I. INTRODUCTION

This is a small monitor program for the 6809 Color Computer. The program allows you to do hex-ascii dumps of memory, examine and change memory, set break points in programs, examine and change the registers, and tests memory. The program is very versitile and is position independent (pic).

II. PURPOSE OF THIS PROGRAM

The purpose of this program is to aid in the debugging of machine guage programs and to better understand the internal workings of ...e Color Computer.

III. HOW TO GET STARTED

Load the program using the CLOADM command. Then type EXEC to start the program (you should get 'CMD?' as a prompt). The first command you should try is the 'H' command. For a detailed explaination of this command and other commands, see below. Note - the program as it comes is designed for a 32K machine, so for machines with less memory see the SPECIAL INSTRUCTION section for instructions on loading it into a lower address space.

IV. COMMANDS SPECIFICATIONS

The reference type format will be used with the command displayed first and its function following it. Now for a few fine details: 1) If you make a mistake while typing in a hex number of any kind, just type an invalid hex digit and the command will abort without further action. 2) The dash between two address commands is provided by the computer so you don't have to type it. 3) The 'A's in the syntax diagrams signify hex digits. 4) Brackets surrounding an item indicate that the item is optional. Don't type the brackets in.

B AAAA

SET BREAKPOINTS - Puts a software interrupt in place of the opcode at the address specified. When the software interrupt is executed by the 6809 processor, processing stops, the register values are shown, and the command prompt is given. It is useful to break at the beginning of an instruction to follow the execution flow of a program.

E AAAA-AAAA

EXAMINE MEMORY - Displays in both hex and ASCII any portion of memory.

G [AAAA]

GO ADDRESS - Starts execution of a machine language program at the address specified. If no address is specified, the address specified by the program counter register on the stack is used.

H HELP - Lists all of the commands and a brief discription of each.

M [AAAA]

MEMORY EXAMINE-CHANGE - Used to alter things in memory and view values in memory a little at a time. If an address is specified, the examining starts at that address. If no address is specified, examining starts with the address last viewed by a previous 'M' command (or at location 0 if the 'M' command has not been used before). To scan forwards in memory, hit any key except <up arrow>, <enter>, or hex numbers (0123456789ABCDEF). To scan backwards, use the <up arrow> key. To change the currently displayed memory location, just type two hex numbers. If a question mark appears after the two typed in characters, the memory value was not changed due to the location not being in RAM. To return to the command prompt hit <enter>.

Q AAAA-AAAA

QUESTION MEMORY - Tests memory between the addresses specified. This will test over this monitor program and destroy it if it is asked to, so be careful.

R [REGISTER]

REGISTER EXAMINE-CHANGE - Displays all of the registers and their contents if the 'R' is followed by <enter>. However, if it is followed by one of the following letters (C,A,B,D,X,Y,U,P), that register is displayed and you can change its value by typing in a hex value. The definitions of the registers are:

C = condition codes	X = X register
A = A register	Y = Y register
B = B register	U = U register
D = D register	P = program counter

U AAAA

UNDO BREAKPOINTS - Clear breakpoints at the specified address.

V. SPECIAL INSTRUCTIONS

To load CK Monitor on a 16k machine you have to add an offset to the CLOADM command (then just use EXEC to run):

```
CLOADM"CKMON",&HC000
```

To make a copy of this program after loading it into 16k you:

```
CSAVEM"CKMON",&H3000,&H3DD1,&H3000
```

Note: the 16k backup copy does NOT need the offset to be reloaded (CLOADM will do).

To make a copy of this program after loading it into 32k you:

```
CSAVEM"CKMON",&H7000,&H7DD1,&H7000
```