8085 Microprocessor Trainer can interface with IBM PC/XT/AT computer with the help of 96 bit TTL I/O Experimental Interface and Editor Assembler Software. It is quite an efficient system based on Industry Standard Intel 8085 ìp for the purpose of training and prototype development of microprocessor based systems. Its hardware is capable of supporting multi processor configuration also.

The unit is self contained and requires no other apparatus. Practical experience on this board carries great educative value for Science and Engineering Students.

The Microprocessor trainer is designed to teach the subject of Microprocessor programming and interfacing through practical, essentially designed to teach the study of :

01   Design student projects.
02   Familiarize components used in Microprocessor based instruments.
03.   Study the signals generated by the Microprocessor.
04.   Learn the art of programming in machine language.
05.   Design application oriented equipment.
06.   Design and debugging techniques, etc.
07.   Perform input / output experiments.
08.   Instruction set of 8085.

Hardware Specifications:

* **CPU**	:	8085 Microprocessor @ 6.144 MHz
* **MEMORY**	:	Total space ON BOARD is 48KB,Comprising of 16KB monitor EPROMS and 32KB RAM. Battery Backup for RAM. No expansion required.
* **PERIPHERALS**	:	8279 for controlling 24 feather keys (including 6 digit seven segment display).
	:	1 Timer/counter with three independtly programmable counters.
	:	Two 8255 for controlling 48 I/O lines and same are brought out to FRC 50 pin connector.
	:	8251 for RS 232 C serial communication and firmware for UP/DOWN facility for IBM PC/XT/AT computer.
	:	Built-in cassette interface.
	:	Built-in Speaker interface.
	:	Built-in EPROM programmer for 27128 operating at 12.5V.
* **INTERFACING SIGNALS**	:	All buffered & demultiplexed TTL compatible signals brought on a 50 pin FRC connector including address and data control lines brought out at another 50 pin FRC connector. Several experimental interface modules can be connected to this trainer. They are ADC, DAC, Stepper motor, 8-bit switch input, 8-bit LED output, Relay interface module, etc. and many more are available.

The following programs can be performed on the above 8085 Microprocessor Trainer, detail of which have been provided in the manual supplied with the Trainer.

Experiment:
01.   Program to perform integer division 8-bit by 8-bit.
02.   Program to perform integer division 16-bit by 8-bit.
03.   Transfer of a block data in memory to another place in memory in the direct and reverse order.
04.   Finding the parity of number.
05.   Sorting of array in Ascending order.
06.   Sorting of array in Descending order.
07.   Program to multiply two 8-bit numbers.
08.   Program to generate and sum 15 Fibonacci number.
09.   Program for rolling display of message "INDIAN"
10.   To insert a number at correct place in a sorted array.
11.   Program to display smallest number in an array.
12.   Program to display largest number in an array.
13.   Program to add 2 numbers in Hex and Decimals
14.   4 digit Hex counter.
15.   Program for converting 8 bit binary (Hex) to Decimal.
16.   Subtraction of two 16 bit numbers.
17.   Program to perform Hex to BCD conversion.
18.   Program to read key board and display its code.
19.   Program to find HCF.
20.   Program to find LCM.

Software Capabilities:
The Monitor provided in 32K EPROM is capable of assisting the user, entering, editing and running the programs in assembly language. Along with other keys the following keys support these features.

* **SET ADDR**	:	This key allows to examine and optionally update the RAM.
* **EXAM/REG**	:	This key allows to examine and optionally update the CPU Registers.
* **"GO" & "EXEC" KEYS**	:	These keys allow running of the user or monitor programs at full speed.
* **STEP**	:	This key allows running of the user or monitor programs, one instruction at a time

Features:
*   The unit is operative on 230V, 50 Hz A.C. Mains.
*   Strongly Supported by Detailed operating Instructions, giving details of Object, Theory, Design procedures, Report Suggestions and Book References.
*   Power Supply: 5V @ 1A, ± 12V @ 500mA All assembled in an well de signed cabinet.

Accessories:
01.   50 pin FRC Cable 2 Nos.
02.   Software CD 1 Nos.

Note: Specifications are subject to change.

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