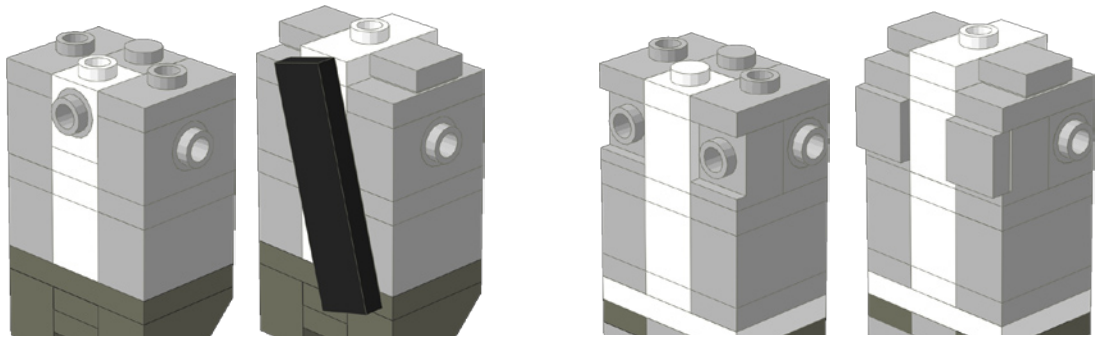
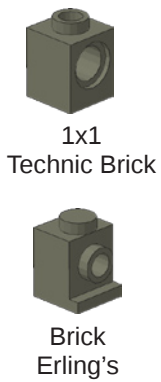
The first amendments to this uniform and geometric bust that we will expose concern the patterns that can be done to add details. The simplest is to add a belt with its buckle. On that purpose, we use plates of different colors from the rest of the torso and legs. As we will see later, it often needs a change on part colors to suggest a new item. A similar change consist in swapping the color all the way up to the neck. We then get an open jacket over a T-shirt.



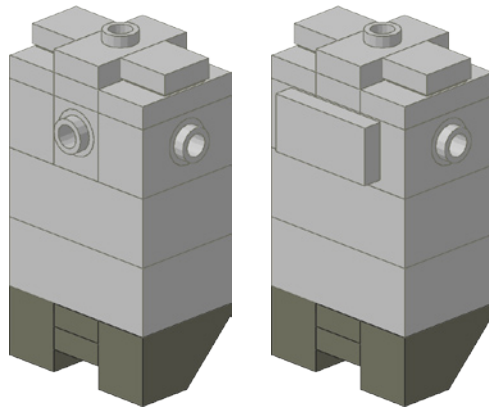
The following examples show that by varying the colors, you can already get a huge variety of different characters.



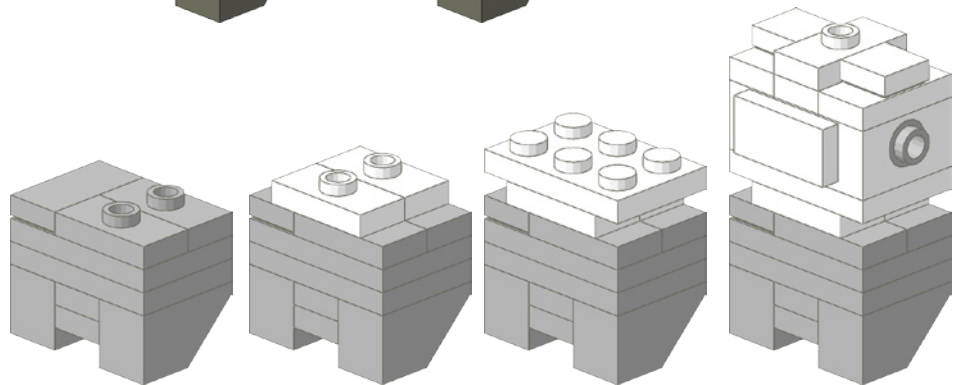
A minor change - the addition of a 1x1 Technic bricks with half pin or of an Erling's brick - allows you to add details like a tie or shirt pockets.



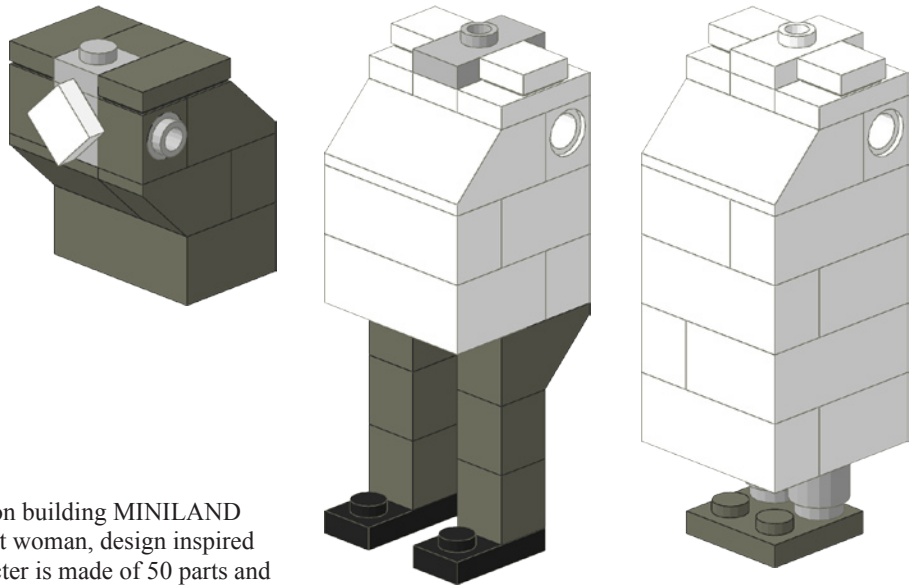
The same change made possible to put a smooth plate 1x2. This assembly is used for female characters to represent the chest.



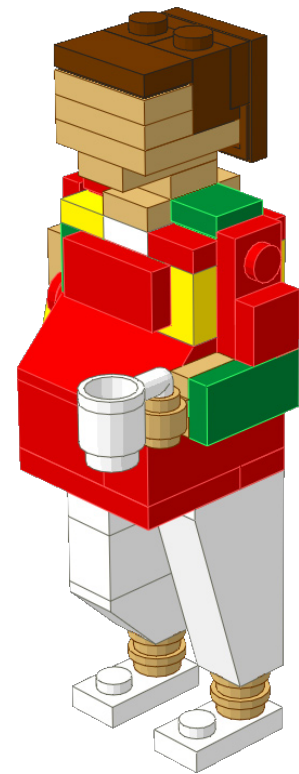
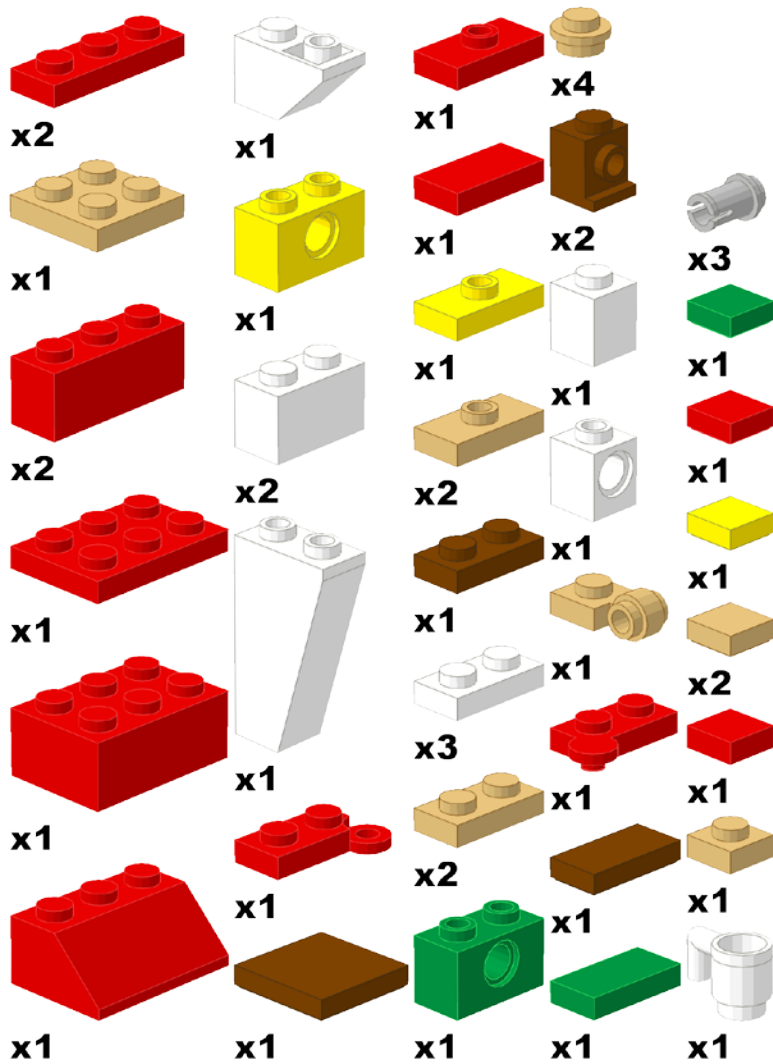
Keeping in mind the will to represent women, the following arrangement makes an intensive use of the jumper plate to shape a thinner figure at the waist.



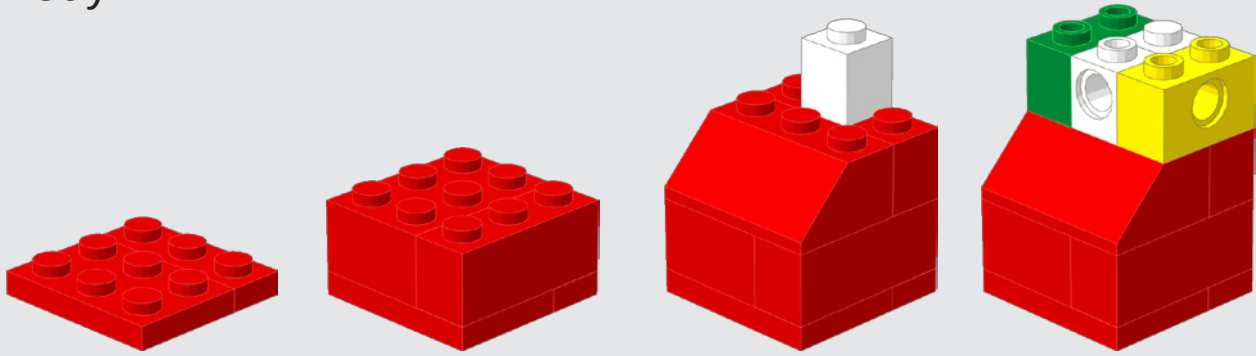
But all the characters do not have wasp waist. The use of slope bricks, a deeper bust (3 studs instead of 2), can recreate large characters (overweight people, pregnant women), looked (for a charge or based on a guardrail) or arched (elderly people).



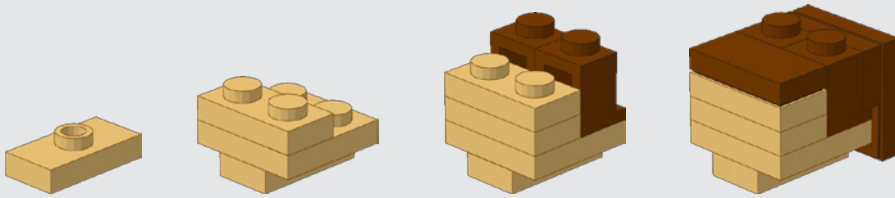
As an illustration to this second lesson on building MINILAND characters, we propose you to build a pregnant woman, design inspired by Billund's MINILAND models. This character is made of 50 parts and is 10 bricks tall (5'8" - 1.73 meters at scale).



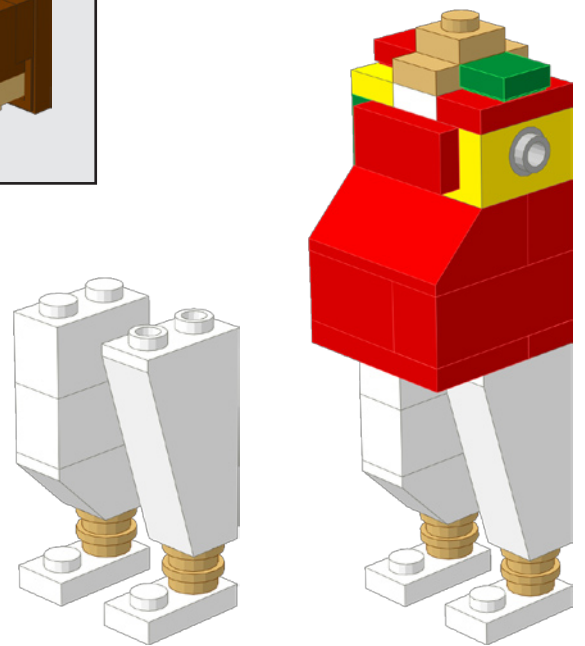
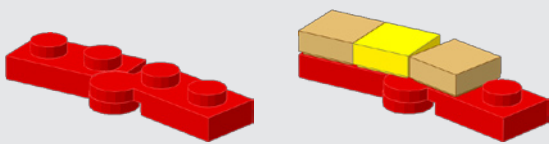
Body



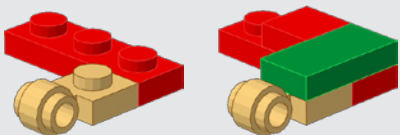
Head



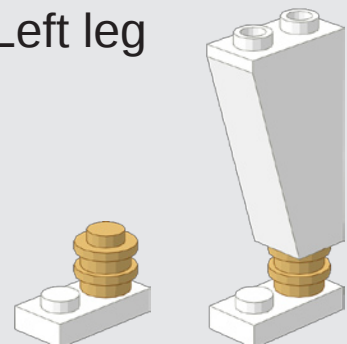
Right Arm



Left Arm

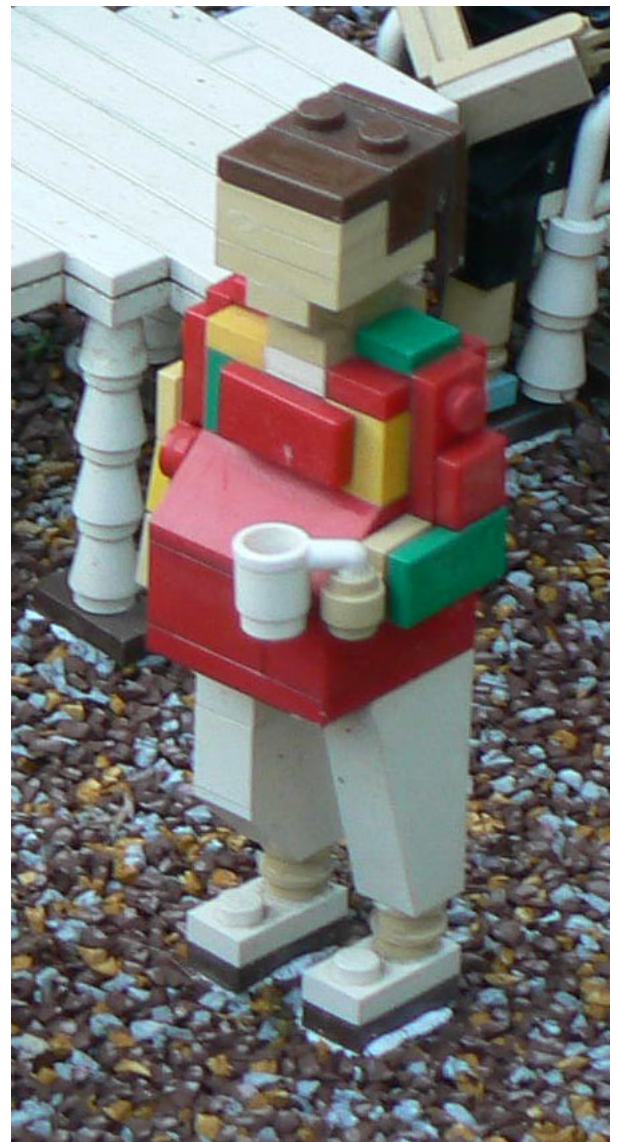
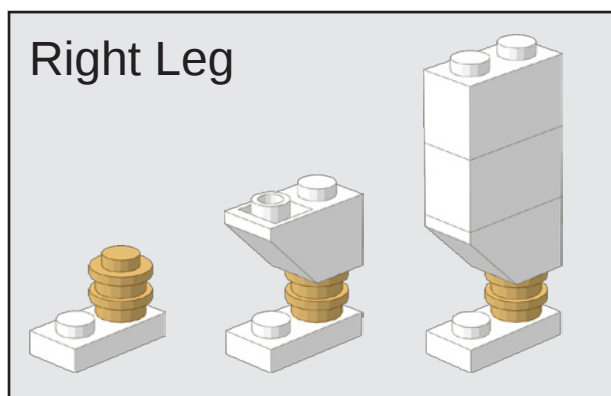
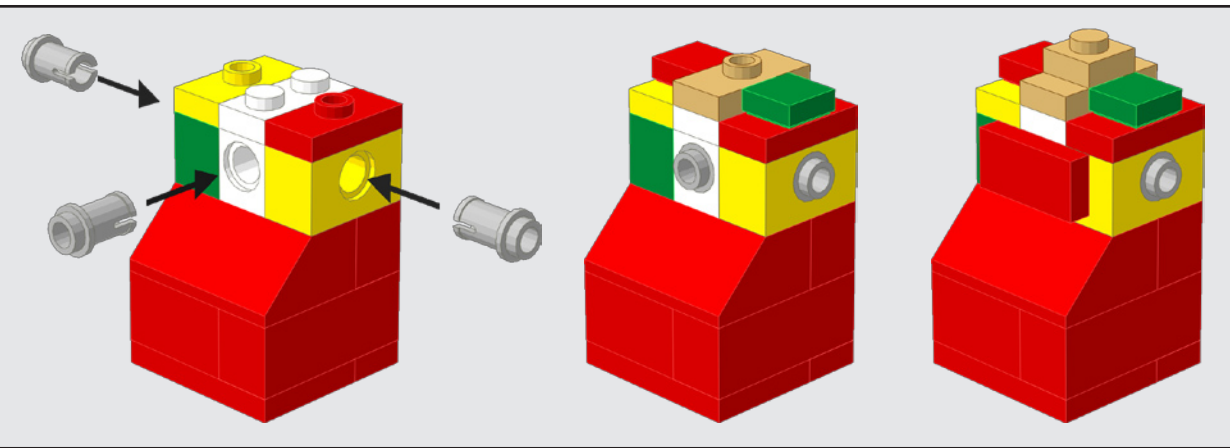


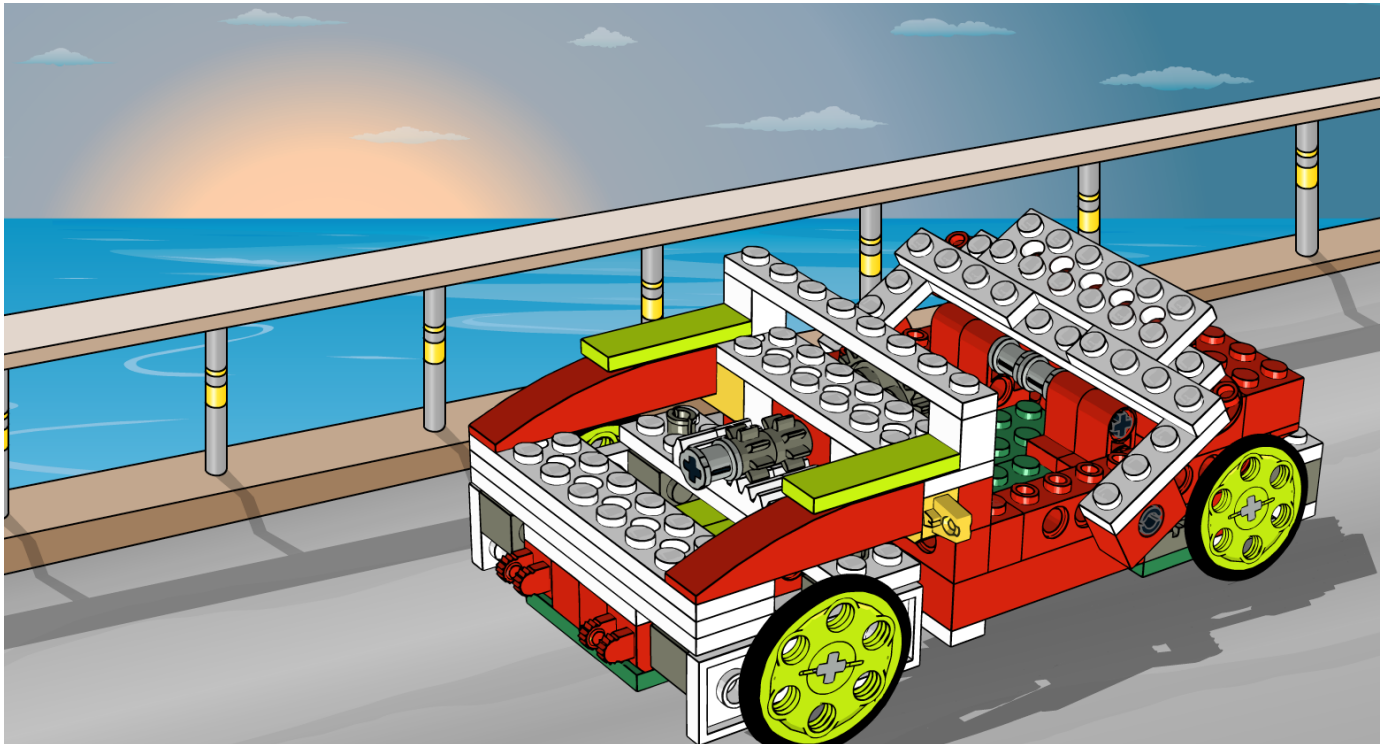
Left leg



Arts created using
the LDraw
System of Tools

Original Design
from Billund's
MINILAND Model





Robotics with LEGO® WeDo (IV)

An introduction to robotics for the young with LEGO® WeDo

By Diego Gálvez

In this part we will have a closer look at the Display Block and mathematical operations.

Display Block

This block allows you to visualise the value of an attached input block on the screen.



Let's make and run the following program.



The number will be displayed on the Display Tab. In the case of this example the number that is shown will be 10.



If you change the number you will notice that you can only display numbers up to 1000.

When dragging a Display Block onto the canvas it comes with a Number Input Block attached. This block can be detached so you can combine the Display Block with different Input Blocks, as we will see next.

The Display Block doesn't only display numbers, it can also display a word that will be visible in the Display Tab. The following are a number of things you will notice when using the Display Block with numerical values.

Maximum value

The maximum value the Display Block can show is 1000. If you write a higher value it will automatically change to 1000.

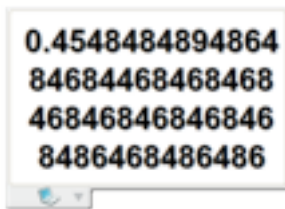
Negative values

You can also write negative values. You simply need to write a minus before the number. The highest negative value is -1000.



Decimal values

The Display Block also accepts decimals and contrary to whole numbers, the range of digits is much larger.



Random Input Block

The Display Block can also work together with the Random Input Block.



The following is an example of the use of the Random Input Block.



If you run the program several times you will notice the Display Tab never shows a number larger than 10 and never 0. This is because the Random Input Block only generates values between 1 and 10.

Mathematical operations

The WeDo software lets you do mathematical operations using four blocks: Add, Subtract, Multiply and Divide.

Add to Display Block

On the palette at the bottom of the WeDo software you can find a block named Add to Display.



This block is used to add a numerical value to the value on the display.

To see it in use let's build the following program.



If you run it you will see the following:



What if instead of adding I want to subtract, multiply or divide?

The WeDo software also incorporates blocks for these cases, but they are not normally shown on the palette. However, if you click on the Add to Display Block you will see it changes to subtract. Another click will turn it into Multiply and yet another click into Divide.

Next we will see a few specific cases that use the blocks we have mentioned so far.

Subtract from Display Block



Example:



The WeDo software recognises negative answers. To see this in action run the following program and watch the Display Tab. You will find the answer on the screen is -2.

Multiply by Display Block

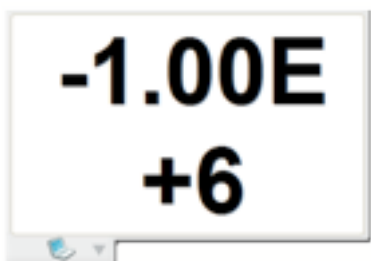


Example:



When running this example program you will see a notation you may not be familiar with.

The Display Tab will show the following:



The E means 10 and the numbers after it are the power it is elevated to. In this case it would be:

$$-1 \times 10^6 = -1000000$$

Divide by Display Block

The WeDo software recognises decimal answers. To see this in action run the following program and watch the Display Tab.

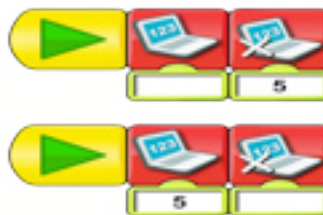


The result on the Display Tab is: 0.2

What happens if by mistake I don't define any number before using one of these blocks?

The program will use the default value of 0 as the display value.

Example:



The result on the Display Tab:



The same happens if instead of not defining a starting number you don't define a number for the operation.



The result on the Display Tab:



In the following part we will have a look at the use of the Message Blocks in order to change the linearity of the program.

On the website notjustbricks.blogspot.com you will find multimedia materials (images and videos) of the creations of the author, some of which come with building instructions. #





LEGO® WeDo (III)

Programming in Scratch

By Edwar Romero

Images by Osvaldo Romero

This time we will try to continue dominating the universe one brick at a time, the LEGO® universe! WeDo is a challenging platform that forces our imagination to generate designs with very few pieces. While Diego Galvez delights us with detailed explanations of the WeDo software, we will continue with Scratch: The free platform for those tempted to wear an eye patch!

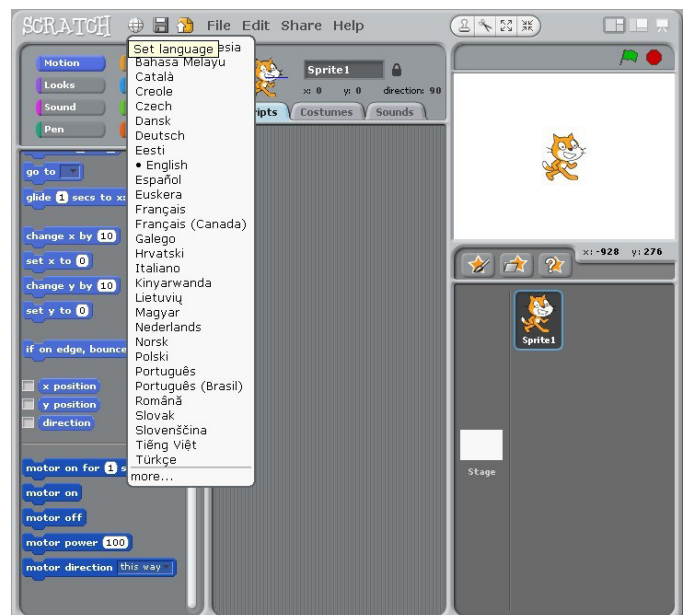
In the last issue, we briefly described how Scratch works. We also discussed some differences with the WeDo software, and where you can get it. From now on, we will be working with Scratch. Why not, it is free after all.

Boy, you have been talking about Scratch since the last issue, and still I haven't seen one program!

Don't be impatient my dear friend. As with good food, you need to know some little things before facing the challenge of delivering a gourmet dish.

In case English is not your native language, it is a good thing to know that you can change it. By default, Scratch will be installed in English, but if you look carefully, you will find the option to modify this. Next to the floppy disk image (the save option), you will see a round icon shaped as a globe. If you click it, there will be a long menu with a list of languages Scratch is available in.

Since a picture is worth a thousand words, you can check the next image for your own reference. There are more choices than in the WeDo software. This is really a good thing.



In the image, you can observe that when you have the WeDo connected to the computer, there will be 5 new options for controlling the motor. You need to remember that if the WeDo is disconnected, they will not be displayed.

So, let's start programming with Scratch, and what could be better than beginning with the motor. You can make a thousand little wonders if you learn to use it. Imagine the number of combinations with all the bricks, plates, axles, wheels, belts, pulleys, cams and gears available. You can motorize cars, construction machines, move a crane or even a robot arm, you can simulate the motion of animals or make them fly, imagine the number of helicopters and airplanes, animals, automatic doors, rockets, spaceships, robots and many, many models you can dream up. Now, the power to control your LEGO® creations in your LEGO® universe will be at your fingertips. Star Wars™ will be closer to domination!



Boy, please stop talking and show us how you do it!

Well, for those who cannot wait; let's make an analogy with the WeDo software. If you want to move the motor one way, this is the combination used



In Scratch, this is what a similar code will look like



Using the WeDo software, clicking the square red button will stop the program. In Scratch, you will accomplish the same when clicking the round red button. In order to increase the complexity a bit, let's set the power level of the motor. Using

the WeDo software, you can choose a level from 1 to 10 (where 10 is the maximum).



In Scratch this is done in a similar fashion. The power level here goes from 1 to 100



So, let's keep increasing the complexity in our programs. Rather than using the mouse to click icons on the screen, why not use the keyboard to perform the same functions? Let's say that when pressing the letter R the engine will run, and when pressing the letter S, it will stop. In the WeDo software this part is a bit confusing: after dragging and dropping the computer key icon, you need you hit the key you want on the keyboard. It can be a letter, a number or even the arrow keys. In Scratch you will find a drop down menu to choose from letters, numbers, arrows or the space bar. Below you will see the codes in both programs.



In Scratch you can also use the command when Object 1 clicked (the Scratch Cat or the figure you have on the white canvas) to turn the motor on, and you can turn it off with the space bar (this command is found under the control menu). Nice trick, Isn't it?

You can program the time the motor is turned on in the WeDo software. You also have the same functionality in Scratch.



Just knowing how to program the motor to turn it on and off is enough to motorize a large number of creations. You can turn the motor in both directions. You can program the motor to wait a few seconds while on or to wait a few seconds to turn it off. You may activate the motor with the mouse or the keyboard. You can also program cycles that repeat several times. Now you know how to do a number of tricks with the motor alone. There is still more to come since we haven't talked about the sensors (tilt and proximity). Those will be covered in a future issue. Stay tuned.

A good meal is not complete without a good dessert. What's better than using Sprites in Scratch as a neat treat. Sprites are programmable animations. Imagine you can interact with sensors and control what the Scratch Cat does on screen with your WeDo creation. You can control the virtual creation with your real one made of bricks. You can use your WeDo robot as a remote control. What a nice treat!

You know that in LEGO®, the sky is the limit. Now that you have learned how to program your creations you can start making plans about conquering the universe, the LEGO® universe. You may try controlling robotic insects, or why not with the Mars Rover from your very own room.

You can find more information, and building and programming instructions for the designs presented here and many more at:

www.wedobots.com

www.facebook.com/wedorobots

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WE DO BOTS

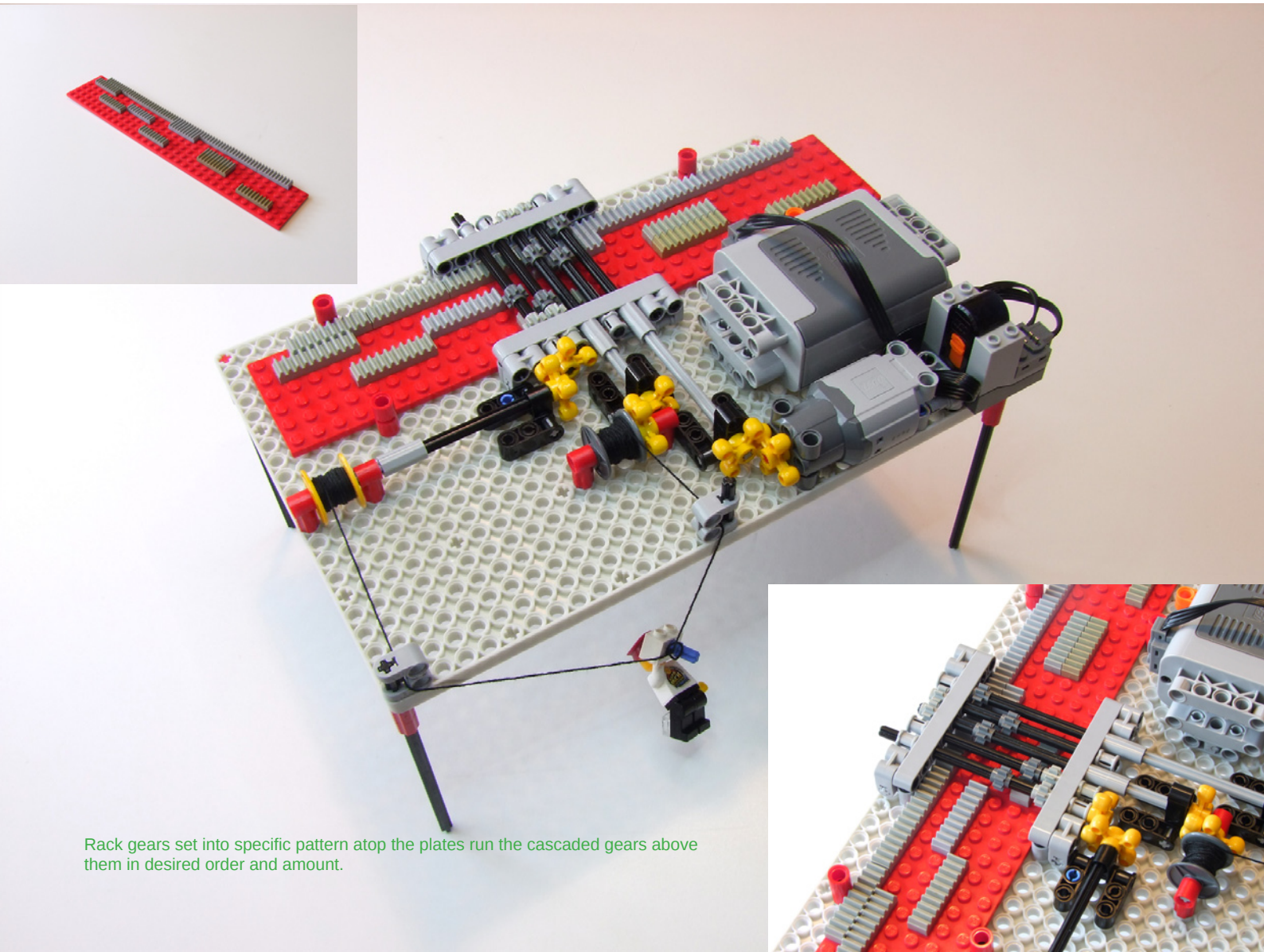


Technic Automation

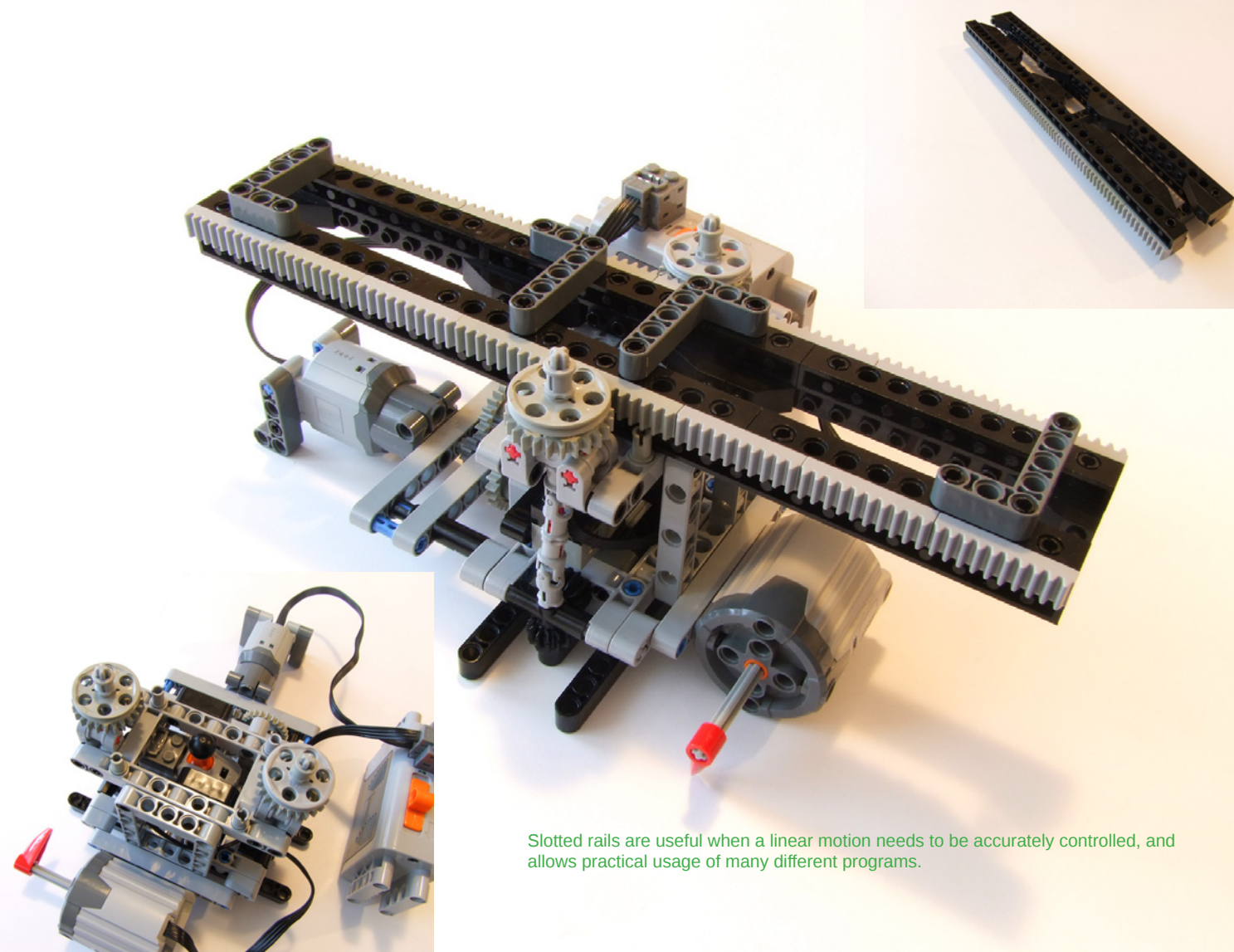
By Oton Ribic

Technic models involving large complex processes, such as the Great Ball Contraptions, robots, etc. often require some sort of mechanical automation to work as intended. Typically it involves various movement sequences with precise timing and mechanical accuracy. It is tempting to solve these sequences using MINDSTORMS with its convenient programming and easily controlled motors, but some may prefer a mechanical solution — either for Technic pureness, or if MINDSTORMS is not available. In this article we shall take a look at a few basic methods for mechanical automation that can be easily modified and developed further according to their purpose.

The choice of methods depends largely on what type of automation is required: single or recurring. Single automation runs a mechanical program of movements only once, and usually allows the programs to be easily modified or replaced mechanically. Recurring automation, however, repeats a single program in loops as long as it is powered, and is normally not as simple to change on-the-fly. Both approaches allow running the programs backwards, and regulating the execution speed by changing the rotation speed of the automation drive, either manual or motorized.



Rack gears set into specific pattern atop the plates run the cascaded gears above them in desired order and amount.



Slotted rails are useful when a linear motion needs to be accurately controlled, and allows practical usage of many different programs.

Single run automation

Let us begin with single automation, specifically with the rack gear plates — a simple and reliable method that appeared in the official Technic Idea Book 8888 over three decades ago. It consists of standard, connected plates of fixed width with rack gears atop, sliding under a cascade of gears they mesh with. By changing the position and density of rack gears, timing of movements can be easily adjusted. Typically, one of the rows of gears will be continuous and used to provide drive, i.e. to slide the entire plate under constant speed. Longer programs can be built by connecting multiple plates together, and reverse rotations done by having separate rows for each direction, connected via extra gears elsewhere, as shown in the photos. Apart from its reliability, additional advantages of rack gear plates are the ability to easily include as many independent outputs as necessary (by adding multiple rows of rack and receiver gears), have them well synchronized between themselves, and keep the mechanism relatively small yet strong.

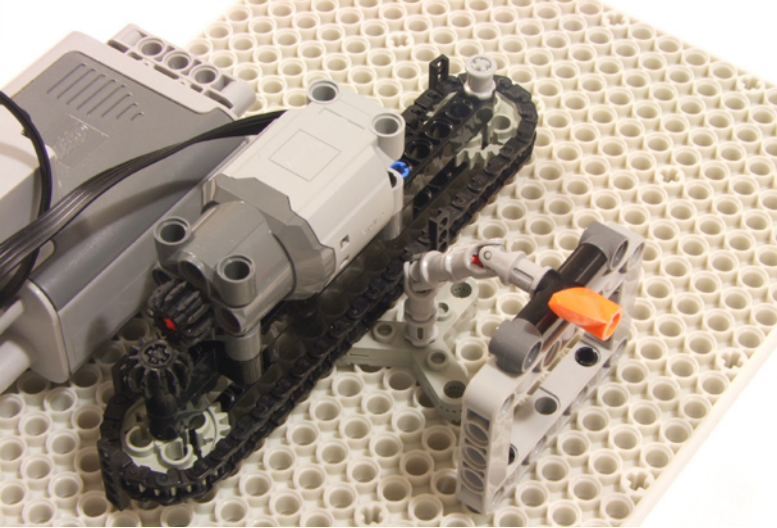
Rack gear plates are a good idea if rotation is what one requires at the output of the automation. However, if it needs to accurately control a linear position, such as flicking switches or moving levers, slotted rails may be more useful. They usually consist of two parallel main beams, held at a fixed distance using perpendicular beams, with sloped bricks forming a narrow, squiggly slot in between. If slid lengthwise across a

switch or a lever that fits in the slot and moves perpendicularly, it will move the switch through desired positions according to the shape of the slot. This sliding action can be done whichever way one prefers, though the aforementioned rack gears can be of use here as well.

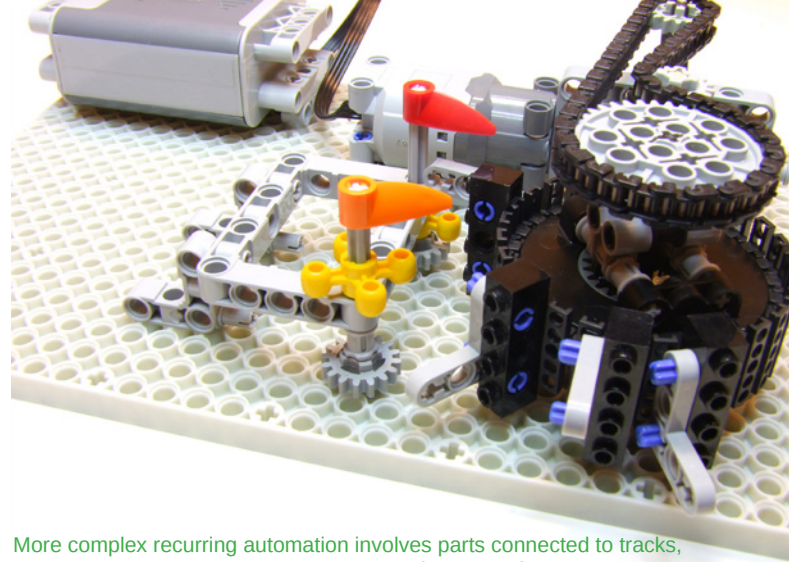
One needs to pay attention to the receiving lever design, as it should not have any kind of edges that may halt the rail — various towball parts serve nicely for this purpose. In addition, the tighter it fits in the rail slot, the more accurate automatic movements can be achieved. Multiple synchronized movements can be made by connecting more than two main beams, and building a slot between each pair.

Recurring automation

TLG has provided components that serve useful for recurring automation, i.e. where the movements are repeated. Those are Technic chains and track treads, both of narrow and wide type. The simplest approach is to build a regular Technic chain with several narrow track treads replacing chain links where necessary and have it run in a motorized loop. With a bit of adjustments, it is possible to let each of the occasional passing treads turn a knob gear underneath by about 90°. Additional movements can be controlled by running multiple chains simultaneously on a common sprocket axle, although that takes a lot of space and requires plenty of supporting structure.



Interchanging regular chain links and track parts can control timing of the knob gears positioned underneath.

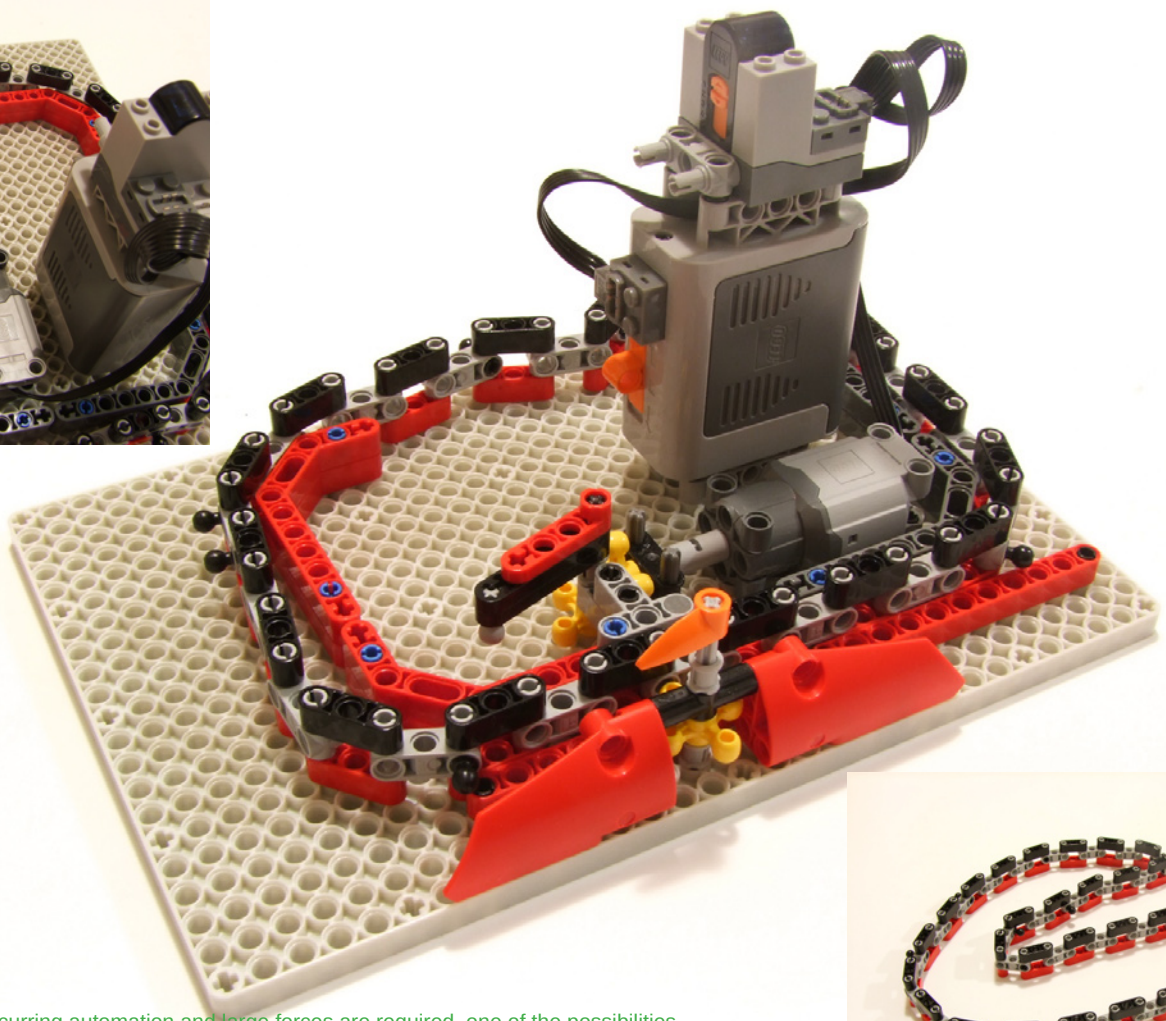
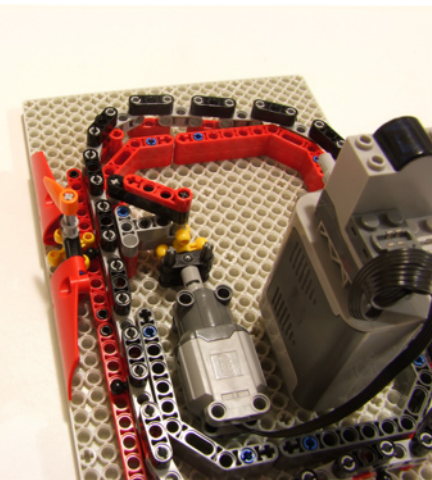


More complex recurring automation involves parts connected to tracks, actuating several outputs at once.

This problem can be avoided by going for a more sophisticated solution — mounting additional parts on track parts themselves. Parts such as four stud wide plates or Technic bricks fit atop the narrow tracks, while the wide allow connection to almost any Technic part thanks to their pin holes. These extra parts can vary in shapes and operate multiple gears, levers, switches, etc. along their way.

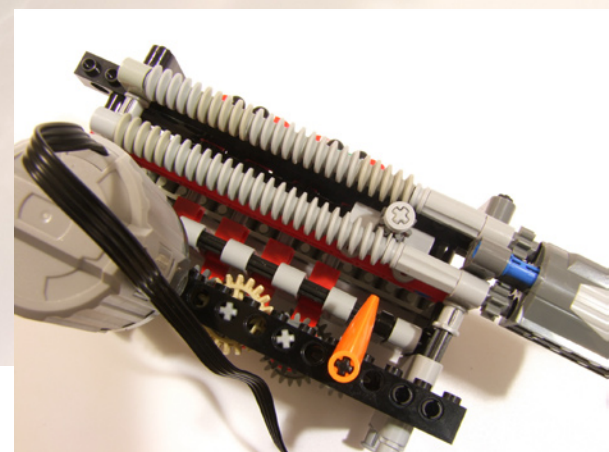
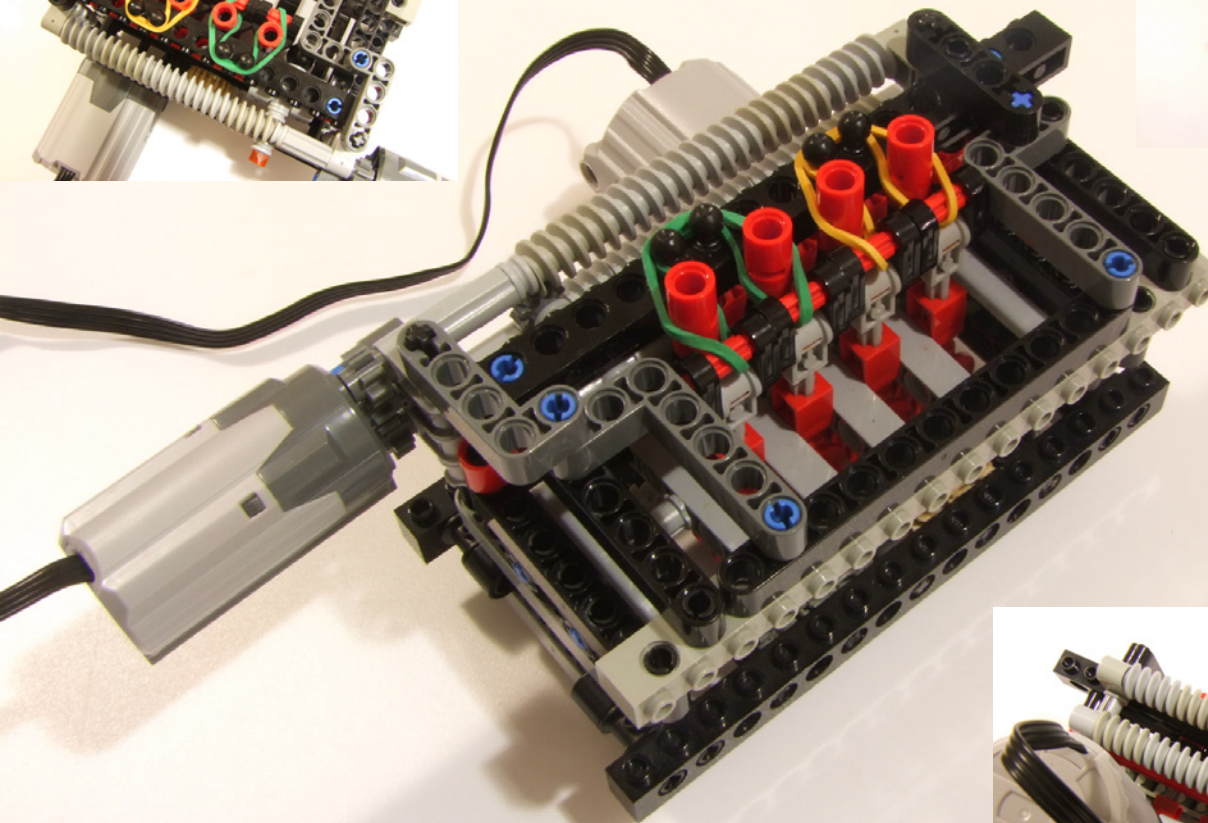
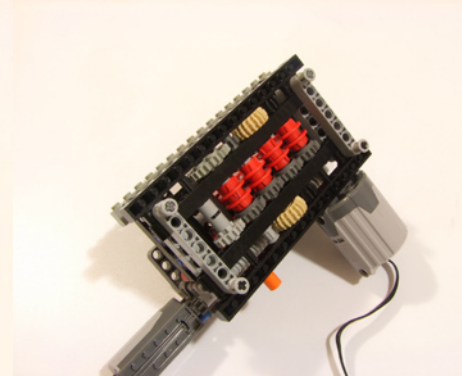
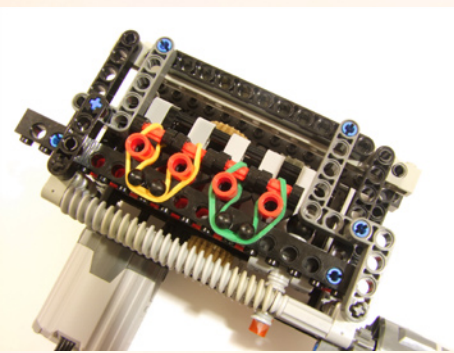
While these recurring automation ideas work well for small forces, they are not sturdy enough (especially not the narrow

tracks) when considerable mechanical strain is involved. In those cases, one can build a wide, strong chain from pins and beams, as these can withstand considerably higher strain and handle more power, in exchange for larger dimensions and more complex driving mechanism. There are many ways to employ them for automation, with ball pins and knob wheels being among the simplest and most reliable. In fact, they are particularly useful for many types of Technic automation.



When recurring automation and large forces are required, one of the possibilities is to build a custom chain.





Sometimes automation is not necessary, as the receiving mechanism itself can be redesigned to be controlled simply. This sequential gearbox is controlled solely with one sliding gear changer.

Things to keep in mind

You may have noted that all these concepts share a common trait: they do not lock their outputs at the time they are not actuated, e.g. a wheel driven by the occasional track tread in a running Technic chain can rotate freely when not meshed with it. Locking mechanisms are doable with pure Technic as well, but are more complex than even the automation itself and of limited reliability. Instead, a more practical approach is to connect the outputs to worm gears that keep their follower gears locked at all times.

In the case you intend to develop your own custom Technic automation, these examples hopefully display the basic concepts that are typical for any mechanical automation, even beyond LEGO®. There is always at least one component, such as a slotted rail, rack gear plate or a chain in displayed examples, that serves as a data carrier. When the mechanism runs, it is “scanned”, usually by it being driven or moved in a certain way across a receiver mechanism that gets actuated at the programmed time by whatever way the data is embedded into the carrier. In our cases, those are sloped bricks in a rail, track treads in a chain, or rack gears on the plates set into patterns that correspond to desired output movements and timings.

Mechanical automation can be developed to great lengths and perform amazingly advanced tasks, but one should keep in mind that it makes sense only if such advanced operation is required in the first place. On the other hand, if the starting requirements are rather simple, the entire cumbersome automation can often be substituted by a well-adjusted crank or some clever type of linkage. In addition, the receiving systems can often be redesigned to simplify their control. For example, sequential gearboxes, if built in the common manual H-pattern as in most cars, require various programs controlling horizontal and vertical gear changer movements. However, as shown on the photo, gearboxes can be designed to have gears changed simply by moving a sliding changer across a liftarm, controlled with a single motor without any need for advanced automation — a linear movement is all that is required.

Finally, all automation examples from this article can be seen in action at the following address: youtu.be/-mYP01sohdo.
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An introduction to Robotics with LEGO® MINDSTORMS (XVI)

US vs. IR Sensor Comparison

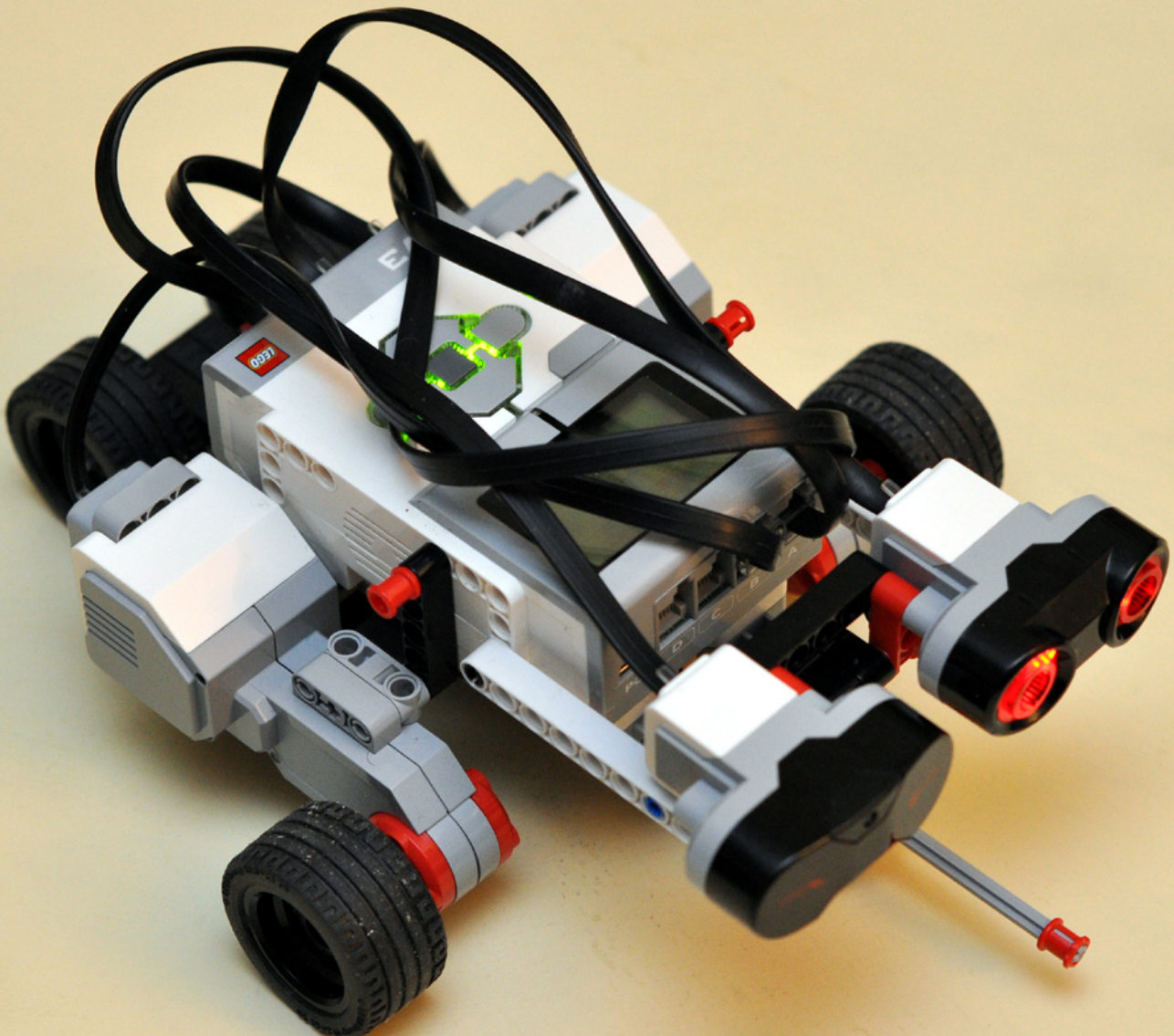
By Koldo Olaskoaga

The Retail edition of the LEGO® MINDSTORMS EV3 contains an infra-red distance sensor while the Education version has an ultrasound sensor. Both allow you to measure distance, but each of them has its peculiarities.

Since it is always good to know how sensors work before starting to use any of them, I have run some tests to see how each one of them responds.

To this end I have collected data in a file on the EV3 itself, which I have then transferred to a computer to open it in a spread sheet to create graphs in order to make interpreting the data easier.

The process for saving data to a file is very similar in EV3-G when compared to NXT-G. I published another article on how to do this in HBM 017, so I will not explain it on this occasion.



Ultrasound sensor

This sensor allows you to measure the distance to an object in front of it. It gives a reading in centimetres or inches and has a maximum range of 255 cm. It emits a sound that is inaudible to people and measures the time it takes for this sound to bounce back. With this data it can calculate the distance to the object. Other ultrasound sensors or objects that the sound can bounce off of can generate interference in the readings.

Infra-red sensor

The infra-red sensor emits infra-red light (invisible to the human eye) and measure distance based on the light that is reflected. This sensor doesn't give readings in centimetres, but offers a relative value between 0 and 100, 0 being near and 100 far.

The value can change depending on the colour, roughness and other characteristics of the surface of the object.

The robot

I built a basic robot that cannot turn, just move forwards and backwards. To determine their behaviour when closing in on a wall that is perpendicular to the sensors I mounted the sensor in parallel, making it easier to compare readings.

The robot also has a touch sensor to detect the moment it touches the wall.

The program

I used the retail version of EV3-G to record the data. Contrary to the Education version, it does not include any specific tool to record data systematically, so it was necessary to develop a program that could do this. But before doing anything you need to define what exactly it is you want the program to do.

- The robot advances in a straight line at a uniform speed until it touches the wall.
- While the robot advances it reads the data from the infra-red and ultrasound sensors every 0.05 seconds and records the values in a file.
- At the moment the robot hits the wall data registration is finished, the program exits and the robot stops.

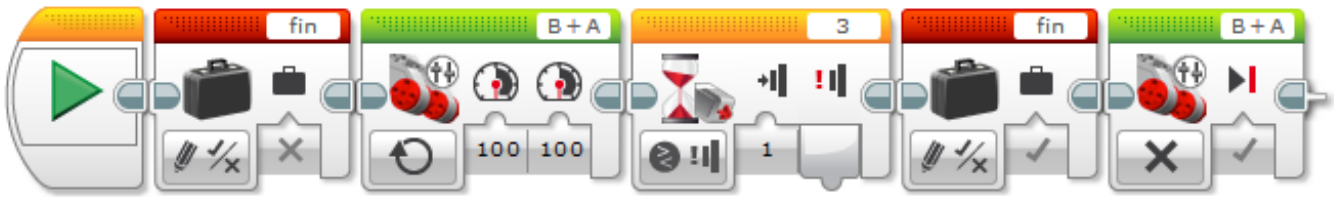
EV3-G allows you to create programs with multiple threads that are executed simultaneously. You simply need to use more than one Start block, just like I did in this case.

The program consists of two threads. The reason for doing things this way is that the robot needs to be monitoring the touch sensor while recording the readings from the ultrasound and infra-red sensors.

The first thread is in charge of the movement of the robot and monitoring the touch sensor so it will stop as soon as it touches the wall. In order to tell the second thread to stop registering data and to close the file a variable named fin (end) is used.



The second thread registers the readings from both sensors until the robot touches the wall (when the value of fin turns to true), and then it closes the file and exits the program.



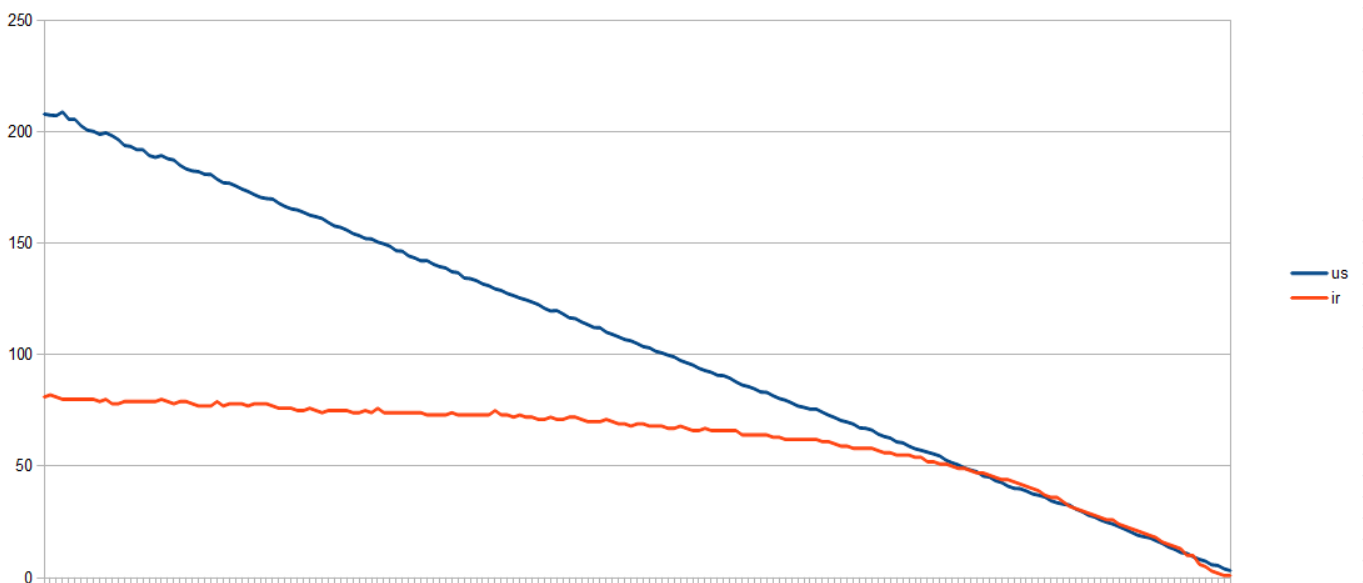
Data collection

For this experiment the robot was placed at an initial distance of 2 m from the obstacle so that it would travel towards it at a right angle. The material of the obstacle is variable while the floor is made of wood.

Results

Case 1

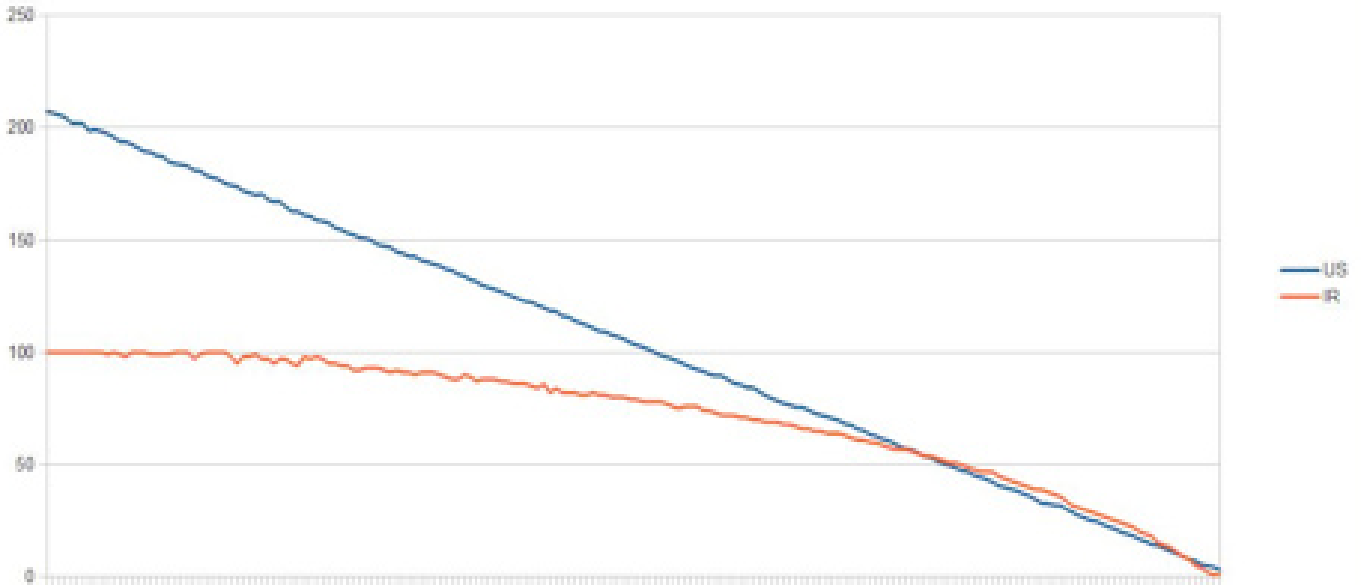
In the first test I placed a laminated wooden board with white melamine against the wall for the robot to “see”. I ran the program with different power levels for the motors, but this has had no impact on the results. The results shown in the image correspond to a test with motor power at 50%.



The first surprise when opening the files on the computer was that although the robot was at 2m from the obstacle when it started the initial readings never indicate anything over 85cm. This has been a constant in all the tests which has led me to believe that the floor affects the readings of the sensor. And it does: with the lower part of the infra-red sensor at 6 cm from the floor the distance it measures is always less than 85.

I modified the robot to elevate the sensor and place it at 15cm from the floor. From this moment on the highest readings start at 100 as can be seen in the next image.

On the other hand, you can see that under 50cm the readings from both sensors are very similar, although the ultrasound sensor is the only one that gives a reading that is directly proportional to the distance.

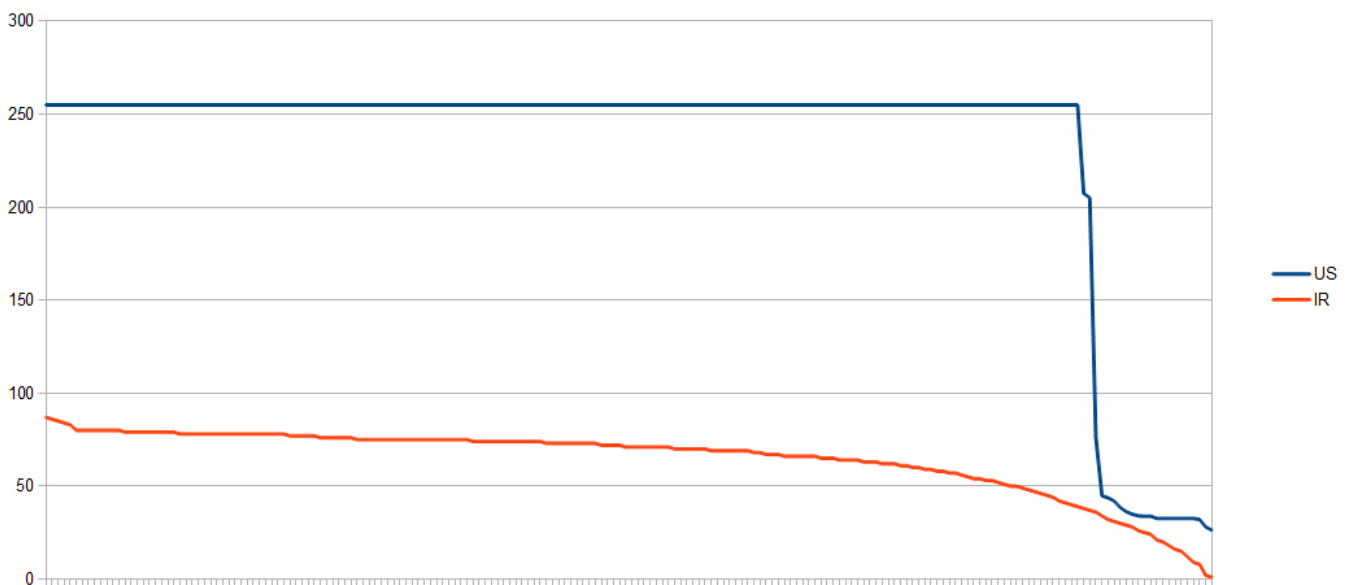


Case 2

Two years ago I had the opportunity to collaborate with LEGO® and Ericsson in an exhibition at the Mobile World Congress. The object was to give a fun demonstration of the Internet of Things. Among other things we built a robot that collected socks from the floor and placed them in baskets depending on their colour.

After building the robot, with only the picking mechanism to be adapted for picking up socks it was time to programming and testing. At first glance, finding the socks with the ultrasound sensor seemed like an easy task, but it wasn't. It's behaviour was completely unexpected and after doing some testes we realised that the sensor didn't "see" the socks; the material they were made of didn't reflect the ultrasounds in the same way as other materials do so it was impossible to locate them. After studying and testing several alternatives and in view of the limited time we ended up putting the socks in small transparent plastic bags so the sensor could see them.

So I decided to do a test with socks. I have piled up some socks and, after placing the robot at 2 meters distance again, repeated the test. You can see the results in the following graph.

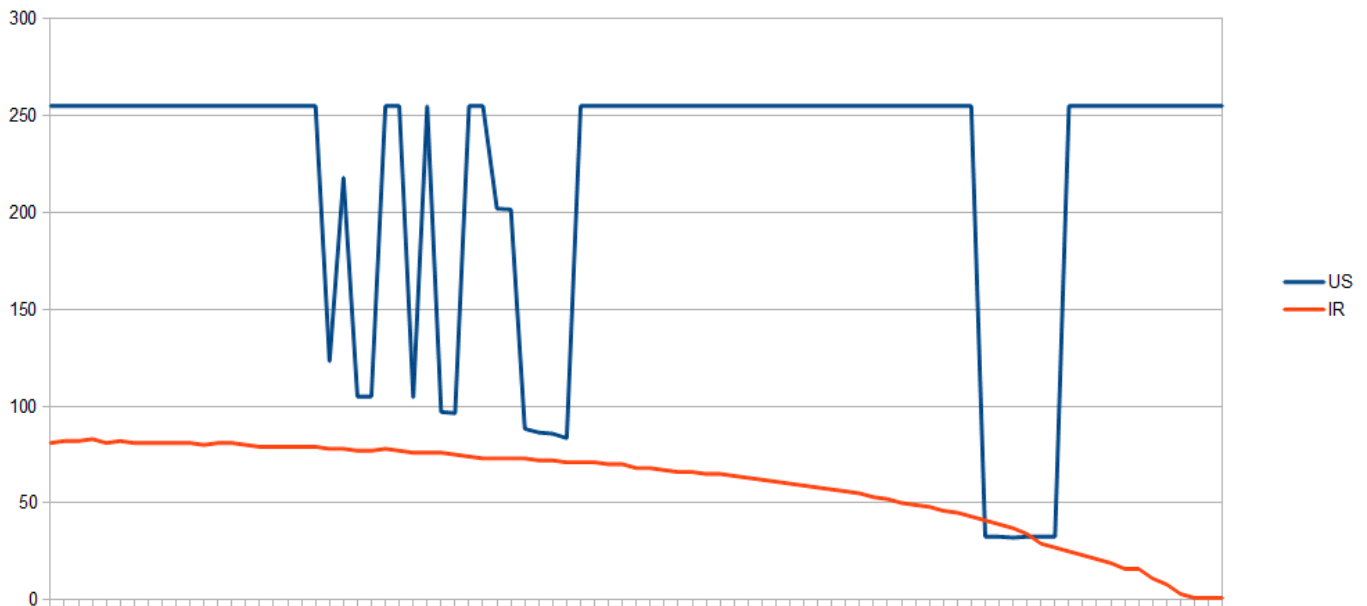


As you can see in this case the infra-red sensor is the clear winner sin the ultrasound sensor doesn't produce any reliable readings. I did another test using a box covered with a sweater and while the results were different the ultrasound sensor again did not offer any reliable results.

Case 3

The third situation I wanted to test is when a robot approaches a wall at an angle of approximately 45°. I have run several tests with varying results, but all of them had something in common: the readings from the infra-red sensor are more predictable than those of the ultrasound sensor.

The following graph shows the results of some of these tests. The results of the ultrasound sensor may be due in part to the rebounding of the sound on surrounding objects.



Conclusions.

- When using the infra-red sensor you need to keep in mind that if it is close to the floor the readings will never be over 85.
- At a distance of under 50cm the readings from both sensors are very similar, although only the ultrasound sensor readings reduce lineally as it approaches the object.
- When approaching a wall from an oblique angle the infra-red sensor provides better readings, while the ultrasound sensor is unpredictable.
- The material of the objects that need to be detected may affect the readings.
- If you wish to get readings at distances over 50cm you will have to use the ultrasound sensor.
- Always test the response of the sensors when using the robot in a new context.

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Lrobotikas.net

Robótica Educativa y Recreativa



HispaBrick Magazine® Event 2013

By A. Bellón (Legotron)

We held our event on December 13th. During this event we had several activities and we gathered with other AFOLS. The main activity, as in other events, was an exhibition of LEGO® constructions built by the attendees. It was really impressive to see the great effort and building skill that was shown in this year's exhibition.

Several months before the event we were asked to do our exhibition in a joint exposition. We were asked to take part in a big project, called "Juguetes de toda la vida" (Spanish for TOYS OF ALL TIMES) with fans of other toys like "Transformers", "Exin Castillos", Barbie, "Meccano" and "Marklin". So we agreed to show our constructions in this big exhibition as it was held on the same date as our event. The location of the exhibition was the 1,500m² main exhibition hall of the Euskalduna Congress Palace of Bilbao (Spain), one of the most important conference centres in Spain. The exhibition was open for visitors from December 16th to January 6th.

We needed 100m² of exhibition space to display our constructions. No single constructions or oficial sets were shown in the exhibition as we had to group all the elements of the exhibition in dioramas or theme collections. We built 8 dioramas and 2 theme collections:

- A City display of 42m².
- An industrial display of 3m².



- The battle of Isengard (LOTR) of 4m2.
- A collection of sculptures of movie and TV characters.
- A medieval display of 6m2.
- A Wild West display 20m2.
- A Star Wars hangar of 3m2.
- Another Star Wars™ display with the battle of Hoth of 4m2.
- The Panzerbricks tank collection.
- A Space Classic display of 4m2.

For this event we very carefully prepared two MILS[1] displays. The Modular Integrated Landscaping System is our way to create a modular landscape in our displays, and we have been working on it for more than half and a year. Both, the medieval display and the Battle of Hoth were made with MILS modules. And they met our expectations. The final outcome was very impressive. We saw how fast and easy it was to carry out the dioramas with the modules. If you have enough modules is very easy to change the layout and to get a very nice display. We prepared also, our biggest display ever. With more than 40m2, the City diorama was huge and very complex.

Now the event is over, but we are preparing the HBME 2014...

[1] MILS rules: <http://www.abellon.net/MILS/index.html>
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LEGOWorld Copenhagen 2014

By lluisgib

I arrived in Copenhagen on Friday afternoon. The organisation invited me to participate in the AFOL Evening, although I was not an exhibitor. Once I was seated at the table, and had said hello to the other guests (I had met some of them before) we started to dinner.

During the dinner we had the special visit of Mr. Thomas Kirk Kristiansen, son of the owner of the LEGO® company and great-grandson of the founder.

After dinner, the organisers of LEGOWorld from LEGO offered us an interesting game. They gave each one a bag with around 50 parts and we had to guess which themes and how many parts of each theme were in each bag. After that, we also enjoyed a Speed Building competition with one hand, and a building competition, where we had to copy a model, but looking at it and explaining to the other AFOLs how to build it.

Finally, there was the auction, where some special sets were offered, like Christmas sets for Employees signed by the LEGO CEO, Master Builder Academy sets (only available in the USA), bags with interesting loose bricks and the Press kit of the LEGO Movie. It was an exciting dinner :)

At 10 AM the next day, I arrived to the exhibition. It was a huge venue where 90% of the space was occupied by play zones of the LEGO Themes. All were present, from DUPLO, Friends, CITY or Star Wars, to MINDSTORMS. All areas had workshops and free play zones, and there were queues all day because all the kids wanted to participate in everything. At the CITY display I could see the new CITY sets of the Arctic sub-theme and the new LEGO Trains.

The Fan Zone was the most spectacular area of the exhibition. In that area there were all the models created by the AFOLs. There were a lot of displays of different themes. Perhaps the most beautiful one was the reproduction of the Tivoli Amusement Park of Copenhagen. It was a collaborative display made by 7 Danish fans (Jakob Hestbæk, Henrik Christian Grove, Jørgen



Pedersen, Lasse Vestergård, Anne Mette Vestergård, Trine Jensen and Tine Gudiksen). Some of the rides and main decorative elements were reproduced. Moreover, some rides were working. This is the kind of display you can spend hours just trying to see all details. It was also the winner of the best model of the exhibition.

Perhaps the other display I paid more attention to, was one made by Hugo Santos and Miguel Reizinho, from Portugal. It reproduced the small village of Asterix, the Roman camp and some of the most typical scenes of the French comic.

Stephan Sander (see section Great Creators of the World) displayed his Brick Valley with new additions like a new DeLorean or a Lancia Stratos.

In the middle of the Fan Zone there was a huge CITY display, the same configuration as Skaerbaek, but with some modifications and new models. I'd like to highlight an inverted house, the Nyhavn seaport of Copenhagen, or a cadet's chapel inspired by the US Army.

Another surprising display was a sweet micro-scale reproduction of Copenhagen made by Ulrik Hansen, where you could appreciate all the streets, main monuments, the central train station...

Smaller displays could not be missing, i.e. Lord of the Rings, Castle, a big modular hangar for Tie Fighters built by several Swedish AFOLs, or the always interesting GBC track, this time with 107 modules. A ball took around 13 minutes to cross all 107 modules. The table of the functional Technic models was another place to stop. They were doing different tasks along the table.

On Saturday evening, once the exhibition was closed, we went to dinner in the center of Copenhagen. Before dinner, we did a small tourist tour of one hour in a double-decker bus and we could see the most iconic places of the city (except the little mermaid). Svend Erik was the guide and he gave all the explanations.

On Sunday morning I spent my last minutes taking pictures and saying goodbye to everybody, because I had to take the flight back home after lunch.

#



Review: LEGO® Minifigure Year by Year: A Visual History

By Iluisgib

Images by Dorling Kindersley™ Limited

LEGO® Minifigure Year by Year: A Visual History
By Daniel Lipkowitz
Dorling Kindersley™ Limited
ISBN: 9781409333128

In this section we normally write our opinion about some books we receive to be reviewed. But this time I am going to explain how I collaborated in the amazing book published last October by Dorling Kindersley (DK) about the small inhabitants of the LEGO world.

To start off I should say that I was not in direct contact with DK. This experience could be explained by anybody because it all started by a thread posted at brickset.com. DK was asking for fans to collaborate with a book about minifigures. Since the minifig is my favourite part of LEGO, and I have minifigures from my childhood until the present day, I decided to write a mail to the address that was published, offering my minifigs if needed.

When I had already forgotten about the book I received a mail from Helen Murray with a spreadsheet attached, and the request to provide as many minifigs as possible from the list, excluding the ones they had from other fans or from LEGO.

I checked the list and I saw a lot of minifigs I could provide. It took me around 2 weeks to collect them all and send them to UK. It was a race for me, because my collection is spread over 4 different locations. I had to spend tens of hours at my parent's house, the family holiday house, a warehouse and my own flat, searching for the minifigs.

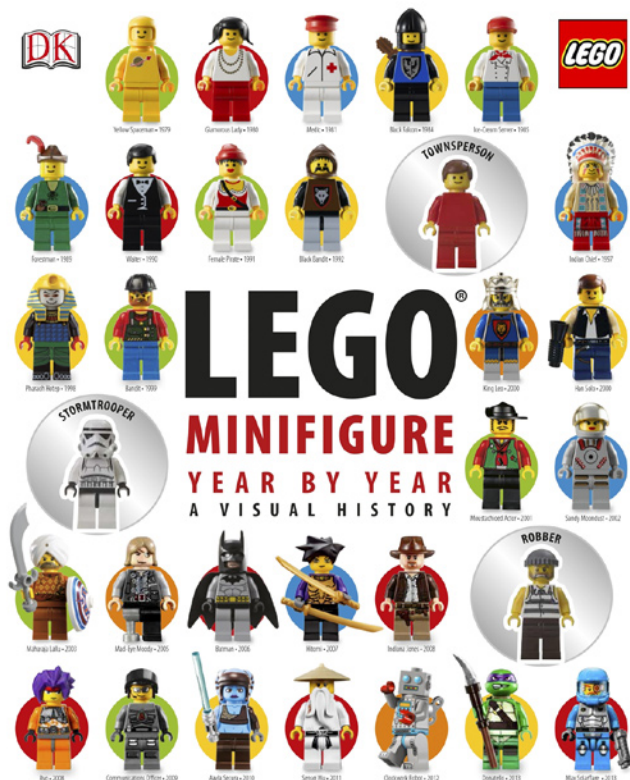
I like some special themes that are not usually liked by most of the AFOLs, i.e. LEGO Sports. That's why I could provide most of the minifigs of those themes. Moreover, I also have some vevy special minifigs in my collection, like the promotional minifigs of the LEGO Fan Weekend in Skaerbaek, or the commemorative minifigs of DeBouwsteen.

Once I had all the minifigs I could find (around 150 of them) I packed them all individually and each one was labelled with the Bricklink code, year and my name. Following instructions from DK, I sent an insured parcel by courier and the minifigs went to DK headquarters to be photographed.

After more than one month without any news, I received a new mail saying that my minifigs were being shipped back to Barcelona. Once I received them, I was asked to fill in a form and DK paid the expenses of the initial shipment.

During 5 months, no more news came from DK. They were working on editing the book. But one day in September, a couple of weeks before the official launch, I received an unexpected parcel. When I opened it, I found the book "LEGO® Minifigure Year by Year. A Visual History" and I quickly started to read it. It didn't take me a lot of time to start to find some of my minifigs. It was a strange sensation. I had read a lot of books about LEGO and, for first time, it was not only a book but also a part of my life inside it. I felt really proud to have collaborated with DK and, while reading, I was saying myself "Here it is one of my babies, here another...".

DK did a presentation of the book in London and some celebrities were invited. To commemorate this event, DK produced a very limited edition of the book at minifig scale. Some days later all the people who collaborated with the book received a copy of this amazing goody by way of a thank you for our collaboration. My copy is #042 and it is one of the biggest treasures of my collection, more for its meaning than for its exclusivity.





1980s

The 1980s were a golden age for LEGO® minifigures. Many young builders were discovering them for the first time as the minifigure reached US stores. Although the beloved minifigure's clothes and headgear might be switched around from set to set, the basic style remained the same—until 1989, when the arrival of the swashbuckling new LEGO® Pirates theme changed everything. Suddenly, minifigures could have eye patches, mustaches, stubble, or lipstick, not to mention hook-hands and peg-legs. The possibilities were endless!

The book starts with an explanation about the design of the minifigs, and a timeline explaining all the changes and additions along the years. After that, there are 5 main sections: Minifigs of the 70's, 80's, 90's, 2000's and 2010's. Of course, each section is bigger compared to the previous ones, just because of the increase of minifigs and themes over the years. Between those sections, there are some 2-page special sections where some facts of the minifigs are highlighted, like exclusive minifigs, the evolution of the facial expressions, and many others. The quality of the pictures is really high and most of the minifigs were photographed, instead of using rendered images. All the minifigs have a small description and some

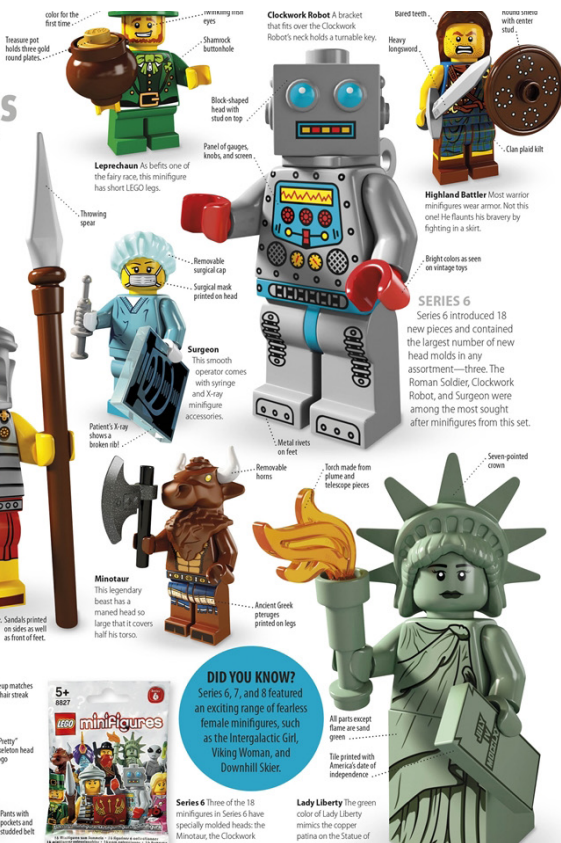
of them also feature facts, discovering some of the secrets behind them.

Of course I recommend you to get the book and read it. Not only because a number of fans have collaborated in it, but also because you can read and explore the history of these “minimen” that steal our hearts.

Acknowledgements: Dorling Kindersley Ltd.
#

LEGO MINIFIGURES

The LEGO collectible Minifigures line returned for its third year in 2012, with 48 new minifigures spread over three series. As in previous years, many new elements were featured in each of the series.



DID YOU KNOW?
Series 6, 7, and 8 featured an exciting range of fearless female minifigures, such as the Intergalactic Girl, Viking Woman, and Downhill Skier.

Lady Liberty The green color of Lady Liberty in Series 6 have specially modified heads the Minotaur, the Clockwork

RESISTANCE IS... JUST GOING TO BE FRUSTRATING FOR YOU.

Review: Extreme Bricks

By Car_mp

Pictures courtesy of Skyhorse Publishing

Extreme Bricks

By Sarah Herman

Pages: 242

Editorial: Skyhorse Publishing

Skyhorse Publishing has kindly sent us a copy of the book *Extreme Bricks* so we can give our opinion on it, and I have to say that from the moment you pick up the book it draws your attention. Hardcover, thick, heavy, ..., this can only portend good things. The author is Sarah Herman, she already appeared in this magazine when she published the book *A Million Little Bricks: The Unofficial Illustrated History of the LEGO® Phenomenon*. This time the book focuses more on the creations, but not on the ones that any AFOL may aspire to build in his lifetime, but to those whose sheer size and complexity are able to leave both novice builders and veteran AFOLS with their mouths open.

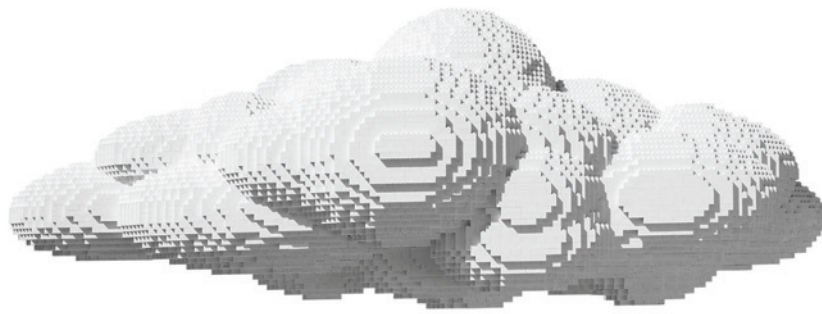
The book is a journey through the most extreme LEGO constructions. From the pioneers in the LEGOLAND parks to the most current mega constructions you can see on the internet or, hopefully, live at a big event. The book begins by

explaining the history of the first constructions made for the promotion of LEGO products in stores and fairs. It continues with a journey through the latest mega constructions, without forgetting the LEGO Certified Professionals who have succeeded in making LEGO bricks their way of life. It also devotes a chapter to constructions and collections that beat records and another chapter to the most technological constructions. At the end of each chapter you can find a paragraph with the profiles of the most prominent builds and their authors, which includes more specific information about the project and how it was carried out, and even tips from the builders to those who dream of making these mega constructions.

In conclusion I can say that is a fantastic book. A delight to the eye, with a fabulous presentation and some photos that will awake the desire of many to have more room and more pieces to unleash the most extreme part of our hobby.

Acknowledgements: Skyhorse Publishing
#





EXTREME BRICKS

SPECTACULAR, RECORD-BREAKING, AND ASTOUNDING
LEGO PROJECTS FROM AROUND THE WORLD

SARAH HERMAN



Review: LEGO® Space: Building the Future

By Car_mp

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LEGO® Space: Building the Future

By Peter Reid and Tim Goddard

Pages: 216

Editorial: No Starch Press

"Are you a LEGO fan? Are you a Space fan? Look no further. This is your book."

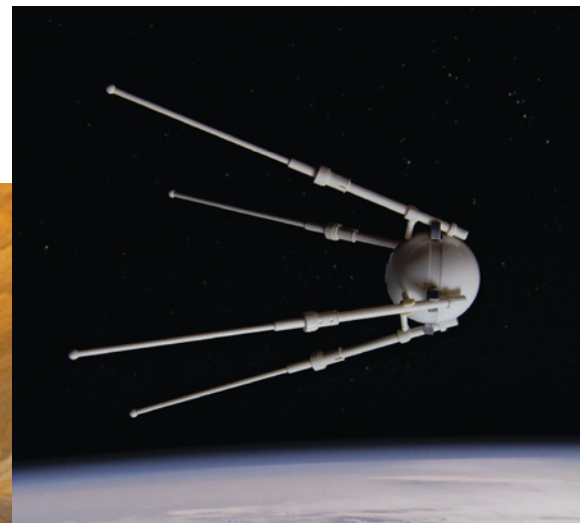
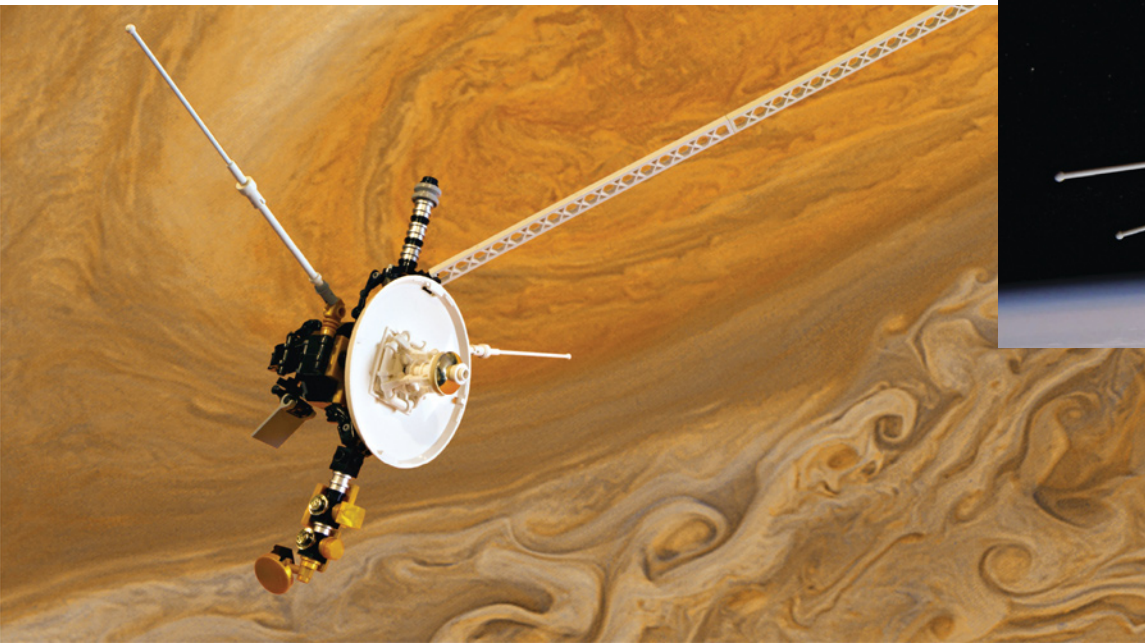
This could be the ad for this book, but the truth is that this is probably the best book I've read about LEGO. Okay, okay, yes, I am a fan of LEGO Classic Space, and maybe my view is clouded by this, but before you think I am a hopeless case, keep reading.

What stands out about this book is not the subject itself, but how the authors have shaped the book telling a story about the conquest of space. The first part tells us the first steps taken by humans in space, the launch of the Sputnik, the first moon landing ... then it immerses you in a science fiction story where there is a lot of research, colonization, betrayal and war. All shown through photographs that often border on perfection.

The construction quality is no surprise, especially if you follow the work of the authors on the Internet, yet I cannot help but show my admiration for the careful detail show in each of the models, regardless of scale. And don't forget that the book includes instructions for some of the models. Although honestly, this time I'm happy just looking.

I know that those who are not interested enough in science fiction and space may find this book less interesting. I'm sorry for them; they don't know what they're missing. Definitely a must for fans of Space.

#




Peter Reid's Exo Suit
LEGO CUUS00 #006

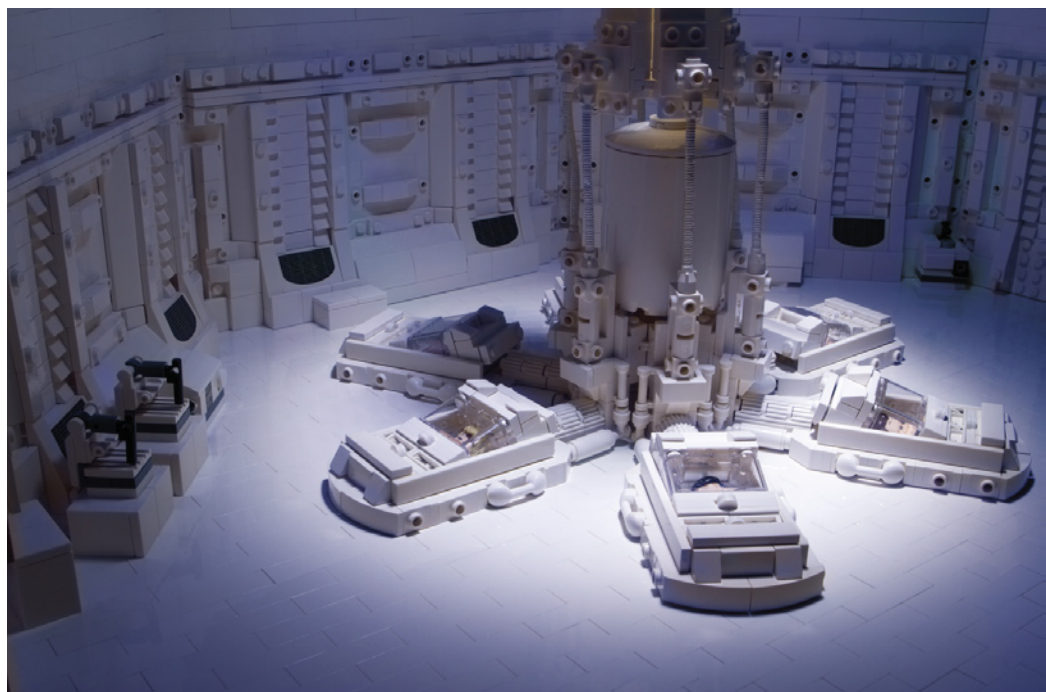


original fan submission (not final product)

as seen in

LEGO SPACE
BUILDING THE FUTURE

from  no starch press



Review: The LEGO® MINDSTORMS EV3 Laboratory

By Jetro

Pictures by Daniele Benedettelli

The LEGO® MINDSTORMS EV3 Laboratory
By Daniele Benedettelli
Editorial: No Starch Press

So you have an EV3 set and want to do more with it... well you have several options. The five models that come with the Retail set software are a good starting point to let your imagination fly. There is a lot you can learn from having a closer look at the models and peering into the programs. After that there are the 12 bonus models that you can download from the official LEGO MINDSTORMS website. Do you really need anything else?

Technically, you might think “no”, but I can already hear some of you think: “some more building instructions would be nice”. Also, there are areas both in building technique and in programming knowledge where you may welcome some help. The LEGO MINDSTORMS EV3 Laboratory is the perfect companion to your EV3 set.

What can you expect to find in the book? Basically you can divide the information into 4 categories:

1- Building instructions

The book contains complete and detailed building instructions for 5 different models, ROV3R, which is used in the initial chapters of the book, WATCHGOOZ3, a walking biped, SUP3R CAR, SENTIN3L (any Star Wars fans out there?) and T-R3X, another walker (featured on the cover).

2 – Programming guides

Building is only a small part of robotics and the programming guides go way beyond providing instructions to make the builds move. The programming guides go into every aspect of the programming language that LEGO provides with the EV3, from every single option in the on-brick programming to detailed practical examples of how to use everything that is available in EV3-G. From simple control structures to the advanced use of the math and array blocks, each element is explained and used in the different programs that accompany the models, teaching you how to use them in your own creations.

3 – Building Ideas

The building instructions contain many helpful explanations on why certain solutions were used, but the book goes a step further by dedicating an entire chapter to explaining how to make the most of all the elements in the set including ideas for bracing, cross-blocks, gears and motor assemblies.

4 – Comics

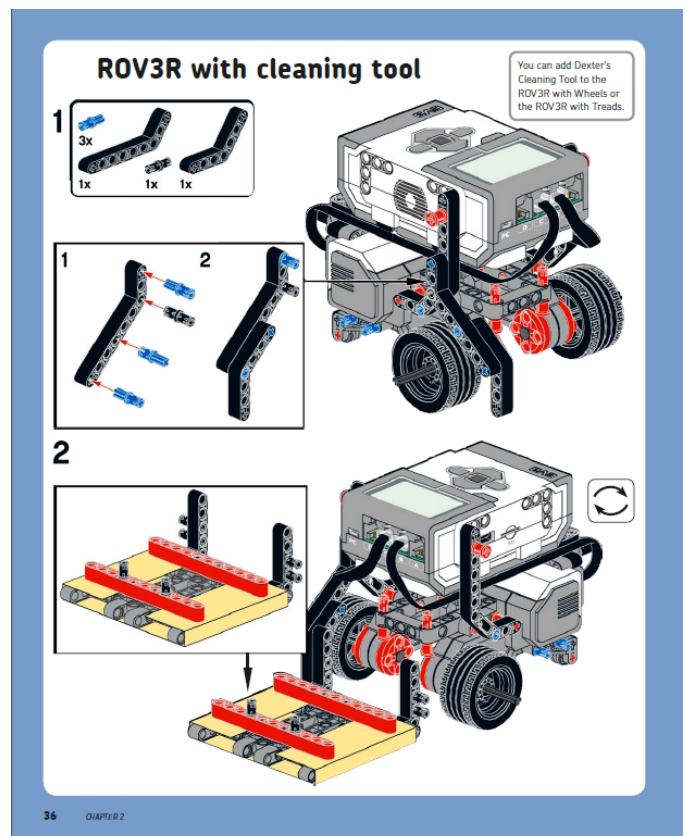
In addition to a technical building and programming guide, the

book is a fun read as it includes a comic “The EV3L Scientist’s Apprentice”, featuring Dexter as the apprentice and Danny as his tutor in robotics. The comic is woven through the book and provides the uniting element between the chapters and challenges.

Not convinced yet? The companion website <http://EV3L.com> provides the code for all the projects (in case you want to use the shortcut – but you are much better off following the step-by-step instructions in the book anyway) as well as some additional models (the codes to unlock the content are all contained in the book). Daniele (the author of the book) is even in the process of providing alternative build options for those who instead of the Retail set have the Education set which comes with a different inventory

The book is available in paper format (black and white) and as a full colour eBook and it provides a very complete addition to make to most of your MINDSTORMS EV3.

Acknowledgements: No Starch Press
#





THE LEGO® MINDSTORMS® EV3 LABORATORY

build, program, and experiment with
five wicked cool robots!

daniele benedettelli



THE LEGO MOVIE

By HispaBrick Magazine®



One of the most important milestones this year has undoubtedly been the premiere of The LEGO® Movie. I must say that I was all skepticism at first. There have been previous attempts, by other toy companies, of making movies in which their products were the protagonists, most of them directly intended for release on DVD and cartoon television channels. When you think about toys and movies you cannot avoid thinking about Toy Story, a leader in animated films, in which LEGO bricks already appeared in some scenes. But in the beginning everything made me think that it would be far from this type of film. As more and more details were known, the interest in the project grew. The release of the first trailer was highlighted on all websites related to LEGO bricks and gave birth to hope in the hearts of AFOLS.

The waits are always long, the difference in release dates between different countries did not help. The lucky ones who attended premieres or previews in selected countries flooded

blogs and forums with comments and reviews of the movie. Also the first collection figures and specialized reviews made us think that LEGO seemed to have a new success.

After seeing the movie one can only confirm that everything that has been said about it is true. Any child will enjoy the film, any LEGO fan will enjoy it twice. Everyone will find something to love, its argument, the nods to our world... but seeing the end product as a whole, the film is fresh, original, it is spectacularly done... in short, it's awesome.

Here we present an interview with **Matthew Ashton**, Vice President of Design The LEGO Group and Executive Producer, and then the fantastic models from **Imagine Rigney**, an example of how the AFOL world has been inspired by the film.

#

Interview with Matthew Ashton, Vice President of Design, The LEGO® Group & Executive Producer

Pictures courtesy of The LEGO® Group

HBM: What was the collaboration with the writers/directors of the movie like?

MA: It has been a whole heap of fun. Phil and Chris (Lord and Miller) and the Hageman Brothers are hilarious! When we first signed up to do this project, we gave the writers complete creative freedom to write the most exciting, heartfelt story they could. We knew the key to the success of this movie would be the story itself. There have been several 'toy-based' movies that have been released in the past that have not connected with the audiences well. We wanted to make sure we had a dramatic rollercoaster adventure with characters that the audience would deeply care about. We reviewed the treatment, the scripts and the animatics throughout the process to ensure that the story championed an underlying message of creativity, and that it tied in with our LEGO® brand values.

HBM: Have you been involved in making the movie in addition to designing the models?

MA: Yes. I have been involved in the development of the movie for three years now, as well as the development of the products associated with it. In fact, all the movie stuff came on top of my regular 'day-job', as I also oversee the development of many of our other product lines including LEGO City, LEGO® Star Wars™, LEGO Minifigures, LEGO® Teenage Ninja Mutant Turtles™, and LEGO Super Heroes, etc. It has been a very busy couple of years!

HBM: How many people have participated in designing the models and scenes that appear in the movie? How much time have you invested in the project?

MA: The number of designers involved has varied through the different stages of the project. I have been working together with Michael Fuller (Senior Designer) on the project day to day since the beginning. Michael has been an absolute star. He designed a large percentage of the models seen in the movie. At certain points we arranged 'Design Boosts' where we pulled together a team of maybe 50 designers to brainstorm and flush out a load of different ideas for the movie. The team that finalized the models (which ultimately became the toys) consisted of around 8 designers.

HBM: When the models for the movie were designed, were they conceived with idea of launching them as sets?

MA: This varied from model to model. Once we had a pretty final script locked down, I ran through the story and highlighted the assets that I felt would make great toys. Every aspect of the LEGO Movie is made from LEGO Bricks, and some of the content was very similar to some of our existing lines. Bricksburg was an interpretation of LEGO City and the modular buildings we already produce, and Middle Zealand reflects a Castle kingdom – so we chose to produce the items that were new, and different and distinct from all our other product lines. We also made sure that we selected the vehicles from the most memorable action sequences, as we knew the kids would want to rebuild these sets and play out the scenes that they remember from the movie. Once we had the shortlist of models, we put full focus on those, collaborating with the directors and animators to make sure that they would work well

Matthew Ashton and Unikitty



in the movie and also make great toys.

HBM: Was it difficult to convert the virtual models from the film to actual sets made with bricks?

MA: As it was such a collaborative process, both the virtual and physical models were designed simultaneously – so the majority of the sets they are a 100% representation of what you see in the movie. There are one or two sets that are more of an 'interpretation' of what you see in the Movie: for Lord Business' Lair, for example, we obviously couldn't create an entire office tower, so we picked the most iconic components and combined them into one super fun play set. The movie version of Emmet's Construct-O-Mech was actually designed first by the animators and we then scaled it down and refined



Lord Business' Evil Lair



Matthew Ashton with concept designer Matteo Oliverio (left)

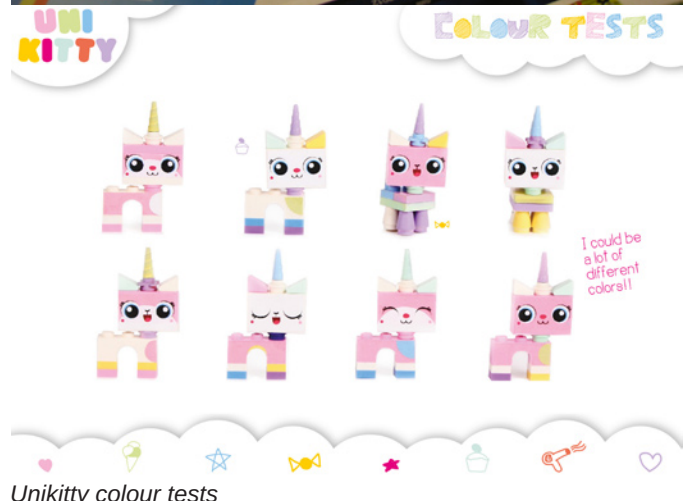
it to make the toy. Metal Beard's Sea Cow, on the other hand, was designed the opposite way round: we actually designed the toy first, and then it was scaled up and reworked into the Movie version long after the toy had been designed. This was one of the sets that we knew from the beginning would have its challenges, simply because of the scale of the model (the movie version needed to be colossal – much bigger than any toy we could produce). We were super happy how they both turned out. The movie version is absolutely breath-taking on screen, while the toy version is jam-packed with exciting details, building techniques and functions.

HBM: What kind of information did you have for the set design?

MA: It varied from model to model. In some instances, the directors had very clear vision of exactly what they wanted, and provided us with sketches or inspiration material. In other instances they came to us and asked us to run with our ideas and then we would refine them together afterwards.

Take Unikitty for example. Cloud Cuckoo Land had already been conceptualized fairly early on in the story development, but it had been quite difficult to nail down the character who should rule over this Kingdom. We had all tried several attempts and none of them were really working, so we decided to wipe the slate clean and start from scratch. By this point we knew that we needed to balance the gang out with someone who was much more emotional, and we could really do with someone 'cute' too. We hopped on a call with the directors and had a brainstorm of what the most adorable things in the

Unikitty sketches



Unikitty colour tests

world were.... We boiled it down to two favorites: kittens and unicorns. So to make our character super-special we decided to mix the two together! After a couple of concept sketches that didn't really nail it, Unikitty was handed over to me to design and turn her into the adorable, brick-built bundle of bubblyness she is today!

HBM: Did you have any limitation in colors or parts that you could use so to get the desired on-screen results?

MA: As the film is built digitally, the animators pretty much had free reign to build with bricks in whichever colors they wanted from our color palette. Of course this isn't something we could do in real life, as our factories would go into complete meltdown if we had to produce all those bricks in every imaginable color ;)

HBM: Did you have to make many changes in the designs during production to adapt them to the script?

MA: Not too many, luckily! The one model that was really complicated to deal with was Wyldstyle's Super Cycle. You see it in the movie being built from parts of a Bricksburg back-alley, so it took a lot of work to get it right both for the animation sequence and the final end result of the movie model and the toy. This model changed color several times throughout the movie development, and was actually blue up until the last minute. However, as it was quite dark on screen, we made the last minute decision to switch it to orange so it would 'pop' better in the chase sequence.

HBM: Are there any scenes in the film that haven't been turned into sets that you would have liked to design?

MA: We all have our favorites. I love 'The Dog' from Cloud Cuckoo Land, and I have already seen that some fans have recreated that. The mis-matched submarine is also hilarious. I adore the paddling, pink, snorkeling teddy that Unikitty built for the front section. Of course we can't recreate everything as an official set, but we hope that the movie itself inspires fans to get creative and dive into their buckets of LEGO® bricks to recreate what they have seen and much more.



The Super Cycle



Matthew Ashton and Senior Designer Michael Fuller

Senior Designer Michael Fuller



HBM: What are the main differences between designing a set for the LEGO Movie and designing a set for any of the licensed movies?

MA: Every LEGO set is different and fun to design. I cannot get into the details of the main differences but loved how designing the sets for the LEGO Movie was remarkably collaborative, as we were working on them together with both the film makers and lots of LEGO designers from other project teams.

HBM: What has been the best and the worst of working on this particular project?

MA: There have been so many positives it is impossible to list them all. We are so proud of the end result and are so thankful that everyone who has been involved in this process has thrown themselves whole-heartedly into the making this movie. For me personally I feel so blessed to have been involved in this. It has been an amazing experience, and I have met some truly inspiring, talented, creative people along the way, and that means everything to me. If I did have to highlight a negative, it would probably be having to deal with the different time zones; we were working in Billund, Denmark, the directors were mainly based in LA, and production/animation was based in Sydney, Australia – so there were plenty of late night calls, sleepless nights, delayed flights and lost baggage to be dealt with along the way. But despite all of that, everything turned out AWESOME in the end and we have carved a brand new milestone into LEGO history, so it has all been well worth it!
#

HBM: What is easier to design: a theme as varied as LEGO® Movie, with elements from City, Castle, Pirates, Western, etc, or a theme with line with a single theme?

MA: I wouldn't say it was easier, it was definitely very exciting! It was so funny seeing some people's reactions to the movie products before they had seen any scenes from the movie. The line-up is so obscure, quirky and weird that many people thought we had gone completely ga-ga!

HBM: Some of the sets allow you to build a secondary model. How were these alternatives designed? Was the main set designed with the secondary set in mind or has the alternative design been a later process based on the available parts?

MA: They were designed with both models in mind from the get-go and refined as we went along. We wanted to make a series of vehicles that would fit seamlessly into a LEGO City environment for all our more purist fans, while at the same time creating something cool (and completely bonkers) for everyone to have a laugh and a lot of fun with.



Ice Cream Truck

Matthew Ashton & Senior Designer Michael Fuller





Imagine Rigney

<https://www.flickr.com/photos/imaginebrickzone/with/13098262345/>



Review: 70806 Castle Cavalry

By Legotron (A. Bellón)

Set: 70806 Castle Cavalry

Parts: 411

Contains: 3 minifigs

This is one of the medium size sets of the new theme related to the LEGO® Movie. The LEGO Movie depicts an imaginary world populated by minifigs, with many different themes, like City, Castle, Space or Wild West.

At first sight, it seems to be a strange set. The box is decorated with a castle thingy flying towards a robot, and you may think, what is this? Well, don't worry. It is one of the scenes of the movie. I'm not going to reveal the argument of the movie to avoid spoilers, but yes, it is a real scene shown in the LEGO Movie.

So let's talk about the set itself. The box has three small instruction booklets, which allow you to build three different models. Yes, three different models! Each instruction booklet is focused

on one model. With the first one you can build the black robot, a Micro Manager, who are the bad guys in The LEGO Movie. This thing is easy to build, but with many features for its small size. The functionality of the combat arm is very remarkable in that it can be placed in many different ways. It is possible to build this model at the same time as one of the other two.

Then you have two models to choose. The first one is a flying thing, built with castle elements. It is a strange plane, piloted by two castle soldiers. The whole thing is made up with pieces with the same colours as the King's Knights faction of the last LEGO castle theme. It is a very heavy model. The internal structure is full of pieces to make a very strong base for the rest of the elements. It is very curious to see the way some typical castle elements, like walls, are used to make the flying craft structure. The command bridge made with the fence is a nice touch, and the basket for the pilot is hilarious. But the whole construction is very robust and can be played with like a plane without any problem. If you prefer to build a more classic construction, you can choose the other model.



It is a construction depicting the main gate of a castle. The gate is very easy to build, with two flanking towers and many ornaments. The door is made with bars instead of wood, and there is a functional door lock. In my opinion it is an ugly detail, as it is too big, but it is not the most important part of the construction. There is also a small cart with a catapult, and two light posts. As a curiosity, the light posts are different from those shown in the box art: there is one plate with two light posts in the box and two plates with one light post in the instructions.

There are three minifigs in this set: Sharon Shoehorn, a female minifig in city disguise, with a new printed torso and two castle soldiers with King's Knight colours. They are the same as the last castle minifigs, so there is nothing new in this case.

Let's analyse the parts of the set. There is a nice bunch of parts, some specific castle elements are used for very different tasks than what they are intended to, so this is a nice detail. There is a great variety of pieces, but nothing new to be remarked.

In short, I believe that this set depicts the movie scene it is related to very well. You need to see the movie in order to understand what's going on, but once you are familiar with the movie it is easy to understand the set. As a LEGO construction itself, the three models are really nice and very playable.

Acknowledgements: To LEGO® SYSTEM A/S and the CEE Team for the set.

#



Review: 70810 MetalBeard's Sea Cow

By Iluisgib

Pictures courtesy of LEGO® System A/S

Set: 70810 MetalBeard's Sea Cow

Parts: 2741

Characters: 6

SPOILER ALERT : This review refers to passages of the "The LEGO® Movie".

After the first wave of sets released in January, on March 1st, the Flagship of the sets of "The LEGO Movie" was launched: MetalBeard's pirate ship called the Sea Cow. It is one of the main scenes of the movie, where the attack to Lord Business begins to take shape, in order to avoid the use of the Kragle during the Taco Tuesday.

The set consists of 4 minifigures, Unikitty, the Pirate MetalBeard (Mecha), 2 micro managers, the Double-decker



couch and the Pirate ship. The assembly is divided into 9 stages, starting with the minifigures, and ending with the ship's sails.

The first thing that surprised me about this set, compared with other sets of similar size is that there is only one instruction book. As you can guess it is thick, but I personally appreciate





that LEGO® has concentrated everything in one book, instead of in 2 or 3 volumes.

The set comes with 4 minifigures: Emmet, Wyldestyle, Vitruvius and Benny, the astronaut of the '80s. There are some interesting pieces on the minifigs. The nicest for me are Benny's torso and helmet. The torso printing simulates the wear of a minifig from the 80's, and the break on the helmet simulates an old and much played with helmet. In addition, there are two other characters which are built: Unikitty and MetalBeard. The pirate is smaller compared to the one from set 70807, but it should be scaled with the rest of the ship.

There is another major element of the film that is present only in this set. The double-deck couch invented by Emmet. According to the Master Builders it is the worst idea ever, "pitiful". But this object finally saves the protagonists from being

hunted down by the Micro-managers when the submarine used to escape from Cuckoo Palace explodes in the water.

To finish with the characters or iconic elements, 2 micro-managers are built with different appendages and features. Micro-managers are responsible for enforcing Lord Business' plans.

The construction of the ship starts with the hull. Although there are some large parts for the base, you can already feel that this will be an entertaining build. There are dozens of small 1x1 plates, round plates a round bricks for the first walls of the ship. The colours are brown, dark brown, Los colores son reddish brown, dark brown, dark red, gold silver, black... The ship has no less than 6 cannons in the base together with munition and other accessories.



After the hull you build the interior, the cabins, the bow, the keel... Tall the elements are made up of dozens of small pieces that all for some great shaping. Since this is a fantasy ship, the proportions are not what you'd typically expect in a model this size of a real life boat.

The stern is very high. It has three levels and one of the surprising characteristics is that it has three propellers: one near the rudder for sailing in water, and two more for flying. there are two cabins, one above the other, and on top of both the bridge with the helm. In order to make sure the construction is sturdy there is an internal structure of liftarms. The lower cabin is a weapons arsenal which can be accessed through swinging doors. As decoration for the room there is a lamp in the centre of the ceiling. The lattice of the windows is pearl gold and break the monotony of the brown with which the hull is built.

In the top cabin there is a table with a globe, bottles of rum, a ship in a bottle, navigation instruments, maps... Again, the decoration is done in pearl gold and dark brown to avoid monotony. The cabin is accessed through a door with a lock (and key).



The roof of this second cabin is the bridge. In order for Captain MetalBeard to sail his ship there is a large dark red seat. After seating the captain the rudder hinges towards him so his hands can grasp it. Behind the chair there is a mast with sails and a banner.

At the front of the ship a cow stands out as figurehead, giving the ship its name (Sea Cow). In addition to the cow There are three sails and an aggressive bow to intimidate other ships At the back the large mast holds the first set of sails as well as a crow's nest and a defence post with weapons that a sailor can operate to attack enemies.

The last part is the "engine" of the vessel, which is placed in the centre of the ship and sticks out on every side. On top of the engine the main mast is built, with two sets of sails and another crow's nest.

The model is quite baroque as far as details are concerned. There are hundreds of small parts that make up the hull and which make building it an entertaining, but lengthy job. The finished model is quite striking, but rather overwhelming due to the concentration of details in a limited space. That's not a bad thing, but it takes some time before you come to appreciate everything the designers have included in this set.

The minifigs are quite exclusive. Benny and Vitrovius only appear in 2 sets, Queasy Kitty is exclusive to this set. The more "standard" figs are Emmet and Wyldestyle. I was surprised Batman wasn't included, since he is one of the main characters in the film and aprotagonist in this scenes on the ship. He is also in 70815 (which will be launched in June), So I don't think it is a question of licences.

The set allows you to build one of the main scenes of the film, some quite exclusive minifigs and iconic elements like Emmet's double decker couch. The price per part is slightly under 0,10€. Keeping in mind that "The LEGO® Movie" sets have a license price that's more than acceptable. The only "but" I find in this set is the playability. The set is large, ornate and it is hard to get to some of the spaces in the ship. It is more a display model that something to play with for hours as it is also quite fragile in the hands of a child.

Acknowledgements: To LEGO® SYSTEM A/S and the CEE Team for the set, and the official pictures.

#

Review: 31025 Mountain Hut

Off to the mountains

By Otum

Pictures courtesy of Brickset and Otum

Set: 31025 Mountain Hut

Parts: 550

Contains: 1 minifig

Everyone has imagined at one time or another, what it would be like to spend a couple of days in a mountain hut, surrounded by nature. Well, this is your chance!!!

The 31025 Creator set gives you the opportunity to see what it would be like, in addition to being a perfect complement to the collection of houses that the Creator line has offered in the last few years. Like most Creator sets this set is a 3 in 1.



Additionally, it has this special charm that Creator sets have, building with mostly generic parts. The set includes five bags with parts, two BURPS, one bright green 16x16 and two 8x16 plates, and three instruction booklets, one per model.

The first (and main) model is a typical mountain hut at the foot of a waterfall. The cabin can be opened and inside there is a table, a chest of drawers with a gas lantern, a painting and a





chimney which includes a stack of logs and is decorated with an animal skull. There is nothing that particularly stands out in the construction process, which is simple and easy, as is to be expected with Creator sets. But to be honest, the mountain with the waterfall is great. If any defects are to be pointed out, maybe the quad doesn't fit in very well, but the eagle more than makes up for that - it is the best part of the set.



The second and simplest model of the three is a little hut built on the mountain side: two of its walls are made up of the mountain itself. Just like the main model, the inside is furnished. There is a table with a lamp, a small kitchen and a painting. As the model is quite simple there isn't much more, but despite how simple it is it looks really good. The most outstanding feature is the smoke coming out of the chimney which is also included in the first model. Again the quad doesn't fit in.

It might sound as if I have something against the quad, but it simply doesn't fit in no matter how you look at it. This cabins look like the typical isolated cabins which you get to after a long walk and are meant to be a place to get away from noise and bustle of modern life. But it isn't going to be all bad. The rims on the quad are the type of part any LEGO builder wants to have.



The third model is a cabin on top of a rock formation and to get to it you need to cross a bridge over a waterfall. It is of an intermediate size, a little more complex than the hut in the mountain side, but simpler than the main model. The best part of this model is building the rock, together with the effect of the water. The hut is very simple, and it has a bed and a bedside table. Just like the first model the most attractive part is the a bird, a woodpecker, and I also like the effect of the coals scattered around the fireplace for cooking. As for the canoe... let's just not mention it.

To sum up, this is a Creator set and as such is a simple construction with standard parts, but it has some interesting details that stand out and make it attractive. The set captures your imagination and takes you away to the mountains. It fits in perfectly with anything city setup or display as a holiday or mountain scene. As I mentioned before, the best part are the waterfalls and the birds, both the eagle and the woodpecker.

So, grab your backpack and let's have an adventure!!!!

Acknowledgements: To LEGO® SYSTEM A/S and the CEE Team for the set.

#

Great creators of the world: Stephan Sander

By HispaBrick Magazine®

Pictures by Stephan Sander

Our guest in this issue is Stephan Sander, alias x_Speed, a fantastic Miniland scale builder, responsible for the spectacular Brick-Valley.

HispaBrick Magazine: Name?

Stephan Sander, "x_Speed"

HBM: Age?

Stephan: 42

HBM: Nationality?

Stephan: German

HBM: What do you do normally?

Stephan: Normally I'm building cool stuff with LEGO®, but sometimes I'm working as an IT Specialist for a German banking datacentre. Mostly I'm doing this from Monday to Friday.

HBM: When did you first start building with LEGO?

Stephan: I'm a big fan of LEGO since I've been a kid, but I can't name the exact age. Sadly I entered my dark ages when other things became more important. Luckily the Ferrari #2556 breached the wall of darkness and got me out. That was about 1998 and since then I'm completely lost in the bricks.

HBM: When did you decide to build at Miniland scale?

Stephan: It started in 2006 after a discussion with two other AFOLs about a car displayed in LEGOLAND Billund. I started to build the Ferrari Testarossa to get the prove that the model showed in Miniland is not a Ferrari Testarossa (in fact it's a Ferrari 348).

HBM: Which was the motivation to build at this scale?

Stephan: After finishing the Testarossa, I figured out, that 1:20 is a brilliant scale for building cars. It gives you many more capabilities to include details, but it's not too big that it will take years and thousands of bricks just to finish one model. I'm not just a LEGO fan since, but I'm also a petrol head since I've been able to say the word "car" (german translation, of course :). So it was more than obvious to make more cars and I never stopped since and I don't think that I will stop in the future.

HBM: When did you start posting your models online?

Stephan: My website x-brick.de is online since 2000, so my first online postings of moc's might be a little bit older. Loads of things happened since then...

HBM: What is the last set you have purchased?

Stephan: Gorzan's Gorilla Striker #70008. It was a hard way to get off the drug of collecting Star Wars sets, which I managed a couple of years ago (I'm still clean!). So because of too less space I've stopped buying usual sets and decided to build my own stuff instead. But from time to time I buy sets and still enjoy to build them, like that brilliant Mecha kind of thing. I love the banana cannon and the colour combination which give the model a very special look.

HBM: What is your favourite commercial LEGO building theme?

Stephan: Classic space is my all-time favourite, because back in my childhood I've been a million times to my local toy dealer,





just to take a look at the 928 Galaxy Explorer, before I've gathered enough money to buy this fantastic set. Beside to this, I love the 1997 divers theme. The Deep Reef Refuge #6441 is a fantastic set and I still got some 10+ years old moc's according to this theme. The sets remind me about one of my favourite movies: "The abyss".

HBM: What is your favourite theme for building?

Stephan: This might be a bit surprising: cars!

HBM: Which reason did you have to create Brick-Valley?

Stephan: At the first event where I've shown my cars in Frechen (Germany, 2006), they were simply placed at the table. It looked quite boring and not many people recognized them and I wouldn't blame them. For the next time, I've made some background creations, based on 32x32 baseplates. That was way better and made the cars looking more interesting. Since the number of cars were growing, the need for a proper background became more important. And what is better than showing cars in their natural environment? So I started to build some streets and a very simple gas station, basing on 48x48 baseplates. This was basically the birth of Brick-Valley. The streets became more detailed and there were more buildings, including a model of the "Anzeiger Hochhaus" (popular building in my hometown), which is made of ~35.000 1x2 plates. So after all Brick-Valley is "just" the background to give the cars a nice environment.

HBM: During the last years, Brick-Valley has grown a lot, with new cars, buildings and characters, what are the next objectives for the upcoming years?

Stephan: My collection contains now 74 cars, but whenever I finish one car, two new cars pop up at my todo list. But this list is more a reminder, than a real todo list. I'm building whatever I come to my. There are still some gaps in my Ferrari timeline and a pink, six wheeled Rolls Royce which has been started a long time ago and still waits to be finished. So I'm not afraid of not knowing what to build next.

HBM: What is your favourite LEGO® element and why?

Stephan: Good question. The jumper plate? Very useful, very often in use. The Earling/washmaschine brick? Love the way it can be used. But the best of all might be the standard 1x2 plate. I think this is the most useful element of all. If this one exists in a new colour, only a few more will be needed to build a car.

HBM: Which part would you like LEGO to produce?

Stephan: A new upside-down converter, like the old finger hinges. The company which must not be named has a fantastic 2x2 plate with studs on top and at the bottom in their program. That would be very helpful! But since there is the wrong name on the stud, there must alternative solutions be found.

HBM: How many hours do you spend building with LEGO?



Stephan: Depends who you ask: I would say not enough; my wife would answer way too much. The truth might be somewhere in between. Sometimes it depends on my mood and on the progress of a model. If I'm satisfied with it, I usually can't stop building until it's finished, but when it still looks ridiculous after several hours, I prefer to watch a good movie instead. I don't count the hours of building, the only thing I can say is that to build one car takes roughly about 20 hours, 10 hours until a first draft is finished and another 10 hours to do refinements.

HBM: Could you explain us how you have designed your last creation?

Stephan: It's only half new, because it's a mashup from Back to the Future and Doctor Who. In Skærbæk last year, a nice friend gave me a T-Shirt showing the mixture of two timemachines: the DeLorean and the TARDIS. Normally I not a big fan of mashups, but somehow this one was different. So I decided to build my 5th DeLorean in TARDIS blue. It was great fun to build it and the combination of dark blue and black works extremely good. The timey wimey stuff above the engine is supposed to be parts of a Dalek. Actually I'm quite curious what visitors at LEGO® World will think about it.

HBM: What do your family/friends think about this hobby?

Stephan: Well, my colleagues first stared at me like if I had three eyes, but now they've got used to it when I take a day off to go to Billund for a day trip without taking my kids with me. My son loves my hobby, which doesn't sound very surprising. My daughter is not yet a teen-ager, so it's ok for her, but still not uncool. I tried every trick to get her into LEGO, but at the end I failed.

Lately I needed to setup about 7meter of miniland scaled train tracks within our living room. When my wife came home and saw the "surprise", she just started to smile. I mean honestly, can I expect more?

HBM: Do you draw or pre-designs before you start building?

Stephan: No. Yes. Well, I'm not very good at drawing and I don't draw anything before I start to build. Not with pen and paper, neither with LDD. I need the bricks in my hand to figure out how to use them best. But when I build cars, I print out their outline to make sure that they'll be in the right scale and have the correct proportions.





HBM: If you had to choose one among all your creations, which one would you choose and why?

Stephan: Without the need of thinking about it, it would be the DeLorean. I've build it a couple of years ago, but I'm still very happy with the model and it's still one of my cars I've spend the most time to build it and it's the model I'm most proud of. Even the colour of the bricks fits perfectly to the non painted stainless steel surface of the original. The car is build with pearl-light-grey elements, which are hard to find and it took loads of afford to get enough of them. This is also the only model I've build in five variations: Back to the Future I, II, III, a "non timemachine" and the latest one is a Doctor Who mashup.



HBM: What do you think about the use of non-official parts (stickers, modified parts, non-LEGO® elements ...)?

Stephan: Yes, great, love them – as long, as they stay away from me. I mean especially for the old American cars it would be great to have more chromed elements, but LEGO didn't make them anymore. In my eyes there is no difference between coating elements with chrome, or to paint them. And where would be the fun, if all elements would exist in all colours? It's part of the hobby to search for rare parts and try to build stuff even if just a few useful elements exist. My pink Cadillac is the best example: usually I use tons of jumper plates within one car, but they are extremely rare in that old pink. So I had to build it with just three (!) jumpers. The only exception are the license plates for my cars. If possible I try to get printed tiles, but this is only a very small detail. The cars would work as well, if they just got a plain tile. So I'm obviously very puristic, but if people want to cut, paint, or do whatever to their bricks – it's up to them. At the end it's a hobby and everybody just should have fun with the bricks.
#

Pillars of the Community: RAILBRICKS

By HispaBrick Magazine®

Pictures by RAILBRICKS

RAILBRICKS is, undoubtedly, one of the best references in the LEGO® trains world, including for those who are fans of the trains but not of LEGO. They have been publishing their magazine since 2007 and they have recently brought out their issue number 14. Its Editor, Elroy Davis, answers our questions

HispaBrick Magazine: How did the idea of RAILBRICKS come up and what was its original purpose?

RAILBRICKS: RAILBRICKS was initially conceived by Jeramy Spurgeon and others back in early 2007. The original mission statement of the magazine was to "strive to advance the LEGO Train Hobby by providing a FREE online publication created by LEGO Train fans that focuses on various aspects of the LEGO Train Hobby." This goal was to be accomplished by providing articles about builders, clubs and events, construction tips and tricks, instructions that readers could follow, as well as set reviews and various articles about real trains. At the time, RAILBRICKS was also partnered with the International LEGO Train Club Organization (ILTCO) which had a goal of being a sort of information sharing center for LEGO train clubs around the world.

Jeramy, as Senior Editor, assembled a small team of people to produce the first issue in October of 2007. In 2010, at Jeramy's suggestion and with okay from the rest of the group, I took over the editor's role with Issue #7 and continued the magazine using the original guidelines.

HBM: To what degree has that goal been fulfilled?

RB: I think we've done a very good job of fulfilling the magazine's original goals. We continue to publish fan-produced content tailored specifically toward the Trains line of the LEGO hobby. Our content has ranged from instructions for the beginning builder to highly customized solutions for builders who are willing to work with 3rd party electronics or customizations. Our authors live in all parts of the world, and the magazine brings those people together and provides an outlet for sharing information for all levels of builder outside of the usual online formats.

HBM: How many people are working on the magazine and how did you meet?

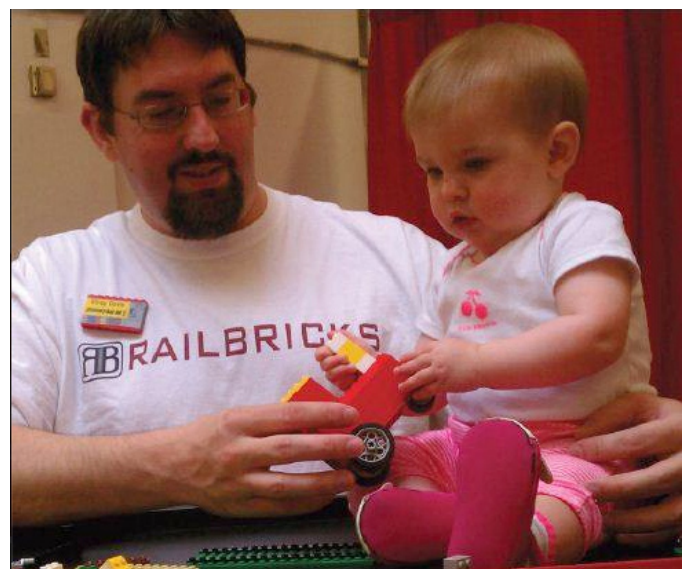
RB: Our volunteer staff consists of about 17 people, with probably 6 or 7 of us working on the magazine at any one time. Some of the original members of the group have left, and we've brought new people on board. I believe that most of the original members met in person at various events. These days, we have volunteers from a few different countries, and some of us have only met online.

HBM: How do you distribute the work?

RB: Our working style is very loose. Mostly the volunteers of the group look for content to be published, or write articles themselves. Articles are then sent to me as editor. I read over the content, and then work with the authors on corrections or suggestions. Once the authors and I are satisfied with the content, I lay out the articles and images in the magazine's format. After layout work is finished, I'll send a copy of the magazine to our main proof-reader, who also makes some edits. A final proof is then sent to all of our volunteers for a final look before we release the magazine. After all changes are complete, the online version is posted to railbricks.com, and the print-version is sent to our on-demand publisher, Magcloud.com.

HBM: Is it difficult to get material for the magazine articles being about a topic as specific as LEGO trains?

RB: Sometimes it is very difficult to get content. We're sort of a niche of a niche hobby. Also, though we produce the magazine in English, many of our readers are not native English



speakers. As such, those readers sometimes feel that they cannot contribute to the magazine without having perfect English writing skills. This is far from the truth though. We've had many article authors send content that we've translated into English and published. We welcome photos and stories from any of our readers.

HBM: Where the magazine has greater impact? Between LEGO® fans or train fans?

RB: That's an interesting question. The magazine is definitely better known among LEGO fans, but I have heard some feedback from traditional train modellers about how much they enjoy the articles. I do think that traditional train fans, after reading the magazine, have a better appreciation of how deep the hobby is, and that it's not just adults playing with a child's toy.

HBM: Over the years, have you noticed an increase in the number of LEGO train fans? In that case, what do you think it is due to?

RB: I've noticed a lot more interest in LEGO trains from younger people, especially teenagers. I attribute this to the number of LEGO train layout displays that appear at various events, as well as the Power Functions system that LEGO released several years ago. I've also noticed that more people, even if they are not LEGO hobbyists, are more aware than they used to be that LEGO carries train sets.

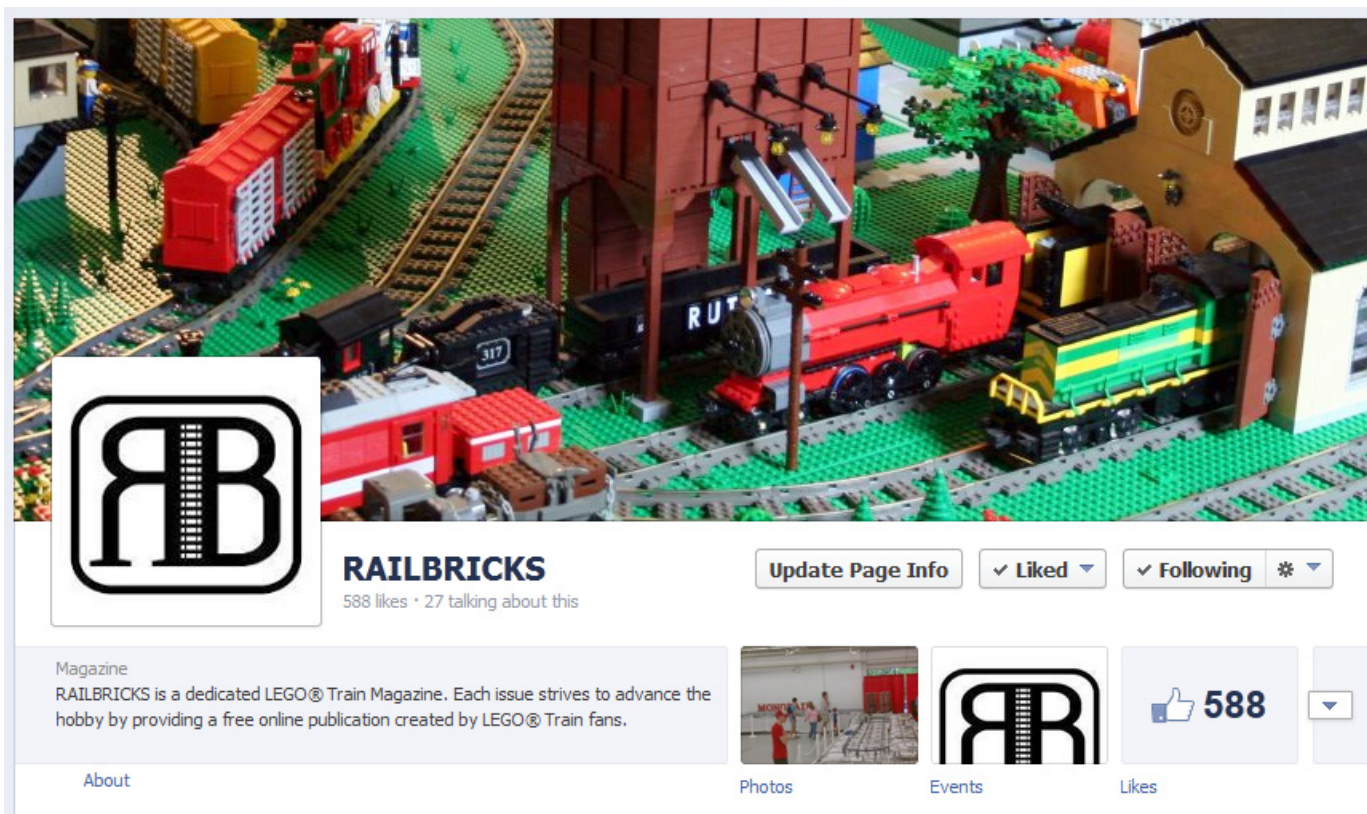
HBM: What is your relationship with TLG?

RB: In the past we haven't really had an established relationship with the LEGO Group. Recently, though, we've reached out to them in regards to creating a partnership of some sort. They've been very receptive. I'm looking forward to working with them in 2014.

HBM: During these years of daily following the LEGO community, which do you think are the main changes that have occurred in the AFOL community?

RB: The biggest change that I've seen is the fragmentation of the AFOL community into smaller, more specialized groups. When I first came out of my Dark Ages, LUGNET, BrickShelf, and Peeron were the main AFOL sites. No matter what line you were interested in, trains, space, castle or whatever, you could go to LUGNET for discussion, BrickShelf for images, and Peeron for set information. There was a lot of cross-sharing of information. Train fans could get ideas by reading about techniques being used by Space fans, Town fans would get ideas from Castle fans and so forth. When specialized sites started popping up, I think we lost some of that. As a Train fan, I mostly read train sites now, and very rarely venture into sites catering to other themes. My local LUG also has its own web forum where we discuss our hobby, so I don't often read about what other LUGs are doing unless I make a conscious effort to visit their sites. RAILBRICKS has actually helped me in that aspect, as I now interact with AFOLs all over the world on a regular basis. It's fun to see how different clubs and different events work.

HBM: Have you done any activities in "real life"? Can you explain them?



RAILBRICKS
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RAILBRICKS is a dedicated LEGO® Train Magazine. Each issue strives to advance the hobby by providing a free online publication created by LEGO® Train fans.

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RB: I've done a lot of shows with my local LUG, the New England LEGO® Users Group (NELUG). We've created displays at many train shows throughout New England. We've also taken part in some very large events like the first LEGO Kidsfest in Hartford, CT, and the National Train Show in 2009. I love these types of events where individual builders bring their creations together to create one giant display. It's a lot of fun to work together with other AFOLs, and then to see the reactions of visitors when they see what can be done with a simple building toy. I especially enjoy watching children as they view our displays, and talking to them about how they can use their imaginations to create anything that they would like create.

Outside of NELUG, I've also set up a couple of smaller displays with other AFOLs to help raise money for railway preservation groups and museums. These displays tend to have less direct interaction with the public, but are more tailored to the venue where they are being displayed.

HBM: Can you explain any interesting anecdotes related to RAILBRICKS?

RB: One of my favourite moments was when an older gentleman, probably in his mid to late 70s, came up to our display at a train show. It was obvious by the items that he was carrying that he was a traditional model railroader. He leaned over the display and pointed at our LEGO trains. "Have you ever heard of a magazine for these?" he asked. "RAILBRICKS?" I said. The man smiled. "That's the one," he said, "Great magazine. You should read it if you don't already." It was really nice to know that someone outside of the LEGO hobby appreciated all the work that we put into the magazine.

HBM: In your opinion, which is the key point for RAILBRICKS to become a reference magazine in the AFOL Community?

RB: I think that a lot of builders use RAILBRICKS as a reference already. I see mentions of the magazine on the Eurobricks forum fairly regularly and I know of a few readers, myself included, who order the print version of the magazine when each new issue is released so that they can keep it on a bookshelf near their building areas. As long as we keep publishing content by fans, and those fans keep coming up with great building techniques and models, I feel like we'll always be a useful resource.

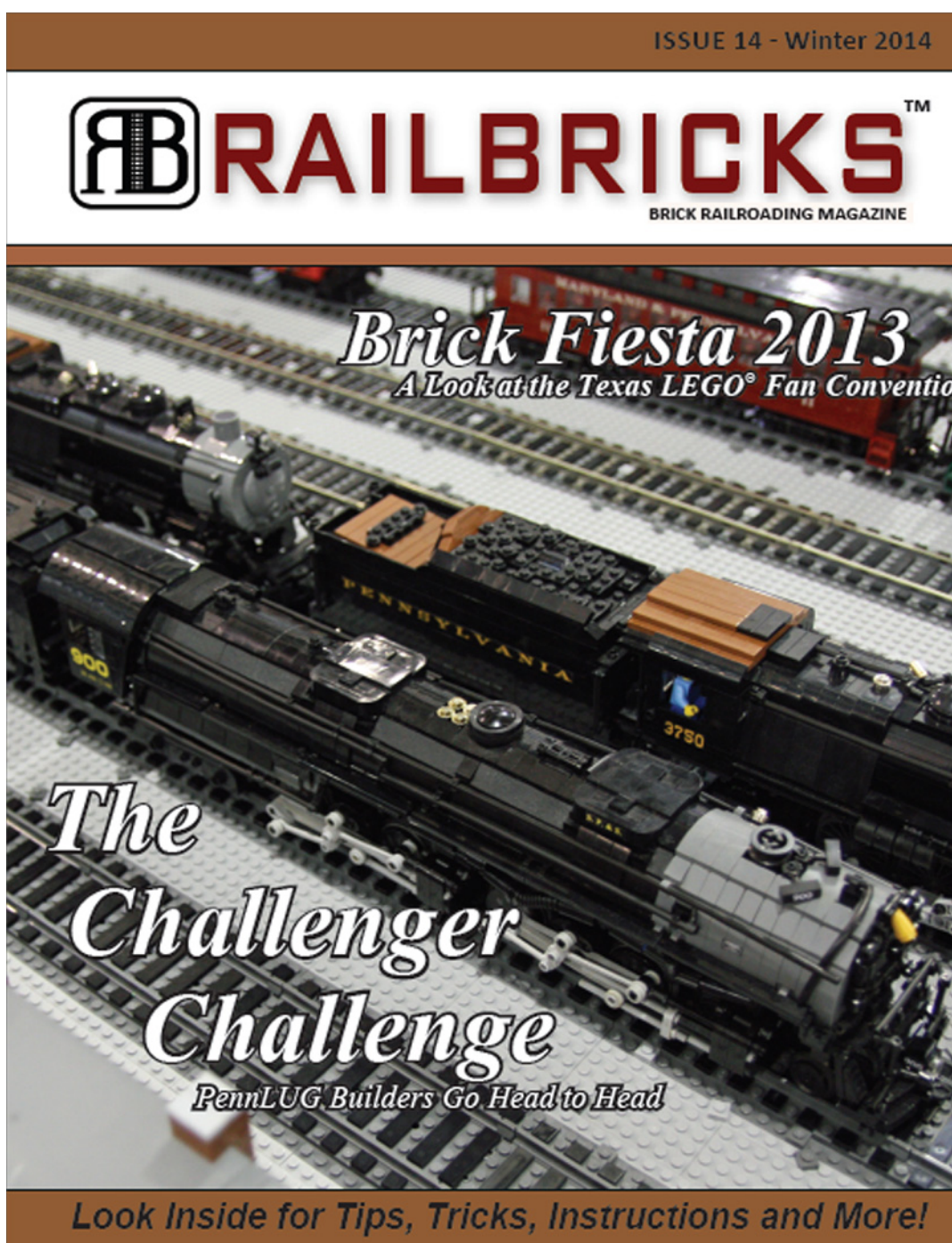
HBM: How much time do you spend to keep RAILBRICKS running?

RB: Lots! The time that I spend varies, but on average it's at least a few hours each week. The largest block of time is dedicated to editing and page layout, as the magazine is our focus, but we also have a website (railbricks.com) and a Facebook page that we keep up. In addition to the magazine work, I spend a lot of time emailing other AFOLs, or reading web forums to try to keep up on what's happening in the community.

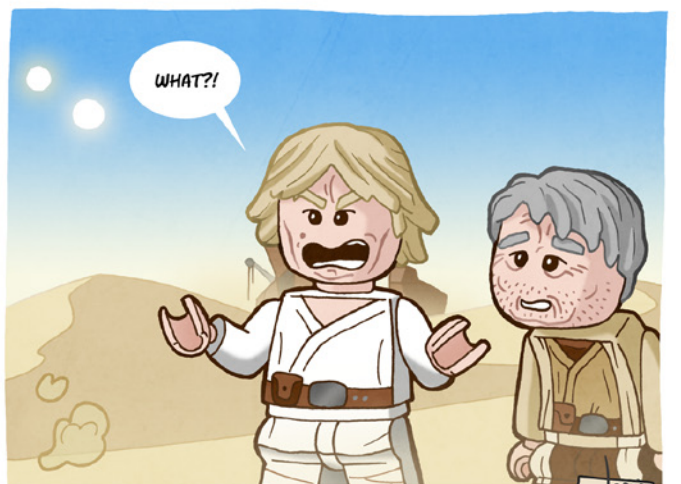
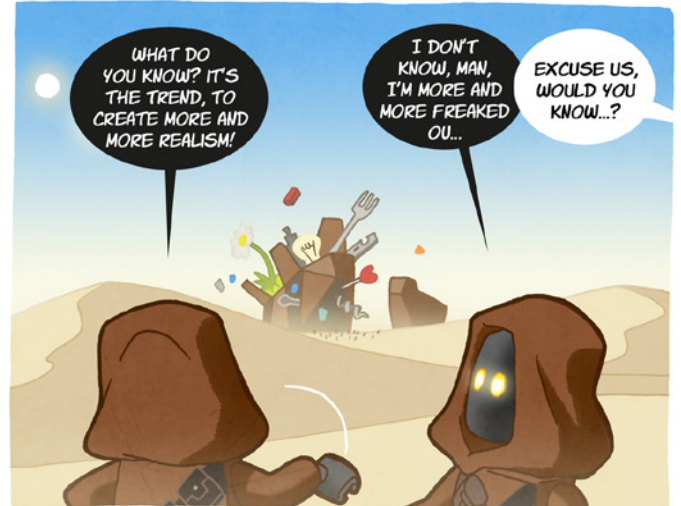
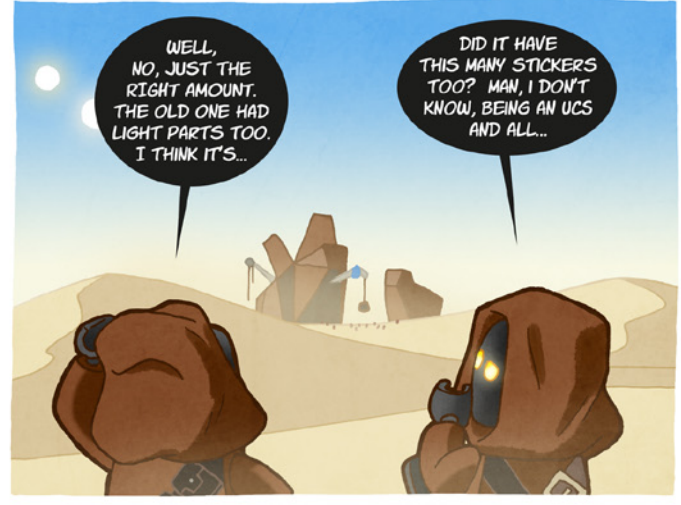
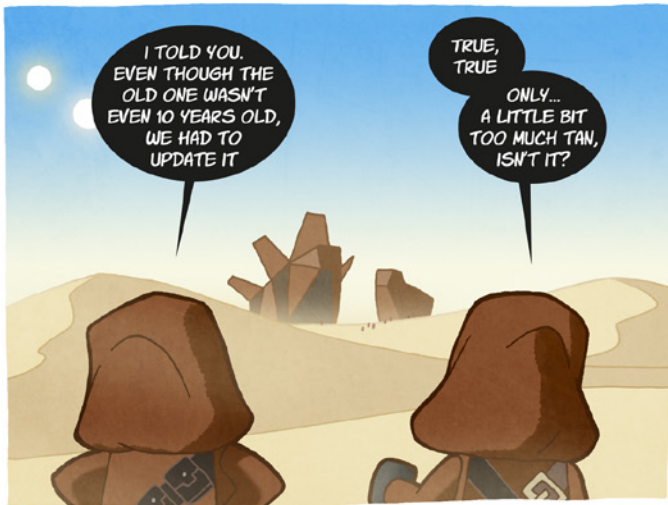
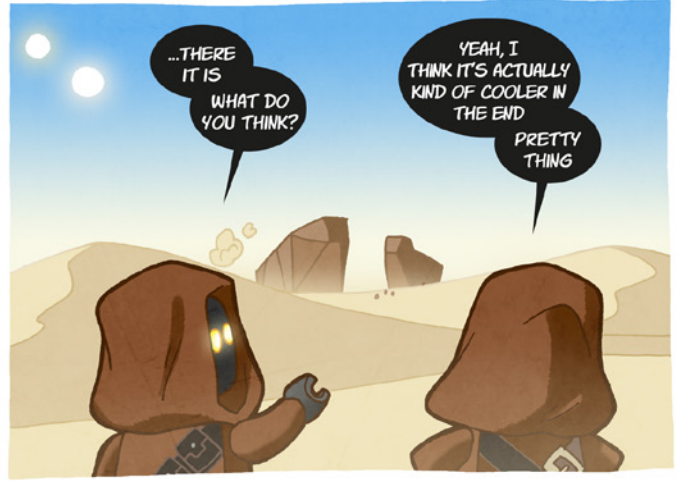
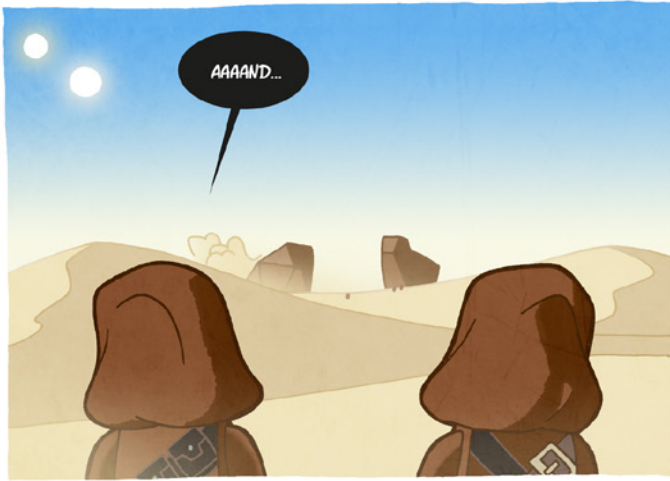
HBM: How do you see the future of RAILBRICKS?

RB: The future of RAILBRICKS really depends on the readers of RAILBRICKS. We look to them to provide content for us to publish. The magazine really is a community effort, created by fans, for fans. We've created a structure for LEGO® Train enthusiasts to share their work with the world, in a format that is more permanent than a website forum. As long as fans continue to support us, and we have volunteers to work on the magazine, we'll continue to publish, and keep the magazine free and available for everyone to read.

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How to collaborate with us

Collaborating with HispaBrick Magazine® is very easy, just send an email with your ideas to info@hispabrickmagazine.com and we will help you to “build” your article.

If your native language is not Spanish or English, don't worry, we will find a solution. Contact us now!

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Our collaborators on the Internet

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