

Practical No.1

Aim → Familiarization of different keys of 8085 microprocessor kit and its memory map.

Apparatus 8085 kit

Diagram

Reset	VCT INT	SHIFT	C	D	E	F
RTG <sub>1</sub>	INSD	DELD	8	9	A	B
DEL GO	INS BM	REL EXREG	4	5	6	7
STRG <sub>1</sub> PRG	MEMC NEXT	FILL	0	1	2	3

Keyboard 8085 kit

Theory

Keyboard Description

8085 kit has 28 keys and six-seven segment display to communicate with the outside world. As kit switches on, a message "UP85" is displayed on the display and all the keys are in command mode.

The keyboard is as shown below.

- RESET - Reset the system.
- VCINT - Hardware interrupt via keyboard, RST7.5
- SHIFT - Provides the second level command to all keys.
- GO - To execute a program.
- SI - To execute the program on single step mode.
- EXREG - examine registers.
- PRE - Previous used as an intermediate terminator in case of examine memory.
- DEL - Delete
- INS BM - Insert Block move

- **FILL** - Allow user to fill RAM area with constant.
- **REL** - Relocates a program written for some memory area and to be transferred to other memory area.
- **INS DATA** - Insert data.
- **STRING** - Find out the strings of data lying at a particular address.
- ~~MEME~~
- **MEME** - Memory compare.
- **0 TO F** - Hexadecimal keys.

### Memory map of kit.

0000 H	To	0FFFH	=	ERROM (2732)
1000 H	To	17FFH	=	RAM #1 (61/6)
1800 H	To	1FFFH	=	RAM #2 (61/6)
2000 H	To	27FFH	=	RAM #3 (61/6)
2800 H	To	2FFMH	=	RAM #4 (61/6)
309FH	To	300FH	=	256 bytes of user step
30A0H	To	3FFFH	=	fold back memory
4000 H	To	FFFFH	=	expandable memory



## Practical No. 2

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AIM → Steps to enter data/program and execute a program in 8085 kit.

Apparatus - 8085 HP kit.

### Procedure

- 1) Switch ON the power supply and kit will display "UP 8085"
- 2) Press reset → examine memory - program starting memory address - next ~ op code ~ next and so on upto the end of program op codes.
- 3) To execute the program press Reset ~ go ~ starting address ~ execute buttons.
- 4) To check the result press Reset ~ examine memory ~ memory address ~ Next.