fischertechnik
NEWSLETTER

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What's New?

Available in early 2003 will be the new Mobile Robots II kit (77792). This kit will construct six wheeled models using the heavy-duty power motors. An additional mini-motor also allows one model to pick up and deposit objects using a fork lift mechanism. Numerous sensors are provided for touch, light and temperature providing stimulating projects with the help of the new activity booklet. The models are controlled using the LLWIN windows software which allows the models to operate independently of the PC.

As with other kits, Procon Technology will provide the option of purchasing a 'complete' kit (77792-2) with 30402 interface, 30407 LLWIN software and 34969 Accu Set (rechargeable battery and charger). Other options will allow the models to be controlled using a micro-controller unit. Finally, program examples in Terrapin Logo can be provided which allows the path of the models to be tracked on the screen and a pen may be added to produce interesting graphics!

Available soon in 2002 will be the new Profi Pneumatic II (77791) kit. This kit will allow six different models to be controlled using compressed air. A mini-compressor and air reservoir is included which provides smooth operation of the air cylinders. An activity manual provides useful information about 'pneumatics' in a fun way.

Also available soon will be the Super Trucks (77790) kit. With over 720 components this kit allows six heavy-duty trucks with trailers to be constructed. Some trucks may be motorized with up to five motors and remotely controlled using the IR Control Set (30344).

On the Net

Check out the new 'puzzle page' on our website that shows how to solve the frustrating 'attemptation' puzzles featured in Melbourne's Age newspaper ... many program examples are given - including one in LLWIN. Just go to:

www.procontechnology.com.au

From our website you can also go to the official fischertechnik website and check out the database (including pictures) of all kits produced since 1965. Many manuals can now be downloaded in PDF format as well as FAN-CLUB models since 1993.

GST savings!

Australians wishing to send goods overseas may ask us to ship the goods directly. We are happy to quote on any overseas shipment, the advantage is that GST does not apply (a saving of about 10%). The options for shipping overseas include; EMS (4 to 5 day service which you can track on the internet), airmail (1 to 2 week service) and economy air (2 to 3 week service).

Alternatively, should customers wish to take the goods as 'hand luggage' with them as they go overseas, a TRS office at the airport allows the GST to be refunded on single invoice totals over $300. See www.customs.gov.au for more information.

By-the-way, if travelling or telephoning overseas, check out www.timeanddate.com for the current time difference between cities and for sunrise and sunset times as well as longitude and latitude and travel information about many towns and cities around the world.

Classroom...

...Starter Pack (16553CSP) is now available. It contains TEN 18353 Computing Starter Kits with over 130 components with storage boxes and construction baseplate as a lid. TEN 30402 interface units, TEN power supplies (Australian orders only), TEN assembly and activities manuals, plus LLWIN software site license for unlimited copies on the one school site.

Procon Technology also provides a copy of it's own documentation and software with source code in VisualBASIC for Windows and MSWLogo. As an option, software examples are also available in Terrapin Logo, VisualC and Delphi. Two additional projects, a 'reaction tester' and the 'tune memory game' are provided bringing the total number of projects to TEN.

Additional projects, bringing the total to over 20, will be available soon. Please read the next section. For a limited time only, FREE delivery is provided on the 16553CSP.
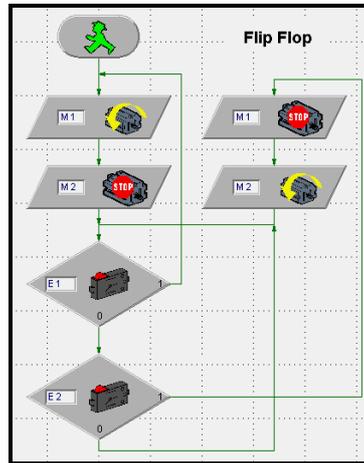
LLWIN Update

Procon Technology has been working hard lately to provide many new example programs for the Computing Starter Pack (16553), the entry level kit that includes the interface unit (30402) and LLWIN software (30407). LLWIN is the fischertechnik control software that allows you to program in a flow-chart style of language (see example above). LLWIN can be used to learn the fundamentals of programming and programmable control - and you don't need to have an interface unit!

Don't forget, a demo version of LLWIN is available on the internet which allows all functions of LLWIN (it's excellent for students to program their fischertechnik projects from home). It's only limited when an interface unit is connected. Two example programs are now available from our website. The puzzle solving example (puzzle2.zip) and the 'tune memory game' (tune5.zip). Both programs are designed to illustrate the power and flexibility of LLWIN.

The LLWIN example pack 30402llw (available soon) will come with documentation and LLWIN examples for over 20 simple projects. The additional projects, provided in this pack include; reaction tester, stopwatch, organ, decision maker, guessing game, electronic dice, doorbell, house alarm, quiz contestant lights and buzzer, hanoi towers solution plus more.

The pack will also include a step-by-step description of programming in LLWIN with special chapters on debugging and solving problems. Some of this information and example programs will be published on our website and in future newsletters.

Finally, fischertechnik fans may

Flip Flop

be interested to know that the latest 30402 'intelligent' interface, with it's own on-board microcomputer, now executes instructions much faster. This makes it possible to download and run programs that weren't possible before!

New Training...

...Model. The fischertechnik fully-assembled, ready-to-run training models are proving popular with universities and technical colleges. A new model is now available. The 77577 Pneumatic Processing Centre provides magazine loading of parts onto a rotary table that moves parts to a processing station and then rotates parts for despatch to a conveyor belt.
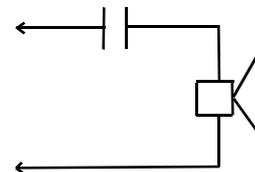
The model incorporates two double-acting pneumatic cylinders and one single-acting cylinder. A mini-compressor and air reservoir provides steady air pressure at 0.5 bar. Also provided is 2 DC motors, 4 micro-switches, 2 light barriers. The model can be supplied in 9 Volt or 24 Volt versions. A special linking conveyor is available to connect the 77577 to the 51664 indexed line model. The 3D-Robot arm may be used to load the 77577 magazine with parts and pick up parts at the exit conveyor.

Hints & Tips

1. The Sensoric kit (30491) incorporates a Flip-Flop (FF) unit that controls the various models (7 in total) in the kit. This FF unit may be replaced by the 30402 interface

controlled from a PC. An LLWIN program, shown opposite, is capable of simulating the FF's operation. All projects, except the egg cooler, may be controlled in this way. Inputs are connected to E1 and E2, whilst the outputs are connected to M1 and M2. To change the program from 'A' to 'B' mode - simply swap the 1 & 0 branches on the E1 decision block.

2. A number of people have asked me; 'Where do I get a copy of QBASIC?' Well, QBASIC is an old, but still useful, programming environment that was provided with Microsoft DOS. QBASIC can be used to control fischertechnik models and our software diskettes (..DOS) still provide examples in this language. A copy of QBASIC is actually provided on the Windows 95, 98 or NT CD-ROM. Just look for the files 'qbasic.exe' and 'qbasic.hlp' and transfer them to your hard-drive or boot-disk. Check our website for a link to the MIcrosoft website to download QBASIC!

3. Would you like to provide sound output on the 30402 interface when operating in download mode? One way is to simply use a 6-12V buzzer (part number 36119). Another way is to connect a speaker (e.g. your computer system speaker) via a 1uF 50V capacitor to an output - M1 for example.

To get the speaker to make a clicking sound is easy, just activate then de-activate the motor output. A louder volume level is also possible, activate with 'ccw' operation then 'cw' operation. If you wish to generate a tone (perfect tones are NOT possible however), just activate then deactivate the output repeatedly. Different tones will be heard in the on-line mode compared to the download mode of operation - so experiment and see what happens!