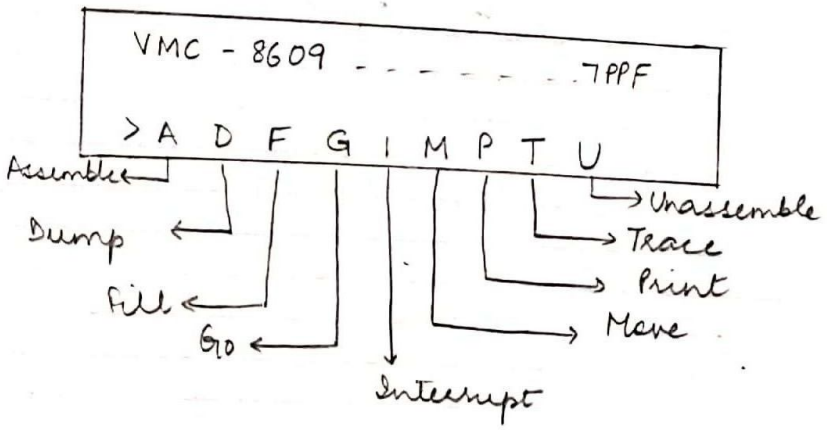
EXPERIMENT-1



Operating commands

- A → Assemble
  This command is used to convert the INPUT assembly language to machine language in memory

- Display (D) or Modify the RAM's hexadecimal:-
  A D U are the most important commands in the compiling. The effective address or the segment+effective address can be used during input.

- Fill (F) Data in the RAM:-
  By setting the starting, ending address & the details, an ENTER key will allow the data to enter the RAM.

- G: Proceed to the address for execution: The go command which causes the machine language

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MICROPROCESSOR 8086
VMC-8609

GENERAL DESCRIPTION:-

- VMC-8609 is a single board microprocessor TRAINING / DEVELOPMENT KIT configured around the INTEL'S 16 Bit Microprocessor 8086.
- It can operate in max or min mode. Coprocessor 8087 & I/O processor 8089 can be added.
- The kit communicates with outside world through an IBM PC compatible keyboard & LCD Display.
- It is packed up with a powerful monitor in 32K Bytes of factory programmed EPROMS & 32K Bytes of RAM for user. These memory can be expandable upto 256 K Bytes each.
- The system has 72 programmable I/O lines. The serial I/O communication is made possible through 8251
- 3 16-bit Timer / Counters are available through 8253. The 8 level of interrupt are provided through 8259
- VMC-8609 provides onboard battery back up for RAM
- The onboard resident system monitor software provides various software commands like BLOCK MOVE, INSERT, DELETE, FILL etc. which help in developing & debugging software.
- The kit has an on board buzzer for self testing of hardware & software. A centronics Printer port is

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statements to be executed

I- Interrupt
3 interrupts can be set in for the program execution, one CPU will continuously make a single step subprogram for checking IP values

M→ Moving Data :- To move data in the memory from specified address by input the starting address, the ending address & desired address

P→ Print :- For printing the output through printer

T→ Trace Program
For program execution, TRACE will enter the interrupt subprogram with every time the program will be executed

U→ Unassemble
This decodes the value of a gp memory location mnemonics & displays on the displayed. Once entered the command input the proper design address

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used to take out prints of the program in RAM or bit
- An onboard Assembler/Disassembler is also provided on VMC-8609AD
- The bit also supports MASM
- A Real time clock is also provided onboard for Real time applications

SPECIFICATIONS FOR VMC-8609

- Processor 8086, 16 bit microprocessor operating in max 8088, 8 bit microprocessor
- EPROM : 128K Bytes of EPROM loaded with monitor
- RAM : 64K Bytes expandable to 128K Bytes
- Parallel I/O lines : 48 I/O lines using 2 nos 8255
- Additional I/O lines : 24 I/O lines using 8255
- Serial Communications : Through RS-232C port using 8251
- Interrupts : 8 different level interrupt through 8259
- Timer/Counter : 3 16 bit Timer/Counter through 8253.
- Keyboard :- IBM PC compatible ASCII keyboard.
- Display 20X2 LCD with back light or 40X2 or 20X4
- Sound : Buzzer
- Assembler/Disassembler provided onboard
- BUS :- All address data & control signals (TTL compatible) available at FRC connector

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- Power Requirement 5V, 800 mA
- Operating Temperature : 0 to 50°C

OPTIONAL FEATURES:-

- Display 40X2 LCD
- Printer Interface :- Centronix Printerport
- Real Time Clock :- Provided on board
- Programmable Module Card :- 27C64 to 27C512
- Relay & Opto Card :- Provided on board
- Audio Cassette Interface :- Provided on board
- Speaker interface :- Provided on board.