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

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

Input Filename : segalinit.asm  
Output Filename : segalinit.obj

```

1      .LIST ON
2      .NAM INIT.ASM - Accolade's SEGA initialization program
3      .SUBTTL Version: 03/15/91
4
5      ;*****+
6
7          .PW    128
8          .PL    79
9          .LINKLIST
10         .OPTIONS X
11
12         ;*****
13
14     0000 0000      Stack EQU $000000      ;At the top of RAM, change if you like
15
16     0000 0078      VBLloc EQU $000078      ;VBlank vector location
17
18     D0A8 0000      Z80_Addr EQU $A00000      ;Z80 data
19     00A1 1100      Z80_Bus EQU $A11100      ;Z80 bus request
20     00A1 1200      Z80_Res EQU $A11200      ;Z80 reset line
21
22     00C0 0000      VidDat EQU $C00000      ;Video chip data register
23     00C0 0004      VidCmd EQU $C00004      ;Video chip command register
24
25
26         ;*****+
27         ; first define vector table for 68000
28
29         .CODE
30
31     00000000      ORG $000000
32     00000007      DC.I Stack,Startup,ColdSt,ColdSt
33     00000010      DC.I ColdSt,ColdSt,ColdSt,ColdSt
34     00000020      DC.I ColdSt,ColdSt,ColdSt,ColdSt
35     00000030      DC.I ColdSt,ColdSt,ColdSt,ColdSt
36     00000040      DC.I ColdSt,ColdSt,ColdSt,ColdSt
37     00000050      DC.I ColdSt,ColdSt,ColdSt,ColdSt
38     00000060      DC.I ColdSt,ColdSt,ColdSt,ColdSt
39     00000070      DC.I ScanVec,ColdSt,VBLVec,ColdSt
40     00000080      DC.I ColdSt,ColdSt,ColdSt,ColdSt
41     00000090      DC.I ColdSt,ColdSt,ColdSt,ColdSt
42     000000A0      DC.I ColdSt,ColdSt,ColdSt,ColdSt
43     000000B0      DC.I ColdSt,ColdSt,ColdSt,ColdSt
44     000000C0      DC.I ColdSt,ColdSt,ColdSt,ColdSt
45     000000D0      DC.I ColdSt,ColdSt,ColdSt,ColdSt
46     000000E0      DC.I ColdSt,ColdSt,ColdSt,ColdSt
47     000000F0      DC.I ColdSt,ColdSt,ColdSt,ColdSt
        0000 02AC 0000 02AC

```

Appendix B

FROM ACCOLADE, INC.

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## INIT.ASM : Accolade's SEGA Initialization Program

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```

48
49
50
51 00000100 53 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 20 20
54 00000130 20 20 20 20 20 20      DC.b   '          '    ;$130-$13F
      20 20 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 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 20 20
58 00000170 20 20 20 20 20 20      DC.b   '          '    ;$170-$17F
      20 20 20 20 20 20
      20 20 20 20 20 20
59 00000180 47 4D 20 41 43 4C      DC.b   '(C) ACLO??? -001' ;$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
63
64 00000190 4A 20 20 20 20 20      DC.b   'J'           ;$190-$19F
      20 20 20 20 20 20
      20 20 20 20 20 20
65
66 000001A0 0000 0000      ROMStart DC.L $00000000      ;Start of ROM
67 000001A4 0007 FFFF      ROMEnd DC.L $0007FFFF      ;End of ROM; FILL IN END
68 000001A8 00FF 0000      RAMStart DC.L $00FF0000      ;Start of RAM
69 000001AC 00FF FFFF      RAMEnd DC.L $002FFFFFF      ;End of RAM
70
71 000001B0 20 20 20 20 20 20      DC.b   '          '    ;$1B0-$1BF
      20 20 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 20 20
73 000001D0 20 20 20 20 20 20      DC.b   '          '    ;$1D0-$1DF
      20 20 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 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 20 20
76
77
78
79 00000200 StartUp
80 00000200 4A79 00A1 0008      tst   $A10008      ;Check DDR's for warm/cold start
81 00000206 6600 0132      bne   WarmSt
82 0000020A 4A79 00A1 000A      tst   $A1000A
83 00000210 6600 0128      bne   WarmSt
84 00000214 41F9 0000 036C      lea   VBLVec,A0      ;See if development system is running
85 0000021A 81F8 0078      cmpx.l VBLLoc,A0
86 0000021E 6600 008C      bne   ColdSt
87 00000222 4A79 00A1 000C      tst   $A1000C      ;Don't use this with the accolade development
88 00000228 6600 0110      bne   WarmSt      ;system enabled.
89 0000022C 607E      bra.s ColdSt
90
91

```

FROM ACCOLADE, INC.

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INIT.ASM - Accolade's SEGA initialization program  
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```

92
93 0000022E 53 65 67 61 20 61      dc.b  'Sega and Genesis are registered trademarks'
       6E 64 20 47 69 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 6D 61 72 68 73
       20
94 00000259 6F 66 20 53 65 67      dc.b  'of Sega Enterprises Ltd.'
       51 20 45 66 74 65
       72 70 72 69 73 65
       73 20 6C 76 64 2E
95 00000271 41 63 63 67 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 76 65 72 70
       72 69 73 65 73 20
       4C 74 64 2E

```

96

97

98

99

100

.EVEN ON

;\*\*\*\*\*

```

101 000002AC 1039 00A1 0001      coldst
102 000002AC 0240 000F      move.b $A10001,00 ;Check for SEGA write
103 000002B2 0240 000F      and #$000F,00 ;Don't write if zero
104 000002B4 670A      beq.s ?1
105 000002B8 23FC 5345 4741 00A1      move.l #$53454741,$A14000 ;Write SEGA ASCII
       4000
106 000002C2 4D9 0000 0000      ?1      lea VidDat,A6 ;Init common address register
107 000002C8 302E 0004      move 4(A6),00 ;Read VidCom
108 000002CC 41F9 0000 0000      lea VidTbl,A0 ;Now init vid chip
109 000002D2 303C 0019      move #25,00 ;26 values to write
110 000002D6 3058 0004      move (AD)+,4(A6)
111 000002DA 51C8 FFFA      dbra D0,?2
112 000002DE 3C8C 0000      move #FC,(A6) ;Now finish fill command at table end
113
114 000002E2 2079 0000 01AB      move.l RAMStart,A0 ;Now clear system RAM
115 000002E8 2279 0000 01AC      move.l RAMEnd,A1 ;using table entries
116 000002EE 7000
117 000002F0 20CD      moveq #C,DJ
118 000002F2 B1C9      move.l D0,(AD)+
119 000002F4 60FA      cmpe.l A1,A0
       bit ?3
120
121 000002F6 207C 4000 0010 0004      move.l #$40000010,4(A6) ;Clear V Scroll table to 0
122 000002FE 323C 0027      move #S27,D1 ;Clear 40 entries
123 00000302 3C80      move D0,(A6)
124 00000304 51C9 FFFC      dbra D1,?4
125
126 00000308 207C 0009 0000 0004      move.l #$C0000000,4(A6) ;Clear palette to 0
127 00000310 723F      moveq #3F,D1 ;Do 64 colors
128 00000312 3C80      move D0,(A6)
129 00000314 51C9 FFFC      dbra D1,?5
130
131 00000318 6100 0054      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 000F 0011      move.b #0F,$11(A6)
135 0000032E 107C 00FF 0011      move.b #FF,$11(A6)
136 00000334 307C 8A00 0004      move #S8A00,4(A6) ;Turn off scan line interrupt index
137 0000033A
138 0000033A 4DF9 0000 0000      WarmSt lea VidDat,A6 ;Init common address register
139 00000340 1039 00A1 0001      move.b $A10001,00 ;Check for SEGA write
140 00000346 0240 000F      and #$000F,00 ;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 VSLVec,A0 ;See if development system is running

```

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## INIT.ASM - Acclaim's SEGA initialization program

Version: 03/15/91

```

144 0000035C B1F8 0078      stpa.l  VBLVec,A0
145 00000360 6608      bne.a  ??
146 00000362 13FC 0040 00A1 0000  move.b  #$40,SA1000D ;Init rest port DDR to flag warm start
147 00000364          ???
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: DD/AO
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 00000378 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 00000384 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    btst  #$00,Z80_Bus ;wait till granted
182 0000039E 66F6      bne  ?1
183 000003AC 41F9 00A0 00C3  lea   Z8C_Addr,A0
184 000003A6 108C 00F3      move.b  #SF3,(A0) ;DI
185 000003AA 117C 00E0 0001      move.b  #SD0,1(A0) ;IM 1
186 000003B0 117C 0056 0002      move.b  #S56,2(A0)
187 000003B6 117C 0018 0003      move.b  #S18,3(A0) ;JR +2
188 000003B8 117C 00F3 0004      move.b  #SF6,4(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                                     $400 $500 $600 $700
203 00000010 8800 8900 8AFF 8800      DC.W  $8800,$8900,$8AFF,$8B00,$8C81,$8D00,$8E00,$8F01
204 00000020 9001 9100 9200 93FF      DC.W  $9001,$9100,$9200,$93FF,$94FF,$9500,$9600,$9780
205 00000030 4000 0080      DC.W  $4000,$0080
206
207
208
209                                     ;*****
210                                     END

```