YILDIRIM ELEKTRONİK

Y-0016 DIG
BASIC ELECTRICITY ELECTRONICS TRAINING SET
DIGITAL CIRCUITS APPLICATION MODULES

Digital Circuits Application Modules are consisting of 11 experiment modules and are designed for digital applications.

The theory, application areas, the definition of the components and their figures in practice are given detailed in the introduction of every subject in the Experiment Book. The Book contains the chapters of “Preparation information” supported with circuit diagrams and graphics, ”how to do the experiment” with detailed explanation and ”conclusion” where the results and the questions regarding to the experiment are included.

2 mm sockets and 2 mm connection leads in different colors are used with the Digital Circuits Application Modules.

SYSTEM PRESENTATION

Application Modules	:	11 Pcs
2mm Connection Leads	:	24 Pcs, in 4 different colors
Experiment Book	:	1 Pcs

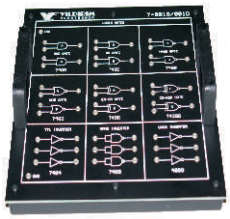
DİJİTAL DEVRELER UYGULAMA MODÜLLERİ VE ÖZELLİKLERİ

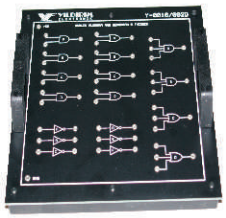
SUITABLE MAIN UNITS

- Y-0016
- Y-0039

Experiment Module - 1

- Obtaining the truth table of AND Gate
- Obtaining the truth table of 3 - Input AND Gate
- Obtaining the truth table of NAND Gate
- Using NAND Gate as an INVERTER
- Generating 3 - Input NAND Gate using 2- Input NAND Gates
- Obtaining the truth table of INVERTER Gate
- Converting AND Gate into OR Gate by using INVERTER
- Converting OR Gate into AND Gate by using INVERTER
- Obtaining the truth table of OR Gate
- Obtaining the truth table of 3 - Input OR Gate
- Obtaining the truth table of NOR Gate
- Using NOR Gate as an INVERTER
- Obtaining 3 - Input NOR Gate using 2 - Input NOR Gates
- Obtaining the truth table of EXCLUSIVE-OR Gate
- Obtaining the truth table of EXCLUSIVE-NOR Gate
- Examination of EXCLUSIVE-NOR Gate





Experiment Module - 2

- Examination of COMMUTATIVE Law (OR GATE)
- Examination of COMMUTATIVE Law (AND GATE)
- Examination of ASSOCIATIVE Law (OR GATE) (2 Experiments)
- Examination of ASSOCIATIVE Law (AND GATE) (2 Experiments)
- Examination of DISTRIBUTIVE Law (4 Experiments)
- Examination of IDEMPOTENCY Law
- Examination of AND GATE Law
- Examination of OR GATE Law
- Examination of COMPLEMENT Law
- Examination of INVOLUTION Law
- Examination of ABSORPTION Law
- Examination of DE MORGAN’S Law (2 Experiments)

Experiment Module - 3

- R-S FLIP FLOP with NOR Gates
- R-S FLIP FLOP with NAND Gates
- R-S FLIP FLOP with clock
- Obtaining the truth table of J-K FLIP FLOP
- Obtaining the truth table of D FLIP FLOP
- Obtaining the D FLIP FLOP using J-K FLIP FLOP
- Obtaining the truth table of T FLIP FLOP

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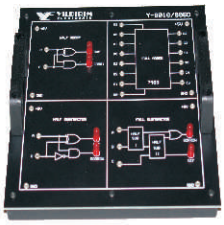
Experiment Module - 4

- BINARY COUNTER application
- Using BINARY COUNTER as BCD COUNTER
- Examination of 7 bit BINARY COUNTER
- Examination of Asynchronous up-counters composed of JK FLIP FLOP
- Examination of Asynchronous down-counters composed of JK FLIP FLOP
- Determining counting limits of Asynchronous counters

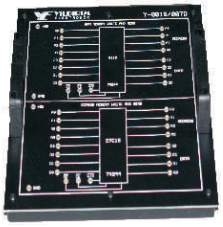


Experiment Module - 5

- Examination of HALF ADDER
- Examination of FULL ADDER
- Examination of HALF-SUBTRACTORS
- Examination of FULL-SUBTRACTORS

Experiment Module - 6

- Shift registers composed of FLIP FLOP
- Serial - Parallel SHIFT REGISTERS Experiment
- Right SHIFT REGISTERS Experiment
- Left SHIFT REGISTERS Experiment
- Parallel input - Parallel output SHIFT REGISTERS Experiment

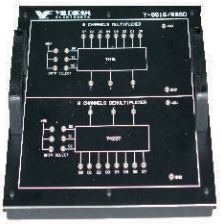


Experiment Module - 7

- Examination of 6116 RAM Integrated circuit
- Examination of addressing 2816 EEPROM Integrated circuit

Experiment Module - 8

- Sliding letters experiment by using character generators and dot matrix
- Examination of character generators and dot matrix

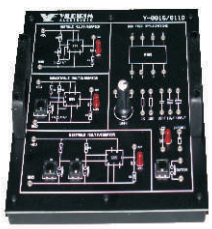


Experiment Module - 9

- Examination of 8x1 MULTIPLEXER
- Examination of 1x8 DE-MULTIPLEXER (DEMUX)
- DATA Transfer MUX-DEMUX combination experiment

Experiment Module - 10

- Analog - Digital Converters experiment ADC
- Digital - Analog Converters Experiment DAC
- Examination of DATA Transmission with A/D - D/A Convertors



Experiment Module - 11

- Examination of 555 Integrated circuit as ASTABLE multivibrator
- Examination of 555 Integrated circuit as MONOSTABLE multivibrator
- Examination of 555 Integrated circuit as BISTABLE multivibrator