Aleste Debugger (DBG)

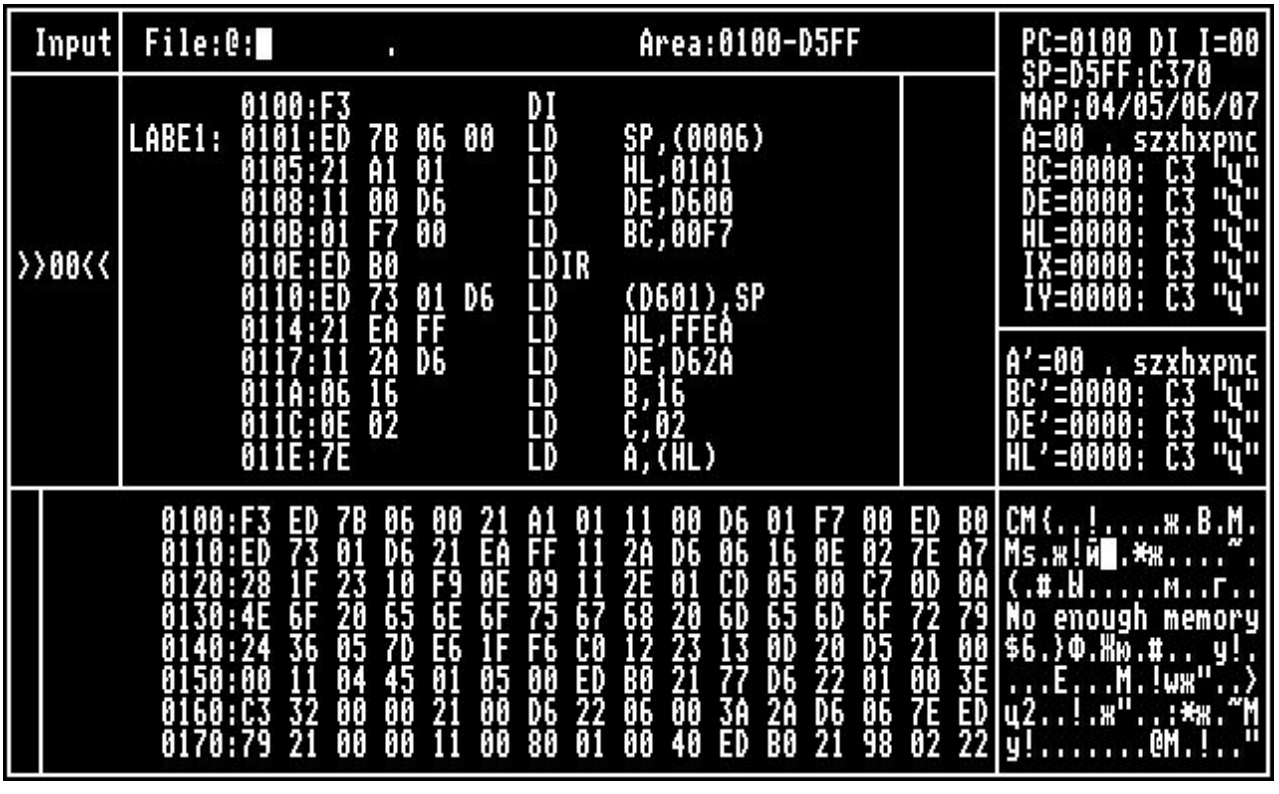
Short manual

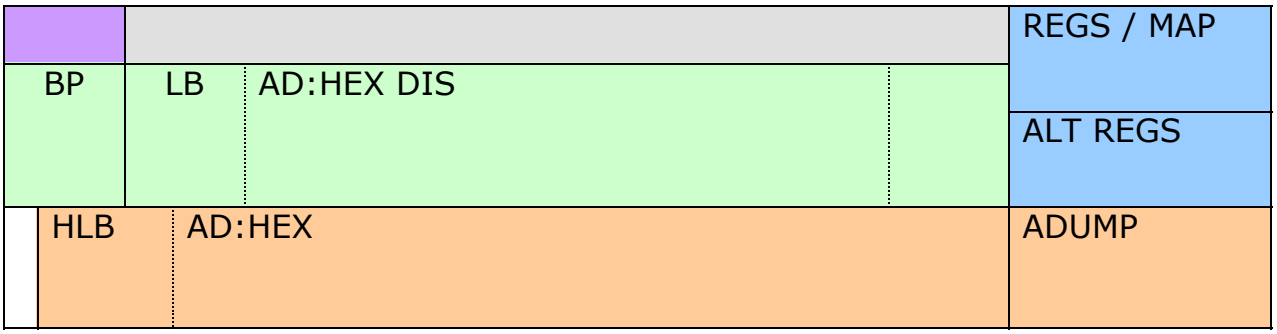
Features

- Size 23KB
- Easy to use (Simple GUI)
- Separated video buffer
- CPU Register's Dump
- Memory Dump
- Breackpoints
- Custom Labels
- Memory management (mapper support)
- Embedded Dissassembler
- Embedded Assembler
- Embedded Calculator
- Embedded memory operations

Introduction

Debugger can be started by DBG command. The disk should have DBG.COM application. After start the debugger shows a framed window (look at screenshoot). Each frame display a frame specific information. The debugger located at (CORRECT ME) memory and use (CORRECT ME) page for video buffer, so the video buffer of the OS would not be changed by DBG.





Frames

State
Input field
List
Registers
Dump

Subframes

BP – Breakpoints, LB and HLB – labels, AD – address, HEX – hex dump, ADUMP – asci dump, REGS – registers, ALT REGS – alternate (‘) registers, MAP – mapper, DIS - dissassembler

Difference between frames and subframes is: move to frame possible by special key sequense but moving between subframes in one frame by cursor movements. Also all subframes of one frame has the same scroll position.

Frames and Subframes description

- **State**
  Display current state of debbugger (ESC, List, Dump, Regs, Trace, Exec, Go, Break, Quit, Input, Output).Depend on current state cursore can be relocated to specific frame.
- **Input field**
  Some of states required user input then cursor will be moved to this frame and neede information will be requested. Enter will finish entering but TAB will move cursore to next column of requested information.
- **List**
  - **Breakpoints**
    Add or remove BP by space or any another key.
  - Label
    This is labels for memo. Just mark eny line by label. Put cursor and enter the label text then Enter or just left the line or frame.
  - **Address**
    Address of dissassembler or dump, change put on anddress cursor and edit it as hex number – it will change address. Or use up/down keys to scroll address.
  - **Hex dump**
    Edit it easy
  - **Dissassembler**
    Edit it easy and DBG will assemple it
- **Hex**
  - **Label**
    This is labels for memo. Just mark eny line by label. Put cursor and enter the label text then Enter or just left the line or frame.

    - **Address**
      Address of dissassembler or dump, change put on anddress cursor and edit it as hex number – it will change address. Or use up/down keys to scroll address.
    - **Hex dump**
      Edit it easy
    - **ASCI dump**
      Just edit it easy
- **Registers**
  CPU registers and mapper edit same as dup. Register MAP is a mapper has 4 numbers. Each is the number of RAM page for one 16KB page. On the screenshoot 4/5/6/7 means:

  0000-3FFF – 4 page
  4000-7FFF – 5 page
  8000-BFFF – 6 page
  C000-FFFF – 7 page

States

ESC	Was pressed ESC button and DBG is waiting for next character
List	Dissassembler List
Dump	Memory Dump
Regs	Registers/Mapper Dump
Trace	Trace *The command will not be executed, but debugger will simulate the command's result (side effect)*
Exec	Execute *The command will be really executed.*
Go	Go
Break	Break at the breackpoint
Quit	Exit from DBG
Input	Input (Read) file
Output	Output (Write) file

Keyboard shorcuts

The character + means at the same time, but character → means sequevintaly.

File operations

ESQ → I	Read file
ESQ → O	Write file

Frames

ESQ → L	List mode
ESQ → D	Dump mode
ESQ → R	Register's dump mode

Memory operations

ESQ → S	Serach
ESQ → F	Fill memory
ESQ → W	Compare memory
ESQ → M	Move momory

Execution

CTR + P	Load current address to PC
CTR + T	Trace one line
CTR + X	Execute one line (who can explain me difference with trace)
CTR + G	Go up to BP
CTR + V	Show DOS video screen (press any key return back to DBG)

Utilities

ESC → V	Refresh screen
ESC → C	Calculator
ESC → Q	Exit

EOF