


```
BBBBBBBBB      AAAAAA      SSSSSSSS      CCCCCCCC      HH      HH      AAAAAA      IIIIII      NN      NN
BBBBBBBBB      AAAAAA      SSSSSSSS      CCCCCCCC      HH      HH      AAAAAA      IIIIII      NN      NN
BB      BB      AA      AA      SS      CC      HH      HH      AA      AA      II      NN      NN
BB      BB      AA      AA      SS      CC      HH      HH      AA      AA      II      NN      NN
BB      BB      AA      AA      SS      CC      HH      HH      AA      AA      II      NNNN      NN
BBBBBBBBB      AA      AA      SSSSSS      CC      HH      HH      AA      AA      II      NNNN      NN
BBBBBBBBB      AA      AA      SSSSSS      CC      HHHHHHHHHH      AA      AA      II      NN      NN
BB      BB      AAAAAAAAAA      SS      CC      HH      HH      AAAAAAAAAA      II      NN      NN
BB      BB      AAAAAAAAAA      SS      CC      HH      HH      AAAAAAAAAA      II      NN      NN
BB      BB      AA      AA      SS      CC      HH      HH      AA      AA      II      NN      NN
BB      BB      AA      AA      SS      CC      HH      HH      AA      AA      II      NN      NN
BBBBBBBBB      AA      AA      SSSSSSSS      CCCCCCCC      HH      HH      AA      AA      IIIIII      NN      NN
BBBBBBBBB      AA      AA      SSSSSSSS      CCCCCCCC      HH      HH      AA      AA      IIIIII      NN      NN
                                     ....
                                     ....
                                     ....
                                     ....

LL      IIIIII      SSSSSSSS
LL      IIIIII      SSSSSSSS
LL      II      SS
LL      II      SS
LL      II      SS
LL      II      SS
LL      II      SSSSSS
LL      II      SSSSSS
LL      II      SS
LL      II      SS
LL      II      SS
LL      II      SS
LLLLLLLLLLL      IIIIII      SSSSSSSS
LLLLLLLLLLL      IIIIII      SSSSSSSS
```



```
1 0001 0 MODULE BAS$CHAIN (
2 0002 0 IDENT = '1-005'
3 0003 0 ) =
4 0004 1 BEGIN
5 0005 1
6 0006 1 *****
7 0007 1 *
8 0008 1 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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25 0025 1 *
26 0026 1 *
27 0027 1 *****
28 0028 1
29 0029 1
30 0030 1 ++
31 0031 1 FACILITY: VAX-11 BASIC Miscellaneous
32 0032 1
33 0033 1 ABSTRACT:
34 0034 1
35 0035 1 This module causes the current program to end and another
36 0036 1 program to be run in its place.
37 0037 1
38 0038 1 ENVIRONMENT: VAX-11 User Mode
39 0039 1
40 0040 1 AUTHOR: John Sauter, CREATION DATE: 13-NOV-1979
41 0041 1
42 0042 1 MODIFIED BY:
43 0043 1
44 0044 1 1-001 - Original. JBS 15-NOV-1979
45 0045 1 1-002 - Make the entry point global. JBS 28-NOV-1979
46 0046 1 1-003 - CHAIN to a non-existent file should generate an error,
47 0047 1 not just return to DCL. PLL 17-Nov-1981
48 0048 1 1-004 - If LIB$RUN_PROGRAM returns an error, signal this error
49 0049 1 to the user instead of the Basic message 'not implemented.'
50 0050 1 PLL 16-Jun-1982
51 0051 1 1-005 - signal ILLFILNAM when $PARSE fails, not FATSYSIO. MDL 27-Apr-1983
52 0052 1 --
53 0053 1
54 0054 1 !<BLF/PAGE>
```



```
56 0055 1 |
57 0056 1 | SWITCHES:
58 0057 1 |
59 0058 1 |
60 0059 1 SWITCHES ADDRESSING_MODE (EXTERNAL = GENERAL, NONEXTERNAL = WORD_RELATIVE);
61 0060 1 |
62 0061 1 |
63 0062 1 | LINKAGES:
64 0063 1 |
65 0064 1 |     NONE
66 0065 1 |
67 0066 1 | TABLE OF CONTENTS:
68 0067 1 |
69 0068 1 |
70 0069 1 FORWARD ROUTINE
71 0070 1     BASSCHAIN : NOVALUE;
72 0071 1 |
73 0072 1 |
74 0073 1 | INCLUDE FILES:
75 0074 1 |
76 0075 1 |
77 0076 1 REQUIRE 'RTLIN:RTLPSECT';
78 0171 1 LIBRARY 'RTLSTARLE';
79 0172 1 |
80 0173 1 | MACROS:
81 0174 1 |
82 0175 1 |     NONE
83 0176 1 |
84 0177 1 | EQUATED SYMBOLS:
85 0178 1 |
86 0179 1 |     NONE
87 0180 1 |
88 0181 1 | PSECTS:
89 0182 1 |
90 0183 1 DECLARE_PSECTS (BAS);
91 0184 1 |
92 0185 1 | OWN STORAGE:
93 0186 1 |
94 0187 1 |     NONE
95 0188 1 |
96 0189 1 | EXTERNAL REFERENCES:
97 0190 1 |
98 0191 1 |
99 0192 1 EXTERNAL ROUTINE
100 0193 1     BASS$SIGNAL : NOVALUE,
101 0194 1     BASS$STOP : NOVALUE,
102 0195 1     LIB$STOP : NOVALUE,
103 0196 1     LIB$RUN_PROGRAM;
104 0197 1 |
105 0198 1 |
106 0199 1 | +
107 0200 1 | The following are the error codes used in this module.
108 0201 1 | -
109 0202 1 EXTERNAL LITERAL
110 0203 1     BASSK_ILLFILNAM : UNSIGNED (8),
111 0204 1     BASSK_FATSYSIO : UNSIGNED (8),
112 0205 1     BASSK_CANFINFIL : UNSIGNED (8),
```

! End this program and start another

! Macros for defining PSECTS

! Declare psepts for BASS\$ facility

! Signal an error
! Signal a fatal BASIC error
! Signal a fatal error
! Run a program! Illegal File Name
! Fatal System I/O error
! Can't find file or account

BASSCHAIN
1-005

K 2
16-Sep-1984 00:05:06
14-Sep-1984 11:54:45

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[BASRTL.SRC]BASCHAIN.B32;1

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: 113
: 114

0206 1
0207 1

BASSK_NOTIMP : UNSIGNED (8);

! Not implemented


```
116 0208 1 GLOBAL ROUTINE BASSCHAIN (
117 0209 1     PGM_NAME,
118 0210 1     LINE_NO
119 0211 1 ) : NOVALUE =
120 0212 1
121 0213 1 !++
122 0214 1 FUNCTIONAL DESCRIPTION:
123 0215 1
124 0216 1     Stop running this program and start running another.
125 0217 1
126 0218 1 CALLING SEQUENCE:
127 0219 1
128 0220 1     CALL BASSCHAIN (PGM_NAME.rt.dx, LINE_NO.rl.r)
129 0221 1
130 0222 1 FORMAL PARAMETERS:
131 0223 1
132 0224 1     PGM_NAME.rt.dx The name of the program to be run in place of this one.
133 0225 1     LINE_NO.rl.r   The line number to start the program at
134 0226 1
135 0227 1 IMPLICIT INPUTS:
136 0228 1
137 0229 1     NONE
138 0230 1
139 0231 1 IMPLICIT OUTPUTS:
140 0232 1
141 0233 1     NONE
142 0234 1
143 0235 1 ROUTINE VALUE:
144 0236 1 COMPLETION CODES:
145 0237 1
146 0238 1     NONE
147 0239 1
148 0240 1 SIDE EFFECTS:
149 0241 1
150 0242 1     Either signals or never returns to its caller.
151 0243 1
152 0244 1 !--
153 0245 1
154 0246 2 BEGIN
155 0247 2
156 0248 2 LOCAL
157 0249 2     FAB_BLOCK : $FAB_DECL,
158 0250 2     FAB : REF $FAB_DECL,
159 0251 2     NAM_BLOCK : $NAM_DECL,
160 0252 2     EXP_NAME : BLOCK[NAM$C_MAXRSS, BYTE],
161 0253 2     STATUS;
162 0254 2
163 0255 2 BIND
164 0256 2     DEFAULT_NAME = UPLIT ('*.EXE');
165 0257 2
166 0258 2 MAP
167 0259 2     PGM_NAME : REF BLOCK [0, BYTE];
168 0260 2
169 0261 2 BUILTIN
170 0262 2     NULLPARAMETER;
171 0263 2
172 0264 2 !+
```



```
173 0265 2 ! The line number feature is not implemented, so give an error
174 0266 2 ! if it is specified.
175 0267 2 !-
176 0268 2
177 0269 2 IF ( NOT NULLPARAMETER (2)) THEN BASS$$STOP (BASS$K_NOTIMP);
178 0270 2
179 0271 2 !+
180 0272 2 ! If the user tries to CHAIN to a non-existent program, this should be
181 0273 2 ! returned as ERR=5, 'can't find file ...'. Since LIB$RUN_PROGRAM will
182 0274 2 ! return to DCL level if an error other than invalid argument occurs,
183 0275 2 ! try to determine if the file exists before LIB$RUN_PROGRAM is called.
184 0276 2 !-
185 0277 2
186 0278 2 FAB = FAB_BLOCK;
187 0279 2 $FAB_INIT (FAB = .FAB);
188 0280 2 FAB [FAB$L_FNA] = .PGM_NAME [DSC$A_POINTER];
189 0281 2 FAB [FAB$B_FNS] = .PGM_NAME [DSC$W_LENGTH];
190 0282 2 FAB [FAB$L_DNA] = DEFAULT_NAME;
191 0283 2 FAB [FAB$B_DNS] = 5;
192 0284 2
193 0285 2 $NAM_INIT (NAM = NAM_BLOCK);
194 0286 2 NAM_BLOCK [NAM$L_RSA] = NAM_BLOCK [NAM$L_ESA] = EXP NAME;
195 0287 2 NAM_BLOCK [NAM$B_RSS] = NAM_BLOCK [NAM$B_ESS] = NAM$C_MAXRSS;
196 0288 2
197 0289 2 FAB [FAB$L_NAM] = NAM_BLOCK;
198 0290 2
199 0291 2 !+
200 0292 2 ! Do not use $OPEN to look for the file because if the protection code
201 0293 2 ! is execute only, a privilege violation will occur.
202 0294 2 !-
203 0295 2
204 0296 2 STATUS = $PARSE (FAB = .FAB);
205 0297 2 IF (NOT .STATUS) THEN BASS$$STOP (BASS$K_ILLFILNAM);
206 0298 2
207 0299 2 STATUS = $SEARCH (FAB = .FAB);
208 0300 2 SELECTONE .STATUS OF
209 0301 2 SET
210 0302 2 [RMS$_NORMAL]:
211 0303 2 ! file exists
212 0304 2 [RMS$_FNF]:
213 0305 2 BASS$$SIGNAL (BASS$K_CANFINFIL); ! file not found
214 0306 2 [OTHERWISE]:
215 0307 2 BASS$$STOP (BASS$K_FATSYSIO_); ! random RMS error
216 0308 2 TES;
217 0309 2
218 0310 2
219 0311 2 STATUS = LIB$RUN_PROGRAM (.PGM_NAME);
220 0312 2 !+
221 0313 2 ! LIB$RUN_PROGRAM should never return. If it does, we have an
222 0314 2 ! error of some kind.
223 0315 2 !-
224 0316 2 LIB$STOP (.STATUS);
225 0317 2
226 0318 1 END; ! end of BASS$CHAIN
```

.TITLE BASS\$CHAIN

.IDENT \1-005\

.PSECT _BASSCODE, NOWRT, SHR, PIC, 2

00 00 00 45 58 45 2E 2A 00000 P.AAA: .ASCII *.EXE\<0><0><0>

DEFAULT_NAME= P.AAA

.EXTRN BASS\$SIGNAL, BASS\$STOP
.EXTRN LIB\$STOP, LIB\$RUN_PROGRAM
.EXTRN BASSK_ILLFILNAM
.EXTRN BASSK_FATSYSIO
.EXTRN BASSK_CANFINFIL
.EXTRN BASSK_NOTIMP, SYSS\$PARSE
.EXTRN SYSS\$SEARCH

				01FC 00000	.ENTRY	BASSCHAIN, Save R2,R3,R4,R5,R6,R7,R8	0208
	58	00000000G	00	9E 00002	MOVAB	BASS\$STOP, R8	
	5E	FE50	CE	9E 00009	MOVAB	-432(SP), SP	
	02		6C	91 0000E	CMPB	(AP), #2	0269
			0C	1F 00011	BLSSU	1\$	
		08	AC	D5 00013	TSTL	8(AP)	
			07	13 00016	BEQL	1\$	
	7E	00G	8F	9A 00018	MOVZBL	#BASSK_NOTIMP, -(SP)	
	68		01	FB 0001C	CALLS	#1, BASS\$STOP	
0050	8F		AD	9E 0001F	MOVAB	FAB_BLOCK, FAB	0278
		00	00	2C 00023	MOVCS	#0, (SP), #0, #80, (FAB)	0279
			66	0002A			
		5003	8F	80 0002B	MOVW	#20483, (FAB)	
	16		02	90 00030	MOVB	#2, 22(FAB)	
	1F		02	90 00034	MOVB	#2, 31(FAB)	
		04	AC	D0 00038	MOVL	PGM_NAME, R7	0280
	2C		A7	D0 0003C	MOVL	4(R7), 44(FAB)	
	34		67	90 00041	MOVB	(R7), 52(FAB)	0281
	30		AF	9E 00045	MOVAB	DEFAULT_NAME, 48(FAB)	0282
0060	8F		05	90 0004A	MOVB	#5, 53(FAB)	0283
		00	00	2C 0004E	MOVCS	#0, (SP), #0, #96, \$RMS_PTR	0285
			CD	00055			
	FF50	CD	8F	80 00058	MOVW	#24578, \$RMS_PTR	
		50	6E	9E 0005F	MOVAB	EXP_NAME, R0	0286
	FF5C	CD	50	D0 00062	MOVL	R0, NAM_BLOCK+12	
	FF54	CD	50	D0 00067	MOVL	R0, NAM_BLOCK+4	
	FF5A	CD	01	8E 0006C	MNEGB	#1, NAM_BLOCK+10	0287
	FF52	CD	01	8E 00071	MNEGB	#1, NAM_BLOCK+2	
	28	A6	CD	9E 00076	MOVAB	NAM_BLOCK, 40(FAB)	0289
			56	DD 0007C	PUSHL	FAB	0296
	00000000G	00	01	FB 0007E	CALLS	#1, SYSS\$PARSE	
		52	50	D0 00085	MOVL	R0, STATUS	
		07	52	E8 00088	BLBS	STATUS, 2\$	0297
		7E	8F	9A 0008B	MOVZBL	#BASSK_ILLFILNAM, -(SP)	
		68	01	FB 0008F	CALLS	#1, BASS\$STOP	
			56	DD 00092	PUSHL	FAB	0299
	00000000G	00	01	FB 00094	CALLS	#1, SYSS\$SEARCH	
		52	50	D0 0009B	MOVL	R0, STATUS	
	00010001	8F	52	D1 0009E	CMPL	STATUS, #65537	0302
			1D	13 000A5	BEQL	4\$	
	00018292	8F	52	D1 000A7	CMPL	STATUS, #98962	0304
			0D	12 000AE	BNEQ	3\$	

BASSCHAIN
1-005

B 3
16-Sep-1984 00:05:06
14-Sep-1984 11:54:45

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00000000G	7E 00	00G	8F 9A 000B0 01 FB 000B4 07 11 000BB	MOVZBL #BASSK CANFINFIL, -(SP) CALLS #1, BASS\$SIGNAL BRB 4\$	: 0305
	7E 68	00G	8F 9A 000BD 3\$: 01 FB 000C1 57 DD 000C4 4\$:	MOVZBL #BASSK FATSYSIO, -(SP) CALLS #1, BASS\$STOP PUSHL R7	: 0307
00000000G	00 52		01 FB 000C6 50 DD 000CD	CALLS #1, LIB\$RUN_PROGRAM MOVL R0, STATUS	: 0311
00000000G	00		52 DD 000D0 01 FB 000D2 04 000D9	PUSHL STATUS CALLS #1, LIB\$STOP RET	: 0316 : 0318

; Routine Size: 218 bytes, Routine Base: _BASS\$CODE + 0008

: 227 0319 1
: 228 0320 1 END
: 229 0321 1
: 230 0322 0 ELUDOM

! end of module BASS\$CHAIN

PSECT SUMMARY

Name	Bytes	Attributes
_BASS\$CODE	226	NOVEC, NOWRT, RD, EXE, SHR, LCL, REL, CON, PIC, ALIGN(2)

Library Statistics

File	----- Total	Symbols Loaded	----- Percent	Pages Mapped	Processing Time
_\$255\$DUA28:[SYSLIB]STARLET.L32;1	9776	61	0	581	00:01.0

COMMAND QUALIFIERS

; BLISS/CHECK=(FIELD, INITIAL, OPTIMIZE)/NOTRACE/LIS=LIS\$:BASCHAIN/OBJ=OBJ\$:BASCHAIN MSRC\$:BASCHAIN/UPDATE=(ENH\$:BASCHAIN)

; Size: 218 code + 8 data bytes
; Run Time: 00:07.3
; Elapsed Time: 00:17.2
; Lines/CPU Min: 2639
; Lexemes/CPU-Min: 27950
; Memory Used: 101 pages

BASSCHAIN
1-005

C 3
16-Sep-1984 00:05:06

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; Compilation Complete

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