

# FAN CLUB NEWS

## fischertechnik

EDITION 02/2018



### PAGE 2: CURRENT

fischertechnik Team gets the World Champion Title



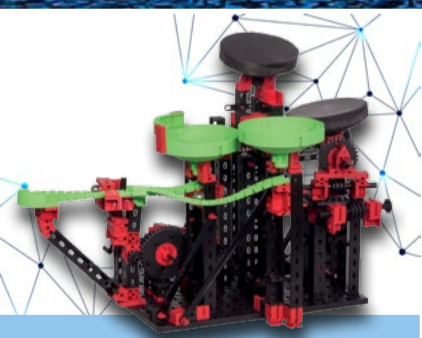
### PAGE 3: CURRENT

Fan Club Day 2018



### PAGE 4: NEW

Smart home



### PAGE 7: BUILDING MANUAL

FAN CLUB model:  
Double Trampoline

## Award for fischertechnik

### Nominations for Dynamic XM and TXT Smart Home

Our PROFI Dynamic XM building set was nominated for the "TOP 10 Toys" for 2018. We are very excited with the nomination because the new Dynamic building set is really a great product. The Dynamic XM brings pure action in the children's room. The balls are catapulted on the trampoline, bounce off in the air and then land in the collecting bin.



You can see on page 4 why the ROBOTICS TXT Smart Home building set shall win a prize. And it's not just we who think this, but the technical jury of the Golden Rocking Horse Award (Goldenes Schaukelpferd). The new fischertechnik building set was nominated in the Games and Technology category for the Golden Rocking Horse.



## Get ready for Christmas time

Christmas is approaching and the production is already running in full blast at fischertechnik. For all the gifts to be under the Christmas tree on time, our employees are producing fischertechnik building sets and fischerTiP buckets in three shift operation round the clock.

If you should still have some space on your wish lists, we have just the right product for you! The building set TXT Smart Home playfully ushers you in the world of Internet of Things. Six constructible models allow you to design your home to be smart. Temperature, air quality, brightness etc. in your home can be measured with the help of various sensors. Using a movable camera, you could also look into rooms even when you are outside. But our fischertechnik TXT Smart Home can do a lot more. We have combined further information and all the important functions for you on page 4.



## HELLO DEAR FANS,

A great and successful year is coming towards the end. In Canada, the fischertechnik "Miaoli" Robotics Team from Taiwan came out on top among 4,000 other participants and won itself the gold medal (page 2). Similarly, the fischertechnik Fan Club Day was a great success this year, which attracted around 1,200 visitors to Tumlingen (more about on page 3). I was especially pleased with the message from Hans Schlüter, an almost 90 year old fischertechnik fan. He narrates his impressions on the structure and handling of our

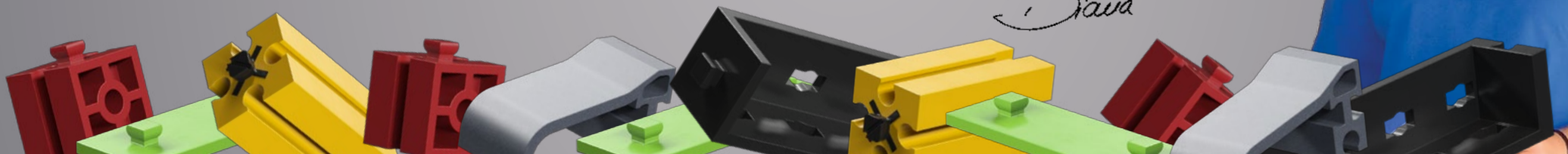
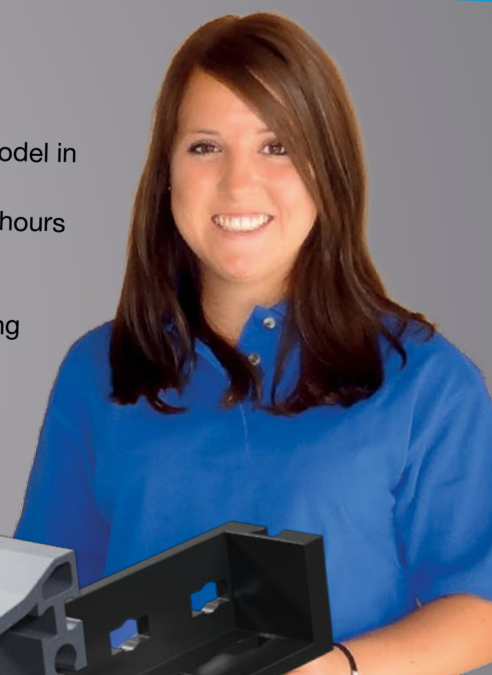
3D printer in his report, on page 3.

Naturally, you will once again find a new Fan Club model in this issue. Our fischertechnik Junior developer and vacation intern Roman Budde tinkered and build for hours on a double trampoline.

Hope you have a lot of fun while browsing and reading through the new issue of the FAN CLUB News!

Your Diana

*Diana*



## fischertechnik Team gets the World Champion Title

### ROBO Cup WC 2018 in Montreal, Canada

The ROBO Cup World Championship in Canada this year was especially thrilling. 4,000 participants from 35 countries fought to win, and all had their impressive robots in tow. There were 5,000 robots of all types to be marvel at and assessed. Naturally you could also find many fischertechnik robots - particularly in the Junior League. There were three categories there: On stage robots, rescue robots and soccer robots. Most of fischertechnik team's robots were rescue robots. There were inspiring applications and functions to be admired. Anyway, two teams - equipped with fischertechnik robots - Achieved amazing success:

**The "Miaoli" Robotics Team from Taiwan won the world championship title – "Super Team World Champion" – in the RoboCup Junior RESCUE ROBOT League.**

Wow! And heartiest congratulations to the team! The team, which exclusively used fischertechnik components right down to the caterpillar tracks was supported and sponsored by our long standing school marketing partner KOTEC Co. Ltd. in Taiwan. In order to participate in the WC in Canada, the team "Miaoli" won through the annual fischertechnik Robotics Cup in Pingtung, Taiwan in the first place against around 100 competitors.

**Another team, which boasted great success at the World Championship this year is the Croatian fischertechnik Robotics Team.** It is already active since 2005 and is represented since 2011 in the European and international RoboCups. The boys and girls from Croatia participated with three groups in various categories of Stage Novice, On Stage Advanced and Rescue Line, exclusively with fischertechnik components and our RoboPro software.

The numerous robotics workshops, which took place all over Croatia around the year have paid off: The team from Croatia could go home from RoboCup with two gold medals in their kitty.

We congratulate the participants for this as well!

We are already excited about the RoboCup WC 2019, which will take place in June 2019 in Sydney. We already wish all teams good ideas and a lot of fun in the preparation and cross our fingers!



*The RoboCup Federation is a renowned international scientific initiative with the aim of promoting the state of the art smart robots. In the founding in the year 1997, the mission was establishing a team of robots which would be in a position by the year 2050 to win against the human soccer world champions. The association has this dream even today, but the necessary technologies to realise this pioneering project in the artificial intelligence require not only a lot of commitment, but also much investment in research and development. The RoboCup Major League (college/university students) and the RoboCup Junior League (school students) are generally different.*



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## MINT Vacation camp in Karlsruhe

### Great atmosphere and many ideas

Well? What is that in the sky? High above the roofs of Karlsruhe, a drone made of fischertechnik components soared in the Whit holidays. Many pedestrians wondered about the flying object. But as soon as you turned around the corner, the puzzle was solved: The MINT vacation camp took place in the Karlsruher Gartenschule from 31.05. to 02.06. There was quite a lot to marvel at for the school students interested in technology: a cool model exhibition of our fans with over 60 large-scale models, which could even be automatically controlled or programmed to a certain extent. For example, you could see a Carrera track, which was controlled virtually via cloud – we had never had anything like this before! The 3.50 m high aeroplane carousel was also a real eye catcher. It was almost as if you were at a fair.

If you weren't there, you have missed something:

In the gymnasium of the school, you could actually build and construct to your heart's content with fischertechnik. And you could take part daily in new workshops – for example, on the topics of pneumatics, static or programming. The well attended courses invited participation through many practical exercises. Incidentally: A huge (17 meter long) truck of the fischer Group was also at the site. You could also find a fischertechnik exhibition as well as informative trainings inside it.

On the whole, you could say: The event was a total success for all those involved and they had enormous fun!



# Technology is exciting at any age

A report by Hans Schlüter

We fischertechnikers are always very happy when we get reports of experiences from you. Nonetheless, this one made us especially happy: Hans Schlüter reports, what drove him to set up and test our 3D printer. What's special about it: He is almost 90 years old.

"What drove me, a no longer a young, rather an old man, to assemble and operate the new 3D printer of fischertechnik?" I always try to have an interesting, perhaps even important occupation. After I discovered the new 3D printer in a fischertechnik catalogue and got to know about the "modern printers" on the internet, I had found my new occupation: I wanted to assemble the fischertechnik 3D printer. Printing something with it was however not my intent, initially. Rather, I wanted to know whether I was still up to the challenging task of assembling. Of course, it came out completely differently. My new forward looking hobby was soon known among my circle of friends.

Print samples such as the vase with small flowers or the small box for candies were and are gladly accepted as small presents. In addition, we always had an interesting topic on which we could philosophise.

The set up went much better than was initially imagined.

The building manual turned out well. The setup is sub divided in around 60 small modules. I cannot remember of any problem areas while setting up the framework. In spite of the smooth push fit of the components, fischertechnik has accomplished a very stable structure.

I screwed the printer on a strong wooden board and set it on a turning platform. I find it rather practical.

After the assembly of the "hardware" are the software settings on the PC, which are equally well described in the instruction booklet. It is surely a

child's play for the generation grown up on computers.

At the beginning I thought that I had to constantly observe the print progress. I broke the habit very soon. If the first printing conditions have worked, the system independently completes the printing of the model.

The filament roles should not be stored in humid air.

A discarded steam cooker, filled with a pound of drying agent from the chemist's is a good storage place.

I did not shy from sending questions to fischertechnik service by email.

I received very prompt and competent answers. In case of problems, fischertechnik always helps you happily. The occupation with the fischertechnik 3D printer has been a great source of joy for me."

Hans Schlüter

Tanks a lot Hans Schlüter for this great report on your experience!

We are very happy that we could introduce you to this forward looking technology.

A further proof that technology can be exciting at any age.



## Fan Club Day 2018

1,200 visitors visited our locations Salzstetten and Tumlingen

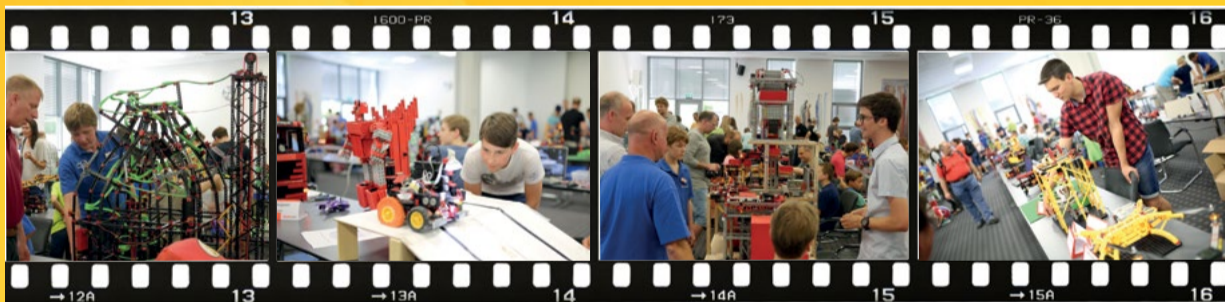
To put it in a nutshell: You guys are awesome! The fischertechnik Fan Club Day this year simply floored us all. Together with you, we spent a lovely day with blue skies and the best spirits.

The Fan Exhibition was once again the crowd puller: Many of you arrived with well packed and partly dismantled models.

On the Friday evening, a total of 90 lovingly constructed structures were then unpacked and staged for the rush of visitors on the following day.

An eye-catcher was for example, a R2-D2, true to the original, which ran through the exhibition hall and distributed candies.

For all those who could not be there: It is absolutely worthwhile to take a look at our After movie once. You will be elated.



Apart from the exhibition, there were also pretty cool programme items: For example, our fischertechnik production. Anyone who wanted to assemble their own building set had to get into a long line. The elements of the dream building kit had to be then placed in a wooden board with a jig and weighed. If the number and weight were right, the elements went in the folding box.

You were naturally also curious about everything new that we would pull out like rabbits from a hat in this year: Our product innovations were all exhibited as were our new factory models, which we use in industrial operations and universities.

Which of you is eSports fan? This was also a feature of the fischertechnik Fan Club Day – you could play FIFA with VfB Stuttgart eSports professionals and kick like a pro on the virtual field. Incidentally, memories of the day brought about a photo box, in which you could have your pictures taken.

If you could unfortunately not be there at the Fan Club Day, you can go to Facebook and watch everything again there. Our Junior developer Roman reports live from the event. Swing by our Facebook channel sometime, and you can virtually walk through the Fan Club Day with Roman there and gather a lot of impressions once again.

You see, we are still full of memories: Your models, Your fantasy, Your ideas – we are elated and simply say:

**Thank You!**

## DATES 2018

### Trade fairs:

Consumenta	Nuremberg	27.10.–04.11.2018
Fascination Model Making	Friedrichshafen	01.11.–04.11.2018
Kärntner Spieltage	Villach	09.11.–11.11.2018
South German Games Fair	Stuttgart	22.11.–25.11.2018

### Special Sales:

Stock Sale

Wolfäcker 1, 72178 Salzstetten 01.12.2018  
09.00 – 12.00 hours

# NEW

## 4

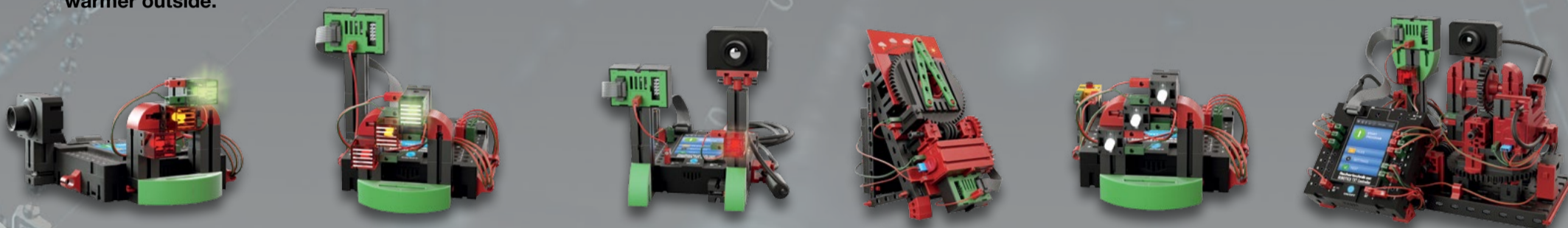
# Smart Home

fischertechnik steps in the world of Internet of Things.

As promised, this issue of Fan Club News takes a closer look at our novelty, the ROBOTICS TXT Smart Home.

**Smart Home is an umbrella term for technical processes and systems with which household and multimedia devices can be connected and centrally operated by a remote-control (with an app for example). A smart heating system can control the heating output in the house itself depending on the temperature outside. Thus the heating does not run in high gear, when it gets warmer outside.**

The six models of the TXT Smart Home construction kit, which can be programmed and controlled with the ROBO Pro software and the ROBOTICS TXT Controller, all have something to do with this "smart home". Different sensors allow you to measure temperature, humidity, air pressure, air quality, sound level and brightness. You can also explore rooms with the moving camera. The LED display or alarm sounds indicate when certain values are undershot or exceeded. A brief overview of all six models in the construction kit and their "capabilities":



### Noise sensor

This measures sound levels in the room. Depending on how loud you are in your room, the green, amber or red light flashes. What are you waiting for! Let's go, try it out, play some drums or something similar in your room... You will certainly make the red lamp glow.

### Well-being sensor

The well-being sensor can be set as a frost monitor, mould monitor or to measure air quality. The frost monitor checks the temperature with regard to its freezing point. If a value below 1.5 degrees Celsius is measured, you receive a warning message and the lamp lights up in red. The mould monitor provides information on humidity. As soon as there is a risk of mould, which is the case when humidity exceeds 80 per cent, the lamp lights up in red. When measuring air quality, the LEDs indicate whether the air in the room is very good (green), moderate (amber) or poor (red).

### Stationary camera

The camera serves as a motion detector. If the camera registers movement, an alarm is triggered. With this model, nobody can enter your room unmediated anymore.

### Barometer

The barometer measures the air pressure in the room, and the model shows when air pressure rises or falls. Since the air pressure changes are always indicated on this barometer, you can even become a meteorologist and predict a change in the weather.

### Lighting

This model can be used to control outside lighting, according to the brightness of the surroundings. The model with the brightness sensor installed can be programmed such, that the lamps light up, as it gets dark.

### Sensor station

The stationary sensor station, the main model of the construction kit, contains all actuators and sensors found in the ROBOTICS TXT Smart Home. The moving camera can be controlled by the two encoder motors in two axes. With this model, all your wishes come true.

## The most important functions at a glance

### Camera

The camera can be moved in different directions by a smartphone or tablet and the live images can be retrieved at any time. So you can take snapshots from every corner of the place where your model is standing and save them in the cloud gallery.

### Push notifications

With the so-called push notifications, you are informed of changes in the measured values without undue delay with an immediate message to your smartphone or tablet. For example, you will receive a notification on your mobile device, if the humidity in your room is too high.

### Data logging

The four sensors (environmental sensor, camera, brightness sensor and button) record the measured values and store them on the fischertechnik cloud. Here they can be accessed at any time.

### Cloud connection

The recorded data is graphically displayed and stored on the fischertechnik cloud. So you can call up the values anywhere and at any time via a user interface known as a "dashboard". If you connect the TXT Smart Home to a WLAN, you can easily control the models while on the move.



**This brief description shows you how the TXT Smart Home can be used in practice.**

**For more articles of this sort, which illustrate what the construction kit can do, take a look at our homepage [www.fischertechnik.de/smart-home](http://www.fischertechnik.de/smart-home)**

### TXT Smart Home

- from 10 years
- 6 Models
- 220 components
- with environmental sensor, brightness sensor, 2 buttons, USB camera (1 MP), 2 encoder motors, LEDs
- You will require: ROBOTICS TXT controller, ROBO Pro software, Accu set or Power set.
- Price: 209.95 Euro



Is it Monday already...

12-year-old Max has spent his entire weekend building with his new TXT Smart Home construction kit based on fischertechnik and has programmed it with a punch. He just wants to keep exhausting the whole spectrum of prospects of his smart models. Even when he is at school, he can take a look at the cloud from time to time and check the air quality in his room, for instance. Suddenly a push notification (message) pops up on his mobile phone.

A movement is triggered in his room. Who can that be? It is perhaps because mum has entered the scene. Oh no! It might as well be his big sister Anna, who has no school today and likes to lay hands on his tablet.

Max opens the fischertechnik cloud and activates his USB camera on the model in his room via the camera control on the dashboard. One turn upwards, to the right and the mystery is resolved. The house cat Lucy sneaked into his room and that is what triggered the alarm.

To show his parents tonight how cheeky little Lucy simply spreads out on his sofa, he takes some screenshots on the cloud and saves them in the gallery.

# NEW

5

## fischertechnik books

### Pleasure of reading guaranteed

#### Building, experiencing, understanding: History of technology with fischertechnik

by Dirk Fox, Thomas Püttmann

Suddenly moving loads such as gigantic stones, computing complicated tasks with a tool or even floating through the air? This was still unimaginable many years back. Of course, great inventions such as the pulley, the computing machine or the helicopter have made all this possible – and a lot many things. Venture on a journey through the history of technology - from the early days to the twentieth century - with our book recommendation. The authors Dirk Fox and Thomas Püttmann present 16 milestones of outstanding technical innovations of humanity, their history and their innovators. The functionalities and technical backgrounds of their outstanding accomplishments are shown with the help of fischertechnik models. These inventions make an impact on the technical progress even today.

So get going! Simply recreate the models and develop your own variants. The structure of the fischertechnik models is described in the book along with many photos and illustrations. Detailed 3D building manual can also be downloaded from the book's website. <https://technikgeschichte-mit-fischertechnik.de/>

If you copy the fischertechnik models, you will gain a deeper understanding of the technology and its history - and learn some essential technical basics in a playful way.



**Dirk Fox** is a computer scientist, founder and managing director of a consulting firm for IT security, publisher of a trade journal for data protection and data security, board member of a large IT network - and an enthusiastic »fischertechniker«.

He publishes the fischertechnik magazine »ft:pedia« and is committed to the expansion of technical education with fischertechnik at German schools.

#### Building, experiencing, understanding: fischertechnik®-Roboter with Arduino

Models, controls, programming / by Dirk Fox and Thomas Püttmann

They look after the house and take care of the garden, play football or clean: Robots!

Our next book recommendation will take you into the world of programmed machines. There you can learn how to build and program a fischertechnik-robot with the physical-computing-platform Arduino.

The Arduino is a universal controller of the control system. You can connect many sensors, motors and other actuators to it. The controller can be combined very well with fischertechnik. This gives you the opportunity to build great model robots and develop them with amazing efficiency. The book talks about the prospects of the Arduino-controlled fischertechnik robots with three exciting basic models.

- the "plotter": a highly precise and fast 2D printer that can read and plot HP-GL files,
- the "Delta": a robot arm that can grasp and sort objects at high speed,
- the "Flitzer" (speedster): a car that can be operated by a remote-control or has the automatic parking potential and can also drive to a given GPS position.

The book, which will be published in November, talks about how one can continue building and gives you ideas and suggestions for further designs.



**Thomas Püttmann** is Professor of Mathematics at the Ruhr-University Bochum. So that topics from fields like mathematics, technology and natural sciences can be conveyed, he specifically develops educational models, if and as possible from fischertechnik. Like a true mathematician, he optimises his constructions to the ultimate level, until no piece can be left out or moved anymore. He regularly writes articles for the ft:pedia.

#### Building, experiencing, understanding: fischertechnik® models for makers

Creative construction and technology projects / by Andreas Gail

This book appeals to the ambitious designer lot amongst readers. It introduces you to the fascinating world of engineering arts: You can use it to replicate models from the fields of electro-mechanics, sensors or hydraulics, to name a few. For instance, construct a loudspeaker, an R2D2 clone or a magnetic stirrer for the chemistry laboratory.

The structure of the models as well as technical details are described in detail in the book.

Brace yourself, as you may need to go beyond our fischertechnik system at times.

There is a good chance that you'll have to go to the nearby hardware store to get some utensils to be integrated into the models.

You may already know some of these models from the ft:pedia. The design proposals may serve as inspiration for your own projects and further experiments. Have fun with it!



As a child, **Andreas Gail** loved getting busy with different materials and tools and it was his favourite pastime.

Soon he was intrigued with fischertechnik and its mechanical and electrical components. He was fascinated by the controlling and regulation possibilities that were emerging at the time. His passion for fischertechnik awakened anew after a considerable amount of time and a degree in engineering. Today, Andreas Gail and his children construct realistic fischertechnik models that encourage experimentation.

## EXPERTS' OPINION

"With the ROBOTICS TXT Smart Home, you can connect your fischertechnik models to the Internet. Hide the camera and a lamp in a small fishing equipment treasure chest, then you can check at any time whether your treasure is still there via the Internet. Or see what your pets are doing while you're at school. The TXT controller connects camera and sensors to the "cloud" and allows you to access your data from anywhere, anytime".

Greetings,  
Till Harbaum  
(long-time ft-fan)



## Individual items now online

Have you always been on the lookout for a detailed overview of our individual items with detailed information and pictures? If so, we are happy to inform you that exactly this information can now be found online on our homepage. Each individual item is illustrated under the category "Products / Spare parts".

In future you will also find the corresponding data sheets when it comes to technical components such as sensors and actuators.

We are working on further expanding this overview and are confident that we can offer you

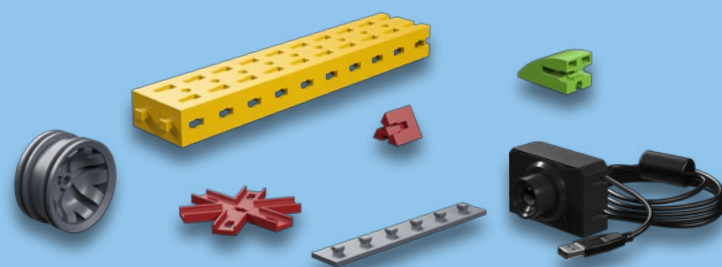
absolute added value.

Got any ideas or suggestions?

We are looking forward to your feedback!

Please contact us via Facebook or mail

([info@fischertechnik.de](mailto:info@fischertechnik.de)).



# FUN

6

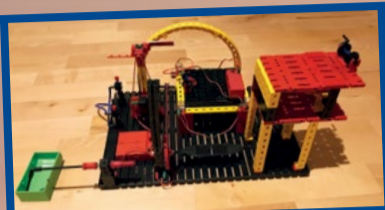
## GALLERY, GALLERY, GALLERY



This is where YOUR photo could be!



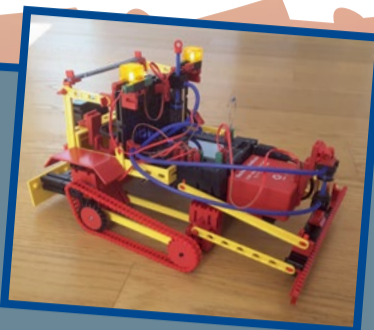
Soft toy picker arm, Daniel (9 years)



Concrete mixing factory running on air & electricity, Louis (8 years)



Marble run, Nathanael



Pistenbully, Tim (10 years)



Elevator, Martin (6 years)



Car with camera, Jacob (12 years)

Thank you very much for the interesting and full of fun models you sent us.

Are you creative and hard-working and often build your own models? Are you good enough to construct different models creatively without building manual? And do you always have really cool model ideas? It would be a shame, if nobody but you and your family were the only audience for them! All you have to do is send a picture of your homemade model to [info@fischertechnik.de](mailto:info@fischertechnik.de).

The picture will be published on our homepage under "Playing-Fan Club". In addition, we always showcase the most beautiful models in the Fan Club News.

We are looking forward to great model pictures.



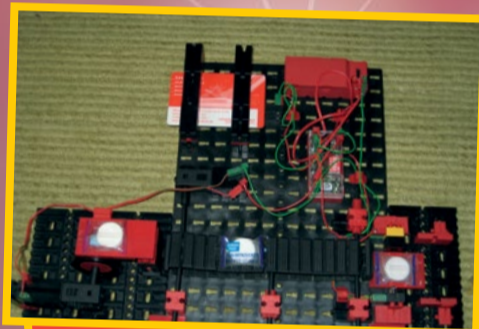
Remote controlled car Jannes (8 years)



Racing car, Thibault (9 years)



Flipper, Linus (11 years)



Dextrose vending machine, Adrian



Disco machine, Nathanael (13 years)

## CONGRATULATIONS!

In the first issue of 2018, Florian from Breitengüßbach found out that Model 2 has lost a flexible hose. The correct solution and some luck won him a PROFI Dynamic XXL. Martin from Grünberg found his way around the scrambled text and discovered the six hidden words (Pneumatic, Dynamic, SmartHome, Tractors, Solar, Advanced). Imagine how happy he must be with an ADVANCED Solar and an ADVANCED Tractor. Congratulations to both the winners!

The winners will be notified in writing.  
The organisers' decision is final.

## Picture puzzle


















Oh, the picture of the novelty PROFI Dynamic XM is wildly intermingled. Can you put it in the right order? You will stumble upon a password after putting it in right order. Please send this password with your full name, address and age with the subject line (Picture puzzle) "Bilderraus" at [gewinnspiel@fischertechnik.de](mailto:gewinnspiel@fischertechnik.de). The closing date for entries is December 13, 2018. Join in and win the novelty PROFI Dynamic XM. All the best.

















## Find the error


















Take a close look at both the pictures. Some errors have crept in the picture on the right side. How many errors can you find when you look at the picture? Please send us the number of errors by December 13, 2018 at [gewinnspiel@fischertechnik.de](mailto:gewinnspiel@fischertechnik.de) with the subject line (Find the error) "Finde den Fehler". Two lucky winners can win the book "fischertechnik-Modelle für Maker". (fischertechnik models for makers) All the best!







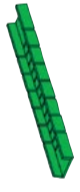










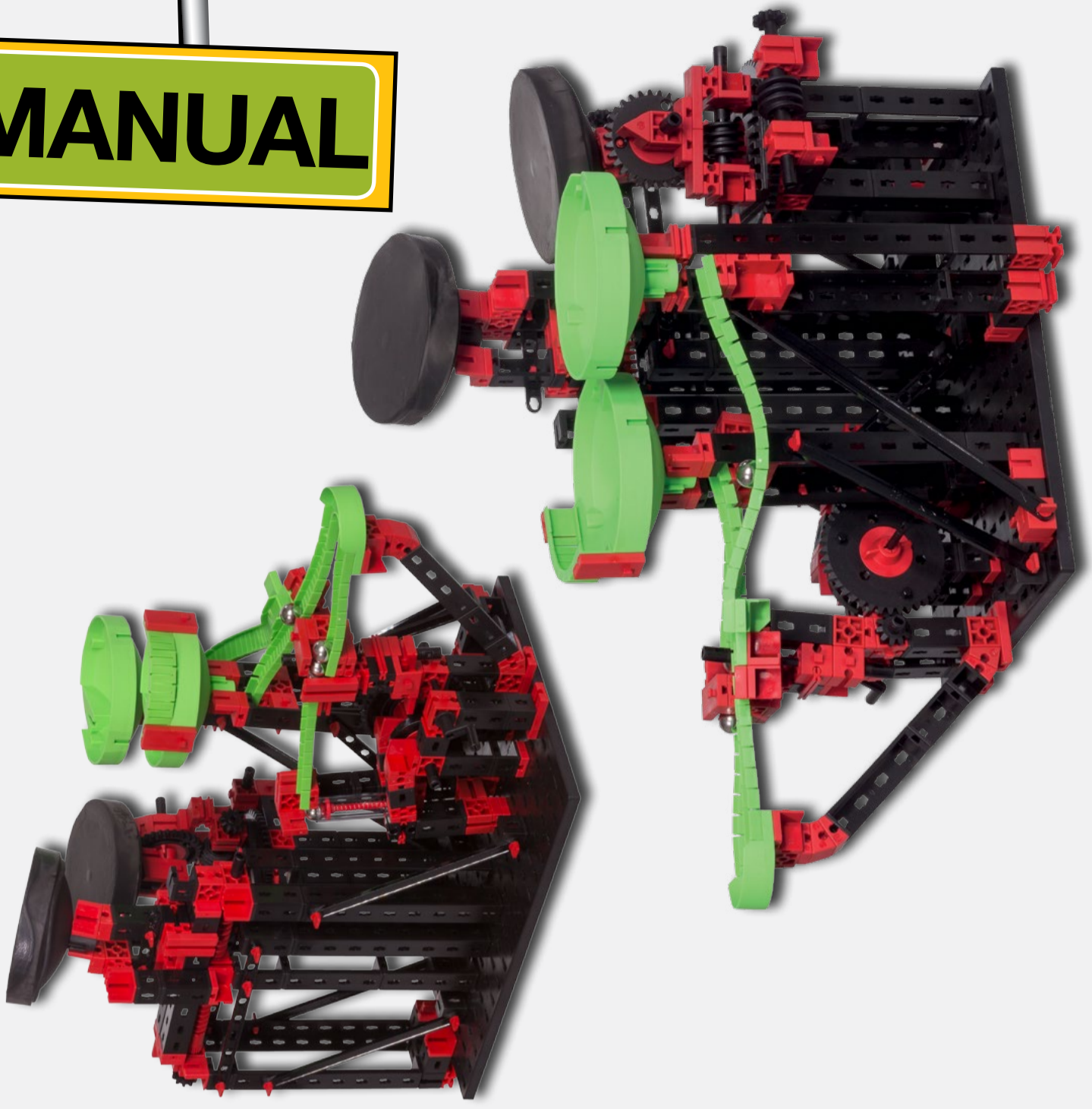
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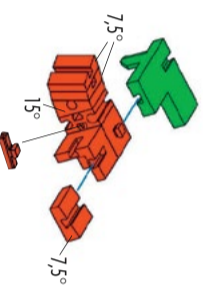
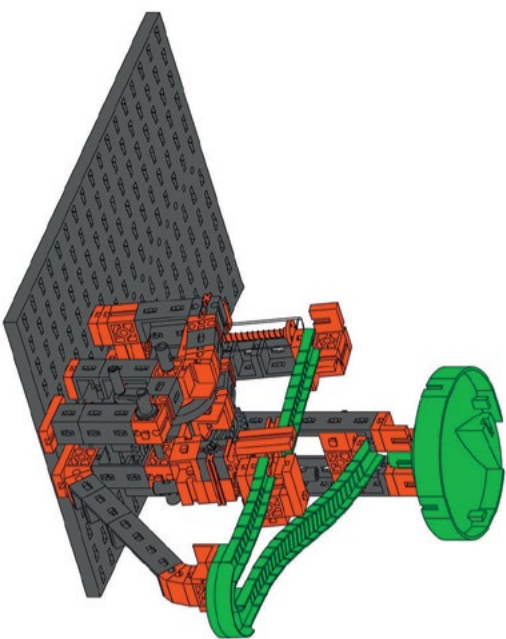
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	105 196 1 x
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	143 234 2 x
	144 262 5 x
	151 715 1 x
	155 901 3 x
	155 902 2 x
	158 962 1 x
	163 201 1 x
	167 983 1 x
	167 984 1 x
	167 985 2 x
	168 721 2 x
	169 194 1 x

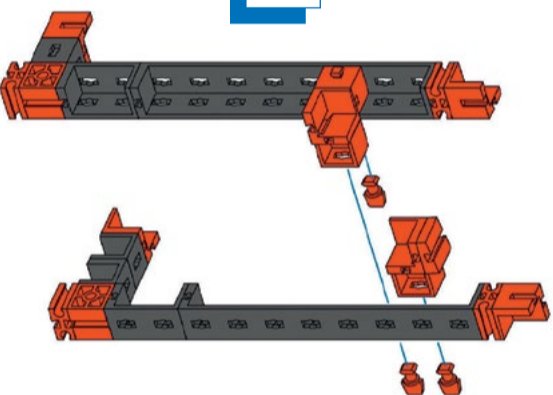


# BUILDING MANUAL

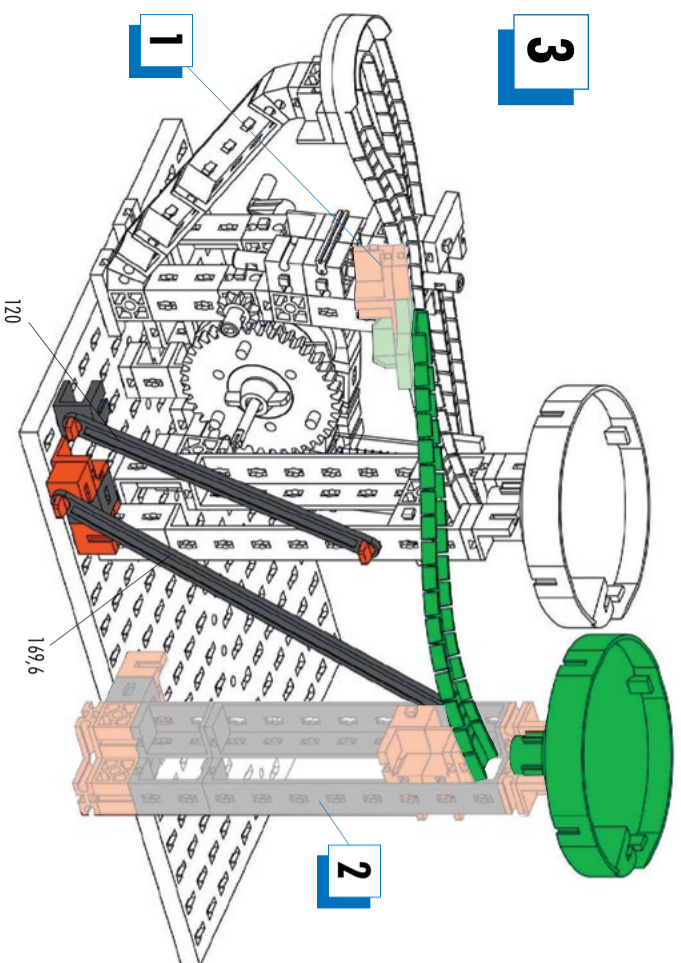
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2

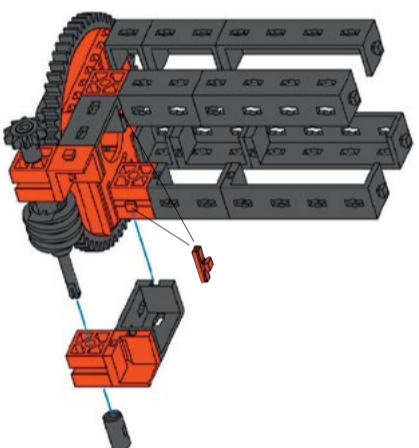


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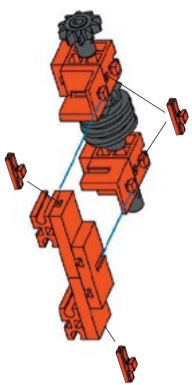


2

4



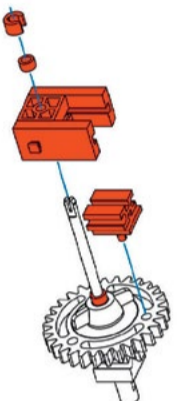
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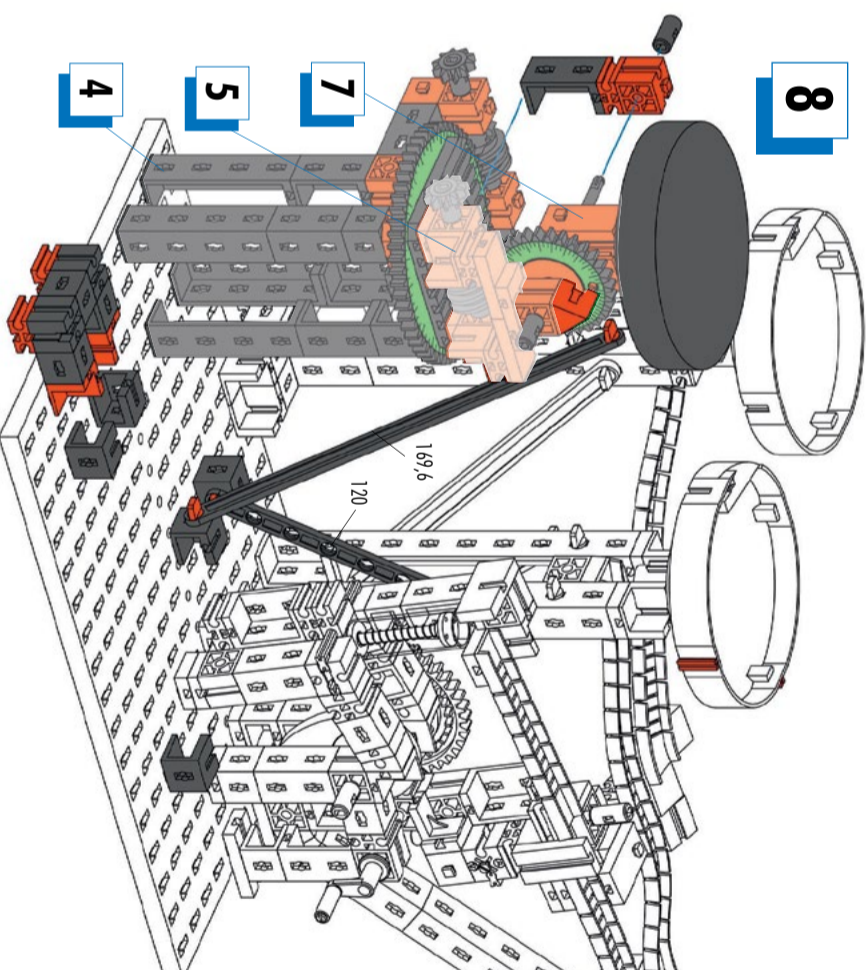
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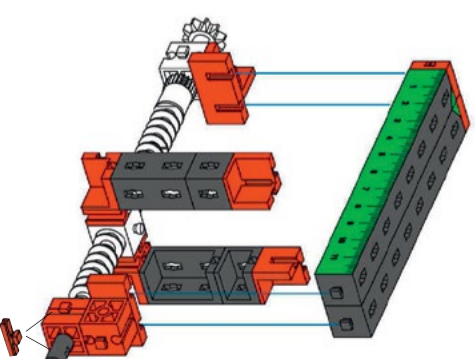
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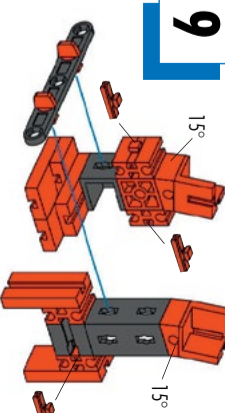
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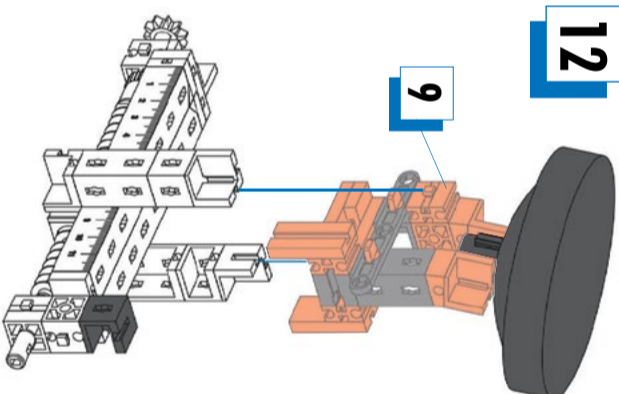
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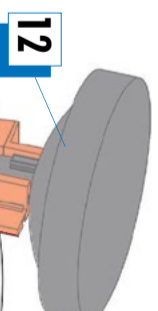
9



12



13



12

