**MONITOR 2.0 SPECIFICATIONS**

1. Memory Organization

FFFF-----------------------

BIOS (same as CP/M)

E600-----------------------

MONITOR

D000-----------------------

TPA

0100-----------------------

PZERO (same as CP/M)

0000-----------------------

1. Commands

* BOOT – warm boot (no parameter required)
* MEMO – memory operations (no parameter required)
* RUN – execute a program
* XMODEM – receive a file
* HEX2COM – convert hex file to executable
* LCD – write on LCD (no parameter required)
* DISK – disk operations (no parameter required)
  1. MEMO

>MEMO

M>Q Quit command (return to Monitor).

M>R aaaa Read one page, starting at aaaa.

<ENTER>=Next page, <ESC>=quit.

M>W aaaa,c1c2…cN Write starting at aaaa. End sequence with <ENTER>. Characters c1, c2… cN may be separated by blank spaces.

M>F aaaa-bbbb,cc Fill area aaaa till bbbb with cc.

M>C aaaa-bbbb,cccc Copy area aaaa till bbbb to cccc.

All parameters (aaaa, bbbb, cccc and cc) are in hexadecimal.

* 1. RUN

>RUN aaaa Execute program at aaaa.

* 1. XMODEM

>XMODEM aaaa Receive a file, using xmodem protocol, and

save at aaaa.

* 1. HEX2COM

>HEX2COM aaaa Convert HEX file (Intel format) at aaaa

to executable.

* 1. LCD

>LCD

L>Q Exit command (return to Monitor).

L>I a Initialize LCD on card address a.

L>P aaaa,d Print on LCD text starting at aaaa, finishing

with NUL (0). Use d seconds delay between each line. Type <ESC> to quit.

L>W Enter WYSIWYG window. Use arrows to navigate,

^H to clear LCD, and <ESC> to quit.

* 1. DISK

>DISK

Disk operations are addressed using DTS format (Disk, Track, Sector). In order to keep compatibility with CP/M 128MB Flash, these are the physical limits:

* Disk in range [A; P] (16 disks)
* Track in range [000; 1FF] (512 tracks/disk)
* Sector in range [00; 1F] (32 sectors/track)

(512 bytes/sector)

D>Q Exit command (return to Monitor).

D>R d,ttt,ss Read one sector, starting at the

specified location (d,ttt,ss).

<ENTER>=next sector, <ESC>=quit.

D>D d,ttt,ss-aaaa Download one sector from d,ttt,ss to memory aaaa.

D>U aaaa-d,ttt,ss Upload one sector from memory aaaa to disk location d,ttt,ss.

D>V d,ttt,ss Verify sector d,ttt,ss.

V d,ttt Verify all sectors in track d,ttt.

V d Verify all sectors in disk d.

V full Verify full media. Take a coffee,

sit and wait, wait, wait.

For all verify sector operations, original content will be lost! All parameters, except disk, are in hexadecimal.

XXXXX – phase 1

XXXXX – phase 2

XXXXX – phase 3

XXXXX – not sure if needed