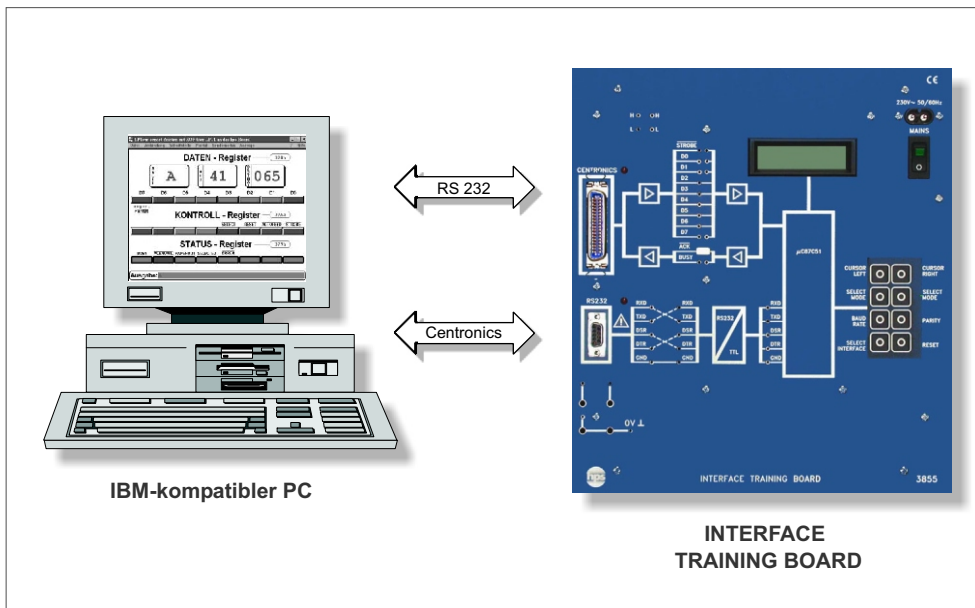


INTERFACE TRAINING BOARD

Type 3855



- Training unit for serial and parallel interfaces
- For direct connection to any PC with RS 232 and Centronics interfaces
- Important signals of both interfaces can be tapped externally at measuring points
- Can be used on a table or in a demonstration rack
- Windows software
- With software and experiment manual
- Fault simulation

The INTERFACE TRAINING BOARD has been designed for teaching practical knowledge of parallel and serial interfaces.

The user can connect the training system directly to any commercially available PC through the integrated RS 232 or Centronics interfaces. No additional equipment is required.

The unit contains the following function groups:

- Microcontroller

- Input keyboard
- LC display
- Level converter, RS 232/TTL
- Power supply unit

All the signals of both interfaces can be tapped at integrated measuring points. The measuring points of the Centronics interface are decoupled for safety reasons.

The characters transmitted by the PC are displayed in ASCII Code.

At the same time the values of these characters are displayed in hexadecimal, decimal or binary form.

The most important signal lines can be disconnected for error simulation.

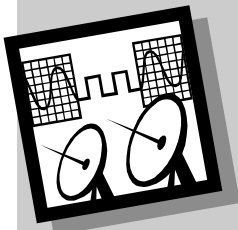
The measurements can be made with a storage oscilloscope or a logic analyser.

Software

- Windows software: „COMwin / LPTwin“, light-version (Type PC 3855.1)

Experiment manual

- „Experiments in Interface Technology with COMwin/ LPTwin“ (Type V 0155.1)



INTERFACE TRAINING BOARD

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Subjects dealt with in the manuals:

Theory section

- Structure of interfaces with RS 232 and Centronics as examples
- Data transmission possibilities: serial, parallel
- Transmission format

Experiments section

- Installation of software and commissioning of the INTERFACE TRAINING BOARD
- Signal designations and their meanings
- Connector pin assignment
- Level conditions
- Time display of signals and their evaluation
- Determining the baud rate
- Data security technique with parity bit
- Troubleshooting in case of interrupted or interchanged lines

Communications / Digital Technology

PC requirements

- IBM-compatible PC, CPU: 80386/40 MHz and upwards, working memory: ≥ 4 MB RAM, operating system for the PC: Windows version 3.1 and upwards or Windows 95/98, colour monitor and graphic card (VGA), mouse, free serial and parallel interface

Accessories Included

- Serial interface cable, 9-pin (Sub-D), length: 2 m
- Parallel interface cable Sub-D (25-pin)/Centronics (36-pin), length: 1.8 m

Accessories Recommended

- Storage oscilloscope or
- Logic analyser

Technical Data

Mains connection

- Voltage: 230 V AC / 115 V (110 V) AC; approx. 2.5 VA; 50 ... 60 Hz

TTL outputs

- 2 outputs with LOW level
- 2 outputs with HIGH level

Interface RS 232

- Serial interface RS 232 for connection to the PC
- With level converter for converting the RS 232 level to TTL level

Interface Centronics

- Parallel interface Centronics for connection to the PC

Microcontroller

- Type 87C51

LC display

- LCD module, 2 lines of 16 characters each

Input keyboard

- Membrane keyboard with 8 keys for setting: interface (RS 232 and Centronics), display (HEX, DEC, BIN), parity (even, odd), baud rate (4800 Bd/9600 Bd)

Test jacks (2 mm)

All the lines necessary for the interfaces are fed out as test jacks (short-circuit-proof). Various lines can be disconnected to simulate errors.

Adapter field

The adapter field adapts 4 mm to 2 mm connections.

Mechanical design

The front panel of the INTERFACE TRAINING BOARD is made of 5 mm thick laminate, matt blue in colour with white engraving representing the built-in function groups. The rear of the Board is protected with a grey plastic cover. Its shape allows the Board to be placed at an ergonomically favourable angle for example on a table.

Dimensions and weight

Dimensions: 266 x 297 x 100 mm (w x h x d); weight: 1.8 kg

Subject to technical modifications.