```
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  RRRRRRRR      222222
BBBBBBBB      AAAAAA      SSSSSSSS  VV      VV  EEEEEEEEEE    CCCCCCCC  TTTTTTTTTT  RRRRRRRR      222222
BB      BB   AA      AA  SS        VV      VV  EE          CC              TT      RR      RR  22      22
BB      BB   AA      AA  SS        VV      VV  EE          CC              TT      RR      RR  22      22
BB      BB   AA      AA  SS        VV      VV  EE          CC              TT      RR      RR          22
BB      BB   AA      AA  SS        VV      VV  EE          CC              TT      RR      RR          22
BBBBBBBB     AA      AA    SSSSSS    VV      VV  EEEEEEEE    CC              TT      RRRRRRRR          22
BBBBBBBB     AA      AA    SSSSSS    VV      VV  EEEEEEEE    CC              TT      RRRRRRRR          22
BB      BB   AAAAAAAAAA          SS  VV      VV  EE          CC              TT      RR  RR        22
BB      BB   AAAAAAAAAA          SS  VV      VV  EE          CC              TT      RR  RR        22
BB      BB   AA      AA          SS    VV  VV    EE          CC              TT      RR    RR    22          ....
BB      BB   AA      AA          SS    VV  VV    EE          CC              TT      RR    RR    22          ....
BBBBBBBB     AA      AA  SSSSSSSS        VV      EEEEEEEEEE    CCCCCCCC      TT      RR      RR  2222222222  ....
BBBBBBBB     AA      AA  SSSSSSSS        VV      EEEEEEEEEE    CCCCCCCC      TT      RR      RR  2222222222  ....

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
```

```
0000     1          .TITLE  BAS$VECTR2 - Entry vectors for BASRTL2.EXE
0000     2          .IDENT  /1-002/                 ; File: BASVECTR2.MAR Edit: MDL1002
0000     3
0000     4 ;
0000     5 ;*****************************************************************************
0000     6 ;*                                                                           *
0000     7 ;*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                  *
0000     8 ;*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.                   *
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0000    15 ;*  OTHER PERSON.  NO TITLE TO AND OWNERSHIP OF  THE  SOFTWARE IS  HEREBY    *
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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 BASRTL2.EXE
0000    36 ;
0000    37 ; ENVIRONMENT: User mode, AST Reentrant
0000    38 ;
0000    39 ; AUTHOR: Matthew D. LaPine, CREATION DATE: 19-May-1983
0000    40 ;
0000    41 ; MODIFIED BY:
0000    42 ;
0000    43 ; 1-001 - adapted from BASVECTOR.  MDL 19-May-1983
0000    44 ; 1-002 - rename to BASVECTR2, image is now BASRTL2.  MDL 9-Aug-1983
0000    45 ;--
```

```
0000     47          .SBTTL  DECLARATIONS
0000     48 ;
0000     49 ; LIBRARY MACRO CALLS:
0000     50 ;
0000     51 ;        NONE
0000     52 ;
0000     53 ; EXTERNAL DECLARATIONS:
0000     54 ;
0000     55          .DSABL  GBL             ; Force all external symbols to be declared
0000     56 ;
0000     57 ; MACROS:
0000     58 ;
0000     59
0000     60 ;+
0000     61 ; Macro to define an entry vector for a CALL entry point
0000     62 ;-
0000     63
0000     64          .MACRO  VCALL   NAME, ALTMSK
0000     65          .EXTRN          NAME
0000     66          .TRANSFER       NAME
0000     67          .IF B ALTMSK
0000     68          .MASK           NAME
0000     69          .IFF
0000     70          .MASK           ALTMSK
0000     71          .ENDC
0000     72          JMP             NAME+2
0000     73          .ENDM
0000     74
0000     75 ;+
0000     76 ; Macro to define an entry vector for a JSB entry point
0000     77 ;-
0000     78
0000     79          .MACRO  VJSB    NAME
0000     80          .EXTRN          NAME
0000     81          .TRANSFER       NAME
0000     82          JMP             NAME
0000     83          .BLKB           2
0000     84          .ENDM
0000     85
0000     86 ;+
0000     87 ; Macro to define an entry vector for a condition handler whose actual
0000     88 ; routine address has a different name from the vector entry.
0000     89 ;-
0000     90
0000     91          .MACRO  VHANDL  NAME, INTNAME
0000     92          .EXTRN          INTNAME
0000     93          .TRANSFER       NAME
0000     94 NAME::
0000     95          .MASK           INTNAME
0000     96          JMP             INTNAME+2
0000     97          .ENDM
0000     98
0000     99 ;+
0000    100 ; Macro to define an alias for the next vectored entry point
0000    101 ;-
0000    102
0000    103          .MACRO  ALIAS   NAME
```

```
                        .TRANSFER       NAME
                        .ENDM

;
; EQUATED SYMBOLS:
;
;       NONE
;
; OWN STORAGE:
;
;       NONE
;
; PSECT DECLARATIONS:
;
00000000                .PSECT $BAS$VECTR2      PIC, USR, CON, REL, LCL, SHR, -
                                                EXE, RD, NOWRT, LONG
```

```
                        .SBTTL  BASRTL2 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$:BASRTLVEC2.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$MAT_ADD

0000                    VCALL   BAS$MAT_ADD

                ; Module BAS$MAT_ASSIGN

0008                    VCALL   BAS$MAT_ASSIGN

                ; Module BAS$MAT_IDN

0010                    VCALL   BAS$MAT_IDN

                ; Module BAS$MAT_INIT

0018                    VCALL   BAS$MAT_INIT

                ; Module BAS$MAT_INV

0020                    VCALL   BAS$MAT_INV

                ; Module BAS$MAT_MUL

0028                    VCALL   BAS$MAT_MUL

                ; Module BAS$MAT_NULL

0030                    VCALL   BAS$MAT_NULL

                ; Module BAS$MAT_REDIM

0038                    VCALL   BAS$MAT_REDIM

                ; Module BAS$MAT_SCA_MUL

0040                    VCALL   BAS$MAT_SCA_MUL

                ; Module BAS$MAT_SUB

0048                    VCALL   BAS$MAT_SUB

                ; Module BAS$MAT_TRN

0050                    VCALL   BAS$MAT_TRN

                ; Module BAS$NOT_IMP
```

```
00A8   180
0058   181          ALIAS   BAS$FSS
0058   182          ALIAS   BAS$PEEK
0058   183          ALIAS   PPA$SET_DEF
0058   184          VCALL   BAS$NOT_IMP
0060   185
0060   186 ; Module BAS$ONECHR
0060   187
0060   188          VCALL   BAS$ONECHR
0068   189
0068   190 ; Module BAS$RSTS_CVT
0068   191
0068   192          VCALL   BAS$CVT_D_S
0070   193          VCALL   BAS$CVT_F_S
0078   194          VCALL   BAS$CVT_S_D
0080   195          VCALL   BAS$CVT_S_F
0088   196          VCALL   BAS$CVT_S_W
0090   197          VCALL   BAS$CVT_W_S
0098   198
0098   199 ; Module BAS$SYS
0098   200
0098   201          VCALL   BAS$SYS
00A0   202
00A0   203 ;+
00A0   204 ; End of initial BASRTL2 vector.  All subsequent additions must be made
00A0   205 ; after this point.
00A0   206 ;-
00A0   207
00A0   208          .END                                    ; End of module BAS$VECTR2
```

```
BAS$CVT_D_S         ********  X   01
BAS$CVT_F_S         ********  X   01
BAS$CVT_S_D         ********  X   01
BAS$CVT_S_F         ********  X   01
BAS$CVT_S_W         ********  X   01
BAS$CVT_W_S         ********  X   01
BAS$MAT_ADD         ********  X   01
BAS$MAT_ASSIGN      ********  X   01
BAS$MAT_IDN         ********  X   01
BAS$MAT_INIT        ********  X   01
BAS$MAT_INV         ********  X   01
BAS$MAT_MUL         ********  X   01
BAS$MAT_NULL        ********  X   01
BAS$MAT_REDIM       ********  X   01
BAS$MAT_SCA_MUL     ********  X   01
BAS$MAT_SUB         ********  X   01
BAS$MAT_TRN         ********  X   01
BAS$NOT_IMP         ********  X   01
BAS$ONECHR          ********  X   01
BAS$SYS             ********  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
$BAS$VECTR2                     000000A0  (  160.)  01 (  1.)    PIC   USR   CON   REL   LCL   SHR   EXE   RD  NOWRT NOVEC LONG
```

Performance indicators

Phase	Page faults	CPU Time	Elapsed Time
Initialization	34	00:00:00.11	00:00:00.49
Command processing	134	00:00:00.46	00:00:01.37
Pass 1	87	00:00:00.79	00:00:01.19
Symbol table sort	0	00:00:00.00	00:00:00.01
Pass 2	49	00:00:00.44	00:00:00.70
Symbol table output	4	00:00:00.03	00:00:00.03
Psect synopsis output	1	00:00:00.02	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	311	00:00:01.87	00:00:03.82

The working set limit was 900 pages.
3656 bytes (8 pages) of virtual memory were used to buffer the intermediate code.
There were 10 pages of symbol table space allocated to hold 20 non-local and 0 local symbols.
208 source lines were read in Pass 1, producing 13 object records in Pass 2.
4 pages of virtual memory were used to define 4 macros.

```
                                  +---------------------------+
                                  ! Macro library statistics !
                                  +---------------------------+

Macro library name                 Macros defined
------------------                 --------------
_$255$DUA28:[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$:BASVECTR2/OBJ=OBJ$:BASVECTR2 MSRC$:BASVECTR2/UPDATE=(ENH$:BASVECTR2)
```

BASUDFWL
LIS

BASUNLOCK
LIS

BASVECTOR
LIS

BASVIRTUA
LIS

BASVAL
LIS

BASVIRTIO
LIS

BASUNWIND
LIS

BASUPDATE
LIS

BASVECTR2
LIS