YILDIRIM ELEKTRONIK

Y-0020 - 02
ADVANCED LEVEL DIGITAL ELECTRONICS TRAINING SET

The Advanced Digital Electronics Training Set is designed for advanced electronics applications. Set consists of a breadboard that allows internal applications, power supply, oscillator, logic level generator, logic level indicators, dot matrix display and 7 segment display.

2 mm sockets and 2 mm connection leads in different colors are used in the set.

The set is placed with cover in a shock proof separable case. It is designed for using horizontally and is suitable for storing vertically.

The theory, application areas, the definition of the components and their figures in practice are given detailed in 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" where the real pictures are used and "conclusion" where the results and the questions regarding the experiment are included.

TECHNICAL SPECIFICATIONS

Supply Voltage	:	220V AC / 50Hz ±10%
DC Fixed TTL Power Supply	:	+5V DC / 1.2A / Electronic protected
TTL Pulse Generator	:	1Hz - 20KHz, Variable
Pulse Switch	:	Positive and Negative

APPLICATION COMPONENTS ON THE SET

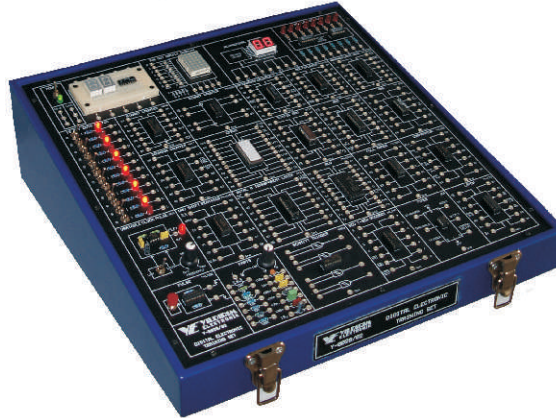|	
Binary switch (with LED Indicator), 12 Bit, TTL	1 Pcs
8 Bit Logic indicator	1 Pcs
BreadBoard (For internal applications)	1 Pcs

SYSTEM PRESENTATION

Main Unit	:	1 Pcs, (Dimensions 400mm x 45 - 120mm x 420mm) Metal Case
2mm connection Leads	:	24 Pcs, in 4 different colors
Power Cable	:	1 Pcs, IEC, 2mE
Experiment Book	:	1 Pcs

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PRACTICAL EXPERIMENTS ON ADVANCED LEVEL DIGITAL ELECTRONICS TRAINING SET

SCHMITT TRIGGER Gate Circuits
UNIVERSAL SHIFT REGISTER Experiment
Left-Shift Register Experiment
Parallel Input - Paralel Output Shift Register
Complement Shift Register Experiment
Forming Hexadecimal numbers using 7 segment Display
Using 7 segment display as Hexadecimal decoder
Using character generators and dot matrix to genertaing scrolling writings
Examination of Decade Johnson Counter IC
Frequency division using one of the FF forming the Binary Counter
Forming 3 bit counter using two of the FF forming the Binary Counter
Examination of Binary Counter as BCD Counter
Examination of 74 LS 93 IC as Binary Counter
Up / Down BCD Counter
Programming BCD Counterand operation
Examination the automatical loading of BCD Counter
Examination of up-asynchronous counters composed of JK FF
Examination of down-asynchronous counters composed of JK FF
Determining the counting range of the asynchronous counters
Examination of up-synchronous counters composed of JK FF
Examination of down-synchronous counters composed of JK FF
Changing the counting limit of synchronous counter
Examination of 4040 counter integrated circuit
Experiment of counting up to 99
555 timer operating as Astable multivibrator
555 timer operating as Monostable multivibrator
Examination of Full Adder
Using 74 LS 83 as half adder or half substractor via MOD selection property
Examination of Latch
Examination of 74 LS 373 (D-type transparent latch) Integrated Circuit
Examination of Comparator Circuits
Examination of 74LS47 7 segment decoder circuit
Examination of 74LS151 Multiplexer Integrated circuit
Examination of 74 LS 259 Integrated Circuit as demultiplexer
Examination of AD558 Digital-Analog Converter
Examination of ADC0804 Analog-Digital Converter
Examination of ADC0804 behaviour after conversion
Examination of converting Analog data to digital data and transmitting
Examination of 2114 RAM integrated circuit
Examination of 2716 EPROM IC addressing experiment
Examination of 2716 EPROM IC addressing with 4040 counter
Examination of ALU experiments done with 74LS181 IC
Counter design with Karnough maps
Examination of Encoder circuits