

## Fan Club NEWS 02/2007

### Page 1

**Dear fischertechnik Fans,** On 8 June, the day finally arrived and we met you for the first time at the first ever fischertechnik Fan Club Day in Tumlingen. Many thanks to all who came and experienced an unforgettable day with us. The numerous comments on our Internet site ([www.fischertechnik.de](http://www.fischertechnik.de)) and the many eMails confirm: You really enjoyed the Fan Club Day. The best thing for me was the many laughing faces and bright eyes. We will of course arrange a Fan Club Day next year too. Page 3 contains a summary of the Fan Club Day. We were also overwhelmed by the response to our survey. Thank you very much for this too. We know know precisely how you would like to find out about news from fischertechnik in the future and which topics you are interested in. We have already made use of the initial results in this NEWS. And here's another result: 95% would recommend the fischertechnik Fan Club to friends! I now leave you to enjoy the NEWS, hot off the press. Your Tobias

**Discover the world! New: fischertechnik ROBO Explorer.** This is what you have been waiting for: A mobile robot with powerful power motors, with stable caterpillar tracks for "difficult terrain" and with all the important sensors for exploring the world. The ROBO Explorer counts steps, measures the temperature, identifies colours and obstructions and stays on the trail. And in an emergency it flashes too and emits an audible signal. (Page 4/5)

### Page 2

**Chancellor Merkel enthusiastic about fischertechnik.** fischertechnik is pleased to have a famous fan: Chancellor Angela Merkel was enthusiastic about fischertechnik at the summer party organised by the Baden-Württemberg State Representation. As a memento of her visit to the fischer stand and as a new fan she was given a fischertechnik model and several fischer Rawl plugs.

**Fan Club Meetings throughout the country.** The Fan Club Day in Tumlingen went down really well with you all! For this reason we have done our utmost for you. To make the Fan Club even more attractive for you we are organising Fan Club Meetings in several locations in Germany. There you will be able to exchange views & experiences with each other, and you can look forward to campaigns, competitions and of course special offers. We will also be offering you the current product range, bargains and discontinued products at particularly favourable rates. We look forward to your visit!

**fischertechnik is TOP.** Two of our company's products have been nominated for the TOP 10 toy prize. Among the numerous suggestions the jury of the "Bundesverband des Spielwaren-Einzelhandels" (BVS - German Federal Toy Retail Trade Association) chose the fischer TIP Princess Box in the Girls category and the fischertechnik ADVANCED Ships + More kit in the Kids category. The kit has been on the market since September.

**Fan Club NEWS Reader Survey - very good report.** That's what we call real fans! More than 1650 members of the fischertechnik Fan Club answered our survey: Thank you for this overwhelming participation and the positive result. The new NEWS is very popular among you all. More than 91% of you rated the new Fan Club NEWS as good or even very good! You showed us that you are interested in the News and New headings, especially technology and assembly instructions. We have responded to this and have merged the Postbox and Puzzles page to form one Fun page. We therefore now have more space for the topics in which you are more interested. One thing you made clear to us too: The printed Fan Club NEWS is the most popular among you (92%). More than 95% of you would also recommend the Fan Club to friends. Thank you for your trust and confidence.

**Profile.** Name: Timo Harr, age: 31, favourite kit: King of the road, job: Industrial clerk, work at fischertechnik: Timo ensures that enough fischertechnik components are always available to be able to produce the kits for you.

**Profile.** Name: Kerstin Kalmbach, age: 42, favourite kit: ROBO Mobile Set, job: Clothes cutter, work at fischertechnik: Kerstin receives the delivered parts and checks their quality and quantity. She then takes the parts to the appropriate storage space.

**Did you know that?** From January to June 2007, 125 tonnes (equal to the weight of 42 elephants) of fischertechnik components left our production. That's seven pallets on average per day.

### Page 3

**An exceptional time in Tumlingen - fischertechnik Fan Club Day.** An exceptional time was had by all at the fischertechnik Fan Club Day on 8 June. The fischer conference centre converted itself into an amusement arcade: Children rummaged in boxes for matching components, others set a lap record with the new remote controlled RC Cars or dropped cards with new ideas for kits and components in the Requests Box. And in another corner the fischertechnik designers excitedly talked shop about the technical refinements of the selected fischertechnik exhibits of the Fan Club members. The Tobias Brezing team had organised a full day's schedule for the visitors and therefore deliberately limited the number of participants to 250. "The discussions with and between fischertechnik fans was decisive on this day", he stressed. The guests from Germany, Luxembourg, the Netherlands and Switzerland not only toured the fischertechnik production and found out about training but also experienced the Rawl plug production and learned how to use them. How the production takes place in Tumlingen and that toys are still produced in Germany particularly impressed the adult fischertechnik fans and parents. But the visitors were not only allowed to watch but were also able to make up a kit themselves. The last were still in the production after the shift had ended. And next year you will be at the fischertechnik Fan Club Day – promise!

**A summary of the Fan Club Day.** Visitors: 250 from the whole of Germany, Switzerland, the Netherlands and Luxembourg, Catering: Preparation of 50kg schnitzel and 50kg French fries, Production: more than 100 kits were made up in production by fans, Organisation: 15 fischertechnik employees and 4 trainees

**The Balloon, Berlin and the Bear.** More than 300 balloons ascended into the brilliant blue sky above Tumlingen during the fischertechnik Fan Club Day – including the one belonging to R. Wolf. One day later his balloon was found by Marco Banzer in Andeer (Switzerland) – at an altitude of 2900 metres. The special thing about this was that the only living wild bear in Switzerland was sighted on the same day in the same place in which the balloon was found. But the balloon had not travelled the furthest. The winner's balloon flew all the way to Berlin-Spandau. That is 564km from Tumlingen as the crow flies. The winner was Gerhard Seeger from Egenhausen. He and the finder can look forward to the Car Tuning Center kit. We also wish Mr Wolf, Marco B. and the bear of course all the best.

### Page 4

**Explore the oceans - fischertechnik Ships + More.** Having launched the first fischertechnik boats, the large ships of the Ships + More kit (79.95 euro/from seven years) are now being launched. You can use the 400 components to build four different models with all kinds of accessories and explore the oceans with them. Go on an excursion with the stylish passenger liner. The passengers are already waiting on the jetty. In the adjacent cargo port a harbour tug is just mooring with a barge. You can attach and release the barge with the hook on the cable winch. A barge is a small, shallow boat, mostly without its own propulsion. It is used to transport excavated material, ore, gravel and sand from an ocean-going ship to the storage area within the port. You can open its roof for loading and unloading. At the mooring opposite the freight ship is just being unloaded with the revolving crane. You can rotate the crane superstructure, move the crane's jib and lower and raise the crane hook. The final preparations before casting off are taking place on the large research ship moored opposite. The rotary crane is used to lift the mini submarine onto the deck and the buoys are fastened. But before you can explore the oceans you still have to acquire your fischertechnik master's certificate. Only fischertechnik Fan Club members can do this.

## Page 5

**Inquiring mind with caterpillar drive - fischertechnik ROBO Explorer.** The new ROBO Explorer kit will awaken your inquiring mind. Use the 420 components to create six different models. Starting with the easy basic model, until you explore the world with all your senses with the Explorer model: Count steps, measure temperatures, identify colours, measure brightness, search for tracks, measure distances, identify obstructions, flash and buzz. As you'd expect from fischertechnik, detailed assembly instructions and a didactic brochure are also included. The kit also contains: the experimental course (60x85cm). New track chain links are used in the ROBO Explorer which provide optimum grip for the soft caterpillar track surfaces. In addition to the ROBO Explorer kit you will also need the ROBO Interface, the ROBO Pro software and the rechargeable battery set. But a lot of you have already got it.

### **The means is an end within itself – ROBO Explorer models.**

**Basic model,** Features: 2 power motors, sensors: Pushbuttons, functions: forwards, backwards, left and right, distance measurement via probes

**Track finder,** features: 2 power motors, buzzer, sensors: probe, infrared track sensor, functions: as basic model, with additional track finder (black & white) and acoustic signal if the track is lost

**Tunnelling robot,** features: 2 motors, buzzer, lamp, sensors: Probe, temperature sensor, ultrasound distance sensor, functions: as basic model, additional temperature measurement, distance measurement with acoustic and optical signal

**Colour identification,** Features: 2 power motors, buzzer, 3 lamps, sensors: Probe, optical colour sensor, functions: as basic model, additional colour identification with optical and acoustic signal

**Explorer,** Features: 2 power motors, buzzer, 3 lamps (warning lamp + 2 headlamps), sensors: Probe, infrared track sensor, optical colour sensor, ultrasound distance sensor, temperature sensor, brightness sensor Functions: as basic model, additional temperature measurement, distance measurement, obstruction recognition, colour identification, brightness measurement and track finder

**Rescue Robot** (for ROBOCup Junior Rescue League) , Features: 2 power motors, buzzer, 3 lamps (warning lamp + 2 signal lamps for located "victims"), sensors: optical colour sensor, ultrasound distance sensor, functions: as basic model, additional distance measurement, obstruction recognition, colour identification, track finder

### **With all the senses - that's how the sensors work**

**Temperature sensor:** An NTC resistor is used as a temperature sensor. At an ambient temperature of 20°C, the NTC resistor used has a value of 1.5kOhm. If the temperature rises the resistance value drops and if the temperature drops the resistance value rises. The name Negative Temperature Coefficient (NTC) is derived from this function. This property is used to measure the temperature.

**Ultrasound distance sensor:**The distance sensor measures the distance between it and an object using ultrasound. Sound propagates as a wave. The echo is reflected to the transmitter where it is analysed. The time difference between the transmission and reception equals the distance. The value is given in centimetres. The maximum range is four metres. Not only can distances be measured in this way, but obstructions can also be detected.

**Optical colour sensor:**The optical colour sensor identifies different coloured surfaces. It emits a red light which is reflected with different strengths by the coloured surfaces. The quantity of reflected light is measured by a phototransistor and is output as a voltage value between 0 and 10V. The measured value depends on the ambient brightness and the distance between the sensor and the coloured surface.

**Probe:** The probe is a contact sensor. When the red button is pressed a contact is closed and a second contact is simultaneously opened. The probe can therefore be used as a make contact or as a break contact. Together with the pulse wheel which is fixed to the drive shaft of a motor the probe is used as a pulse counter and is used to measure a distance travelled. Such pulse counters are also called encoders.

**Infrared track sensor:**This sensor is used to detect a black track on a light background. This is done using infrared light. The sensor consists of two transmitter and two receiver elements. Each receiver element outputs the value 0, if a black line is recognised and the value 1 if it is located above a light coloured surface. If both receiver elements output the value 0 the robot is located directly on the black track. If one of the two values is 1 the robot is left or right of the track and the direction of travel can be corrected accordingly. The distance between the sensor and track can be between 5 and 30 mm. The width of the track must be at least one centimetre.

**Brightness sensor:**The ambient brightness is measured with a photoresistor. The resistance value falls as the brightness increases. If the surroundings become darker the resistance increases. This can be used for example to differentiate between day and night.

## Page 5

**Gallery, Gallery, Gallery.** We have received a large number of letters and eMails with photos of great fischertechnik models. Thank you very much! Please understand that we can only use photos which are sent to us by eMail (info@fischertechnik.de). We will publish all the photos sent to us in the Gallery heading and will present the most attractive models in the FAN CLUB NEWS as well. Then at the end of the year we will choose the Model of the Year.

**Picture puzzle.** Carefully look at the small picture cutouts. These are missing in the large picture. If you have found the right positions, write the letters in the box in the fields below and find the answer. Send the answer on a stamped postcard by 31. December 2007 to schertechnik GmbH, Weinhalde 14–18, D-72178 Waldachtal

or send an eMail to info@fischertechnik.de. Please write "Lösungswort 02/07" in the subject line. This time you can win the new Ships + More kit. The winner of the kit will be notified in writing. The judges' decision is final. Good luck! The answer from the 01/07 issue is Service Station.

**Troubleshooting:** Ten errors have found there way into the picture on the right. Can you find them?

**Sudoku:** The numbers 1 to 9 have to be arranged so that they only occur once in each column, in each line and in each block of 9 squares. Several numbers have already been entered. Think about it carefully and you will find the others too!

## Page 7

**No. 31, To Collect, Fan Club Model - RC Gripper Scorpion.** The Gripper Scorpion is built from the new RC Car Set in combination with the Universal II. With the Fan Club model you can grip or catch different objects from a safe distance using the radio remote control. When the Scorpion touches an object with its "mouth" the tongs snap closed with the speed of lightning. Push the gripper tongs back apart and the Scorpion is ready for use again. Have fun assembling it!