


```

BBBBBBBB      AAAAAA      SSSSSSSS      EEEEEEEEEEE      NN      NN      DDDDDDDD      GGGGGGGG      SSSSSSSS      BBBBBBBB
BBBBBBBB      AAAAAA      SSSSSSSS      EEEEEEEEEEE      NN      NN      DDDDDDDD      GGGGGGGG      SSSSSSSS      BBBBBBBB
BB      BB      AA      AA      SS      EE      NN      DD      DD      GG      SS      BBB      BB
BB      BB      AA      AA      SS      EE      NN      DD      DD      GG      SS      BB      BB
BB      BB      AA      AA      SS      EE      NNNN      NN      DD      DD      GG      SS      BB      BB
BB      BB      AA      AA      SS      EE      NNNN      NN      DD      DD      GG      SS      BB      BB
BBBBBBBB      AA      AA      SSSSSS      EEEEEEEEEEE      NN      NN      DD      DD      GG      SSSSSS      BBBBBBBB
BBBBBBBB      AA      AA      SSSSSS      EEEEEEEEEEE      NN      NN      DD      DD      GG      SSSSSS      BBBBBBBB
BB      BB      AAAAAAAAAA      SS      EE      NN      NN      DD      DD      GG      GGGGGG      S      BB      BB
BB      BB      AAAAAAAAAA      SS      EE      NN      NNNN      DD      DD      GG      GGGGGG      SS      BB      BB
BB      BB      AA      AA      SS      EE      NN      NN      DD      DD      GG      GG      SS      BB      BB
BB      BB      AA      AA      SS      EE      NN      NN      DD      DD      GG      GG      SS      BB      BB
BBBBBBBB      AA      AA      SSSSSSSS      EEEEEEEEEEE      NN      NN      DDDDDDDD      GGGGGG      SSSSSSSS      BBBBBBBB
BBBBBBBB      AA      AA      SSSSSSSS      EEEEEEEEEEE      NN      NN      DDDDDDDD      GGGGGG      SSSSSSSS      BBBBBBBB

```

```

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
LLLLLLLLLL      IIIIII      SSSSSSSS
LLLLLLLLLL      IIIIII      SSSSSSSS

```

```

1 0001 0 MODULE BAS$END_GSB (
2 0002 0 IDENT = '1-002'
3 0003 0 ) =
4 0004 1 BEGIN
5 0005 1
6 0006 1 *****
7 0007 1 *
8 0008 1 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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25 0025 1 *
26 0026 1 *
27 0027 1 *****
28 0028 1
29 0029 1
30 0030 1
31 0031 1 **
32 0032 1 FACILITY: BASIC-PLUS-2 Frame Support
33 0033 1
34 0034 1 ABSTRACT:
35 0035 1
36 0036 1 These routines set up and tear down frames for BASIC-PLUS-2.
37 0037 1 Frames are used for main routines, external functions,
38 0038 1 external subroutines, internal functions (both DEFs and DEF*s)
39 0039 1 internal subroutines (GOSUBs) and condition handlers.
40 0040 1
41 0041 1 ENVIRONMENT: VAX-11 user mode
42 0042 1
43 0043 1 AUTHOR: John Sauter, CREATION DATE: 10-Oct-78
44 0044 1
45 0045 1 MODIFIED BY:
46 0046 1
47 0047 1 1-001 - Original.
48 0048 1 1-002 - Change BAS$ to BSF$ prefix for BASIC stack frame. JBS 08-FEB-1979
49 0049 1 --
50 0050 1
51 0051 1 !<BLF/PAGE>

```

```

53 0052 1 |
54 0053 1 | SWITCHES:
55 0054 1 |
56 0055 1 |
57 0056 1 | SWITCHES ADDRESSING_MODE (EXTERNAL = GENERAL, NONEXTERNAL = WORD_RELATIVE);
58 0057 1 |
59 0058 1 |
60 0059 1 | LINKAGES:
61 0060 1 |
62 0061 1 |
63 0062 1 | LINKAGE
64 0063 1 |     BASS$INIT LINK = JSB (REGISTER = 0, REGISTER = 1, REGISTER = 2) : !
65 0064 1 |     GLOBAL (BSF$A_MAJOR_STG = 11, BSF$A_MINOR_STG = 10, BSF$A_TEMP_STG = 9) !
66 0065 1 |     NOPRESERVE (8, 7, 6, 5, 4, 3, 2, 1, 0);
67 0066 1 |
68 0067 1 |
69 0068 1 | TABLE OF CONTENTS:
70 0069 1 |
71 0070 1 |
72 0071 1 | FORWARD ROUTINE
73 0072 1 |     BASS$END_GSB_RB : NOVALUE BASS$INIT_LINK; ! end GOSUB
74 0073 1 |
75 0074 1 |
76 0075 1 | INCLUDE FILES:
77 0076 1 |
78 0077 1 |
79 0078 1 | REQUIRE 'RTLIN:RTLPSECT'; ! macros for defing psects
80 0173 1 |
81 0174 1 | REQUIRE 'RTLIN:BASFRAME.REQ'; ! Define frame structure
82 0377 1 |
83 0378 1 |
84 0379 1 | MACROS:
85 0380 1 |
86 0381 1 |     NONE
87 0382 1 |
88 0383 1 | EQUATED SYMBOLS:
89 0384 1 |
90 0385 1 |     NONE
91 0386 1 |
92 0387 1 | PSECTS:
93 0388 1 |
94 0389 1 | DECLARE_PSECTS (BAS); ! Declare psects for BASS$ facility
95 0390 1 |
96 0391 1 | OWN STORAGE:
97 0392 1 |
98 0393 1 |     NONE
99 0394 1 |
100 0395 1 | EXTERNAL REFERENCES:
101 0396 1 |
102 0397 1 |
103 0398 1 | EXTERNAL ROUTINE
104 0399 1 |     BASS$$STOP : NOVALUE; ! signals error
105 0400 1 |
106 0401 1 | +
107 0402 1 | | The following are the error codes used in this module.
108 0403 1 | -
109 0404 1 |

```

BAS\$END_GSB
1-002

N 6
16-Sep-1984 00:22:52 VAX-11 Bliss-32 V4.0-742
14-Sep-1984 11:54:56 [BASRTL.SRC]BASENDGSB.B32;1

Page 3
(2)

```
: 110      0405 1 EXTERNAL LITERAL
: 111      0406 1      BAS$K_RETWITGOS : UNSIGNED (8);
: 112      0407 1
```

! RETURN without GOSUB

```

: 114      0408 1 GLOBAL ROUTINE BAS$END_GSB_R8                ! end of GOSUB frame
: 115      0409 1      : NOVALUE BAS$INIT_LINK =
: 116      0410 1
: 117      0411 1  !*
: 118      0412 1  FUNCTIONAL DESCRIPTION:
: 119      0413 1
: 120      0414 1      Check a BASIC-PLUS-2 RETURN statement to be sure that
: 121      0415 1      the return is being made from a GOSUB. This is needed
: 122      0416 1      since GOSUB has no lexical scope.
: 123      0417 1
: 124      0418 1  FORMAL PARAMETERS:
: 125      0419 1
: 126      0420 1      NONE
: 127      0421 1
: 128      0422 1  IMPLICIT INPUTS:
: 129      0423 1
: 130      0424 1      The frame, as set up by BAS$INIT_GSB_R8.
: 131      0425 1
: 132      0426 1  IMPLICIT OUTPUTS:
: 133      0427 1
: 134      0428 1      NONE
: 135      0429 1
: 136      0430 1  ROUTINE VALUE:
: 137      0431 1
: 138      0432 1      NONE
: 139      0433 1
: 140      0434 1  COMPLETION CODES:
: 141      0435 1
: 142      0436 1      NONE
: 143      0437 1
: 144      0438 1  SIDE EFFECTS:
: 145      0439 1
: 146      0440 1      May signal an error
: 147      0441 1
: 148      0442 1  --
: 149      0443 1
: 150      0444 2      BEGIN
: 151      0445 2
: 152      0446 2      BUILTIN
: 153      0447 2          FP;
: 154      0448 2          SP;
: 155      0449 2
: 156      0450 2      REGISTER
: 157      0451 2          FMP : REF BLOCK [0, BYTE] FIELD (BSF$FCD);
: 158      0452 2
: 159      0453 2  !*
: 160      0454 2  Give an error message if this RETURN does not correspond to
: 161      0455 2  * GOSUB.
: 162      0456 2  -
: 163      0457 2      FMP = .FP;
: 164      0458 2
: 165      0459 2      IF (.FMP [BSF$B_PROC_CODE] NEQ BSF$K_PROC_GOSB) THEN BAS$$STOP (BAS$K_RETWITGOS);
: 166      0460 2
: 167      0461 2  !*
: 168      0462 2  All is ok, return to the compiled code, which will issue a
: 169      0463 2  RET instruction to return to the caller of BAS$INIT_GOSUB.
: 170      0464 2  !*

```

BASSEND_GSB
1-002

C 7
16-Sep-1984 00:22:52 VAX-11 Bliss-32 V4.0-742
14-Sep-1984 11:54:56 [BASRTL.SRC]BASENDGSB.B32;1

: 171 0465 1 END:

!of BASSEND_GSB_R8

.TITLE BASSEND_GSB
.IDENT \1-002\
.EXTRN BAS\$\$STOP, BAS\$K_RETWITGOS
.PSECT _BAS\$CODE,NOWRT, SHR, PIC,2

50		5D	D0	00000	BASSEND_GSB_R8::		
06	E5	A0	91	00003	MOV	FP, FMP	: 0457
		0B	13	00007	CMPB	-27(FMP), #6	: 0459
7E	00G	8F	9A	00009	BEQL	1\$:
00000000G	00	01	FB	0000D	MOVZBL	#BAS\$K_RETWITGOS, -(SP)	:
		05	00014	1\$:	CALLS	#1, BAS\$\$STOP	:
					RSB		: 0465

: Routine Size: 21 bytes, Routine Base: _BAS\$CODE + 0000

: 172 0466 1
: 173 0467 1 END
: 174 0468 1
: 175 0469 0 ELUDOM

PSECT SUMMARY

Name	Bytes	Attributes
_BAS\$CODE	21	NOVEC,NOWRT, RD, EXE, SHR, LCL, REL, CON, PIC,ALIGN(2)

COMMAND QUALIFIERS

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

: Size: 21 code + 0 data bytes
: Run Time: 00:02.8
: Elapsed Time: 00:06.8
: Lines/CPU Min: 10158
: Lexemes/CPU-Min: 29068
: Memory Used: 29 pages
: Compilation Complete

0022 AH-BT13A-SE
VAX/VMS V4.0

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