COMPACT, MODULAR, ELECTRONICS TEACHING SYSTEM

LEARNING WITH THE GUARANTEE OF SUCCESS
- safe experiments
- comprehensive content
- easy handling
The **teknikit** learning environment combines experimentation with the advantages of interactive e-learning.

The new Console is the bridge between the experimental panel and the learning software. It contains all necessary measuring instruments and power supplies.

**THE CONSOLE**

- clearly labelled with a functional design
- interfaces to all PC systems
- precise and rapid measuring instruments and signal generators
- robust against electromagnetic interference
- simple and safe in the hands of students
EXPERIMENT BOARD

- safe and clearly structured courses for every learning field of electrical engineering
- regular new courses on modern topics
- visible modules and realistic system components
- interactive course guidance with LEDs

INTERACTIVE TEACHING SOFTWARE

- clearly structured, simple operation
- easily understandable theoretical part
- all experiments performed under guidance with learning control tests
- multimedia support content with animations, videos, audio and real measuring instruments with virtual display
THE NEW CONSOLE
DESIGNED FOR TEACHERS AND TRAINERS

FOR TABLET, PC AND LAPTOP

No matter if and how your IT system changes tomorrow, the new Console fits into any modern infrastructure. Whether USB, WiFi or Ethernet, all interfaces are supported directly, and without adapters. Windows systems are supported natively, iOS and Android systems can be easily connected via RDP or VNC.

RUGGED CONSTRUCTION

Safety features for a long service life in the teaching laboratory:

- A blue security lock keeps the course board mechanically secure and if it is opened, the course board is switched off.
- To meet current regulations, 2 mm security cable can also be used.
- On the rear there is a slot for a Kensington lock so that your Console remains in the place where you need it.
- Course board frames made from high-quality material protect the PCB and the furniture against scratches and defects.
- The use of high-quality components.

ASSEMBLY AND DISASSEMBLY QUICK AND EASY

- The compact construction permits space-saving storage in a cupboard.
- Course boards can be connected to the new Console quickly.
HIGHER MOTIVATION AND GREATER LEARNING SUCCESS FOR STUDENTS

COMPATIBLE WITH ALL COURSE BOARDS

The course board frame acts as an “adapter” for all basic and advanced course boards. The frames can be purchased individually.

INTUITIVE LEARNING, FUNCTIONAL DESIGN

The Console has been designed to allow perfect learning ergometry:
- Complete and easily readable labelling.
- Multi-coloured activity indicators for measuring instruments.
- A luminous strip indicates to the instructor(s) whether a course is being actively carried out.
- All measuring instruments can be controlled directly by the software.

4 CHANNEL OSCILLOSCOPE

The integrated oscilloscope offers many advantages:
- Four differential inputs
- Measuring rate: 2 M-samples per channel
- Resolution: 12 bits per channel
- Memory depth: 4 K-samples per channel

ACTIVE GUIDANCE

The relevant areas light up during the course of the experiment to guide the user through the experiment.
THE NEW CONSOLE
NEW FUNCTIONAL DESIGN

ANTI-THEFT PORT
using a Kensington lock

FUNCTION GENERATOR
up to 100 KHz
Δ, π, sine, CD

FOR TABLETS
Interfaces for many available models

PC interface for controlling course boards (RJ45/USB/WLAN)

8-BIT DIGITAL ANALYSER

4-CHANNEL OSCILLOSCOPE
with differential inputs

2 mm safety sockets
MECHANICAL AND ELECTRICAL SAFETY
Course board clicks into place

RASTER SLOT FOR EXPERIMENT BOARDS
compatible with Teknikit

LUMINOUS STRIP
as a status indicator

USB PORT
for external experiments

2 x MULTIMETER
8 measurement ranges for current, voltage and resistance measurement

One headphone socket each

Tablet power supply

FOR TABLETS
Interfaces for many available models

TECHNICAL SPECIFICATIONS:
- Tablet power supply
- USB PORT for external experiments
- LUMINOUS STRIP as a status indicator
- One headphone socket each
- 2 x MULTIMETER: 8 measurement ranges for current, voltage and resistance measurement
- RASTER SLOT FOR EXPERIMENT BOARDS compatible with Teknikit
Owing to the clear and consistent preparation of the teaching content, the learning software clearly and unmistakable provides guidance through the individual experiments. Every topic starts with a theoretical introduction followed by at least one topic-related, practical experiment. The Teknikit self-assessment test ensures that the course content is absorbed and consolidated.

The interactive Teknikit learning software is suitable for independent learning and experimenting as well as for complete teaching units and project work. The multimedia learning environment supports the real experiments additionally with graphics, animations, videos and optionally with audio.

In addition to being in English, all courses are available in various other languages including German, French, Spanish, Dutch, Russian and Polish.
ADVANTAGES

FOR THE TEACHER

- comprehensive content
- practice-oriented experiments
- descriptive teaching materials for presentations
- documentation with solutions
- flexible application for teaching
- time-saving through quick and simple assembly

FOR THE STUDENT

- practice-oriented learning
- review of the results
- documentation of the results
- team work or independent study
- language selection
- adapted to the individual’s learning speed
- promotes decision-making and responsibility

PRACTICE-ORIENTATED EXPERIMENTS INCREASE LEARNING OUTCOMES
SAFETY
TWO STEPS AHEAD

A comprehensive safety concept has been developed for the new teknikit.

PROTECTION FROM DESTRUCTION
Apart from the careful choice of materials and a robust design, this aspect includes the protection of the course provided by the new course frameworks.

PROTECTION AGAINST DANGEROUS VOLTAGES
In all teknikit courses, only safe voltages and low currents are used. This rules out any hazard. In order to comply additionally with the new regulations in many teaching establishments, the courses can be operated with safety cables.

PROTECTION FROM THEFT
On the rear side of the Console there is a compatible slot for a Kensington lock. In addition, every networkable Console is equipped with a unique ID for easy assessment management.

SO THAT YOU CAN CONCENTRATE ON WHAT’S IMPORTANT
SHORT PREPARATION TIME
ASSEMBLY AND DISASSEMBLY IN ONLY A FEW MINUTES

1. OPEN THE SECURITY LOCK AND PUSH THE CONSOLE INTO PLACE
2. CLOSE THE SECURITY LOCK
3. SWITCH ON THE CONSOLE
4. START THE SOFTWARE
   START TRAINING

COURSE DEVICES ARE MECHANICALLY LOCKED AND AUTOMATICALLY ACTIVATED
COMPATIBLE WITH ANY LABORATORY EQUIPMENT ...

FOR TABLETS

The slot in the Console is designed to accept many available 8-10" tablets.
Simply establish a connection via WiFi, Ethernet or USB.
An additional charging port at the rear of the Console ensures long-term learning pleasure.

LAPTOP AND PC

For use with laptops and PCs, we recommend Windows 7 or Windows 8.
Now all possibilities are open to you. For better documentation, the course pages can be saved and printed, i.e. as PDF, XPS, ....
The results of measurements can be further processed in Word and Excel.
COURSES FOR EVERY LEVEL OF EDUCATION
### LEARNING LEVEL

**SCHOOLS LEVEL**
- suitable for demonstration and practical teaching

**TECHNICIAN / COLLEGE LEVEL**
- suitable for project work and independent study

**UNIVERSITY LEVEL**
- suitable for practical work in fundamental principles, tutorials and for independent study

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### AUTOMOTIVE ELECTRICITY / ELECTRONICS
- 14-127 AUTOMOTIVE ELECTRICS
- 14-128 AUTOMOTIVE SENSOR TECHNOLOGY
- 14-129 AUTOMOTIVE DATA BUS
- 14-130 AUTOMOTIVE DIGITAL TECHNOLOGY I
- 14-131 AUTOMOTIVE DIGITAL TECHNOLOGY II

### COMMUNICATION TECHNOLOGY
- 14-132 TRANSMISSION TECHNOLOGY TX433
- 14-133 RECEPTION TECHNOLOGY RX433
- 14-134 DIGITAL COMMUNICATION TECHNOLOGY
- 14-135 MODEM TECHNOLOGY
- 14-136 TELECOMMUNICATION LINES

### BASIC AND FUNDAMENTALS
- 14-106 DC TECHNOLOGY I
- 14-107 DC TECHNOLOGY II
- 14-108 AC TECHNOLOGY I
- 14-109 AC TECHNOLOGY II
- 14-110 ELECTRONIC COMPONENTS I
- 14-111 ELECTRONIC COMPONENTS II
- 14-112 DIGITAL TECHNOLOGY I
- 14-113 DIGITAL TECHNOLOGY II
- 14-114 THREE-PHASE TECHNOLOGY
- 14-115 SENSOR TECHNOLOGY
- 14-116 PHOTOVOLTAIC

### APPLIED ELECTRICAL ENGINEERING
- 14-117 OPERATIONAL AMPLIFIER
- 14-118 CONTROL TECHNOLOGY I
- 14-119 CONTROL TECHNOLOGY II (extended course)
- 14-120 AUTOMATION- AND BUS TECHNOLOGY
- 14-121 POWER ELECTRONICS I
- 14-122 POWER ELECTRONICS II (extended course)
- 14-123 ELECTRICAL MACHINES I
- 14-124 ELECTRO PNEUMATICS
- 14-125 PNEUMATIC BOARD
- 14-126 PROTOBOARD II

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### TEKNIKIT
- 92-500 Console