

ASSIGN M:CI,(FILE,INITIAL,:DOOCI)

METASYM CI,LC,CN

•SS R0,R1,R2,R3,R4,R5,R6,R7,R8,R9,R10,R11,R12,R13,R14,R15

•SS SR1,SR2,SR3,SR4,D1,D2,D3,D4,*

•FND

ADDR							
	406/LB	444/STW	451/STW*	512=PZE	552/GEN		
A10PSD	345/XPSD	353=IPSD	370/LPSD				
A10SRV	353/IPSD	362=A10					
ARMSENABLE	146/IWD	201/IWD					
BA							
	244/MBS	274/GEN	354/GEN	524/GEN	529/GEN	534/GEN	550/GEN
	552/GEN	557/EQU	557/EQU				
BITS							
	21=SET						
BOOTHLT							
	70/REF	351/IPSD					
BOOTS BAND							
	74/REF	160/STW	162/STH	179/MTW			
BUSH							
	550/GEN	556=TEXT	557/EQU				
BUSHSIZE							
	551/GEN	557=EQU					
CAL1PSD							
	50/REF	325/XPSD					
CAL2PSD							
	51/REF	326/XPSD					
CAL3PSD							
	52/REF	327/XPSD					
CAL4PSD							
	53/REF	328/XPSD					
CC							
	411/BCS	413/BCS	417/BCS	419/BCS	424/BCS	426/BCS	504=EQU
CJOBACC							
	233/LW	315=DATA					
CLK3PSD							
	63/REF	343/XPSD					
CLK4PSD							
	64/REF	344/XPSD					

CONV							
CONV1	440/BAL	447/BAL	474-EQU				
CONV2	476/BNEZ	479-EQU					
CORED	481-EQU	490/BDR					
CRNDD	91/REF	240/LW					
CSED\$PATH	416/SIB*	418/TIB*	508-DATA				
DA	107/REF	187/STW					
	152/LI	152/LI	360/LI	402/LI	409/LI	415/LI	421/LI
	434/LI						
DCT1	105/REF	352/LH					
DFBUG	19-SET	142/DB	372/DB				
DECFPSD	47/REF	322/XPSD					
EXIT	408/BNE	429/BEZ	539-EQU				
FIVES	249/LW	311-DATA					
FIX8VPSD	45/REF	320/XPSD					
FLTFPSD	46/REF	321/XPSD					
HGP	75/REF	161/LH					
HLTPSD	344/XPSD	351-:PSD					
IA	351-:PSD	352-:PSD	353-:PSD				
INITIAL	113/DEF	123-LPSD	347/DATA	563/END			

INITIAL:						
INITPSD	17/DEF	12=EGU				
INIT2	123/LPSD	352=IPSD				
IBHIGH	124=RES	352=IPSD				
IBLOW	97/REF	266/LI				
IOPSD	96/REF	265/LI				
IXPSDS	65/REF	349/XPSD				
IPT47	184/LD	349=XPSD				
JIT	49/REF	324/XPSD				
L	93/REF	150/LI	152/LI	153/STD	251/LI	252/LI
LACBF	332/DATA					258/LI
LFE20	430/CW	477/BR				
LKING	233=LW					
LMA	56/REF	331/XPSD				
LOADMAP	94/REF	270/LI	276/GFN	297/STS		
LOADWL	114/DEF	142/BAL	222=EGU			
L8C	224/BAL	224=EGU				
L8P	223/BAL	239=RES				
	439/LD	505=EGU				
	230/BAL	235/BAL	242/BAL	304=LI	309/BDR	

LOOPS	309-BDR					
LPNDD	410/SI0*	412/TI0*	423/SI0*	425/TI0*	509-DATA	
LSWAP	109/REF	192/LI				
LWL	250/BAL	253/BAL	257/BAL	263/BAL	268/BAL	279-RES
LWL1	293-CW	300/B				
MAPINC	232/AW	313-GEN				
MAPINIT	229/LW	246/MBS	312-GEN			
MASKS	286/LW	291/LCW				
MBIGAM4	81/REF	162/LB				
MBIGPT	78/REF	163/LB				
MING	84/REF	190/LD	190/LD			
MBNINIT	72/REF	147/BAL				
MBNBRG	68/REF	134/LI				
MTWO	135/LW	342-MTW				
NEWPAGE	500-TEXT	534/GEN				
NB10WL	264/BIF	269-RES				
NBPPSD	42/REF	317/XPSD				
NBSREL	181-EQU					
NSWAP						

0B:B0PTX	110/REF	192/STW				
0C	104/REF	357/LB				
0CPSD	20-EQU	356/LI				
PACHBUF	66/REF	350/XPSD				
PACHER	428/LW	432/STW	502-RFS	505/EQU	506/EQU	524/GEN
PATCH	399-EQU	545/DATA				
PATCHEE	431/BNE	437-EQU				
PB:HVA	560-RFS					
POWR0FF	95/REF	260/LB				
POWR0N	58/REF	334/XPSD				
PPSTART	57/REF	332/XPSD				
PRINT	92/REF	248/LI	254/LI			
PRNTBUF	421/LI	522-EQU				
PRNTEST	501-TEXT	529/GEN				
PRNT0K	409/LI	434/LI	533-EQU			
PRNT0K0	420-EQU					
PRNT0K1	422-EQU	435/B				
PSA\$END	427-EQU					
	74/REF	156/LW				

PSD*I56			
	61/REF	339/XPSD	
PSD*I57			
	62/REF	340/XPSD	
PSD*T4C			
	54/REF	329/XPSD	
PSD*T4D			
	55/REF	330/XPSD	
PSD*T46			
	48/REF	322/XPSD	
PTHMSG			
	402/LI	550=GEN	
RFAD			
	415/LI	522=EQU	
RFADCR			
	414=EQU	452/B	
RFS			
	351/IPSD	352/IPSD	
S:CLOCK4			
	60/REF	332/MTW*	
S:GJOBTL			
	83/REF	182/LD	190/LD
SL:CORE			
	79/REF	171/LW	
SP00L			
	87/REF	205/STW*	
STK			
	401/PSM	516=PZE	541/PLM
STKLPSD			
	44/REF	319/XPSD	
STKSZ			
	515=EQU	517/GEN	518/RFS
SYSVERS			
	102/REF	182/LW	
S7			
	196/BIF		
S7ERR			

S7INST	355-DATA	364/XPSD		
S7MSG	133/EXU	365-GEN		
S7S9	354-GEN	360/LI		
S7TST	264/BIF			
S7TXT	125/LW	364-XPSD		
S9	354/GEN	364-DATA		
S9AIBCC	198/BIF			
T:GJOBSTRT	369/STCF	371-DATA		
T:ISE	85/REF	189/BAL	191/BAL	
T:SGRNU	89/REF	204/B		
T:INC	80/REF	177/BAL		
T:PROBT	59/REF	337/MTW		
TRIGGER	116/DEF	255/LI	316-RES	
TRP51	203/IWD			
TSTACK	143/XPSD	542/LPSD	545-DATA	
TYNDD	98/REF	149/LI	150/LI	152/LI
UMBV#	403/SIB*	404/TIB*	510-DATA	
UNIMPPSD	115/DEF	259-LI		
	43/REF	318/XPSD		

VALUE							
WD	446/LD	506-EQU					
WLZAP	196/BIF	192/BIF	200-EQU				
XPSDS	245/LW	276-GEN					
Y08	139/LW	317-XPSD					
IBIG	271/LW						
	100/RFF	222/SLS	312/GFN	312/GEN	312/GEN	313/GEN	313/GEN
	313/GEN	313/GEN	314/GEN	314/GEN	365/GEN		

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INITIAL - MONITOR INITIALIZATION ROUTINE
INITIAL MONITOR INITIALIZATION ROUTINE - RESIDENT

9

NAME: INITIAL

PURPOSE: INITIALIZATION ROUTINE FOR RESIDENT MONITOR

DESCRIPTION: (1) SETS UP TRAP AND INTERRUPT LOCATIONS
(2) BALS TO BOOTSUBR FOR FURTHER INITIALIZATION
AND/OR TAPE BOOT PROCESS
(3) SETS UP THE HARDWARE WRITE LOCKS AND MAP
(4) BUILDS MONITOR JIT
(5) INITIATES ALLOCAT AND GHOST1
(6) STARTS UP SYSTEM BY EXITING TO SCHEDULER

PCC 0

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INITIAL - MONITOR INITIALIZATION ROUTINE

		DEF	INITIAL:	MODULE NAME
17				
18	01 00000	INITIAL: EQU	6	
19	00000000	DEBUG SET	0	SET TO 1 TO INCLUDE ABS PATCHER
20	00000002	BC EQU	2	
21	00000001	BITS SET	1	GET BT31T00 AND MASKS
22		SYSTEM	UTS	
23	00000000	R0 EQU	0	
24	00000001	R1 EQU	1	
25	00000002	R2 EQU	2	
26	00000003	R3 EQU	3	
27	00000004	R4 EQU	4	
28	00000005	R5 EQU	5	
29	00000006	R6 EQU	6	
30	00000007	R7 EQU	7	
31	00000008	R8 EQU	8	
32	00000009	R9 EQU	9	
33	0000000A	R10 EQU	10	
34	0000000B	R11 EQU	11	
35	0000000C	R12 EQU	12	
36	0000000D	R13 EQU	13	
37	0000000E	R14 EQU	14	
38	0000000F	R15 EQU	15	

INITIAL - MONITOR INITIALIZATION ROUTINE
 * REFS AND DEFS

42	REF	N0PPSD	TRAP 40
43	REF	UNIMPPSD	TRAP 41
44	REF	STKLPSD	TRAP 42
45	REF	FIX0VPSD	TRAP 43
46	REF	FLTFFPSD	TRAP 44
47	REF	DECFPSD	TRAP 45
48	REF	PSD\$T46	TRAP 46 WATCHDOG TIMER
49	REF	IPT47	TRAP 47 INTER-PROCESSOR TRAP
50	REF	CAL1PSD	TRAP 48
51	REF	CAL2PSD	TRAP 49
52	REF	CAL3PSD	TRAP 4A
53	REF	CAL4PSD	TRAP 4B
54	REF	PSD\$T4C	TRAP 4C HARDWARE ERROR TRAP
55	REF	PSD\$T4D	TRAP 4D REG EXCEPTION TRAP
56	REF	LEE20	TRAP 4E XDLT ENTRY
57	REF	POWERON	TRAP 50
58	REF	POWEROFF	TRAP 51
59	REF	TINC	INTR 54 CLOCK 3 PULSE
60	REF	S:LOCK4	INTR 55 CLOCK 4 PULSE (
61	REF	PSD\$I56	INTR 56 MEM PE INTR OR PFI
62	REF	PSD\$I57	INTR 57 MEM FLT INTR
63	REF	CLK3PSD	INTR 5A CLOCK3 ZERO
64	REF	CLK4PSD	INTR 5B CLOCK4 ZERO
65	REF	I0PSD	INTR 5C
66	REF	0CPSD	INTR 5D
68	REF	MONORG	START OF RESIDENT CODE
70	REF	BOOTHLT	EMERGENCY HALT (BOOT 0C INTR)
72	REF	MONINIT	ENTRY POINT TO BOOTSUBR
74	REF	PSA\$END	SET UP FOR RECOVERY
75	REF	HGP	SET UP FOR RECOVERY
76	REF	BOOTSBAND	SET UP FOR RECOVERY

SPACI

INITIAL - MONITOR INITIALIZATION ROUTINE

78			
79	REF	MBIGPT	USED TO REL GHOST1 SW SPACE
80	REF	SLICORE	USED TO REL GHOST1 SW SPACE
81	REF	T:SGRNU	USED TO REL GHOST1 SW SPACE
	REF	MBIGAM4	USED TO REL GHOST1 SW SPACE
83			
84	REF	S:GJOBTL	USED TO START ALLOCAT & GHOST1
85	REF	MING	USED TO START ALLOCAT & GHOST1
	REF	T:GJOBSTRT	USED TO START ALLOCAT & GHOST1
87			
	REF	SP00L	INITIALIZED TO ZERO
89			
	REF	T:SE	ENTRY TO SCHEDULER
91			
92	REF	CORED	USED TO SET UP WRITE LOCKS
93	REF	PPSTART	USED TO SET UP WRITE LOCKS
94	REF	JIT	USED TO SET UP WRITE LOCKS
95	REF	LKIMG	USED TO SET UP WRITE LOCKS
96	REF	PB:HVA	USED TO SET UP WRITE LOCKS
97	REF	I0LOW	USED TO SET UP WRITE LOCKS
98	REF	I0HIGH	USED TO SET UP WRITE LOCKS
	REF	TSTACK	USED TO BUILD MONITOR JIT
100			
	REF	I0BIG	USED TO SET UP MAP
102			
	REF	SYSVERS	SET UP FROM X12B1
104			
105	REF	0B;00PTX	DCTX OF 0C FOR ERROR MSG
	REF	DCT1	I0 ADDR OF 0C FOR ERROR MSG
107			
	REF	CSED\$PATH	CLEARED TO ZERO FOR FLT HANDLERS
109			
110	REF	LSWAP	NO. OF SWAPPERS IN SYSTEM
111	REF	NSWAP	CELL CONTAINING NO. OF SWAPPERS IN SY
			INITIALLY SET AT ONE.
113			
	DEF	INITIAL	ENTRY POINT AND MODULE BASE

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114
115
116

INITIAL - MONITOR INITIALIZATION ROUTINE 13
DEF LMA ENTRY TO RELOAD WRT LOCKS, MAP & ACC
DEF UMOV# INSTR FILLED IN BY BOOTSUBR
DEF TOPROBT TOP OF RESIDENT CODE

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118
119
120
121

INITIAL - MONITOR INITIALIZATION ROUTINE
F NAME: INITIAL
F
F PURPOSE: INITIAL ENTRY POINT FOR STARTUP OF SYSTEM
F DURING ANY TYPE OF BOOT OR RECOVERY

14

123 01 00000 0E0000C0
124 01 00001
125 01 00001 322000D4
126 01 00002 35200040 A

INITIAL LPSD,0 INITPSD
INIT2 RES
LW,2 S7TST
STW,2 X140'

127
128
129
130
131
132

*
B MESSAGE: SYSTEM REQUIRES SIG9 OR X560
B
B MEANING: THIS PB TAPE CANNOT BE BOOTED ON A SIGMA 6/7
B BECAUSE IT NEEDS HALFWORD MAP FORMAT
*

133 01 00003 670000D5
134 01 00004 222FFFA0 N
135 01 00005 321000B2
136 01 00006 3514005F A
137 01 00007 64200006
138 01 00008 22100020 A
139 01 00009 32220098
140 01 0000A 3522003F A
141 01 0000B 64100009
142 00000000

EXU S7INST CHECK IF SIG7 IN BIG MAP MODE
LI,2 MONORG=X160'
LW,1 MTW0 !MTW,0 0' INSTRUCTION
STW,1 X15F1,2
BDR,2 \$=1
LI,1 X15F1=X13F1
LW,2 XPSDS=1,1 SET TRAPS, INTERRUPTS, ETC
STW,2 X13F1,1
BDR,1 \$=2
DB DEBUG
XPSD,10 TRP51 DB WE WANT TO PATCH

143
144
145 01 0000C 22102030 A
146 01 0000D 64101200 A
147 01 0000E 6AB00000 X
148 01 0000F 6AB00049
149 01 00010 22000001 N
150 01 00011 221001FE N
151 01 00012 25100010 A
152 01 00013 22200000 N
153 01 00014 1505FFFE N
154 01 00015 18000000 A

S
FIN
LI,1 X12030' ARM/ENABLE I/O,CLOCK3,BC
:WD,1 ARM\$ENABLE
BAL,11 MONINIT
BAL,11 LMA
LI,0 TSTACK+1 BUILD MONITOR JIT
LI,1 JIT+512=TSTACK=2
SLS,1 16
LI,2 DA(TSTACK)=DA(JIT-2)
STD,0 JIT=2,2
SD,0 0

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INITIAL - MONITOR INITIALIZATION ROUTINE

155	01	00016	64200014	BDR,2	\$=2	
156	01	00017	32900000 X	LW,9	PSA\$END	REL SWAP SPACE FOR GH=1
157	01	00018	21901480 A	CI,9	X11480!	DON'T ALLLOCATE LAST
158	01	00019	6910001B	BL	\$+2	& GRAMS
159	01	0001A	209FFFF8 A	AI,9	=8	
160	01	0001B	35900000 X	STW,9	BOOTSBAND	INITIALIZE BOOTSBAND
161	01	0001C	52700001 N	LH,7	HGP+1	FROM END OF PSA
162	01	0001D	55700000 X	STH,7	BOOTSBAND	INSERT DCT INDEX
163	01	0001E	72200000 X	LB,2	MBIGPT	GRAM PER TRACK
164	01	0001F	25200001 A	SLS,2	1	SECTORS PER TRACK
165	01	00020	22800000 A	LI,8	0	
166	01	00021	36800002 A	DW,8	2	
167	01	00022	22200000 A	LI,2	0	SWAPI OF FIRST SWAPPER
168	01	00023	72300000 X	LB,3	MBIGAM4	
169	01	00024	25960001 A	SLS,9	1,3	
170	01	00025	30900008 A	AW,9	8	
171	01	00026	32700000 X	LW,7	SLICORE	
172	01	00027	20700003 A	AI,7	3	
173	01	00028	2570047E A	SAS,7	=2	
174	01	00029	25700402 A	SAS,7	2	
175	01	0002A	209FFFFE A	AI,9	=2	
176	01	0002B	32F00009 A	LW,15	9	
177	01	0002C	6AB00000 X	BAL,11	TISGRNU	REL SLICORE GRAN FOR GH1
178	01	0002D	6910002A	BCS,1	\$=3	
179	01	0002E	33E00000 X	MTW,=2	BOOTSBAND	
180	01	0002F	6470002A	BDR,7	\$=5	
181		01 00030		EGU	\$	
182	01	00030	32000000 X	LW,0	SYVERS	
183	01	00031	3500002B A	STW,0	X12B!	
184	01	00032	120000BA	LD,0	I0XPSDS	REPLACE XPSDS
185	01	00033	1500005C A	STD,0	X15C!	FOR I/O AND BC
186	01	00034	22200000 A	LI,R2	0	LET TRAP HANDLERS
187	01	00035	35200000 X	STW,R2	CSED\$PATH	KNOW INITIAL IS DONE
188	01	00036	12000004 N	LD,0	SIGJOBTL+4	START UP ALLLOCAT
189	01	00037	6AA00000 X	BAL,10	TIGJOBSTRT	
190	01	00038	12000000 F	LD,0	SIGJOBTL+MING+MING	
191	01	00039	6AA00000 X	BAL,10	TIGJOBSTRT	START UP THE STARTER GHOST

NBSREL

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INITIAL MONITOR INITIALIZATION ROUTINE

227 01 0004C 22300040 A
 228 01 0004D 25300000 N
 229 01 0004E 32200096
 230 01 0004F 6A40008E
 231 01 00050 6F080000 N
 232 01 00051 30200097
 233 01 00052 32200098
 234 01 00053 22300010 A
 235 01 00054 6A40008E
 236 01 00055 6F040000 A
 237 01 00056 222FFFFFFF A
 238 01 00057 E800000A A
 239 01 00058
 240 01 00058 32300000 X
 241 01 00059 25300073 A
 242 01 0005A 6A40008E
 243 01 0005B 22200000 A
 244 01 0005C 6F020000 A
 245 01 0005D 3210007A
 246 01 0005E 61000258
 247 01 0005F 22100000 A
 248 01 00060 224FFFFFFF N
 249 01 00061 32200095
 250 01 00062 6A60007B
 251 01 00063 22100000 N
 252 01 00064 224001FF N
 253 01 00065 6A60007B
 254 01 00066 221001FF N
 255 01 00067 224FFF98 N
 256 01 00068 222FFFFFFF A
 257 01 00069 6A60007B
 258 01 0006A 22100200 N
 259 01 0006B 22500000 A
 260 01 0006C 724A0000 X
 261 01 0006D 25400009 A
 262 01 0006E 204FFFFFFF A
 263 01 0006F 6A60007B

LACBF

LOADWL

UMBV#

LI,3 64
 SLS,R3 ;BIG SHIFT FOR BIG MAP MODE
 LW,2 MAPINIT
 BAL,4 LOOP
 LDMAP,0 0
 AW,2 MAPINC
 LW,2 CJOBACC
 LI,3 16
 BAL,4 LOOP
 LPC,0
 LI,R2 =1
 B *R10
 RES
 LW,3 CORED FIRST SET ALL TO ZERO
 SLS,3 =9=4
 BAL,4 LOOP
 LI,2 0
 LLBCKS,0
 LW,1 WLZAP ZAP WRITE LOCK BUFFER
 MBS,0 BA(MAPINIT)
 LI,1 0 NOW SET MON DATA TO 01
 LI,4 PPSTART=1
 LW,2 FIVES
 BAL,6 LWL
 LI,1 JIT SET JIT TO 01
 LI,4 JIT+511
 BAL,6 LWL
 LI,1 PPSTART+511 SET MON PURE PROCEDURE TO 11
 LI,4 TOPROBT=1=256 IF SPOOL BUFFER, DONT PROTECT IT
 LI,2 =1
 BAL,6 LWL
 LI,1 JIT+512 SET UMBV TO 11
 LI,5 0 FILLED IN BY BOOTSUBR
 LB,4 PB:HYA,5
 SLS,4 9
 AI,4 =1
 BAL,6 LWL

INITIAL - MONITOR INITIALIZATION ROUTINE

264	01	00070	70200000	X				
	01	00071	69C00076					
265	01	00072	22100000	N	LI,1	I0L0W	SET I0 BUFFERS TO 0 FOR 560	
266	01	00073	224FFFFFF	N	LI,4	I0HIGH=1		
267	01	00074	22200000	A	LI,2	0		
268	01	00075	6A60007B		BAL,6	LWL		
269	01	00076			N0I0WL	RES		
270	01	00076	22000000	N	LI,0	LKIMG		
271	01	00077	3210001C	N	LW,1	Y08		
272	01	00078	6F020000	A	LL0CKS,0		INT0 THE HARDWARE REGISTERS	
273	01	00079	E800000A	A	B	*10	AND RETURN	
274					*			
275					*			
276	01	0007A	20000000	N	WLZAP	GEN,8,24 32,BA(LKIMG)		
277					*			
278					*			
279	01	0007B			LWL	RES		
280					*	SET WRITE LOCK IMAGE FOR PAGES (1) THRU (4)		
281					*	TO (2) (32 BITS)		
282	01	0007B	25100077	A	SLS,1	=9		
283	01	0007C	2230000F	A	LI,3	XIF1	GET DISP INTO WORD	
284	01	0007D	4B300001	A	AND,3	1		
285	01	0007E	233FFFFFFE	A	MI,3	=2	(COMPLEMENTED)	
286	01	0007F	32360020	N	LW,3	MASKS+32,3	INITIAL MASK TO USE	
287	01	00080	2510007C	A	SLS,1	=4	INITIAL WORD DISP	
288	01	00081	25400573	A	SAD,4	=9-4	N0W GET MASK FOR LAST STORE	
289	01	00082	25500064	A	SLS,5	=28		
290	01	00083	235FFFFFFE	A	MI,5	=2		
291	01	00084	3A5A001E	N	LCW,5	MASKS+30,5		
292	01	00085	205FFFFFFF	A	AI,5	=1		
293	01	00086	31400001	A	LWL1	CW,4	1	
294	01	00087	691C0000	A	BL	0,6	RETURN IF DONE	
295	01	00088	6930008A		BNE	\$+2		
296	01	00089	4B300005	A	AND,3	5	SET FINAL MASK (MAY ALSO BE FIRST 0N)	
297	01	0008A	47220000	X	STS,2	LKIMG,1		
298	01	0008B	20100001	A	AI,1	1		
299	01	0008C	223FFFFFF	A	LI,3	=1	INTERMEDIATE MASK	

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300 01 0008D 6800n086 B LWL1
301 *
302 *
303 *
304 01 0008E 2210n001 A LOOP LI,1 1
305 01 0008F 2200n002 A LI,0 2
306 01 00090 7510n001 A STB,1 1
307 01 00091 6708n000 A EXU 0,4
308 01 00092 6708n001 A FXU 1,4
309 01 00093 6430n08F L00P5 BDR,3 L00P+1
310 01 00094 6808n002 A B 2,4
311 01 00095 55555555 A FIVES DATA X'55555555'
312 01 00096 0001n203 N MAPINIT GEN,15,1,6,1,7,1,1 0,1=:BIG,0,1=:BIG,0,1=:BIG,1
313 MAPINC GEN,5,1,7,1,1,6,1,7,1,1,1 0,1=:BIG,0,1=:BIG,:BIG,0,1=:BIG,;
0,1=:BIG,:BIG,0
314 01 00097 0404n404 N CJOBACC DATA X'BBBBBBBB'
315 01 00098 BFFFFFFF A T0PR00T RES
316 01 00099 0FA0n000 X XPSDS XPSD,10 N0PPSD
317 01 00099 0FA0n000 X XPSD,10 UNIMPPSD
318 01 0009A 0FA0n000 X XPSD,10 STKLPSD
319 01 0009B 0FA0n000 X XPSD,10 FIX0VPSD
320 01 0009C 0FA0n000 X XPSD,10 FLTFFSD
321 01 0009D 0FA0n000 X XPSD,10 DECFPSD
322 01 0009E 0FA0n000 X XPSD,0 PSD*T46
323 01 0009F 0F00n000 X XPSD,10 IPT47 INTER-PROCESSOR TRAP
324 01 000A0 0FA0n000 X XPSD,10 CAL1PSD
325 01 000A1 0FA0n000 X XPSD,10 CAL2PSD
326 01 000A2 0FA0n000 X XPSD,10 CAL3PSD
327 01 000A3 0FA0n000 X XPSD,10 CAL4PSD
328 01 000A4 0F00n000 X XPSD,0 PSD*T4C
329 01 000A5 0F00n000 X XPSD,0 PSD*T4D
330 01 000A6 0F80n000 X XPSD,8 LEE20 LEES WATERING HOLE
331 01 000A7 FF00n000 N DATA JIT*255**24 CJ0B
332 01 000A8 0FA0n000 X XPSD,10 P0WR0N
333 01 000A9 0FA0n000 X XPSD,10 P0WR0FF
334 01 000AA 3300n000 A MTW,0 0
335 01 000AB 3300n000 A MTW,0 0
336 01 000AC 3300n000 A CLECK2
    
```

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INITIAL - MONITOR INITIALIZATION ROUTINE

337	01	000AD	33F00000	X		MTW,=1	TINC	
338	01	000AE	B3100000	X		MTW,1	*S;CLOCK4	ACCOUNTING CLOCK (CLOCK4)
339	01	000AF	0F000000	X		XPSD,0	PSD\$156	
340	01	000B0	0F000000	X		XPSD,0	PSD\$157	
341	01	000B1	33000000	A		MTW,0	0	CLOCK1
342	01	000B2	33000000	A	MTWO	MTW,0	0	CLOCK2
343	01	000B3	0FA00000	X		XPSD,10	CLK3PSD	
344	01	000B4	0FA00000	X		XPSD,10	CLK4PSD	
345	01	000B5	0FA000C2			XPSD,10	A18PSD	INITIAL I8 INTERRUPT XPSD
346	01	000B6	0FA000BC			XPSD,10	HLTPSD	BOOT RESTART HALT
347	01	000B7	00000000	A		DATA	0,INITIAL	MON START ADR FOR DISCBOOT
	01	000B8	00000000					
348						BBUND	8	
349	01	000BA	0F800000	X	I8XPSDS	XPSD,8	I8PSD	
350	01	000BB	0F800000	X		XPSD,8	8CPSD	
351	01	000BC	00000000	N	HLTPSD	:PSD	RES,(IA,B00THLT)	
			00000000					
			00000000					
			00000000					
352	01	000C0	00000001	N	INITPSD	:PSD	(IA,INIT2)	
			00000000					
353	01	000C2	00000000	N	A18PSD	:PSD	RES,(IA,A18SRV)	
			00000000					
			000000DE					
			00000000					
354	01	000C6	05000358	N	S7MSG	GEN,8,24,32	5,BA(S7TXT),31	
			0000001F					
355	01	000C8	00000000	A	S7ERR	DATA	0,0,\$+2,0	
	01	000C9	00000000	A				
	01	000CA	000000CC					
	01	000CB	00000000	A				
356	01	000CC	22100002	A		LI,1	8C	8C 8P LABEL INDEX
357	01	000CD	72120000	X		LB,1	8B;B8PTX,1	DCTX 8F 8C
358	01	000CE	52120000	X		LH,1	DCT1,1	
359	01	000CF	201F3F00	A		AI,R1	=X'C100'	MAKE INTO SIGMA7 ADDRESS
360	01	000D0	22000063			LI,0	DA(S7MSG)	TELL OPERATOR AND QUIT.
361	01	000D1	CC000001	A		SI0,0	*1	

362 01 000D2 680000D2
 363 01 000D3 680000D1
 364 01 000D4 0F A000C8
 365 01 000D5 28000000 N
 366 01 000D6 15 A
 01 000D6 1 15 A
 01 000D6 2 E2 A
 01 000D6 3 E8 A
 367 01 000D7 E2E3C5D4 A
 01 000D8 40D9C5D8 A
 01 000D9 E4C9D9C5 A
 01 000DA E240F2C9 A
 01 000DB C7F940D6 A
 01 000DC D940F7F5 A
 01 000DD F6F04040 A
 368 01 000DE 6E000000 A
 369 01 000DF 740000E1
 370 01 000E0 0EB000C2
 371 01 000E1 00000000 A

S7TST XPSD,10 S7ERR
 S7INST GEN,5,1,26 5,1BIG,0
 S7TXT DATA,1 X'15',X'15','S','Y'

TEXT 'STEM REQUIRES SIG9 OR X560'

A10SRV A10,0 0
 STCF S9A10CC SAVE A10 CC
 LPSD,X'BI' A10PSD RETURN
 S9A10CC DATA 0
 DB DEBUG

00000000

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S *****
 S * B O O T T I M E P A T C H R O U T I N E
 S *
 S * PATCH CP-V MONITOR BOOT AND BOOT TIME ROUTINE
 S * WITH ABSOLUTE PATCHES. PATCH FORMAT IS:
 S *
 S * CBL.1 CBL.9
 S *
 S * LBC. VALUE
 S *
 S * WHERE: LBC #5 HEX DIGIT ADDR
 S * VALUE #8 HEX DIGIT VALUE
 S *
 S * ENTRY : BY EXECUTING TRAP LBC. X'151' WHICH CONTAINS XPSD
 S * EXIT : BY LPSD TO RESULT OF ENTRY XPSD
 S *
 S *

INITIAL MONITOR INITIALIZATION ROUTINE

```

391 *S* *          PATCHES ARE TERMINATED BY A EOD CARD, AND ARE
392 *S* *          READ FROM THE CARD READER
393 *S* *
394 *S* *          PATCHES ARE PRINTED ON THE LINE PRINTER
395 *S* *
396 *S* *****
399 *S* PACHER   EQU          $          ENTRY-----
400 *S*         LCI          0          SAVE REGS.
401 *S*         PSM,R0     STK
402 *S*         LI,0       DA(PTHMSG)   ASK IF THEY WANT TO PATCH
403 *S*         SI0,0      *TYNDD
404 *S*         TI0,0      *TYNDD
405 *S*         BCS,12     $=1
406 *S*         LB,R1      ADDR         GET ANSWER
407 *S*         CI,R1      IY!         IS IT YES
408 *S*         BNE        EXIT        B IF NOT
409 *S*         LI,R0      DA(PRNTST)
410 *S*         SI0,R2     *LPNDD      EJECT A PAGE
411 *S*         BCS,CC     $
412 *S*         TI0,R4     *LPNDD
413 *S*         BCS,CC     $=1
414 *S* READCR   EQU          $
415 *S*         LI,0       DA(READ)    READ A CARD
416 *S*         SI0,R2     *CRNDD
417 *S*         BCS,CC     $
418 *S*         TI0,R4     *CRNDD      WAIT FOR
419 *S*         BCS,CC     $=1        I/O DONE
420 *S* PRNTOK   EQU          $
421 *S*         LI,R0      DA(PRINT)
422 *S* PRNTOKO  EQU          $
423 *S*         SI0,R2     *LPNDD      PRINT CARD
424 *S*         BCS,CC     $          STOP SOMETHING IS WRONG
425 *S*         TI0,R4     *LPNDD      WAIT FOR
426 *S*         BCS,CC     $=1        I/O TO FINISH
427 *S* PRNTOK1 EQU          $
428 *S*         LW,R1      PACHBUF
429 *S*         BEZ        EXIT        B IF END OF PATCHING

```

INITIAL - MONITOR INITIALIZATION ROUTINE

```

430 *S*      CW,R1      L(' EOD')      NO---CHECK FOR
431 *S*      BNE       PATCH          END OF PATCHES
432 *S*      LI,R1      0              WE ARE DONE, SO SET
433 *S*      STW,R1    PACHBUF        PATCHING FLAG
434 *S*      LI,R0     DA(PRNTEST)
435 *S*      B         PRNTOKO        EJECT PAGE
436 *S*      *-----*
437 *S*      PATCH    EGU      $
438 *S*      LI,R8     0              FLAG FOR !LOC! CONVERS.
439 *S*      LD,R6     LBC          GET LBC FIELD
440 *S*      BAL,R9    CONV          CONVERT TO HEX
441 *S*      *
442 *S*      *      RETURN WITH R10 = LOC.
443 *S*      *
444 *S*      STW,R10   ADDR
445 *S*      LI,R8     1              VALUE CONVERS.
446 *S*      LD,R6     VALUE          VALUE FIELD
447 *S*      BAL,R9    CONV          CONVERT TO HEX
448 *S*      *
449 *S*      *      RETURN WITH R10 = VALUE
450 *S*      *
451 *S*      STW,R10   *ADDR          PATCH MONITOR
452 *S*      B         READCR        GET NEXT CARD
453 *S*      *
454 *S*      *
455 *S*      *
456 *S*      *
457 *S*      *-----*
458 *S*      *
459 *S*      *      C O N V R O U T I N E
460 *S*      *
461 *S*      *      PART OF BOOTPATCH ROUTINE. CONVERTS EIGHT (8)
462 *S*      *      EBC CHARACTERS TO 8 HEX CHARACTERS
463 *S*      *
464 *S*      *      ENTRY : R6-R7   = 8 EBC CHAR.
465 *S*      *      R8           = 0 CONVERT LBC
466 *S*      *      R9           = 1 CONVERT VALUE
467 *S*      *

```

INITIAL - MONITOR INITIALIZATION ROUTINE

```

468 *S* * EXIT : R10 = 8 HEX CHAR (CONVERTED)
469 *S* *
470 *S* * ENTERED BY : BAL,R9
471 *S* *
472 *S* *****
474 *S* CONV FGU $ ENTRY.....
475 *S* CI,R8 0
476 *S* BNEZ CONV1 NO--LBC CONV.
477 *S* BR,R7 L('000') YES--5 CHAR LBC BECOMES
478 *S* SCD,R6 =24 8 CHAR
479 *S* CONV1 FGU $
480 *S* LI,R15 8 8 DIGITS
481 *S* CONV2 FGU $
482 *S* LB,R11 R6 GET CHAR
483 *S* SLD,R6 8 TO NEXT CHAR
484 *S* CI,R11 '0'
485 *S* BGE $+2
486 *S* AI,R11 X'39' CONVERT
487 *S* AI,R11 =10' EBC DIGIT
488 *S* SCS,R11 =4
489 *S* SLD,R10 4
490 *S* BDR,R15 CONV2 GET NEXT CHAR.
491 *S* B *R9 ***** RETURN
492 *S* *****
494 *S* *****
495 *S* * DATA INFO
496 *S* *****
498 *S* *****
499 *S* BOUND 8
500 *S* NEWPAGE TEXT '1 ' TOP OF FORM
501 *S* PRNTBUF TEXT 'A ' UPSPACE ONE LINE
502 *S* PACHBUF RES 20 INPUT BUFFER FOR PATCHES
503 *S* *****
504 *S* CC FGU X'1' CONDITION CODE FOR I/O CHECK
505 *S* LBC FGU PACHBUF+0 WD=0 IN BUF OF LBC (2 WDS TOTAL)
506 *S* VALUE FGU PACHBUF+2 WD=2 IN BUF OF VALUE (2 WDS TOTAL)
507 *S* *****

```

INITIAL - MONITOR INITIALIZATION ROUTINE

```

508 *S* CRNDD DATA 0003 CR ADDR
509 *S* LPNDD DATA 0002 LP ADDR
510 *S* TYNDD DATA 0001 TY ADDR
511 *S* *****
512 *S* ADDR PZE 0 WHERE TO PATCH
513 *S* *****
514 *S* BBUND 8
515 *S* STKSZ EQU 16
516 *S* STK PZE *+1
517 *S* GEN,16,16 STKSZ,0
518 *S* RES STKSZ
519 *S* *****
520 *S* *****
521 *S* *****
522 *S* BBUND 8
523 *S* READ EQU * IBCD TO READ A CARD
524 *S* GEN,8,24 X'06',BA(PACHBUF)
525 *S* GEN,8,24 X'00',20*4
526 *S* *****
527 *S* BBUND 8
528 *S* PRINT EQU * IBCD TO PRINT A CARD
529 *S* GEN,8,24 X'05',BA(PRNTBUF)
530 *S* GEN,8,24 X'00',21*4
531 *S* *****
532 *S* BBUND 8
533 *S* PRNTEST EQU * IBCD TO DETERMINE PRINTER TYPE
534 *S* GEN,8,24 X'05',BA(NEWPAGE) AND EJECT PAGE
535 *S* GEN,8,24 X'00',1*4
536 *S* *****
537 *S* *****
538 *S* *****
539 *S* EXIT EQU *
540 *S* LCI 0
541 *S* PLM,RO STK
542 *S* LPSD,0 TRP51 RETURN
543 *S* *****
544 *S* BBUND 8
545 *S* TRP51 DATA 0,0,PACHER,0

```

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INITIAL - MONITOR INITIALIZATION ROUTINE

```

546 *S* *
547 *S* *
548 *S*          BBUND      8
549 *S* *
550 *S* PTHMSG    GEN,8,24 X'05',BA(BUSH)
551 *S*          GEN,8,24 X'20',BUSHSZ
552 *S*          GEN,8,24 X'86',BA(ADDR)
553 *S*          GEN,8,24 X'00',4
554 *S* *
555 *S* *
556 *S* BUSH TEXT  ' IF YOU WANT TO PATCH, ANSW. YES '
557 *S* BUSHSZ   FQU      BA(*)=BA(BUSH)
558 *S* *
559 *S* *
560 *S* PATCHEE  RES      50
561 *S* *
562 *S* *
563 *S* *          FIN
                    END      INITIAL

```

01 00000

CONTROL SECTION SUMMARY: 01 000E2 PT 0

*

SYMBOL VALUES

AIBPSD/01 000C2	AIBSRV/01 000DE	ANSPR8C/00000000	BITS/00000001
CJBBACC/01 00098	DCBPR8C/00000000	DEBUG/00000000	DISCBPR8C/00000000
FIVES/01 00095	HLTPSD/01 000BC	INITPSD/01 000C0	INIT2/01 00001
I8XPSDS/01 000BA	LACBF/01 00052	LBADMAP/01 0004C	LBADWL/01 00058
L88P/01 0008E	L88P5/01 00093	LWL/01 0007B	LWL1/01 00086
MAPINC/01 00097	MAPINIT/01 00096	M8NPR8C/00000000	MPBITS/00000000
MTW0/01 000B2	M1/00000001 S	M10/0000000A S	M11/0000000B S
M12/0000000C S	M13/0000000D S	M14/0000000E S	M15/0000000F S
M16/00000010 S	M17/00000011 S	M18/00000012 S	M19/00000013 S
M2/00000002 S	M20/00000014 S	M21/00000015 S	M22/00000016 S
M23/00000017 S	M24/00000018 S	M25/00000019 S	M26/0000001A S
M27/0000001B S	M28/0000001C S	M29/0000001D S	M3/00000003 S
M30/0000001E S	M31/0000001F S	M32/00000020 S	M4/00000004 S
M5/00000005 S	M6/00000006 S	M7/00000007 S	M8/00000008 S
M9/00000009 S	N8IBWL/01 00076	N8SREL/01 00030	8C/00000002
R0/00000000	R1/00000001	R10/0000000A	R11/0000000B
R12/0000000C	R13/0000000D	R14/0000000E	R15/0000000F
R2/00000002	R3/00000003	R4/00000004	R5/00000005
R6/00000006	R7/00000007	R8/00000008	R9/00000009
S69PR8C/00000001	S7ERR/01 000C8	S7INST/01 000D5	S7MSG/01 000C6
S7TST/01 000D4	S7TXT/01 000D6	S9AIBCC/01 000E1	UFLAGS/00000000
UTSPR8C/00000001	WD/01 00043	WLZAP/01 0007A	XPSDS/01 00099
X1/00000001 S	X10/00000005 S	X100/00000009 S	X1000/0000000D S
X2/00000002 S	X20/00000006 S	X200/0000000A S	X2000/0000000E S
X4/00000003 S	X40/00000007 S	X400/0000000B S	X4000/0000000F S
X8/00000004 S	X80/00000008 S	X800/0000000C S	X8000/00000010 S
Y0001/00000011 S	Y0002/00000012 S	Y0004/00000013 S	Y0008/00000014 S
Y001/00000015 S	Y002/00000016 S	Y004/00000017 S	Y008/00000018 S
Y01/00000019 S	Y02/0000001A S	Y04/0000001B S	Y08/0000001C S
Y1/0000001D S	Y2/0000001E S	Y4/0000001F S	Y8/00000020 S

*

EXTERNAL DEFINITIONS

INITIAL/01 00000	INITIAL:/01 00000	LMA/01 00049	T8PR8AT/01 00099
UM8V#/01 0006B			

*

PRIMARY REFERENCES

B88THLT	B88TSBAND	BT31T80	C8CPU	CAL1PSD	CAL2PSD	CAL3PSD
CAL4PSD	CLK3PSD	CLK4PSD	C8RED	C8ED8PATH	DCT1	DEC8PSD

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FIXAVPSD	FLTFPSD
JIT	LEE20
MING	MONINIT
PB:HVA	POWR0FF
PSD:T4C	PSD:T4D
STKLPSD	SYSVERS
UNIMPPSD	IBIG

INITIAL - MONITOR INITIALIZATION ROUTINE

HGP	I0HIGH	I0LOW	I0PSD
LKING	LSWAP	MASKS	MB:GAM4
MONORG	N0PPSD	NSWAP	0B:00PTX
P0WR0N	PPSTART	PSA#END	PSD\$I56
PSD:T46	S:CL0CK4	S:GJ0BTBL	SL:00RE
T:GJ0BSTRT	T:SE	T:SGRNU	TINC
IB560	IB9		

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IPT47
MB:GPT
0CPSD
PSD\$I57
SP00L
TSTACK

- * NO SECONDARY REFERENCES
- * NO UNDEFINED SYMBOLS
- * ERROR SEVERITY LEVEL: 0
- * NO ERROR LINES