

Fri Mar 15 1991 14:25

Page 1

INIT.ASM - Accolade's SEGA initialization program
Version: 03/15/91

2500 A.D. 68000 Macro Assembler - Version 5.00a

Input Filename : segainit.asm
Output Filename : segainit.obj

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47

.LIST ON
.NAM INIT.ASM - Accolade's SEGA initialization program
.SUBTTL Version: 03/15/91

.PW 123
.PL 79
.LINKLIST
.OPTIONS X

0000 0000 Stack EQU \$000000 ;At the top of RAM, change if you like
0000 0078 VBLoc EQU \$000078 ;Vblank vector location
0000 0000 Z80_Adr EQU \$A00000 ;Z80 data
00A1 1100 Z80_Bus EQU \$A11100 ;Z80 buss request
00A1 1200 Z80_Res EQU \$A11200 ;Z80 reset line
0000 0000 VidDat EQU \$C00000 ;Video chip data register
0000 0004 VidCom EQU \$C00004 ;Video chip command register

; first define vector table for 68000

.CODE

00000000 ORG \$000000
00000000 0000 0000 0000 0200 DC.L Stack,Startup,ColdSt,ColdSt
0000 02AC 0000 02AC
00000010 0000 02AC 0000 02AC DC.L ColdSt,ColdSt,ColdSt,ColdSt
0000 02AC 0000 02AC
00000020 0000 02AC 0000 02AC DC.L ColdSt,ColdSt,ColdSt,ColdSt
0000 02AC 0000 02AC
00000030 0000 02AC 0000 02AC DC.L ColdSt,ColdSt,ColdSt,ColdSt
0000 02AC 0000 02AC
00000040 0000 02AC 0000 02AC DC.L ColdSt,ColdSt,ColdSt,ColdSt
0000 02AC 0000 02AC
00000050 0000 02AC 0000 02AC DC.L ColdSt,ColdSt,ColdSt,ColdSt
0000 02AC 0000 02AC
00000060 0000 02AC 0000 02AC DC.L ColdSt,ColdSt,ColdSt,ColdSt
0000 02AC 0000 02AC
00000070 0000 036A 0000 02AC DC.L ScanVec,ColdSt,VBLVec,ColdSt
0000 036C 0000 02AC
00000080 0000 02AC 0000 02AC DC.L ColdSt,ColdSt,ColdSt,ColdSt
0000 02AC 0000 02AC
00000090 0000 02AC 0000 02AC DC.L ColdSt,ColdSt,ColdSt,ColdSt
0000 02AC 0000 02AC
000000A0 0000 02AC 0000 02AC DC.L ColdSt,ColdSt,ColdSt,ColdSt
0000 02AC 0000 02AC
000000B0 0000 02AC 0000 02AC DC.L ColdSt,ColdSt,ColdSt,ColdSt
0000 02AC 0000 02AC
000000C0 0000 02AC 0000 02AC DC.L ColdSt,ColdSt,ColdSt,ColdSt
0000 02AC 0000 02AC
000000D0 0000 02AC 0000 02AC DC.L ColdSt,ColdSt,ColdSt,ColdSt
0000 02AC 0000 02AC
000000E0 0000 02AC 0000 02AC DC.L ColdSt,ColdSt,ColdSt,ColdSt
0000 02AC 0000 02AC
000000F0 0000 02AC 0000 02AC DC.L ColdSt,ColdSt,ColdSt,ColdSt
0000 02AC 0000 02AC

Appendix B

Fri Mar 15 1991 14:25

INIT.ASM = Accolade's SEGA initialization program
Version: 03/15/91

```

48
49
50
51 00000100 55 45 47 41 20 47          DC.b  'SEGA GENESIS '          ;$100-$10F
      45 4E 45 53 49 53
      20 20 20 20
52 00000110 28 43 29 41 43 4C          DC.b  '(C)ACLD 1991,???'       ;$110-$11F ;FILL IN RELEASE MONTH
      44 20 31 39 39 31
      2E 3F 3F 3F
53 00000120 20 20 20 20 20 20          DC.b  ' ' ' ' ' ' ' '          ;$120-$12F
      20 20 20 20 20 20
      20 20 20 20
54 00000130 20 20 20 20 20 20          DC.b  ' ' ' ' ' ' ' '          ;$130-$13F
      20 20 20 20 20 20
      20 20 20 20
55 00000140 20 20 20 20 20 20          DC.b  ' ' ' ' ' ' ' '          ;$140-$14F
      20 20 20 20 20 20
      20 20 20 20
56 00000150 47 61 60 65 20 74          DC.b  'Game title here '      ;$150-$15F ;FILL IN TITLE
      69 74 6C 65 20 68
      65 72 65 20
57 00000160 20 20 20 20 20 20          DC.b  ' ' ' ' ' ' ' '          ;$160-$16F
      20 20 20 20 20 20
      20 20 20 20
58 00000170 20 20 20 20 20 20          DC.b  ' ' ' ' ' ' ' '          ;$170-$17F
      20 20 20 20 20 20
      20 20 20 20
59 00000180 47 40 20 41 43 4C          DC.b  'GM ACLE??? -00'       ;$180-$18D ;FILL IN 3 LETTER CODE
      44 3F 3F 3F 20 20
      30 30
60
61 0000018E 0000          DC.w  $0000          ;FILL IN the additive checksum of ROM
62                                     ;from $200 to ROM end
63
64 00000190 4A 20 20 20 20 20          DC.b  'J ' ' ' ' ' '          ;$190-$19F
      20 20 20 20 20 20
      20 20 20 20
65
66 000001A0 0000 0000          ROMStt DC.l  $00000000          ;Start of ROM
67 000001A4 0007 FFFF          ROMEnd DC.l  $0007FFFF          ;End of ROM: FILL IN END
68 000001A8 00FF 0000          RAMStt DC.l  $00FF0000          ;Start of RAM
69 000001AC 0CFF FFFF          RAMEnd DC.l  $0CFFFFFF          ;End of RAM
70
71 000001B0 20 20 20 20 20 20          DC.b  ' ' ' ' ' ' ' '          ;$190-$19F
      20 20 20 20 20 20
      20 20 20 20
72 000001C0 20 20 20 20 20 20          DC.b  ' ' ' ' ' ' ' '          ;$1C0-$1CF
      20 20 20 20 20 20
      20 20 20 20
73 000001D0 20 20 20 20 20 20          DC.b  ' ' ' ' ' ' ' '          ;$1D0-$1DF
      20 20 20 20 20 20
      20 20 20 20
74 000001E0 20 20 20 20 20 20          DC.b  ' ' ' ' ' ' ' '          ;$1E0-$1EF
      20 20 20 20 20 20
      20 20 20 20
75 000001F0 55 20 20 20 20 20          DC.b  'U ' ' ' ' ' '          ;$1F0-$1FF
      20 20 20 20 20 20
      20 20 20 20
76
77
78
79 00000200          Startup
80 00000206 4A79 00A1 0008          tst   $A10008          ;Check DDR's for warm/cold start
81 0000020E 6600 0132          bne   WarmSt
82 00000214 4A79 00A1 000A          tst   $A1000A
83 0000021C 6600 0128          bne   WarmSt
84 00000224 41F9 0000 036C          lee   VBLVec,AD          ;See if development system is running
85 0000022A 81F8 0078          cmpa.l VBLVec,AD
86 00000230 6600 008C          bne   ColdSt
87 00000238 4A79 00A1 000C          tst   $A1000C          ;Don't use this with the Accolade development
88 00000240 6600 0110          bne   WarmSt          ;system enabled.
89 00000246 607E          bra.s ColdSt
90
91

```



1A6 OF

Fri Mar 15 1991 14:25

INIT.ASM - Accolade's SEGA initialization program
Version: 03/15/91

```

92
93 0000022E 53 65 67 61 20 61      dc.b  'Sega and Genesis are registered trademarks '
      6E 64 20 47 65 6E
      65 73 69 73 20 61
      72 65 20 72 65 67
      69 73 74 65 72 65
      64 20 74 72 61 64
      65 60 61 72 68 73
      20
94 00000259 6F 66 20 53 65 67      dc.b  'of Sega Enterprises Ltd.'
      61 20 45 6E 74 65
      72 70 72 69 73 65
      73 20 4C 74 64 2E
95 00000271 41 63 63 6F 6C 61      dc.b  'Accolade Inc. is not associated with Sega Enterprises Ltd.'
      64 65 20 49 6E 63
      2E 20 69 73 20 6E
      6F 74 20 61 73 73
      6F 63 69 61 74 65
      64 20 77 69 74 68
      20 53 65 67 61 20
      45 6E 74 65 72 70
      72 69 73 65 73 20
      4C 74 64 2E

```

96
97
98
99
100

.EVER ON

```

101 000002AC                               colqst
102 000002AC 1039 00A1 0001      move.b $A10001,D0      ;Check for SEGA write
103 000002B2 0240 000F      and   #$000F,D0      ;Don't write if zero
104 000002B6 670A      beq.s ?1
105 000002B8 23FC 5345 4741 00A1      move.l #$53454741,$A14000 ;Write SEGA ASCII
      4000
106 000002C2 4DF9 00C0 0000      ?1  lea   VidDat,A6      ;init common address register
107 000002C8 302E 0004      move  4(A6),D0      ;Read VidCom
108 000002CC 41F9 0000 0000      lea   VidTbl,A0      ;Now init vid chip
109 000002D2 303C 0019      move  #25,D0      ;26 values to write
110 000002D6 3058 0004      ?2  move  (A0)+,4(A6)
111 000002DA 51C8 FFFA      dbra  D0,?2
112 000002DE 3C5C 0000      move  #0,(A6)      ;now finish fill command at table end
113
114 000002E2 2079 0000 01A8      move.l RAMStart,A0   ;Now clear system RAM
115 000002E8 2279 0000 01AC      move.l RAMEnd,A1    ;using table entries
116 000002EE 7000      moveq  #0,D0
117 000002F0 20C0      ?3  move.l D0,(A0)+
118 000002F2 B1C9      cmpa.l A1,A0
119 000002F4 60FA      btr   ?3
120
121 000002F6 2D7C 4000 0010 0004      move.l #$40000010,4(A6) ;Clear V Scroll table to 0
122 000002FE 323C 0027      move  #$27,D1      ;Clear 40 entries
123 00000302 3C80      ?4  move  D0,(A6)
124 00000304 51C9 FFFC      dbra  D1,?4
125
126 00000308 2D7C C000 0000 0004      move.l #$C0000000,4(A6) ;Clear palette to 0
127 00000310 723F      moveq  #3F,D1      ;Do 64 colors
128 00000312 3C80      ?5  move  D0,(A6)
129 00000314 51C9 FFFC      dbra  D1,?5
130
131 00000318 6100 0034      bsr   InitZ80      ;Init the Z80 to a known state
132 0000031C 107C 009F 0011      move.b #$9F,$11(A6) ;Set audio attenuation to max
133 00000322 107C 00BF 0011      move.b #$BF,$11(A6)
134 00000328 107C 00DF 0011      move.b #$DF,$11(A6)
135 0000032E 107C 00FF 0011      move.b #$FF,$11(A6)
136 00000334 307C 8A00 0004      move  #$8A00,4(A6) ;Turn off scan line interrupt index
137 0000033A                               WarmSt
138 0000033A 4DF9 00C0 0000      lea   VidDat,A6      ;Init common address register
139 00000340 1039 00A1 0001      move.b $A10001,D0      ;Check for SEGA write
140 00000346 0240 000F      and   #$000F,D0      ;Don't write if zero
141 0000034A 670A      beq.s ?1
142 0000034C 23FC 5345 4741 00A1      move.l #$53454741,$A14000 ;Write SEGA ASCII
      4000
143 00000356 41F9 0000 036C      ?1  lea   VBLVec,A0      ;See if development system is running

```

Fri Mar 15 1991 14:25

INIT.ASM - Accolade's SEGA initialization program
Version: 03/15/91

```

144 0000035C B1F8 0078      stps.l  VBLVec,A0
145 00000360 6608      bne.b  ?2
146 00000362 13FC 0040 00A1 0000  move.b  #540,$A10000 ;Init rear port DDR to flag warm start
147 0000036A      ?2
148      ;Do your own thing
149      ;Init Joy pad DDR's
150      ;Init Vid chip to your specs
151      ;init Z-80 to your specs/routine
152      ;Turn on interrupts
153
154
155 ;*****
156 ; Use your routines and/or labels for these
157
158 0000036A      ScanVec
159 0000036A 4E73      rte
160
161 ;*****
162 ; Use your routines and/or labels for these
163
164 0000036C      VBLVec
165 0000036C 4E73      rte
166
167 ;*****
168 ; Initialize the Z-80 to a known state
169 ;
170 ; USES: 00/A0
171 ; RETURNS: Nothing
172
173 0000036E 33FC 0000 00A1 1200  InitZ80 move  #0000,Z80_Res ;Reset the Z-80
174 00000376 C0C0      mulu   00,00 ;delay
175 0000037E 33FC 0100 00A1 1100  move  #0100,Z80_Bus ;request the buss
176 00000380 C0C0      mulu   00,00 ;delay
177 00000382 33FC 0100 00A1 1200  move  #0100,Z80_Res ;Start 'er up
178 0000038A C0C0      mulu   00,00 ;delay
179 0000038C 33FC 0100 00A1 1100  move  #0100,Z80_Bus ;request the buss
180 00000394 C0C0      mulu   00,00 ;delay
181 00000396 0839 0000 00A1 1100  ?1     bsr   #00,Z80_Bus ;wait till granted
182 0000039E 64F6      bne   ?1
183 000003AC 41F9 00AC 0000      lea   Z80_Addr,A0
184 000003A6 108C 00F3      move.b #0F3,(A0) ;DI
185 000003AA 117C 00E9 0001      move.b #0E9,1(A0) ;IM 1
186 000003B0 117C 0056 0002      move.b #056,2(A0)
187 000003B6 117C 0018 0003      move.b #018,3(A0) ;JR +2
188 000003BC 117C 00FE 0004      move.b #0FE,4(A0)
189 000003C2 33FC 0000 00A1 1200  move  #0000,Z80_Res ;Reset the Z-80
190 000003CA C0C0      mulu   00,00 ;delay
191 000003CC 33FC 0000 00A1 1100  move  #0000,Z80_Bus ;give back the buss
192 000003D4 C0C0      mulu   00,00 ;delay
193 000003D6 33FC 0100 00A1 1200  move  #0100,Z80_Res ;Start 'er up
194 000003DE C0C0      mulu   00,00 ;delay
195 000003E0 33FC 0000 00A1 1100  move  #0000,Z80_Bus
196 000003E8 4E75      rts
197
198 ;*****
199
200      .DATA
201
202 00000000 8004 8114 8200 8300  VidTbl DC.W  $8004,$8114,$8200,$8300,$8400,$8500,$8600,$8700
203      8400 8500 8600 8700
204 00000010 8800 8900 8AFF 8B00  DC.W  $8800,$8900,$8AFF,$8B00,$8C81,$8D00,$8E00,$8F01
205      8C81 8D00 8E00 8F01
206 00000020 9001 9100 9200 93FF  DC.W  $9001,$9100,$9200,$93FF,$94FF,$9500,$9600,$9780
207      94FF 9500 9600 9780
208 00000030 4000 0080      DC.W  $4000,$0080
209
210 ;*****
211
212      END

```