P2.ASM

BOOT LOADER MODULE FOR PROF-180 CP/M 3.0CP/M RMAC ASSEM 1.1 #001 BOOT LOADER MODULE FOR PROF-180 CP/M 3.0

title 'Boot loader module for PROF-180 CP/M 3.0'

; Letzte Aenderung am:

; 10.02.1986 (Joachim)

public ?init,?ldccp,?rlccp,binit

extrn ?pmsg,?conin,?cono,?const,?wboot

extrn @civec,@covec,@aivec,@aovec,@lovec

extrn @cbnk,?bnksl,?pmsg,?bank,@ctbl

extrn monon,monoff,dmatrans,adrtab

maclib pdef

;

maclib pvec

;

maclib hd64180

;

maclib psys

;

maclib modebaud

0005 = bdos equ 5

0001 = tpa$bank equ 1

dseg ; init done from banked memory

?init:

0000 AF xra a ; setze mmu

out0 cbr,a ;

0001+ED3938 DB 0EDH,A\*8+1,CBR

out0 bbr,a ;

0004+ED3939 DB 0EDH,A\*8+1,BBR

0007 324CFF sta epromz ;

U000A 3E00 mvi a,com$page and 0f0h ;

out0 cbar,a ;

000C+ED393A DB 0EDH,A\*8+1,CBAR

000F 218001 lxi h,0180h ; setze kennung

0012 2228FF shld dispadr ; in dispadr

0015 3E00 mvi a,0 ; setze biosversion

0017 3249FF sta temp ; in temp

001A 21F200222B lxi h,xwboot ! shld umleit$getcm + 1 ; setze umleit

0020 21FD002204 lxi h,xconst ! shld mcs + 1 ; vektoren

0026 2107012207 lxi h,xconin ! shld mci + 1 ;

002C 211101220A lxi h,xcono ! shld mco + 1 ;

0032 3A32FF lda io$jumperbyte ; waehle richtige Voreinstellung

0035 FE04 cpi 4 ! jrz io4 ; der Geraetetreiber

0037+2838 DB 28H,IO4-$-1

0039 FE03 cpi 3 ! jrz io3 ; in Abhaengigkeit des IO Jumpers

003B+2829 DB 28H,IO3-$-1

003D FE02 cpi 2 ! jrz io2 ;

003F+281A DB 28H,IO2-$-1

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0041 FE01 cpi 1 ! jrz io1 ;

0043+280B DB 28H,IO1-$-1

0045 2100041100io0: lxi h,00400h ! lxi d,02000h ! lxi b,04000h ! jr ioset ; j4 kein jumper

004E+182A DB 18H,IOSET-$-1

0050 2100801100io1: lxi h,08000h ! lxi d,02000h ! lxi b,04000h ! jr ioset ; j4/1-3

0059+181F DB 18H,IOSET-$-1

005B 2100101100io2: lxi h,01000h ! lxi d,02000h ! lxi b,04000h ! jr ioset ; j4/2-4

0064+1814 DB 18H,IOSET-$-1

0066 2100081100io3: lxi h,00800h ! lxi d,02000h ! lxi b,04000h ! jr ioset ; j4/3-5

006F+1809 DB 18H,IOSET-$-1

0071 2100041100io4: lxi h,00400h ! lxi d,02000h ! lxi b,04000h ; j4/4-6

007A 2200002200ioset: shld @civec ! shld @covec

sded @lovec

0080+ED53 DB 0EDH,53H

0082+0000 DW @LOVEC

sbcd @aivec

0084+ED43 DB 0EDH,43H

0086+0000 DW @AIVEC

sbcd @aovec

0088+ED43 DB 0EDH,43H

008A+0000 DW @AOVEC

008C 219300CD00 lxi h,signon$msg ! call ?pmsg ; print signon message

0092 C9 ret

0093 0D0A signon$msg: db 13,10

0095 50524F462D db 'PROF-180X CP/M Version 3, '

00AF 2843292032 db '(C) 20.01.1986 Digital Research & Conitec'

00D9 0D0A00 db 13,10,0

binit:

00DC 3A51FF lda serbaud0 ;setze die baudraten

00DF E60F ani 0fh ;der beiden V-24 Schnittstellen

00E1 320700 sta @ctbl+7 ;wie im monitor definiert

00E4 3A52FF lda serbaud1 ;

00E7 E60F ani 0fh ;

00E9 320F00 sta @ctbl+7+8 ;

00EC C9 ret ;

j4baudlist:

00ED 0E db baud$9600

00EE 0C db baud$4800

00EF 0A db baud$2400

00F0 08 db baud$1200

00F1 06 db baud$300

; diese Routinen werden von Monitor UP's benutzt

xwboot:

00F2 3E01324CFF mvi a,1 ! sta epromz

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00F7 CD0000C300 call monoff ! jmp ?wboot

xconst:

00FD C5D5E5 push b ! push d ! push h

0100 CD0000 call ?const

0103 E1D1C1C9 pop h ! pop d ! pop b ! ret

xconin:

0107 C5D5E5 push b ! push d ! push h

010A CD0000 call ?conin

010D E1D1C1C9 pop h ! pop d ! pop b ! ret

xcono:

0111 C5D5E5 push b ! push d ! push h

0114 CD0000 call ?cono

0117 E1D1C1C9 pop h ! pop d ! pop b ! ret

cseg

; Laden des CCP.COM von default drive

?ldccp:

; First time, load the CCP.COM file into TPA

0000 0E0DCD0500 mvi c,13 ! call bdos ; reset disk system

0005 AF32C800 xra a ! sta ccp$fcb+15 ; zero extent

0009 21000022D9 lxi h,0 ! shld fcb$nr ; start at beginning of file

000F 11B900CD82 lxi d,ccp$fcb ! call open ; open file containing CCP

0015 3CCA4800 inr a ! jz no$CCP ; error if no file...

0019 110001CD87 lxi d,0100h ! call setdma ; start of TPA

001F 118000CD8C lxi d,128 ! call setmulti ; allow up to 16k bytes

0025 11B900CD91 lxi d,ccp$fcb ! call read ; load the thing

;

002B 210001 lxi h,100h ; save ccp

002E 220000 shld adrtab ;

0031 3E04 mvi a,04h ; source bank is 1

0033 320200 sta adrtab+2 ;

0036 2100F3 lxi h,0f300h ;

0039 220300 shld adrtab+3 ;

003C 320500 sta adrtab+5 ; gleiche dest. bank wie source

003F 21000D lxi h,0d00h ; laenge ccp etwas groeser wg. patch

0042 220600 shld adrtab+6 ;

0045 C30000 jmp dmatrans ; uebertrage

no$CCP: ; here if we couldn't find the file

0048 219600CD00 lxi h,ccp$msg1 ! call ?pmsg ; report this...

004E 0E19CD0500 mvi c,19h ! call bdos ; read current disk

0053 C6414FCD00 adi 'A' ! mov c,a ! call ?cono ; and display

0059 21A500CD00 lxi h,ccp$msg2 ! call ?pmsg ;

005F CD0000 call ?conin ; get a response

0062 C30000 jmp ?ldccp ; and try again

?rlccp:

0065 2100F3 lxi h,0f300h ; get ccp

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0068 220000 shld adrtab ;

006B 3E04 mvi a,04h ; source bank is 1

006D 320200 sta adrtab+2 ;

0070 210001 lxi h,0100h ;

0073 220300 shld adrtab+3 ;

0076 320500 sta adrtab+5 ; gleiche dest. bank wie source

0079 21000D lxi h,0d00h ; laenge ccp etwas groeser wg. patch

007C 220600 shld adrtab+6 ;

007F C30000 jmp dmatrans ; uebertrage

; CP/M BDOS Function Interfaces

open:

0082 0E0FC30500 mvi c,15 ! jmp bdos ; open file control block

setdma:

0087 0E1AC30500 mvi c,26 ! jmp bdos ; set data transfer address

setmulti:

008C 0E2CC30500 mvi c,44 ! jmp bdos ; set record count

read:

0091 0E14C30500 mvi c,20 ! jmp bdos ; read records

0096 0D0A42494Fccp$msg1 db 13,10,'BIOS Err on ',0

00A5 3A204E6F20ccp$msg2: db ': No CCP.COM file',13,10,0

00B9 0043435020ccp$fcb db 0,'CCP ','COM',0,0,0,0

00C9 ds 16

00D9 000000 fcb$nr db 0,0,0

00DC end