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Vol. 025 #7/2016



English Edition



# HISPA BRICK MAGAZINE®



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# 025

ISSN 1989-0982



Cover by Antonio Bellón  
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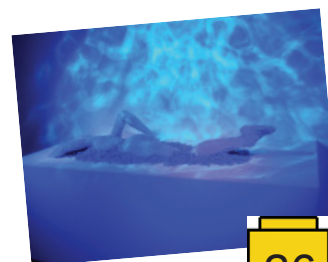


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# Editorial

By Jetro



We are still alive!!

Over the last few months we have been in a constant process of restructuring tasks and responsibilities at HispaBrick Magazine and as you may have noticed, we have run a bit behind our intended schedule. It takes a lot of hard work to put together a magazine in two languages and we have had to learn to be flexible and adapt as the need arose. Writing or getting articles from contributors, translating and reviewing, layout, all mixed in with our everyday responsibilities of turning up for work and spending time with our families.

Don't get me wrong, it's been a roller coast ride, but despite the occasional moment of despair it has been a fun one. Along the way we have seen the support of long-time collaborators as well as new incorporations. We have also enjoyed all the positive feedback on previous issues we have received. Rather than focus all our attention on the magazine itself, we have paid a little more attention to our online presence, through our blog, facebook page and twitter feed, and again the response has been very gratifying.

In addition we really appreciate the continued support we get from LEGO, both in the format of early access to sets for reviews, access to employees for interviews and something that was a very special treat, an invitation to the first ever LEGO Media Fan days - you can learn more about that in one of the articles in this issue.

So where does this leave us? Well, first and foremost we are proud to present HispaBrick Magazine 025. We hope you enjoy it. It's been exhausting, but we have already started putting together the first bits and pieces for the next issue and we will be working through our backlog of blog materials in the interim. As always we enjoy reading your reactions and look forward to your proposals for new articles and other collaborations. Don't be shy; we are sure there are plenty of interesting articles out there, ready to be added to HispaBrick Magazine 026 and beyond.

#



# 42056 LEGO® Technic Porsche 911 GT3 RS

*By Jetro de Château*

*Pictures by Jetro de Château*

*Renders by JunkstyleGio*

The growing size of the Technic flagships appears to be an unstoppable trend. The LEGO® Technic Porsche 911 GT3 RS completely obliterates all previous records for size and sets the bar almost 50% higher than the previous model. In a couple of months even that record will be history, but until then I can boast I have the largest official Technic set ever.



Size is important, but there are other factors that make this set special. The first of these is the fact that, after models licensed with Mercedes and Ferrari, LEGO has teamed up with new partner for a licensed Technic set. And in doing so LEGO has also changed something in the concept of this set. In addition to advertising it as the Ultimate LEGO Technic set, LEGO has made several references to the fact that this set is the beginning of a new LEGO Technic series. What exactly that means remains to be seen. Some have speculated this to mean there will be several Porsche vehicles, other that this is the start of a new series of licensed Super Cars, and still others that this new series is about a new user experience when it comes to Technic models. We hope to be able to tell you more about this soon, but for now, let's concentrate on what this set offers that makes it Ultimate and extrapolate from there.

## Ultimate

To emphasize the fact this is an "ultimate" set, LEGO has made a number of interesting and unconventional moves. When the set was first shown on toy fairs the model was black and covered in camouflage stickers to hide as much as possible about its

shape and functions. Of course that didn't deter the hard-core LEGO® Technic fans and soon different solutions and ideas were proposed and often discarded regarding the looks and the functions of the model. Whether intended or not, this move started a lot of speculations with the resulting hype and the model has received more attention on AFOL forums and blogs than any of the other models that were presented.



LEGO has also made a lot of effort to make the set feel special from the very moment you receive the box. Each box is packaged separately and the beautiful black box that contains the 42065 LEGO Technic Porsche 911 GT3 RS feels deceptively small and makes very little noise when handled - an indication of how tightly packed everything is in this set. Rather than use the typical box we see for "normal" Technic sets, LEGO has designed a special box to gift-wrap the set:

The presentation is certainly spectacular and a lot of attention has been paid to small details. Four seals hold the lid in place and after cutting these through they can be gently peeled off the lid and base without damaging it.

After taking off the lid, you can see the streamlined shape of the Porsche 911 printed in glossy black on the matt background of the box on the short sides of the base and "911 GT3 RS" in the bottom right of the long sides.

The inside of the lid shows a historic overview of the different versions of the Porsche 911, from 1963 to 2011.

In the centre of the box, the instruction book takes a prominent place, because of the splash of colour it provides, despite being quite discreet and stylish, and the weight it represents, both physically and as the centre of the story the entire sets wishes to convey. The book is nearly 2.5cm thick and measures 20.6cm x 27.2cm. It contains 580 pages (including front and back cover) and the instructions don't start until page 41. These first pages are used to explain some of the history and motivation behind the Porsche 911 and a description of the design process of the LEGO version in both English and German. To mention just one detail, the text mentions the use Porsche makes of black models to make it hard to see the proportions of the model, in much the same way as LEGO did when presenting the model at the toy fairs. These texts were obviously first written in German and while the quality of the English texts is impeccable, it doesn't transmit quite as much information as the German original. There are an additional 6 pages of photographs from the Porsche archives in the back.



After taking out the book and a small sticker sheet underneath, it becomes clear the set has been divided into 4 stages, each with a numbered box.

The fifth box, containing the special rims and tires for this set is used at the end of stage 4.

Similarly, the instructions in the book have been divided into four sections. Each stage is introduced with black two-page spread containing the same image that is also on the corresponding box and a short description of what will be built during that stage. Next up is a photograph of the building process of the actual Porsche, before starting the building steps.





## So let's start building

### Stage 1: The Chassis

Box 1 contains the parts for the Chassis. For some reason the wheel arches are included in this box (presumably because there was space here and not in box 4 where they really belong). It is nice to see 2 of them are printed as a sticker in this location would have been really awkward.

Some of the more interesting parts in this box include the following



A question that immediately comes to mind is whether LEGO® has decided more colour coding is necessary for the axles. This set comes with 3L axles with stop that are chocolate brown and the 5L axles in this box are yellow. A quick look at the inventory reveals there are some LBG 5L axles in the set, but those are used in places where they are more visible. Another nice surprise that can be gleaned from the inventory is the inclusion of a (yellow) 11L axle.

The red shock breakers were already mentioned in the designer video as well as the new 3L smooth axle connector that was developed especially for this set. No less than 11 are included (and only 2 are used in the gearbox as an alternative to the "traditional" 3L driving ring connector). There are a large number of panels and frames which help to create a large solid structure for the base of this vehicle.

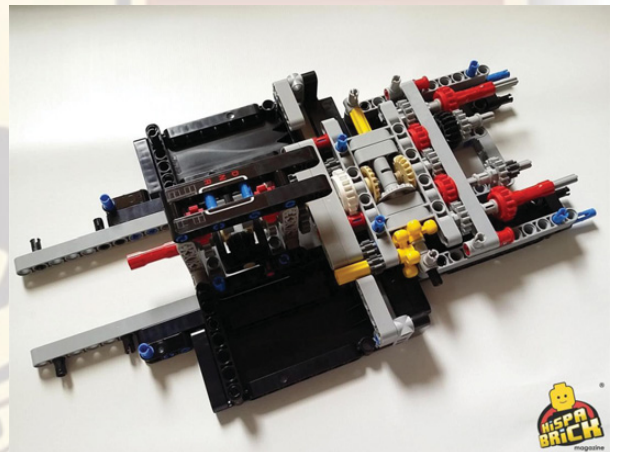
The first element we build is the drive selector (setting the car in drive, neutral or reverse), an appetiser for what is to come.

The structure of the chassis progresses quickly with the use of panels, frames and beams.

On to the next little mechanism which helps the transmission bridge the gear selector mechanism (or so you will eventually realise).

Then it is time for the gearbox. Aside from the use of the new 3L smooth connectors, this is a very straightforward build.

And then it is time for the steering column which also includes the gear shifting paddles. This is no doubt the mechanism that has generated more speculation. It feels quite fragile while building and you don't get a real sense of how it will work until you connect it to the chassis and get some friction (from the changeover mechanism) that you get a real feel for how it works. As exciting as this part of the construction is, I was also a little disappointed with the steering wheel. The position of the steering wheel at 90° is very strange. In addition, the 1x1 round tile with the Porsche logo turns out to require a sticker! I can recommend the use of a penknife to get the sticker on properly and more or less centred.



Once you install the steering column on the chassis you can test the paddles. They require quite some force (not surprising given they are held in place by two rubber bands each) and the amount of stretch the rubber bands are subjected to makes me wonder if I should release them whenever I don't plan to use the mechanism for an extended period of time - otherwise they might get very loose or even break.



Next to the steering column and behind the drive selector you install a panel (screen) that can hold one of two stickers. One shows the same streamline of the car as is present on the box, together with the denomination of the mode (GT3 RS), the other shows a (GPS?) view of the Weissach Porsche test track. Again I felt disappointed: surely an "ultimate" set could include a second 2x4 tile so I can easily swap one display for another, instead of having to choose once and for all (or source a second 2x4 tile).

The next hurdle is installing the front suspension with steering mechanism. To anyone unaccustomed to building Technic models, getting the steering wheel to align with the wheels may seem a daunting task and no guidance is given in the manual. It would have been so easy to hold off adding that last 20t gear and the 3x5 beam until after hooking the assembly up to the steering wheel.

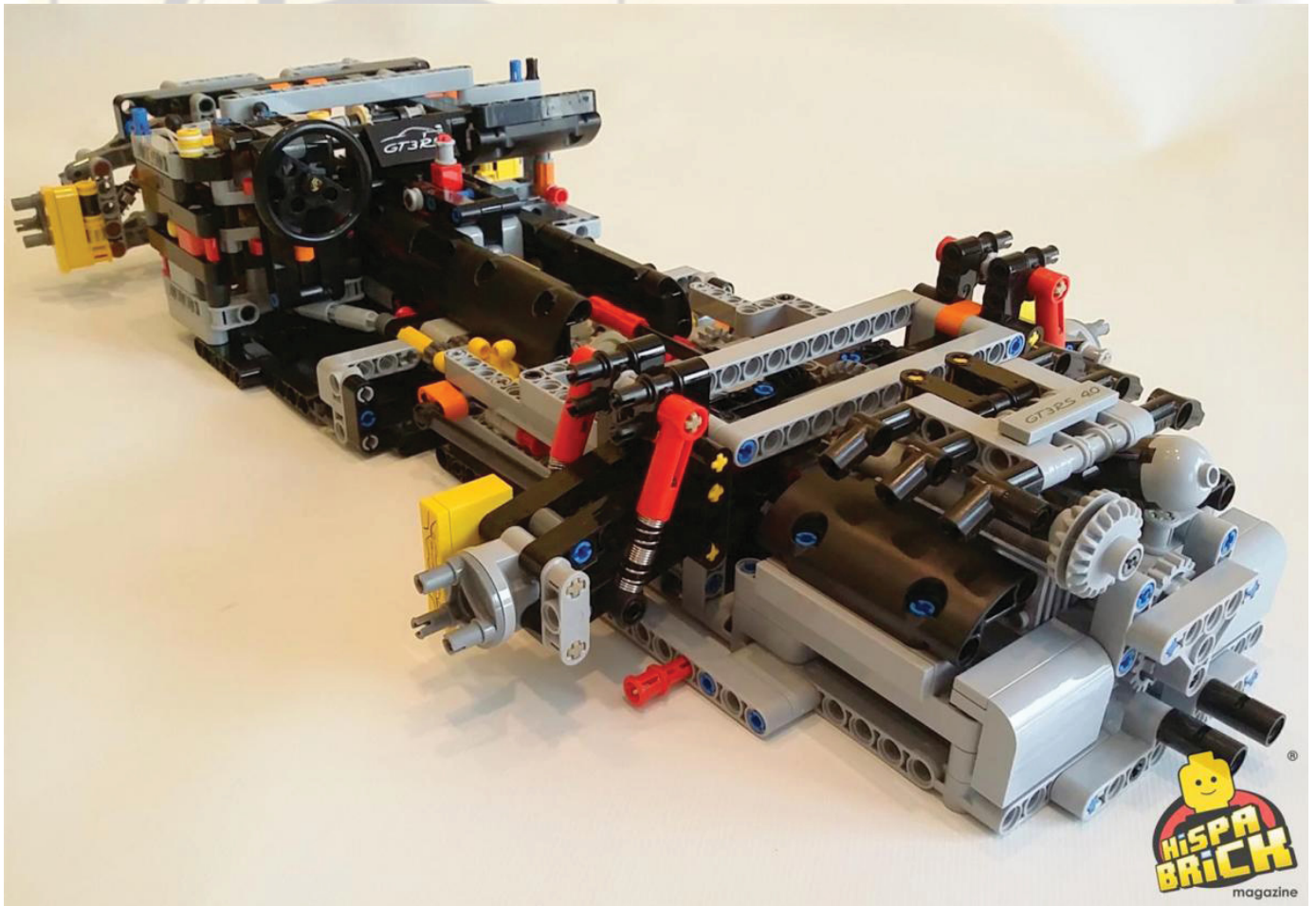


Aligning it this way is a piece of cake, and much more reliable than the method the instruction booklet appears to suggest - holding everything straight while inserting the axle coming from the steering column into the steering CV joint in the suspension assembly.

The designer video made a big deal of the authentic yellow callipers on the front and rear wheels. In fact they are nothing more than a couple of yellow tiles with stickers that have no other function than to look reasonably good, but add no function to the model.

The gearbox isn't completed until after adding the rear suspension. An odd choice as the last gears do not depend on the structure of the rear suspension assembly and following this order makes it really hard to see how the complete gearbox works. It also prevents you from easily realising a mistake is being made...

It's time to build the engine. The flat 6V engine of this model is a bit of a puzzle to me. On the one hand, I like (and most certainly expected) the fact that the engine is built with standard LEGO® Technic cylinder parts. The thing is that as soon as it is finished and hooked up to the transmission it is covered on all sides. The finished engine looks impressive and quite possibly a lot like the engine in a real Porsche 911. However, you can only really see the last two pistons working as well as part of the crankshaft. Of course it is hardly realistic to see the pistons of an engine in a real car, but there are certain "givens" in a Technic set...



The chassis is finished. We have suspension, steering, a working motor, a drive shifter and the "piece de résistance" and innovation in this set, the gearshift paddles on either side of the steering wheel. The set certainly looks promising...

## Stage 2: The "Marriage"

On to box two. As explained on the introductory page for this stage, during the production of the 911 GT3 RS there is a stage called the "marriage" when the drivetrain is connected to the body of the car. It is now time to build that body and after a little over 170 steps it is joined to the chassis.

While the construction process during stage 1 was more or less self-explanatory (it's quite easy to see you are building e.g. the steering column or the engine), the steps in stage 2 aren't quite as obvious. And unless you skip ahead to see where it is all leading to you have no idea of what you are building for much of the stage. Some explanatory notes would have made the process much more enjoyable.

There is only one sticker in the whole of stage 2: a tiny "Mobil1" sticker that ends up to the right of the engine.

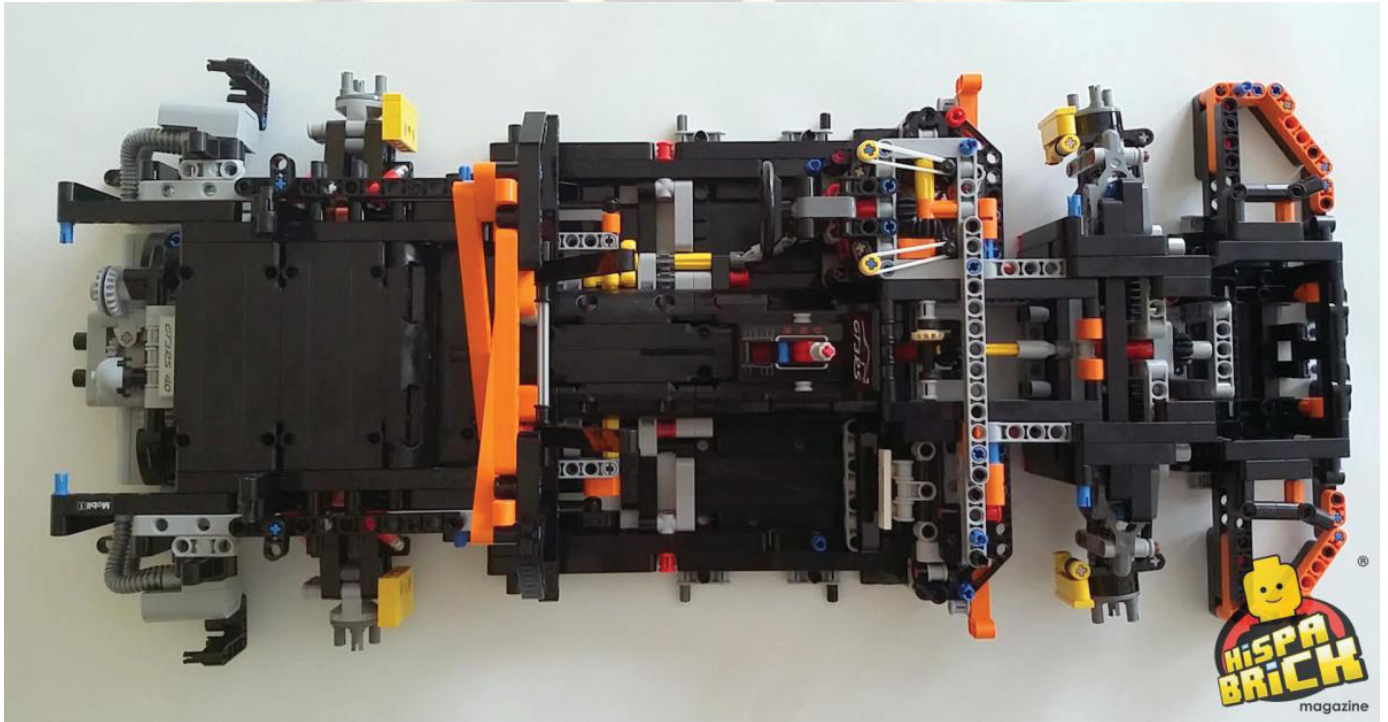




By step 493 it is time to connect the body to the drivetrain [1], using 14 long red pins with bush (and a few other elements).

Finally, the seats are added and it's time to move on to Stage 3

[1] As I write this review I can hear myself thinking to "correct" my personal description of the elements. Both elements together make up the chassis, but since the upper part is connected to the doors and plates making up the bodywork I tend to think only of the drivetrain as the chassis.



### Stage 3: On to the Roof

So far, the model has been mostly black and grey, with some additional colours to make it easier to find the correct parts. Stage 3 is where orange really takes the limelight. As you can see from the inventory for this stage, there are plenty of orange beams and panels.



In addition to using some simple techniques to make the car look less square and to add some details (like the air inlets behind the doors), this entire stage is about bodywork.

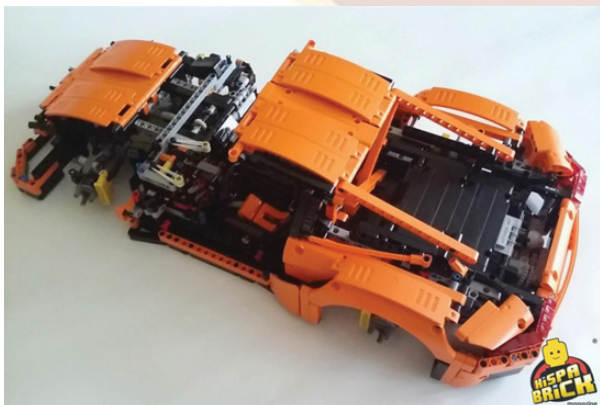
After attaching the rear bumper, what little could be seen of the pistons has now been definitively blocked from view, but you can still see most of the crankshaft.

A single sticker identifying the make of the car is added to the rear (no license plate).

It's time to use all those panels to create the wheel arches (a really interesting new part that makes the car look a lot more authentic), the hood and the roof.



The roof construction is surprisingly sturdy and the finished model can be safely lifted from under the roof on the rear side.





## Stage 4: Finishing off

Stage 4 adds the front wheel arches and the rear wing, but starts off with the dashboard.



Again, there is an interesting selection of orange beams and panels. In total, this set will give you 22x3L, 14x7L 10x11L, 13L and 15L. There are also 34 angles beams of different types and 28 wing panels as well as several other orange parts. All in all, it is quite an interesting orange parts pack.

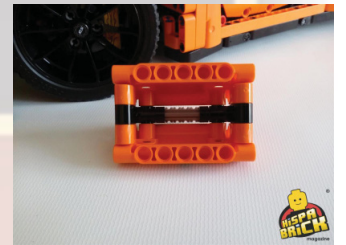
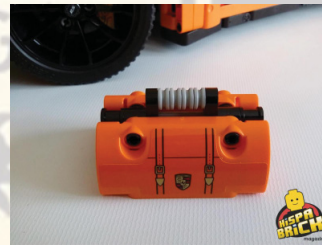
In order to keep the building process interesting, the building process takes you around the car, building the front, then the wheel arch assembly on the side of the driver and the door on that same side. It then moves on to the back, adding the cover for the engine (with a large sticker) and the rear wing. The tour around the car continues with the other door and finally the wheel arch assembly on the passenger side.



After adding the dashboard, and in case you hadn't noticed yet, it becomes clear the laser printed serial number is located in the glove compartment which opens and closes.



Finally, the wheels are added with the (printed!) 1x1 round tiles, but there are still some largish parts left over. These are then used to build the driver's bag, which also uses two large, but very nice stickers. Unfortunately, the driver's bag is just symbolic: it can't actually hold anything as it is open at the bottom.



## Playtime

Building is over and it's time to play with the set. Despite its considerable size, the model has a sturdy and rigid structure. You can easily lift the car using the back of the roof as a kind of handle and it feels quite safe to hold it like that.





The code in the glove compartment gives access to some backgrounds for your computer and phone as well as a “certificate of ownership”, but it can only be used twice. The compartment itself is a nice little detail. The doors feel a little flimsy though. There is no locking mechanism and it doesn't feel as if the doors close properly. Specifically, the top of the door may or may not rest against the side of the seat so you may be able to push it in too far. Nothing serious, just a feeling.

The suspension has the right strength and while there is only 1 stud of travel on the front suspension before the car hits the floor, you wouldn't expect much more from a sleek sports car like the Porsche 911.

Steering the car is not an easy task. For starters, the steering wheel is inside the car and not particularly easy to access and there is no HOG (Hand of God) anywhere in the model to steer it from the outside. In addition, the turn cycle of the car is big. There are two tan half pins in the steering assembly that limit the travel of the steering rack which keep the turning radius to a bare minimum. Add to that the fact that there is a lot of slack in the whole mechanism and you will understand that turning the car around is going to take a lot of room or a lot of effort. Removing the half pins from the assembly doesn't cause any readily noticeable friction anywhere and makes playing with the car a lot nicer so mine are staying out.

The gear paddles on either side of the steering wheel require some force and effort, but can be used without too much trouble. They are definitely easier to use than the steering wheel.



So far so good. But if asked you “what is the essence of a Technic set?” you would likely refer to the functions and seeing how they work - to me that is an important part of any set. The LEGO® Technic Porsche 911 GT3 RS is quite different in this regard. No open spaces, just lots and lots of panels, both in the very complete bodywork and underneath. Very little of all the mechanisms can be seen and it almost makes you wonder if it was worth it to put them in. This may sound a little harsh, but let's get back to those 14 long red pins with bush I mentioned earlier. Wouldn't it be great if I could pull out those 14 pins and separate the body work from the chassis to get a good look at everything that's going on inside? But pulling those pins won't do the trick: there are several other obstacles to overcome. The seats are easy, there are two long blue pins buried under the dashboard that require some disassembling and modification to make separating both parts viable. It's not that hard, and leaving

the model ready to show the interior without too much hassle only requires you change a few pins. For an Ultimate Technic model, this is an important missed opportunity. If you want to know how to modify your set to get the same result, you can see my instructions in this video: <https://youtu.be/HSuGya3HByU>

On to the next important thing: does the gearbox actually work? In order to answer that question I needed to make some space (my tabletop was simply too small) and test the functionality. With all the mechanisms so well hidden, it was hard to see, but after some considerable back and forth I had the unshakeable feeling something was off. I extended the axle coming out of the gearbox to make it easier to see, and found that the sequence is 1-3-2-4 (or 1-4-2-3 on the opposite side). Did I make a mistake? Could there be an error in the instructions? I consulted a few fellow reviewers who confirmed the odd behaviour and Paul “Crowkillers” Boratko, our technical consultant, provided the solution: the gear assemblies added at steps 267 and 269 (on pages 190 and 192) need to be inverted to get the gear sequence right. You can see a short video explaining how to get at those axles assemblies here: <https://youtu.be/nu6f6lBkMY>

That was not the end of my troubles though. Inverting those axles fixed the gear sequence, but there is another issue with the gearbox that derives from the shifting mechanism. The XO beam that pull and push the links so the different gears engage and disengage should stop at 90-degree intervals, to be precise at 0, 90, 180 and 270 degrees. The fact is they do... when you pull either of the paddles, but as soon as you let them go the backlash (or slop) in the system pushes the beam back some 30 degrees.

This can result in all sorts of unexpected behaviour. In the best-case scenario, nothing happens! However, quite frequently this results in a strange clicking sound in the gearbox as a partially engaged driving ring clicks over the notches in a clutch gear. Your worst-case scenario is that this same driving rings stays too far inside the clutch gear meaning two different gears are engaged at the same time. This will result in the engine stalling and the mechanism locking up. This can be easily solved by shifting gears again, but it happens with a certain regularity.

Compared to all this, the fact that the car has 4 forward speeds, neutral and 4 reverse speeds (!?) is just an anecdote.



## Conclusions

It's hard to find the right balance to judge this set. The packaging and presentation of the set certainly give you the "gourmet" feel. It's a special set to savour while building and leafing through the magnificent instruction book. The part count is impressive in a LEGO® model. The special rims and tires are a very nice touch and they work really well with the new wheel arches. The 3L axle connector is a great new part that opens up many new possibilities and the addition of a significant number of orange parts in good quantities is something many AFOLs have been asking for.



I should really be happy about all those new orange parts - even so, I cannot help but feel slightly cheated by the image on the box. That is certainly no LEGO orange, and while it looks really good on the box, the final effect of the model is less inspiring.

There are also a few areas of the bodywork that have not been resolved quite as well as I had hoped. While I can live with the largish black gap under the headlights, the grey half bush that's visible there is a bit distracting. The same happens with the grey half bushes on the rear wing - I'm not even convinced they are necessary and all black would have looked nicer.

The fact that the gear sequence is off is an unfortunate error, but can be easily corrected. Getting the body off the chassis isn't as trivial as it should be, but it can be done, after which swapping the two axles requires little work. It's a pity the first batch of books include the error, but a lot of LEGO Porsche owners aren't even going to realise there is an error until someone points it out - the engine is very well hidden...

More serious is the gear paddle problem, but again, the mechanism work reasonably well and wasn't designed to be motorised so there won't be any serious issues, just some inconvenient engine lock ups.

In the end it boils down to this: is the set worth the price? That's a very personal matter. The premium packaging, the beautiful book and the "gourmet" building experience certainly make the set feel special. If you are a fan of sports cars, especially of Porsche, the set is definitely for you. If what you are looking for is a lot of cool mechanics in a large set and a B-model to build when you get tired of the main one, there are other LEGO sets this year that better fit your profile.

The biggest question is where LEGO will take this new Technic series. I'll let you know as soon as I find out...



## Reprise:

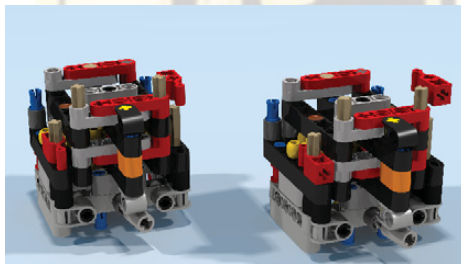
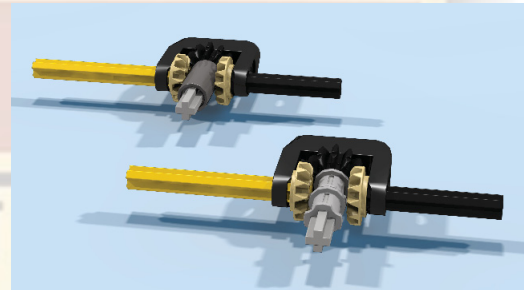
The model is built, the designers have spoken. What is there left to say? Plenty!

The official reply LEGO gave concerning the gear sequence issue in part said: "It was a considered decision taken during development that the gears running in the correct order meant that it did not result in a great experience when driving the car." While the statement didn't supply a (credible) reason for this decision, the fact that the engine is so well hidden and it is hard to see the actual speed of the engine mean that using a non-sequential gear order gives you a better "feel" or physical appreciation of a change in gear ratios.

The statement also added: "we look forward to seeing all the 'improved' models our fans create. After all, that is what LEGO building is all about." Of course, LEGO Technic fans had already started to present their modifications of the set, improving and adding to the current functionality of the 42065 LEGO Technic Porsche 911 GT3 RS.

Modifications can generally be divided into two categories: improvements and additions. Some of the improvements that have been presented almost feel like they should be part of the official building instructions and I will briefly review some of the most important ones with renders by Hans Tolhuisen.

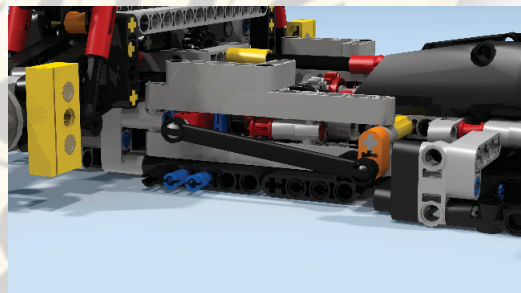
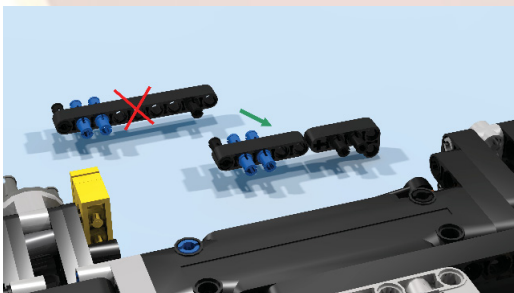
Friction is an important issue in this set, from the very first mechanism built in the early stages of the model. Step 4 uses a 5L axle with stop on which a 12T double bevel gear is placed. Because the axle has a stop it is very easy to "lock" it in place and cause a lot of friction to the system. Using an axle without stop would have solved this potential issue, but would have been a less "comfortable" build (the axle assembly can slip out of the model before it is secured into place). Even more important is the fact that – as Eric "Blakbird" Albrecht realised – the pin joiner used in step 5 actually causes friction against the bevel tan gears on either side. This could have been easily avoided using two bushes.



More important still is the fact that the slack in the gear changing mechanism can lead to two gears being engaged at the same time. EB user Attika realised this could be very easily remedied by placing the changeover caches in step 151 the other way round!

Combined with Paul "Crowkiller" Boratko's gear sequence fix (mentioned in the review), this fixes the most pressing issues in the set, bringing it up to LEGO standards ("only the best is good enough")

Another interesting and surprisingly simple mod is the one proposed by EB user Supertechnicman. The gear paddles will allow you to gear up or down indefinitely. This means that when you reach 4th gear and pull the selector again you move on to 1st. Adding a simple 2x4 beam solves the "infinite shift" problem." por "A minor modification as shown below solves the "infinite shift" problem.



Other proposals include the addition of a HOG (allowing you to steer the model from a different location that from inside the cabin), a limiter on the reverse gear resulting in a single reverse speed rather than 4, and of course the easy separation of the bodywork I presented in the review.

If you would like to know more about these and other proposals, I invite you to visit this thread at EuroBricks: <http://www.eurobricks.com/forum/index.php?showtopic=133743>

I would like to thank LEGO for providing this set for review. This opinions in this review ar of course entirely my own.  
#

# Maxifigs Star Wars™

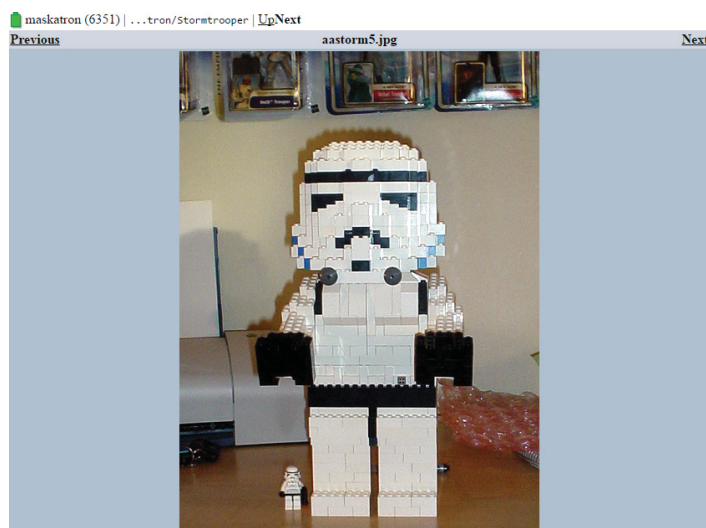
By A. Bellón (Legotron)

Pictures by A. Bellón (Legotron)

Among all my LEGO® constructions, there is one group I am especially fond of. These are my max-sized Star Wars sculptures. More than 11 years ago I started to build the first of these and over the next 6 years I added another 6 to my private collection of Star Wars Maxifigs.



It all started in 2004, a few years after I came out of my dark ages. At that time, Brickshelf was one of the main references to discover great creations by people from all over the world. My first years were centred on Star Wars and my searches were almost exclusively for Star Wars related MOCs. It was then that I found this picture:



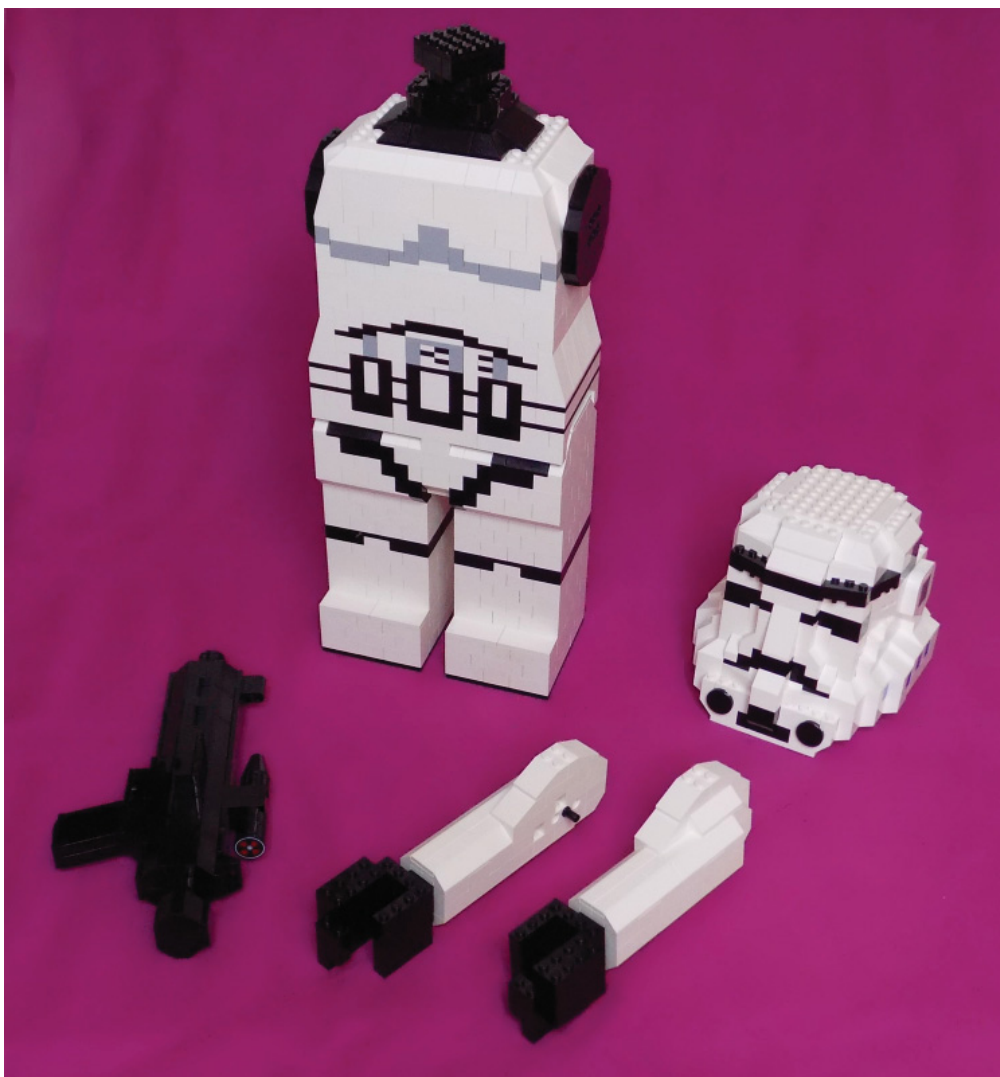
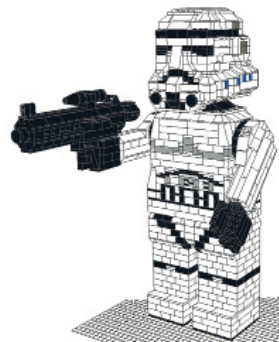
It was a sculpture made by Brickshelf user Maskatron, representing a stormtrooper minifig built at a much larger scale. As soon as I saw it I knew I wanted to do something similar. I thought it was a fantastic idea.

At that time I didn't have many parts and I couldn't really figure out what it would mean to build something so big so I used a digital design tool: LeoCAD. Initially I wanted to make something similar, but stylised so the scale difference didn't make the size of the head stand out so much. It took me several weeks of sketches and tests until sometime mid 2005 I finished my first complete digital design.

It took several weeks to design all the parts of the maxifig. I hadn't solved the problem of assembling the moving parts: arms and head, as the software allowed me to place them as I wished. But digital design was the way to go, creating the maxifigs in different separate elements, much like minifigs: torso, legs, arms, head and complements.



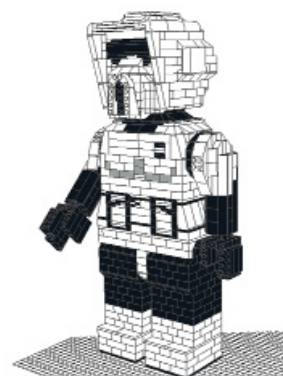
The big problem was that the piece count was well over 1000 which, at least in my first years, was a very large number, and the fact that the software didn't take into account the existence or availability of the parts I used. It took me about 3 months to get all the parts through Bricklink. Building the body, arms and legs was quite straight forward - they were basic structures built with bricks and some slopes. The legs and torso were connected permanently, although they could be separated for transport, since they were always going to be exhibited standing up. However, I wanted the arms to be mobile and connecting the arms to the body turned out to be a serious problem. I tried innumerable ways of using Technic axles, but none of them supported the weight of the arms, so I ended up using a system of Technic bricks and pins that allowed for different poses, although with a fixed position. While building the head I ran into another problem that wasn't evident in the digital design: structural rigidity. I didn't take into account that without internal reinforcement the head could cave in. I was so focussed on the way it looked that it turned out to be too fragile and so I had to make numerous changes. But finally, at the beginning of 2006, I finished the first maxifig of a stormtrooper.



I still have a picture of the first exhibition where I showed the model back in 2006.

That same year I started designing the next maxifig, that of the biker scout. The process was the same - I used the designs for the body of the first model and only needed to design a new head. It only took a couple of days.

After a couple of months waiting to get all the parts I needed, at the end of 2006 it was finished, and now I had a pair.





While building, and as I started to have a larger number of parts available, I realised it was much quicker to build them without using a digital design. During 2007 I started to build the Darth Vader maxifig as well as a copy of the stormtrooper so it could hold a banner. The appearance of new parts allowed me to make some small modifications to soften the shape of the stormtrooper helmets, while I finished building the Darth Vader maxifig. For the Darth Vader maxifig I built a slightly taller body and all the hard work went into designing the helmet. On this occasion I didn't use any digital design software and built the whole thing directly in parts. I had to use SNOT techniques for the sides of the helmet. As a final detail, my mother sewed a cape which of course became part of Darth Vader's outfit. And so I finished my third maxifig in 2007.



As an icon of the saga it is the most sought after maxifig and the one that draws most attention, despite the fact that I am still not completely happy with the design of the front of the head. I haven't yet found a way to make it better though.

With this third maxifig, the set became a prominent set piece rather than just being accompaniment to other Star Wars MOCs and as such I started to take them to different LEGO events.



The advantage of a design made up of three parts is that it allows you to simplify the work of making new ones. The torso and arms are virtually the same for each maxifig. All you need to do is create the right markings with different colour parts. The biggest challenge is the design of the head or helmet depending on the model.



And so I completed the designs of two more maxifigs over the next years, the imperial officer and imperial navy trooper.

In the case of the stormtrooper I made several copies because I really liked the figure. And since then these maxifigs have accompanied me to many different exhibitions of LEGO constructions and Star Wars fans.

Since 2011 - the year I finished my last maxifig - I haven't built more. Other projects have taken up my attention, but I still have several designs in mind which I hope to build one day.

#



# Moving a LEGO® collection

By Cody Rodrigues

Pictures by Cody Rodrigues

Sometimes we move from one house to another, we do it for many reasons, be it for a new job, a bigger house or some other reason. In my case, I'm moving because a small airport near where my family lives is buying our house. They have already destroyed the neighborhood in which I live; our house and that of our neighbor are the only ones that remain. We are moving to the town over, and in the new house I'm happy to say I'll have a room dedicated to my LEGO collection. Why am I telling you all this? Well, because I have to bring with me a quite sizable collection, one which I've never had to move before. I will be presented with many problems, I'm sure of that, but I plan to document the move so that you all can have an idea of what works well and what doesn't when it comes to moving a LEGO collection should you ever be faced with the same challenge as me.

I still have four months to move to the new house. I decided to plan my move strategy early on so as to avoid any problems later on, and in some cases have already started to move the collection in. This article is meant to be a guide describing what I've done so far, in no way should it be taken as the best way to move a collection. As some of you who have been in a similar situation already know, each person has their own way of doing things, and so I hope that you keep that in mind while reading.

## Step 1

Before I began with anything else, I decided to minimize my collection's footprint. This meant breaking down sets that I didn't use in my dioramas. At the moment I am working on an arctic base and city diorama, things like Star Wars ships, castle sets and yes, even the Helicarrier were broken down. I placed them in their own zip lock bags and properly labeled them all. These bags were later placed in a box that can easily be tucked under a diorama table. Why not just have kept the sets built and place them under the diorama table? I could have done that, but I wanted to minimize the amount of built things I was bringing (less chance of something going missing), beyond that, they were doing nothing but collecting dust. I then took anything else that was on display and placed that into a container, for example my minifigure collection that I had out on display was placed into a LEGO head storage container that had previously sat empty on a shelf in my room. I went as far as to bring some of my collection to a local toy store that buys, sells and trades LEGO. I traded a lot of my larger tubs of LEGO, ones which contained pieces that I knew I would never use. Since I don't build many space MOCs I placed a lot of my space pieces in the tubs, same goes for wheels and larger pieces like BURPs. Taking this first step helped me in the long run to condense the collection and have less to bring.

## Step 2

The second step was to identify how much LEGO I had and estimate the number of boxes that I'd need. While I looked at my collection that I accumulated in my 21 years all laid out on my bedroom floor I came to the realization that while I may not be rich in terms of money, I'm rich in terms of LEGO. My collection can be broken down into three distinct categories: unopened boxes (sets that I have bought but haven't opened for whatever reason), built sets and MOCs, and loose pieces (organized in their own drawer or box).





The unopened sets vary in size, this means that I would have to play tetris to try and fit the most possible into a cardboard box. The built sets and MOCs are also of different sizes. The majority of my MOCs and sets are buildings built in the modular style. Other MOCs are larger and more fragile dioramas (my large arctic base built on two 48x48 stud baseplates for example). We aren't moving very far (approximately 25 minutes) so it didn't take long to go back and forth. Therefore, the MOCs and built sets didn't require their own boxes, instead, I placed them in the trunk of my car. I put pillows down on both sides to prevent too much damage. At the time of planning I knew that the drive would be a lot of uphill and downhill, I was sure things would still break (the beauty of the toy is that it can be put back together). With the loose pieces I've spent countless hours separating them into their own drawers (I use stack-on drawers). The only issue in moving these drawers is that there is no backing to them, so even if you tip it slightly, pieces may fall out. The unit was designed to stay vertical at all times. All that said, I needed to be careful not to tip it in either direction. To move these units I needed to find a cardboard box that fit them perfectly, the cardboard box in which the Ghostbusters Headquarters set was sent in fits 3 stack-on units quite snugly. The larger pieces like 2x4 bricks and larger plates are placed in their own individual tub of similar pieces. These were easier to bring (despite their weight), the only thing I had to do was put them in the car and off I went. I suppose that I can add another category of things like LEGO related books, movies, videogames and accessories, but these didn't present me with any problem.

At the time of looking at all the different parts of my collection and seeing that not everything needed to be put in a box, I estimated that I'd need between 8-10 cardboard boxes (for the unopened sets, some MOCs, and for the storage units). Thanks to working in a LEGO® store, I was able to reuse the boxes we receive from shipping.

### Step 3

The next step was to get to work. This meant putting everything into the boxes and getting everything together in one place so as to make the move easier. Seeing it all in one place I came to the realization that I may have too much LEGO. I don't know why I bought some many sets from so many different themes. The good news is that lately I have been buying only things that work well in my LEGO city and another good piece of news is that the new LEGO room is spacious.

While putting all the unopened sets together in larger boxes I found it extremely useful to write on the box everything that was going in, especially since they will probably stay in the box at the new house. Once everything was put into its own cardboard box the next step was to put everything in the car. For the unopened sets I made two separate trips, each time trying to maximize all the dead space between the boxes and seats in an attempt to bring as much as possible in one trip. The MOCs were a little more difficult. My modular style buildings were taken apart floor by floor and each floor was wrapped in bubble wrap (excessive, perhaps). Like I stated before, I put down pillows so that if things were to slide, the impact wouldn't be so hard. Anyone who has participated in an AFOL event probably knows the best way to transport their pieces, and each person has their own method. My method, I'd say worked well considering I only found a few pieces that fell off of my MOCs or built sets. The smaller pieces organized and placed in the storage units were easy to move once they were in the larger cardboard box. Had they not fitted tightly in that cardboard box I'm sure I would have found a bunch of loose pieces at the bottom of the box. The other larger pieces that were in their own containers didn't present me with any problems either. In total I made 7 trips back and forth to move the collection, a total of 1.5 tanks of gas. Of course, I could have left this work to the professional movers who within a few days are going to be moving all of our furniture and other items, but come on, it's a LEGO collection, I can't trust anyone else to move it.

Now that the hard part is over, the fun part is soon to begin. This involves getting my new LEGO room together and placing everything where it belongs. At the moment, almost everything I bought is on the floor. In the next addition I will present you with my progress and together we'll construct a LEGO room.

#





## Sail Boats

By HispaBrick Magazine®

We continue with our TOPMOC section, on this occasion dedicated to sail boats. Sail boats encompasses any kind of ship using sails, from famous French galleons of the 17th and 18th centuries to more modern fishing boats. The condition for finding MOCs in this case was that the ships use sails as a method of propulsion.

We would like to remind you that the intention of this section isn't creating a ranking of the best MOCs, nor being exhaustive in our analysis of all the constructions we select. It is simply to show constructions of sailboats the HispaBrick Magazine® team thought were interesting, with appropriate pictures that could be included in this publication.

Boats are a type of construction that up until a few years ago were very limited by the available LEGO® parts. The curved shapes of the hull are hard to reproduce and except for a few specific parts with the shape of a hull, the result was often quite pixelated. Anyway, as techniques have evolved and new parts have been added to the existing ones, ship construction has evolved greatly in beauty and design.

Although there is a large number of ships of all kinds that would deserve to be in this section, we have tried to keep it as diverse as possible in order to show off different types of design, both in the kind of models as in the time frame they originally existed in. Undoubtedly, the large models with thousands of parts that have been exquisitely put together quickly attract attention. However, there is no less merit in other, smaller designs because of the techniques they have used and that have managed to capture the shape of the vessel in incredible ways.

But we have focussed on an essential element in the models that were chosen: the sails. That is where you can really see the talent of the builders of this kind of construction. There are builders who have decided to only show the masts and riggings, simulating folded sails. Others include cloth sails by LEGO® or by the makers themselves and there are even those who manage to build the sails from bricks. Other important aspects include decorative details some models display, showing off cabins and other interior areas of the vessel. Although most of the models are built at minifig scale, we have also seen some great models at much smaller scales with details that are on par with larger constructions.

From all the models that have been chosen by the HispaBrick Magazine® team and whose authors have authorised their publication, these are the MOCs that make up TOPMOC in this edition of magazine.

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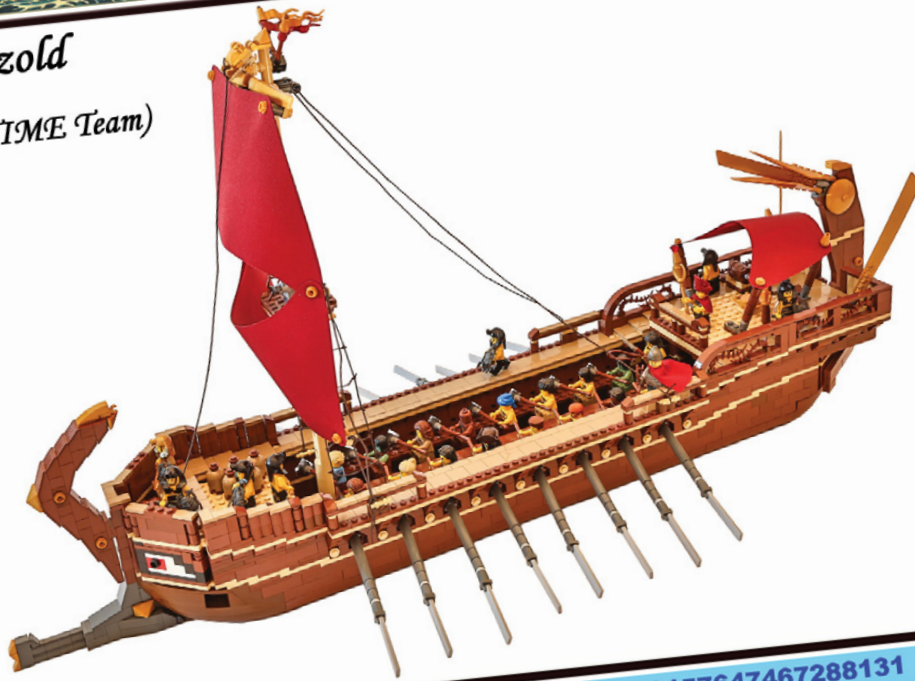


*Lennart Cort*  
~ Lennart C ~

<https://www.flickr.com/photos/49277037@N06/>

**Meridian Galley**

*Björn Pätzold*  
~ BoB ~  
(THE BRICK TIME Team)  
2013



<https://www.flickr.com/photos/thebricktime/sets/72157647467288131>

**Dukling**

*Li Hon Man*  
~ ArzLan ~  
2010

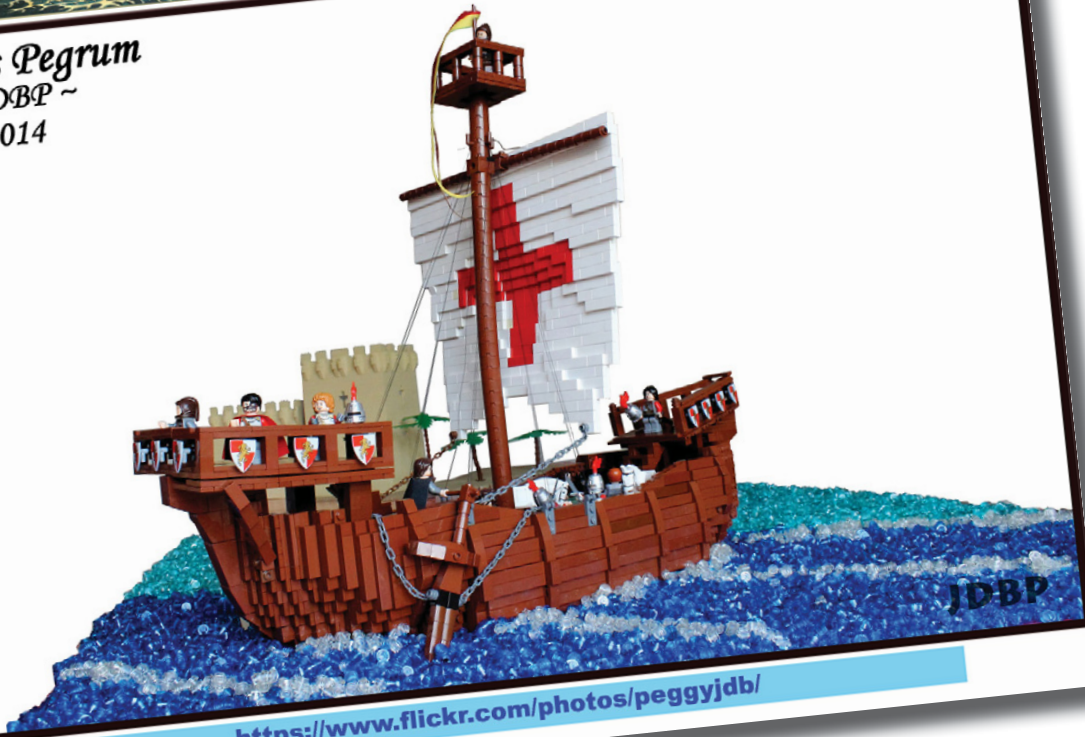


<https://www.flickr.com/photos/32161137@N08/>





*James Pegrum*  
~ JDBP ~  
2014



<https://www.flickr.com/photos/peggyjdb/>



*Laurent Le Berre*  
~ LaurentB ~  
2013



<http://legololo.canalblog.com/>





<https://www.flickr.com>



**Sark**



*Henrik Hoexbroe*  
*~ Hoexbroe ~*  
2010



[n/photos/hxmiesa/](https://photos/hxmiesa/)



## The Art of the Brick

By HispaBrick Magazine®

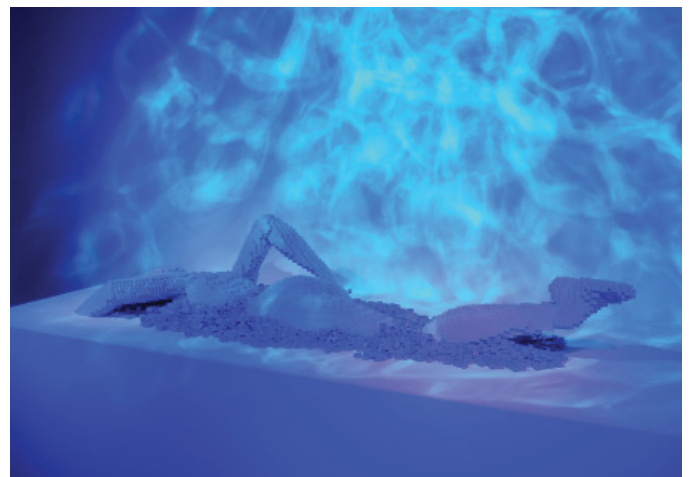
Pictures by HispaBrick Magazine®

Nathan Sawaya was born July, 10th 1973 in Colville (Washington, US). He is well known in the LEGO community given that he is one of the first LEGO artists in the world . HispaBrick Magazine interviewed him in issue 019, there, he explained to us why he decided to start building sculptures with LEGO bricks and the themes behind his work. In this issue we talk about his "The Art of the Brick" gallery that just recently arrived in Barcelona.

Perhaps his most well known sculpture is the yellow man opening his chest, but with a few years spent on building more sculptures, he decided to debut his work worldwide. The exhibition "The Art of the Brick" arrived to Barcelona in March of 2016 after having previously visited North America, Australia, Asia, and the Middle East.

The exhibit contains 110 different works of art, occupying 1900 m2 with different sections named for the colours employed or the theme expressed. "The Art of the Brick" is not only an exhibition for LEGO fans, but also for any art lover, or those who are just curious to see what can be done with LEGO bricks.

HispaBrick Magazine was invited to the official opening. We took one hour to visit the entire exhibition, going room to room and marveling at each piece. After some years of just hearing about his work, it was really exciting to see the exhibition in person. Nathan Sawaya was also there at the opening. We had a small chat with him about the exhibition and he was even kind enough to sign our exhibition guide books.



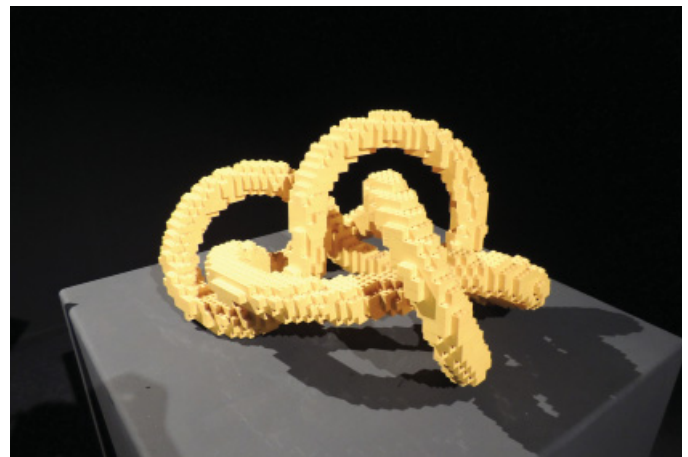




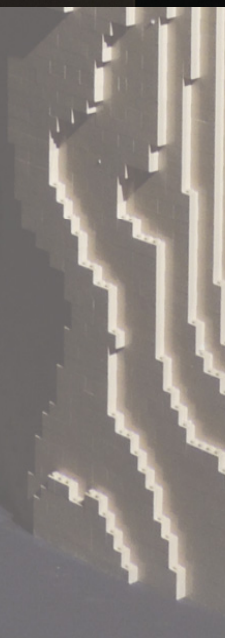
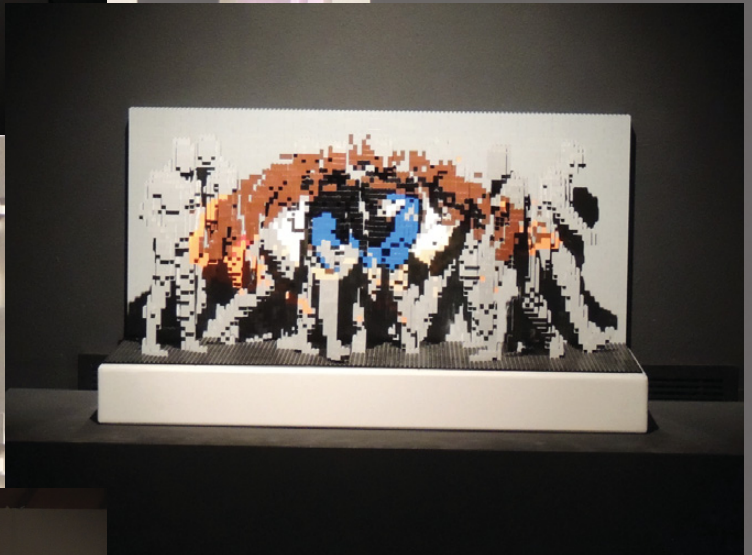
Just entering the exhibition we found, what in our opinion was, one of the best works you can come across in the exhibition: "the knot". It is a small knot made with 1240 bricks. The meaning of this work is that there are problems that seem to have no beginning or end, and that it's difficult to know where to start. From this starting point, we entered into a larger room where we found the famous sculptures reproducing human bodies in different positions, reproductions of works from the story of the art, and some nice original ideas expressed with bricks.

The environment is very well designed to focus your attention to the sculptures. There are lights shining on different works so as to capture the viewer's attention, whereas the rest of the corridors and rooms have dimmer lighting. We are not going to explain each sculpture, it is better that you browse the following pages and see what is exhibited. Instead, we'd like to mention some of our favourites: besides "the knot", we really liked "The scream", a reproduction of the painting of Munch, "The great wave of Kanagawa" of Hokusai, and originals from Sawaya like "The Swimmer" or "Untitled", showing the frustration of a man that exerted so much to progress forward, only to come back to the start.

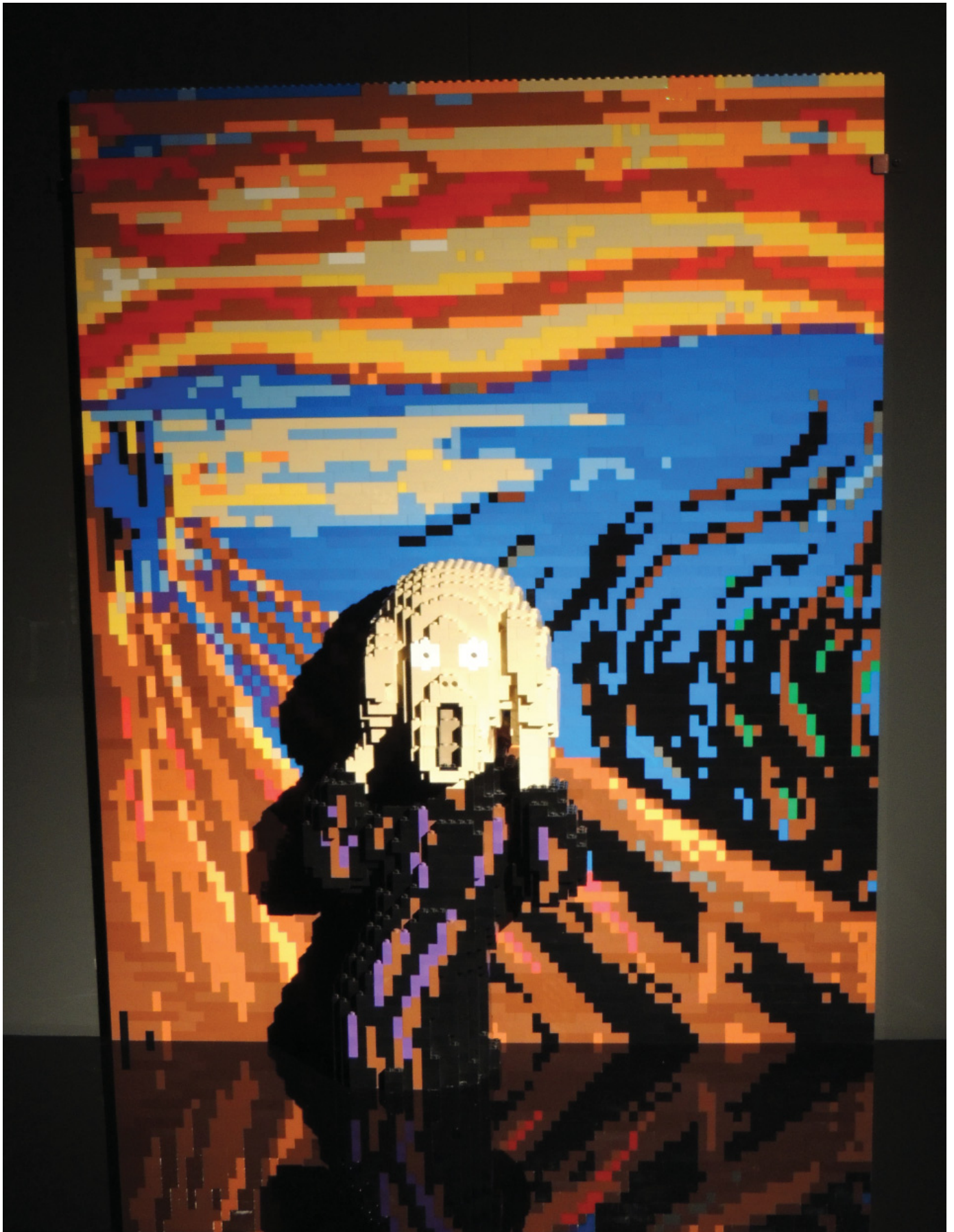
There are not enough words to express what you will find there, the pictures are not enough to understand what Nathan Sawaya is expressing with his sculptures. Being there is a whole different experience, we can do no more than to encourage you to visit should it be on display near you, but we provide some pictures on the next pages as a sneak peek.











We would like to thank Proactiv for inviting us to the opening. #

# LEGO® Fan Media Days

By HispaBrick Magazine®

Pictures by HispaBrick Magazine® and LCE (LEGO® Community Engagement)



Last May we received an email invitation from Kim E. Thomsen (LCE Team) for an event called the LEGO Media Fan Days. It was an invitation to spend 2 days in Billund for the purpose of making a number of visits and doing interviews with employees from different departments. A total of 13 media from Europe and the USA were invited, including magazines, webs and blogs.

After deciding who in our team would be available for the event we accepted the invitation. A few days later we received more information about the event. On the first day, after a welcome, there would be a visit to the moulding factory and the LEGO Idea House, plus a community lunch and dinner. On the second day there would be a series of interviews. We were offered a catalogue of interviews from which we needed to choose up to 6 different department employees. HispaBrick Magazine requested interviews with every available department. These interviews will be published in the next issue of HispaBrick Magazine, after a final check with the communications department at LEGO.

## Day 1

The first day started with a welcome meeting in which we all introduced ourselves. Kim introduced the Fan Media Days and we had an interesting conversation about the state of the AFOL community.

We had lunch in the famous Pizzeria - Restaurant in the centre of Billund after which the visits started.

### Moulding factory

In HispaBrick Magazine 006 we wrote an article about the moulding factory. Would another visit after 7 years offer something new? The answer is a resounding "yes"!

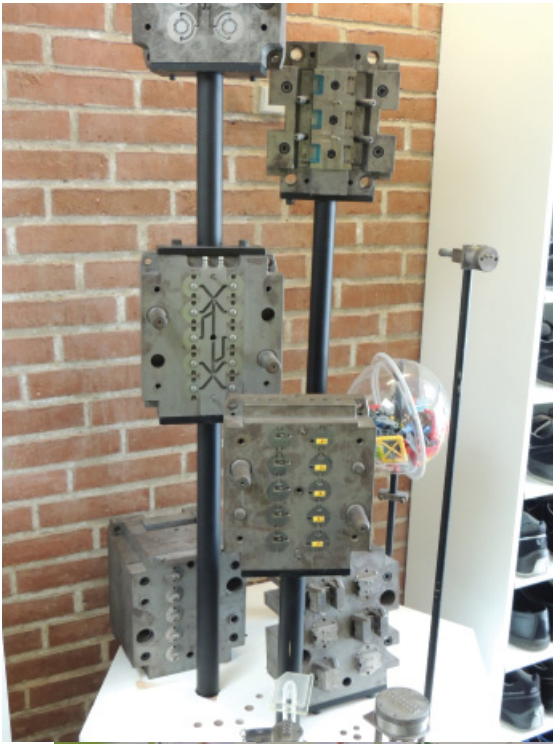
Obviously the factory is still the same as is its purpose. However, now everything is much better prepared for visits, more areas can be visited and there is a lot of information available.



We had to put on a reflective safety vest and Kim explained how bricks are moulded. Then we entered the factory. Because these were the Fan Media days we were allowed to take pictures and video inside the factory. Obviously we took maximum advantage of this opportunity since this is usually not allowed.







**LEGO**

**Maskinvedligehold  
Machine maintenance**

Ansvaret for reparation af alle Kommarkens udstyr, transporttøler (FRGG), materialvaretag og Etnemhjælpere.  
Responsible for repair of all equipment, transportation (FRGG), material installation and rigging services at Kommarken.

Der foretages systematisk vedligehold på alle maskiner og udstyr, for at opnå stabilitet i produktionen og længst mulig levetid på udstyret.  
Preventive maintenance is carried out on all machine and equipment to secure stability in production and to extend the lifetime of equipment.

Antal udstyr Number of devices	19.000
Antal jobs pr. år Number of jobs per year	33.000
Antal medarbejdere Number of employees	75
Antal forskellige reservedele Number of different spare parts	60.000





The factory is almost completely automated, requiring only a small number of employees. For example, for mould maintenance there are a total of 83 employees and for general factory maintenance 75.

Bricks are made from uncoloured granulate and colour is added when the plastic is heated in the moulding machine. In addition to the plastic that is used for bricks, almost 30 different kinds of plastic are used for moulding things like tires and windows. This plastic is stored in 24-ton silos and is distributed to the moulding machines through tubes. For little used colours there is coloured plastic that can be moulded directly, without adding colour, because colours need to be precisely adjusted to ensure the colour of all bricks is as similar as possible.

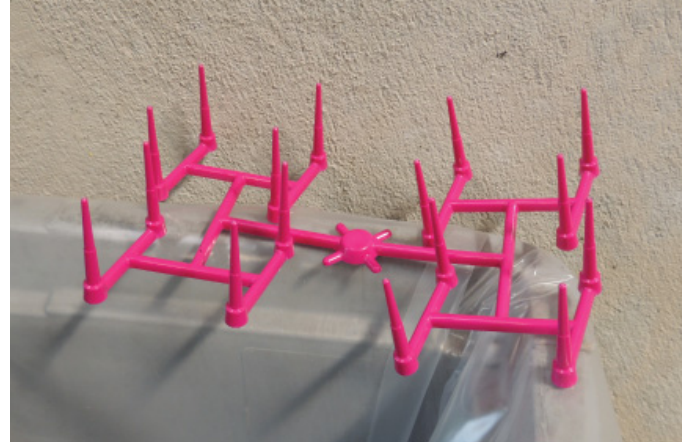
The moulding machines are new, but maintain the same characteristics as the old ones, ensuring full operational autonomy, with robots that automatically load and unload the containers with the moulded parts. Samples are taken from every machine for quality control. Those parts are then discarded, even if they are perfectly OK.



You are not allowed to touch anything as this might contaminate an entire batch of parts. For example, if anyone has the flu and touches a part that comes out of the moulding machine, the virus could end up in a box and be "sold", creating a global flu pandemic. I know it sounds exaggerated, but it makes sense. On the other hand, if there are bricks on the floor these might indicate a problem with a machine and taking them would remove vital clues for solving the problem.



An important aspect of the factory is recycling. Currently, 99.7% of residues are recycled and they expect to reach 100% in a few years. The principal obstacle is that plastic loses properties if it is reheated several times. The percentage of reused plastic in each injection process is limited as it could affect the colour of the parts and they might end up looking marbled or have defects.



Another interesting area, and one I hadn't seen in my previous visit, is the mould warehouse. It contains hundreds of moulds, ready to be used in production when required. They were absolutely clean. There is a hoist to load the mould when it is required as some can weigh a ton.



Finally we went to the chaotic warehouse, where the containers that come from the moulding machines are stored. A computer keeps track of where each part is stored and provides the necessary boxes when they are required. Each stand is 73 m long and 12.8 m tall. It is really impressive to see millions of bricks in the warehouse, and how the robots never stop storing and recovering containers. Oddly enough



there was nobody to keep an eye on them. The computer takes care of everything.



On our way out we received a 2x4 brick with "Moulding Billund" on one side and "I was here" on the other.

### The LEGO Idea House

The second visit of the day was to the LEGO Idea House. For now it is still a private LEGO museum which can only be visited by direct invitation from LEGO. There we found an overview of LEGO history, from the first wooden toys to the Porsche 911 GT3 RS. We already dedicated an article to this museum in HispaBrick Magazine 006 so I won't go into more detail. As a novelty in comparison to my last visit I saw a room with clone brands, where original sets are shown alongside copies made by other companies.

You can also see Ole Kirk Kristiansen's office (Founder of LEGO) with its original furniture, as the LEGO House is integrated into the original house of Ole Kirk.



After the visit we went down to the Vault, where we enjoyed taking pictures with our favourite childhood sets - the ones that made us fall in love with LEGO. The visit to the Vault was longer than expected, but even so it felt really short to all in attendance.



When we came out of the LEGO Idea House we all received a commemorative minifig and went for dinner. After dinner we continued our conversation in one of the bungalows that were provided for the AFOLs attending the event.





## Day 2

On the next morning we met in front of the Innovation House at 9 in the morning. We had the first floor to ourselves for the interviews. After a briefing with the rules for the day the interview marathon began.

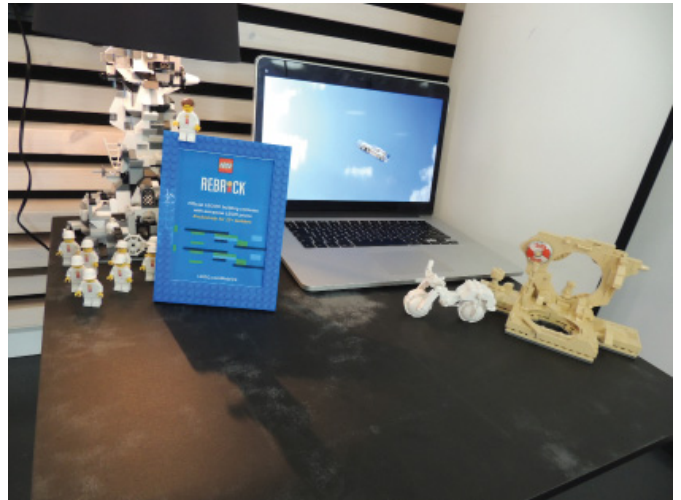


There were 7 different departments represented.

- LEGO Technic
- LEGO Bionicle
- LEGO Nexo Knights
- LEGO House
- LEGO Ideas
- LEGO Rebrick
- LEGO Worlds

We had 30 minutes for each interview, and there were 9 slots available, so we had some free time to talk as attendants and discover some of the history behind each medium.

I would like to thank the employees for their patience in answering the same questions over and over again. We also had a chance to talk to them informally over lunch.

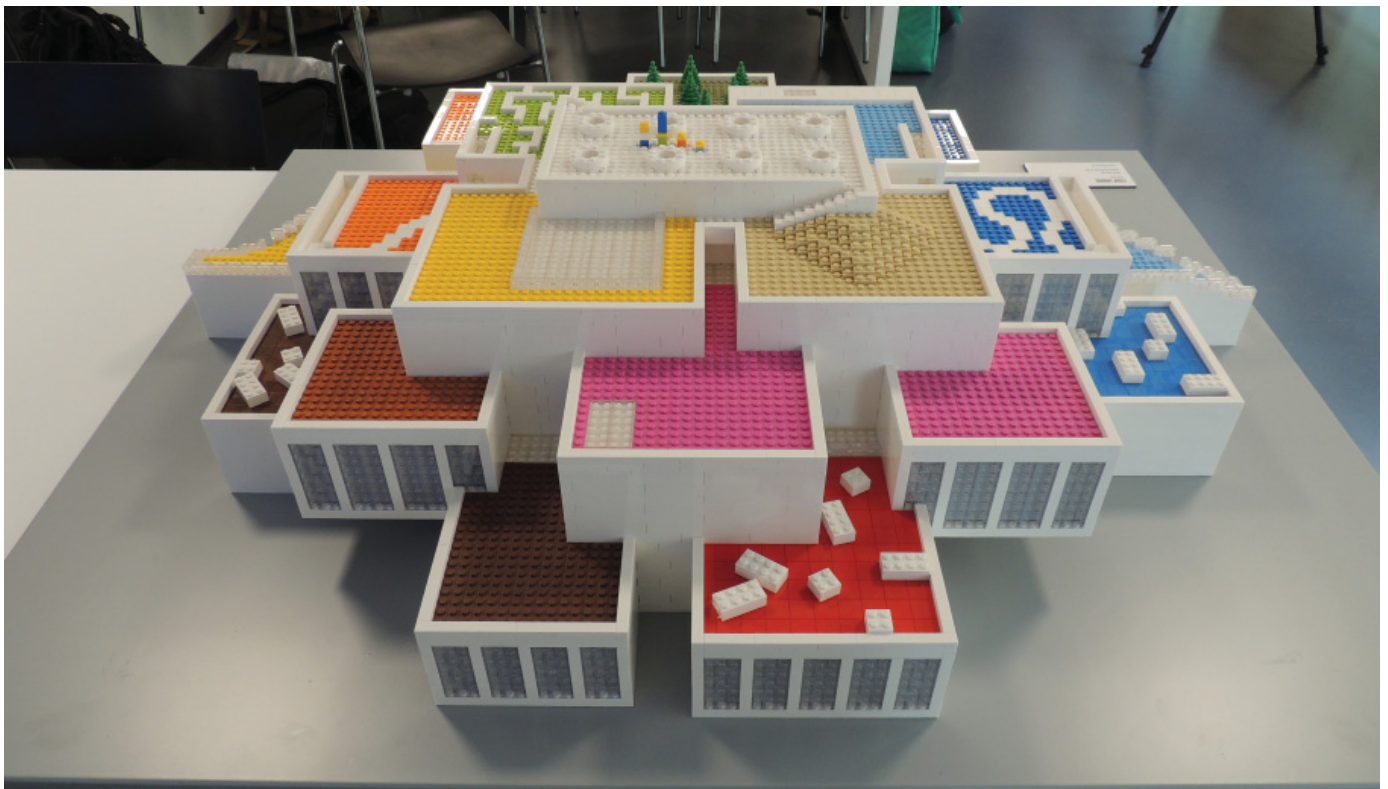


At the end of the interviews we took a group picture and I went on my way to the airport to go back home.

I think this initiative is really interesting and has allowed us to do a good mix of visits and interviews which in any other format would have been impossible to accomplish. I would like to thank all the AFOLs who attended the LEGO Media Fan Days for their companionship and the great time we spent together, and especially Kim E. Thomsen of the LEGO LCE team for organising this event, which was an absolute success.

HispaBrick Magazine already looks eagerly forward the LEGO Media Fan Days in 2017.

#







## Game: Reaction Time Test

By Koldo Olaskoaga

Pictures by Koldo Olaskoaga

This article will discuss how to create a simple program that measures the user's reaction time. The program will be created using Open Lab Roberta.

### Challenge

Create a program that measures the speed of reaction to a light stimulus.

To achieve this, I am going to use the same electronic device that I used for the LEGO MINDSTORMS article (HispaBrick #15), that which I later completed and published with more detail in Issue [1]: 3 different colored buttons corresponding to three different colored lights all connected to NXT. However, I have updated it to EV3 as can be seen in the picture and in this case using the EV3 light.

As a stimulant, I will use EV3's very own light. After pressing the corresponding key the achieved time will be shown on the screen.

### Program

The final objective will be to create a program that has the following characteristics:

- A green, orange, or red light will be turned on and one will have to click on the corresponding key.
- The light be turned on for a margin of time between 2 and 5 seconds.
- 3 attempts will be given and after each the achieved time will be shown as well as the best time thus far.
- The necessary instructions will be shown on the screen.

Starting everything at once isn't recommended, it is always best to divide the challenges into smaller challenges that can be combined later little by little to create something more complex. Therefore we will start by looking at just one corresponding button, covering the other objectives step by step.

As always, before creating the program in the desired language, it is best to write the algorithm in your natural language, meaning, in your first language.

### Step 1

**Objective:** When the green light turns on, the green button must be hit. Afterward the elapsed amount of time will be shown on the screen.

Let's look at the following steps, that is, the algorithm:

1. Create a variable that allows the amount of time elapsed

- before the button has been clicked to be stored.
2. Turn on the green light (EV3).
3. Start the stopwatch (the EV3 timer and stopwatch are continuously running, so what you need to do is reset them to zero when you want to begin counting).
4. Wait until the green button is pressed (EV3's port 1).
5. Store the result in a variable (the timers can't be stopped, but the result can be assigned to a variable when desired, so you can record the value at any given time).
6. Show the result on the screen.

Once we have the algorithm, we can then convert the program into the desired language. In this case I am going to use Open Roberta Lab (NEPO from here on), a program which we talked about in the previous issue of HispaBrick Magazine, although using EV3-G would be much the same. You have to select the expert mode NEPO-blocks as there are some blocks not present in the beginner mode.

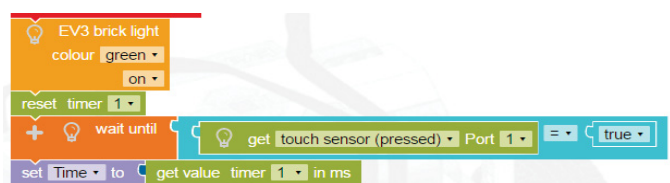
**The Program:** in NEPO the variables are defined in the program-start block, all that is needed to create one is to press on the plus sign. This way we can give each their own name, indicate what kind of variable they deal with (there are 9 different kinds) and assign it an initial value.



After turning on the EV3 green light, you have to reset the timer to zero, there are 5 different timers available, in this case we will use number 1.

The process of creating the instruction that will pause the program until the green key has been pressed (above the touch sensor connected to port 1) is very similar to that used in Scratch. Here we use the **Wait Until** block, that can be found in the control menu **Control > Wait** to which we need to connect a logic operator. In this case it is to see if the touch sensor connected to port 1 has been pressed.

Once the program can continue the value of timer 1 is assigned to the variable **Time**. This value will be expressed in milliseconds.



All that is left is to show on the screen is the achieved time.



Now hit execute and observe the following happening:

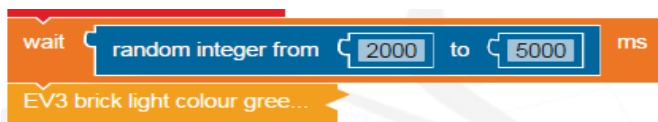
- The green light turns on as soon as the program starts
- It does not show the reading on the screen as the program exits as soon as it finishes.

The reason is that we haven't marked the runtimes that we are interest in. We haven't asked it to wait a bit to turn on the green light after the execution. We haven't given it proper time to show the reading on the screen,proper time, because in fact, the result was shown, but once shown, the program is ended right away and we haven't been able to take it in. These are two things that we will fix by introducing several changes.

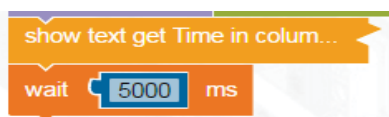
**What we will change:** Once the program begins, it will wait a period of time between 2 and 5 seconds before turning on the green light and at the end of the program we will include a wait of 5 seconds so that we are given time to see the achieved result (the changes appear in bold text in the algorithm).

1. Create a variable to be able to store the time
- 2. Wait between 2 and 5 seconds**
3. Turn on the green light
4. Start the stopwatch
5. Wait until the green button is pressed (part 1)
6. Store the stopwatch reading in a variable
7. Show the result on the screen
- 8. Wait 5 seconds**

A random start up time between 2 and 5 seconds is like throwing a die and seeing how it falls, except in this case the number of results are much higher. Given that the control block **wait** asks that the time be given in milliseconds, you would have to calculate a number between 2000 and 5000, even though you can also calculate a number between 2 and 5 later multiply it by 1000.



Toward the end of the program a **wait** block is added to give time to read the result.



As you can see, the blocks that were in the first program have been made so they occupy less space. This can be done by right clicking on the block that you wish to collapse.

Upon executing the new program we can see that the two previous problems have been solved and that we have successfully responded to that which was asked of us for step 1. However, in the challenge it asked that 3 rounds be played, with that said, let's go to step 2.

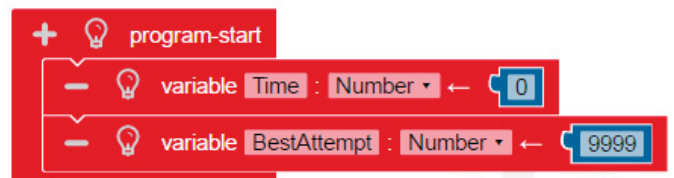
## Step 2

**Objective:** when the program begins, the name of the game will appear on the screen along with a message that asks that the user press on the green key to continue. After a 2 to 5 second wait, the green light will turn on and once the green key has been hit, the reaction time will be shown on the screen as well as the best time thus far. After 2 seconds the program will continue. This will be done 3 times before coming to an end.

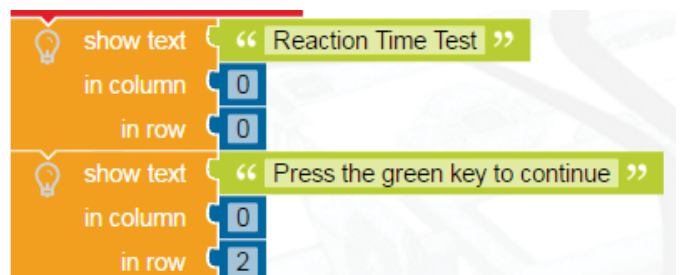
The new algorithm includes the following:

1. Create time and best result variables
- 2. Show on the screen the name of the game and a text that asks the user to press the green key to continue.**
- 3. Repeat the following steps**
  - a. Wait for the green key to be hit**
  - b. Wait 2 to 5 seconds for startup
  - c. Turn on the green light
  - d. Start the stopwatch
  - e. Wait until the green key has been hit
  - f. Store the stopwatch reading in a variable
  - g. Compare the new result with the one stored in the best result variable**
    - i. If the value of the Time variable is lower than the Best result variable, store in the best result variable the new value**
  - h. Show the reading on the screen, along with the best result thus far.
  - i. Wait 2 seconds

Even though in the prior step we saw how to create a variable and initiate it, we are going to see a peculiarity with the new variable "Best Result". This variable has to save the best result that has been achieved up that point so that it can be compared with the current result (step 3g of the algorithm). To see if there has been an improvement, compare the new result with the best achieved value, and if it is higher, the old best result will be replaced. *ver si ha habido mejora comparará el nuevo resultado con su valor, y si es menor lo sustituirá.* So the starting value needs to be big enough so that after the first attempt, when the comparison is executed, the compared value is less than the initial value. This value is then updated with the new reaction time. A safe value that will ensure it is bigger than the expected reaction time is 9999 milliseconds, but apart from this we could have chosen any other high enough value.

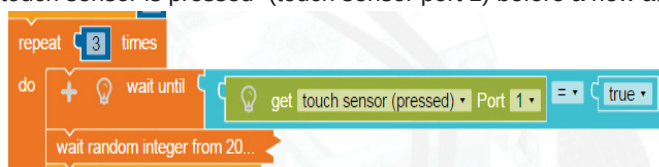


Once the program begins the name of the of the game as well as instructions in two different rows.

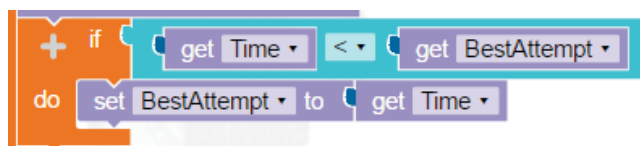




Then, a **Loop** begins that will be repeated 3 times, this block can be found in the **Control** menu. The first instruction that we see inside is the “wait until the green touch sensor is pressed” (touch sensor port 1) before a new attempt begins.



What comes next is the same as what we had in step 1 until we got to the comparing a new result with the best result. In this case we will need to use a conditional control structure, that is, one of the blocks that appears under **Control > Decisions**. In this case, if the result has a value that is less than what is stored in the variable **BestResult**, it will substitute the value for the new one. If not, the block will exit without making any changes.



Now all that is left is to show the results. It can be done in the same way as the previous step, we are going to see how to combine the result with the text we want. In the Text menu we have several blocks that allow you to manipulate text chains. One of them can be seen in the following image that allows you to create. One of them can be seen in the next image and allows you generate a sentence, combining text strings with the result we just generated. We will do the same for the best result, but on a different line.



So far the program is going the way we wanted, but there are still some small things left to be corrected:

- the green light stays on all the time: we need to turn it off when we no longer need it
- the width of the screen is limited, so if we want to show a text that is longer than the width we need to cut the text and display each fragment on a separate line.
- the text chains are superimposed: when we tell the program to display a new text chain we only delete the area that is overwritten, so we need to clear the screen before showing new text..

These improvements are easy enough that you can work them out by yourself..

### Step 3

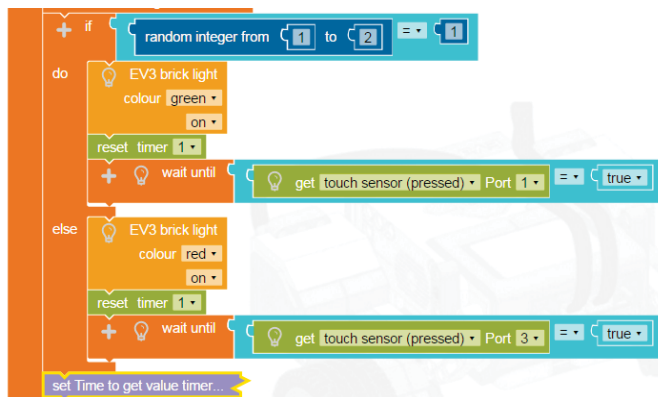
**Objective:** incorporate a second key. Now you won't know which of the two will light up and you will have to press the right key for the program to advance.

1. Create the variables
2. Show the name of the game on the screen and a text that asks you to press any key to continue
3. Repeat the following steps
  - a. Wait until a key is pressed
  - b. Clear the screen**
  - c. Wait a random time between 2 and 5 seconds
  - d. Randomly select which light to turn on:**
    - i. If it is the first one: turn on the green light, start the stopwatch and wait for the green button to be pressed**
    - ii. If not: turn on the red light, start the stopwatch and wait for the red button to be pressed**
  - e. Store the value of the reading of the stopwatch in a variable
  - f. Switch off the light**
  - g. Compare the new value to the value stored in BestResult
    - i. If it is less, store the new value in the variable BestResult
  - h. Show the reading on the screen as well as the minimum value and a message asking to press a key to continue
  - i. Wait until no key is pressed**
4. Wait for 2 seconds

The program starts in the same way. However, now any of the keys that are used can be pressed, in this case both red and green. This requires a modification of the block that waits for the key press before starting the sequence. Now it will have to wait for one or the other key to be pressed, so the logic operator OR is needed.



After clearing the screen and waiting for the light to turn on it is time to decide which light will turn on and then wait for the corresponding key to be pressed. To take this decision we are going to generate a random number between 1 and 2. If it is 1 we will turn on the green light, if it is 2 the red light. After turning on the light, the stopwatch is restarted and the program waits for the correct key to be pressed. If the wrong key is pressed nothing will happen - the program will simply continue waiting for the right key to be pressed. When the right key is pressed the program will continue and assign the result to the variable **Time**.



After turning off the light it checks if the time is better than the previous one or not, using the same method as before. After presenting the result on the screen the program shows text indicating that in order to continue you need to press one of the keys. No 2 second wait is necessary. This is where the algorithm “wait until no key is pressed” comes in. Bear in mind that instructions in a program are executed at lightning speed, so it could happen that when you remove the 2 second wait, the program continues with the next loop without pausing to show the result. This is due to the fact that the program may execute in less time than it takes to release any of the keys. EV3-G has an option for the touch sensor which is “wait for press or release”, which would solve this issue, but this option is not (yet) available in NEPO. In this case, the difference with the previous logic operator is that now both keys need to be released so we will use the logic operator AND.



## How to continue

The examples shown above are not the only two possible algorithms for this challenge and can surely be improved. The following are some ideas to optimise them:

- Modify the program for a third key
- Instead of using a light to identify the right key, use a sound or tones that can be associated to the keys.
- In addition to showing the best result, show the average response time.
- If you press a key too early an error sound is reproduced or you lose the game.
- Convert milliseconds in seconds before showing the result on the screen
- Create the program in a different programming environment
- Have the program ask the user for a name and store both the name and the results in a file. For now this cannot be done in NEPO, but it is possible in other programming environments that allow the use of files

[1] [https://issuu.com/koldo\\_lobotikas/docs/memorygame](https://issuu.com/koldo_lobotikas/docs/memorygame)

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## About the autor

[About.me/koldo\\_olaskoaga](https://www.about.me/koldo_olaskoaga)



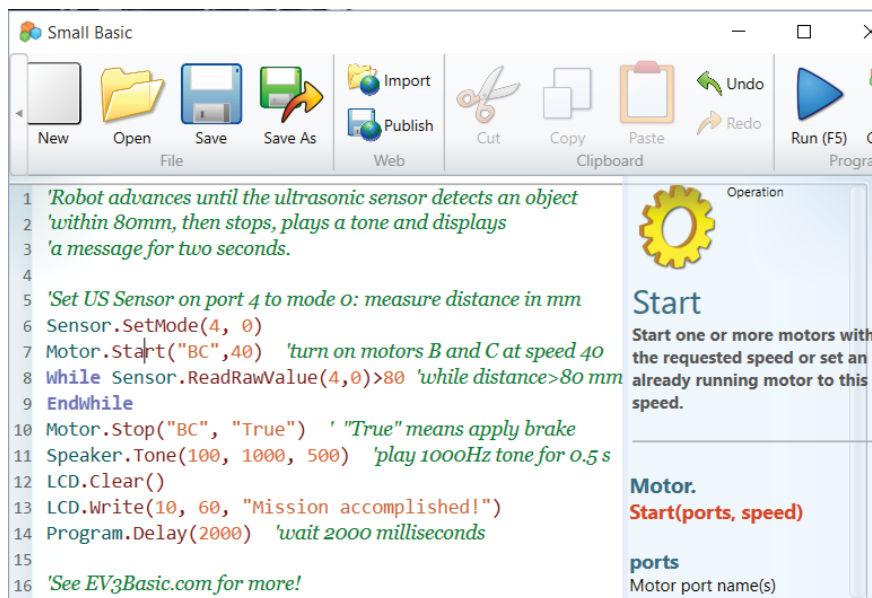
# Introducing EV3 Basic

By Jetro

Pictures by EV3 Basic

Learning to program the LEGO EV3 robot with the standard software (EV3-G) is great fun but youngsters who have mastered EV3-G may want to go further and try programming the EV3 with a text-based programming environment that is more powerful and a step closer to the environments used by professional programmers. A number of text-based programming options exist for the EV3 such as EV3 Lejos or EV3dev with EV3 Python but most of these options are probably too difficult for young teens. However, one option stands out for its ease of installation and ease of programming: EV3 Basic. EV3 Basic is Microsoft Small Basic with the EV3 extension that was released earlier this year. It is compatible only with Windows PCs.

EV3 Basic is easier to install than other text-based programming systems for the EV3 and it does not require the use of a different operating system on an SD card nor a modification of the EV3 firmware. It is easier to program than other text-based programming systems for the EV3. The programming interface is extremely simple, and thoroughly appropriate for beginner programmers (the declared aim of Microsoft when Small Basic was released in 2008 was to put the fun back into programming).



EV3 Basic programs can be run directly from Small Basic – it is not even necessary to download them to the brick. It is also possible to compile the programs into 'brick format' (RBF) and download them to the brick using a companion program, EV3 Explorer. In fact this is the recommended way of using EV3 Basic with a wireless connection (either Bluetooth or WiFi)

EV3 Basic has many functions that are not included in EV3-G. For example, the EV3 can interact with the Small Basic graphics window, as in the remote control example on EV3Basic.com. It also supports all the standard LEGO EV3 and NXT motors and sensors. EV3 Basic is fast! Cube Twister uses mainly EV3 parts and EV3 Basic code and can solve random Rubik cubes in 2.2 seconds! You can see it in action in this video:

<https://youtu.be/s2tCAf6yYoo>

Both Small Basic and the EV3 Extension are entirely free! The official tutorials website, EV3Basic.com has dozens of sample programs, a YouTube playlist, and no ads. In addition, Small Basic is available in 18 languages and the documentation of the EV3 extension (Intellisense and manual) is available in English, Spanish, French, Russian and German. An important feature of the user interface is that you learn as you type, for it displays a pop-up with your options and provides helpful information about those options so you can make the right choice.

EV3 Basic has many more features so visit EV3Basic.com to learn more, then download Small Basic and the extension and give E3 Basic a try!

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# LEGO® WeDo (VIII)

## Programming in Scratch

*By Edwar Romero*

*Pictures by Osvaldo Romero*

How can we conquer the world if we forgot to put up the advanced Scratch instructions? We were busy playing with our LEGO, ahem, planning our strategy for world domination and didn't have a chance to be on time for the previous issue of HispaBrick. That is what happens when you keep staring at your programmable bricks! After learning some Scratch programming it's difficult not to want to spend hours and hours marveling at our creations.

Up until now, in previous issues of HispaBrick we have made the comparison between the basic commands of the WeDo program and the equivalent coding instructions in Scratch. We have also discussed the Amazing Mechanisms (Dancing Birds, Smart Spinner and Drumming Monkey), the Wild Animals (Hungry Alligator, Roaring Lion and Flying Bird) and the Soccer game (Goal Kicker, Goal Keeper and Cheerful Fans). From here on out we will revisit the 12 discussed WeDo designs, looking now at the advanced programming instructions for Scratch.

Today the Amazing Mechanisms are back: Dancing Birds, Smart Spinner and Drumming Monkey



First we will revisit the Dancing Birds with the advanced programming version.



The advanced version of the Dancing Birds created using the WeDo software is shown below. With the expertise acquired thus far, it is a good idea to try to recreate the program on your own.



We need a loop to run the cycle indefinitely. Inside the loop we have the icon that selects the motor's power level with random numbers (the dice below). This helps to choose a different power level each time. After that, we need the icon to turn the motor





one way, the music button, the wait time with a random input, turn the motor the other way, another sound file, wait again for another random amount of time, play another different sound and repeat the cycle.

```

when clicked
  forever
    motor power pick random 1 to 100
    motor direction this way
    play sound WaterDrop until done
    wait pick random 2 to 5 secs
    motor direction that way
    play sound Plunge until done
    wait pick random 2 to 5 secs
    play sound Ripples until done
  
```

In Scratch the above code becomes really interesting, really challenging but not impossible. Below you will find one of the possible solutions. You will need the repeat indefinitely loop under the Control menu and the command of "wait \_\_ secs" , also found in this menu. You will also need the power motor and motor direction (don't forget to change the direction for the second command). The pick random number function is also required (found under the Operators menu). You can choose the numbers that work best for you here. In order to finish, it is required that there be a command to play a sound until done (to avoid finishing quickly). After that you have the most important task pending: choosing your preferred sounds to play. The selected sounds (under the Sounds tab on the programming area) were WaterDrop, Plunge and Ripples (under the Effects folder). You can choose the ones you prefer or you can even record your own sound for a custom program.

Now we will continue with the Smart Spinner to learn more techniques.

The WeDo code for advanced programming is shown below. It is a good challenge to try to recreate the code without looking at our version.



The programming in Scratch is more challenging than it looks since we need to create a new variable for this one. One possible solution is shown below trying to keep a similar format to the one used in the WeDo code. When the green flag is clicked, the motor is turned on, a sound is played (WaterRunning as in this example, found under the Effects folder), a wait command follows until the distance sensor detects it is far from the surface. You need to look for the command de "\_ >\_" (greater than, from the Operators menu) and the command sensor value for the distance sensor (found under the Sensing menu). Don't forget to select the distance sensor from the drop down menu and fill in with the number 50 on the right cell (or another number you find that works for your situation). Once the distance sensor detects it is far from a surface you need to turn the motor off. Here comes the most critical part of the coding, you need to create a new variable. In our example we called it time. Under the Variables menu you need to select "Make a variable", write the name that you like. After that part is done, you will see new commands with the name of your variable. With those commands we need to set the time to zero before repeating the loop. Inside the loop you need to include the option of wait for 1 second from the Control menu. After that you need to include the change time by 1 (to increase the count by one second each time it runs).

```

when clicked
  motor on
  play sound WaterRunning
  wait until distance sensor value > 50
  motor off
  set time to 0
  forever
    wait 1 secs
    change time by 1
  
```

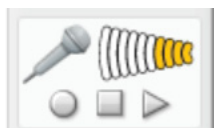
When you configure a new variable, you will see an empty cell in the white canvas with the name you have chosen. This cell will change in increments of 1 according to the programmed time, similar to the figure below.



Now we learn how to complete the advanced programming for the Drumming Monkey.



The Drumming Monkey program in WeDo uses the computer microphone option (if you have one in your PC) to record your own sound. This way the monkey can play the music you want. You need to click on the microphone icon on the top left corner. If you have a mic, click over the circle figure to start recording and click over the square to stop the process. Once you record your own sound, it will be stored using the position 1 in WeDo. This new sound will temporarily replace the whistle-like sound from the music icon with the number 1. We will assign this sound to the letter "C" as shown in the figure below. Once you do a new project, the original whistle-like sound will return and your recorded sound will only be available in the original project.



In WeDo, the In Scratch, the code may end up as shown below.



Within the Sounds tab there are sound files that you can import for instruments and music (Instruments and Music Loops). There are several drum sounds to choose from. As mentioned before, you can also record your own sound.

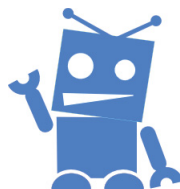


And that's it for now. Remember, if you want to conquer the world with LEGO bricks, always keep in mind that those bricks are so tempting that you may end up forgetting your objective. Spending hours and hours designing your next creation can make you forget your plans, as has happened to us!

That's all for now this time folks, keep tuned in for the advanced programming of these creations in the next issues of HispaBrick magazine. You can find more information, building and programming instructions for the designs presented here and many more at:

[www.wedobots.com](http://www.wedobots.com)  
[www.facebook.com/wedorobots](https://www.facebook.com/wedorobots)

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# wedobots

The unofficial blog for LEGO® WeDo designs



# 45300: WeDo 2.0 - Bringing Science to Life

By Jetro

Pictures by Jetro and LEGO® System A/S



Over the last couple of years, HispaBrick Magazine® has published a series of articles and tutorials about WeDo, the LEGO® robotics platform targeted at children between the ages of 6-9. WeDo has been around since 2009 and at the start of this year LEGO® announced a renewed WeDo 2.0 product. HispaBrick Magazine® has had a close look at the renewed set and these are our findings.



For many AFOLs there are few secrets when it comes to what LEGO sets are available at any given time and how to get them. This isn't the case with LEGO Education sets. This department of the LEGO group caters to educational institutions (schools, colleges, academies etc.) and their products are distributed through dedicated channels. Even so, for LEGO robotics fans, the MINDSTORMS EV3 and NXT sets have put the spotlight on LEGO Education because of the different inventory their versions of these sets offer, as well as the software and models that go with these sets.

WeDo is also a robotics platform, but since it doesn't have a Retail version (i.e. it is only available through LEGO education) it is much less visible to the average AFOL. And although it is an excellent introduction to robotics, it is primarily oriented at a young age group and not an obvious choice for an AFOL. The response from the articles about WeDo that have been published in HispaBrick Magazine's prior editions as well as from and the use of this platform in a series of MOCs by builders like Sariel [1] show that there is an interest in this platform beyond the "standard" classroom use, and in this review we will have a close look at the new version of this platform launched in January under the name WeDo 2.0

## Parts, parts, parts

Before opening the box, the first thing that draws our attention is the difference in size. WeDo 1 [2] comes in a small white plastic tub and includes a transparent plastic tray to sort the parts in the set. Although the number of parts isn't particularly large (154), it is hard to fit them in the tray, especially since there is no guidance as to how to sort them. The latter is not necessarily bad as each user has their own preferences, but with 4 compartments there aren't that many options.



WeDo 2.0 comes in a much larger blue box that contains a tray with no less than 13 compartments. The set also includes a sticker sheet with a label for each of the compartments, to indicate which parts go where. The number of parts has also experienced a dramatic increase to 280.



WeDo 1 is predominantly red and yellow (with a few bits of green, white and grey). WeDo 2.0 comes with a completely different palette that is predominantly blue, green and orange (with a little white, grey, black and red). The result is that the builds look "fresher". But there is more to the inventory than the addition of a few parts. At the base of this change is the new selection of electronic components, so let's have a look at those first.

## Plug it in, hook it up

The core change of WeDo 2.0 lies, not in the parts, but in the electronics. Whereas WeDo 1 consists of a hub with a USB connector that uses Power Function connections to attach the motor and sensors, WeDo 2.0 has changed in two fundamental ways: (1) the hub is no longer attached via USB and (2) the cables use a new connector.

Since the hub is no longer physically connected to the computer, it requires a different power source, and so it includes a compartment for 2 AA batteries (LEGO Education also sells a rechargeable battery pack to substitute the battery compartment, but it is not included in the core set).



Of course this has both advantages and disadvantages: the models built with this set are no longer tethered to one spot – whether that is a pro or a con will depend on the kind of use you make of the set – and batteries drain, so you need to keep an eye on the power level.

The connection over Bluetooth Low Energy (BLE) also opens up new possibilities in terms of devices that can be used for programming, but more about that later.

The new connectors also leave us with mixed feelings. The Power Functions connectors used in the WeDo 1 set can be hard to separate for little hands, especially when you stack two or more.





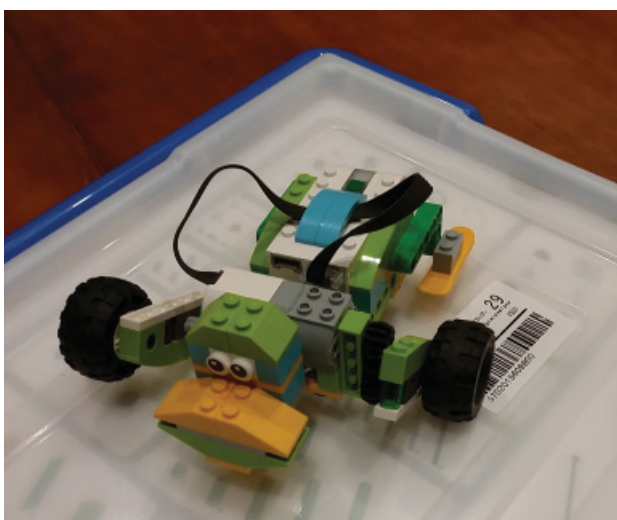
The WeDo software didn't allow more than one PF element to be used on a single port, but the fact that the connectors could be stacked seemed to indicate the contrary. However, the PF connectors are compatible with all other PF elements LEGO produces – including lights. The new connectors remove the stacking issue as their new form factor means there can be only one connector to a socket. However, these new elements are not compatible with anything LEGO has on offer. On the plus side, this new system is marketed as LEGO Power Functions 2 and the wording in the WeDo 2.0 FAQs appears to indicate that in time LEGO will add to this new LPF2 system.



There are no other evident changes to the sensors in WeDo 2.0 (tilt and proximity, just like in WeDo 1), but there is a change to the motor. While the footprint and overall look is very similar to that of the current PF "M" motor, the new motor includes new attachment studs on top of the motor and one less pin hole in the front. Internally there appears to have been little or no change.

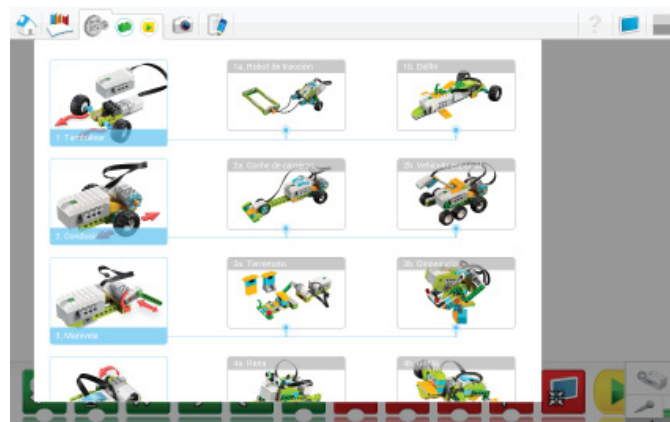
## Building system

Many of the WeDo 1 models that come with the software and or have been developed by others use the large 8x16 brick from the set as a starting point. WeDo 2.0 doesn't include this element and the hub is now the core of any model. There are also more axles, axle connectors and gears [3]. This means that slightly more effort must be made to create a base when necessary, but the hub does provide a solid starting point for constructions and on the whole it may help kids (and older users) to more easily create sturdy mechanical constructions.



There is another, even more fundamental change to the building system that has to do with how models are presented in the software.

While the core mechanism for each model is presented in the usual step by step way, the Curriculum pack contains models built around those core mechanism for which only a few additional images are provided, inviting the user to "reverse engineer" the model, or come up with their own solutions. As a result, it becomes much easier for young users to create their own models based on mechanical ideas and have a more actively creative part in the construction of their own ideas.



While the Curriculum pack was originally offered as a classroom solution for around \$300USD, it is now available as a free download (for a limited time). For the Windows 7 version you need a LEGO ID (which you can create for free if you don't already have one).

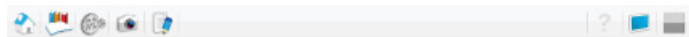
## Software and platforms

The change from USB to BLE has a profound impact on the devices that can be used to program WeDo 2.0. WeDo 1 required a USB connection, meaning that only desktop and laptop computers (Mac and Windows) could be used for programming. BLE means no physical connection is required and programming can be done on handheld devices – iPads and Android tablets. The software developers of WeDo 2.0 clearly saw these devices as their primary targets and the Android and iOS versions of the software were given priority. As a result, when the product was launched the tablet versions of the software were well developed, but the Windows 7 version in particular are still unfinished. Officially Windows 7 is fully supported, but there are still some issues, and there is no Windows 10 version yet. An important fact to keep in mind is that the Windows 7 version will only work with one specific BLE dongle (the Bluegiga BLED112). No such restrictions apply to the Windows 8.1 version. In Android, devices need to run version 4.4 or higher and the minimum screen size is 8". If either of these conditions are not met, the software will not install.

So with the preliminaries out of the way, what is the software like? In part it is very similar to WeDo 1 – almost all of the programming blocks are the same, and some of the new options that are related to the sensors (e.g. seeing if an object is coming closer or going away) were already available in Scratch for WeDo 1. There is a new block to set the colour of the LED on the hub, which adds new debugging (and decorative) options to the set. Like in the previous version you can also record one additional sound, but so far it is not possible to import more sounds or backgrounds as in WeDo 1.

The fact that the hub is no longer connected to the computer comes at a price though. Not only do you need to watch the battery level, it takes time to send commands back and forth between the device the code runs on and the hub. This means that commands have a minimum execution time (approximately 0.3 seconds). While that may not seem like much of an issue, it can result in some pretty strange behaviours, especially since several of the programming blocks have similar effects. No less than three different blocks will start the motor, in addition to the task you would expect them to carry out (change the direction of the motor, change the power level, set the duration of the motor) [4] so if you were to try to change the direction of the motor and the power level at the same time, these two actions would be applied at a small interval.

At this time Scratch is only available for Mac, but in a couple of months the Windows version should also be ready.



## Time to move forward?

WeDo 1 will still be sold for about another year and whether or not you want to upgrade to or get started with WeDo 2.0 is a matter of convenience as much as of taste. Looking purely at the functionality of the hardware, if you plan on using it in a classroom full of Windows computers, your best bet for now is WeDo 1. If, on the other hand, you want to use handheld devices, WeDo 2.0 is your only option.

Looking at the curriculum, the WeDo 2.0 curriculum pack is definitely a much more powerful tool. Also, the software (of any version) includes a documentation tool – including options like adding screenshots of the program and pictures taken with the camera of the device – that make it much more attractive.



As for the price, considering that the base software is free, the price of a working kit (box + software) of the WeDo 2.0 set is more attractive, and if you add in the (for now) free curriculum pack the numbers are clear.

	WeDo 1	WeDo 2.0
Operating Systems	Windows & Mac	Windows, Mac, iPad, Android [5]
Software	Programming	Programming and documenting
Connection	USB	Bluetooth Low Energy
Storage	Small white box	Large blue box
Elements	158	280
Models	12	4 + 16 projects in the Curriculum Pack
Extra parts	Resource set (326 elements) + 4 additional models	No resource set

If you have more questions about WeDo 2.0 or want to show of your creations, don't forget to visit the facebook group for WeDo: <https://www.facebook.com/groups/letsdowedo/>  
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[1] <http://sariel.pl/tag/wedo/>

[2] For clarity, in this article we will call the WeDo set 9580 (launched in 2009) "WeDo 1"

[3] For a detailed description of the differences in the inventories of the WeDo 1 and 2.0 set the review by Robocamp is a very good read <https://www.robocamp.eu/lego-education-wedo-2-0-core-set-the-ultimate-review-by-robocamp-team/>

[4] It turns out the same odd behaviour was present in the WeDo 1 software, but because the hub is tethered the commands are executed without any noticeable interval.

[5] LEGO is working on a version of the app for Chrome Books.



# WeDo 2.0 Walker

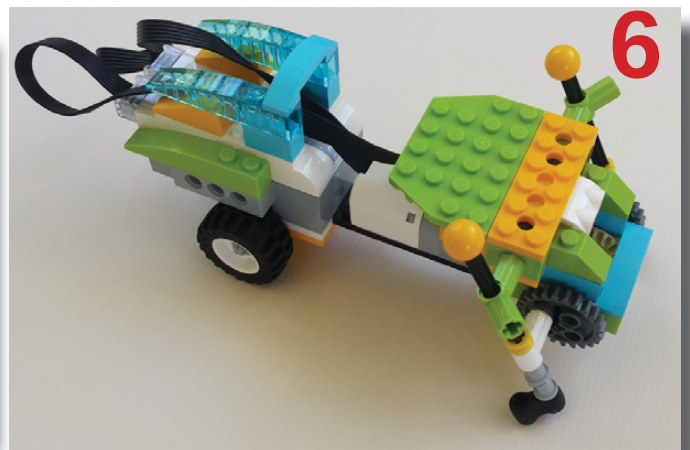
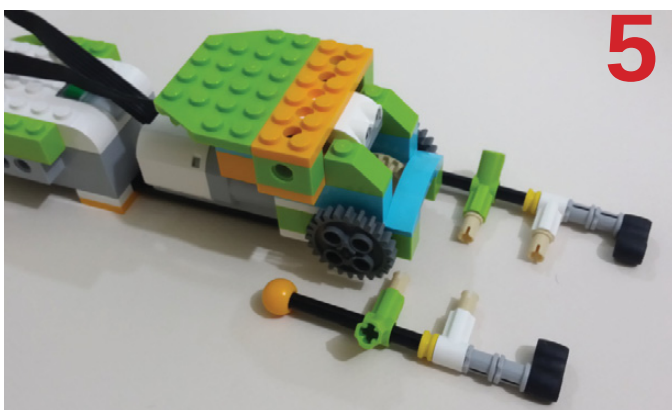
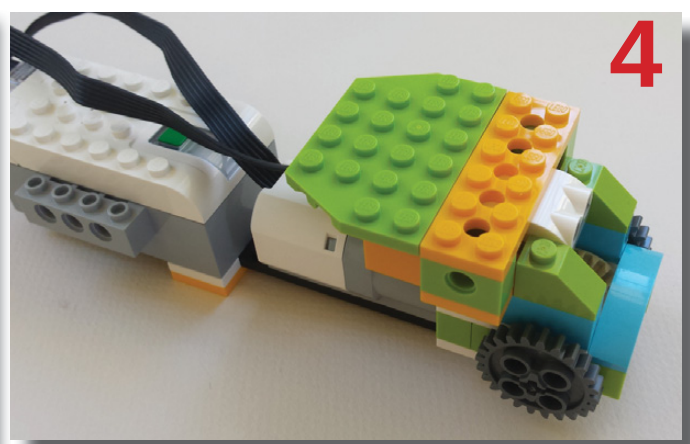
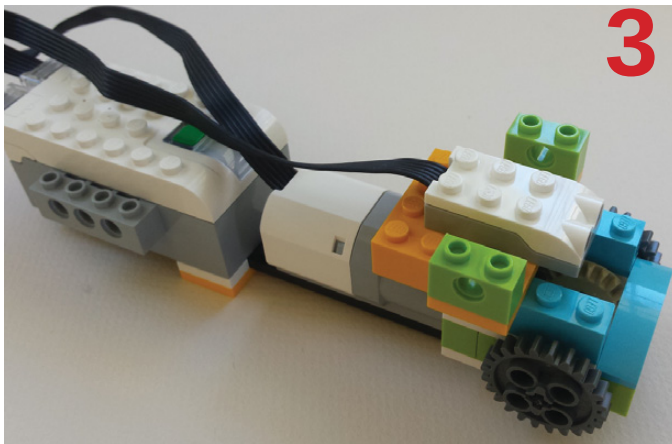
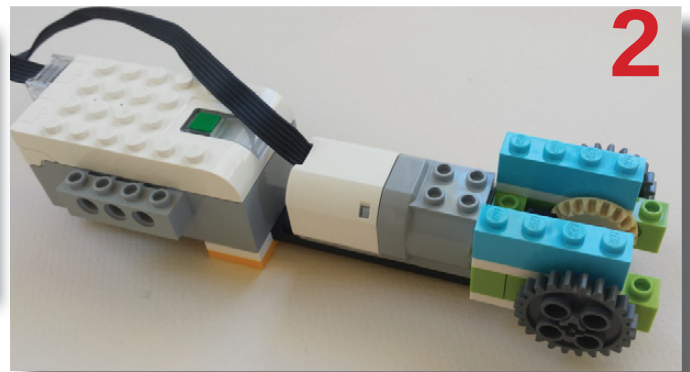
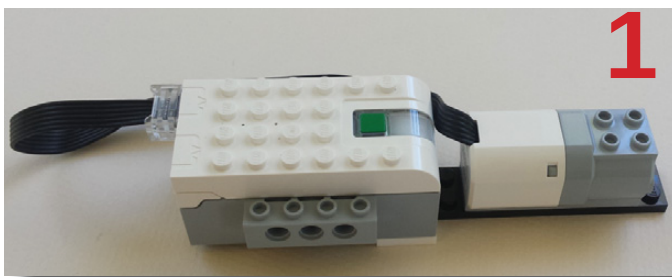
By Eduardo Ventura

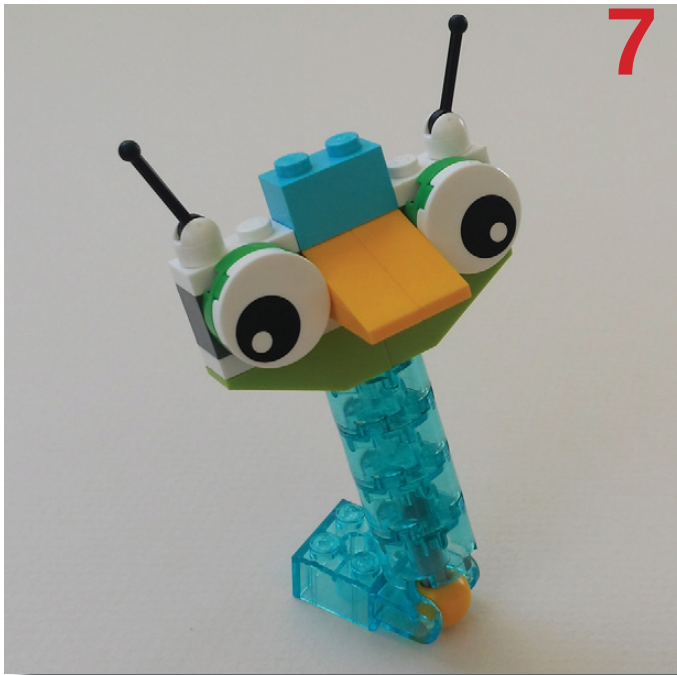
Pictures by Eduardo Ventura

Have you already got your WeDo 2.0 set, or are you still thinking about it?

As a bonus, below you will find instructions to build your very own walking robot with the WeDo 2.0 set.

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# Reviews

## Review: Energy LEGO® Tablet 8”

By HispaBrick Magazine®

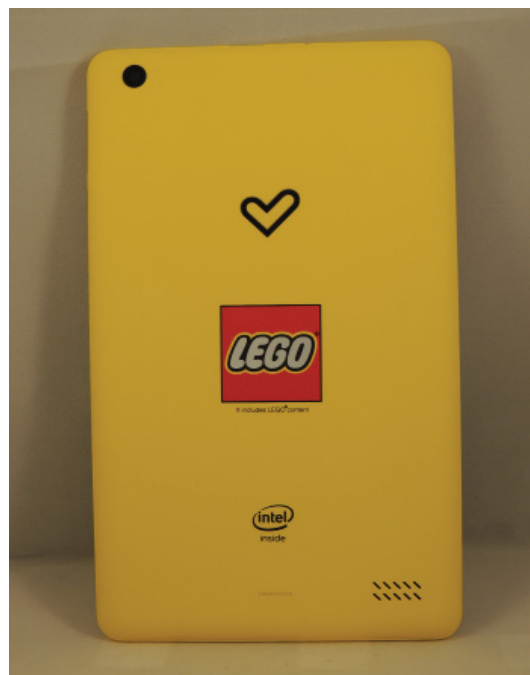
Pictures by EnergySistem and HispaBrick Magazine®



Some time ago while browsing on the internet, I saw an advert about a “LEGO® tablet”. I was curious about it and clicked the advert. I saw a nice picture of a yellow tablet with the LEGO logo. Investigating a little bit more, I discovered that this tablet was produced by a Spanish company (unbelievable). I decided to write them and ask for one to review. They quickly responded and kindly sent me one to have a look at.

On the front side there is a picture of the front and rear side of the tablet, all on a yellow background. On the right side there is the logo of the brand “Energy Sistem” and on the left there is the LEGO logo and some 2x2 bricks. On the rear side there is an explanation of the features of the tablet, including the LEGO features.

When I opened the bag from the courier, I discovered inside a very nice yellow packaging, consistent with LEGO Group's colour scheme. Without opening the box you can see that they put a lot of efforts to give a high quality product, following the LEGO standard.



Once you open the box, you find the tablet. The size of the screen is 8 inches. The first impression is quite nice. Although it's made of plastic (well, it is LEGO® after all ;D), it looks and feels like a quality product. The back cover has the same yellow paint scheme as the box. It also has the LEGO logo and the message "It includes LEGO content".



The plastic sheet protecting the screen is also LEGO special, and explains the basic characteristics of the tablet:

- Windows 10
- Intel Atom processor
- 8" IPS HD screen
- 1 GB RAM
- 16 GB eMMC

Moreover, this plastic sheet explains the different ports and buttons featured on the device.

By now it's time to switch it on! After configuring language and user, it's time to search the LEGO features. First of all, the wallpaper is LEGO related and includes a CITY and two Friends minifigures. There is one icon on the screen with the LEGO logo. After pressing it the application starts and there is a menu with 4 options. The top of the menu has a LEGO Friends background,



and at the bottom there is an icon with the LEGO CITY logo.

The 4 possible options are: Videos, Music, Images and Activities. Clicking the "Videos" section you can see up to 6 different videos related to LEGO Friends. Each video lasts about 2 and ½ minutes each with different stories where the main characters of LEGO Friends are explained.

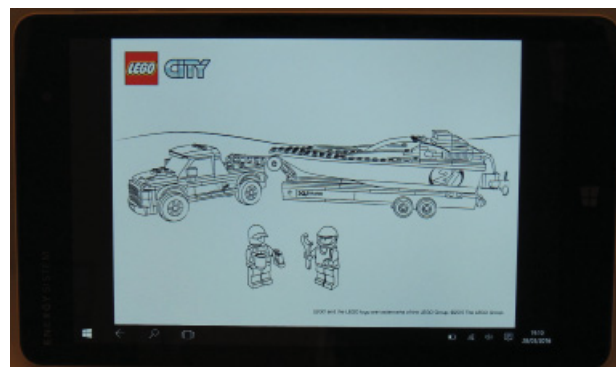
The section "music" allows you to hear different songs. In this case I think these songs come from an US group of teenager singers that

are LEGO Friends related. There are 5 songs available.

In the section "Images" there are 5 wallpapers with images well known by LEGO Friends fans.

There are three "Activities" to do some handicraft stuff like jewellery or decoration.

Pressing the LEGO CITY icon, the application switches to the LEGO CITY Theme. The options in this section are almost the same as those in LEGO Friends section. In this case there are 9 videos, 9 wallpapers and 6 activities, including coloring books, playmats and much more. For the CITY section, there is a game in place of the music section. To play the game, the application redirects you to the application store and allows you to download the game for free. It's curious to see that although the section is about LEGO CITY, the game is LEGO HERO FACTORY related. The name of the game is: "INVASION FROM BELOW" and it's a fighting game. This is a bit surprising for me because there are some fun games related to LEGO CITY and I can't quite understand why they chose to add a LEGO HERO FACTORY game.



I expected some more LEGO related content. The look of the tablet is great, and the application is nice, but the LEGO related features stop there. No other LEGO applications, icons or skins are available, and it is a little bit disappointing. It's cool to have a tablet with the LEGO logo on the back, but I would have expected there to be more personalized features.

The tablet itself is perhaps a bit heavy for its size. Of course it is not a high performance and expensive device, so for me it's ok. The performance is enough to play, and run the tablet for most kid's use. Being Microsoft based makes the device somehow distant from the rest of the world, where most of the devices are Android or iOS based. But taking in to account that this tablet is kid oriented, and it has some connection with the XBOX, I don't think it's a big problem.

Besides the tablet, there is a small folder with some documentation about the tablet... and LEGO stickers!!! Cool! Moreover, there are two boxes, one with a charger and the other one with a USB cable.

The LEGO Energy Tablet 8" is a nice device for kids, and even for AFOLs. The device works quite well and as an added bonus looks cool. Windows is perhaps not the best choice but we can survive with it, and gives compatibility with PC and XBOX. The LEGO content is quite nice and I am sure kids will enjoy it, and will encourage them to find more LEGO related stuff on the net.

Thanks to Energy Sistem who lent us the device to test it  
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# Review: 21305 - The Maze

By Oton Ribic

Pictures by Oton Ribic and LEGO® System A/S



Without a doubt, the old-school mechanical mazes, where one had to carefully navigate a ball through a treacherous path, were among the most common items on the children's Christmas wishlists for decades. While nowadays less common in their original wooden form, thanks to the LEGO® Ideas programme they have recently been reincarnated as a new LEGO® set.

If you are familiar with the originals, the similarity of their LEGO® counterpart has surely not escaped you. The colours, the layout, the wheel controls at the sides, and even the rotating mechanism are precisely reconstructed, and offer the very same functionality. However, this LEGO version has a few other tricks up its sleeve.

## Maze architecture

Contrary to the bitter experience of Daedalus, building this maze is very enjoyable and simple. The entire model rests on a standard 32x32 baseplate, upon which two tilting mechanisms and a cradle are built. These mechanisms rely on a bit of Technic, and employ two tricks to make building them less prone to errors: they use varying colours at different sides (not visible once the model is completed), and there are many auxiliary internal parts that serve as guidelines for accurate spacing and positioning. LEGO actually went to great lengths to minimize any chances of confusing sides or gaps between the internal mechanisms.

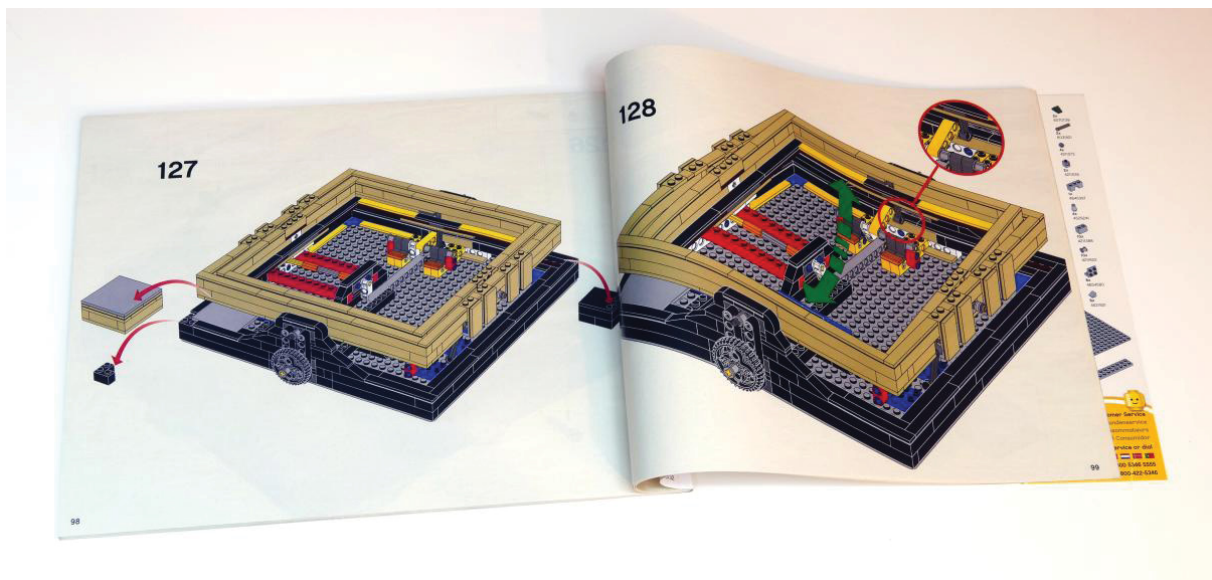


The set includes parts for two maps or “levels”, though they share some parts and therefore cannot be built at the same time — at least not using the supplied parts. One is a reconstruction of the old wooden mazes, while the other represents a small, cute fantasy setting in microscale including a little fort the ball rolls through on its way, as well as a tiny castle and a mill with a tiny water wheel. They are 24x24 studs in size and rest snugly in the cradle.



There is no ball return mechanism, hence the traps for the ball are not really holes, but just areas exposing the studded black plates underneath. However, they serve their purpose as they trap the ball anyway.

Apart from the maze itself, this set includes a small box for four supplied balls. It can be stowed into the side of the maze in a small cradle, and along with an additional little black cube, also serves as a blocker to prevent the maze from tilting during transport.



### So, let's play!

Once the last brick is in place, one can hardly wait to place one of the balls in the starting position and give the game a try. And let us say right away that, just like the wooden originals, this game is far from easy. It requires some coordination, thoughtful planning, and most of all — plenty of patience; attempting to scramble through the narrow passages and over the tiny bridges will invariably end in the ball being trapped.

Of course, the parts included are enough to create an almost infinite number of personalized levels, and if you combine them with your own parts, the possibilities are even higher. You can build your own levels - the real objective of any LEGO® set - and it wouldn't be a surprise if we will see in the near future hundreds of proposals from the community.



Fortunately, the designers of this set have avoided the pitfall of using the Technic gears for the tilting mechanism, because the minute backlashes between their teeth would probably make accurate movements nearly impossible. It relies on liftarms and ball-links instead, which offer adequate precision — there is a minimal amount of backlash, but it does not hamper playing in any way.

Nevertheless, not all is perfect. Before building the set, we were suspecting the creases between the level tiles may interfere with very precise movements. It turned out that they actually do not cause any troubles whatsoever, but there was another difficulty. Namely, the balls (part 72824) have two small yet existing moulding dents. For usual playing or Great Ball Contraptions these dents are too small to be significant, but here, if one is adjusting angles very slowly and accurately as it is often required, it is not uncommon for these dents to change the direction of the ball. Or worse, if the ball comes to rest on one of its dents, it is sometimes impossible to dislodge it even under full tilt — then the only “legal” way further is to shake the entire level and risk it storming around. A well-polished metal ball, though unconventional for LEGO®, would have made the precise playing much more reliable.

The only other slight criticism is aimed at the control wheels. They are, in fact, double-beveled Technic gears with 36 teeth. While undeniably common and usable, these gears are not particularly comfortable to hold for a while. Though slightly more expensive, proper wheels with tyres, such as 44293c01, for example, might have been a better idea.



### Raw materials

From the viewpoint of supplies, The Maze consists of 769 parts — it offers no particularly unusual or exotic parts, but in return comes up with plenty of generally useful building material. Most of it is in black and tan colour, with an amount of brown as well. There is a fine amount of standard one stud-wide bricks, of course plenty of 4x2 tiles both in tan and green, and a grey baseplate is a nice addition too. Although the 9-stud long axles are very common, its rare yellow variant, of which four are present in here, may be attractive for advanced Technic builders. The total weight of the model along with the boxes is slightly under a kilogram: 986 grams, to be exact.



The large instruction booklet is typically clear and generous at 140 pages, and apart from the instruction for the mechanism and the aforementioned two levels, it includes an interesting introduction about the designer and the original maze game, as well as three photos of additional levels for inspiration.



### Customizations

Thanks to the levels being easily interchangeable, this set is easily customizable to the extreme. Supplied parts suffice for building virtually any “standard” level consisting of beige corridors, walls and holes, and there is also enough to build any simple fantasy setting similar to the one in the instructions.

Of course, adding one’s own parts into the mix increases the possibilities even further. The ball can pass through any corridor with a flat surface which is at least two studs wide and two studs high, so the combinations are countless. There are many additional tricks possible, which have not been used in this official version — e.g. the ball cannot climb slowly over a single tile, but if given enough speed, it can.

Likewise, very narrow one-stud wide catwalks can be built, as well as mechanical contraptions and ratchets that allow the ball to pass in one direction only, collapse the path after it has been used, employ more than one ball at once, etc. The basic platform of the cradle and its tilting mechanism has been cleverly designed to allow as diverse level configurations as possible.[1]

The LEGO® community will undoubtedly come up with plenty of other interesting ideas, which may in time even go as far as holding competitions. For an even further level of customization, the very same concept can be relatively easily expanded to accommodate larger levels, resting on a 48x48 baseplate, or perhaps even larger.







#### To sum up

Altogether, our impressions of The Maze firmly lean towards the positive. It is certainly something completely different and a refreshing occasional departure from the more standardized theme sets. Easy to build, fun to play with and possibly among the most customizable sets ever launched by The LEGO® Group, it is an attractive set for many a LEGO® fan, and even after being disassembled it brings a substantial amount of universally useful parts.

True, we cannot overlook that the playability of the supplied ball should have been better. A more even, rounded ball would have made the gameplay much easier. But this is a relatively minor inconvenience in comparison to plenty of good time one can expect from this, somewhat unusual set. And after all, if you are ready to sacrifice a grain of purism, it can be solved by replacing the ball with a steel ball, a marble, or something of the sort.

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[1] as a matter of fact, the designer of the original maze, Jason Allemann has posted several suggestions for mazes on his website: <http://jkbrickworks.com/maze>

HispaBrick Magazine® would like to thank LEGO® for the set they provided for review. We can't guarantee they agree with our opinions on the set.

# Review 75098: Assault on Hoth™

All set to recreate one of the best scenes of the film *The Empire Strikes Back*.

By A. Bellón (*Legotron*)

Pictures by A. Bellón (*Legotron*) and LEGO System A/S

**Set:** Assault on Hoth™

**Set number:** 75098

**Parts:** 2055

**Contains:** 15 minifigs and 2 creatures.

Finally it is here, 75098 Assault on Hoth™ which recreates one of the best known scenes of the Star Wars™ saga; the assault of the forces of the Galactic Empire on the secret "Echo" base the Rebel Alliance has hidden on the planet Hoth. A UCS (Ultimate Collector's Series) Star Wars set that contains no less than 2055 parts and 15 minifigs.

Before starting the review of this set I would like to say that this set has generated enormous expectation and it is one of the most talked about sets I remember. If memory serves, the first rumours about this set started to circulate about a year and a half ago. The first thing that drew the attention was the fact that it was rumoured to be a UCS set, causing much speculation about what a UCS of the battle of Hoth might look like. After seeing the magnificent 10236 Ewok Village a new playset was anticipated. Many speculated that the set might include some of the interior of the Echo base or the the battle that raged outside it. The rumours were only increased by the continuous delays in the launch date and everything exploded when the contents of the set were finally announced. It has certainly been one of the most discussed sets of the last few years in the themes I normally follow. So let's have a look at the contents of this set.

Since the set is labelled as a UCS, as an AFOL I expect a certain minimum quality in design to justify branding the set as a UCS. The box is large, and from the description of the elements it is clear that this is a playset with different elements that make up the scene of the assault on the rebel base. The box is quite heavy - understandable in a set with more than 2000 parts. Inside it we find the different numbered bags, a few loose parts and the enormous instruction manual with stickers (!!), perfectly bagged to protect it.

The construction process is divided in the different elements that make up the scene, each of which has a different bag number.

The first bags are used to build the outside perimeter of the base and the defence laser towers as well as the imperial units that attack. First are my favourites: the imperial elements, an E-Web cannon with a curious construction with somewhat unfortunate new launchers which are so in fashion now, and a speeder bike which is very similar to the model that comes in other sets with 2 snowtroopers.

That's it! This is all the empire can summon in what looks to be a suicide mission. Next the outer perimeter is built with its towers and laser cannons. Comparisons are often odious and it is immediately obvious that the towers are quite a bit smaller than the ones that were in previous sets and that the laser cannon looks horrible with all this missile launchers. It is something I don't like for a UCS set. It is good that the stickers are numbered both on the sheet and in the instruction manual so you don't make any mistakes. To finish off there are three rebel soldiers to defend the perimeter and they are printed with the new colours. The printing doesn't look very good. There should have been two layers of print to ensure the print didn't look transparent but really white. These minifigs don't look very good.







The next element you build is the shield generator. It is built with a mechanism that allows you to blow up the shields. After building the shields and placing it besides the rest of the parts you can see it is really small. It is disappointing that this UCS playset doesn't include a more powerful (or larger) shield generator, especially since this is the first time there is an official LEGO model of this element.

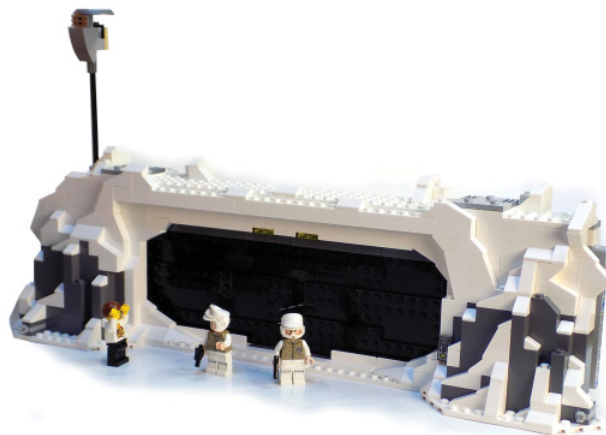


The next element is the landspeeder. This isn't a particularly novel construction either. Anyone who collects Star Wars sets will be able to tell you this is the 7th or 8th landspeeder they build and the whole construction process is very similar to all the other landspeeders in Star Wars sets. It includes the hook, the spoilers and the omnipresent missile launcher. If memory serves, at this point I found an error in the manual since the numbering of the stickers was wrong: sticker number 17 should have been 18. Talking of stickers, I now realise I have built several elements of the set and haven't encountered a single printed brick, only printed minifigs. Very strange for a UCS. At this stage two pilots are included and the printing of their helmets is very nice.



The next step is building the entry to the Echo base, the largest and most outstanding element of the set. It is a laborious building process, with many steps, and although it reminds me vaguely of other sets, this time it is much bigger. I also start seeing the first printed parts which means the set is beginning to earn some points. After finishing this construction the doors are adjusted and the mechanism for opening and closing the doors works perfectly.

As a final detail some positions for attaching defence weapons or the towers are included, as well as a watchtower! Ouch! It is exactly the same as the one on the Yavin 4 base. They have mixed up the bases! LOL. Finally two new minifigs are added, rebel soldiers with a different uniform.



So far we have built the outer perimeter and the entrance to the base. Now it's time for the inside of the base.

First up is the control structure - a small segment with some controls and the famous screens on which enemy ships that approach the planet Hoth are monitored. It is a pity this representation has been done with a sticker, because the sticker is much smaller than the element it is attached to and the edges of the sticker can be seen on the transparent background. The best part of this stage are the minifigs, 1 rebel officer and 2 droids. The trans black part that serves as the head of R3-A2 looks really good.



The next element represents the Wampa cave. At first I thought it belonged to a scene that had been cut from the film in which the Wampa gets into the rebel base and attacks the Tauntaun, but the Luke's saber stuck in the floor, the parts to hang Luke from the ceiling and the image of the Wampa with its arm cut leave no doubt: this is the Wampa cave. So why is it in the base? It is not a very realistic detail, contrary to what is said in the introduction of the construction booklet.



Anyway, it is a modular element you can place anywhere you like so it isn't a problem. The minifig that is included at this stage is Luke Skywalker and, of course, the Wampa.



A new element on the inside represents the area where the Tauntaun are stabled together with a small canteen. There is also a crane arm on rails that allows you to load and unload containers. Finally there is also a small transport vehicle. This stage includes Han Solo and a Tauntaun.



Finally you build the ion cannon. This construction is a little more complex than the rest, with different support systems using Technic parts, which allow you to move it and simulate a discharge. First the structure, base and mechanism are built and finally the panels which give the cannon its spherical shape. This has several snags. The first one is the size which is very small compared to the rest of the elements. The second is the mechanisms which don't allow you to cover the canon, leaving the rear open. And third the shape of the cannon is really extremely ugly. There are too many structures and mechanisms making it look ugly and there still isn't a lot of playability. In this case the minifig for this stage is a rebel officer.

The building process is long and takes quite some time so you'll be entertained for a couple of hours. After finishing all the steps you can put everything together. As far as I am concerned, the most interesting part of the set are the minifigs: no less than 15 in total.



To sum up, and as a very personal opinion, from the point of view of the standard fan or of a child, this is a perfect set to get all the elements of the battle of Hoth in a single set. These elements are mostly very similar to the ones that have appeared in other sets in previous years, except for the ion cannon and the shield generator. It is a very complete playset, with many minifigs that will provide many hours of fun for the little ones.



However, from an AFOL point of view, who sees this kind of details:

And who looks for something more in this kind of set the contents are disappointing. UCS sets are designed to be displayed as collectibles. Would anyone who has the UCS Super Star Destroyer, the Ewok Village or the UCS X-Wing put this set next to them? I certainly wouldn't because as a UCS I think this set is ugly and unattractive. The different scales make the structures look disproportionate and the launch elements that are present everywhere make the set look quite ugly. If you look at it as a Star Wars fan, the set isn't very faithful to the movie either, starting with the name which should be "Suicide Assault" because of the lack of balance between the forces in the set, especially compared to the movie. It is true that the set contains a lot of mechanisms,

making it quite playable, but UCS sets tend to have a finish that makes them stand out as desirable objects to AFOLs and in my eye this set lacks that. What stands out most is the selection of minifigs, which are abundant and in some cases very nice, but still doesn't justify calling this a UCS and placing it at the same level as the X-Wing (UCS), the Imperial Star Destroyer (UCS) or the Millennium Falcon (UCS).

HispaBrick Magazine® would like to thank LEGO® for the set they provided for review. We can't guarantee they agree with our opinions on the set

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# Review 21128: The Village

*Continuing to explore the world of Minecraft™*

*By A. Bellón (Legotron)*

*Pictures by A. Bellón (Legotron)*

**Set:** THE VILLAGE

**Set Number:** 21128

**Parts:** 1563

**Contains:** 8 minifigs



**It looks like** LEGO® is very invested in Minecraft™. This set has been one of the big surprises for 2016 because nobody was expecting it and it is not included in the winter or spring series. This set contains all the elements to build a village like the ones you can see in the Minecraft game. The set is quite large and contains over 1500 parts.

The contents of the box comes in different bags together with a booklet to build the village and another one for optional constructions, which cannot be built simultaneously, but can be added to the village. The village contains different structures representing a tower, a market an area to grow crops and

several buildings as well as lots of space to develop your game play in the village.

The building process is divided in the different elements that make up the village. All the elements are built in the same way as other sets within this theme, with plates on bricks as a basis for all the other elements. The set is divided into modules that can be built independently and after finishing all of them they can be put together to create the village. Each construction consists of a number of bags for that specific module and each module includes a different character from the game.

You start with the market, which is a simple build consisting of a stall and a small tent for the market. Next to it, you build a typical Minecraft tree that includes a hanging branch. There are also a number of loose blocks that help connect it to the other modules. The construction includes the minifig of the librarian of the village, who appears for the first time. It is a pity his legs are short so you can't move them. The next stage is building the forge. The structure is very similar to that of the game, with a flat roof under which you find all the elements of the forge. The construction includes



a mechanism that allows you to lift up the roof as if the forge were a box, so you can access the interior, which is quite spacious. This could of course also have been achieved with a simple lid-like roof, but the added functionality is welcome. This build includes Steve (once again...).

The next element you build is the house of a villager, the one with the library. As is standard in Minecraft, the building is very square. although nicely recreated. with walls that include the



classical designs you can see in the game. In addition, you can access the house by means of some hinges that open one of the sides. Inside the building, there are some bookshelves and some furniture, and a working door. Even though the walls are very thick, there is plenty of space to place a minifig inside. This is also when you build Enferman.

Up next is the tower module, which contains a small mountain area with snow and part of a river. The tower is a simple



structure you build on top of the mountain. The top level is a balcony. The character for this stage is an iron golem, which is built with many articulated parts so it can adopt many postures.

Then there is the area for growing crops, which also includes an enclosure for animals. The space is quite large and a simple build, but it includes some curious details, like carrots



in different stages of growth and a mast with torches. This part includes a farmer and a pig.





The next module is the well. It is placed on arid soil, contrary to the rest, which is very grassy. There are very few decorative elements. Just the structure of the well and some plants. It also includes Alex, a creeper and a piglet.



Finally, there is a module with a new house. The design of the house is very similar to that of the house I mentioned earlier, with a side that opens on hinges. This house only contains some furniture, but there are two doors, one front door and another which gives access to small terrace. It comes with two minifigs, a zombie and a zombie villager.



After building all of the elements, you can put them together using the extra blocks to build the village. The set takes up quite some space, and is very playable. There are many and varied structures that allow you to play and recreate a Minecraft village. Although there are many modules of very different styles, the building process is quite fast.

My personal opinion of this set? I simply love it! I am not a Minecraft fan, but this set is brilliant. It contains many structures: 3 buildings, 2 structures, a desert area and another for crops and 8 minifigs, 2 of which are animals. Despite the fact that the set simulates square world of Minecraft, with thick-walled buildings, all the buildings are playable and the interior is large enough to be able to place several minifigs as well as furniture. I would love to see something like this in medieval, Western or Pirates themed sets, instead of micro-constructions with a single wall and no space to play. In addition, the areas between buildings are quite wide and allow for easy play because of the space. That is not to say there are no outstanding details. It is a Minecraft set and so it includes some of the typical elements of the game, like material blocks, bookshelves with books, furniture, plants etc. In addition, the instruction booklet contains additional designs you can add to the village in case you have a second set. Since the modules are compatible with the rest of the sets in this theme you can build huge scenes. As for the parts, they are simply great, all bricks and plates - the most useful parts for any type of construction. There are also a couple of new parts, like the Plant Flower Stem with Bar and 6 Stems (Dark orange) and the Plate Modified 1x2 with Minifig Head Post (white) which will surely allow for very creative uses. The set doesn't include any stickers and there are many printed parts with the classical design of other Minecraft sets. As for the minifigs, although the same minifigs are repeated for the umpteenth time (Steve, Alex, a zombie and a creeper) there are also 4 new ones including Enderman and some villagers. The only downside to the set is the difference in shade between printed and unprinted parts, which stands out quite a bit. But aside from that little detail, this is a really good set.

I would like to thank LEGO for providing this set for review. This opinions in this review are of course entirely my own.  
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# Presentation: 71012 - LEGO® Minifigures Disney™ Series 1

By HispaBrick Magazine®

Pictures by LEGO® System A/S

At the end of every year, rumours of the following year's sets being to surface, and arguably one of the more exciting ones are the collectable minifigures. After two years of Simpsons minifigures, we expected the same for the following year. A third year of Simpsons? Why not? There are still plenty of characters that could be reproduced in LEGO®. But it was something surprising when we saw included in the list of rumors "Disney™ Minifigures".





We all are aware about the partnership between Disney™ and LEGO®, and there have been a lot of different Disney characters included in various sets over the last few years. Normally they are related to films you could see in theaters or dedicated themes like Disney Princess... So, what could we expect from this new CMF series? A compendium of these minifigures? The answer is a big NO! There are only two repeated minifigures, and strictly talking, only one. Let's take a look at them. There are 18 minifigs. They are grouped in 8 "couples" and 2 single characters related to the following film or cartoon:

- Mickey Mouse
- Donald Duck
- Toy Story
- Alice's Adventures in Wonderland
- Peter Pan
- Aladdin
- The incredibles
- The Little Mermaid
- Lilo & Stitch
- Sleeping Beauty



It's a nice mixture of classic and modern characters. This means that with this collection, LEGO can satisfy the expectations of all fans (and non fans alike, my brother is already asking for a Donald Duck minifigure). The quality of the new parts (up to 20) is superb and LEGO has been able to keep the proportions of the characters, even if they use standard LEGO torso and legs. This was one of my concerns before having them in my hands, mainly because at that moment there weren't pictures available on the internet.

For those who use the "feel proof" technique to search for figures, let me advise you: You have a problem! I have opened all minifigures from Series 3 "feeling" the bags with perhaps 2 or 3 mistakes, but this time it took me so long to identify some of the minifigs. They are a little bit more difficult compared to other series. But I am sure you will succeed! Be patient...

#### **Mickey and Minnie Mouse**

They are Disney's most iconic figures, and one of the symbols of the brand.



## Donald and Daisy Duck

The collection wouldn't be complete without the second most iconic couple in the Disney™ universe.



## Buzz Lightyear and Alien

Although both have already been released in the Toy Story line, Buzz has a standard minifigure head, instead of a custom head, and both figures have new and more detailed prints.



## Alice and Cheshire Cat

Alice is the main character of Lewis Carroll's novel. The work done on this figure's hair mold is great. There are many characters that could go along with Alice, but Cheshire cat is, in my opinion, a good choice due to his importance in the story and his big smile :D



## Peter Pan and Captain James Hook

Another classic tale and Disney film. The boy that didn't want to grow up is reproduced in his classic green clothe, and his recognizable hat. Captain Hook, Peter Pan's nemesis, has a single huge mold for his hair and hat, and has a hook for his left hand.





### Aladdin and Genie

Characters from the One Thousand and One Nights' folktale Aladdin and the magic lamp, they both have the magic lamp in their hand. The Genie has a new hair piece with ears and a hole to add the plume. Aladdin's hair piece also features his small red hat. The colour of Aladdin's skin is more reddish compared to flesh colour, this, so as to give him a more "Arabian" look.



### Mr. Incredible and Syndrome

These are the more simple minifigures of the collection. They are both regular minifigures with special pad printing and special hair. They both include as an accessory a 2x2 printed tile. Despite them being the more simple looking figs, they still look "incredible"



### The Little Mermaid and Ursula

Although the little mermaid was reproduced under the Disney™ Princess license, we now have the minifig version of the character. A new hair piece and the mermaid tail both make Ariel a must have figure. Together with her, we have her enemy Ursula who converts Ariel into a human in exchange for her voice. Ursula sports new tentacle legs, head and arms in light purple and white hair.

### Stitch

An accident with his spaceship lead Stitch to Earth. His name is actually being 626, but Lilo adopts him as a lifelong friend. In doing so, Lilo also gives him the name Stitch. The head of Stitch is another great part that can be found in this series, with big ears and eyes. He comes with short legs and without any accessory. What makes me be a bit confused is why there's no Lilo minifig.



### Maleficent

The last minifigure also comes alone. Maleficent is the Queen that wants to kill Sleeping Beauty because she can't bear that Sleeping Beauty is more beautiful than her. This minifig has a new hair, reproducing very well the film character. The expression on her face is also noticeable. The accessory included with Maleficent is her signature staff.

This CMF series is the result of the increasing (and sometimes annoying) partnership between LEGO® and Disney. The good news is that, after Fabuland figs, we could have again Mickey Mouse and other classic characters, together with other iconic (classic and modern) characters of the Disney world. The reproductions of the different characters are extremely well done and the pad printing work is fantastic. I only don't understand why there are two figures without their complementary character, but perhaps this means that we have to wait until May of next year to get Disney CMF Series 2.

HispaBrick Magazine® would like to thank LEGO® for the set they provided for the presentation. We can't guarantee they agree with our opinions on the set

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# Review: 71011 - Collectible Minifigures Series 15

By Jetro

Pictures by LEGO System A/S



When the Collectible Mini Figures (CMF) series started, like many other AFOLs I wanted to have them all, a complete set, to put on display in some corner of my already overcrowded LEGO room. As the successive series came out I tried to keep up with the new releases, but after 7 or 8 series I decided enough was enough.

I've tried not to look at the next couple of series to avoid more impulse buying and that worked for a while. For series 15 I got to share a full box with some friends and we decided to do so over a few drinks, while trying to work out what was in each bag. No "cheating", no bump codes or other tricks, simply feeling the bags (and in the reassuring knowledge that a full box will render three complete sets).

I don't remember enjoying any of the previous series quite as much, simply because of this experience – if you haven't experienced the sensation I can recommend it wholeheartedly.

So here is what I felt, and what I think of each minifigs after taking it out of the bag:

Feeling for parts requires some skill and training. Figuring out parts to feel for (and what parts to ignore since they are in most sets – legs, torsos, heads, the tile/plate) takes a while at first the bags feel rather stiff. It takes some time to learn how hard you need to squeeze and kneed the bags to figure out what's in them. As a result, the easiest minifigs to locate is of course the one that has the largest piece of them all, a huge petticoat:



## 16 – Queen

Lady broad hips. Oddly enough, the most defining part of this fig is the one I like least, but the double cape, and especially the ermine top cape, combined with the new hair really make this fig interesting. The hair piece was already available in one set, but in yellow, and looks much better in dark orange.

There's another unmistakable and large part in this series. It is very long and you can easily feel the tail of:



## 13 – Shark Suit Guy

You just gotta to love those flippers! This is one fun minifigs, and it even comes with an alternate face expression. Still, after the first few laughs, it's not a particularly useful one...

Another easy part to locate is the large net in:

## 8 – Animal Control

Do you have kids? The second I saw CMF15 I knew which figs mine would absolutely love, and the animal control girl is one of them. The fig itself is not especially interesting – it reminds me of the zoo keepers in the Duplo sets we have – but the net and especially the skunk, now that's a whole different story. Usually it's the Friends sets that have the cute animals, but this CMF is a great addition to our collection of animals. Talking of Friends, we've had The LEGO Movie, Simpsons and Disney CMFs, when can we expect a Friends series? That's one CMF set I'd get a full box of!

Getting smaller, but still quite large is the pig. It is roughly the same size as the skunk in the previous bag, but the absence of the net means this must be:



## 1 – The Farmer

At first glance the only thing that really stands out is the hat; a new design that includes a small hole for a feather in the top (or a crown, whatever tickles your fancy). The brown spots on the pig also add some diversity to the farm available animals. Upon closer inspection I was delighted to see the checked pattern of light and dark green on the arms, which is also present on the front (though almost completely hidden by the dungarees) and (more clearly) the back.

The next fig I found I recognised, not so much because of the size of the part, but because of the curious and characteristic shape of a great new minifigs accessory, the crutch:

## 4 – The Clumsy Guy

The perfect minifigs to add some backstory to a large layout. The crutches are a great addition to the minifigs accessory palette and the fig is full of nice details. I love the fact the plaster cast is signed and in two different colours to boot. The bandage on the head is nice and the black eye and Band-Aids on the cheek complete the story. The finishing detail is the banana peel on his t-shirt. A brilliantly executed minifigs!

It took me a while to find the next one, mostly because I somehow almost discarded the large flat shape of the tutu as being too similar to the large tile, but once I realised there were two hole in the centre I knew I had found:



## 10 – Ballerina

At first sight this fig is extremely simple. At first the tutu appeared to be the most interesting part in the set, but then I realised it wasn't just a glimmer I had seen on the hair piece, but actual printing. The delicate flower pattern is beautiful!

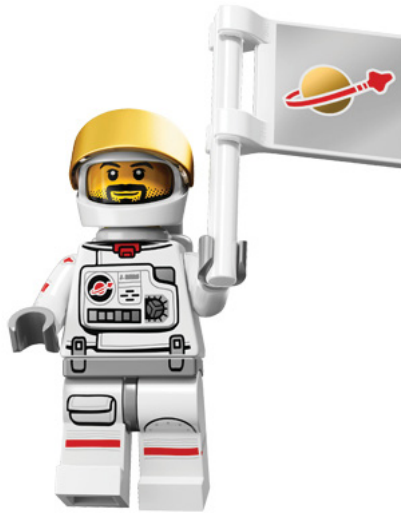
With my fingers getting more dexterous and locating parts becoming easier and easier I set out to find a very specific fig. I still remember my first Space set and the characteristic feel of the oxygen bottles and so it was quite simple to locate:



## 2 – The Astronaut

The space classic flag is iconic, but between the splurge of printing on torso and legs and the gold visor the minifigs looks decidedly modern. It doesn't fit in with the recent City Space and Space Port themes though which uses very different helmets.

If you can find oxygen bottle, a neck bracket shouldn't be too hard to find either... oddly enough the baby was really hard to locate, because (at least to me) it felt very much like a head, but I stumbled upon the bracket in no time and located



## 5 – Tribal Woman

Are we trying to be so politically correct we can't even name things by their name? Anyway, it's nice to have another addition to the Far West MOCs and displays. Even more interesting is the baby she carries, wrapped in a cloth. The official image shows her carrying the baby in her hand, but the minifigs comes with a neck bracket with back stud to carry the baby on her back which looks really good.

The order in which I found the rest of the figs depended very much on chance. I set out to find the janitor, but found a stick that was too short. Further inspection showed the legs were somewhat oddly shaped and to I knew I had found the:

## 7 – Faun

Another favourite of mine. As a musician I appreciate the printed bar that serves as a flute, and the legs are a really nice design. The hair-piece with horns is also very nice and I can just see him tucked away in some little corner of a medieval layout.



The next fig was of course the one with the much longer bar, the:



## 9 – Janitor

The characterisation is spot on: the sad moustache, the cloth hanging from one of the pockets on the trousers, and, most important of all, the cleaning mop. I love the fact that you can attach the mop in both directions, either to clean the floor or drooping down the stick, although in the latter position the first one we opened didn't fit very well and was a little too loose for comfort. As in other minifigs in this series, the short sleeves on the short feel a bit incomplete. I think a black line delimiting the sleeve from the arm would have looked even better. Still, I like the variety the short sleeves bring.

Next up I located the trophy as well as some very broad long hair....

## 14 – Wrestling champion

Not my kind of fig, but I can foresee some really nice scenes with mullets :D

Two of the figs have quite elaborate shoulder pieces and I was wondering whether I'd be able to distinguish between the two. It turned out to be quite simple to find the rounder shape of the:



## 6 – Flying Warrior

"Aztec god" was my first impression. I'm sure there will be some awesome MOCs that are perfect for this fig, but despite the Mr. Gold look of the fig, to me it screams Ninjago – not my cup of tea.

And right after that I found the straighter version for the:

## 11 – Laser Mech

Honestly? Meh.

Aside from the helmet, the real giveaway for the next one were the two thin flexible swords of the:





## 12 – Kendo Fighter

This fig reminded me of the Samurai Warrior I got in series 4, but didn't quite touch the same soft spot, possibly because the Samurai felt more like a historic figure, something I relate to more. Even so, the printing on the torso is really delicate and fits in nicely with the Japan theme.



The piece that stood out next were the three prongs of the grappling hook. Once you lock onto that it becomes quite easy to locate the:

## 15 – Jewel Thief

Another fig I love! At first sight the torso and legs don't look that special, but the dark blue printing on the black background is really nice. Even better is the hair piece – this new piece (new from 2015) was already available in dark orange, and now also in black.



And finally the fig I had been looking for from the beginning, but which, out of sheer (bad) luck, turned out to be right at the bottom of the pile:

## 3 – The Frightening Knight

I'm always game for a new knight and this one looks particularly fierce. I especially like the shoulder pads and the weapon. I expected it to be a single piece, but it turns out it consists of a bar and rubbery ball with spikes. Possibly my favourite minifigs in the whole set.

How many would I like to keep? Well, if you've read all the way through the review you would have a pretty good idea. I had some good fun feeling for the figs though and I think overall the series is quite interesting, even if I won't collect them all - I look forward to testing my skills on some more bags...

HispaBrick Magazine® would like to thank LEGO® for the CMF 15 series they provided for review. We can't guarantee they agree with our opinions on the series.

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# 76052-1: Batman™ Classic TV Series – Batcave

By Jetro

Pictures by Jetro and LEGO System A/S



Batman is back in glorious 60s style and in a large 2526pc set that includes a total of 9 minifigs. Is it a collectors item? A playset? Or is there too much nostalgia for either option? This review will (hopefully) give you the answer.

Even though I wasn't even around when the original Batman TV series aired in the 60s (January 1966 to March 1968), the iconic images of Batman and Robin chasing villains in loud colours, accompanied by large speech bubbles emphasising the power of their punches are still etched in my memory from the many reruns of this iconic show. As a result the 76052 Batman Classic TV Series Batcave is instantly recognisable, if only because of the classic lines of the Batmobile – they don't make cars like that anymore.



Today's Batman is a much darker knight, but even so, the colourful lines of the original TV series as represented in this set have an instant appeal, and not only those of us who saw the series on TV. I wanted to know if it was just my memories that drew me to the set (despite not being much of a super heroes fan, at least not when it comes to LEGO), so I sat down with my kids to build the set together and see what their reactions were.

The instruction manual for this set is one hefty volume. On the one hand this has the important advantage that it is less likely to bend and deteriorate inside the box. The plastic film that protects it is also very helpful in this sense. On the other hand it has the drawback that only one builder can use the book at any given time making a group build a little more complicated. Fortunately LEGO instructions are now easily available through the website which has also recently been revamped and finding and accessing the right instruction manual is now even easier than before.

Of course the main interest of my kids were the minifigs that appear at different stages of the building process. Batman is instantly recognisable, even for them, although my 5-year-old wanted to know if one of his super powers is looking with his forehead: the slit in the mask Batman wears is at that height. I did not provide too much information about who is who and what each character is about and I found my kids came to some interesting conclusions: after learning Bruce Wayne is in fact Batman, they thought Alfred must be the daytime version of the Joker, seeing as they have the same hair, only in a different colour. They were also pretty sure Catwoman must be good and the rest could be persuaded to behave – if you hadn't guessed it by now, both my kids are girls :D



The building process starts with the Batmobile, which we found to be a thoroughly enjoyable build. Despite having studied the images on the box, it turned out to be considerably larger than we had anticipated. With 8 studs in width and a length of 26 it certainly is a massive vehicle, but it certainly doesn't feel too large and fits in nicely with other elements in the set. More about that later. A particularly cool element are the two blaster/shooters on the hood, adding some extra action to the model.



The next stage turned out to be more interesting to me as an AFOL than to my kids. Building the large structure that holds the study on top seemed like a tedious and boring task. While some of it wasn't particularly inspiring, it turned out to be a lot more interesting than I had expected. The image that stuck in my mind from the first time I saw the set was that of lots of tan structures and some accents in the shape of vehicles, minifigs and scene elements (mainly the power plant and the study). What I had somehow completely missed is that backside of the "study-structure" is actually the façade of Wayne Manor. It was very interesting to see how much of the structure is built as vertical plates, with windows built in bricks in the usual direction. Some of the bricks used in those windows structures are later completely hidden, which made me think a more simple, "cheap" solution might have been used, but the tile and plate mosaic conveys the impression of a brick building with relief very well.



The structure also houses our favourite play element in the set: the 32-long spiral poles Batman and Robin use to descend from the study to the Batcave. A simple Technic mechanism is used to create a platform for each of the superheroes. The structure of the cave almost hides them so when you pull on the lever for each of the platform they suddenly appear flying down the pole.

Next up is the study, which is very nicely decorated and full of little play elements. The desk with the red phone, the bust that hides the button to open bookcase that slides to one side reveal the top of the poles our masked friends use to access the Batcave.

There is no connection between the twisted poles and the study, which is actually a plus. This way Bruce and Dick can go to their respective poles behind the bookcase and "disappear", to emerge as superheroes entering the Batcave.

Aside from those play elements the study also contains the portraits of Bruce's parents with lamps on either side, made with the new "nipple" tile in pearl gold: a very nice use of this new element. Another fabulous new element is the 1x4 brick with sand green wallpaper print – no less than 16 of these are used giving the study a very special feel. All in the study is an exquisitely detailed build and stands in stark contrast with the sober base it is built on; a great way to compensate the boring part of the Batcave structure. This is a recurring feature in the set, in the sense that less interesting structural builds are alternated with more attractive details, like the study, the power plant or the Batcopter.



On the whole, the structural parts of the build are relatively quick and uneventful. They contain a considerable number of Tan supports 2x2x13 (16 in total) and lots of Tan and Dark Tan plates, wedges and slopes, in addition to a few BURPs that are all used to create quick, but reasonably interesting shapes to outline the walls of the Batcave.





The power plant has an 8-sided core (based on a 4-sided core and using hinges to add 4 more sides) and uses lots of brackets to add on to it in different directions, adding a lower level platform that reminded me of the Doctor Who playset and a sturdy top with orange trimming, each with ringed with sand green fences that again provide a beautiful contrast. The sides of this part of the cave are built with the help of BURPs that could do with some more detailing, but the number of computers and other control elements (all with stickers) more than make up for it.



The final structural element is the helicopter platform.

The level of detailing on the pillars that hold up the platform is especially attractive in this part of the build, but the structure is otherwise pretty boring and uneventful. A nice detail is the fact that there is a kind of road/parking area for the Batmobile under the helicopter platform.

The final touches of the set are two more vehicles, the Batcopter and the Batcycle and a well-equipped lab. Initially I was a little disappointed with the use of one large piece for the landing gear of the Batcopter. However, despite the odd collection of parts used, the finished model looks very good (wings included!). The piece de resistance for me is the Batcycle. It uses a new top that gives it a cool vintage look and the spare wheel on the back of the sidecar is another great detail. The different lab elements (shelf, computer, lab stand on table) add a lot of play to the set, but they don't have a particular place in it: they are simply a bunch of accessories that don't "fit" anywhere. They are really nice and detailed, but I prefer sets that are more "tidy".

The final verdict? Lots of nice details, an interesting lesson in the use of vertical plates, a cool façade and a lovely study. Aside from that and the very recognisable vehicles, the rest of the set is really lost on me. The power generator uses nice techniques, but I had a hard time answering my kids' question "what is it for" (as in "how do we play with this?") and the large number of tan and dark tan elements will no doubt find their way into other MOCs.

As always, your mileage may vary...

I would like to thank LEGO for providing this set for review. This opinions in this review ar of course entirely my own.

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# Exhibition of LEGO® constructions at the XIV Collectors Fair in Mungia

By A. Bellón (Legotron)

Pictures by A. Bellón and Fernando de Quintana



The XIV Collectors Fair was held on April 2 and 3, 2016 in Mungia, Vizcaya, organised by the association of collectors Bitxikiak ([www.bitxikiak.org](http://www.bitxikiak.org)), in collaboration with the local municipality. As in previous editions, HispaBrick Magazine celebrated its usual encounter, including an exhibition of LEGO constructions.

Although there were many incidents during this edition, the exhibition was a success due to the willing collaboration of the participants. This year the star of the show was the Technic/MINDSTORMS section which grows year after year, and included a GBC display, RC MOCs and a plotter made with LEGO parts. In previous years the lack of exhibitors in this area limited the number of elements on display as well as the time that could be dedicated to making the work and as a result the interest this year was beyond all expectation.

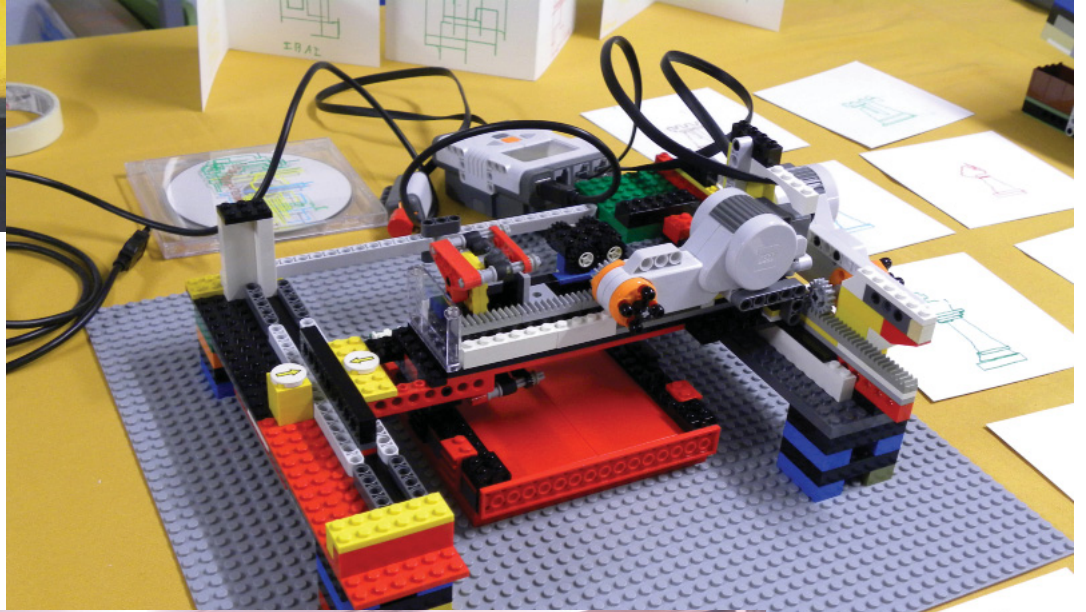
The habitual City display, which usually attracts a lot of visitors, had to be substituted with an improvised section that included 3 historic buildings from the town of Mungia in its surroundings. These buildings also drew a lot of attention because of their level of detail and size which made them easily identifiable.

The rest of the exhibition was comprised of constructions from several themes, including Winter, West and a Tyrol village. In addition there were the usual Star Wars displays, among which the Imperial Hanger stood out.

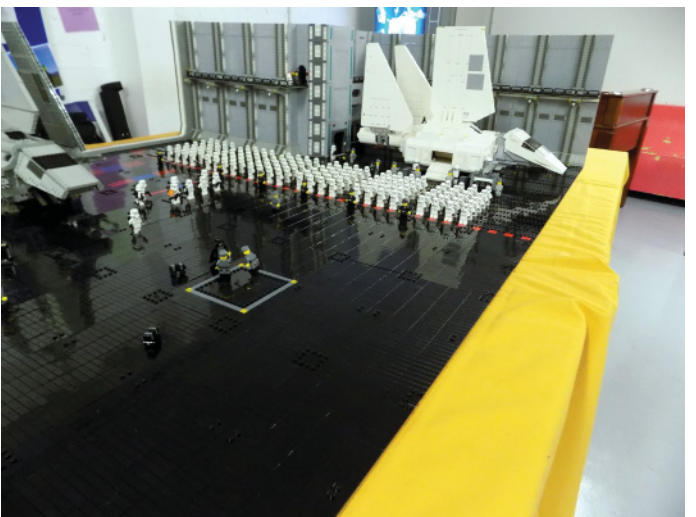
As in previous years, we are grateful for the excellent treatment we have received from Asociación Bitxikiak, which has done everything in its power to provide us with all we needed for our activities.

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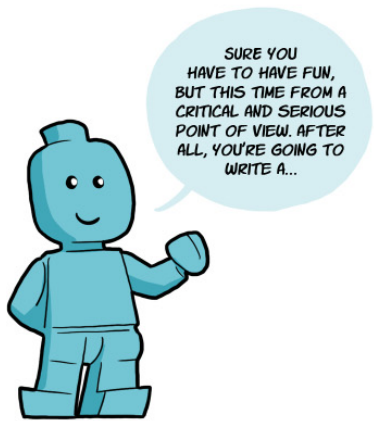




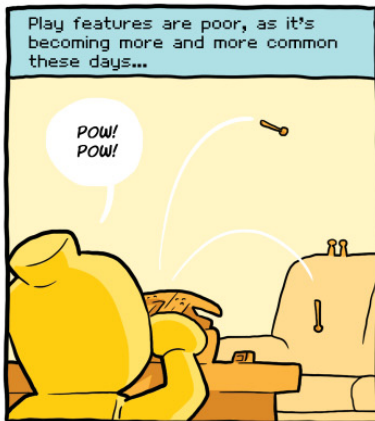
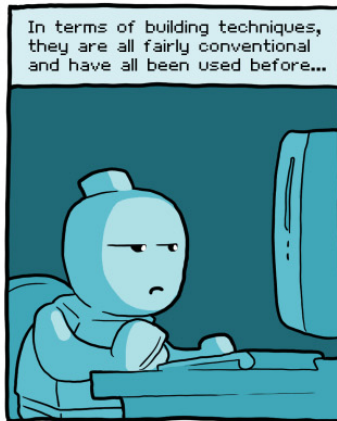
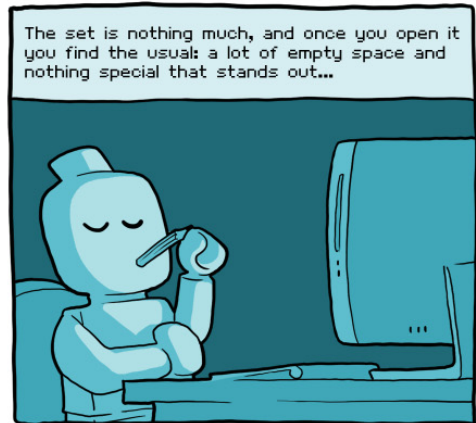








## REVIEW





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ISSN 1989-0982



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