

DIGITAL RESEARCH

Post Office Box 579, Pacific Grove, California 93950, (408) 373-3403

SYSTEM GENERATION (SYSGEN)

CP/M VERSION _____

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DIGITAL RESEARCH

P. O. BOX 579

PACIFIC GROVE, CA. 93950

SER. # _____

SYSGEN

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1>
2>
3>
4> 0000 =      VERS      EQU      11      ;X.X
5>
6>
7>
8>
9> 0100          ORG      100H      ;BASE OF TRANSIENT AREA
10>
11> 0900 =      LOADP     EQU      900H      ;LOAD POINT FOR SYSTEM DURING LOAD/STORE
12> 0005 =      BDOS      EQU      5H       ;DDOS ENTRY POINT
13> 0000 =      BOOT      EQU      0        ;JMP TO 'BOOT' TO REBOOT SYSTEM
14> 0001 =      CONI      EQU      1        ;CONSOLE INPUT FUNCTION
15> 0002 =      CONO      EQU      2        ;CONSOLE OUTPUT FUNCTION
16> 000E =      SELF      EQU      14       ;SELECT DISK
17> 0000 =      DISKA     EQU      0        ;NUMBER CORRESPONDING TO A
18> 0001 =      DISKB     EQU      1        ;AND B, RESPECTIVELY
19>
20> 000A =      MAXTRY    EQU      10       ;MAXIMUM NUMBER OF RETRIES ON EACH READ/WRITE
21> 0002 =      NTRKS     EQU      2        ;NUMBER OF TRACK RESERVED FOR CP/M
22> 000D =      CR        EQU      0DH      ;CARRIAGE RETURN
23> 000A =      LF        EQU      0AH      ;LINE FEED
24> 000A =      STACKSIZE EQU      0AH      ;SIZE OF LOCAL STACK
25>
26> 0001 =      WBOOT     EQU      1        ;ADDRESS OF WARM BOOT (OTHER PATCH ENTRY
27>                                POINTS ARE COMPUTED RELATIVE TO WBOOT)
28> 0018 =      SELDSK    EQU      24       ;WBOOT+24 FOR DISK SELECT
29> 001B =      SETTRK    EQU      27       ;WBOOT+27 FOR SET TRACK FUNCTION
30> 001E =      SETSEC    EQU      30       ;WBOOT+30 FOR SET SECTOR FUNCTION
31> 0021 =      SETDMA    EQU      33       ;WBOOT+33 FOR SET DMA ADDRESS
32> 0024 =      READF     EQU      36       ;WBOOT+36 FOR READ FUNCTION
33> 0027 =      WRITF     EQU      39       ;WBOOT+39 FOR WRITE FUNCTION
34>
35> 0100 317103      LXI      SP,STACK      ;SET LOCAL STACK
36> 0103 C3DE01      JMP      START
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 SER. # SYSGEN

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59> 0125 7EB7C0      -----
60>
61> 0120 E5CD0E01E1  ;
62> 012E C32501      ;
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MOV A,M! ORA A! RZ
MESSAGE NOT YET COMPLETED
PUSH HI CALL PUTCHAR! POP HI INX H
JMP OUTHMSG0

;
SEL,
SELECT DISK GIVEN BY REGISTER A
MOV C,A! LHL WBOOT! LXI D,SELDSK! DAD D! PCHL

;
TRK,
;SET UP TRACK
LHL WBOOT ;ADDRESS OF BOOT ENTRY
LXI D,SETTRK ;OFFSET FOR SETTRK ENTRY
DAD D
PCHL ;GONE TO SETTRK

;
SEC,
;SET UP SECTOR NUMBER
LHL WBOOT
LXI D,SETSEC
DAD D
PCHL

;
DMA,
;SET DMA ADDRESS TO VALUE OF B,C
LHL WBOOT
LXI D,SETDMA
DAD D
PCHL

;
READ,
;PERFORM READ OPERATION
LHL WBOOT
LXI D,READF
DAD D
PCHL

;
WRITE,
;PERFORM WRITE OPERATON
LHL WBOOT
LXI D,WRITF
DAD D
PCHL

;
GETPUT,
GET OR PUT CP/M (RW=0 FOR READ, 1 FOR WRITE)
DISK IS ALREADY SELECTED

;
LXI H,LOADP ;LOAD POINT IN RAM FOR CP/M DURING SYS
SHLD DMADDR

;
CLEAR TRACK TO 00
XRA A ;CLEAR REG-A
STA TRACK

;
RUTRK,
;READ OR WRITE NEXT TRACK
LXI H,TRACK
MOV A,M
CPI NTRKS ;LOADED OR DUMPED ENTIRE SYSTEM?
JNC ENDRW ;END OF READ OR WRITE

;
OTHERWISE NOTDONE, GO TO NEXT TRACK
INR M
MOV C,A
CALL TRK ;TO SET TRACK

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 SER. # _____


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239> 0246 C27502      JHZ      REBOOT
240>
241>      PUTC:
242>      ;
243>      SET DISK FROM REGISTER C
244> 0249 79           MOV     A,C
245> 024A C641         ADI     'A'
246> 024C 32F202       STA     PDISK ;MESSAGE SET
247> 024F 79CD3101    MOV     A,C; CALL SEL
248>      ;
249>      PUT SYSTEM, SET RW TO WRITE
250> 0253 CD1501      CALL   CRLF
251> 0256 21E302      LXI     H,PUTMSG
252> 0259 CD2001      CALL   OUTMSG
253> 025C CD0601      CALL   GETCHAR
254> 025F FE0D        CPI     CR
255> 0261 C27502      JNZ     REBOOT
256> 0264 CD1501      CALL   CRLF
257>
258> 0267 215903      LXI     H,RW
259> 026A 3601        MVI     M,1
260> 026C CD6201      CALL   GETPUT ; TO PUT SYSTEM BACK ON DISKETTE
261> 026F 212D03      LXI     H,DONE
262> 0272 CD2001      CALL   OUTMSG
263>
264>      REBOOT:
265> 0275 213F03      LXI     H,BOOTING
266> 0278 CD2001      CALL   OUTMSG
267> 027B CD0601      CALL   GETCHAR
268> 027E FE0D        CPI     CR
269> 0280 C27502      JNZ     REBOOT
270>
271>      SELECT DISK A BEFORE REBOOT
272> 0283 3E00CD3101  MVI     A,DISK1; CALL SEL; CALL CRLF; JMP BOOT
273>
274>      DATA AREAS
275>      MESSAGES
276> 028E 53595347455SIGNDB DB 'SYSGEN VERSION '
277> 029D 312E31      DB     VERS/10+'0',',',',',VERS MOD 10+'0'
278> 02A0 00          DB     0
279> 02A1 4745542053ASKCET DB 'GET SYSTEM? (Y/N)',0
280> 02B3 534F555243GETMSG DB 'SOURCE ON '
281> 02B8 42          DB     'B'
282> 02BE 2C20544045   DB     ', THEN TYPE RETURN',0
283> 02D1 5055542053ASKYPUT DB 'PUT SYSTEM? (Y/N)',0
284> 02E3 4445535449PUTMSG DB 'DESTINATION ON '
285> 02F2 42          DB     'B'
286> 02F3 2C20544045   DB     ', THEN TYPE RETURN',0
287> 0306 5045524D41ERRMSG DB 'PERMANENT ERROR, TYPE RETURN TO IGNORE',0
288> 032D 46554E4354DONE DB 'FUNCTION COMPLETE',0
289>
290>      BOOTING:
291> 033F 5245424F4F  DB     'REBOOTING. TYPE RETURN',0
292>
293>      VARIABLES
294> 0356      SDISK, DS 1 ;SELECTED DISK FOR CURRENT OPERATION
295> 0357      TRACK, DS 1 ;CURRENT TRACK
296> 0358      SECTOR, DS 1 ;CURRENT SECTOR
297> 0359      RW, DS 1 ;READ IF 0, WRITE IF 1
298> 035A      DMADDR, DS 2 ;CURRENT DMA ADDRESS
299> 035C      RETRY, DS 1 ;NUMBER OF TRIES ON THIS SECTOR
300> 035D      DS 2 STACKSIZE=2
301>
302> 0371      END

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