```
BBBBBBBBBBBB        AAAAAAAAA        SSSSSSSSSSS  RRRRRRRRRRR     TTTTTTTTTTTTTTT  LLL
BBBBBBBBBBBB        AAAAAAAAA        SSSSSSSSSSS  RRRRRRRRRRR     TTTTTTTTTTTTTTT  LLL
BBBBBBBBBBBB        AAAAAAAAA        SSSSSSSSSSS  RRRRRRRRRRR     TTTTTTTTTTTTTTT  LLL
BBB         BBB   AAA         AAA   SSS          RRR         RRR         TTT        LLL
BBB         BBB   AAA         AAA   SSS          RRR         RRR         TTT        LLL
BBB         BBB   AAA         AAA   SSS          RRR         RRR         TTT        LLL
BBB         BBB   AAA         AAA   SSS          RRR         RRR         TTT        LLL
BBB         BBB   AAA         AAA   SSS          RRR         RRR         TTT        LLL
BBB         BBB   AAA         AAA   SSS          RRR         RRR         TTT        LLL
BBBBBBBBBBBB      AAA         AAA     SSSSSSSSS  RRRRRRRRRRR             TTT        LLL
BBBBBBBBBBBB      AAA         AAA     SSSSSSSSS  RRRRRRRRRRR             TTT        LLL
BBBBBBBBBBBB      AAA         AAA     SSSSSSSSS  RRRRRRRRRRR             TTT        LLL
BBB         BBB   AAAAAAAAAAAAAAA           SSS  RRR   RRR               TTT        LLL
BBB         BBB   AAAAAAAAAAAAAAA           SSS  RRR   RRR               TTT        LLL
BBB         BBB   AAAAAAAAAAAAAAA           SSS  RRR   RRR               TTT        LLL
BBB         BBB   AAA         AAA           SSS  RRR      RRR            TTT        LLL
BBB         BBB   AAA         AAA           SSS  RRR   RRR               TTT        LLL
BBB         BBB   AAA         AAA           SSS  RRR      RRR            TTT        LLL
BBBBBBBBBBBB      AAA         AAA   SSSSSSSSSSS     RRR         RRR      TTT        LLLLLLLLLLLLLLL
BBBBBBBBBBBB      AAA         AAA   SSSSSSSSSSS     RRR         RRR      TTT        LLLLLLLLLLLLLLL
BBBBBBBBBBBB      AAA         AAA   SSSSSSSSSSS     RRR         RRR      TTT        LLLLLLLLLLLLLLL
```

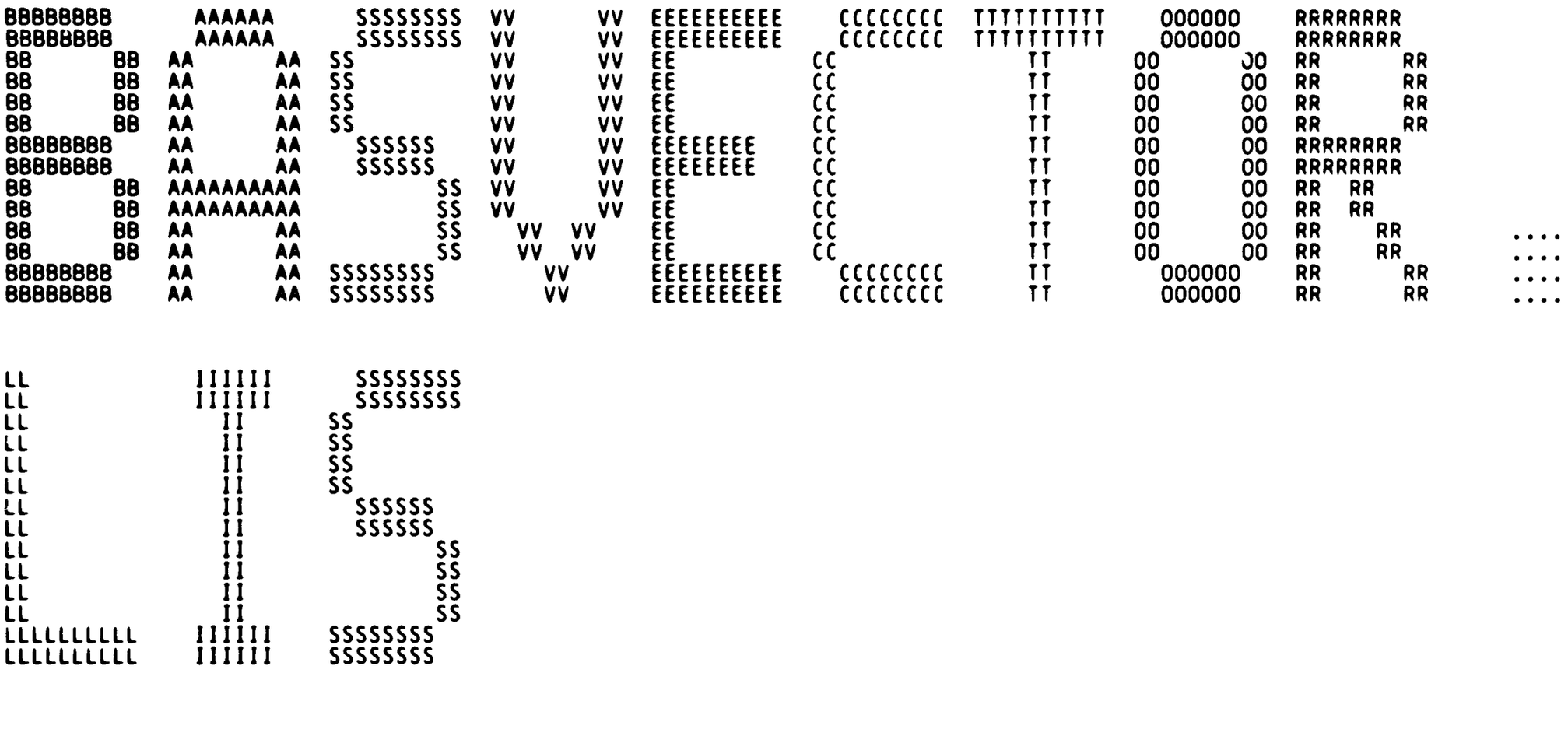
BBBBBBBB AAAAAA SSSSSSSS VV VV EEEEEEEEEE CCCCCCCC TTTTTTTTTT OOOOOO RRRRRRRR
BBBBBBBB AAAAAA SSSSSSSS VV VV EEEEEEEEEE CCCCCCCC TTTTTTTTTT OOOOOO RRRRRRRR
BB BB AA AA SS VV VV EE CC TT OO OO RR RR
BB BB AA AA SS VV VV EE CC TT OO OO RR RR
BB BB AA AA SS VV VV EE CC TT OO OO RR RR
BB BB AA AA SS VV VV EE CC TT OO OO RR RR
BBBBBBBB AA AA SSSSSS VV VV EEEEEEEE CC TT OO OO RRRRRRRR
BBBBBBBB AA AA SSSSSS VV VV EEEEEEEE CC TT OO OO RRRRRRRR
BB BB AAAAAAAAAA SS VV VV EE CC TT OO OO RR RR
BB BB AAAAAAAAAA SS VV VV EE CC TT OO OO RR RR
BB BB AA AA SS VV VV EE CC TT OO OO RR RR
BB BB AA AA SS VV VV EE CC TT OO OO RR RR
BBBBBBBB AA AA SSSSSSSS VV EEEEEEEEEE CCCCCCCC TT OOOOOO RR RR
BBBBBBBB AA AA SSSSSSSS VV EEEEEEEEEE CCCCCCCC TT OOOOOO RR RR
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

Table of contents

```
0000     1         .TITLE  BAS$VECTOR - Entry vectors for BASRTL.EXE
0000     2         .IDENT  /1-005/                 ; File: BASVECTOR.MAR Edit: MDL1005
0000     3
0000     4 ;
0000     5 ;*****************************************************************************
0000     6 ;*                                                                           *
0000     7 ;*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                  *
0000     8 ;*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.                   *
0000     9 ;*  ALL RIGHTS RESERVED.                                                     *
0000    10 ;*                                                                           *
0000    11 ;*  THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED    *
0000    12 ;*  ONLY IN  ACCORDANCE WITH  THE  TERMS  OF  SUCH  LICENSE  AND WITH THE   *
0000    13 ;*  INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR  ANY  OTHER    *
0000    14 ;*  COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY    *
0000    15 ;*  OTHER PERSON.  NO TITLE TO AND OWNERSHIP OF  THE  SOFTWARE IS  HEREBY    *
0000    16 ;*  TRANSFERRED.                                                             *
0000    17 ;*                                                                           *
0000    18 ;*  THE INFORMATION IN THIS SOFTWARE IS  SUBJECT TO CHANGE WITHOUT NOTICE    *
0000    19 ;*  AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT   *
0000    20 ;*  CORPORATION.                                                             *
0000    21 ;*                                                                           *
0000    22 ;*  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE  OR  RELIABILITY OF ITS    *
0000    23 ;*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                  *
0000    24 ;*                                                                           *
0000    25 ;*                                                                           *
0000    26 ;*****************************************************************************
0000    27 ;
0000    28
0000    29 ;++
0000    30 ; FACILITY: Run-Time Library - BASIC Language Support
0000    31 ;
0000    32 ; ABSTRACT:
0000    33 ;
0000    34 ;       This module contains the entry vector definitions for the
0000    35 ;       VAX-11 Run-Time Library shareable image BASRTL.EXE
0000    36 ;
0000    37 ; ENVIRONMENT: User mode, AST Reentrant
0000    38 ;
0000    39 ; AUTHOR: Steven B. Lionel, CREATION DATE: 29-October-1982
0000    40 ;
0000    41 ; MODIFIED BY:
0000    42 ;
0000    43 ; 1-001 - Original. SBL 29-October-1982
0000    44 ; 1-002 - add new vectored entry points.  MDL 19-May-1983
0000    45 ; 1-003 - add entry points overlooked in edit 1-002.  MDL 25-May-1983
0000    46 ; 1-004 - add BAS$ANSI_PRINT.  MDL 18-Aug-1983
0000    47 ; 1-005 - BAS$MOVE_TO is an alias for BAS$MOVE_BEG, not _END.  MDL 14-Sep-1983
0000    48 ;--
```

```
0000            .SBTTL  DECLARATIONS
0000    ;
0000    ; LIBRARY MACRO CALLS:
0000    ;
0000    ;       NONE
0000    ;
0000    ; EXTERNAL DECLARATIONS:
0000    ;
0000            .DSABL  GBL             ; Force all external symbols to be declared
0000    ;
0000    ; MACROS:
0000    ;
0000
0000    ;+
0000    ; Macro to define an entry vector for a CALL entry point
0000    ;-
0000
0000            .MACRO  VCALL   NAME, ALTMSK
0000            .EXTRN          NAME
0000            .TRANSFER       NAME
0000            .IF B ALTMSK
0000            .MASK           NAME
0000            .IFF
0000            .MASK           ALTMSK
0000            .ENDC
0000            JMP             NAME+2
0000            .ENDM
0000
0000    ;+
0000    ; Macro to define an entry vector for a JSB entry point
0000    ;-
0000
0000            .MACRO  VJSB    NAME
0000            .EXTRN          NAME
0000            .TRANSFER       NAME
0000            JMP             NAME
0000            .BLKB           2
0000            .ENDM
0000
0000    ;+
0000    ; Macro to define an entry vector for a condition handler whose actual
0000    ; routine address has a different name from the vector entry.
0000    ;-
0000
0000            .MACRO  VHANDL  NAME, INTNAME
0000            .EXTRN          INTNAME
0000            .TRANSFER       NAME
0000    NAME::
0000            .MASK           INTNAME
0000            JMP             INTNAME+2
0000            .ENDM
0000
0000    ;+
0000    ; Macro to define an alias for the next vectored entry point
0000    ;-
0000
0000            .MACRO  ALIAS   NAME
```

```
                        107          .TRANSFER       NAME
                        108          .ENDM
                        109
                        110
                        111 ;
                        112 ; EQUATED SYMBOLS:
                        113 ;
                        114 ;        NONE
                        115 ;
                        116 ; OWN STORAGE:
                        117 ;
                        118 ;        NONE
                        119 ;
                        120 ; PSECT DECLARATIONS:
                        121 ;
                        122          .PSECT $BAS$VECTOR PIC, USR, CON, REL, LCL, SHR, -
                        123                            EXE, RD, NOWRT, LONG
                        124
```

```
                        .SBTTL  BASRTL Vector

                ;+
                ; Define vectored entry points for the BASIC Language Support procedures
                ; by module in alphabetical order.
                ;
                ; Any additions to this file should be reflected in
                ; COM$:BASRTLVEC.DAT.  All new entry points must be appended to the end
                ; of the list.  NEVER change existing entries unless you are sure that
                ; what you do won't break existing programs.
                ;-

                ; Module BAS$$CB

0000 00000000'          VJSB    BAS$$CB_GET
0008 00000000'          VJSB    BAS$$CB_POP
0010 00000000'          VJSB    BAS$$CB_PUSH
0018 00000000'          VCALL   BAS$$NEXT_LUN

                ; Module BAS$$EXIT_HANDL

0020 00000000'          VCALL   BAS$$CLOSE_ALL

                ; Module BAS$$FOR_INT

0028 00000000'          VCALL   BAS$$FORMAT_INT

                ; Module BAS$$OPEN_ZERO

0030 00000000'          VCALL   BAS$$OPEN_ZERO

                ; Module BAS$$REC_PROC

0038 00000000'          VCALL   BAS$$BLNK_LINE
0040 00000000'          VCALL   BAS$$RECOD_INIT
0048 00000000'          VJSB    BAS$$REC_WSL1
0050 00000000'          VCALL   BAS$RECODNT
0058 00000000'          VCALL   BAS$WAIT

                ; Module BAS$$SIGNAL_IO

0060 00000000'          VCALL   BAS$$SIGNAL_IO
0068 00000000'          VCALL   BAS$$STOP_IO
0070 00000000'          VCALL   BAS$$STOP_RMS

                ; Module BAS$$UDF_RL

0078 00000000'          VCALL   BAS$$UDF_RL1

                ; Module BAS$$UDF_WL

0080 00000000'          VCALL   BAS$$UDF_WL1

                ; Module BAS$BUFSIZ

0088 00000000'          VCALL   BAS$BUFSIZ
```

```
                     ; Module BAS$CANTYPAHEAD
                     
                             VCALL   BAS$CANTYPAHEAD
                     
                     ; Module BAS$CCPOS
                     
                             VCALL   BAS$CCPOS
                     
                     ; Module BAS$CHR
                     
                             VCALL   BAS$CHR
                     
                     ; Module BAS$CLOSE
                     
                             VCALL   BAS$CLOSE
                     
                     ; Module BAS$CMP_APPROX
                     
                             VCALL   BAS$CMPD_APP
                             VCALL   BAS$CMPF_APP
                             VCALL   BAS$CMPG_APP
                             VCALL   BAS$CMPH_APP
                     
                     ; Module BAS$CTRLC
                     
                             VCALL   BAS$$CTRLC_INIT
                             VCALL   BAS$CTRLC
                             VCALL   BAS$RCTRLC
                     
                     ; Module BAS$CVT_OUT
                     
                             VCALL   BAS$CVT_OUT_D_E
                             VCALL   BAS$CVT_OUT_D_F
                             VCALL   BAS$CVT_OUT_D_G
                             VCALL   BAS$CVT_OUT_F_E
                             VCALL   BAS$CVT_OUT_F_F
                             VCALL   BAS$CVT_OUT_G_E
                             VCALL   BAS$CVT_OUT_G_F
                             VCALL   BAS$CVT_OUT_G_G
                             VCALL   BAS$CVT_OUT_H_E
                             VCALL   BAS$CVT_OUT_H_F
                             VCALL   BAS$CVT_OUT_H_G
                             VCALL   BAS$CVT_OUT_P_E
                             VCALL   BAS$CVT_OUT_P_F
                             VCALL   BAS$CVT_OUT_P_G
                     
                     ; Module BAS$CVT_T_P
                     
                             VCALL   BAS$CVT_T_P
                     
                     ; Module BAS$DELETE
                     
                             VCALL   BAS$DELETE
                     
                     ; Module BAS$EDIT
                     
                             VCALL   BAS$EDIT
```

```
0170    240
0170    241 ; Module BAS$END
0170    242
0170    243         VJSB    BAS$END_R8
0178    244
0178    245 ; Module BAS$END_DEF
0178    246
0178    247         VJSB    BAS$END_DEF_R8
0180    248
0180    249 ; Module BAS$END_DFS
0180    250
0180    251         VJSB    BAS$END_DFS_R8
0188    252
0188    253 ; Module BAS$END_GSB
0188    254
0188    255         VJSB    BAS$END_GSB_R8
0190    256
0190    257 ; Module BAS$ERROR
0190    258
0190    259         VCALL   BAS$$ERR_INIT
0198    260         VCALL   BAS$$SIGNAL
01A0    261         VCALL   BAS$$STOP
01A8    262         VCALL   BAS$ERL
01B0    263         VCALL   BAS$ERN
01B8    264         VCALL   BAS$ERR
01C0    265         VCALL   BAS$ERROR
01C8    266         VCALL   BAS$ERT
01D0    267         VCALL   BAS$ON_ERR_BK
01D8    268         VCALL   BAS$ON_ERR_Z
01E0    269         VCALL   BAS$POP_ERR
01E8    270         VCALL   BAS$PUSH_ERR
01F0    271         VCALL   BAS$RESUME
01F8    272         VCALL   BAS$RESUME_Z
0200    273
0200    274 ; Module BAS$FIND
0200    275
0200    276         VCALL   BAS$FIND
0208    277         VCALL   BAS$FIND_KEY
0210    278         VCALL   BAS$FIND_RECORD
0218    279         VCALL   BAS$FIND_RFA
0220    280
0220    281 ; Module BAS$FREE
0220    282
0220    283         VCALL   BAS$FREE
0228    284
0228    285 ; Module BAS$GET
0228    286
0228    287         VCALL   BAS$GET
0230    288         VCALL   BAS$GET_KEY
0238    289         VCALL   BAS$GET_RECORD
0240    290         VCALL   BAS$GET_RFA
0248    291
0248    292 ; Module BAS$GETRFA
0248    293
0248    294         VCALL   BAS$GETRFA
0250    295
0250    296 ; Module BAS$HANDLER
```

```
                0250   297
                0250   298          VHANDL  BAS$HANDLER     BAS$$HANDLER
                0258   299
                0258   300 ; Module BAS$INIT
                0258   301
                0258   302          VJSB    BAS$INIT_R8
                0260   303
                0260   304 ; Module BAS$INIT_DEF
                0260   305
                0260   306          VJSB    BAS$INIT_DEF_R8
                0268   307
                0268   308 ; Module BAS$INIT_DFS
                0268   309
                0268   310          VJSB    BAS$INIT_DFS_R8
                0270   311
                0270   312 ; Module BAS$INIT_GOSUB
                0270   313
                0270   314          VCALL   BAS$INIT_GOSUB
                0278   315
                0278   316 ; Module BAS$INSTR
                0278   317
                0278   318          VCALL   BAS$INSTR
                0280   319
                0280   320 ; Module BAS$IO_BEG
                0280   321
                0280   322          VCALL   BAS$ANSI_INPUT
                0288   323          VCALL   BAS$INPUT
                0290   324          VCALL   BAS$INPUT_LINE
                0298   325          VCALL   BAS$LINPUT
                02A0   326          VCALL   BAS$MAT_INPUT
                02A8   327          VCALL   BAS$MAT_LINPUT
                02B0   328          VCALL   BAS$MAT_PRINT
                02B8   329          VCALL   BAS$MAT_READ
                02C0   330          VCALL   BAS$PRINT
                02C8   331          VCALL   BAS$PRINT_USING
                02D0   332          VCALL   BAS$READ
                02D8   333
                02D8   334 ; Module BAS$IO_END
                02D8   335
                02D8   336          VCALL   BAS$ANSI_IO_END
                02E0   337          VCALL   BAS$IO_END
                02E8   338
                02E8   339 ; Module BAS$NUM
                02E8   340
                02E8   341          VCALL   BAS$NUM_D
                02F0   342          VCALL   BAS$NUM_F
                02F8   343          VCALL   BAS$NUM_G
                0300   344          VCALL   BAS$NUM_H
                0308   345          VCALL   BAS$NUM_L
                0310   346          VCALL   BAS$NUM_P
                0318   347
                0318   348 ; Module BAS$NUM1
                0318   349
                0318   350          VCALL   BAS$NUM1_D
                0320   351          VCALL   BAS$NUM1_F
                0328   352          VCALL   BAS$NUM1_G
                0330   353          VCALL   BAS$NUM1_H
```

```
0338   354          VCALL   BAS$NUM1_L
0340   355          VCALL   BAS$NUM1_P
0348   356
0348   357 ; Module BAS$OPEN
0348   358
0348   359          VCALL   BAS$$STATU_INIT
0350   360          VCALL   BAS$OPEN
0358   361          VCALL   BAS$STATUS
0360   362
0360   363 ; Module BAS$PUT
0360   364
0360   365          VCALL   BAS$PUT
0368   366          VCALL   BAS$PUT_COUNT
0370   367          VCALL   BAS$PUT_RECORD
0378   368          VCALL   BAS$PUT_REC_CNT
0380   369
0380   370 ; Module BAS$RESTORE
0380   371
0380   372          VCALL   BAS$RESTORE
0388   373          VCALL   BAS$RESTORE_DAT
0390   374          VCALL   BAS$RESTORE_KEY
0398   375
0398   376 ; Module BAS$RSET
0398   377
0398   378          VCALL   BAS$RSET
03A0   379          VCALL   BAS$RSET_R
03A8   380
03A8   381 ; Module BAS$SCALE
03A8   382
03A8   383          VJSB    BAS$$SCALE_L_R1
03B0   384          VJSB    BAS$$SCALE_RT
03B8   385          VJSB    BAS$DSCALE_D_R1
03C0   386          VJSB    BAS$SCALE_D_R1
03C8   387
03C8   388 ; Module BAS$SCRATCH
03C8   389
03C8   390          VCALL   BAS$SCRATCH
03D0   391
03D0   392 ; Module BAS$STR
03D0   393
03D0   394          VCALL   BAS$STR_D
03D8   395          VCALL   BAS$STR_F
03E0   396          VCALL   BAS$STR_G
03E8   397          VCALL   BAS$STR_H
03F0   398          VCALL   BAS$STR_L
03F8   399          VCALL   BAS$STR_P
0400   400
0400   401 ; Module BAS$UNLOCK
0400   402
0400   403          VCALL   BAS$UNLOCK
0408   404
0408   405 ; Module BAS$UPDATE
0408   406
0408   407          VCALL   BAS$UPDATE
0410   408          VCALL   BAS$UPDATE_COUN
0418   409
0418   410 ; Module BAS$UPI_TERM_IO
```

```
0418    411
0418    412          VCALL   BAS$IN_B_R
0420    413          VCALL   BAS$IN_D_R
0428    414          VCALL   BAS$IN_F_R
0430    415          VCALL   BAS$IN_G_R
0438    416          VCALL   BAS$IN_H_R
0440    417          VCALL   BAS$IN_L_R
0448    418          VCALL   BAS$IN_P_DX
0450    419          VCALL   BAS$IN_T_DX
0458    420          VCALL   BAS$IN_W_R
0460    421          VCALL   BAS$OUT_D_V_B
0468    422          VCALL   BAS$OUT_D_V_C
0470    423          VCALL   BAS$OUT_D_V_S
0478    424          VCALL   BAS$OUT_F_V_B
0480    425          VCALL   BAS$OUT_F_V_C
0488    426          VCALL   BAS$OUT_F_V_S
0490    427          VCALL   BAS$OUT_G_V_B
0498    428          VCALL   BAS$OUT_G_V_C
04A0    429          VCALL   BAS$OUT_G_V_S
04A8    430          VCALL   BAS$OUT_H_V_B
04B0    431          VCALL   BAS$OUT_H_V_C
04B8    432          VCALL   BAS$OUT_H_V_S
04C0    433          VCALL   BAS$OUT_L_V_B
04C8    434          VCALL   BAS$OUT_L_V_C
04D0    435          VCALL   BAS$OUT_L_V_S
04D8    436          VCALL   BAS$OUT_P_DX_B
04E0    437          VCALL   BAS$OUT_P_DX_C
04E8    438          VCALL   BAS$OUT_P_DX_S
04F0    439          VCALL   BAS$OUT_T_DX_B
04F8    440          VCALL   BAS$OUT_T_DX_C
0500    441          VCALL   BAS$OUT_T_DX_S
0508    442
0508    443 ; Module BAS$VAL
0508    444
0508    445          VCALL   BAS$VAL_D
0510    446          VCALL   BAS$VAL_F
0518    447          VCALL   BAS$VAL_G
0520    448          VCALL   BAS$VAL_H
0528    449          VCALL   BAS$VAL_L
0530    450          VCALL   BAS$VAL_P
0538    451
0538    452 ;+
0538    453 ; modules added in edit 1-002 start here.
0538    454 ;-
0538    455
0538    456 ; Module BAS$CHAIN
0538    457
0538    458          VCALL   BAS$CHAIN
0540    459
0540    460 ; Module BAS$CHANGE
0540    461
0540    462          VCALL   BAS$CHANGE_NA_S
0548    463          VCALL   BAS$CHANGE_S_NA
0550    464
0550    465 ; Module BAS$CONCAT
0550    466
0550    467          VCALL   BAS$CONCAT
```

```
                     ;
0558   468
0558   469 ; Module BAS$CTRLO
0558   470
0558   471          VCALL   BAS$CTRLO
0560   472          VCALL   BAS$RCTRLO
0568   473
0568   474 ; Module BAS$CVTRP
0568   475
0568   476          VCALL   BAS$CVTDP
0570   477          VCALL   BAS$CVTFP
0578   478          VCALL   BAS$CVTGP
0580   479          VCALL   BAS$CVTHP
0588   480          VCALL   BAS$CVTPD
0590   481          VCALL   BAS$CVTPF
0598   482          VCALL   BAS$CVTPG
05A0   483          VCALL   BAS$CVTPH
05A8   484          VCALL   BAS$CVTRDP
05B0   485          VCALL   BAS$CVTRFP
05B8   486          VCALL   BAS$CVTRGP
05C0   487          VCALL   BAS$CVTRHP
05C8   488
05C8   489 ; Module BAS$DATE_TIME
05C8   490
05C8   491          VCALL   BAS$DATE_T
05D0   492          VCALL   BAS$TIME_F
05D8   493          VCALL   BAS$TIME_T
05E0   494
05E0   495 ; Module BAS$DET
05E0   496
05E0   497          VCALL   BAS$DET_D
05E8   498          VCALL   BAS$DET_F
05F0   499          VCALL   BAS$DET_G
05F8   500          VCALL   BAS$DET_H
0600   501
0600   502 ; Module BAS$ECHO
0600   503
0600   504          VCALL   BAS$ECHO
0608   505          VCALL   BAS$NOECHO
0610   506
0610   507 ; Module BAS$EXTEND_DIVP
0610   508
0610   509          VCALL   BAS$EXTEND_DIVP
0618   510
0618   511 ; Module BAS$EXTEND_MULP
0618   512
0618   513          VCALL   BAS$EXTEND_MULP
0620   514
0620   515 ; Module BAS$FETCH_ADDR
0620   516
0620   517          VCALL   BAS$FETCH_ADDR
0628   518
0628   519 ; Module BAS$FETCH_DESC
0628   520
0628   521          VCALL   BAS$FETCH_DESC
0630   522
0630   523 ; Module BAS$FORMAT
0630   524
```

```
0630    525          VCALL   BAS$FORMAT_D
0638    526          VCALL   BAS$FORMAT_F
0640    527          VCALL   BAS$FORMAT_G
0648    528          VCALL   BAS$FORMAT_H
0650    529          VCALL   BAS$FORMAT_P
0658    530          VCALL   BAS$FORMAT_T
0660    531
0660    532 ; Module BAS$FSP
0660    533
0660    534          VCALL   BAS$FSP
0668    535
0668    536 ; Module BAS$INIT_C_GSB
0668    537
0668    538          VCALL   BAS$INIT_C_GSB
0670    539
0670    540 ; Module BAS$INIT_IOL
0670    541
0670    542          VCALL   BAS$INIT_IOL
0678    543
0678    544 ; Module BAS$INIT_ONER
0678    545
0678    546          VCALL   BAS$INIT_ONERR
0680    547
0680    548 ; Module BAS$KILL
0680    549
0680    550          VCALL   BAS$KILL
0688    551
0688    552 ; Module BAS$LEFT
0688    553
0688    554          VCALL   BAS$LEFT
0690    555
0690    556 ; Module BAS$MAGTAPE
0690    557
0690    558          VCALL   BAS$MAGTAPE
0698    559
0698    560 ; Module BAS$MARGIN
0698    561
0698    562          VCALL   BAS$MARGIN
06A0    563          VCALL   BAS$NOMARGIN
06A8    564
06A8    565 ; Module BAS$MAT_IO
06A8    566
06A8    567          VCALL   BAS$IN_MAT
06B0    568          VCALL   BAS$NUM
06B8    569          VCALL   BAS$NUM2
06C0    570          VCALL   BAS$OUT_MAT_B
06C8    571          VCALL   BAS$OUT_MAT_C
06D0    572          VCALL   BAS$OUT_MAT_S
06D8    573
06D8    574 ; Module BAS$MID
06D8    575
06D8    576          VCALL   BAS$MID
06E0    577
06E0    578 ; Module BAS$MOVE
06E0    579
06E0    580          ALIAS   BAS$MOVE_FROM
06E0    581          ALIAS   BAS$MOVE_TO
```

```
06E0   582          VCALL   BAS$MOVE_BEG
06E8   583          VCALL   BAS$MOVE_END
06F0   584
06F0   585 ; Module BAS$MOVE_ARRAY
06F0   586
06F0   587          VCALL   BAS$MOVE_ARRAY
06F8   588
06F8   589 ; Module BAS$NAME_AS
06F8   590
06F8   591          VCALL   BAS$NAME_AS
0700   592
0700   593 ; Module BAS$POS
0700   594
0700   595          VCALL   BAS$POS
0708   596
0708   597 ; Module BAS$POWDD
0708   598
0708   599          VCALL   BAS$POWDD,OTS$POWDD
0710   600
0710   601 ; Module BAS$POWDJ
0710   602
0710   603          VCALL   BAS$POWDJ,OTS$POWDJ
0718   604
0718   605 ; Module BAS$POWDR
0718   606
0718   607          VCALL   BAS$POWDR,OTS$POWDR
0720   608
0720   609 ; Module BAS$POWGG
0720   610
0720   611          VCALL   BAS$POWGG,OTS$POWGG
0728   612
0728   613 ; Module BAS$POWGJ
0728   614
0728   615          VCALL   BAS$POWGJ,OTS$POWGJ
0730   616
0730   617 ; Module BAS$POWHH
0730   618
0730   619          VCALL   BAS$POWHH,OTS$POWHH_R3
0738   620
0738   621 ; Module BAS$POWHJ
0738   622
0738   623          VCALL   BAS$POWHJ,OTS$POWHJ_R3
0740   624
0740   625 ; Module BAS$POWII
0740   626
0740   627          VCALL   BAS$POWII,OTS$POWII
0748   628
0748   629 ; Module BAS$POWJJ
0748   630
0748   631          VCALL   BAS$POWJJ,OTS$POWJJ
0750   632
0750   633 ; Module BAS$POWRD
0750   634
0750   635          VCALL   BAS$POWRD,OTS$POWRD
0758   636
0758   637 ; Module BAS$POWRJ
0758   638
```

```
                        0758   639          VCALL   BAS$POWRJ,OTS$POWRJ
                        0760   640
                        0760   641 ; Module BAS$POWRR
                        0760   642
                        0760   643          VCALL   BAS$POWRR,OTS$POWRR
                        0768   644
                        0768   645 ; Module BAS$RAD50
                        0768   646
                        0768   647          ALIAS   BAS$RAD
                        0768   648          VCALL   BAS$RAD50
                        0770   649
                        0770   650 ; Module BAS$RANDOM
                        0770   651
                        0770   652          VCALL   BAS$RANDOMIZE
                        0778   653          VJSB    BAS$RND_F_R1
                        0780   654
                        0780   655 ; Module BAS$REMAP_ARRAY
                        0780   656
                        0780   657          VCALL   BAS$REMAP_ARRAY
                        0788   658
                        0788   659 ; Module BAS$RIGHT
                        0788   660
                        0788   661          VCALL   BAS$RIGHT
                        0790   662
                        0790   663 ; Module BAS$RSTS_FIELD
                        0790   664
                        0790   665          VCALL   BAS$FIELD_CLEAR
                        0798   666          VCALL   BAS$FIELD_CLOSE
                        07A0   667          VCALL   BAS$FIELD_COPY
                        07A8   668          VCALL   BAS$FIELD_COP_R
                        07B0   669          VCALL   BAS$FIELD_OPEN
                        07B8   670          VCALL   BAS$FIELD_PURGE
                        07C0   671          VCALL   BAS$FIELD_SET
                        07C8   672
                        07C8   673 ; Module BAS$RT_DIM
                        07C8   674
                        07C8   675          VCALL   BAS$RT_DIM
                        07D0   676
                        07D0   677 ; Module BAS$RUN_INIT
                        07D0   678
                        07D0   679          VCALL   BAS$RUN_INIT
                        07D8   680
                        07D8   681 ; Module BAS$SARITH
                        07D8   682
                        07D8   683          VCALL   BAS$COMP
                        07E0   684          VCALL   BAS$DIF
                        07E8   685          VCALL   BAS$PLACE
                        07F0   686          VCALL   BAS$PROD
                        07F8   687          VCALL   BAS$QUO
                        0800   688          VCALL   BAS$SUM
                        0808   689
                        0808   690 ; Module BAS$SEG
                        0808   691
                        0808   692          VCALL   BAS$SEG
                        0810   693
                        0810   694 ; Module BAS$SLEEP
                        0810   695
```

```
0810   696          VCALL   BAS$SLEEP
0818   697
0818   698 ; Module BAS$STOP
0818   699
0818   700          VCALL   BAS$STOP
0820   701
0820   702 ; Module BAS$STRING
0820   703
0820   704          VCALL   BAS$STRING
0828   705
0828   706 ; Module BAS$TAB
0828   707
0828   708          VCALL   BAS$ANSI_TAB
0830   709          VCALL   BAS$TAB
0838   710
0838   711 ; Module BAS$TRM
0838   712
0838   713          VCALL   BAS$TRM
0840   714
0840   715 ; Module BAS$VIRTUAL_ARR
0840   716
0840   717          VCALL   BAS$FETCH_BFA
0848   718          VJSB    BAS$FET_FA_B_R8
0850   719          VJSB    BAS$FET_FA_D_R8
0858   720          VJSB    BAS$FET_FA_F_R8
0860   721          VJSB    BAS$FET_FA_G_R8
0868   722          VJSB    BAS$FET_FA_H_R8
0870   723          VJSB    BAS$FET_FA_L_R8
0878   724          VJSB    BAS$FET_FA_W_R8
0880   725          VCALL   BAS$STORE_BFA
0888   726          VCALL   BAS$STORE_BFA_OFF
0890   727          VJSB    BAS$STO_FA_B_R8
0898   728          VJSB    BAS$STO_FA_D_R8
08A0   729          VJSB    BAS$STO_FA_F_R8
08A8   730          VJSB    BAS$STO_FA_G_R8
08B0   731          VJSB    BAS$STO_FA_H_R8
08B8   732          VJSB    BAS$STO_FA_L_R8
08C0   733          VCALL   BAS$STO_FA_RDX
08C8   734          VJSB    BAS$STO_FA_W_R8
08D0   735
08D0   736 ; Module BAS$XLATE
08D0   737
08D0   738          VCALL   BAS$XLATE
08D8   739
08D8   740 ; Module BAS$ERROR, additional
08D8   741
08D8   742          VCALL   BAS$$HANDLER
08E0   743
08E0   744 ;+
08E0   745 ; modules added in edit 1-002 end here.
08E0   746 ;-
08E0   747
08E0   748 ;+
08E0   749 ; 1-003 start
08E0   750 ;-
08E0   751
08E0   752 ; Module BAS$DET
```

```
                                I 10
08E0    753
08E0    754          VCALL   BAS$$STORE_DET
08E8    755          VCALL   BAS$$STORE_DET_G
08F0    756          VCALL   BAS$$STORE_DET_H
08F8    757
08F8    758 ; Module BAS$$UNWIND
08F8    759
08F8    760          VCALL   BAS$$UNWIND
0900    761
0900    762 ;+
0900    763 ; 1-003 end
0900    764 ;-
0900    765
0900    766 ;+
0900    767 ; 1-004 start
0900    768 ;-
0900    769
0900    770 ; Module BAS$IO_BEG
0900    771
0900    772          VCALL   BAS$ANSI_PRINT
0908    773
0908    774 ;+
0908    775 ; 1-004 end
0908    776 ;-
0908    777
0908    778 ;+
0908    779 ; End of initial BASRTL vector.  All subsequent additions must be made
0908    780 ; after this point.
0908    781 ;-
0908    782
0908    783          .END                                    ; End of module BAS$VECTOR
```

BAS$$BLNK_LINE	********	X	01	BAS$CVTRGP	********	X	01
BAS$$CB_GET	********	X	01	BAS$CVTRHP	********	X	01
BAS$$CB_POP	********	X	01	BAS$CVT_OUT_D_E	********	X	01
BAS$$CB_PUSH	********	X	01	BAS$CVT_OUT_D_F	********	X	01
BAS$$CLOSE_ALL	********	X	01	BAS$CVT_OUT_D_G	********	X	01
BAS$$CTRLC_INIT	********	X	01	BAS$CVT_OUT_F_E	********	X	01
BAS$$ERR_INIT	********	X	01	BAS$CVT_OUT_F_F	********	X	01
BAS$$FORMAT_INT	********	X	01	BAS$CVT_OUT_G_E	********	X	01
BAS$$HANDLER	********	X	01	BAS$CVT_OUT_G_F	********	X	01
BAS$$NEXT_LUN	********	X	01	BAS$CVT_OUT_G_G	********	X	01
BAS$$OPEN_ZERO	********	X	01	BAS$CVT_OUT_H_E	********	X	01
BAS$$RECOO_INIT	********	X	01	BAS$CVT_OUT_H_F	********	X	01
BAS$$REC_WSL1	********	X	01	BAS$CVT_OUT_H_G	********	X	01
BAS$$SCALE_L_R1	********	X	01	BAS$CVT_OUT_P_E	********	X	01
BAS$$SCALE_RT	********	X	01	BAS$CVT_OUT_P_F	********	X	01
BAS$$SIGNAL	********	X	01	BAS$CVT_OUT_P_G	********	X	01
BAS$$SIGNAL_IO	********	X	01	BAS$CVT_T_P	********	X	01
BAS$$STATU_INIT	********	X	01	BAS$DATE_T	********	X	01
BAS$$STOP	********	X	01	BAS$DELETE	********	X	01
BAS$$STOP_IO	********	X	01	BAS$DET_D	********	X	01
BAS$$STOP_RMS	********	X	01	BAS$DET_F	********	X	01
BAS$$STORE_DET	********	X	01	BAS$DET_G	********	X	01
BAS$$STORE_DET_G	********	X	01	BAS$DET_H	********	X	01
BAS$$STORE_DET_H	********	X	01	BAS$DIF	********	X	01
BAS$$UDF_RL1	********	X	01	BAS$DSCALE_D_R1	********	X	01
BAS$$UDF_WL1	********	X	01	BAS$ECHO	********	X	01
BAS$$UNWIND	********	X	01	BAS$EDIT	********	X	01
BAS$ANSI_INPUT	********	X	01	BAS$END_DEF_R8	********	X	01
BAS$ANSI_IO_END	********	X	01	BAS$END_DFS_R8	********	X	01
BAS$ANSI_PRINT	********	X	01	BAS$END_GSB_R8	********	X	01
BAS$ANSI_TAB	********	X	01	BAS$END_R8	********	X	01
BAS$BUFSIZ	********	X	01	BAS$ERL	********	X	01
BAS$CANTYPAHEAD	********	X	01	BAS$ERN	********	X	01
BAS$CCPOS	********	X	01	BAS$ERR	********	X	01
BAS$CHAIN	********	X	01	BAS$ERROR	********	X	01
BAS$CHANGE_NA_S	********	X	01	BAS$ERT	********	X	01
BAS$CHANGE_S_NA	********	X	01	BAS$EXTEND_DIVP	********	X	01
BAS$CHR	********	X	01	BAS$EXTEND_MULP	********	X	01
BAS$CLOSE	********	X	01	BAS$FETCH_ADDR	********	X	01
BAS$CMPD_APP	********	X	01	BAS$FETCH_BFA	********	X	01
BAS$CMPF_APP	********	X	01	BAS$FETCH_DESC	********	X	01
BAS$CMPG_APP	********	X	01	BAS$FET_FA_B_R8	********	X	01
BAS$CMPH_APP	********	X	01	BAS$FET_FA_D_R8	********	X	01
BAS$COMP	********	X	01	BAS$FET_FA_F_R8	********	X	01
BAS$CONCAT	********	X	01	BAS$FET_FA_G_R8	********	X	01
BAS$CTRLC	********	X	01	BAS$FET_FA_H_R8	********	X	01
BAS$CTRLO	********	X	01	BAS$FET_FA_L_R8	********	X	01
BAS$CVTDP	********	X	01	BAS$FET_FA_W_R8	********	X	01
BAS$CVTFP	********	X	01	BAS$FIELD_CLEAR	********	X	01
BAS$CVTGP	********	X	01	BAS$FIELD_CLOSE	********	X	01
BAS$CVTHP	********	X	01	BAS$FIELD_COPY	********	X	01
BAS$CVTPD	********	X	01	BAS$FIELD_COP_R	********	X	01
BAS$CVTPF	********	X	01	BAS$FIELD_OPEN	********	X	01
BAS$CVTPG	********	X	01	BAS$FIELD_PURGE	********	X	01
BAS$CVTPH	********	X	01	BAS$FIELD_SET	********	X	01
BAS$CVTRDP	********	X	01	BAS$FIND	********	X	01
BAS$CVTRFP	********	X	01	BAS$FIND_KEY	********	X	01

BAS$FIND_RECORD	********	X	01	BAS$NUM1_H	********	X	01
BAS$FIND_RFA	********	X	01	BAS$NUM1_L	********	X	01
BAS$FORMAT_D	********	X	01	BAS$NUM1_P	********	X	01
BAS$FORMAT_F	********	X	01	BAS$NUM2	********	X	01
BAS$FORMAT_G	********	X	01	BAS$NUM_D	********	X	01
BAS$FORMAT_H	********	X	01	BAS$NUM_F	********	X	01
BAS$FORMAT_P	********	X	01	BAS$NUM_G	********	X	01
BAS$FORMAT_T	********	X	01	BAS$NUM_H	********	X	01
BAS$FREE	********	X	01	BAS$NUM_L	********	X	01
BAS$FSP	********	X	01	BAS$NUM_P	********	X	01
BAS$GET	********	X	01	BAS$ON_ERR_BK	********	X	01
BAS$GETRFA	********	X	01	BAS$ON_ERR_Z	********	X	01
BAS$GET_KEY	********	X	01	BAS$OPEN	********	X	01
BAS$GET_RECORD	********	X	01	BAS$OUT_D_V_B	********	X	01
BAS$GET_RFA	********	X	01	BAS$OUT_D_V_C	********	X	01
BAS$HANDLER	00000250 RG		01	BAS$OUT_D_V_S	********	X	01
BAS$INIT_C_GSB	********	X	01	BAS$OUT_F_V_B	********	X	01
BAS$INIT_DEF_R8	********	X	01	BAS$OUT_F_V_C	********	X	01
BAS$INIT_DFS_R8	********	X	01	BAS$OUT_F_V_S	********	X	01
BAS$INIT_GOSUB	********	X	01	BAS$OUT_G_V_B	********	X	01
BAS$INIT_IOL	********	X	01	BAS$OUT_G_V_C	********	X	01
BAS$INIT_ONERR	********	X	01	BAS$OUT_G_V_S	********	X	01
BAS$INIT_R8	********	X	01	BAS$OUT_H_V_B	********	X	01
BAS$INPUT	********	X	01	BAS$OUT_H_V_C	********	X	01
BAS$INPUT_LINE	********	X	01	BAS$OUT_H_V_S	********	X	01
BAS$INSTR	********	X	01	BAS$OUT_L_V_B	********	X	01
BAS$IN_B_R	********	X	01	BAS$OUT_L_V_C	********	X	01
BAS$IN_D_R	********	X	01	BAS$OUT_L_V_S	********	X	01
BAS$IN_F_R	********	X	01	BAS$OUT_MAT_B	********	X	01
BAS$IN_G_R	********	X	01	BAS$OUT_MAT_C	********	X	01
BAS$IN_H_R	********	X	01	BAS$OUT_MAT_S	********	X	01
BAS$IN_L_R	********	X	01	BAS$OUT_P_DX_B	********	X	01
BAS$IN_MAT	********	X	01	BAS$OUT_P_DX_C	********	X	01
BAS$IN_P_DX	********	X	01	BAS$OUT_P_DX_S	********	X	01
BAS$IN_T_DX	********	X	01	BAS$OUT_T_DX_B	********	X	01
BAS$IN_W_R	********	X	01	BAS$OUT_T_DX_C	********	X	01
BAS$IO_END	********	X	01	BAS$OUT_T_DX_S	********	X	01
BAS$KILL	********	X	01	BAS$PLACE	********	X	01
BAS$LEFT	********	X	01	BAS$POP_ERR	********	X	01
BAS$LINPUT	********	X	01	BAS$POS	********	X	01
BAS$MAGTAPE	********	X	01	BAS$POWDD	********	X	01
BAS$MARGIN	********	X	01	BAS$POWDJ	********	X	01
BAS$MAT_INPUT	********	X	01	BAS$POWDR	********	X	01
BAS$MAT_LINPUT	********	X	01	BAS$POWGG	********	X	01
BAS$MAT_PRINT	********	X	01	BAS$POWGJ	********	X	01
BAS$MAT_READ	********	X	01	BAS$POWHH	********	X	01
BAS$MID	********	X	01	BAS$POWHJ	********	X	01
BAS$MOVE_ARRAY	********	X	01	BAS$POWII	********	X	01
BAS$MOVE_BEG	********	X	01	BAS$POWJJ	********	X	01
BAS$MOVE_END	********	X	01	BAS$POWRD	********	X	01
BAS$NAME_AS	********	X	01	BAS$POWRJ	********	X	01
BAS$NOECHO	********	X	01	BAS$POWRR	********	X	01
BAS$NOMARGIN	********	X	01	BAS$PRINT	********	X	01
BAS$NUM	********	X	01	BAS$PRINT_USING	********	X	01
BAS$NUM1_D	********	X	01	BAS$PROD	********	X	01
BAS$NUM1_F	********	X	01	BAS$PUSH_ERR	********	X	01
BAS$NUM1_G	********	X	01	BAS$PUT	********	X	01

```
BAS$PUT_COUNT                   ********    X   01
BAS$PUT_RECORD                  ********    X   01
BAS$PUT_REC_CNT                 ********    X   01
BAS$QUO                         ********    X   01
BAS$RAD50                       ********    X   01
BAS$RANDOMIZE                   ********    X   01
BAS$RCTRLC                      ********    X   01
BAS$RCTRLO                      ********    X   01
BAS$READ                        ********    X   01
BAS$RECOUNT                     ********    X   01
BAS$REMAP_ARRAY                 ********    X   01
BAS$RESTORE                     ********    X   01
BAS$RESTORE_DAT                 ********    X   01
BAS$RESTORE_KEY                 ********    X   01
BAS$RESUME                      ********    X   01
BAS$RESUME_Z                    ********    X   01
BAS$RIGHT                       ********    X   01
BAS$RND_F_R1                    ********    X   01
BAS$RSET                        ********    X   01
BAS$RSET_R                      ********    X   01
BAS$RT_DIM                      ********    X   01
BAS$RUN_INIT                    ********    X   01
BAS$SCALE_D_R1                  ********    X   01
BAS$SCRATCH                     ********    X   01
BAS$SEG                         ********    X   01
BAS$SLEEP                       ********    X   01
BAS$STATUS                      ********    X   01
BAS$STOP                        ********    X   01
BAS$STORE_BFA                   ********    X   01
BAS$STORE_BFA_OFF               ********    X   01
BAS$STO_FA_B_R8                 ********    X   01
BAS$STO_FA_D_R8                 ********    X   01
BAS$STO_FA_F_R8                 ********    X   01
BAS$STO_FA_G_R8                 ********    X   01
BAS$STO_FA_H_R8                 ********    X   01
BAS$STO_FA_L_R8                 ********    X   01
BAS$STO_FA_RDX                  ********    X   01
BAS$STO_FA_W_R8                 ********    X   01
BAS$STRING                      ********    X   01
BAS$STR_D                       ********    X   01
BAS$STR_F                       ********    X   01
BAS$STR_G                       ********    X   01
BAS$STR_H                       ********    X   01
BAS$STR_L                       ********    X   01
BAS$STR_P                       ********    X   01
BAS$SUM                         ********    X   01
BAS$TAB                         ********    X   01
BAS$TIME_F                      ********    X   01
BAS$TIME_T                      ********    X   01
BAS$TRM                         ********    X   01
BAS$UNLOCK                      ********    X   01
BAS$UPDATE                      ********    X   01
BAS$UPDATE_COUN                 ********    X   01
BAS$VAL_D                       ********    X   01
BAS$VAL_F                       ********    X   01
BAS$VAL_G                       ********    X   01
BAS$VAL_H                       ********    X   01
BAS$VAL_L                       ********    X   01
BAS$VAL_P                       ********    X   01
BAS$WAIT                        ********    X   01
BAS$XLATE                       ********    X   01
```

Psect synopsis

PSECT name	Allocation	PSECT No.	Attributes
. ABS .	00000000 (0.)	00 (0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
BASVECTOR	00000908 (2312.)	01 (1.)	PIC USR CON REL LCL SHR EXE RD NOWRT NOVEC LONG

Performance indicators

Phase	Page faults	CPU Time	Elapsed Time
Initialization	41	00:00:00.11	00:00:00.77
Command processing	116	00:00:00.57	00:00:04.37
Pass 1	132	00:00:06.09	00:00:07.15
Symbol table sort	0	00:00:00.38	00:00:00.40
Pass 2	146	00:00:02.28	00:00:02.82
Symbol table output	33	00:00:00.20	00:00:00.23
Psect synopsis output	2	00:00:00.02	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	470	00:00:09.67	00:00:15.76

The working set limit was 1200 pages.
33827 bytes (67 pages) of virtual memory were used to buffer the intermediate code.
There were 20 pages of symbol table space allocated to hold 289 non-local and 0 local symbols.
783 source lines were read in Pass 1, producing 50 object records in Pass 2.
4 pages of virtual memory were used to define 4 macros.

Macro library statistics

Macro library name	Macros defined
_255DUA28:[SYSLIB]STARLET.MLB;2	0

0 GETS were required to define 0 macros.

There were no errors, warnings or information messages.

```
MACRO/ENABLE=SUPPRESSION/LIS=LIS$:BASVECTOR/OBJ=OBJ$:BASVECTOR MSRC$:BASVECTOR/UPDATE=(ENH$:BASVECTOR)
```

BASUDFWL
LIS

BASUNLOCK
LIS

BASVECTOR
LIS

BASVIRTUA
LIS

BASVAL
LIS

BASVIRTIO
LIS

BASUNWIND
LIS

BASUPDATE
LIS

BASVECTR2
LIS