

## CHIP-16 Debugger

[illegible]

## Introduction

The debugger allows you to single step through each CHIP-16 instructions and see how the variables, registers, memory pointers and memory get affected.

The new CHIP-16 command to turn the debugger ON is 9 - this will actually toggle the debugger ON/OFF.

The debugger mode defaults to OFF when you first launch DBUG-16.

DEBUG-16 will run just about as fast as CHIP-16 while the debugger mode is OFF.

NOTES:

Graphic modes B, C, D and E (MODEX) can be debugged but will not be able to restore the graphics properly.

The character set with **CHAR Vxx = MLn** (**CHARACTER SET Vxx = MLn**) in VGA font will be reset when you single-step.

In Fast mode, the **CHAR Vxx = MLn** will work as you don't alternate between the debug and virtual screens.

### Debugger command overview:

B - Break point address. Enter a hexadecimal word (4 digits).

NOTES:

Press ENTER to cancel. (Applies also to 'E', 'J', 'P' and 'S')

Press shift+a...f to enter capital A-F. (Applies also to 'E', 'J', 'P' and 'S')

Enter an address outside program limits to cancel break point (FFFF is a good value).

D - Display virtual screen when single stepping through program (Toggles ON/OFF).

In other words, when ON, the debugger will stop and display the screen after the current instruction has executed. Press any key to go back to debugger main screen.

E - Examine memory (functions just like the E command in CHIP16).

G - Go execute current CHIP-16 GSUB instruction. Stops at the instruction after the GSUB. (If current instruction is not a GSUB, it will act as SPACE bar).

**J** - Jump to an address.

M - Examine memory with previous Start and End addresses.

P - Program memory (functions just like the P command in CHIP16).

S - Change Segment (functions just like the S command in CHIP16). Defaults to segment 8 when first enter debugger mode. Will change as program debugs.

T - Toggle fast mode ON/OFF.

Note: will not run as fast as when debugger mode is OFF, but still much faster than single stepping with continual pressing of SPACE bar.

SPACE bar - execute current CHIP-16 instruction.

UP Arrow key - point to previous instruction (used to skip current instruction).

DOWN Arrow key - point to next instruction (used to skip current instruction).

ESC - get out of debugger. Returns to CHIP-16 command prompt. Debugger mode remains ON unless you toggle it OFF with Command 9.