

```

3400 .TITLE      'MONITOR *****# MONITP.SRC ***** 3/9/79 ***** 4:00:00 P
3401 ;
3402 ;
3403 ;
3404 ;      CONSTANT EQUATES
3405 ;
3406 0009 PUTTXT      =      $9          ; "PUT TEXT RECORD" CIO COMMAND CODE
3407 0007 GETCAR      =      $7          ; "GET CHARACTER" CIO COMMAND CODE
3408 000B PUTCAR      =      $B          ; "PUT CHARACTER" CIO COMMAND CODE
3409 0000 INIMLL      =      $00         ; INITIAL MEM LO LOW BYTE
3410 0007 INIMLH      =      $07         ; INITIAL MEM LO HIGH BYTE
3411 ; GOOD          =      $1          ; GOOD STATUS CODE
3412 ; WRITE         =      $57         ; WRITE COMMAND
3413 ; READ          =      $52         ; READ COMMAND
3414 ; STATC         =      $53         ; STATUS COMMAND
3415 0000 SEX         =      $0          ; SCREEN EDITOR IOCB INDEX
3416 007D CLS         =      $71)       ; CLEAR SCREEN CODE
3417 0092 CTRLC       =      $92         ; KEYBOARD CODE FOR 'CONTROL C'
3418 0088 EOF         =      388         ; CASSETTE END OF FILE CODE
3419 0000 LIRG        =      $0          ; LONG IRG TYPE CODE
3420 ;
3421 0004 BUFFH        =      (CASBUF+3)/256
3422 0000 BUFFL        =      (-256)*BUFFH+CASBUF+3 ; BUFFER POINTER
3423 ;
3424 ;
3425 ;
3426 ; THE FOLLOWING EQUATES ARE IN THE CARTRIDGE ADDRESS SPACE.
3427 ;
3428 ;
3429 ; "B" CARTRIDGE  ADDR'S      ARE 8000-9FFF (36K CONFIG. ONLY)
3430 ; "A" CART. ADDR'S ARE  A000-BFFF (36K CONFIG. ONLY)
3431 ;
3432 ; "A" CART. ADDR'S ARE  B000-BFFF (48K CONFIG. ONLY)
3433 ;
3434 ;      *=$BFFA
3435 BFFA CARTCS:      .RES  2          ; CARTRIDGE COLD START ADDRESS.
3436 BFFC CART:        .RES  1          ; CARTRIDGE AVAILABLE FLAG BYTE.
3437 BFFD CARTFG:      .RES  1          ; CARTRIDGE FLAG BYTE. BIT 0=FLAG1~

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3438 BFFE CARTAD: .RES 2 ; 2-BYTE CARTRIDGE START VECTOR
3439 ;
3440 ;
3441 ; CARTRIDGE FLAG ACTION DEFINITIONS
3442 ;
3443 ;
3444 ; BIT ACTION IF SET
3445 ;
3446 ; 7 SPECIAL -- DON'T POWER-UP, JUST RUN CARTRIDGE
3447 ; 6-3 NONE
3448 ; 2 RUN CARTRIDGE
3449 ; 1 NONE
3450 ; 0 BOOT DOS
3451 ; 3452
3453 ; *****
3454 ; NOTE
3455 ; *****
3456 ;
3457 ; 1. IF BIT2 IS 0. GOTO BLACKBOARD MODE.
3458 ; 2. IF BIT0 SET. THE DISK WILL BE BOOTED BEFORE ANY
3459 ; OTHER ACTION.
3460 ;
3461 ;
3462 ;
3463 ;
3464 ;
3465 ;
3466 ;
3467 ;
3468 ;
3469 ; POWER-UP VECTOR
3470 ;
3471 ; *****
3472 *= $FFFC
3473 ;
3474 ; PVECT .WORD PWRUP POWER-UP VECTOR
3475 ; *****
3476 ;
3477 ;

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3478 ;
3479 ;
3480 ;
3481 ; ENTRY POINT VECTOR
3482 ;
3483 ; *=BLKBDV
3484 ;
3485 E471 4C 23 F2 JMP SIGNON ; BLACK BOARD VECTOR
3486 ;
3487 *=WARMSV
3488 ;
3489 E474 4C 1B F1 JMP RESET :WARM START VECTOR
3490 ;
3491 *=COLDSV
3492 ;
3493 E477 4C 25 F1 JMP PWRUP ; COLD START VECTOR (9000 FOR RAM VECTOR WRIT
3494 ;
3495 ; *=9000
3496 9000 20 0C 90 JSR 9000
3497 9003 4C 25 F1 JMP PWRUP ; (TO HANDLE RAM VECTOR WRITING)
3498 9006 20 0C 90 JSR 9000
3499 9009 4C 18 F1 JMP RESET
3500 ;
3501 ;
3502 ;
3503 ; *=MONORG
3504 ;
3505 ;
3506 ;
3507 ;
3508 ; HANDLER TABLE ENTRIES
3509 ;
3510 F0ES 50 TBLENT: .BYTE 'P'
3511 F0E4 30 E4 .WORD PRINTV
3512 F0E6 43 .BYTE 'C'
3513 F0E7 40 E4 .WORD CASETV
3514 F0ES 45 .BYTE 'E'
3515 F0EA 00 E4 .WORD EDITRV
3516 F0EC 53 .BYTE 'S'

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ERR LINE ADDR B1 B2 B3 B4

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3517 F0ED 10 E4 .WORD SCRENV
3518 F0EF 4B .BYTE 'K'
3519 F0F0 20 E4 .WORD KEYBDV
3520 ;
3521 ;
3522 ; TBLLEN = IDENT-TBLENT-1 HANDLER TABLE LENGTH. "MOVED TO LINE 8
3523 ;
3524 ; ***** PRINT MESSAGES *****
3525 ;
3526 ;
3527 F0F2 7D 41 54 41 IDENT: .BYTE CLS,'ATARI COMPUTER - MEMO PAD ',CR
3528 F0F6 52 49 20 43
3529 F0FA 4F 4D 50 55
3530 F0FE 54 45 52 20
3531 F102 2D 20 4D 45
3532 F106 4D 4F 20 50
3533 F10A 41 44 9B
3534 ;
3535 00F0 IDENTH = IDENT/256
3536 00F2 IDENTL = (-256)*IDENTH+IDENT ; SYSTEM I. D. MSG POINTER
3537 ;
3538 000E TBLLEN = IDENT-TBLENT-1 ; HANDLER TABLE LENGTH
3539 F10D 42 4F 4F 54 DERR5: .BYTE 'BOOT ERROR ',CR
3540 F111 20 45 52 52
3541 F115 4F 52 9B
3542 ;
3543 00F1 DERRH = DERR5/256
3544 000D DERRL = (-256)*DERRH+DERR5 ; DISK ERROR MSG POINTER
3545 ;
3546 ;
3547 ;
3548 ;
3549 ; DEVICE/FILENAME SPECIFICATIONS
3550 ;
3551 F118 45 3A 9B OPNEDT: .BYTE 'E: ',CR ; "OPEN SCREEN EDITOR" DEVICE SPEC.
3552 ;
3553 00F1 OPNH = OPNEDT/256
3554 0018 OPNL = (-256)*OPNH+OPNEDT ; SCREEN EDITOR OPEN POINTER
3555 F11B ;
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3556 ;
3557 ;
3558 ;
3559 ;
3560 ; *****
3561 ; RESET BUTTON ROUTINE STARTS HERE
3562 ; *****
3563
3564 F11B 78 RESET: SEI ; DISABLE IRQ INTERRUPTS
3565 F11C AD 44 02 LDA COLDST ; WERE WE IN MIDDLE OF COLDSTART?
3566 F11F D0 04 BNE PWRUP ; YES. GO TRY IT AGAIN
3567 F121 A9 FF LDA #$FF
3568 F123 D0 03 BNE PWRUPI ; SET WARM START FLAG
3569 ;
3570 ;
3571 ;
3572 ; *****
3573 ; POWER UP ROUTINES START HERE
3574 ; *****
3575 ;
3576 F125 78 PWRUP: SEI ; DISABLE IRQ INTERRUPTS
3577 F126 A9 00 LDA #0 ; CLEAR WARMSTART FLAG
3578 F128 85 08 PWRUPI: STA WARMST
3579 F12A D8 CLD ; CLEAR DECIMAL FLAG.
3580 F12B A2 FF LDX #$FF
3581 F12D 9A TXS ; SET STACK POINTER
3582 F12E 20 3F F2 JSR SPECL ; CARTRIDGE SPECIAL CASE?
3583 F131 20 77 F2 JSR HARDI ; DO HARDWARE INITIALIZATION
3584 F134 A5 08 LDA WARMST ; IS IT WARMSTART?
3585 F136 D0 28 BNE ZOSRAM ; YES, ONLY ZERO OS RAM
3586 ;
3587 F138 A9 00 ZERORM: LDA 1#0
3588 F13A A0 08 LDY #WARMST
3589 F13C 85 04 STA RAMLO
3590 F13E 85 05 STA RAMLO+1 ; INITIALIZE RAM POINTER
3591 F140 91 04 CLRRAM: STA (RAMLO),Y ; CLEAR MEMORY LOC.
3592 F142 C8 INY
3593 F143 C0 00 CPY #10 ; AT END OF PAGE?
3594 F145 D0 F9 BNE CLRRAM

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3595 F147 E6 05          INC   RAMLO+1      ; YES. INCR PAGE POINTER
3596 F149 A6 05          LDX   RAMLO+1
3597 F14B E4 06          CPX   TRAMSZ      ; AT END OF MEM?
3598 F14D D0 F1          BNE   CLRRAM      ; NO.
3599
3600                      ;
3601                      ; INITIALIZE DOSVEC TO POINT TO SIGNON (BLACKBOARD)
3601 F14F AD 72 E4        LDA   BLKBDV+i
3602 F152 85 0A          STA   DOSVEC      ; USE BLACKBOARD VECTOR
3603 F154 AD 73 E4        LDA   BLKBDV+2    ; FOR DOSVEC
3604 F157 85 0B          STA   DOSVEC+1
3605 F159 A9 FF          LDA   #$FF
3606 F15B 8D 44 02        STA   COLDST     ; SET TO SHOW IN MIDDLE OF COLDSTART
3607 F15E D0 13          BNE   ESTSCM      ; GO AROUND ZOSRAM
3608
3609                      ;
3609                      ; CLEAR OS RAM (FOR WARMSTART)
3610 F160 A2 00          ZOSRAM: LDX   #0
3611 F162 8A              TXA
3612 F163 9D 00 02        ZOSRM2: STA  #200,X      ; CLEAR PAGES 2 AND 3
3613 F166 9D 00 03        STA  $300,X
3614 F169 CA              DEX
3615 F16A D0 F7          BNE   ZOSRM2
3616 F16C A2 10          LDX   #INTZBS
3617 F16E 95 00          ZOSRM3: STA  0,X          ; CLEAR ZERO PAGE LOCATIONS INTZBS-7F
3618 F170 E8              INX
3619 F171 10 FB          BPL   ZOSRM3
3620
3621                      ;
3621                      ; ESTABLISH SCREEN MARGINS
3622 F173 A9 02          ESTSCM: LDA  #LEDGE
3623 F175 85 52          STA  LMARGN
3624 F177 A9 27          LDA  #REDGE
3625 F179 85 53          STA  RMARGN
3626
3627                      ;
3627                      ;
3628                      ; MOVE VECTOR TABLE FROM ROM TO RAM
3629 F17B A2 25          OPSYS:  LDX  #$25
3630 F17D BD 80 E4        MOVVEC: LDA  VCTABL,X      ;ROM TABLE
3631 F180 9D 00 02        STA  INTABS,X      ; TO RAM
3632 F183 CA              DEX
3633 F184 10 F7          BPL  MOVVEC

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3634 F186 20 8A F2          JSR   OSRAM          ; DO O. S. RAM SETUP
3635 F189 58                CLI                   ; ENABLE IRG INTERRUPTS
3636                        ;
3637                        ;
3638                        ;   LINK HANDLERS
3639                        ;
3640 F18A A2 0E              LDX   #TBLLN
3641 F18C BD E3 F0          NXTENT: LDA  TBLENT,X      ; READ HANDLER TABLE ENTRY
3642 F18F 9D 1A 03          STA  HATABS,X      ; PUT IN TABLE
3643 F192 CA                DEX
3644 F193 10 F7            BPL   NXTENT          ; DONE WITH ALL ENTRIES?
3645                        ;
3646                        ;
3647                        ;
3648                        ;
3649                        ;
3650                        ; INTERROGATE   CARTRIDGE ADDR. SPACE TO SEE WHICH CARTRIDGES THERE ARE
3651                        ;
3652 F195 A2 00              LDX   #0
3653 F197 86 07              STX   TSTDAT          ; CLEAR "B" CART. FLAG
3654 F199 86 06              STX   TRAMSZ          ; CLEAR "A" CART. FLAG
3655 F19B AE E4 02          LDX   RAMSIZ
3656 F19E E0 90              CPX   #$90          ; RAM IN "B" CART. SLOT?
3657 F1A0 B0 0A              BCS   ENDBCK
3658 F1A2 AD FC 9F          LDA   CART-$2000      ; NO,
3659 F1A5 D0 05              BNE   ENDBCK          ; CART. PLUGGED INTO "B" SLOT?
3660 F1A7 E6 07              INC   TSTDAT          ; YES, SET "B" CART. FLAG
3661 F1A9 20 3C F2          JSR   CBINI          ; INITIALIZE CARTRIDGE "B"
3662                        ;
3663 F1AC AE E4 02          ENDBCK: LDX   RAMSIZ
3664 F1AF E0 B0              CPX   #$B0          ; RAM IN "A" CART. SLOT?
3665 F1B1 B0 0A              BCS   ENDACK
3666 F1B3 AE FC BF          LDX   CART          ; NO,
3667 F1B6 D0 05              BNE   ENDACK          ; CART. PLUGGED INTO "A" SLOT?
3668 F1B8 E6 06              INC   TRAMSZ          ; YES, SET "A" CART. FLAG
3669 F1BA 20 39 F2          JSR   CAINI          ; INITIALIZE CARTRIDGE "A"
3670                        ;
3671                        ;
3672                        ; OPEN   SCREEN EDITOR

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3673
3674 F1BD A9 03      ENDACK:   LDA    113
3675 F1BF A2 00      LDX    #SEX
3676 F1C1 9D 42 03   STA    ICCOM,X      ; OPEN I/O COMMAND
3677 F1C4 A9 18      LDA    #OPNL
3678 F1C6 9D 44 03   STA    ICBAL,X
3679 F1C9 A9 F1      LDA    #0PNH
3680 F1CB 9D 45 03   STA    ICBAH,X      ; SET BUFFER POINTER TO OPEN SCREEN EDITOR
3681 F1CE A9 0C      LDA    #$C
3682 F1D0 9D 4A 03   STA    ICAX1,X      ; SET UP OPEN FOR INPUT/OUTPUT
3683 F1D3 20 56 E4   JSR    CIOV      ; GO TO CIO
3684
3685 F1D6 10 03      ;
3686 F1D8 4C 25 F1   BPL    SCRNOK      ; BR IF NO ERROR
3687 F1DB E8         JMP    PWRUP      ; RETRY PWRUP IF ERROR (SHOULD NEVER HAPPEN!)
3688 F1DC D0 FD      SCRNOK:   INX      ; SCREEN OK, SO WAIT FOR VBLANK TO
3689 F1DE C8         BNE    SCRNOK      ; BRING UP THE DISPLAY
3690 F1DF 10 FA      INY
3691 BPL    SCRNOK
3692 ;
3693 ;
3694 F1E1 20 B2 F3   DO CASSETTE BOOT
3695 JSR    CSBOOT      ; CHECK, BOOT, AND INIT
3696 ;
3697 F1E4 A5 06      ; CHECK TO SEE IF EITHER CARTRIDGE WANTS DISK BOOT
3698 F1E6 05 07      LDA    TRAMSZ      ; CHECK BOTH CARTRIDGES
3699 F1EB F0 12      ORA    TSTDAT
3700 F1EA A5 06      BEQ    NOCART      ; NEITHER CARTRIDGE LIVES
3701 F1EC F0 03      LDA    TRAMSZ      ; "A" CART?
3702 F1EE AD FD BF   BEQ    NOA1      ; NO
3703 F1F1 A6 07      LDA    CARTFG      ; GET CARTRIDGE MODE FLAG
3704 F1F3 F0 03      NOA1:   LDX    TSTDAT      ; "B" CART?
3705 F1F5 0D FD 9F   BEQ    NOB1      ; NO
3706 F1FE 29 01      ORA    CARTFG-$2000      ; ADD OTHER FLAG
3707 F1FA F0 03      NOB1:   AND    #1      ; DOES EITHER CART WANT BOOT?
3708 BEQ    NOBOOT      ; NO
3709 ;
3710 F1FC 20 CF F2   DO DISK BOOT
3711 JSR    BOOT      ; CHECK, BOOT, AND INIT

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3712      ; GO TO      ONE OF THE CARTRIDGES IF THEY SO DESIRE
3713 F1FF  A9 00      NOBOOT: LDA  #0
3714 F201  8D 44 02   STA  COLDST      ; RESET TO SHOW DONE WITH COLDSTART
3715 F204  A5 06      LDA  TRAMSZ      ; "A" CART?
3716 F206  F0 0A      BEQ  NOA2        ; NO
3717 F208  AD FD BF   LDA  CARTFG      ; GET CARTRIDGE MODE FLAG
3718 F20B  29 04      AND  #4          ; DOES IT WANT TO RUN?
3719 F20D  F0 03      BEQ  NOA2        ; NO
3720 F20F  6C FA BF   JMP  (CARTCS)    ; RUN "A" CARTRIDGE
3721 F212  A5 07      NOA2:  LDA  TSTDAT  ; "B" CART?
3722 F214  F0 0A      BEQ  NOCAR2      ; NO
3723 F216  AD FD 9F   LDA  CARTFG-$2000 ; GET "B" MODE FLAG
3724 F219  29 04      AND  #4          ; DOES IT WANT TO RUN'?
3725 F21B  F0 DF      BEQ  NOCART      ; NO
3726 F21D  6C FA 9F   JMP  (CARTCS-$2000) ; RUN "B" CARTRIDGE
3727      ;
3728      ; NO CARTRIDGES OR NEITHER WANTS TO RUN,
3729      ; SO GO TO DOSVEC (DOS, CASSETTE, OR BLACKBOARD)
3730 F220  6C 0A 00   NOCAR2: JMP  (DOSVEC)
3731      ;
3732      ; PRINT      SIGN-ON      MESSAGE
3733 F223  A2 F2      SIGNON: LDX  #IDENTL
3734 F225  A0 F0      LDY  #IDENTH
3735 F227  20 85 F3   JSR  PUTLIN      ; GO PUT SIGN-ON MSG ON SCREEN
3736      ;
3737      ;
3738      ;
3739      ; BLACKBOARD ROUTINE
3740 F22A  20 30 F2   BLACKS: JSR  BLKB2      ; "JSR EGETCH"
3741 F22D  4C 2A F2   JMP  BLACKS      ; FOREVER
3742 F230  AD 05 E4   BLKB2:  LDA  EDITRV+5    ; HIGH BYTE
3743 F233  48      PHA
3744 F234  AD 04 E4   LDA  EDITRV+4    ; LOW BYTE
3745 F237  48      PHA
3746 F238  60      RTS          ; SIMULATES "JMP (EDITRV)"
3747      ;
3748      ;
3749      ; CARTRIDGE INITIALIZATION INDIRECT JUMPS
3750 F239  6C FE BF   CAINI:  JMP  (CARTAD)

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ERR LINE ADDR B1 B2 B3 B4

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3751 F23C 6C FE 9F CBINI: JMP (CARTAD-$2000)
3752 .PAGE
3753 ;
3754 ;
3755 ;
3756 ;
3757 ;
3758 ;
3759 ; SUBROUTINES
3760 ;
3761 ;
3762 ;
3763 ;
3764 ;
3765 ;
3766 ;
3767 ;
3768 ;
3769 ;
3770 ;
3771 ;
3772 ;
3773 ;
3774 ;
3775 ;
3776 ;
3777 ;
3778 ; CHECK FOR HOW MUCH RAM & SPECIAL CARTRIDGE CASE.
3779 ; IF SPECIAL CARTRIDGE CASE. DON'T GO BACK -- GO TO CART.
3780 ;
3781 F23F AD FC BF SPECL: LDA CART ; CHECK FOR RAM OR CART
3782 F242 D0 13 BNE ENSPE2 ; GO IF NOTHING OR MAYBE RAM
3783 F244 EE FC BF INC CART ; NOW DO RAM CHECK
3784 F247 AD FC BF LDA CART ; IS IT ROM?
3785 F24A D0 08 BNE ENSPEC ; NO
3786 F24C AD FD BF LDA CARTFG ; YES,
3787 F24F 10 03 BPL ENSPEC ; BIT SET?
3788 F251 6C FE BF JMP (CARTAD) ; YES. GO RUN CARTRIDGE
3789

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3790      ; CHECK      FOR AMOUNT OF RAM
3791      ;
3792      ;
3793      F254  CE FC BF      ENSPEC:    DEC    CART      ; RESTORE RAM IF NEEDED
3794      F257  A0 00      ENSPE2:    LDY    #0
3795      F259  84 05              STY    RAMLO+1
3796      F25B  A9 10              LDA    #$10
3797      F25D  85 06              STA    TRAMSZ      ; SET RAM POINTER TO 4K.
3798      F25F  B1 05      HOWMCH:    LDA    (RAMLO+1),Y ; READ RAM LOCATION
3799      F261  49 FF              FOR    #$FF      ; INVERT IT.
3800      F263  91 05              STA    (RAMLO+1),Y ; WRITE INVERTED DATA.
3801      F265  D1 05              CMP    (RAMLO+1),Y ; READ RAM AGAIN
3802      F267  D0 0D              BNE    ENDRAM
3803      F269  49 FF              EOR    #$FF      ; CONVERT IT BACK
3804      F26B  91 05              STA    (RAMLO+1),Y ; RESTORE ORIGINAL RAM DATA
3805      F26D  A5 06              LDA    TRAMSZ
3806      F26F  18              CLC
3807      F270  69 10              ADC    #$10
3808      F272  85 06              STA    TRAMSZ      ; INCR. RAM POINTER BY 4K.
3809      F274  D0 E9              BNE    HOWMCH      ; GO FIND HOW MUCH RAM.
3810      F276  60      ENDRAM:    RTS
3811      ;
3812      ;
3813      ;
3814      ;
3815      ;      HARDWARE INITIALIZATION
3816      ;
3817      ;
3818      F277  A9 00      HARDI:    LDA    #0
3819      F279  AA              TAX
3820      F27A  9D 00 D0      CLRCHP:  STA    $D000,X
3821      F27D  9D 00 D4              STA    $D400,X
3822      F280  9D 00 D2              STA    $D200,X
3823      F283  9D 00 D3              STA    $D300,X
3824      F286  E8              INX
3825      F287  D0 F1              BNE    CLRCHP
3826      F289  60              RTS
3827      ;
3828      ;

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3829 ; O. S. RAM SETUP
3830 ;
3831 F28A C6 11 OSRAM: DEC BRKKEY ; TURN OFF BREAK KEY FLAG
3832 F28C A9 54 LDA #.LOW.BRKKY2
3833 F28E 8D 36 02 STA BRKKY
3834 F291 A9 E7 LDA #.HIGH.BRKKY2
3835 F293 8D 37 02 STA BRKKY+1
3836 F296 A5 06 LDA TRAMSZ ; READ RAM SIZE IN TEMP. REG.
3837 F298 8D E4 02 STA RAMSIZ ; SAVE IT IN RAM SIZE.
3838 F29B 8D E6 02 STA MEMTOP+1 ; INIT. MEMTOP ADDR HI BYTE
3839 F29E A9 00 LDA #0
3840 F2A0 8D E5 02 STA MEMTOP ; INIT. MEMTOP ADDR LO BYTE
3841 F2A3 A9 00 LDA #INIMLL
3842 F2A5 8D E7 02 STA MEMLO
3843 F2AS A9 07 LDA #INIMLH
3844 F2AA 8D E8 02 STA MEMLO+1 ; INITIALIZE MEMLO ADDR VECTOR
3845 F2AD 20 0C E4 JSR EDITRV+$C ; EDITOR INIT.
3846 F2B0 20 1C E4 JSR SCRENV+$C ; SCREEN INIT.
3847 F2B3 20 2C E4 JSR KEYBDV+$C ; KEYBOARD INIT.
3848 F2B6 20 3C E4 JSR PRINTV+$C ; PRINTER HANDLER INIT
3849 F2B9 20 4C E4 JSR CASETV+$C ; CASSETTE HANDLER INIT
3850 F2BC 20 6E E4 JSR CIOINV ; CIO INIT.
3851 F2BF 20 65 E4 JSR SIOINV ; SIO INIT.
3852 F2C2 20 68 E4 JSR INTINV ; INTERRUPT HANDLER INIT.
3853 F2C5 AD 1F D0 LDA CONSOL
3854 F2C8 29 01 AND #$1
3855 F2CA D0 02 BNE NOKEY ; GAME START KEY DEPRESSED?
3856 F2CC E6 4A INC CKEY ; YES, SET KEY FLAG.
3857 F2CE 60 NOKEY: RTS
3858 ;
3859 ;
3860 ; DO BOOT OF DISK
3861 ;
3862 F2CF A5 08 BOOT: LDA WARMST
3863 F2D1 F0 0A BEQ NOWARM ; WARM START?
3864 F2D3 AS 09 LDA BOOT? ; YES
3865 F2D5 29 01 AND #1
3866 F2D7 F0 03 BEQ NOINIT ; VALID BOOT?
3867 F2D9 20 7E F3 JSR DINI ; YES, RE-INIT DOS SOFTWARE

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3868 F2DC 60          NOINIT:   RTS
3869 F2DD A9 01      NOWARM:   LDA    #1
3870 F2DF 8D 01 03   STA    DUNIT      ; ASSIGN DISK DRIVE NO.
3871 F2E2 A9 53      LDA    #STATC
3872 F2E4 8D 02 03   STA    DCOMND     ; SET UP STATUS COMMAND
3873 F2E7 20 53 E4   JSR    DSKINV     ; GO DO DISK STATUS
3874 F2EA 10 01      BPL    DOBOOT     ; IS STATUS FROM SIO GOOD?
3875 F2EC 60          RTS            ; NO. GO BACK WITH BAD BOOT STATUS
3876                ;
3877 F2ED A9 00      DOBOOT:   LDA    #0
3878 F2EF 8D 0B 03   STA    DAUX2
3879 F2F2 A9 01      LDA    #1
3880 F2F4 8D 0A 03   STA    DAUX1     ; SET SECTOR # TO 1.
3881 F2F7 A9 00      LDA    #BUFFL
3882 F2F9 8D 04 03   STA    DBUFLO
3883 F2FC A9 04      LDA    #BUFFH
3884 F2FE 8D 05 03   STA    DBUFHI     ; SET UP BUFFER ADDR
3885 F301 20 9D F3   SECT1:   JSR    GETSEC   ; GET SECTOR
3886 F304 10 08      BPL    ALLSEC     ; STATUS O. K. ?
3887 F306 20 81 F3   BADDSK:   JSR    DSKRDE   ; NO. GO PRINT DISK READ ERROR
3888 F309 A5 4B      LDA    CASSBT
3889 F30B F0 E0      BEQ    DOBOOT     ; CASSETTE BOOT?
3890 F30D 60          RTS            ; YES. QUIT
3891 F30E A2 03      ALLSEC:   LDX    #3
3892 F310 BD 00 04   RDBYTE:   LDA    CASBUF+3,X ; READ A BUFFER BYTE
3893 F313 9D 40 02   STA    DFLAGS,X ; STORE IT
3894 F316 CA          DEX
3895 F317 10 F7      BPL    RDBYTE     ; DONE WITH 4 BYTE TRANSFER ?
3896 F319 AD 42 02   LDA    BOOTAD     ; YES.
3897 F31C 85 04      STA    RAMLO
3898 F31E AD 43 02   LDA    BOOTAD+i
3899 F321 85 05      STA    RAMLO+1    ; PUT BOOT ADDR INTO Z. PAGE RAM
3900 F323 AD 04 04   LDA    CASBUF+7
3901 F326 85 0C      STA    DOSINI     ; ESTABLISH DOS INIT ADDRESS
3902 F328 AD 05 04   LDA    CASBUF+B
3903 F32B 85 0D      STA    DOSINI+1
3904 F32D A0 7F      MVBUFF:   LDY    #$7F   ; YES, SET BYTE COUNT
3905 F32F B9 00 04   MVNXB:   LDA    CASBUF+3,Y
3906 F332 91 04      STA    (RAMLO),Y ; MOVE A BYTE FROM SECTOR BUFFER TO BOOT ADDR

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3907 F334 88 DEY
3908 F335 10 F8 BPL MVNXB ; DONE ?
3909 F337 18 CLC ; YES,
3910 F338 A5 04 LDA RAMLO
3911 F33A 69 80 ADC #$80
3912 F33C 85 04 STA RAMLO
3913 F33E A5 05 LDA RAMLO+1
3914 F340 69 00 ADC #0
3915 F342 85 05 STA RAMLO+1 ; INCR BOOT LOADER BUFFER POINTER.
3916 F344 CE 41 02 DEC DBSECT ; DECR # OF SECTORS.
3917 F347 F0 11 BEQ ENBOOT ; MORE SECTORS ?
3918 F349 EE 0A 03 INC DAUX1 ; YES. INCR SECTOR #
3919 F34C 20 9D F3 SECTX: JSR GETSEC ; GO GET SECTOR.
3920 F34F 10 DC BPL MVBUFF ; STATUS 0. K. ?
3921 F351 20 81 F3 JSR DSKRDE ; NO. GO PRINT DISK READ ERROR
3922 F354 A5 4B LDA CASSBT
3923 F356 D0 AE BNE BADDSK ; IF CASSETTE QUIT.
3924 F358 F0 F2 BEQ SECTX ; IF DISK TRY SECTOR AGAIN.
3925 F35A A5 4B ENBOOT: LDA CASSBT
3926 F35C F0 03 BEQ XBOOT ; CASSETTE BOOT ?
3927 F35E 20 9D F3 JSR GETSEC ; YES, GET EOF RECORD BUT DON'T USE IT.
3928 F361 20 6C F3 XBOOT: JSR BLOAD ; GO EXECUTE BOOT LOADER
3929 F364 B0 A0 BCS BADDSK ; IF BAD BOOT. DO IT OVER AGAIN
3930 F366 20 7E F3 JSR DINI ; GO INIT. SOFTWARE
3931 F369 E6 09 INC BOOT? ; SHOW BOOT SUCCESS
3932 F36B 60 RTS
3933 F36C 18 BLOAD: CLC
3934 F36D AD 42 02 LDA BOOTAD
3935 F370 69 06 ADC #6
3936 F372 85 04 STA RAMLO
3937 F374 AD 43 02 LDA BOOTAD+1
3938 F377 69 00 ADC #0
3939 F379 85 05 STA RAMLO+1 ;PUT START ADDR OF BOOTLOADER INTO RAM
3940 F37B 6C 04 00 JMP (RAMLO)
3941 F37E 6C 0C 00 DINI: JMP (DOSINI)
3942
3943
3944
3945

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3946          ; DISPLAY DISK      READ ERROR MSG
3947
3948 F381 A2 0D      DSKRDE: LDX #DERRL
3949 F383 A0 F1      LDY  #DERRH
3950          ;
3951          ;
3952          ;
3933          ; PUT LINE ON SCREEN AT PRESENT CURSOR POSITION
3954          ;
3955          ; X-REG -- LO      BYTE BEGIN  ADDR OF LINE
3956          ; Y-REG -- HI      BYTE BEGIN  ADDR OF LINE
3957          ;
3958 F385 8A          PUTLIN: TXA
3959 F386 A2 00      LDX  #SEX
3960 F388 9D 44 03   STA  ICBAL,X
3961 F38B 98          TYA
3962 F38C 9D 45 03   STA  ICBAH,X      ; SET UP ADDR OF BEGIN OF LINE
3963 F38F A9 09      LDA  #PUTTXT
3964 F391 9D 42 03   STA  ICCOM,X      ; "PUT TEXT RECORD" COMMAND
3965 F394 A9 FF      LDA  #; FF
3966 F396 9D 48 03   STA  ICBLL,X      ; SET BUFFER LENGTH
3967 F399 20 56 E4   JSR  CIOV          ;PUT LINE ON SCREEN
3968 F39C 60          RTS
3969          ;
3970          ;
3971          ;
3972          ;
3973          ; GET SECTOR FROM DISK 0
3974          ;
3975 F39D A5 4B      GETSEC: LDA  CASSBT
3976 F39F F0 03      BEQ  DISKM          ; CASSETTE BOOT ?
3977 F3A1 4C 7A E4   JMP  RBLOKV        ; YES GO TO READ BLOCK ROUTINE
3978 F3A4 A9 52      DISKM: LDA  #READ
3979 F3A6 8D 02 03   STA  DCOMND        ; SET READ SECTOR COMMAND
3980 F3A9 A9 01      LDA  #1
3981 F3AB 8D 01 03   STA  DUNIT          ; SET DRIVE NO. TO DRIVE 0
3982 F3AE 20 53 E4   JSR  DSKINV        ; GET SECTOR
3983 F3B1 60          RTS
3984

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3985
3986
3987 ; DO CHECK FOR CASSETTE BOOT & fF SO. DO BOOT
3988 ;
3989 CSBOOT: LDA WARMST ; WARMSTART?
3990 BEQ CSBOT2 ; NO
3991 LDA BOOT? ; GET BOOT FLAG
3992 AND #2 ; WAS CASSETTE BOOT SUCCESFULL?
3993 BEQ NOCSB2 ; NO
3994 JSR CINI ; YES INIT CASSETTE SOFTWARE
3995 NOCSB2: RTS
3996 ;
3997 CSBOT2: LDA CKEY
3998 BEQ NOCSBT ; "C" KEY FLAG SET ?
3999 LDA #$80 ; YES.
4000 STA FTYPE ; SET LONG IRG TYPE
4001 INC CASSBT ; SET CASSETTE BOOT FLAG
4002 JSR CSOPIV ; OPEN CASSETTE FOR INPUT
4003 JSR SECT1 ; DO BOOT & INIT.
4004 LDA #0
4005 STA CASSBT ; RESET CASSETTE BOOT FLAG
4006 STA CKEY ; CLEAR KEY FLAG
4007 ASL BOOT? ; SHIFT BOOT FLAG (NOW=2 IF SUCCESS)
4008 LDA DOSINI
4009 STA CASINI ; MOVE INIT ADDRESS FOR CASSETTE
4010 LDA DOSINI+1
4011 STA CASINI+1
4012 NOCSBT: RTS
4013
4014 CINI: JMP (CASINI) ; INIT CASSETTE
4015 ; *****
4016 ;
4017 ;
4018 ; SPARE BYTE OR MODULE TOO LONG FLAG
4019 ;
4020 CRNTP7 =*
4021 ;
4022 ;*=$14
4023 MONSPR: .BYTE KBDORG-CRNTP7 : ^GMONITP TOO LONG

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