


```

VV      VV      MM      MM      SSSSSSSS  VV      VV      EEEEEEEEE  CCCCCCCC  TTTTTTTTT  000000  RRRRRRRR
VV      VV      MM      MM      SSSSSSSS  VV      VV      EEEEEEEEE  CCCCCCCC  TTTTTTTTT  000000  RRRRRRRR
VV      VV      MMMM     MMMM     SS      VV      VV      EE          CC          TT          00          00  RR          RR
VV      VV      MMMM     MMMM     SS      VV      VV      EE          CC          TT          00          00  RR          RR
VV      VV      MM      MM      SS      VV      VV      EE          CC          TT          00          00  RR          RR
VV      VV      MM      MM      SSSSSS     VV      VV      EEEEEEEEE  CC          TT          00          00  RRRRRRRR
VV      VV      MM      MM      SSSSSS     VV      VV      EEEEEEEEE  CC          TT          00          00  RRRRRRRR
VV      VV      MM      MM      SS          VV      VV      EE          CC          TT          00          00  RR      RR
VV      VV      MM      MM      SS          VV      VV      EE          CC          TT          00          00  RR      RR
VV      VV      MM      MM      SS          VV      VV      EE          CC          TT          00          00  RR      RR
VV      VV      MM      MM      SSSSSSSS  VV      VV      EEEEEEEEE  CCCCCCCC  TT          000000  RR      RR
VV      VV      MM      MM      SSSSSSSS  VV      VV      EEEEEEEEE  CCCCCCCC  TT          0C0000  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
LLLLLLLLLLLL IIIIII  SSSSSSSS
LLLLLLLLLLLL IIIIII  SSSSSSSS

```

VMSSVECTOR
Table of contents

- Define entry vectors for VMSRTL^{J 7}

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(34) 3014
(35) 3061

MTHSSAB ALOG - Table for ALOG routines
MTHSSAB ATAN - Table for ATAN routines

```
0000 1 .TITLE VMSSVECTOR - Define entry vectors for VMSRTL
0000 2 .IDENT /4-003/ ; File: VMSVECTOR.MAR Edit: MDL4003
0000 3
0000 4
0000 5 *****
0000 6 *
0000 7 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY *
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0000 24 *
0000 25 *
0000 26 *****
0000 27
0000 28
0000 29 FACILITY: VAX/VMS Run-Time Library
0000 30 ++
0000 31 ABSTRACT:
0000 32 This module contains the entry vector for the shareable image
0000 33 VMSRTL.EXE. VMSRTL is now only a 'stub' that references procedures
0000 34 in LIBRTL, MTHRTL, BASRTL, COBRTL and FORRTL.
0000 35
0000 36 --
0000 37
0000 38 VERSION: 1
0000 39
0000 40 Revision History:
0000 41
0000 42 *****
0000 43 *
0000 44 * WARNING!!!
0000 45 *
0000 46 * The order or contents of the VMSRTL vector must never change!
0000 47 *
0000 48 *****
0000 49
0000 50 4-001 - Modified from ALLGBL.MAR to only produce vector declarations.
0000 51 SBL 11-May-1983
0000 52 4-002 - Add MTH$AB ALOG and MTH$AB ATAN table copies to end. SBL 20-May-1983
0000 53 4-003 - Add OLDENTRY macro for obsolete entry points. MDL 26-Sep-1983
0000 54 --
```

```

0000 56 :+
0000 57 : NOTE: This module contains many comments which are now of only historical
0000 58 : significance. The image VMSRTL mostly consists of vectored entry
0000 59 : points that refer to procedures in other shareable images. However,
0000 60 : a few data tables that were in VMSRTL remain since they cannot be
0000 61 : revectored.
0000 62 :-
0000 63
0000 64 :+
0000 65 : Define macro MAC to generate vector entries.
0000 66
0000 67 : call: MAC      VEC_TYPE, VEC_AREA, SYMBOL, MASK
0000 68
0000 69 : where VEC_TYPE is:  CALL      - call entry point transfer vector
0000 70 :                   JSB       - JSB entry point transfer vector
0000 71 :                   NOVECT    - do not have a transfer vector
0000 72 :                   SYM       - this is a symbol, not an entry point
0000 73 :                   DATA     - this is data, kept in the vector
0000 74 :                   FUTURE    - this is a proposed entry point, not yet
0000 75 :                               implemented, but space reserved.
0000 76 :   VEC_AREA is:     FOR       - FORTRAN entry points
0000 77 :                   LIB       - library entry points
0000 78 :                   MTH       - Math library entry points
0000 79 :                   STR       - String library entry points
0000 80 :                   OTS       - Language independent entry points
0000 81 :                   BAS       - BASIC-PLUS-2 entry points
0000 82 :                   COB       - COBOL
0000 83
0000 84 :                   Note: VEC_AREA is ignored
0000 85
0000 86 :   SYMBOL is:      any entry point symbol
0000 87 :   MASK is:        optional entry mask if not same as SYMBOL
0000 88
0000 89 :   Each entry vector is 8 bytes long and contains a 2 byte mask and
0000 90 :   a 6 byte JMP instruction (for CALLs) or
0000 91 :   a 6 byte JMP plus 2 filler bytes for JSBs.
0000 92
0000 93 :-
0000 94

```

```

0000 96 .MACRO MAC VEC_TYPE, VEC_AREA, SYMBOL, MASK
0000 97 .IF IDN VEC_TYPE, JSB
0000 98 $$'SYMBOL'::
0000 99 JMP G^SYMBOL ; branch to JSB routine
0000 100 .BYTE 0,0 ; fill out to 8 bytes
0000 101 .ENDC
0000 102
0000 103 .IF IDN VEC_TYPE, CALL
0000 104 $$'SYMBOL'::
0000 105 .IF B MASK
0000 106 .MASK SYMBOL
0000 107 .IFF
0000 108 .MASK MASK ; get mask from other name
0000 109 .ENDC
0000 110 JMP G^SYMBOL+2 ; branch to CALL+2 routine
0000 111 .ENDC
0000 112
0000 113 .IF IDN VEC_TYPE, FUTURE ; Reserve space for future vector?
0000 114 .BYTE 0,0,0,0,0,0,0,0 ; leave 8 bytes
0000 115 .ENDC
0000 116
0000 117 .IF IDN VEC_TYPE, DATA
0000 118 $$'SYMBOL' V::
0000 119 .ADDRESS SYMBOL-. ; from non-shared routine. Has format:
0000 120 .BLKL 1 ;
0000 121 ; .ADDRESS table_name-.
0000 122 .ENDC ; .BLKL 1
0000 123
0000 124 .ENDM
0000 125
0000 126 .MACRO OLDENTRY SYMBOL
0000 127 $$'SYMBOL'::
0000 128 .ENDM
0000 129
00000000 130 .PSECT $VMSSVECTOR PIC,USR,CON,REL,LCL,SHR,EXE,RD,NOWRT,PAGE
0000 131 RTL$START:
0000 132

```

```
0000 134 ;+
0000 135 ; FORTRAN compatibility routines - do not VECTOR
0000 136 ; -
0000 137
0000 138
0000 139 ; MODULE:COM$ASSIGN
0000 140 MAC NOVECT COM ASSIGN
0000 141
0000 142 ; MODULE:COM$CLOSE
0000 143 MAC NOVECT COM CLOSE
0000 144
0000 145 ; MODULE:COM$ERRSET
0000 146 MAC NOVECT COM ERRSET
0000 147
0000 148 ; MODULE:COM$ERRTST
0000 149 MAC NOVECT COM ERRTST
0000 150
0000 151 ; MODULE:COM$FDBSET
0000 152 MAC NOVECT COM FDBSET
0000 153
0000 154 ; MODULE:COM$IRAD50
0000 155 MAC NOVECT COM IRAD50
0000 156
0000 157 ; MODULE:COM$R50ASC
0000 158 MAC NOVECT COM R50ASC
0000 159
0000 160 ; MODULE:COM$RAD50
0000 161 MAC NOVECT COM RAD50
0000 162
0000 163 ; MODULE:COM$USEREX
0000 164 MAC NOVECT COM USEREX
```

```

0000 166 :+
0000 167 : FORTRAN entry points
0000 168 : Put most frequently used FORTRAN entry points together first,
0000 169 : ie. I/O and OPEN and CLOSE.
0000 170 :-
0000 171
0000 172 : MODULE:FOR$CLOSE
0000 173 :     MAC      CALL      FOR      FOR$CLOSE
0008 174 : MODULE:FOR$ENTRY
0008 175 :     MAC      CALL      FOR      FOR$DECODE_MF  FOR$$IO_BEG
0010 176
0010 177 :     MAC      CALL      FOR      FOR$DECODE_MO  FOR$$IO_BEG
0018 178 :     MAC      CALL      FOR      FOR$ENCODE_MF  FOR$$IO_BEG
0020 179 :     MAC      CALL      FOR      FOR$ENCODE_MO  FOR$$IO_BEG
0028 180
0028 181 :     MAC      CALL      FOR      FOR$READ_KF    FOR$$IO_BEG
0030 182 :     MAC      CALL      FOR      FOR$READ_KG    FOR$$IO_BEG
0038 183
0038 184 :     MAC      CALL      FOR      FOR$READ_DF    FOR$$IO_BEG
0040 185 :     MAC      CALL      FOR      FOR$READ_DO    FOR$$IO_BEG
0048 186 :     MAC      CALL      FOR      FOR$READ_DU    FOR$$IO_BEG
0050 187 :     MAC      CALL      FOR      FOR$READ_SF    FOR$$IO_BEG
0058 188 :     MAC      CALL      FOR      FOR$READ_SL    FOR$$IO_BEG
0060 189
0060 190 :     MAC      CALL      FOR      FOR$READ_SO    FOR$$IO_BEG
0068 191 :     MAC      CALL      FOR      FOR$READ_SU    FOR$$IO_BEG
0070 192 :     MAC      CALL      FOR      FOR$WRITE_DF   FOR$$IO_BEG
0078 193 :     MAC      CALL      FOR      FOR$WRITE_DO   FOR$$IO_BEG
0080 194
0080 195 :     MAC      CALL      FOR      FOR$WRITE_DU   FOR$$IO_BEG
0088 196 :     MAC      CALL      FOR      FOR$WRITE_SF   FOR$$IO_BEG
0090 197 :     MAC      CALL      FOR      FOR$WRITE_SL   FOR$$IO_BEG
0098 198 :     MAC      CALL      FOR      FOR$WRITE_SO   FOR$$IO_BEG
00A0 199
00A0 200 :     MAC      CALL      FOR      FOR$WRITE_SU   FOR$$IO_BEG
00A8 201
00A8 202 : MODULE:FOR$IO_END
00A8 203 :     MAC      CALL      FOR      FOR$IO_END
00B0 204
00B0 205 : MODULE:FOR$IO_ELEM
00B0 206
00B0 207 :     MAC      CALL      FOR      FOR$IO_F_R
00B8 208 :     MAC      CALL      FOR      FOR$IO_F_V
00C0 209 :     MAC      CALL      FOR      FOR$IO_D_R
00C8 210 :     MAC      CALL      FOR      FOR$IO_D_V
00D0 211
00D0 212 :     MAC      CALL      FOR      FOR$IO_L_R
00D8 213 :     MAC      CALL      FOR      FOR$IO_L_V
00E0 214 :     MAC      CALL      FOR      FOR$IO_B_R
00E8 215 :     MAC      CALL      FOR      FOR$IO_B_V
00F0 216
00F0 217 :     MAC      CALL      FOR      FOR$IO_T_DS
00F8 218
00F8 219 :     MAC      CALL      FOR      FOR$IO_W_R
0100 220 :     MAC      CALL      FOR      FOR$IO_W_V
0108 221 :     MAC      CALL      FOR      FOR$IO_G_R
0110 222 :     MAC      CALL      FOR      FOR$IO_G_V

```



```

0118 223      MAC      CALL      FOR      FOR$IO_H_R
0120 224      MAC      CALL      FOR      FOR$IO_H_V
0128 225
0128 226      MAC      CALL      FOR      FOR$IO_DC_R
0130 227      MAC      CALL      FOR      FOR$IO_GC_R
0138 228      :
0138 229      MAC      CALL      FOR      FOR$IO_TV_DS      by value calls at end
0140 230      MAC      CALL      FOR      FOR$IO_FC_R
0148 231      MAC      CALL      FOR      FOR$IO_FC_V
0150 232      MAC      CALL      FOR      FOR$IO_LU_R
0158 233      MAC      CALL      FOR      FOR$IO_LU_V
0160 234      MAC      CALL      FOR      FOR$IO_WU_R
0168 235      MAC      CALL      FOR      FOR$IO_WU_V
0170 236      MAC      CALL      FOR      FOR$IO_X_DA
0178 237
0178 238      : MODULE:FOR$OPEN
0178 239      MAC      CALL      FOR      FOR$OPEN
0180 240
0180 241      :+
0180 242      : Rest of FOR$ entries alphabetical order
0180 243      :-
0180 244
0180 245      : MODULE:FOR$BACKSPACE
0180 246      MAC      CALL      FOR      FOR$BACKSPACE
0188 247
0188 248      : MODULE:FOR$BITOPS
0188 249      MAC      NOVECT  FOR      FOR$IMVBITS
0188 250      MAC      NOVECT  FOR      FOR$JMVBITS
0188 251      MAC      NOVECT  FOR      FOR$IIBITS
0188 252      MAC      NOVECT  FOR      FOR$JIBITS
0188 253      MAC      NOVECT  FOR      FOR$IISHFTC
0188 254      MAC      NOVECT  FOR      FOR$JISHFTC
0188 255      MAC      NOVECT  FOR      FOR$BITEST
0188 256      MAC      NOVECT  FOR      FOR$BJTEST
0188 257      MAC      NOVECT  FOR      FOR$IIBSET
0188 258      MAC      NOVECT  FOR      FOR$JIBSET
0188 259      MAC      NOVECT  FOR      FOR$IIBCLR
0188 260      MAC      NOVECT  FOR      FOR$JIBCLR
0188 261
0188 262      : MODULE:OT$SCVTLT      ; New entry points at end
0188 263      MAC      CALL      FOR      FOR$CNV_OUT_I
0190 264      MAC      CALL      FOR      FOR$CNV_OUT_L
0198 265      MAC      CALL      FOR      FOR$CNV_OUT_O
01A0 266      MAC      CALL      FOR      FOR$CNV_OUT_Z
01A8 267
01A8 268      : MODULE FOR$CVTRT - replaces FOR$CNV_OUT
01A8 269      OLDENTRY  FOR$CNV_OUT_D
01A8 270      MAC      CALL      FOR      -FOR$CVT_D_TD
01B0 271      OLDENTRY  FOR$CNV_OUT_E
01B0 272      MAC      CALL      FOR      -FOR$CVT_D_TE
01B8 273      OLDENTRY  FOR$CNV_OUT_F
01B8 274      MAC      CALL      FOR      -FOR$CVT_D_TF
01C0 275      OLDENTRY  FOR$CNV_OUT_G
01C0 276      MAC      CALL      FOR      -FOR$CVT_D_TG
01C8 277
01C8 278      : MODULE:FOR$DATE
01C8 279      MAC      NOVECT  FOR      FOR$DATE

```

```

01C8 280
01C8 281 ; MODULE:FOR$DATE_T_DS
01C8 282     MAC      NOVECT  FOR      FOR$DATE_T_DS
01C8 283
01C8 284 ; MODULE:FOR$DEFINE_FILE
01C8 285     MAC      CALC   FOR      FOR$DEF_FILE
01D0 286     MAC      CALL   FOR      FOR$DEF_FILE_W
01D8 287
01D8 288 ; MOUDLE FOR$ENDFILE
01D8 289     MAC      CALL   FOR      FOR$ENDFILE
01E0 290
01E0 291 ; MODULE:FOR$ENODEF
01E0 292     MAC      SYM     FOR      FOR$K_ADJARRDIM
01E0 293     MAC      SYM     FOR      FOR$K_ARRREFOUT
01E0 294     MAC      SYM     FOR      FOR$K_ATTACNON
01E0 295     MAC      SYM     FOR      FOR$K_BACERR
01E0 296
01E0 297     MAC      SYM     FOR      FOR$K_CLOERR
01E0 298     MAC      SYM     FOR      FOR$K_DECSTROVE
01E0 299     MAC      SYM     FOR      FOR$K_DELERR
01E0 300     MAC      SYM     FOR      FOR$K_DUPFILSPE
01E0 301     MAC      SYM     FOR      FOR$K_ENDDURREA
01E0 302     MAC      SYM     FOR      FOR$K_ENDFILERR
01E0 303     MAC      SYM     FOR      FOR$K_ERRDURREA
01E0 304     MAC      SYM     FOR      FOR$K_ERRDURWRI
01E0 305     MAC      SYM     FOR      FOR$K_FAC_NO
01E0 306
01E0 307     MAC      SYM     FOR      FOR$K_FILNAMSPE
01E0 308     MAC      SYM     FOR      FOR$K_FILNOTFOU
01E0 309     MAC      SYM     FOR      FOR$K_FINERR
01E0 310     MAC      SYM     FOR      FOR$K_FLCOVE
01E0 311     MAC      SYM     FOR      FOR$K_FLOUND
01E0 312
01E0 313     MAC      SYM     FOR      FOR$K_FLOZERDIV
01E0 314     MAC      SYM     FOR      FOR$K_FORVARMIS
01E0 315     MAC      SYM     FOR      FOR$K_INCFILORG
01E0 316     MAC      SYM     FOR      FOR$K_INCKEYCHG
01E0 317     MAC      SYM     FOR      FOR$K_INCOPECLO
01E0 318     MAC      SYM     FOR      FOR$K_INCRECLEN
01E0 319     MAC      SYM     FOR      FOR$K_INCRECTYP
01E0 320     MAC      SYM     FOR      FOR$K_INFFORLOO
01E0 321     MAC      SYM     FOR      FOR$K_INPCONERR
01E0 322     MAC      SYM     FOR      FOR$K_INPRECTOO
01E0 323     MAC      SYM     FOR      FOR$K_INPSTAREQ
01E0 324     MAC      SYM     FOR      FOR$K_INSVIRMEM
01E0 325     MAC      SYM     FOR      FOR$K_INTOVF
01E0 326     MAC      SYM     FOR      FOR$K_INTZERDIV
01E0 327     MAC      SYM     FOR      FOR$K_INVARGFOR
01E0 328     MAC      SYM     FOR      FOR$K_INVKEYSPE
01E0 329     MAC      SYM     FOR      FOR$K_INVLOGUNI
01E0 330     MAC      SYM     FOR      FOR$K_INVREFVAR
01E0 331     MAC      SYM     FOR      FOR$K_KEYVALERR
01E0 332     MAC      SYM     FOR      FOR$K_LISIO SYN
01E0 333     MAC      SYM     FOR      FOR$K_MAX_ERR
01E0 334     MAC      SYM     FOR      FOR$K_MIXFILACC
01E0 335     MAC      SYM     FOR      FOR$K_NOTFORSPE
01E0 336     MAC      SYM     FOR      FOR$K_NO_CURREC

```

```

01E0 337      MAC      SYM      FOR      FOR$K_NO_SUCDEV
01E0 338      MAC      SYM      FOR      FOR$K_OPEDEFREQ
01E0 339      MAC      SYM      FOR      FOR$K_OPEFAI
01E0 340
01E0 341      MAC      SYM      FOR      FOR$K_OUTCONERR
01E0 342      MAC      SYM      FOR      FOR$K_OUTSTAOVE
01E0 343      MAC      SYM      FOR      FOR$K_RECIO_OPE
01E0 344      MAC      SYM      FOR      FOR$K_RECNUMOUT
01E0 345      MAC      SYM      FOR      FOR$K_REWERR
01E0 346      MAC      SYM      FOR      FOR$K_REWRITERR
01E0 347      MAC      SYM      FOR      FOR$K_SEGRECFOR
01E0 348      MAC      SYM      FOR      FOR$K_SPERECLOC
01E0 349      MAC      SYM      FOR      FOR$K_SYNERRFOR
01E0 350      MAC      SYM      FOR      FOR$K_SYNERRNAM
01E0 351      MAC      SYM      FOR      FOR$K_TOOMANREC
01E0 352      MAC      SYM      FOR      FOR$K_TOOMANVAL
01E0 353      MAC      SYM      FOR      FOR$K_UNIALROPE
01E0 354      MAC      SYM      FOR      FOR$K_UNLERR
01E0 355      MAC      SYM      FOR      FOR$K_VFEVALERR
01E0 356      MAC      SYM      FOR      FOR$K_WRIREFIL
01E0 357
01E0 358      ; MODULE:FOR$ERRSNS      ; See also end where FOR$$ERRSNS_SAV declared
01E0 359      MAC      CALL      FOR      FOR$ERRSNS
01E8 360      MAC      CALL      FOR      FOR$ERRSNS_W
01F0 361
01F0 362      ; MODULE:FOR$EXIT
01F0 363      MAC      CALL      FOR      FOR$EXIT
01F8 364      MAC      CALL      FOR      FOR$EXIT_W
0200 365
0200 366      ; MODULE:OT$SCVTTR
0200 367
0200 368      ; This module is a replacement
0200 369      ; for FOR$CNVIR. The old
0200 370      ; FOR$ entry point still exists.
0200 371      ; See later where other OT$S
0200 372      ; entry points are named.
0200 373      OLDENTRY      FOR$CNV_IN_DEFG ; Same as next symbol.
0200 374      MAC      CALL      OTS      -OT$SCVT_T_D
0208 375
0208 376      ; MODULE:FOR$FIND
0208 377      MAC      CALL      FOR      FOR$FIND
0210 378
0210 379      ; MODULE:OT$SCVT_TI_L - replaces in part FOR$CNVII
0210 380      OLDENTRY      FOR$CNV_IN_I
0210 381      MAC      CALL      OTS      -OT$SCVT_TI_L
0218 382
0218 383      ; MODULE:OT$SCVT_TL_L - replaces in part FOR$CNVII
0218 384      OLDENTRY      FOR$CNV_IN_L
0218 385      MAC      CALL      OTS      -OT$SCVT_TL_L
0220 386
0220 387      ; MODULE:OT$SCVT_TO_L - replaces in part FOR$CNVII
0220 388      OLDENTRY      FOR$CNV_IN_O
0220 389      MAC      CALL      OTS      -OT$SCVT_TO_L
0228 390      OLDENTRY      FOR$CNV_IN_Z
0228 391      MAC      CALL      OTS      -OT$SCVT_TZ_L
0230 392
0230 393      ; MODULE:FOR$IDATE

```

0230	394	MAC	NOVECT	FOR	FOR\$DATE
0230	395				
0230	396	; MODULE:FOR\$INI_DES			
0230	397	MAC	JSB	FOR	FOR\$INI_DES1_R2
0238	398	MAC	JSB	FOR	FOR\$INI_DES2_R3
0240	399	MAC	JSB	FOR	FOR\$INI_DESC_R6
0248	400				
0248	401	; MODULE:FOR\$JDATE			
0248	402	MAC	NOVECT	FOR	FOR\$JDATE
0246	403				
0248	404	; MODULE:FOR\$MSGDEF			
0248	405	MAC	SYM	FOR	FOR\$_ADJARRDIM
0248	406	MAC	SYM	FOR	FOR\$_ATTACCNON
0248	407	MAC	SYM	FOR	FOR\$_BACERR
0248	408	MAC	SYM	FOR	FOR\$_CLOERR
0248	409				
0248	410	MAC	SYM	FOR	FOR\$_DELERR
0248	411	MAC	SYM	FOR	FOR\$_DUPFILSPE
0248	412	MAC	SYM	FOR	FOR\$_ENDDURREA
0248	413	MAC	SYM	FOR	FOR\$_ENDFILERR
0248	414	MAC	SYM	FOR	FOR\$_ERRDURREA
0248	415				
0248	416	MAC	SYM	FOR	FOR\$_ERRDURWRI
0248	417	MAC	SYM	FOR	FOR\$_FILNAMSPE
0248	418	MAC	SYM	FOR	FOR\$_FILNOTFOU
0248	419	MAC	SYM	FOR	FOR\$_FINERR
0248	420	MAC	SYM	FOR	FOR\$_FORVARMIS
0248	421				
0248	422	MAC	SYM	FOR	FOR\$_INCFILORG
0248	423	MAC	SYM	FOR	FOR\$_INCKEYCHG
0248	424	MAC	SYM	FOR	FOR\$_INCOPECLO
0248	425	MAC	SYM	FOR	FOR\$_INCRECLEN
0248	426	MAC	SYM	FOR	FOR\$_INCRECTYP
0248	427	MAC	SYM	FOR	FOR\$_INFFORLOO
0248	428	MAC	SYM	FOR	FOR\$_INPCONERR
0248	429				
0248	430	MAC	SYM	FOR	FOR\$_INPRECTOO
0248	431	MAC	SYM	FOR	FOR\$_INPSTAREQ
0248	432	MAC	SYM	FOR	FOR\$_INSVIRMEM
0248	433	MAC	SYM	FOR	FOR\$_INVARGFOR
0248	434	MAC	SYM	FOR	FOR\$_INVKEYSPE
0248	435				
0248	436	MAC	SYM	FOR	FOR\$_INVLOGUNI
0248	437	MAC	SYM	FOR	FOR\$_INVREFVAR
0248	438	MAC	SYM	FOR	FOR\$_KEYVALERR
0248	439	MAC	SYM	FOR	FOR\$_LISIO_SYN
0248	440	MAC	SYM	FOR	FOR\$_MIXFILACC
0248	441				
0248	442	MAC	SYM	FOR	FOR\$_NOTFORSPE
0248	443	MAC	SYM	FOR	FOR\$_NO_CURREC
0248	444	MAC	SYM	FOR	FOR\$_NO_SUCDEV
0248	445	MAC	SYM	FOR	FOR\$_OPEDEFREQ
0248	446				
0248	447	MAC	SYM	FOR	FOR\$_OPEFAI
0248	448	MAC	SYM	FOR	FOR\$_OUTCONERR
0248	449	MAC	SYM	FOR	FOR\$_OUTSTAOVE
0248	450	MAC	SYM	FOR	FOR\$_RECIO_OPE

```

0248 451
0248 452      MAC      SYM      FOR      FOR$_RECNUMOUT
0248 453      MAC      SYM      FOR      FOR$_REWERR
0248 454      MAC      SYM      FOR      FOR$_REWPITERR
0248 455      MAC      SYM      FOR      FOR$_SEGRCFOR
0248 456
0248 457      MAC      SYM      FOR      FOR$_SPERECLOC
0248 458      MAC      SYM      FOR      FOR$_SYNERRFOR
0248 459      MAC      SYM      FOR      FOR$_SYNERRNAM
0248 460      MAC      SYM      FOR      FOR$_TOOMANREC
0248 461      MAC      SYM      FOR      FOR$_TOOMANVAL
0248 462      MAC      SYM      FOR      FOR$_UNIALROPE
0248 463      MAC      SYM      FOR      FOR$_UNLERR
0248 464      MAC      SYM      FOR      FOR$_VFEVALERR
0248 465      MAC      SYM      FOR      FOR$_WRIREAFIL
0248 466
0248 467      ; MODULE:FOR$PAUSE
0248 468      MAC      CALL      FOR      FOR$PAUSE
0250 469
0250 470      ; MODULE:FOR$RANDOM
0250 471      MAC      NOVECT   FOR      FOR$IRAN
0250 472      MAC      NOVECT   FOR      FOR$RANDU
0250 473      MAC      NOVECT   FOR      FOR$RANDU_W
0250 474
0250 475      ; MODULE:FOR$REWIND
0250 476      MAC      CALL      FOR      FOR$REWIND
0258 477
0258 478      ; MODULE:FOR$SECNDS
0258 479      MAC      CALL      FOR      FOR$SECNDS
0260 480
0260 481      ; MODULE:FOR$STOP
0260 482      MAC      CALL      FOR      FOR$STOP
0268 483
0268 484      ; MODULE:FOR$TIME
0268 485      MAC      NOVECT   FOR      FOR$TIME
0268 486
0268 487      ; MODULE:FOR$TIME_T_DS
0268 488      MAC      NOVECT   FOR      FOR$TIME_T_DS
0268 489

```

```

0268 491 :+
0268 492 : Mathematical library entry points
0268 493 : Include the frequently used ones first (ones with JSBs)
0268 494 :-
0268 495
0268 496 : MODULE:MTH$ACOS (Degree entries further on)
0268 497     MAC      CALL      MTH      MTH$ACOS
0270 498     OLDENTRY MTH$ACOS_R5      ; Release 1 name
0270 499     MAC      JSB      MTH      MTH$ACOS_R4
0278 500
0278 501 : MODULE:MTH$ALOG
0278 502     MAC      CALL      MTH      MTH$ALOG
0280 503     MAC      CALL      MTH      MTH$ALOG10
0288 504     MAC      JSB      MTH      MTH$ALOG10_R5
0290 505     MAC      JSB      MTH      MTH$ALOG_R5
0298 506
0298 507 : MODULE:MTH$ASIN
0298 508     MAC      CALL      MTH      MTH$ASIN
02A0 509     OLDENTRY MTH$ASIN_R5      ; Release 1 name
02A0 510     MAC      JSB      MTH      MTH$ASIN_R4
02A8 511
02A8 512 : MODULE:MTH$ATAN
02A8 513     MAC      CALL      MTH      MTH$ATAN
02B0 514     MAC      CALL      MTH      MTH$ATAN2
02B8 515     MAC      JSB      MTH      MTH$ATAN_R4
02C0 516
02C0 517 : MODULE:MTH$DACOS
02C0 518     MAC      CALL      MTH      MTH$DACOS
02C8 519     OLDENTRY MTH$DACOS_R9      ; Release 1 name
02C8 520     MAC      JSB      MTH      MTH$DACOS_R7
02D0 521
02D0 522 : MODULE:MTH$DASIN
02D0 523     MAC      CALL      MTH      MTH$DASIN
02D8 524     OLDENTRY MTH$DASIN_R9      ; Release 1 name
02D8 525     MAC      JSB      MTH      MTH$DASIN_R7
02E0 526
02E0 527 : MODULE:MTH$DATAN
02E0 528     MAC      CALL      MTH      MTH$DATAN
02E8 529     MAC      CALL      MTH      MTH$DATAN2
02F0 530     MAC      JSB      MTH      MTH$DATAN_R7
02F8 531
02F8 532 : MODULE:MTH$DEXP
02F8 533     MAC      CALL      MTH      MTH$DEXP
0300 534     OLDENTRY MTH$DEXP_R7      ; Obsolete name
0300 535     MAC      JSB      MTH      MTH$DEXP_R6

```

```
0308 537 ; MODULE:MTH$DLOG
0308 538     MAC     CALL    MTH     MTH$DLOG
0310 539     MAC     CALL    MTH     MTH$DLOG10
0318 540     MAC     JSB     MTH     MTH$DLOG10_R8
0320 541     MAC     JSB     MTH     MTH$DLOG_R8
0328 542
0328 543 ; MODULE:MTH$DSINCOS
0328 544     MAC     CALL    MTH     MTH$DCOS
0330 545     MAC     JSB     MTH     MTH$DCOS_R7
0338 546     MAC     CALL    MTH     MTH$DSIN
0340 547     MAC     JSB     MTH     MTH$DSIN_R7
0348 548
0348 549 ; MODULE:MTH$DSQRT
0348 550     MAC     CALL    MTH     MTH$DSQRT
0350 551     MAC     JSB     MTH     MTH$DSQRT_R5
0358 552
0358 553 ; MODULE:MTH$EXP
0358 554     MAC     CALL    MTH     MTH$EXP
0360 555     MAC     JSB     MTH     MTH$EXP_R4
0368 556
0368 557 ; MODULE:MTH$SINCOS
0368 558     MAC     CALL    MTH     MTH$SCOS
0370 559     MAC     JSB     MTH     MTH$SCOS_R4
0378 560     MAC     CALL    MTH     MTH$SSIN
0380 561     MAC     JSB     MTH     MTH$SSIN_R4
0388 562
0388 563 ; MODULE:MTH$SQRT
0388 564     MAC     CALL    MTH     MTH$SQRT
0390 565 ;     JSB to MTH$SQRT_R3 is with new entries.
0390 566
0390 567 ; MODULE:MTH$SQRT_R2 (obsolete module)
0390 568     MAC     JSB     MTH     MTH$SQRT_R2
0398 569
```

```

0398 571 :+
0398 572 : Language independent support entry points
0398 573 : Include them after frequently used math routines, since
0398 574 : they have the power routines.
0398 575 :-
0398 576
0398 577
0398 578 : MODULE:OTSS$DIVC
0398 579     MAC     CALL     OTS     OTSS$DIVC
03A0 580
03A0 581 : MODULE:OTSS$LINKAGE
03A0 582     MAC     SYM     OTS     OTSS$LINKAGE
03A0 583
03A0 584 : MODULE:OTSS$MSGDEF
03A0 585     MAC     SYM     OTS     OTSS$_FATINTERR
03A0 586     MAC     SYM     OTS     OTSS$_INPCONERR
03A0 587     MAC     SYM     OTS     OTSS$_INTDATCOR
03A0 588     MAC     SYM     OTS     OTSS$_INVSTRDES
03A0 589     MAC     SYM     OTS     OTSS$_IO_CONCLO
03A0 590     MAC     SYM     OTS     OTSS$_OUTCONERR
03A0 591     MAC     SYM     OTS     OTSS$_USEFLORES
03A0 592     MAC     SYM     OTS     OTSS$_WRONUMARG
03A0 593
03A0 594 : MODULE:OTSS$POWCJ
03A0 595     MAC     CALL     OTS     OTSS$POWCJ
03A8 596
03A8 597 : MODULE:OTSS$POWDD
03A8 598     MAC     CALL     OTS     OTSS$POWDD
03B0 599     MAC     CALL     OTS     OTSS$POWDR
03B8 600     MAC     CALL     OTS     OTSS$POWRD
03C0 601
03C0 602 : MODULE:OTSS$POWDJ
03C0 603     MAC     CALL     OTS     OTSS$POWDJ
03C8 604
03C8 605 : MODULE:OTSS$POWII
03C8 606     MAC     CALL     OTS     OTSS$POWII
03D0 607
03D0 608 : MODULE:OTSS$POWJJ
03D0 609     MAC     CALL     OTS     OTSS$POWJJ
03D8 610
03D8 611 : MODULE:OTSS$POWRJ
03D8 612     MAC     CALL     OTS     OTSS$POWRJ
03E0 613
03E0 614 : MODULE:OTSS$POWRR
03E0 615     MAC     CALL     OTS     OTSS$POWRR
03E8 616
03E8 617 : MODULE:OTSS$SCOPY
03E8 618     MAC     CALL     OTS     OTSS$SCOPY_DXDX
03F0 619     MAC     JSB     OTS     OTSS$SCOPY_DXDX6
03F8 620     MAC     CALL     OTS     OTSS$SCOPY_R_DX
0400 621     MAC     JSB     OTS     OTSS$SCOPY_R_DX6
0408 622     MAC     CALL     OTS     OTSS$SGET1_DD
0410 623     MAC     JSB     OTS     OTSS$SGET1_DD_R6
0418 624     MAC     CALL     OTS     OTSS$SFREET_DD
0420 625     MAC     JSB     OTS     OTSS$SFREET_DD6
0428 626     MAC     CALL     OTS     OTSS$SFREEN_DD
0430 627     MAC     JSB     OTS     OTSS$SFREEN_DD6

```



```

0438 629 :+
0438 630 : Now define the rest of the Math entry points
0438 631 :-
0438 632 :
0438 633 : MODULE:MTH$ABS
0438 634 MAC NOVECT MTH MTH$ABS
0438 635 MAC NOVECT MTH MTH$DABS
0438 636 MAC NOVECT MTH MTH$GABS
0438 637 MAC NOVECT MTH MTH$HABS
0438 638 MAC NOVECT MTH MTH$IABS
0438 639 MAC NOVECT MTH MTH$JABS
0438 640 :
0438 641 : MODULE:MTH$AINT
0438 642 MAC NOVECT MTH MTH$AINT
0438 643 :
0438 644 : MODULE:MTH$AMOD
0438 645 MAC NOVECT MTH MTH$AMOD
0438 646 :
0438 647 : MODULE:MTH$ANINT
0438 648 MAC NOVECT MTH MTH$ANINT
0438 649 :
0438 650 : MODULE:MTH$BITOPS
0438 651 MAC NOVECT MTH MTH$IAND
0438 652 MAC NOVECT MTH MTH$IEOR
0438 653 MAC NOVECT MTH MTH$IOR
0438 654 MAC NOVECT MTH MTH$IISHT
0438 655 :
0438 656 MAC NOVECT MTH MTH$INOT
0438 657 MAC NOVECT MTH MTH$JAND
0438 658 MAC NOVECT MTH MTH$JIEOR
0438 659 MAC NOVECT MTH MTH$JIOR
0438 660 :
0438 661 MAC NOVECT MTH MTH$JISHT
0438 662 MAC NOVECT MTH MTH$JNOT
0438 663 :
0438 664 : MODULE:MTH$CABS
0438 665 MAC CALL MTH MTH$CABS
0440 666 :
0440 667 : MODULE:MTH$CEXP
0440 668 MAC CALL MTH MTH$CEXP
0448 669 :
0448 670 : MODULE:MTH$CLOG
0448 671 MAC CALL MTH MTH$CLOG
0450 672 :
0450 673 : MODULE:MTH$CONJG
0450 674 MAC NOVECT MTH MTH$CONJG
0450 675 :
0450 676 : MODULE:MTH$CONVER
0450 677 MAC NOVECT MTH MTH$AIMAG
0450 678 MAC NOVECT MTH MTH$DIMAG
0450 679 MAC NOVECT MTH MTH$GIMAG
0450 680 MAC NOVECT MTH MTH$CMPLX
0450 681 MAC NOVECT MTH MTH$DCMPLX
0450 682 MAC NOVECT MTH MTH$GCMPLX
0450 683 MAC NOVECT MTH MTH$DBLE
0450 684 MAC NOVECT MTH MTH$GDBLE
0450 685 MAC NOVECT MTH MTH$DFLOTI

```

0450	686	MAC	NOVECT	MTH	MTH\$DFLOTJ
0450	687	MAC	NOVECT	MTH	MTH\$FLOATI
0450	688	MAC	NOVECT	MTH	MTH\$FLOATJ
0450	689	MAC	NOVECT	MTH	MTH\$GFLOTI
0450	690	MAC	NOVECT	MTH	MTH\$GFLOTJ
0450	691	MAC	NOVECT	MTH	MTH\$IIDINT
0450	692	MAC	NOVECT	MTH	MTH\$IIGINT
0450	693	MAC	NOVECT	MTH	MTH\$IIHINT
0450	694	MAC	NOVECT	MTH	MTH\$IIFIX
0450	695	MAC	NOVECT	MTH	MTH\$IINT
0450	696	MAC	NOVECT	MTH	MTH\$JIDINT
0450	697	MAC	NOVECT	MTH	MTH\$JIGINT
0450	698	MAC	NOVECT	MTH	MTH\$JIHINT
0450	699	MAC	NOVECT	MTH	MTH\$JIFIX
0450	700	MAC	NOVECT	MTH	MTH\$JINT
0450	701	MAC	NOVECT	MTH	MTH\$REAL
0450	702	MAC	NOVECT	MTH	MTH\$DREAL
0450	703	MAC	NOVECT	MTH	MTH\$GREAL
0450	704	MAC	NOVECT	MTH	MTH\$SNGL
0450	705	MAC	NOVECT	MTH	MTH\$SNGLG
0450	706				
0450	707	: MODULE:MTH\$COSH			
0450	708	MAC	CALL	MTH	MTH\$COSH
0458	709				
0458	710	: MODULE:MTH\$CSINCOS			
0458	711	MAC	CALL	MTH	MTH\$CCOS
0460	712	MAC	CALL	MTH	MTH\$CSIN
0468	713				
0468	714	: MODULE:MTH\$CSQRT			
0468	715	MAC	CALL	MTH	MTH\$CSQRT
0470	716				
0470	717	: MODULE:MTH\$DCOSH			
0470	718	MAC	CALL	MTH	MTH\$DCOSH
0478	719				
0478	720	: MODULE:MTH\$DIM			
0478	721	MAC	NOVECT	MTH	MTH\$DDIM
0478	722	MAC	NOVECT	MTH	MTH\$DIM
0478	723	MAC	NOVECT	MTH	MTH\$IIDIM
0478	724	MAC	NOVECT	MTH	MTH\$JIDIM
0478	725				
0478	726	: MODULE:MTH\$DINT			
0478	727	MAC	NOVECT	MTH	MTH\$DINT

0478	729				
0478	730	: MODULE:MTH\$DMAX1			
0478	731	MAC	NOVECT	MTH	MTH\$DMAX1
0478	732				
0478	733	: MODULE:MTH\$DMIN1			
0478	734	MAC	NOVECT	MTH	MTH\$DMIN1
0478	735				
0478	736	: MODULE:MTH\$DMOD			
0478	737	MAC	NOVECT	MTH	MTH\$DMOD
0478	738				
0478	739	: MODULE:MTH\$DNINT			
0478	740	MAC	NOVECT	MTH	MTH\$DNINT
0478	741				
0478	742	: MODULE:MTH\$DPROD			
0478	743	MAC	NOVECT	MTH	MTH\$DPROD
0478	744				
0478	745	: MODULE:MTH\$DSIGN			
0478	746	MAC	NOVECT	MTH	MTH\$DSIGN
0478	747				
0478	748	: MODULE:MTH\$DSINH			
0478	749	MAC	CALL	MTH	MTH\$DSINH
0480	750				
0480	751	: MODULE:MTH\$DTAN			
0480	752	MAC	CALL	MTH	MTH\$DTAN
0488	753				
0488	754	: MODULE:MTH\$DTANH			
0488	755	MAC	CALL	MTH	MTH\$DTANH
0490	756				
0490	757	: MODULE:MTH\$IIDNNT			
0490	758	MAC	NOVECT	MTH	MTH\$IIDNNT
0490	759				
0490	760	: MODULE:MTH\$IISIGN			
0490	761	MAC	NOVECT	MTH	MTH\$IISIGN
0490	762				
0490	763	: MODULE:MTH\$IMAXO			
0490	764	MAC	NOVECT	MTH	MTH\$AIMAXO
0490	765	MAC	NOVECT	MTH	MTH\$IMAXO
0490	766				
0490	767	: MODULE:MTH\$IMINO			
0490	768	MAC	NOVECT	MTH	MTH\$AIMINO
0490	769	MAC	NOVECT	MTH	MTH\$IMINO
0490	770				
0490	771	: MODULE:MTH\$ININT			
0490	772	MAC	NOVECT	MTH	MTH\$ININT
0490	773				
0490	774	: MODULE:MTH\$JIDNNT			
0490	775	MAC	NOVECT	MTH	MTH\$JIDNNT
0490	776				
0490	777	: MODULE:MTH\$JISIGN			
0490	778	MAC	NOVECT	MTH	MTH\$JISIGN
0490	779				
0490	780	: MODULE:MTH\$JMAXO			
0490	781	MAC	NOVECT	MTH	MTH\$AJMAXO
0490	782	MAC	NOVECT	MTH	MTH\$JMAXO
0490	783				
0490	784	: MODULE:MTH\$JMINO			
0490	785	MAC	NOVECT	MTH	MTH\$AJMINO

0490	786	MAC	NOVECT	MTH	MTH\$JMIN0
0490	787				
0490	788	: MODULE:MTH\$JNINT			
0490	789	MAC	NOVECT	MTH	MTH\$JNINT
0490	790				
0490	791	: MODULE:MTH\$MAX1			
0490	792	MAC	NOVECT	MTH	MTH\$AMAX1
0490	793	MAC	NOVECT	MTH	MTH\$IMAX1
0490	794	MAC	NOVECT	MTH	MTH\$JMAX1
0490	795				
0490	796	: MODULE:MTH\$MIN1			
0490	797	MAC	NOVECT	MTH	MTH\$AMIN1
0490	798	MAC	NOVECT	MTH	MTH\$IMIN1
0490	799	MAC	NOVECT	MTH	MTH\$JMIN1
0490	800				
0490	801	: MODULE:MTH\$MOD			
0490	802	MAC	NOVECT	MTH	MTH\$IMOD
0490	803	MAC	NOVECT	MTH	MTH\$JMOD
0490	804				
0490	805	: MODULE:MTH\$MSGDEF			
0490	806	MAC	SYM	MTH	MTH\$_FLOOVEMAT
0490	807	MAC	SYM	MTH	MTH\$_FLOUNDMAT
0490	808	MAC	SYM	MTH	MTH\$_INVARGMAT
0490	809	MAC	SYM	MTH	MTH\$_LOGZERNEG
0490	810				
0490	811	MAC	SYM	MTH	MTH\$_SIGLOSMAT
0490	812				
0490	813	MAC	SYM	MTH	MTH\$_SQUROONEG
0490	814	MAC	SYM	MTH	MTH\$_UNDEXP
0490	815	MAC	SYM	MTH	MTH\$_WRONUMARG
0490	816				
0490	817	: MODULE:MTH\$RANDOM			
0490	818	MAC	CALL	MTH	MTH\$RANDOM
0498	819				
0498	820	: MODULE:MTH\$SIGN			
0498	821	MAC	NOVECT	MTH	MTH\$SIGN
0498	822				
0498	823	: MODULE:MTH\$SINH			
0498	824	MAC	CALL	MTH	MTH\$SINH
04A0	825				
04A0	826	: MODULE:MTH\$TAN			
04A0	827	MAC	CALL	MTH	MTH\$TAN
04A8	828				
04A8	829	: MODULE:MTH\$TANH			
04A8	830	MAC	CALL	MTH	MTH\$TANH
04B0	831				

```

04B0 833 :+
04B0 834 : General library entry points LIB$
04B0 835 :-
04B0 836
04B0 837
04B0 838 : MODULE:LIB$AST_IN_PROG
04B0 839 : MAC CALL LIB LIB$AST_IN_PROG
04B8 840
04B8 841 : MODULE:LIB$CHAR
04B8 842 : MAC NOVECT LIB LIB$CHAR
04B8 843
04B8 844 : MODULE:LIB$CRC
04B8 845 : MAC CALL LIB LIB$CRC
04C0 846
04C0 847 : MODULE:LIB$CRC_TABLE
04C0 848 : MAC CALL LIB LIB$CRC_TABLE
04C8 849
04C8 850 : MODULE:LIB$CVTDF
04C8 851 : MAC NOVECT LIB LIB$CVTDF
04C8 852
04C8 853
04C8 854 : MODULE:LIB$DEC_OVER
04C8 855 : MAC CALL LIB LIB$DEC_OVER
04D0 856
04D0 857 : MODULE:LIB$ESTABLISH
04D0 858 : MAC CALL LIB LIB$ESTABLISH
04D8 859
04D8 860 : MODULE:LIB$EXTV
04D8 861 : MAC CALL LIB LIB$EXTV
04E0 862
04E0 863 : MODULE:LIB$EXTZV
04E0 864 : MAC CALL LIB LIB$EXTZV
04E8 865
04E8 866 : MODULE:LIB$FFC
04E8 867 : MAC CALL LIB LIB$FFC
04F0 868
04F0 869 : MODULE:LIB$FFS
04F0 870 : MAC CALL LIB LIB$FFS
04F8 871
04F8 872 : MODULE:LIB$FIXUP_FLT
04F8 873 : MAC CALL LIB LIB$FIXUP_FLT
0500 874
0500 875 : MODULE:LIB$FLT_UNDER
0500 876 : MAC CALL LIB LIB$FLT_UNDER
0508 877
0508 878 : MODULE:LIB$GET_INPUT
0508 879 : MAC CALL LIB LIB$GET_INPUT
0510 880 : MAC CALL LIB LIB$GET_COMMAND
0518 881
0518 882 : MODULE:LIB$ICHR
0518 883 : MAC NOVECT LIB LIB$ICHR
0518 884
0518 885 : MODULE:LIB$INDEX
0518 886 : MAC CALL LIB LIB$INDEX
0520 887
0520 888 : MODULE:LIB$INITIALIZE
0520 889 : MAC NOVECT LIB LIB$INITIALIZE

```

```

0520 890
0520 891 : MODULE:LIB$INSV
0520 892       MAC      CALL    LIB      LIB$INSV
0528 893
0528 894 : MODULE:LIB$INT_OVER
0528 895       MAC      CALL    LIB      LIB$INT_OVER
0530 896
0530 897 : MODULE:LIB$LEN
0530 898       MAC      NOVECT LIB      LIB$LEN
0530 899
0530 900 : MODULE:LIB$LOCC
0530 901       MAC      CALL    LIB      LIB$LOCC
0538 902
0538 903 : MODULE:LIB$LOOKUP_KEY
0538 904       MAC      NOVECT LIB      LIB$LOOKUP_KEY
0538 905
0538 906 : MODULE:LIB$MATCHC
0538 907       MAC      CALL    LIB      LIB$MATCHC
0540 908
0540 909 : MODULE:LIB$MATCH_COND
0540 910       MAC      CALL    LIB      LIB$MATCH_COND
0548 911
0548 912 : MODULE:LIB$MOVTC
0548 913       MAC      CALL    LIB      LIB$MOVTC
0550 914
0550 915 : MODULE:LIB$MOVTUC
0550 916       MAC      CALL    LIB      LIB$MOVTUC
0558 917
0558 918 : MODULE:LIB$MSGDEF
0558 919       MAC      SYM      LIB      LIB$_AMBKEY
0558 920       MAC      SYM      LIB      LIB$_ATTCONSTO
0558 921       MAC      SYM      LIB      LIB$_BADBLOADR
0558 922       MAC      SYM      LIB      LIB$_BADBLOSIZ
0558 923       MAC      SYM      LIB      LIB$_BADSTA
0558 924       MAC      SYM      LIB      LIB$_EF_ALRFRE
0558 925       MAC      SYM      LIB      LIB$_EF_ALRRES
0558 926       MAC      SYM      LIB      LIB$_EF_RESSYS
0558 927       MAC      SYM      LIB      LIB$_FATERRLIB
0558 928       MAC      SYM      LIB      LIB$_INPSTRTRU
0558 929       MAC      SYM      LIB      LIB$_INSEF
0558 930       MAC      SYM      LIB      LIB$_INSVIRMEM
0558 931
0558 932       MAC      SYM      LIB      LIB$_INTLOGERR
0558 933       MAC      SYM      LIB      LIB$_INVARG
0558 934       MAC      SYM      LIB      LIB$_INVSTRDES
0558 935       MAC      SYM      LIB      LIB$_NORMAL
0558 936
0558 937       MAC      SYM      LIB      LIB$_NOTFOU
0558 938       MAC      SYM      LIB      LIB$_PUSSTAOVE
0558 939       MAC      SYM      LIB      LIB$_SIGNO_ARG
0558 940       MAC      SYM      LIB      LIB$_STRIS_INT
0558 941       MAC      SYM      LIB      LIB$_STRTRO
0558 942
0558 943       MAC      SYM      LIB      LIB$_UNRKEY
0558 944       MAC      SYM      LIB      LIB$_USEFLORES
0558 945       MAC      SYM      LIB      LIB$_WRONUMARG
0558 946

```

```

0558 947 : MODULE:LIB$PUT_OUTPUT
0558 948       MAC      CALL  LIB      LIB$PUT_OUTPUT
0560 949
0560 950 : MODULE:LIB$REVERT
0560 951       MAC      CALL  LIB      LIB$REVERT
0568 952
0568 953 : MODULE:LIB$SCANC
0568 954       MAC      CALL  LIB      LIB$SCANC
0570 955
0570 956 : MODULE:LIB$SCOPY
0570 957       MAC      CALL  LIB      LIB$SCOPY_DXD
0578 958       MAC      JSB   LIB      LIB$SCOPY_DXD6
0580 959       MAC      CALL  LIB      LIB$SCOPY_R_DX
0588 960       MAC      JSB   LIB      LIB$SCOPY_R_DX6
0590 961       MAC      CALL  LIB      LIB$GET1_DD
0598 962       MAC      JSB   LIB      LIB$GET1_DD_R6
05A0 963       MAC      CALL  LIB      LIB$FREE1_DD
05A8 964       MAC      JSB   LIB      LIB$FREE1_DD6
05B0 965       MAC      CALL  LIB      LIB$FREE1_DD
05B8 966       MAC      JSB   LIB      LIB$FREE1_DD6
05C0 967
05C0 968 : MODULE:LIB$STAT_VM
05C0 969       MAC      CALL  LIB      LIB$STAT_VM
05C8 970
05C8 971 : MODULE:LIB$SIGNAL
05C8 972       MAC      CALL  LIB      LIB$SIGNAL
05D0 973       MAC      CALL  LIB      LIB$STOP
05D8 974
05D8 975 : MODULE:LIB$SIG_TO_RET
05D8 976
05D8 977       MAC      CALL  LIB      LIB$SIG_TO_RET
05E0 978
05E0 979 : MODULE:LIB$SKPC
05E0 980       MAC      CALL  LIB      LIB$SKPC
05E8 981
05E8 982 : MODULE:LIB$SPANC
05E8 983       MAC      CALL  LIB      LIB$SPANC
05F0 984
05F0 985 : MODULE:LIB$SYS_ASCTIM
05F0 986       MAC      NOVECT LIB      LIB$SYS_ASCTIM
05F0 987
05F0 988 : MODULE:LIB$SYS_FAO
05F0 989       MAC      NOVECT LIB      LIB$SYS_FAO
05F0 990
05F0 991 : MODULE:LIB$SYS_FAOL
05F0 992       MAC      NOVECT LIB      LIB$SYS_FAOL
05F0 993
05F0 994 : MODULE:LIB$SYS_GETMSG
05F0 995       MAC      NOVECT LIB      LIB$SYS_GETMSG
05F0 996
05F0 997 : MODULE:LIB$SYS_TRNLOG
05F0 998       MAC      NOVECT LIB      LIB$SYS_TRNLOG
05F0 999
05F0 1000 : MODULE:LIB$VM
05F0 1001       MAC      CALL  LIB      LIB$FREE_VM
05F8 1002       MAC      CALL  LIB      LIB$GET_VM
0600 1003

```

```
0600 1004 : MODULE:LIB$STAT_VM
0600 1005 :           MAC      CALL      LIB      LIB$SHOW_VM
0608 1006
0608 1007 : MODULE:LIB$CURRENCY
0608 1008 :           MAC      NOVECT  LIB      LIB$CURRENCY
0608 1009
0608 1010 : MODULE:LIB$DIGIT_SEP
0608 1011 :           MAC      NOVECT  LIB      LIB$DIGIT_SEP
0608 1012
0608 1013 : MODULE:LIB$RADIX_POINT
0608 1014 :           MAC      NOVECT  LIB      LIB$RADIX_POINT
0608 1015
0608 1016 : MODULE:LIB$RUN_PROGRAM
0608 1017 :           MAC      NOVECT  LIB      LIB$RUN_PROGRAM
0608 1018
0608 1019 : MODULE:LIB$DO_COMMAND
0608 1020 :           MAC      NOVECT  LIB      LIB$DO_COMMAND
0608 1021
0608 1022 : MODULE:LIB$COMMON
0608 1023 :           MAC      NOVECT  LIB      LIB$GET_COMMON
0608 1024 :           MAC      NOVECT  LIB      LIB$PUT_COMMON
0608 1025
0608 1026 : MODULE:LIB$TRA_ASC_EBC
0608 1027 :           MAC      NOVECT  LIB      LIB$TRA_ASC_EBC
0608 1028
0608 1029 : MODULE:LIB$TRA_EBC_ASC
0608 1030 :           MAC      NOVECT  LIB      LIB$TRA_EBC_ASC
0608 1031
0608 1032 : MODULE:LIB$INSQHI
0608 1033 :           MAC      NOVECT  LIB      LIB$INSQHI
0608 1034
0608 1035 : MODULE:LIB$INSQTI
0608 1036 :           MAC      NOVECT  LIB      LIB$INSQTI
0608 1037
0608 1038 : MODULE:LIB$REMQHI
0608 1039 :           MAC      NOVECT  LIB      LIB$REMQHI
0608 1040
0608 1041 : MODULE:LIB$REMQTI
0608 1042 :           MAC      NOVECT  LIB      LIB$REMQTI
0608 1043
```



```

0608 1045 :+
0608 1046 : Internal entry points which need vectors because the non-shared
0608 1047 : library must call these procedures in shared library, rather
0608 1048 : than getting a copy of the procedure from the object library.
0608 1049 : Note: the instances of $$ entry vectors is to be minimized.
0608 1050 : The only cases where it hurts to have two copies of a procedure
0608 1051 : is when the procedure has statically allocated (OWN) data
0608 1052 : which is used as a process-wide resource.
0608 1053 : Note: in order to prevent linker data truncation errors, all modules
0608 1054 : which are shared and are also linked in as private copies when
0608 1055 : $$entry points are referenced by non-shared routines called by the user
0608 1056 : must declare external references to code as general (not word displacement)
0608 1057 : even if the reference is to the same PSECT!!!!
0608 1058 : Modules which have this dual life are: FOR$$ERROR, FOR$$VM, FOR$$SIGNAL.
0608 1059 : *****
0608 1060 : MAINTENANCE NOTE: The following $$ entry vectors can not have their
0608 1061 : specs changed, even though $$, since that would cause user programs
0608 1062 : with compatibility (unshared) routines to have to re-link in order to
0608 1063 : work correctly. Worse we would not want to increase the major ID in
0608 1064 : order for the image activator to catch the incompatibility, since
0608 1065 : that would cause all users to have to relink.
0608 1066 :-
0608 1067 :
0608 1068 : MODULE:FOR$$CB
0608 1069 :     MAC     JSB     FOR     FOR$$CB_PUSH
0610 1070 :     MAC     JSB     FOR     FOR$$CB_POP
0618 1071 :     MAC     JSB     FOR     FOR$$CB_RET
0620 1072 :     MAC     JSB     FOR     FOR$$CB_GET           ; Added for non-shared code
0628 1073 :                                                     ; to load CCB from OTSS$A_CUR_LUB
0628 1074 :
0628 1075 :
0628 1076 : MODULE:FOR$ERRSNS
0628 1077 :     MAC     CALL    FOR     FOR$ERRSNS_SAV       ; See also above FOR$ERRSNS, FOR$ERRSNS_W
0630 1078 :

```

```

0630 1080 :+
0630 1081 :
0630 1082 : Here starts all new entry points defined after VMS 1.00.
0630 1083 : Unless a FUTURE above can be replaced, all new transfer
0630 1084 :- points MUST be appended to the end of this list!
0630 1085 :
0630 1086 MAC CALL FOR FOR$IO_DC_V ; by ref above
0638 1087 MAC CALL FOR FOR$IO_GC_V
0640 1088
0640 1089 : MODULE FOR$CVTRT
0640 1090 MAC CALL FOR FOR$CVT_G_TD
0648 1091 MAC CALL FOR FOR$CVT_G_TE
0650 1092 MAC CALL FOR FOR$CVT_G_TF
0658 1093 MAC CALL FOR FOR$CVT_G_TG
0660 1094
0660 1095 : MODULE OT$SCVTTR
0660 1096 MAC CALL OTS OT$SCVT_T_G
0668 1097
0668 1098 : MODULE FOR$CVTRT
0668 1099 MAC CALL FOR FOR$CVT_H_TD
0670 1100 MAC CALL FOR FOR$CVT_H_TE
0678 1101 MAC CALL FOR FOR$CVT_H_TF
0680 1102 MAC CALL FOR FOR$CVT_H_TG
0688 1103
0688 1104 : MODULE OT$SCVTTR
0688 1105 MAC CALL OTS OT$SCVT_T_H
0690 1106
0690 1107 : MODULE OT$SCVTLT - Old entry points under FOR$
0690 1108 MAC CALL OTS OT$SCVT_L_TI
0698 1109 MAC CALL OTS OT$SCVT_L_TO
06A0 1110 MAC CALL OTS OT$SCVT_L_TZ
06A8 1111 MAC CALL OTS OT$SCVT_L_TL
0680 1112
0680 1113 : MODULE FOR$ENTRY continued from above
0680 1114 MAC CALL FOR FOR$REWRITE_SF FOR$$IO_BEG
06B8 1115 MAC CALL FOR FOR$REWRITE_SO FOR$$IO_BEG
06C0 1116 MAC CALL FOR FOR$REWRITE_SU FOR$$IO_BEG
06C8 1117 MAC CALL FOR FOR$READ_IF FOR$$IO_BEG
06D0 1118 MAC CALL FOR FOR$READ_IO FOR$$IO_BEG
06D8 1119 MAC CALL FOR FOR$WRITE_IF FOR$$IO_BEG
06E0 1120 MAC CALL FOR FOR$WRITE_IO FOR$$IO_BEG
06E8 1121
06E8 1122 : MODULE FOR$DELETE
06E8 1123 MAC CALL FOR FOR$DELETE
06F0 1124 MAC CALL FOR FOR$DELETE_D
06F8 1125
06F8 1126 : MODULE FOR$INQUIRE
06F8 1127 MAC CALL FOR FOR$INQUIRE
0700 1128
0700 1129 : MODULE FOR$UNLOCK
0700 1130 MAC CALL FOR FOR$UNLOCK
0708 1131
0708 1132 : MODULE FOR$ENTRY continued
0708 1133 MAC CALL FOR FOR$READ_KU FOR$$IO_BEG
0710 1134
0710 1135 : MODULE FOR$LEX
0710 1136 MAC NOVECT FOR FOR$LGE

```

0710	1137	MAC	NOVECT	FOR	FORSLGT
0710	1138	MAC	NOVECT	FOR	FORSLLE
0710	1139	MAC	NOVECT	FOR	FORSLLT
0710	1140				
0710	1141	; MODULE LIB\$ADDX			
0710	1142	MAC	NOVECT	LIB	LIB\$ADDX
0710	1143	MAC	NOVECT	LIB	LIB\$SUBX
0710	1144				
0710	1145	; MODULE LIB\$ASN_WTH_MBX			
0710	1146	MAC	NOVECT	LIB	LIB\$ASN_WTH_MBX
0710	1147				
0710	1148	; MODULE LIB\$DAY			
0710	1149	MAC	NOVECT	LIB	LIB\$DAY
0710	1150				
0710	1151	; MODULE LIB\$EMODF			
0710	1152	MAC	NOVECT	LIB	LIB\$EMODF
0710	1153				
0710	1154	; MODULE LIB\$EMODD			
0710	1155	MAC	NOVECT	LIB	LIB\$EMODD
0710	1156				
0710	1157	; MODULE LIB\$EMODG			
0710	1158	MAC	NOVECT	LIB	LIB\$EMODG
0710	1159				
0710	1160	; MODULE LIB\$EMODH			
0710	1161	MAC	NOVECT	LIB	LIB\$EMODH
0710	1162				
0710	1163	; MODULE LIB\$EMULATE			
0710	1164	MAC	NOVECT	LIB	LIB\$EMULATE
0710	1165				
0710	1166	; MODULE LIB\$ESTEMU			
0710	1167	MAC	NOVECT	LIB	LIB\$ESTEMU
0710	1168				
0710	1169	; MODULE LIB\$GET_FOREIGN			
0710	1170	MAC	NOVECT	LIB	LIB\$GET_FOREIGN
0710	1171				
0710	1172	; MODULE LIB\$POLYF			
0710	1173	MAC	NOVECT	LIB	LIB\$POLYF
0710	1174				
0710	1175	; MODULE LIB\$POLYD			
0710	1176	MAC	NOVECT	LIB	LIB\$POLYD
0710	1177				
0710	1178	; MODULE LIB\$POLYG			
0710	1179	MAC	NOVECT	LIB	LIB\$POLYG
0710	1180				
0710	1181	; MODULE LIB\$POLYH			
0710	1182	MAC	NOVECT	LIB	LIB\$POLYH
0710	1183				
0710	1184	; MODULE LIB\$SIM_TRAP			
0710	1185	MAC	NOVECT	LIB	LIB\$SIM_TRAP
0710	1186				
0710	1187	; MODULE LIB\$TIMER			
0710	1188	MAC	NOVECT	LIB	LIB\$INIT_TIMER
0710	1189	MAC	NOVECT	LIB	LIB\$SHOW_TIMER
0710	1190	MAC	NOVECT	LIB	LIB\$STAT_TIMER
0710	1191	MAC	NOVECT	LIB	LIB\$FREE_TIMER
0710	1192				
0710	1193	; MODULE MTH\$AINT			

```

0710 1194          MAC      NOVECT  MTH      MTHSAINT_R2
0710 1195
0710 1196 : MODULE MTHSCVTDG
0710 1197          MAC      NOVECT  MTH      MTHSCVT_D_G
0710 1198          MAC      NOVECT  MTH      MTHSCVT_G_D
0710 1199
0710 1200 : MODULE MTH$DFLOOR
0710 1201          MAC      NOVECT  MTH      MTH$DFLOOR
0710 1202          MAC      NOVECT  MTH      MTH$DFLOOR_R3
0710 1203
0710 1204 : MODULE MTH$DIM
0710 1205          MAC      NOVECT  MTH      MTH$GDIM
0710 1206          MAC      NOVECT  MTH      MTH$HDIM
0710 1207
0710 1208 : MODULE MTH$DINT
0710 1209          MAC      NOVECT  MTH      MTH$DINT_R4
0710 1210
0710 1211 : MODULE MTH$DTAN
0710 1212          MAC      JSB      MTH      MTH$DTAN_R7
0718 1213
0718 1214 : MODULE MTH$FLOOR
0718 1215          MAC      NOVECT  MTH      MTH$FLOOR
0718 1216          MAC      NOVECT  MTH      MTH$FLOOR_R1
0718 1217
0718 1218 : MODULE MTH$GACOS
0718 1219          MAC      NOVECT  MTH      MTH$GACOS
0718 1220          MAC      NOVECT  MTH      MTH$GACOS_R7
0718 1221
0718 1222 : MODULE MTH$GASIN
0718 1223          MAC      NOVECT  MTH      MTH$GASIN
0718 1224          MAC      NOVECT  MTH      MTH$GASIN_R7
0718 1225
0718 1226 : MODULE MTH$GATANH
0718 1227          MAC      NOVECT  MTH      MTH$GATANH
0718 1228
0718 1229 : MODULE MTH$GCOSH
0718 1230          MAC      NOVECT  MTH      MTH$GCOSH
0718 1231
0718 1232 : MODULE MTH$GEXP
0718 1233          MAC      NOVECT  MTH      MTH$GEXP
0718 1234          MAC      NOVECT  MTH      MTH$GEXP_R6
0718 1235
0718 1236 : MODULE MTH$GFLOOR
0718 1237          MAC      NOVECT  MTH      MTH$GFLOOR
0718 1238          MAC      NOVECT  MTH      MTH$GFLOOR_R3
0718 1239
0718 1240 : MODULE MTH$GINT
0718 1241          MAC      NOVECT  MTH      MTH$GINT
0718 1242          MAC      NOVEC   MTH      MTH$GINT_R4
0718 1243
0718 1244 : MODULE MTH$GMAX1
0718 1245          MAC      NOVECT  MTH      MTH$GMAX1
0718 1246
0718 1247 : MODULE MTH$GMIN1
0718 1248          MAC      NOVECT  MTH      MTH$GMIN1
0718 1249
0718 1250 : MODULE MTH$GMOD

```

```

0718 1251          MAC      NOVECT  MTH      MTH$GMOD
0718 1252
0718 1253 : MODULE MTH$GNINT
0718 1254          MAC      NOVECT  MTH      MTH$GNINT
0718 1255
0718 1256 : MODULE MTH$GPROD
0718 1257          MAC      NOVECT  MTH      MTH$GPROD
0718 1258
0718 1259 : MODULE MTH$GSIGN
0718 1260          MAC      NOVECT  MTH      MTH$GSIGN
0718 1261
0718 1262 : MODULE MTH$GSINCOS
0718 1263          MAC      NOVECT  MTH      MTH$GSIN
0718 1264          MAC      NOVECT  MTH      MTH$GCOS
0718 1265          MAC      NOVECT  MTH      MTH$GSIN_R7
0718 1266          MAC      NOVECT  MTH      MTH$GCOS_R7
0718 1267
0718 1268 : MODULE MTH$GSINH
0718 1269          MAC      NOVECT  MTH      MTH$GSINH
0718 1270
0718 1271 : MODULE MTH$GSQRT
0718 1272          MAC      NOVECT  MTH      MTH$GSQRT
0718 1273          MAC      NOVECT  MTH      MTH$GSQRT_R5
0718 1274
0718 1275 : MODULE MTH$GTAN
0718 1276          MAC      NOVECT  MTH      MTH$GTAN
0718 1277          MAC      NOVECT  MTH      MTH$GTAN_R7
0718 1278
0718 1279 : MODULE MTH$GTANH
0718 1280          MAC      NOVECT  MTH      MTH$GTANH
0718 1281
0718 1282 : MODULE MTH$HACOS
0718 1283          MAC      NOVECT  MTH      MTH$HACOS
0718 1284          MAC      NOVECT  MTH      MTH$HACOS_R8
0718 1285
0718 1286 : MODULE MTH$HASIN
0718 1287          MAC      NOVECT  MTH      MTH$HASIN
0718 1288          MAC      NOVECT  MTH      MTH$HASIN_R8
0718 1289
0718 1290 : MODULE MTH$HCOSH
0718 1291          MAC      NOVECT  MTH      MTH$HCOSH
0718 1292
0718 1293 : MODULE MTH$HEXP
0718 1294          MAC      NOVECT  MTH      MTH$HEXP
0718 1295          MAC      NOVECT  MTH      MTH$HEXP_R6
0718 1296
0718 1297 : MODULE MTH$HFLOOR
0718 1298          MAC      NOVECT  MTH      MTH$HFLOOR
0718 1299          MAC      NOVECT  MTH      MTH$HFLOOR_R7
0718 1300
0718 1301 : MODULE MTH$HINT
0718 1302          MAC      NOVECT  MTH      MTH$HINT
0718 1303          MAC      NOVECT  MTH      MTH$HINT_R8
0718 1304 : MODULE MTH$HMAX1
0718 1305          MAC      NOVECT  MTH      MTH$HMAX1
0718 1306
0718 1307 : MODULE MTH$HMIN1

```

```

0718 1308          MAC      NOVECT  MTH      MTH$HMIN1
0718 1309
0718 1310 ; MODULE MTH$HMOD
0718 1311          MAC      NOVECT  MTH      MTH$HMOD
0718 1312
0718 1313 ; MODULE MTH$HNINT
0718 1314          MAC      NOVECT  MTH      MTH$HNINT
0718 1315
0718 1316 ; MODULE MTH$HSIGN
0718 1317          MAC      NOVECT  MTH      MTH$HSIGN
0718 1318
0718 1319 ; MODULE MTH$HSINCOS
0718 1320          MAC      NOVECT  MTH      MTH$HSIN
0718 1321          MAC      NOVECT  MTH      MTH$HSIN_R5
0718 1322          MAC      NOVECT  MTH      MTH$HCOS
0718 1323          MAC      NOVECT  MTH      MTH$HCOS_R5
0718 1324
0718 1325 ; MODULE MTH$HSINH
0718 1326          MAC      NOVECT  MTH      MTH$HSINH
0718 1327
0718 1328 ; MODULE MTH$HSQRT
0718 1329          MAC      NOVECT  MTH      MTH$HSQRT
0718 1330          MAC      NOVECT  MTH      MTH$HSQRT_R8
0718 1331
0718 1332 ; MODULE MTH$HTAN
0718 1333          MAC      NOVECT  MTH      MTH$HTAN
0718 1334          MAC      NOVECT  MTH      MTH$HTAN_R5
0718 1335
0718 1336 ; MODULE MTH$HTANH
0718 1337          MAC      NOVECT  MTH      MTH$HTANH
0718 1338
0718 1339 ; MODULE MTH$IIGNNT
0718 1340          MAC      NOVECT  MTH      MTH$IIGNNT
0718 1341
0718 1342 ; MODULE MTH$IIHNNT
0718 1343          MAC      NOVECT  MTH      MTH$IIHNNT
0718 1344
0718 1345 ; MODULE MTH$JIGNNT
0718 1346          MAC      NOVECT  MTH      MTH$JIGNNT
0718 1347
0718 1348 ; MODULE MTH$JIHNNT
0718 1349          MAC      NOVECT  MTH      MTH$JIHNNT
0718 1350
0718 1351 ; MODULE MTH$STAN
0718 1352          MAC      JSB      MTH      MTH$STAN_R4
0720 1353
0720 1354 ; MODULE MTH$SGN
0720 1355          MAC      NOVECT  MTH      MTH$SGN
0720 1356          MAC      NOVECT  MTH      MTH$SGN_R1
0720 1357
0720 1358 ; MODULE OTS$POWGG
0720 1359          MAC      NOVECT  OTS     OTS$POWGG
0720 1360
0720 1361 ; MODULE OTS$POWGJ
0720 1362          MAC      NOVECT  OTS     OTS$POWGJ
0720 1363
0720 1364 ; MODULE OTS$POWHJ

```

```

0720 1365      MAC      NOVECT  OTS      OTSS$POWHJ_R3
0720 1366
0720 1367 ; MODULE OTSS$DIVCD
0720 1368      MAC      NOVECT  OTS      OTSS$DIVCD_R3
0720 1369
0720 1370 ; MODULE OTSS$DIVCG
0720 1371      MAC      NOVECT  OTS      OTSS$DIVCG_R3
0720 1372
0720 1373 ; MODULE OTSS$MULCD
0720 1374      MAC      NOVECT  OTS      OTSS$MULCD_R3
0720 1375
0720 1376 ; MODULE OTSS$MULCG
0720 1377      MAC      NOVECT  OTS      OTSS$MULCG_R3
0720 1378
0720 1379 ; MODULE MTH$CDABS
0720 1380      MAC      NOVECT  MTH      MTH$CDABS
0720 1381
0720 1382 ; MODULE MTH$DCONJG
0720 1383      MAC      NOVECT  MTH      MTH$DCONJG
0720 1384
0720 1385 ; MODULE MTH$CDEXP
0720 1386      MAC      NOVECT  MTH      MTH$CDEXP
0720 1387
0720 1388 ; MODULE MTH$CDLOG
0720 1389      MAC      NOVECT  MTH      MTH$CDLOG
0720 1390
0720 1391 ; MODULE MTH$CDSINCOS
0720 1392      MAC      NOVECT  MTH      MTH$CDCOS
0720 1393      MAC      NOVECT  MTH      MTH$CDSIN
0720 1394
0720 1395 ; MODULE MTH$CDSQRT
0720 1396      MAC      NOVECT  MTH      MTH$CDSQRT
0720 1397
0720 1398 ; MODULE MTH$CGABS
0720 1399      MAC      NOVECT  MTH      MTH$CGABS
0720 1400
0720 1401 ; MODULE MTH$GCONJG
0720 1402      MAC      NOVECT  MTH      MTH$GCONJG
0720 1403
0720 1404 ; MODULE MTH$CGEXP
0720 1405      MAC      NOVECT  MTH      MTH$CGEXP
0720 1406
0720 1407 ; MODULE MTH$CGLOG
0720 1408      MAC      NOVECT  MTH      MTH$CGLOG
0720 1409
0720 1410 ; MODULE MTH$CGSINCOS
0720 1411      MAC      NOVECT  MTH      MTH$CGCOS
0720 1412      MAC      NOVECT  MTH      MTH$CGSIN
0720 1413
0720 1414 ; MODULE MTH$CGSQRT
0720 1415      MAC      NOVECT  MTH      MTH$CGSQRT
0720 1416
0720 1417 ; MODULE OTSS$POWCC
0720 1418      MAC      NOVECT  OTS      OTSS$POWCC
0720 1419
0720 1420 ; MODULE OTSS$POWCDCD
0720 1421      MAC      NOVECT  OTS      OTSS$POWCDCD_R3

```

```

0720 1422
0720 1423 ; MODULE OTSS$POWCDJ
0720 1424     MAC      NOVECT  OTS      OTSS$POWCDJ_R3
0720 1425
0720 1426 ; MODULE OTSS$POWCGCG
0720 1427     MAC      NOVECT  OTS      OTSS$POWCGCG_R3
0720 1428
0720 1429 ; MODULE OTSS$POWCGJ
0720 1430     MAC      NOVECT  OTS      OTSS$POWCGJ_R3
0720 1431
0720 1432 ; MODULE OTSS$POWHH
0720 1433     MAC      NOVECT  OTS      OTSS$POWHH_R3
0720 1434
0720 1435 ; MODULE MTH$SQRT
0720 1436     MAC      JSB      MTH      MTH$SQRT_R3
0728 1437
0728 1438 ;+
0728 1439 ; The following routine is called from FOR$$ERROR, therefore
0728 1440 ; it must be vectored.
0728 1441 ;-
0728 1442
0728 1443 ; MODULE FOR$$CB (continued)
0728 1444     MAC      CALL      FOR      FOR$$FP_MATCH
0730 1445
0730 1446 ; MODULE FOR$READ_SN
0730 1447     MAC      CALL      FOR      FOR$READ_SN      FOR$$IO_BEG
0738 1448
0738 1449 ; MODULE FOR$WRITE_SN
0738 1450     MAC      CALL      FOR      FOR$WRITE_SN      FOR$$IO_BEG
0740 1451
0740 1452 ; MODULE FOR$IO_ELEM (continued)
0740 1453     MAC      CALL      FOR      FOR$IO_X_SB
0748 1454     MAC      CALL      FOR      FOR$IO_X_NL
0750 1455     MAC      CALL      FOR      FOR$IO_X_SE
0758 1456
0758 1457 ; MODULE OTSS$CVTLT (continued)
0758 1458     MAC      CALL      OTS      OTSS$CVT_L_TB
0760 1459
0760 1460 ; MODULE OTSS$CVTTOL (continued)
0760 1461     MAC      CALL      OTS      OTSS$CVT_TB_L
0768 1462
0768 1463 ; MODULE OTSS$CVTTF
0768 1464     MAC      CALL      OTS      OTSS$CVT_T_F
0770 1465
0770 1466 ; MODULE LIB$ATTACH
0770 1467     MAC      CALL      LIB      LIB$ATTACH
0778 1468
0778 1469 ; MODULE LIB$SPAWN
0778 1470     MAC      CALL      LIB      LIB$SPAWN
0780 1471
0780 1472 ; MODULE LIB$GET_OPCODE
0780 1473     MAC      CALL      LIB      LIB$GET_OPCODE
0788 1474
0788 1475 ; MODULE FOR$RAB
0788 1476     MAC      CALL      FOR      FOR$RAB
0790 1477
0790 1478 ;+

```



```

0790 1479 ; The following three entry points are for the 'kernel' floating output
0790 1480 ; conversion routines. Although they are 'double-dollar' names, they are
0790 1481 ; vectored so that future language-specific shareable images can use them.
0790 1482 ; -
0790 1483 ;
0790 1484 ; MODULE OTSS$CVTDT
0790 1485 ;     MAC     JSB     OTS     OTSS$CVT_D_T_R8
0798 1486 ;
0798 1487 ; MODULE OTSS$CVTRT
0798 1488 ;     MAC     JSB     OTS     OTSS$CVT_G_T_R8
07A0 1489 ;     MAC     JSB     OTS     OTSS$CVT_H_T_R8
07A8 1490 ;
07A8 1491 ; +
07A8 1492 ; The following entries are present only so that there will be references
07A8 1493 ; to these symbols in this module. Without them, the linker complains.
07A8 1494 ; Note that these entries are not universal, so they cannot be referenced
07A8 1495 ; by those linking to this image.
07A8 1496 ; -
07A8 1497 ;
00000000'GF 0000' 07A8 1498 ; .MASK  BAS$$HANDLER
17 07AA 1499 ; JMP    G^BAS$$HANDLER
00000000'GF 0000' 07B0 1500 ; .MASK  COB$$HANDLER
17 07B2 1501 ; JMP    G^COB$$HANDLER
00000000'GF 0000' 07B8 1502 ; .MASK  FOR$$IO_BEG
17 07BA 1503 ; JMP    G^FOR$$IO_BEG
07C0 1504 ;

```



```

0800 1517 :+
0800 1518 : The following entry points are for the string library.
0800 1519 : The JSB entry points are later.
0800 1520 :-
0800 1521 MAC CALL STR STR$CONCAT ; Concatenate strings
0808 1522 MAC CALL STR STR$COPY_DX ; Copy by descriptor
0810 1523 MAC CALL STR STR$COPY_R ; Copy by reference
0818 1524 MAC CALL STR STR$FREE_DX ; Free a string
0820 1525 MAC CALL STR STR$GET1_DX ; Allocate a string
0828 1526 MAC NOVECT STR STR$ADD ; Add two strings
0828 1527 MAC NOVECT STR STR$MUL ; Multiply two strings
0828 1528 MAC NOVECT STR STR$RECIP ; Take 1/ a string
0828 1529 MAC NOVECT STR STR$ROUND ; Arithmeticly round a string
0828 1530 MAC CALL STR STR$LEFT ; Take left part of string
0830 1531 MAC NOVECT STR STR$LEFT_R8 ; (JSB entry point)
0830 1532 MAC CALL STR STR$LEN_EXTR ; Extract from a string by l
0838 1533 MAC NOVECT STR STR$LEN_EXTR_R8 ; (JSB entry point)
0838 1534 MAC CALL STR STR$POS_EXTR ; Extract from a string by p
0840 1535 MAC NOVECT STR STR$POS_EXTR_R8 ; (JSB entry point)
0840 1536 MAC CALL STR STR$POSITION ;
0848 1537 MAC NOVECT STR STR$POSITION_R6 ; (JSB entry point)
0848 1538 MAC CALL STR STR$RIGHT ; Take right part of a string
0850 1539 MAC NOVECT STR STR$RIGHT_R8 ; (JSB entry point)
0850 1540 MAC CALL STR STR$DUPL_CHAR ; Make lots of a character
0858 1541 MAC CALL STR STR$TRIM ; Remove trailing blanks
0860 1542 MAC FUTURE STR STR$FUTURE_1 ; Reserved for future expans
0868 1543 MAC FUTURE STR STR$FUTURE_2
0870 1544 MAC FUTURE STR STR$FUTURE_3
0878 1545 :+
0878 1546 : String condition codes
0878 1547 :-
0878 1548 MAC SYM STR STR$_DIVBY_ZER ; Divide by zero
0878 1549 MAC SYM STR $_FATINTERR ; Fatal internal error
0878 1550 MAC SYM STR $_ILLSTRCLA ; Illegal string class
0878 1551 MAC SYM STR $_ILLSTRPOS
0878 1552 MAC SYM STR $_ILLSTRSPE
0878 1553 MAC SYM STR $_INSVIRMEM
0878 1554 MAC SYM STR $_MATCH
0878 1555 MAC SYM STR $_NEGSTRLEN
0878 1556 MAC SYM STR $_NOMATCH
0878 1557 MAC SYM STR $_NORMAL
0878 1558 MAC SYM STR $_STRIS_INT
0878 1559 MAC SYM STR $_STRTOOLON
0878 1560 MAC SYM STR $_TRU
0878 1561 MAC SYM STR $_WRONUMARG
0878 1562

```

```
0878 1564 :+
0878 1565 : The following entry points are generated by the BASIC-PLUS-2
0878 1566 : compiler. The current arrangement of which are vectored is tentative.
0878 1567 :-
0878 1568 :
0878 1569 :
0878 1570 :
0878 1571 :
0878 1572 :
0880 1573 :
0880 1574 :
0888 1575 :
0888 1576 :
0888 1577 :
0888 1578 :
0888 1579 :
0888 1580 :
0888 1581 :
0890 1582 :
0898 1583 :
0898 1584 :
0898 1585 :
0898 1586 :
0898 1587 :
```

ARITHMETIC CODE SUPPORT

MAC	NOVECT	BAS	BASS\$POWII	:	Integer(w) ** Integer(w)
MAC	JSB	BAS	BASS\$SCALE_D_R1	:	Scale a number
MAC	NOVECT	BAS	BASS\$POWJJ	:	Long ** Long
MAC	JSB	BAS	BASS\$DSCALE_D_R1	:	Descal a number
MAC	NOVECT	BAS	BASS\$POWRJ	:	Float ** Long
MAC	NOVECT	BAS	BASS\$POWRR	:	Float ** Float
MAC	NOVECT	BAS	BASS\$POWDJ	:	Double ** Long
MAC	NOVECT	BAS	BASS\$POWDD	:	Double ** Double
MAC	NOVECT	BAS	BASS\$RND_F_R1	:	Return random number
MAC	NOVECT	BAS	BASS\$RANDOMIZE	:	Perturb the random seed
MAC	CALL	BAS	BASS\$CMPF_APP	:	Approximate float compare
MAC	CALL	BAS	BASS\$CMPD_APP	:	Approximate double compar

STRING CODE SUPPORT

MAC	NOVECT	BAS	BASS\$CHANGE_NA_S	:	CHANGE A% to A\$
MAC	NOVECT	BAS	BASS\$CHANGE_S_NA	:	CHANGE A\$ to A%

```

0898 1589 :
0898 1590 :
0898 1591 :
0898 1592 :
08A0 1593 :
08A8 1594 :
08B0 1595 :
08B0 1596 :
08B0 1597 :
08B8 1598 :
08B8 1599 :
08B8 1600 :
08B8 1601 :
08C0 1602 :
08C8 1603 :
08D0 1604 :
08D8 1605 :
08E0 1606 :
08E8 1607 :
08F0 1608 :
08F8 1609 :
0900 1610 :
0900 1611 :
0900 1612 :
0908 1613 :
0910 1614 :
0918 1615 :

```

STRING FUNCTIONS

```

MAC CALL BAS BASSRSET : String move, right justif
MAC CALL BAS BASSRSET_R : By-ref entry point
MAC CALL BAS BASSEDIT : String editing
MAC NOVECT BAS BASSFORMAT_F : Floating FORMATS
MAC NOVECT BAS BASSFORMAT_D : Double FORMATS
MAC CALL BAS BASSINSTR : Match substring
MAC NOVECT BAS BASSRAD : RADIX 50
MAC NOVECT BAS BASSRAD50 : RADIX 50
MAC NOVECT BAS BASSSTOP : STOP statement (** here
MAC CALL BAS BASSSTR_F : Return binary->ASCII numb
MAC CALL BAS BASSSTR_D : Ditto for double
MAC CALL BAS BASSSTR_L : Ditto for longword
MAC CALL BAS BASSNUM_F : Return binary->ASCII numb
MAC CALL BAS BASSNUM_D : Ditto for e
MAC CALL BAS BASSNUM_L : Ditto for word
MAC CALL BAS BASSNUMT_F : Return binary->ASCII numb
MAC CALL BAS BASSNUM1_D : Ditto for double
MAC CALL BAS BASSNUM1_L : Ditto for longword
MAC NOVECT BAS BASSTAB : Tab over x spaces
MAC NOVECT BAS BASSTIME_T : 24 hour time string
MAC CALL BAS BASSVAL_C : Return ASCII->binary stri
MAC CALL BAS BASSVAL_F : Ditto for floating
MAC CALL BAS BASSVAL_D : Ditto for double
MAC NOVECT BAS BASSXLATE : Translate a string

```

```

0918 1617 :
0918 1618 :
0918 1619 :
0918 1620 :
0918 1621 :
0918 1622 :
0918 1623 :
0918 1624 :
0918 1625 :
0918 1626 :
0918 1627 :
0918 1628 :
0918 1629 :
0920 1630 :
0928 1631 :
0930 1632 :
0938 1633 :
0938 1634 :
0940 1635 :
0948 1636 :
0950 1637 :
0958 1638 :
0958 1639 :
0958 1640 :
0958 1641 :
0960 1642 :
0968 1643 :
0970 1644 :
0978 1645 :
0980 1646 :
0988 1647 :
0990 1648 :
0998 1649 :
0998 1650 :

```

				STRING ARITHMETIC		
MAC	NOVECT	BAS	BASSCOMP	:	String arith compare	
MAC	NOVECT	BAS	BASSDIF	:	S.A. difference	
MAC	NOVECT	BAS	BASSPLACE	:	S.A. precision	
MAC	NOVECT	BAS	BASSPROD	:	S.A. multiplication	
MAC	NOVECT	BAS	BASSQUO	:	S.A. division	
MAC	NOVECT	BAS	BASSSUM	:	S.A. addition	
				PROCEDURE ACTIVATION		
MAC	JSB	BAS	BASSINIT_R8	:	Main program initializer	
MAC	JSB	BAS	BASSINIT_DEF_R8	:	DEF function initializer	
MAC	JSB	BAS	BASSINIT_DFS_R8	:	DEF* function initializer	
MAC	CALL	BAS	BASSINIT_GOSUB	:	GOSUB initializer	
MAC	NOVECT	BAS	BASSINIT_C_GSB	:	ON-GOSUB initializer	
MAC	JSB	BAS	BASSEND_R8	:	Main program ender	
MAC	JSB	BAS	BASSEND_DEF_R8	:	DEF function end	
MAC	JSB	BAS	BASSEND_DFS_R8	:	DEF* function end	
MAC	JSB	BAS	BASSEND_GSB_R8	:	GOSUB end	
				ERROR HANDLING		
MAC	CALL	BAS	BASSON_ERR_Z	:	ON ERROR GOTO 0	
MAC	CALL	BAS	BASSON_ERR_BK	:	ON ERROR GOBACK	
MAC	CALL	BAS	BASSRESUME	:	RESUME line num	
MAC	CALL	BAS	BASSRESUME_Z	:	RESUME	
MAC	CALL	BAS	BASSERR	:	ERR variable	
MAC	CALL	BAS	BASSERL	:	ERL variable	
MAC	CALL	BAS	BASSERN	:	ERN\$ variable	
MAC	CALL	BAS	BASSERT	:	ERT\$ variable	
MAC	CALL	BAS	BASSHANDLER		BASS\$HANDLER	

```

09A0 1652 :
09A0 1653 : Scalar (non matrix) I/O
09A0 1654 :
09A0 1655 : MAC CALL BAS BASS$INPUT : Initialize for INPUT unit
09A8 1656 : MAC CALL BAS BASS$LINPUT : Ditto LINPUT unit
09B0 1657 : MAC CALL BAS BASS$INPUT_LINE : Ditto INPUT LINE unit
09B8 1658 : MAC CALL BAS BASS$READ : Ditto READ
09C0 1659 : MAC CALL BAS BASS$PRINT : Ditto PRINT
09C8 1660 : MAC CALL BAS BASS$PRINT USING : Ditto PRINT USING
09D0 1661 : MAC CALL BAS BASS$IO_END : End of I/O list
09D8 1662 : MAC CALL BAS BASS$IN_W_R : INPUT word
09E0 1663 : MAC CALL BAS BASS$IN_L_R : INPUT long
09E8 1664 : MAC CALL BAS BASS$IN_F_R : INPUT float
09F0 1665 : MAC CALL BAS BASS$IN_D_R : INPUT double
09F8 1666 : MAC CALL BAS BASS$IN_T_DX : INPUT string
0A00 1667 : MAC CALL BAS BASS$OUT_C_V_S : PRINT long(word) ;
0A08 1668 : MAC CALL BAS BASS$OUT_L_V_B : PRINT long(word)
0A10 1669 : MAC CALL BAS BASS$OUT_L_V_C : PRINT long(word) ,
0A18 1670 : MAC CALL BAS BASS$OUT_F_V_S : PRINT float ;
0A20 1671 : MAC CALL BAS BASS$OUT_F_V_B : PRINT float
0A28 1672 : MAC CALL BAS BASS$OUT_F_V_C : PRINT float ,
0A30 1673 : MAC CALL BAS BASS$OUT_D_V_S : PRINT double ;
0A38 1674 : MAC CALL BAS BASS$OUT_D_V_B : PRINT double
0A40 1675 : MAC CALL BAS BASS$OUT_D_V_C : PRINT double ,
0A48 1676 : MAC CALL BAS BASS$OUT_T_DX_S : PRINT string ;
0A50 1677 : MAC CALL BAS BASS$OUT_T_DX_B : PRINT string
0A58 1678 : MAC CALL BAS BASS$OUT_T_DX_C : PRINT string .
0A60 1679 :
0A60 1680 : Matrix I/O
0A60 1681 :
0A60 1682 : MAC NOVECT BAS BASS$OUT_MAT_S : Output element xmtr
0A60 1683 : MAC NOVECT BAS BASS$OUT_MAT_B :
0A60 1684 : MAC NOVECT BAS BASS$OUT_MAT_C :
0A60 1685 : MAC NOVECT BAS BASS$IN_MAT : Input element xmtr
0A60 1686 : MAC CALL BAS BASS$MAT_PRINT : Init for MAT PRINT
0A68 1687 : MAC CALL BAS BASS$MAT_INPUT : for MAT INPUT
0A70 1688 : MAC CALL BAS BASS$MAT_LINPUT : for MAT LINPUT
0A78 1689 : MAC CALL BAS BASS$MAT_READ : for MAT READ
0A80 1690 : MAC NOVECT BAS BASS$NUM : NUM var (mat)
0A80 1691 : MAC NOVECT BAS BASS$NUM2 : NUM2 var (mat)
0A80 1692 :
0A80 1693 :
0A80 1694 : RMS I/O
0A80 1695 :
0A80 1696 : MAC CALL BAS BASS$OPEN : OPEN (all)
0A88 1697 : MAC CALL BAS BASS$CLOSE : CLOSE (all)
0A90 1698 : MAC CALL BAS BASS$GET : Sequential GET
0A98 1699 : MAC CALL BAS BASS$GET_RECORD : Random GET
0AA0 1700 : MAC CALL BAS BASS$GET_KEY : Indexed GET
0AA8 1701 : MAC CALL BAS BASS$PUT : Sequential PUT
0AB0 1702 : MAC CALL BAS BASS$PUT_RECORD : Random PUT
0AB8 1703 : MAC CALL BAS BASS$PUT_COUNT : Sequential PUT w/COUNT
0AC0 1704 : MAC CALL BAS BASS$PUT_REC_CNT : Random PUT w/COUNT
0AC8 1705 : MAC CALL BAS BASS$FIND : Sequential FIND
0AD0 1706 : MAC CALL BAS BASS$FIND_RECORD : Random FIND
0AD8 1707 : MAC CALL BAS BASS$FIND_KEY : Indexed FIND
0AE0 1708 : MAC CALL BAS BASS$DELETE : DELETE

```

0AEB	1709	MAC	CALL	BAS	BASSUPDATE	:	UPDATE
0AFO	1710	MAC	CALL	BAS	BASSUPDATE COUN	:	UPDATE w/COUNT
0AFB	1711	MAC	CALL	BAS	BASSRESTORE	:	RESTORE
0B00	1712	MAC	CALL	BAS	BASSRESTORE_KEY	:	Indexed RESTORE
0B08	1713	MAC	CALL	BAS	BASSCRATCH	:	SCRATCH
0B10	1714	MAC	CALL	BAS	BASSUNLOCK	:	Release
0B18	1715	MAC	CALL	BAS	BASSFREE	:	FREE


```

OB48 1758 :
OB48 1759 :
OB48 1760 :
OB48 1761 :
OB48 1762 :
OB48 1763 :
OB48 1764 :
OB48 1765 :
OB48 1766 :
OB48 1767 :
OB48 1768 :
OB48 1769 :
OB48 1770 :
OB48 1771 :
OB48 1772 :
OB48 1773 :
OB48 1774 :
OB48 1775 :
OB48 1776 :
OB48 1777 :
OB50 1778 :
OB50 1779 :
OB50 1780 :
OB50 1781 :
OB50 1782 :
OB50 1783 :
OB50 1784 :
OB50 1785 :
OB50 1786 :
OB50 1787 :
OB50 1788 :
OB50 1789 :
OB50 1790 :
OB50 1791 :

```

MATRIX Arithmetic

MAC	NOVECT	BAS	BASSDET_F	:	Determinate
MAC	NOVECT	BAS	BASSDET_D	:	Determinate
MAC	NOVECT	BAS	BASSMAT_NULL	:	Null out string matrix
MAC	NOVECT	BAS	BASSMAT_ASSIGN	:	Matrix assignments
MAC	NOVECT	BAS	BASSMAT_INIT	:	Matrix initialize(0 or 1)
MAC	NOVECT	BAS	BASSMAT_IDN	:	Matrix identity
MAC	NOVECT	BAS	BASSMAT_ADD	:	Matrix addition
MAC	NOVECT	BAS	BASSMAT_SUB	:	Matrix subtraction
MAC	NOVECT	BAS	BASSMAT_MUL	:	Matrix multiplication
MAC	NOVECT	BAS	BASSMAT_SCA_MUL	:	Matrix scalar multiplicat
MAC	NOVECT	BAS	BASSMAT_TRN	:	Matrix transposition
MAC	NOVECT	BAS	BASSMAT_INV	:	Matrix inversion
MAC	NOVECT	BAS	BASSMAT_REDIM	:	Single redimension

CODE SUPPORT

MAC	CALL	BAS	BASSCHR	:	Return character for bina
-----	------	-----	---------	---	---------------------------

VIRTUAL ARRAYS

MAC	NOVECT	BAS	BASSFET_FA_W_R8	:	Fetch a word from virtual
MAC	NOVECT	BAS	BASSFET_FA_L_R8	:	
MAC	NOVECT	BAS	BASSFET_FA_F_R8	:	
MAC	NOVECT	BAS	BASSFET_FA_D_R8	:	
MAC	NOVECT	BAS	BASSFETCH_BFA	:	
MAC	NOVECT	BAS	BASSSTO_FA_W_R8	:	Store a word in a virtual
MAC	NOVECT	BAS	BASSSTO_FA_L_R8	:	
MAC	NOVECT	BAS	BASSSTO_FA_F_R8	:	
MAC	NOVECT	BAS	BASSSTO_FA_D_R8	:	
MAC	NOVECT	BAS	BASSSTORE_BFA	:	
MAC	NOVECT	BAS	BASSSTO_FA_RDX	:	

```

0B50 1793 :
0B50 1794 :
0B50 1795 :
0B50 1796 :
0B50 1797 :
0B50 1798 :
0B50 1799 :
0B50 1800 :
0B50 1801 :
0B50 1802 :
0B50 1803 :
0B50 1804 :
0B50 1805 :
0B50 1806 :
0B58 1807 :
0B58 1808 :
0B58 1809 :
0B58 1810 :
0B58 1811 :
0B58 1812 :
0B58 1813 :
0B60 1814 :
0B60 1815 :
0B60 1816 :

```

FIELD STATEMENT

```

MAC NOVECT BAS BASSFIELD_SET ; Set up FIELD var
MAC NOVECT BAS BASSFIELD_COPY ; Copy a FIELDed var
MAC NOVECT BAS BASSFIELD_CLEAR ; Clear the fielded attribu
MAC NOVECT BAS BASSFIELD_PURGE ; ?
MAC NOVECT BAS BASSFIELD_OPEN ; ?
MAC NOVECT BAS BASSFIELD_CLOSE ; ?

```

MISC

```

MAC NOVECT BAS BASSDATE_T ; Return an ASCII string w/
MAC CALL BAS BASSERROR ; Signal errors from compil
MAC NOVECT LIB LIB$DATE TIME ; System standard date/time
MAC NOVECT BAS BASSMARGIN ; MARGIN sta/MAR% funct
MAC NOVECT BAS BASSNOMARGIN ; NOMARGIN statement

```

LIB\$PARSE and its subroutines

```

MAC CALL LIB LIB$PARSE
MAC NOVECT LIB LIB$CVT_DTB
MAC NOVECT LIB LIB$CVT_HTB
MAC NOVECT LIB LIB$CVT_OTB

```

```
OB60 1818 :  
OB60 1819 : Entry points used by the BASIC compiler to support the RUN command.  
OB60 1820 :  
OB60 1821 : MAC NOVECT BAS BASSRUN_INIT ; Initialize for RUN  
OB60 1822 : MAC CALL BAS BASSPUSH_ERR ; Save error status  
OB68 1823 : MAC CALL BAS BASSPOP_ERR ; Restore error status  
OB70 1824 : MAC NOVECT BAS BASSINIT_IOL ; Start immediate code
```

```

OB70 1826 :
OB70 1827 : Internal BASIC entry points that are likely to need to be vectored
OB70 1828 : because routines unlikely to be vectored call them.
OB70 1829 :
OB70 1830 : MAC JSB BAS BASS$CB_POP
OB78 1831 : MAC JSB BAS BASS$CB_PUSH
OB80 1832 : MAC JSB BAS BASS$CB_GET
OB88 1833 : MAC CALL BAS BASS$ERR_INIT
OB90 1834 : MAC CALL BAS BASS$OPEN_ZERO
OB98 1835 : MAC CALL BAS BASS$RECO_INIT
OBA0 1836 : MAC CALL BAS BASS$BLNK_LINE
OBA8 1837 : MAC CALL BAS BASS$SIGNAL
OBBO 1838 : MAC CALL BAS BASS$SIGNAL_IO
OB88 1839 : MAC CALL BAS BASS$STATU_INIT
OBC0 1840 : MAC CALL BAS BASS$STOP
OBC8 1841 : MAC CALL BAS BASS$STOP_IO
OBDO 1842 : MAC CALL BAS BASS$CANTYPAHEAD
OBD8 1843 : MAC JSB BAS BASS$SCALE_L_R1
OBE0 1844 : MAC JSB BAS BASS$SCALE_RT
OBE8 1845 : MAC CALL BAS BASS$STOP_RMS
OBF0 1846 : MAC CALL BAS BASS$FORMAT_INT
OBF8 1847 : MAC CALL BAS BASS$CLOSE_ALL
OC00 1848 : MAC CALL BAS BASS$UDF_R1
OC08 1849 : MAC CALL BAS BASS$UDF_WL1
OC10 1850 :
OC10 1851 : JSB entry points to the string routines.
OC10 1852 :
OC10 1853 : MAC JSB STR STR$COPY_DX_R8
OC18 1854 : MAC JSB STR STR$COPY_R_R8
OC20 1855 : MAC JSB STR STR$DUPL_CHARR8
OC28 1856 : MAC JSB STR STR$FREET_DX_R4
OC30 1857 : MAC JSB STR STR$GET1_DX_R4
OC38 1858 : MAC JSB STR STR$LEFT_R8
OC40 1859 : MAC JSB STR STR$LEN_EXTR_R8
OC48 1860 : MAC JSB STR STR$POSITION_R6
OC50 1861 : MAC JSB STR STR$POS_EXTR_R8
OC58 1862 : MAC JSB STR STR$RIGHT_R8
OC60 1863 :
OC60 1864 : More STR$ entry points. These modules must be in the sharable
OC60 1865 : library, even though they are not used much, because they use
OC60 1866 : string interlocks.
OC60 1867 :
OC60 1868 : MAC CALL STR STR$APPEND
OC68 1869 : MAC CALL STR STR$COMPARE
OC70 1870 : MAC CALL STR STR$COMPARE_EQ
OC78 1871 : MAC CALL STR STR$PREFIX
OC80 1872 : MAC CALL STR STR$REPLACE
OC88 1873 : MAC JSB STR STR$REPLACE_R8
OC90 1874 : MAC CALL STR STR$TRANSLATE
OC98 1875 : MAC CALL STR STR$UPCASE

```


OCAO	1991	MAC	SYM	BAS	BASSK_KEYWAIEXH
OCAO	1992	MAC	SYM	BAS	BASSK_LINTOOLON
OCAO	1993	MAC	SYM	BAS	BASSK_LITSTRNEE
OCAO	1994	MAC	SYM	BAS	BASSK_MAGRECLN
OCAO	1995	MAC	SYM	BAS	BASSK_MAGSELERR
OCAO	1996	MAC	SYM	BAS	BASSK_MATARRTOO
OCAO	1997	MAC	SYM	BAS	BASSK_MATARRWIT
OCAO	1998	MAC	SYM	BAS	BASSK_MATDIMERR
OCAO	1999	MAC	SYM	BAS	BASSK_MAXMEMEXC
OCAO	2000	MAC	SYM	BAS	BASSK_MEMMANVIO
OCAO	2001	MAC	SYM	BAS	BASSK_MEMPARFAI
OCAO	2002	MAC	SYM	BAS	BASSK_MISSPEFEA
OCAO	2003	MAC	SYM	BAS	BASSK_MODERR
OCAO	2004	MAC	SYM	BAS	BASSK_MOVOVEBUF
OCAO	2005	MAC	SYM	BAS	BASSK_NAMACCNOW
OCAO	2006	MAC	SYM	BAS	BASSK_NEGFILSTR
OCAO	2007	MAC	SYM	BAS	BASSK_NEXWITFOR
OCAO	2008	MAC	SYM	BAS	BASSK_NODNAMERR
OCAO	2009	MAC	SYM	BAS	BASSK_NONRESRUN
OCAO	2010	MAC	SYM	BAS	BASSK_NOTENDFIL
OCAO	2011	MAC	SYM	BAS	BASSK_NOTENOAVA
OCAO	2012	MAC	SYM	BAS	BASSK_NOTENODAT
OCAO	2013	MAC	SYM	BAS	BASSK_NOTIMP
OCAO	2014	MAC	SYM	BAS	BASSK_NOTRANACC
OCAO	2015	MAC	SYM	BAS	BASSK_NOTVALDEV
OCAO	2016	MAC	SYM	BAS	BASSK_NO_BUFSPA
OCAO	2017	MAC	SYM	BAS	BASSK_NO_CURREC
OCAO	2018	MAC	SYM	BAS	BASSK_NO_FIEIMA
OCAO	2019	MAC	SYM	BAS	BASSK_NO_FILNAM
OCAO	2020	MAC	SYM	BAS	BASSK_NO_PRIKEY
OCAO	2021	MAC	SYM	BAS	BASSK_NO_ROOUSE
OCAO	2022	MAC	SYM	BAS	BASSK_NO_RUNSYS
OCAO	2023	MAC	SYM	BAS	BASSK_NUCIMA
OCAO	2024	MAC	SYM	BAS	BASSK_NUMIMASTR
OCAO	2025	MAC	SYM	BAS	BASSK_NUMIS_NEE
OCAO	2026	MAC	SYM	BAS	BASSK_ODDADDTRA
OCAO	2027	MAC	SYM	BAS	BASSK_ONEOR_TWO
OCAO	2028	MAC	SYM	BAS	BASSK_ON_STANEE
OCAO	2029	MAC	SYM	BAS	BASSK_ON_STAOUT
OCAO	2030	MAC	SYM	BAS	BASSK_OUTOF DAT
OCAO	2031	MAC	SYM	BAS	BASSK_PACIDSDON
OCAO	2032	MAC	SYM	BAS	BASSK_PLEUSERUN
OCAO	2033	MAC	SYM	BAS	BASSK_PRIKEYOUT
OCAO	2034	MAC	SYM	BAS	BASSK_PRIUSIBUF
OCAO	2035	MAC	SYM	BAS	BASSK_PRIUSIFOR
OCAO	2036	MAC	SYM	BAS	BASSK_PROC TRA
OCAO	2037	MAC	SYM	BAS	BASSK_PROLOSSOR
OCAO	2038	MAC	SYM	BAS	BASSK_PROVIO
OCAO	2039	MAC	SYM	BAS	BASSK_RECALREXI
OCAO	2040	MAC	SYM	BAS	BASSK_RECATNOT
OCAO	2041	MAC	SYM	BAS	BASSK_RECBUCLOC
OCAO	2042	MAC	SYM	BAS	BASSK_RECFILTOO
OCAO	2043	MAC	SYM	BAS	BASSK_RECHASBEE
OCAO	2044	MAC	SYM	BAS	BASSK_RECLOCFAI
OCAO	2045	MAC	SYM	BAS	BASSK_RECNOTFOU
OCAO	2046	MAC	SYM	BAS	BASSK_RECNUMEXC
OCAO	2047	MAC	SYM	BAS	BASSK_RECSUBCAL

OCAO	2048	MAC	SYM	BAS	BASSK_REDARR
OCAO	2049	MAC	SYM	BAS	BASSK_RESINSTR
OCAO	2050	MAC	SYM	BAS	BASSK_RESNO_ERR
OCAO	2051	MAC	SYM	BAS	BASSK_RETWITGOS
OCAO	2052	MAC	SYM	BAS	BASSK_RRVNOTFUL
OCAO	2053	MAC	SYM	BAS	BASSK_SCAFACINT
OCAO	2054	MAC	SYM	BAS	BASSK_SIZRECINV
OCAO	2055	MAC	SYM	BAS	BASSK_SP_STAOVE
OCAO	2056	MAC	SYM	BAS	BASSK_STANOTFOU
OCAO	2057	MAC	SYM	BAS	BASSK_STO
OCAO	2058	MAC	SYM	BAS	BASSK_STRIMANUM
OCAO	2059	MAC	SYM	BAS	BASSK_STRIS_NEE
OCAO	2060	MAC	SYM	BAS	BASSK_STRTOOLON
OCAO	2061	MAC	SYM	BAS	BASSK_SUBOUTRAN
OCAO	2062	MAC	SYM	BAS	BASSK_SYNERR
OCAO	2063	MAC	SYM	BAS	BASSK_TAPBOTDET
OCAO	2064	MAC	SYM	BAS	BASSK_TAPNOTANS
OCAO	2065	MAC	SYM	BAS	BASSK_TAPRECNOT
OCAO	2066	MAC	SYM	BAS	BASSK_TERFORFIL
OCAO	2067	MAC	SYM	BAS	BASSK_TIMLIMEXC
OCAO	2068	MAC	SYM	BAS	BASSK_TOOFEWARG
OCAO	2069	MAC	SYM	BAS	BASSK_TOOMANARG
OCAO	2070	MAC	SYM	BAS	BASSK_TOOMANPE
OCAO	2071	MAC	SYM	BAS	BASSK_UNDFUNCAL
OCAO	2072	MAC	SYM	BAS	BASSK_USEDATERR
OCAO	2073	MAC	SYM	BAS	BASSK_VIRARRDIS
OCAO	2074	MAC	SYM	BAS	BASSK_VIRARROPE
OCAO	2075	MAC	SYM	BAS	BASSK_VIRBUFTOO
OCAO	2076	MAC	SYM	BAS	BASSK_WHA
OCAO	2077	MAC	SYM	BAS	BASSK_WROMATPAC
OCAO	2078	:	:	:	:
OCAO	2079	:	:	:	:
OCAO	2080	:	:	:	:
OCAO	2081	MAC	SYM	BAS	BASSK_NEGZERTAB
OCAO	2082	MAC	SYM	BAS	BASSK_TOOMUCDAT
OCAO	2083	MAC	SYM	BAS	BASSK_ERRFILCOR
OCAO	2084	MAC	SYM	BAS	BASSK_UNEFILDAT
OCAO	2085	MAC	SYM	BAS	BASSK_NOSUPFOR
OCAO	2086	MAC	SYM	BAS	BASSK_DECERR
OCAO	2087	MAC	SYM	BAS	BASSK_NETOPEREJ
OCAO	2088	MAC	SYM	BAS	BASSK_REMOVEBUF
OCAO	2089	MAC	SYM	BAS	BASSK_UNAREMVAR
OCAO	2090	MAC	SYM	BAS	BASSK_RECOVEMAP
OCAO	2091	MAC	SYM	BAS	BASSK_IMPERRHAN
OCAO	2092	MAC	SYM	BAS	BASSK_ILLRECLOC
OCAO	2093	MAC	SYM	BAS	BASSK_REQRECSIZ
OCAO	2094	MAC	SYM	BAS	BASSK_TOOLITDAT
OCAO	2095	:	:	:	:
OCAO	2096	:	:	:	:
OCAO	2097	:	:	:	:
OCAO	2098	:	:	:	:
OCAO	2099	MAC	SYM	BAS	BASS_ACCDEVUSE
OCAO	2100	MAC	SYM	BAS	BASS_ARGDONMAT
OCAO	2101	MAC	SYM	BAS	BASS_ARGOUTBOU
OCAO	2102	MAC	SYM	BAS	BASS_ARGTOOLAR
OCAO	2103	MAC	SYM	BAS	BASS_ARRMUSSAM
OCAO	2104	MAC	SYM	BAS	BASS_ARRMUSSQU

New messages for Basic 2.0, VMS 3.1

Now the 32-bit values.

OCAO	2105	MAC	SYM	BAS	BASS_BADDIRDEV
OCAO	2106	MAC	SYM	BAS	BASS_BADLINNUM
OCAO	2107	MAC	SYM	BAS	BASS_BADNUMPRI
OCAO	2108	MAC	SYM	BAS	BASS_BADRECID
OCAO	2109	MAC	SYM	BAS	BASS_BADRECVL
OCAO	2110	MAC	SYM	BAS	BASS_CANCHAARR
OCAO	2111	MAC	SYM	BAS	BASS_CANCOMSTA
OCAO	2112	MAC	SYM	BAS	BASS_CANCON
OCAO	2113	MAC	SYM	BAS	BASS_CANFINFIL
OCAO	2114	MAC	SYM	BAS	BASS_CANINVMAT
OCAO	2115	MAC	SYM	BAS	BASS_CANOPEFIL
OCAO	2116	MAC	SYM	BAS	BASS_CANPOSEOF
OCAO	2117	MAC	SYM	BAS	BASS_CHATO_NON
OCAO	2118	MAC	SYM	BAS	BASS_CORFILSTR
OCAO	2119	MAC	SYM	BAS	BASS_DATFORERR
OCAO	2120	MAC	SYM	BAS	BASS_DATTYPERR
OCAO	2121	MAC	SYM	BAS	BASS_DEFWITFNE
OCAO	2122	MAC	SYM	BAS	BASS_DEVHUNWRI
OCAO	2123	MAC	SYM	BAS	BASS_DEVNOTAVA
OCAO	2124	MAC	SYM	BAS	BASS_DEVNOTFIL
OCAO	2125	MAC	SYM	BAS	BASS_DIFUSELON
OCAO	2126	MAC	SYM	BAS	BASS_DIRERR
OCAO	2127	MAC	SYM	BAS	BASS_DISBLOINT
OCAO	2128	MAC	SYM	BAS	BASS_DISERRDUR
OCAO	2129	MAC	SYM	BAS	BASS_DISPACLOC
OCAO	2130	MAC	SYM	BAS	BASS_DISPACNEE
OCAO	2131	MAC	SYM	BAS	BASS_DISPACNOT
OCAO	2132	MAC	SYM	BAS	BASS_DISPACPRI
OCAO	2133	MAC	SYM	BAS	BASS_DIVBY_ZER
OCAO	2134	MAC	SYM	BAS	BASS_DUPKEYDET
OCAO	2135	MAC	SYM	BAS	BASS_ENDFILDEV
OCAO	2136	MAC	SYM	BAS	BASS_ENDOF_STA
OCAO	2137	MAC	SYM	BAS	BASS_ERRTRNEE
OCAO	2138	MAC	SYM	BAS	BASS_EXEONLFIL
OCAO	2139	MAC	SYM	BAS	BASS_EXPERR
OCAO	2140	MAC	SYM	BAS	BASS_EXPTOOCOM
OCAO	2141	MAC	SYM	BAS	BASS_FATDISPAC
OCAO	2142	MAC	SYM	BAS	BASS_FATSYSIO
OCAO	2143	MAC	SYM	BAS	BASS_FIEOVEBUF
OCAO	2144	MAC	SYM	BAS	BASS_FILACPFAI
UCAO	2145	MAC	SYM	BAS	BASS_FILATTNOT
OCAO	2146	MAC	SYM	BAS	BASS_FILEXIREN
OCAO	2147	MAC	SYM	BAS	BASS_FILEXPDAT
OCAO	2148	MAC	SYM	BAS	BASS_FILIS_LOC
OCAO	2149	MAC	SYM	BAS	BASS_FIRARGSEQ
OCAO	2150	MAC	SYM	BAS	BASS_FLOOVE
OCAO	2151	MAC	SYM	BAS	BASS_FLOPOIERR
OCAO	2152	MAC	SYM	BAS	BASS_FLOUND
OCAO	2153	MAC	SYM	BAS	BASS_FNEWITDEF
OCAO	2154	MAC	SYM	BAS	BASS_FNEWITFUN
OCAO	2155	MAC	SYM	BAS	BASS_FORWITNEX
OCAO	2156	MAC	SYM	BAS	BASS_ILLALLCLA
OCAO	2157	MAC	SYM	BAS	BASS_ILLARGLOG
OCAO	2158	MAC	SYM	BAS	BASS_ILLBYTCOU
OCAO	2159	MAC	SYM	BAS	BASS_ILLCLUSIZ
OCAO	2160	MAC	SYM	BAS	BASS_ILLCONCLA
OCAO	2161	MAC	SYM	BAS	BASS_ILLDEFNES

OCA0	2162	MAC	SYM	BAS	BASS-ILLDUMVAR
OCA0	2163	MAC	SYM	BAS	BASS-ILLEXIDF
OCA0	2164	MAC	SYM	BAS	BASS-ILLEXP
OCA0	2165	MAC	SYM	BAS	BASS-ILLFIEVAR
OCA0	2166	MAC	SYM	BAS	BASS-ILLFILNAM
OCA0	2167	MAC	SYM	BAS	BASS-ILLFN RED
OCA0	2168	MAC	SYM	BAS	BASS-ILLFUNNAM
OCA0	2169	MAC	SYM	BAS	BASS-ILLIF STA
OCA0	2170	MAC	SYM	BAS	BASS-ILLILCACC
OCA0	2171	MAC	SYM	BAS	BASS-ILLIN IMM
OCA0	2172	MAC	SYM	BAS	BASS-ILLIO CHA
OCA0	2173	MAC	SYM	BAS	BASS-ILLKEYATT
OCA0	2174	MAC	SYM	BAS	BASS-ILLLINNUM
OCA0	2175	MAC	SYM	BAS	BASS-ILLMAGUSA
OCA0	2176	MAC	SYM	BAS	BASS-ILLMODMIX
OCA0	2177	MAC	SYM	BAS	BASS-ILLNUM
OCA0	2178	MAC	SYM	BAS	BASS-ILLNUMIMA
OCA0	2179	MAC	SYM	BAS	BASS-ILLOPE
OCA0	2180	MAC	SYM	BAS	BASS-ILLRECACC
OCA0	2181	MAC	SYM	BAS	BASS-ILLRFCFIL
OCA0	2182	MAC	SYM	BAS	BASS-ILLRECFOR
OCA0	2183	MAC	SYM	BAS	BASS-ILLRESSUB
OCA0	2184	MAC	SYM	BAS	BASS-ILLRETSUB
OCA0	2185	MAC	SYM	BAS	BASS-ILLSTA
OCA0	2186	MAC	SYM	BAS	BASS-ILLSTRIMA
OCA0	2187	MAC	SYM	BAS	BASS-ILLSWIUSA
OCA0	2188	MAC	SYM	BAS	BASS-ILLSYM
OCA0	2189	MAC	SYM	BAS	BASS-ILLSYSUSA
OCA0	2190	MAC	SYM	BAS	BASS-ILLUSA
OCA0	2191	MAC	SYM	BAS	BASS-ILLUSADEV
OCA0	2192	MAC	SYM	BAS	BASS-ILLVER
OCA0	2193	MAC	SYM	BAS	BASS-IMASQUROO
OCA0	2194	MAC	SYM	BAS	BASS-INCFUNUSA
OCA0	2195	MAC	SYM	BAS	BASS-INCSUBUSE
OCA0	2196	MAC	SYM	BAS	BASS-INDNOTFUL
OCA0	2197	MAC	SYM	BAS	BASS-INDNOTINI
OCA0	2198	MAC	SYM	BAS	BASS-INTERR
OCA0	2199	MAC	SYM	BAS	BASS-INTOVEFOR
OCA0	2200	MAC	SYM	BAS	BASS-INVFILOPT
OCA0	2201	MAC	SYM	BAS	BASS-INVKEYREF
OCA0	2202	MAC	SYM	BAS	BASS-INVRFATIE
OCA0	2203	MAC	SYM	BAS	BASS-IO CHAALR
OCA0	2204	MAC	SYM	BAS	BASS-IO CHANOT
OCA0	2205	MAC	SYM	BAS	BASS-IO TO DET
OCA0	2206	MAC	SYM	BAS	BASS-KEYFIEBEY
OCA0	2207	MAC	SYM	BAS	BASS-KEYLARTHA
OCA0	2208	MAC	SYM	CAS	BASS-KEYNOTCHA
OCA0	2209	MAC	SYM	BAS	BASS-KEYSIZTOO
OCA0	2210	MAC	SYM	BAS	BASS-KEYWAIEXH
OCA0	2211	MAC	SYM	BAS	BASS-LINTOOLON
OCA0	2212	MAC	SYM	BAS	BASS-LITSTRNEE
OCA0	2213	MAC	SYM	BAS	BASS-MAGRECLN
OCA0	2214	MAC	SYM	BAS	BASS-MAGSELERR
OCA0	2215	MAC	SYM	BAS	BASS-MATARRTOO
OCA0	2216	MAC	SYM	BAS	BASS-MATARRWIT
OCA0	2217	MAC	SYM	BAS	BASS-MATDIMERR
OCA0	2218	MAC	SYM	BAS	BASS-MAXMEMEXC

OCAO	2219	MAC	SYM	BAS	BASS_MEMMANVIO
OCAO	2220	MAC	SYM	BAS	BASS_MEMPARFAI
OCAO	2221	MAC	SYM	BAS	BASS_MISSPEFEA
OCAO	2222	MAC	SYM	BAS	BASS_MODERR
OCAO	2223	MAC	SYM	BAS	BASS_MOVOVEBUF
OCAO	2224	MAC	SYM	BAS	BASS_NAMACCNOW
OCAO	2225	MAC	SYM	BAS	BASS_NEGFILSTR
OCAO	2226	MAC	SYM	BAS	BASS_NEXWITFOR
OCAO	2227	MAC	SYM	BAS	BASS_NODNAMERR
OCAO	2228	MAC	SYM	BAS	BASS_NONRESRUN
OCAO	2229	MAC	SYM	BAS	BASS_NOTENDFIL
OCAO	2230	MAC	SYM	BAS	BASS_NOTENOAVA
OCAO	2231	MAC	SYM	BAS	BASS_NOTENODAT
OCAO	2232	MAC	SYM	BAS	BASS_NOTIMP
OCAO	2233	MAC	SYM	BAS	BASS_NOTRANACC
OCAO	2234	MAC	SYM	BAS	BASS_NOTVALDEV
OCAO	2235	MAC	SYM	BAS	BASS_NO_BUFSPA
OCAO	2236	MAC	SYM	BAS	BASS_NO_CURREC
OCAO	2237	MAC	SYM	BAS	BASS_NO_FIEIMA
OCAO	2238	MAC	SYM	BAS	BASS_NO_FILNAM
OCAO	2239	MAC	SYM	BAS	BASS_NO_PRIKEY
OCAO	2240	MAC	SYM	BAS	BASS_NO_ROOUSE
OCAO	2241	MAC	SYM	BAS	BASS_NO_RUNSYS
OCAO	2242	MAC	SYM	BAS	BASS_NUCIMA
OCAO	2243	MAC	SYM	BAS	BASS_NUMIMASTR
OCAO	2244	MAC	SYM	BAS	BASS_NUMIS_NEE
OCAO	2245	MAC	SYM	BAS	BASS_ODDADDTRA
OCAO	2246	MAC	SYM	BAS	BASS_ONEOR_TWO
OCAO	2247	MAC	SYM	BAS	BASS_ON_STANEE
OCAO	2248	MAC	SYM	BAS	BASS_ON_STAOUT
OCAO	2249	MAC	SYM	BAS	BASS_OUTOF_DAT
OCAO	2250	MAC	SYM	BAS	BASS_PACIDSDON
OCAO	2251	MAC	SYM	BAS	BASS_PLEUSERUN
OCAO	2252	MAC	SYM	BAS	BASS_PRIKEYOUT
OCAO	2253	MAC	SYM	BAS	BASS_PRIUSIBUF
OCAO	2254	MAC	SYM	BAS	BASS_PRIUSIFOR
OCAO	2255	MAC	SYM	BAS	BASS_PROC_TRA
OCAO	2256	MAC	SYM	BAS	BASS_PROLOSSOR
OCAO	2257	MAC	SYM	BAS	BASS_PROVIO
OCAO	2258	MAC	SYM	BAS	BASS_RECALREXI
OCAO	2259	MAC	SYM	BAS	BASS_RECATNOT
OCAO	2260	MAC	SYM	BAS	BASS_RECBUCLOC
OCAO	2261	MAC	SYM	BAS	BASS_RECFILTOO
OCAO	2262	MAC	SYM	BAS	BASS_RECHASBEE
OCAO	2263	MAC	SYM	BAS	BASS_RECLOCFAI
OCAO	2264	MAC	SYM	BAS	BASS_RECNOTFOU
OCAO	2265	MAC	SYM	BAS	BASS_RECNUMXC
OCAO	2266	MAC	SYM	BAS	BASS_RECSUBCAL
OCAO	2267	MAC	SYM	BAS	BASS_REDARR
OCAO	2268	MAC	SYM	BAS	BASS_RESINSTRA
OCAO	2269	MAC	SYM	BAS	BASS_RESNO_ERR
OCAO	2270	MAC	SYM	BAS	BASS_RETWITGOS
OCAO	2271	MAC	SYM	BAS	BASS_RRVNOTFUL
OCAO	2272	MAC	SYM	BAS	BASS_SCAFACINT
OCAO	2273	MAC	SYM	BAS	BASS_SIZRECINV
OCAO	2274	MAC	SYM	BAS	BASS_SP_STAQVE
OCAO	2275	MAC	SYM	BAS	BASS_STANOTFOU

OCAO	2276	MAC	SYM	BAS	BASS-STO
OCAO	2277	MAC	SYM	BAS	BASS-STRIMANUM
OCAO	2278	MAC	SYM	BAS	BASS-STRIS NEE
OCAO	2279	MAC	SYM	BAS	BASS-STRTODLON
OCAO	2280	MAC	SYM	BAS	BASS-SUBOUTRAN
OCAO	2281	MAC	SYM	BAS	BASS-SYNERR
OCAO	2282	MAC	SYM	BAS	BASS-TAPBOTDET
OCAO	2283	MAC	SYM	BAS	BASS-TAPNOTANS
OCAO	2284	MAC	SYM	BAS	BASS-TAPRECNOT
OCAO	2285	MAC	SYM	BAS	BASS-TERFORFIL
OCAO	2286	MAC	SYM	BAS	BASS-TIMLIMEXC
OCAO	2287	MAC	SYM	BAS	BASS-TOOFEWARG
OCAO	2288	MAC	SYM	BAS	BASS-TOOMANARG
OCAO	2289	MAC	SYM	BAS	BASS-TOOMANOPE
OCAO	2290	MAC	SYM	BAS	BASS-UNDFUNCAL
OCAO	2291	MAC	SYM	BAS	BASS-USEDATERR
OCAO	2292	MAC	SYM	BAS	BASS-VIRARRDIS
OCAO	2293	MAC	SYM	BAS	BASS-VIRARROPE
OCAO	2294	MAC	SYM	BAS	BASS-VIRBUF TOO
OCAO	2295	MAC	SYM	BAS	BASS-WHA
OCAO	2296	MAC	SYM	BAS	BASS-WROMATPAC
OCAO	2297				
OCAO	2298	; New messages for Basic 2.0, VMS 3.1			
OCAO	2299	MAC	SYM	BAS	BASS-NEGZERTAB
OCAO	2300	MAC	SYM	BAS	BASS-TOOMUCDAT
OCAO	2301	MAC	SYM	BAS	BASS-ERRFILCOR
OCAO	2302	MAC	SYM	BAS	BASS-UNEFILDAT
OCAO	2303	MAC	SYM	BAS	BASS-NOSUPFOR
OCAO	2304	MAC	SYM	BAS	BASS-DECERR
OCAO	2305	MAC	SYM	BAS	BASS-NETOPEREJ
OCAO	2306	MAC	SYM	BAS	BASS-REMOVEBUF
OCAO	2307	MAC	SYM	BAS	BASS-UNAREMVAR
OCAO	2308	MAC	SYM	BAS	BASS-RECOVEMAP
OCAO	2309	MAC	SYM	BAS	BASS-IMPERRHAN
OCAO	2310	MAC	SYM	BAS	BASS-ILLRECLOC
OCAO	2311	MAC	SYM	BAS	BASS-REQRECSIZ
OCAO	2312	MAC	SYM	BAS	BASS-TOOLITDAT
OCAO	2313				
OCAO	2314	; Module BASS\$REC PROC			
OCAO	2315	MAC	CALL	BAS	BASSWAIT


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OE00 2330 ; MODULE LIBSAB_CVTPT_0
OE00 2331     MAC      SYM      LIB      LIBSAB_CVTPT_0
OE00 2332
OE00 2333 ; MODULE LIBSAB_CVTPT_U
OE00 2334     MAC      SYM      LIB      LIBSAB_CVTPT_U
OE00 2335
OE00 2336 ; MODULE LIBSAB_CVTTP_0
OE00 2337     MAC      SYM      LIB      LIBSAB_CVTTP_0
OE00 2338
OE00 2339 ; MODULE LIBSAB_CVTTP_U
OE00 2340     MAC      SYM      LIB      LIBSAB_CVTTP_U
OE00 2341
OE00 2342 ; MODULE COBSAB_SPANC
OE00 2343     MAC      SYM      COB      COBSAB_SPANC
OE00 2344
OE00 2345 ; MODULE LIBSAB_CVT_U_0
OE00 2346     MAC      SYM      LIB      LIBSAB_CVT_U_0
OE00 2347
OE00 2348 :+
OE00 2349 : Degree equivalents of trig functions
OE00 2350 :-
OE00 2351
OE00 2352 ; MODULE:MTH$ACOS
OE00 2353     MAC      CALL      MTH      MTH$ACOSD
OE08 2354     MAC      JSB      MTH      MTH$ACOSD_R4
OE10 2355
OE10 2356 ; MODULE:MTH$ASIN
OE10 2357     MAC      CALL      MTH      MTH$ASIND
OE18 2358     MAC      JSB      MTH      MTH$ASIND_R4
OE20 2359
OE20 2360 ; MODULE:MTH$ATAN
OE20 2361     MAC      CALL      MTH      MTH$ATAND
OE28 2362     MAC      CALL      MTH      MTH$ATAND2
OE30 2363     MAC      JSB      MTH      MTH$ATAND_R4
OE38 2364
OE38 2365 ; MODULE:MTH$DACOS
OE38 2366     MAC      CALL      MTH      MTH$DACOSD
OE40 2367     MAC      JSB      MTH      MTH$DACOSD_R7
OE48 2368
OE48 2369 ; MODULE:MTH$DASIN
OE48 2370     MAC      CALL      MTH      MTH$DASIND
OE50 2371     MAC      JSB      MTH      MTH$DASIND_R7
OE58 2372
OE58 2373 ; MODULE:MTH$DATAN
OE58 2374     MAC      CALL      MTH      MTH$DATAND
OE60 2375     MAC      CALL      MTH      MTH$DATAND2
OE68 2376     MAC      JSB      MTH      MTH$DATAND_R7
OE70 2377
OE70 2378 ; MODULE:MTH$DSINCOS
OE70 2379     MAC      CALL      MTH      MTH$DCOSD
OE78 2380     MAC      JSB      MTH      MTH$DCOSD_R7
OE80 2381     MAC      CALL      MTH      MTH$DSIND
OE88 2382     MAC      JSB      MTH      MTH$DSIND_R7
OE90 2383
OE90 2384 ; MODULE:MTH$SINCOS
OE90 2385     MAC      CALL      MTH      MTH$SCOSD
OE98 2386     MAC      JSB      MTH      MTH$SCOSD_R4

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OEA0 2387      MAC      CALL      MTH      MTH$SIND
OEA8 2388      MAC      JSB        MTH      MTH$SIND_R4
OEB0 2389
OEB0 2390      : MODULE:MTH$DTAN
OEB0 2391      MAC      CALL      MTH      MTH$DTAND
OEB8 2392      MAC      JSB        MTH      MTH$DTAND_R7
OECO 2393
OECO 2394      : MODULE:MTH$STAN
OECO 2395      MAC      CALL      MTH      MTH$STAND
OEC8 2396      MAC      JSB        MTH      MTH$STAND_R4
OEDO 2397
OEDO 2398      : MODULE MTH$GACOS
OEDO 2399      MAC      NOVECT     MTH      MTH$GACOSD
OEDO 2400      MAC      NOVECT     MTH      MTH$GACOSD_R7
OEDO 2401
OEDO 2402      : MODULE MTH$GASIN
OEDO 2403      MAC      NOVECT     MTH      MTH$GASIND
OEDO 2404      MAC      NOVECT     MTH      MTH$GASIND_R7
OEDO 2405
OEDO 2406      : MODULE MTH$GSINCOS
OEDO 2407      MAC      NOVECT     MTH      MTH$GSIND
OEDO 2408      MAC      NOVECT     MTH      MTH$GCOSD
OEDO 2409      MAC      NOVECT     MTH      MTH$GSIND_R7
OEDO 2410      MAC      NOVECT     MTH      MTH$GCOSD_R7
OEDO 2411
OEDO 2412      : MODULE MTH$GTAN
OEDO 2413      MAC      NOVECT     MTH      MTH$GTAND
OEDO 2414      MAC      NOVECT     MTH      MTH$GTAND_R7
OEDO 2415
OEDO 2416      : MODULE MTH$HACOS
OEDO 2417      MAC      NOVECT     MTH      MTH$HACOSD
OEDO 2418      MAC      NOVECT     MTH      MTH$HACOSD_R8
OEDO 2419
OEDO 2420      : MODULE MTH$HASIN
OEDO 2421      MAC      NOVECT     MTH      MTH$HASIND
OEDO 2422      MAC      NOVECT     MTH      MTH$HASIND_R8
OEDO 2423
OEDO 2424      : MODULE MTH$HATANH
OEDO 2425      MAC      NOVECT     MTH      MTH$HATANH
OEDO 2426
OEDO 2427      : MODULE MTH$HSINCOS
OEDO 2428      MAC      NOVECT     MTH      MTH$HSIND
OEDO 2429      MAC      NOVECT     MTH      MTH$HSIND_R5
OEDO 2430      MAC      NOVECT     MTH      MTH$HCOSD
OEDO 2431      MAC      NOVECT     MTH      MTH$HCOSD_R5
OEDO 2432
OEDO 2433      : MODULE MTH$HTAN
OEDO 2434      MAC      NOVECT     MTH      MTH$HTAND
OEDO 2435      MAC      NOVECT     MTH      MTH$HTAND_R5
OEDO 2436
OEDC 2437      : V E R S I O N      3 . 0      A D D I T I O N S
OEDO 2438      :
OEDO 2439      : FITT up the hole created by removing some translation tables that ended up
OEDO 2440      : in the vector.
OEDO 2441
OEDO 2442      : MODULE:MTH$ATANH
OEDO 2443      MAC      CALL      MTH      MTH$ATANH

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OED8 2444
OED8 2445 ; MODULE:MTH$DATANH
OED8 2446     MAC     CALL     MTH     MTH$DATANH
OEE0 2447
OEE0 2448 ; MODULE MTH$GATAN
OEE0 2449     MAC     NOVECT   MTH     MTH$GATAN
OEE0 2450     MAC     NOVECT   MTH     MTH$GATAN2
OEE0 2451     MAC     NOVECT   MTH     MTH$GATAN_R7
OEE0 2452     MAC     NOVECT   MTH     MTH$GATAN_D
OEE0 2453     MAC     NOVECT   MTH     MTH$GATAN_D2
OEE0 2454     MAC     NOVECT   MTH     MTH$GATAN_D_R7
OEE0 2455
OEE0 2456 ; MODULE MTH$GLOG
OEE0 2457     MAC     NOVECT   MTH     MTH$GLOG
OEE0 2458     MAC     NOVECT   MTH     MTH$GLOG2
OEE0 2459     MAC     NOVECT   MTH     MTH$GLOG10
OEE0 2460     MAC     NOVECT   MTH     MTH$GLOG_R8
OEE0 2461     MAC     NOVECT   MTH     MTH$GLOGTO_R8
OEE0 2462
OEE0 2463 ; MODULE MTH$HATAN
OEE0 2464     MAC     NOVECT   MTH     MTH$HATAN
OEE0 2465     MAC     NOVECT   MTH     MTH$HATAN_R8
OEE0 2466     MAC     NOVECT   MTH     MTH$HATAN2
OEE0 2467     MAC     NOVECT   MTH     MTH$HATAN_D
OEE0 2468     MAC     NOVECT   MTH     MTH$HATAN_D_R8
OEE0 2469     MAC     NOVECT   MTH     MTH$HATAN_D2
OEE0 2470
OEE0 2471 ; MODULE MTH$HLOG
OEE0 2472     MAC     NOVECT   MTH     MTH$HLOG
OEE0 2473     MAC     NOVECT   MTH     MTH$HLOG2
OEE0 2474     MAC     NOVECT   MTH     MTH$HLOG10
OEE0 2475     MAC     NOVECT   MTH     MTH$HLOG_R8
OEE0 2476     MAC     NOVECT   MTH     MTH$HLOGTO_R8
OEE0 2477
OEE0 2478 ; MODULE MTH$SINCOS (Continued)
OEE0 2479     MAC     CALL     MTH     MTH$SINCOS
OEE8 2480     MAC     JSB      MTH     MTH$SINCOS_R5
OEF0 2481     MAC     CALL     MTH     MTH$SINCOS_D
OEF8 2482     MAC     JSB      MTH     MTH$SINCOS_D_R5
OF00 2483
OF00 2484 ; MODULE MTH$DSINCOS (Continued)
OF00 2485     MAC     CALL     MTH     MTH$DSINCOS
OF08 2486     MAC     JSB      MTH     MTH$DSINCOS_R7
OF10 2487     MAC     CALL     MTH     MTH$DSINCOS_D
OF18 2488     MAC     JSB      MTH     MTH$DSINCOS_D_R7
OF20 2489
OF20 2490 ; MODULE MTH$GSINCOS (Continued)
OF20 2491     MAC     NOVECT   MTH     MTH$GSINCOS
OF20 2492     MAC     NOVECT   MTH     MTH$GSINCOS_R7
OF20 2493     MAC     NOVECT   MTH     MTH$GSINCOS_D
OF20 2494     MAC     NOVECT   MTH     MTH$GSINCOS_D_R7
OF20 2495
OF20 2496 ; MODULE MTH$HSINCOS (Continued)
OF20 2497     MAC     NOVECT   MTH     MTH$HSINCOS
OF20 2498     MAC     NOVECT   MTH     MTH$HSINCOS_R7
OF20 2499     MAC     NOVECT   MTH     MTH$HSINCOS_D
OF20 2500     MAC     NOVECT   MTH     MTH$HSINCOS_D_R7

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OF20 2501  
OF20 2502 ; MODULE:MTH$ALOG (Continued)  
OF20 2503 MAC CALL MTH MTH$ALOG2  
OF28 2504  
OF28 2505 ; MODULE:MTH$DLOG (Continued)  
OF28 2506 MAC CALL MTH MTH$DLOG2  
OF30 2507  
OF30 2508 ; MODULE MTH$AL_4_OV_PI  
OF30 2509 MAC NOVECT MTH MTH$AL_4_OV_PI  
OF30 2510  
OF30 2511 ; MODULE MTH$STAN (Continued)  
OF30 2512 MAC JSB MTH MTH$STAN_R5  
OF38 2513 MAC JSB MTH MTH$STAN_R5  
OF40 2514  
OF40 2515 ; MODULE MTH$HTAN (Continued)  
OF40 2516 MAC NOVECT MTH MTH$HTAN_R7  
OF40 2517 MAC NOVECT MTH MTH$HTAN_R7  
OF40 2518  
OF40 2519 ; MODULE MTH$AL_4_OV_PI  
OF40 2520 MAC DATA MTH MTH$AL_4_OV_PI  
OF48 2521  
OF48 2522 ; MODULE MTH$ALOG  
OF48 2523 MAC DATA MTH MTH$$AB_ALOG  
OF50 2524  
OF50 2525 ; MODULE MTH$ATAN  
OF50 2526 MAC DATA MTH MTH$$AB_ATAN
```


00'00'00'00'00'00'00'00'00'00'00'00' 118C
00'00'00'00'00'00'00'00'00'00'00'00' 1198
00'00'00'00'00'00'00'00'00'00'00'00' 11A4
00'00'00'00'00'00'00'00'00'00'00'00' 11B0
00'00'00'00'00'00'00'00'00'00'00'0C' 11BC
00'00'00'00'00'00'00'00'00'00'00'00' 11C8
00'00'00'00'00'00'00'00'00'00'00'00' 11D4
00'00'00'00'00'00'00'00'00'00'00'00' 11E0
00'00'00'00'00'00'00'00'00'00'00'00' 11EC
00'00'00'00'00'00'00'00'00'00'00'00' 11F8
00'00'00'00'00'00'00'00'00'00'00'00' 1204
00'00'00'00'00'00'00'00'00'00'00'00' 1210
00'00'00'00'00'00'00'00'00'00'00'00' 121C
00'00'00'00'00'00'00'00'00'00'00'00' 1228
00'00'00'00'00'00'00'00'00'00'00'00' 1234
00'00'00'00'00'00'00'00'00'00'00'00' 1240
00'00'00'00'00'00'00'00'00'00'00'00' 124C
00'00'00'00'00'00'00'00'00'00'00'00' 1258
00'00'00'00'00'00'00'00'00'00'00'00' 1264
00'00'00'00'00'00'00'00'00'00'00'00' 1270
00'00'00'00'00'00'00'00'00'00'00'00' 127C
00'00'00'00'00'00'00'00'00'00'00'00' 1288
00'00'00'00'00'00'00'00'00'00'00'00' 1294
00'00'00'00'00'00'00'00'00'00'00'00' 12A0
00'00'00'00'00'00'00'00'00'00'00'00' 12AC
00'00'00'00'00'00'00'00'00'00'00'00' 12B8
00'00'00'00'00'00'00'00'00'00'00'00' 12C4
00'00'00'00'00'00'00'00'00'00'00'00' 12D0
00'00'00'00'00'00'00'00'00'00'00'00' 12DC
00'00'00'00'00'00'00'00'00'00'00'00' 12E8
00'00'00'00'00'00'00'00'00'00'00'00' 12F4
00'00'00'00'00'00'00'00'00'00'00'00' 1300
00'00'00'00'00'00'00'00'00'00'00'00' 130C
1318 2539
1318 2540

MAC CALL COB COB\$HANDLER COB\$\$HANDLER


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1480 2898 ; MODULE STR$COMPARE_CASE_BLIND -- Compare strings case-blind
1480 2899         MAC     NOVECT  STR      STR$CASE_BLIND_COMPARE
1480 2900
1480 2901 ; MODULE STR$FIND_FIRST -- Find 1st char in or not in set
1480 2902         MAC     NOVECT  STR      STR$FIND_FIRST_IN_SET
1480 2903         MAC     NOVECT  STR      STR$FIND_FIRST_NOT_IN_SET
1480 2904
1480 2905 ; MODULE STR$FIND_FIRST_SUBSTRING -- Find first substring
1480 2906         MAC     NOVECT  STR      STR$FIND_FIRST_SUBSTRING
1480 2907
1480 2908 ; NEW ENTRY POINTS FOR VAX BASIC 2.0
1480 2909 : -----
1480 2910
1480 2911 ; MODULE BASS$CVTTP -- Basic convert text to packed
1480 2912         MAC     CALL     BAS      BASS$CVT_T_P
1488 2913
1488 2914 ; MODULE LIB$$ADDP -- add packed instruction for BASS$CVT_T_P
1488 2915         MAC     NOVECT  LIB      LIB$$ADDP_R7
1488 2916
1488 2917 ; MODULE BASS$UPI_TERM_IO
1488 2918 : (use up addr vacated by LIB$$ADDP_R7)
1488 2919         MAC     CALL     BAS      BASS$IN_B_R
1480 2920
1480 2921 ; MODULE OT$$CNVOUT -- convert floating to E formatted text
1480 2922 : (shared, not vectored)
1480 2923         MAC     NOVECT  OTS      OT$$CNVOUT
1480 2924
1480 2925 ; OLD ENTRY POINTS FOR MODULE BASS$CVTOUT, originally overlooked
1480 2926         MAC     CALL     BAS      BASS$CVT_OUT_F_E
1488 2927         MAC     CALL     BAS      BASS$CVT_OUT_F_F
1480 2928         MAC     CALL     BAS      BASS$CVT_OUT_D_E
1488 2929         MAC     CALL     BAS      BASS$CVT_OUT_D_F
1480 2930         MAC     CALL     BAS      BASS$CVT_OUT_D_G
1488 2931
1488 2932 ; NEW ENTRY POINTS FOR MODULE BASS$CVTOUT, Basic output conversion
1488 2933         MAC     CALL     BAS      BASS$CVT_OUT_G_E
1480 2934         MAC     CALL     BAS      BASS$CVT_OUT_G_F
1488 2935         MAC     CALL     BAS      BASS$CVT_OUT_G_G
1480 2936         MAC     CALL     BAS      BASS$CVT_OUT_H_E
1488 2937         MAC     CALL     BAS      BASS$CVT_OUT_H_F
1480 2938         MAC     CALL     BAS      BASS$CVT_OUT_H_G
1488 2939         MAC     CALL     BAS      BASS$CVT_OUT_P_E
1480 2940         MAC     CALL     BAS      BASS$CVT_OUT_P_F
1488 2941         MAC     CALL     BAS      BASS$CVT_OUT_P_G
1480 2942
1480 2943 ; NEW ENTRY POINTS FOR MODULE BASS$CMPAPP, Basic compare approximate
1480 2944         MAC     CALL     BAS      BASS$CMPG_APP
1488 2945         MAC     CALL     BAS      BASS$CMPH_APP
1480 2946
1480 2947 ; NEW ENTRY POINTS FOR MODULE BASS$COPYFD, Basic copy floating
1480 2948 : (shared, not vectored)
1480 2949         MAC     NOVECT  BAS      BASS$COPY_G_R1
1480 2950         MAC     NOVECT  BAS      BASS$COPY_H_R3
1480 2951
1480 2952 ; NEW ENTRY POINTS FOR MODULE BASS$NUM, Basic NUM function
1480 2953         MAC     CALL     BAS      BASS$NUM_G
1488 2954         MAC     CALL     BAS      BASS$NUM_H

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1550 2955      MAC      CALL      BAS      BASSNUM_P
1558 2956
1558 2957 ; NEW ENTRY POINTS FOR MODULE BASSNUM1, Basic NUM1 function
1558 2958      MAC      CALL      BAS      BASSNUM1_G
1560 2959      MAC      CALL      BAS      BASSNUM1_H
1568 2960      MAC      CALL      BAS      BASSNUM1_P
1570 2961
1570 2962 ; NEW ENTRY POINTS FOR MODULE BASSSTR, Basic STR$ function
1570 2963      MAC      CALL      BAS      BASSSTR_G
1578 2964      MAC      CALL      BAS      BASSSTR_H
1580 2965      MAC      CALL      BAS      BASSSTR_P
1588 2966
1588 2967 ; NEW ENTRY POINTS FOR MODULE BASSUPI_TERM_IO, Basic UPI level I/O
1588 2968      MAC      CALL      BAS      BASSOUT_G_V_S
1590 2969      MAC      CALL      BAS      BASSOUT_G_V_B
1598 2970      MAC      CALL      BAS      BASSOUT_G_V_C
15A0 2971      MAC      CALL      BAS      BASSOUT_H_V_S
15A8 2972      MAC      CALL      BAS      BASSOUT_H_V_B
15B0 2973      MAC      CALL      BAS      BASSOUT_H_V_C
15B8 2974      MAC      CALL      BAS      BASSOUT_P_DX_S
15C0 2975      MAC      CALL      BAS      BASSOUT_P_DX_B
15C8 2976      MAC      CALL      BAS      BASSOUT_P_DX_C
15D0 2977      MAC      CALL      BAS      BASSIN_G_R
15D8 2978      MAC      CALL      BAS      BASSIN_H_R
15E0 2979      MAC      CALL      BAS      BASSIN_P_DX
15E8 2980
15E8 2981 ; NEW ENTRY POINTS FOR BASSVAL, Basic VAL function
15E8 2982      MAC      CALL      BAS      BASSVAL_G
15F0 2983      MAC      CALL      BAS      BASSVAL_H
15F8 2984      MAC      CALL      BAS      BASSVAL_P
1600 2985
1600 2986 ; MODULE BASS$REC PROC
1600 2987 ; this is needed for BASSANSI_TAB, a non-shared entry point
1600 2988      MAC      JSB      BAS      BASS$REC_WSL1
1608 2989
1608 2990 ; MODULE BASFIND, new entry point
1608 2991      MAC      CALL      BAS      BASSFIND_RFA
1610 2992
1610 2993 ; MODULE BASGET, new entry point
1610 2994      MAC      CALL      BAS      BASSGET_KFA
1618 2995
1618 2996 ; MODULE BASGETRFA, new
1618 2997      MAC      CALL      BAS      BASSGETRFA
1620 2998
1620 2999 ; MODULE BASCB, old entry point must be vectored for improved BASKILL
1620 3000      MAC      CALL      BAS      BASS$NEXT_LUN
1628 3001
1628 3002 ; MODULE BASIOBEG, new entry point
1628 3003      MAC      CALL      BAS      BASSANSI_INPUT
1630 3004
1630 3005 ; MODULE BASIOEND, new entry point
1630 3006      MAC      CALL      BAS      BASSANSI_IO_END
1638 3007
1638 3008 ; MODULE BASCTRLC, all entry points
1638 3009      MAC      CALL      BAS      BASSCTRLC
1640 3010      MAC      CALL      BAS      BASSRCTRLC
1648 3011      MAC      CALL      BAS      BASS$CTRLC_INIT

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VMS\$VECTOR
4-003

- Define entry vectors for VMSRTL^{M 12}

16-SEP-1984 02:15:59
6-SEP-1984 11:48:04

VAX/VMS Macro V04-00
[VMSRTL.SRC]VMSVECTOR.MAR;1

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1650 3012

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1750 3061                    .SBTTL MTH$$AB_ATAN - Table for ATAN routines
1750 3062
1750 3063 :
1750 3064 :    The MTH$$AB_ATAN table is a table of byte entries used to obtain an index
1750 3065 :    into the ATAN_TABLE. MTH$$AB_ATAN is indexed using the low order bits of
1750 3066 :    the exponent field and the high order bits of the fraction field. The
1750 3067 :    MTH$$AB_ATAN table is independent of the data type and is used by all of
1750 3068 :    the arctangent routines.
1750 3069 :
1750 3070 :    This table is a duplicate of that in MTHATAN.MAR, but must remain
1750 3071 :    separate.
1750 3072
1750 3073 MTH$$AB_ATAN:
09 06 06 03 03 00 00 00 1750 3074    .BYTE    ^X00, ^X00, ^X00, ^X03, ^X03, ^X06, ^X06, ^X09
12 0F 0F 0C 0C 0C 09 09 1758 3075    .BYTE    ^X09, ^X09, ^X0C, ^X0C, ^X0C, ^X0F, ^X0F, ^X12
18 18 18 15 15 15 12 12 1760 3076    .BYTE    ^X12, ^X12, ^X15, ^X15, ^X15, ^X18, ^X18, ^X18
21 1E 1E 1E 1B 1B 1B 1B 1768 3077    .BYTE    ^X1B, ^X1B, ^X1B, ^X1B, ^X1E, ^X1E, ^X1E, ^X21
24 24 24 24 21 21 21 21 1770 3078    .BYTE    ^X21, ^X21, ^X21, ^X21, ^X24, ^X24, ^X24, ^X24
27 27 27 27 27 27 24 24 1778 3079    .BYTE    ^X24, ^X24, ^X27, ^X27, ^X27, ^X27, ^X27, ^X27
27 27 27 27 27 27 27 27 1780 3080    .BYTE    ^X27, ^X27, ^X27, ^X27, ^X27, ^X27, ^X27, ^X27
1787 3081
1787 3082                    .END
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VMSSVECTOR
Symbol table

- Define entry vectors for VMSRTL C 13

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\$\$BASS\$BLNK_LINE	00000BA0	RG	01	\$\$BASS\$ERN	00000988	RG	01
\$\$BASS\$CB_GET	00000B80	RG	01	\$\$BASS\$ERR	00000978	RG	01
\$\$JASS\$CB_POP	00000B70	RG	01	\$\$BASS\$ERROR	00000B50	RG	01
\$\$BASS\$CB_PUSH	00000B78	RG	01	\$\$BASS\$ERT	00000990	RG	01
\$\$BASS\$CLOSE_ALL	00000BF8	RG	01	\$\$BASS\$FIND	00000AC8	RG	01
\$\$BASS\$CTRLC_INIT	00001648	RG	01	\$\$BASS\$FIND_KEY	00000AD8	RG	01
\$\$BASS\$ERR_INIT	00000B88	RG	01	\$\$BASS\$FIND_RECORD	00000AD0	RG	01
\$\$BASS\$FORMAT_INT	00000BF0	RG	01	\$\$BASS\$FIND_RFA	00001608	RG	01
\$\$BASS\$NEXT_LON	00001620	RG	01	\$\$BASS\$FREE	00000B18	RG	01
\$\$BASS\$OPEN_ZERO	00000B90	RG	01	\$\$BASS\$GET	00000A90	RG	01
\$\$BASS\$RECOO_INIT	00000B98	RG	01	\$\$BASS\$GETRFA	00001618	RG	01
\$\$BASS\$REC_WSL1	00001600	RG	01	\$\$BASS\$GET_KEY	00000AA0	RG	01
\$\$BASS\$SCALE_L_R1	00000BD8	RG	01	\$\$BASS\$GET_RECORD	00000A98	RG	01
\$\$BASS\$SCALE_RT	00000BE0	RG	01	\$\$BASS\$GET_RFA	00001610	RG	01
\$\$BASS\$SIGNAC	00000BA8	RG	01	\$\$BASS\$HANDLER	00000998	RG	01
\$\$BASS\$SIGNAL_IO	00000BB0	RG	01	\$\$BASS\$INIT_DEF_R8	00000920	RG	01
\$\$BASS\$STATU_INIT	00000BB8	RG	01	\$\$BASS\$INIT_DFS_R8	00000928	RG	01
\$\$BASS\$STOP	00000BC0	RG	01	\$\$BASS\$INIT_GOSUB	00000930	RG	01
\$\$BASS\$STOP_IO	00000BC8	RG	01	\$\$BASS\$INIT_R8	00000918	RG	01
\$\$BASS\$STOP_RMS	00000BE8	RG	01	\$\$BASS\$INPUT	000009A0	RG	01
\$\$BASS\$UDF_RL1	00000C00	RG	01	\$\$BASS\$INPUT_LINE	00000980	RG	01
\$\$BASS\$UDF_WL1	00000C08	RG	01	\$\$BASS\$INSTR	000008B0	RG	01
\$\$BASS\$ANSI_INPUT	00001628	RG	01	\$\$BASS\$IN_B_R	000014B8	RG	01
\$\$BASS\$ANSI_IO_END	00001630	RG	01	\$\$BASS\$IN_D_R	000009F0	RG	01
\$\$BASS\$BUFSTZ	00000B40	RG	01	\$\$BASS\$IN_F_R	000009E8	RG	01
\$\$BASS\$CANTYFAHEAD	00000BD0	RG	01	\$\$BASS\$IN_G_R	000015D0	RG	01
\$\$BASS\$CCPOS	00000B20	RG	01	\$\$BASS\$IN_H_R	000015D8	RG	01
\$\$BASS\$CHR	00000B48	RG	01	\$\$BASS\$IN_L_R	000009E0	RG	01
\$\$BASS\$CLOSE	00000A88	RG	01	\$\$BASS\$IN_P_DX	000015E0	RG	01
\$\$BASS\$CMPD_APP	00000890	RG	01	\$\$BASS\$IN_T_DX	000009F8	RG	01
\$\$BASS\$CMPF_APP	00000888	RG	01	\$\$BASS\$IN_W_R	000009D8	RG	01
\$\$BASS\$CMPI_APP	00001530	RG	01	\$\$BASS\$IO_END	000009D0	RG	01
\$\$BASS\$CMPI_APP	00001538	RG	01	\$\$BASS\$INPUT	000009A8	RG	01
\$\$BASS\$CTRLC	00001638	RG	01	\$\$BASS\$MAT_INPUT	00000A68	RG	01
\$\$BASS\$CVT_OUT_D_E	000014D0	RG	01	\$\$BASS\$MAT_LINPUT	00000A70	RG	01
\$\$BASS\$CVT_OUT_D_F	000014D8	RG	01	\$\$BASS\$MAT_PRINT	00000A60	RG	01
\$\$BASS\$CVT_OUT_D_G	000014E0	RG	01	\$\$BASS\$MAT_READ	00000A78	RG	01
\$\$BASS\$CVT_OUT_F_E	000014C0	RG	01	\$\$BASS\$NUMT_D	000008F0	RG	01
\$\$BASS\$CVT_OUT_F_F	000014C8	RG	01	\$\$BASS\$NUM1_F	000008E8	RG	01
\$\$BASS\$CVT_OUT_G_E	000014E8	RG	01	\$\$BASS\$NUM1_G	00001558	RG	01
\$\$BASS\$CVT_OUT_G_F	000014F0	RG	01	\$\$BASS\$NUM1_H	00001560	RG	01
\$\$BASS\$CVT_OUT_G_G	000014F8	RG	01	\$\$BASS\$NUM1_L	000008F8	RG	01
\$\$BASS\$CVT_OUT_H_E	00001500	RG	01	\$\$BASS\$NUM1_P	00001568	RG	01
\$\$BASS\$CVT_OUT_H_F	00001508	RG	01	\$\$BASS\$NUM_D	000008D8	RG	01
\$\$BASS\$CVT_OUT_H_G	00001510	RG	01	\$\$BASS\$NUM_F	000008D0	RG	01
\$\$BASS\$CVT_OUT_P_E	00001518	RG	01	\$\$BASS\$NUM_G	00001540	RG	01
\$\$BASS\$CVT_OUT_P_F	00001520	RG	01	\$\$BASS\$NUM_H	00001548	RG	01
\$\$BASS\$CVT_OUT_P_G	00001528	RG	01	\$\$BASS\$NUM_L	000008E0	RG	01
\$\$BASS\$CVT_T_P	00001480	RG	01	\$\$BASS\$NUM_P	00001550	RG	01
\$\$BASS\$DELETE	00000AE0	RG	01	\$\$BASS\$ON_ERR_BK	00000960	RG	01
\$\$BASS\$SCALE_D_R1	00000880	RG	01	\$\$BASS\$ON_ERR_Z	00000958	RG	01
\$\$BASS\$EDIT	000008A8	RG	01	\$\$BASS\$OPEN	00000A80	RG	01
\$\$BASS\$END_DEF_R8	00000940	RG	01	\$\$BASS\$OUT_D_V_B	00000A38	RG	01
\$\$BASS\$END_DFS_R8	00000948	RG	01	\$\$BASS\$OUT_D_V_C	00000A40	RG	01
\$\$BASS\$END_GSB_R8	00000950	RG	01	\$\$BASS\$OUT_D_V_S	00000A30	RG	01
\$\$BASS\$END_R8	00000938	RG	01	\$\$BASS\$OUT_F_V_B	00000A20	RG	01
\$\$BASS\$ERL	00000980	RG	01	\$\$BASS\$OUT_F_V_C	00000A28	RG	01

VMS\$VECTOR
Symbol table

- Define entry vectors for VMSRTL D 13

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\$\$BASSOUT_F_V_S	00000A18	RG	01	\$\$COBSACC_TIME	00001400	RG	01
\$\$BASSOUT_G_V_B	00001590	RG	01	\$\$COBSADDT	00001330	RG	01
\$\$BASSOUT_G_V_C	00001598	RG	01	\$\$COBSACMPI	00001358	RG	01
\$\$BASSOUT_G_V_S	00001588	RG	01	\$\$COBSACVTDI_R7	00001360	RG	01
\$\$BASSOUT_H_V_B	000015A8	RG	01	\$\$COBSACVTFI_R7	00001368	RG	01
\$\$BASSOUT_H_V_C	000015B0	RG	01	\$\$COBSACVTID_R7	00001370	RG	01
\$\$BASSOUT_H_V_S	000015A0	RG	01	\$\$COBSACVTIF_R7	00001378	RG	01
\$\$BASSOUT_L_V_B	00000A08	RG	01	\$\$COBSACVTIL_R8	00001380	RG	01
\$\$BASSOUT_L_V_C	00000A10	RG	01	\$\$COBSACVTIP_R9	00001388	RG	01
\$\$BASSOUT_L_V_S	00000A00	RG	01	\$\$COBSACVTIQ_R8	00001390	RG	01
\$\$BASSOUT_P_DX_B	000015C0	RG	01	\$\$COBSACVTIW_R8	00001398	RG	01
\$\$BASSOUT_P_DX_C	000015C8	RG	01	\$\$COBSACVTLI_R8	000013A0	RG	01
\$\$BASSOUT_P_DX_S	000015B8	RG	01	\$\$COBSACVTPI_R9	000013A8	RG	01
\$\$BASSOUT_T_DX_B	00000A50	RG	01	\$\$COBSACVTPQ_R9	00001438	RG	01
\$\$BASSOUT_T_DX_C	00000A58	RG	01	\$\$COBSACVTQI_R8	000013B0	RG	01
\$\$BASSOUT_T_DX_S	00000A48	RG	01	\$\$COBSACVTQP_R9	00001440	RG	01
\$\$BASSPOP_ERR	00000B68	RG	01	\$\$COBSACVTRIC_R8	000013B8	RG	01
\$\$BASSPRINT	000009C0	RG	01	\$\$COBSACVTRIP_R9	000013C0	RG	01
\$\$BASSPRINT_USING	000009C8	RG	01	\$\$COBSACVTRIQ_R8	000013C8	RG	01
\$\$BASSPUSH_ERR	00000B60	RG	01	\$\$COBSACVTRIW_R8	000013D0	RG	01
\$\$BASSPUT	00000AA8	KG	01	\$\$COBSACVTRPQ_R9	00001448	RG	01
\$\$BASSPUT_COUNT	00000AB8	RG	01	\$\$COBSACVTRQP_R9	00001450	RG	01
\$\$BASSPUT_RECORD	00000AB0	RG	01	\$\$COBSACVTTI_R8	000013D8	RG	01
\$\$BASSPUT_REC_CNT	00000AC0	RG	01	\$\$COBSACVTWI_R8	000013E0	RG	01
\$\$BASSRCTRLC	00001640	RG	01	\$\$COBSADISPLAY	00001410	RG	01
\$\$BASSREAD	000009B8	RG	01	\$\$COBSADISP_NO_ADV	00001418	RG	01
\$\$BASSRECOUNT	00000B30	RG	01	\$\$COBSADIVI	00001348	RG	01
\$\$BASSRESTORE	00000AF8	RG	01	\$\$COBSADIVI_OSE	00001350	RG	01
\$\$BASSRESTORE_DAT	00000B28	RG	01	\$\$COBSADIVQ_R8	00001420	RG	01
\$\$BASSRESTORE_KEY	00000B00	RG	01	\$\$COBSAERROR	00001328	RG	01
\$\$BASSRESUME	00000968	RG	01	\$\$COBSASHANDLER	00001318	RG	01
\$\$BASSRESUME_Z	00000970	RG	01	\$\$COBSAIOEXCEPTION	00001320	RG	01
\$\$BASSRSET	00000898	RG	01	\$\$COBSAMULI	00001340	RG	01
\$\$BASSRSET_R	000008A0	RG	01	\$\$COBSAMULQ_R8	00001428	RG	01
\$\$BASSSCALE_D_R1	00000878	RG	01	\$\$COBSA_PAUSE	00001430	RG	01
\$\$BASSSCRATCH	00000B08	RG	01	\$\$COBSASUBI	00001338	RG	01
\$\$BASSSTATUS	00000B38	RG	01	\$\$FOR\$\$CB_GET	00000620	RG	01
\$\$BASSSTR_D	000008C0	RG	01	\$\$FOR\$\$CB_POP	00000610	RG	01
\$\$BASSSTR_F	000008B8	RG	01	\$\$FOR\$\$CB_PUSH	00000608	RG	01
\$\$BASSSTR_G	00001570	RG	01	\$\$FOR\$\$CB_RET	00000618	RG	01
\$\$BASSSTR_H	00001578	RG	01	\$\$FOR\$\$ERRSNS_SAV	00000628	RG	01
\$\$BASSSTR_L	000008C8	RG	01	\$\$FOR\$\$FP_MATCH	00000728	RG	01
\$\$BASSSTR_P	00001580	RG	01	\$\$FOR\$\$BACKSPACE	00000180	RG	01
\$\$BASSUNLOCK	00000B10	RG	01	\$\$FOR\$\$CLOSE	00000000	RG	01
\$\$BASSUPDATE	00000AE8	RG	01	\$\$FOR\$\$CNV_IN_DEFG	00000200	RG	01
\$\$BASSUPDATE_COUN	00000AF0	RG	01	\$\$FOR\$\$CNV_IN_I	00000210	RG	01
\$\$BASSVAL_D	00000910	RG	01	\$\$FOR\$\$CNV_IN_L	00000218	RG	01
\$\$BASSVAL_F	00000908	RG	01	\$\$FOR\$\$CNV_IN_O	00000220	RG	01
\$\$BASSVAL_G	000015E8	RG	01	\$\$FOR\$\$CNV_IN_Z	00000228	RG	01
\$\$BASSVAL_H	000015F0	RG	01	\$\$FOR\$\$CNV_OUT_D	000001A8	RG	01
\$\$BASSVAL_L	00000900	RG	01	\$\$FOR\$\$CNV_OUT_E	000001B0	RG	01
\$\$BASSVAL_P	000015F8	RG	01	\$\$FOR\$\$CNV_OUT_F	000001B8	RG	01
\$\$BASSWAIT	00000CA0	RG	01	\$\$FOR\$\$CNV_OUT_G	000001C0	RG	01
\$\$COBSACCEPT	00001408	RG	01	\$\$FOR\$\$CNV_OUT_I	00000188	RG	01
\$\$COBSACC_DATE	000013E8	RG	01	\$\$FOR\$\$CNV_OUT_L	00000190	RG	01
\$\$COBSACC_DAY	000013F0	RG	01	\$\$FOR\$\$CNV_OUT_O	00000198	RG	01
\$\$COBSACC_DAYWEEK	000013F8	RG	01	\$\$FOR\$\$CNV_OUT_Z	000001A0	RG	01

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\$\$FOR\$CVT_D_TD	000001A8	RG	01	\$\$FOR\$IO_X_DA	00000170	RG	01
\$\$FOR\$CVT_D_TE	000001B0	RG	01	\$\$FOR\$IO_X_NL	00000748	RG	01
\$\$FOR\$CVT_D_TF	000001B8	RG	01	\$\$FOR\$IO_X_SB	00000740	RG	01
\$\$FOR\$CVT_D_TG	000001C0	RG	01	\$\$FOR\$IO_X_SE	00000750	RG	01
\$\$FOR\$CVT_G_TD	00000640	RG	01	\$\$FOR\$OPEN	00000178	RG	01
\$\$FOR\$CVT_G_TE	00000648	RG	01	\$\$FOR\$PAUSE	00000248	RG	01
\$\$FOR\$CVT_G_TF	00000650	RG	01	\$\$FOR\$RAB	00000788	RG	01
\$\$FOR\$CVT_G_TG	00000658	RG	01	\$\$FOR\$READ_DF	00000038	RG	01
\$\$FOR\$CVT_H_TD	00000668	RG	01	\$\$FOR\$READ_DO	00000040	RG	01
\$\$FOR\$CVT_H_TE	00000670	RG	01	\$\$FOR\$READ_DU	00000048	RG	01
\$\$FOR\$CVT_H_TF	00000678	RG	01	\$\$FOR\$READ_IF	000006C8	RG	01
\$\$FOR\$CVT_H_TG	00000680	RG	01	\$\$FOR\$READ_IO	000006D0	RG	01
\$\$FOR\$DECODE_MF	00000008	RG	01	\$\$FOR\$READ_KF	00000028	RG	01
\$\$FOR\$DECODE_MO	00000010	RG	01	\$\$FOR\$READ_KO	00000030	RG	01
\$\$FOR\$DEF_FILE	000001C8	RG	01	\$\$FOR\$READ_KU	00000708	RG	01
\$\$FOR\$DEF_FILE_W	000001D0	RG	01	\$\$FOR\$READ_SF	00000050	RG	01
\$\$FOR\$DELETE	000006E8	RG	01	\$\$FOR\$READ_SL	00000058	RG	01
\$\$FOR\$DELETE_D	000006F0	RG	01	\$\$FOR\$READ_SN	00000730	RG	01
\$\$FOR\$ENCODE_MF	00000018	RG	01	\$\$FOR\$READ_SO	00000060	RG	01
\$\$FOR\$ENCODE_MO	00000020	RG	01	\$\$FOR\$READ_SU	00000068	RG	01
\$\$FOR\$ENDFILE	000001D8	RG	01	\$\$FOR\$REWIND	00000250	RG	01
\$\$FOR\$ERRSNS	000001E0	RG	01	\$\$FOR\$REWRITE_SF	000006B0	RG	01
\$\$FOR\$ERRSNS_W	000001E8	RG	01	\$\$FOR\$REWRITE_SO	000006B8	RG	01
\$\$FOR\$EXIT	000001F0	RG	01	\$\$FOR\$REWRITE_SU	000006C0	RG	01
\$\$FOR\$EXIT_W	000001F8	RG	01	\$\$FOR\$SECNDS	00000258	RG	01
\$\$FOR\$FIND	00000208	RG	01	\$\$FOR\$STOP	00000260	RG	01
\$\$FOR\$INI_DES1_R2	00000230	RG	01	\$\$FOR\$UNLOCK	00000700	RG	01
\$\$FOR\$INI_DES2_R3	00000238	RG	01	\$\$FOR\$WRITE_DF	00000070	RG	01
\$\$FOR\$INI_DESC_R6	00000240	RG	01	\$\$FOR\$WRITE_DO	00000078	RG	01
\$\$FOR\$INQUIRE	000006F8	RG	01	\$\$FOR\$WRITE_DU	00000080	RG	01
\$\$FOR\$IO_B_R	000000E0	RG	01	\$\$FOR\$WRITE_IF	000006D8	RG	01
\$\$FOR\$IO_B_V	000000E8	RG	01	\$\$FOR\$WRITE_IO	000006E0	RG	01
\$\$FOR\$IO_DC_R	00000128	RG	01	\$\$FOR\$WRITE_SF	00000088	RG	01
\$\$FOR\$IO_DC_V	00000630	RG	01	\$\$FOR\$WRITE_SL	00000090	RG	01
\$\$FOR\$IO_D_R	000000C0	RG	01	\$\$FOR\$WRITE_SN	00000738	RG	01
\$\$FOR\$IO_D_V	000000C8	RG	01	\$\$FOR\$WRITE_SO	00000098	RG	01
\$\$FOR\$IO_END	000000A8	RG	01	\$\$FOR\$WRITE_SU	000000A0	RG	01
\$\$FOR\$IO_FC_R	00000140	RG	01	\$\$LIB\$ANALYZE_SDESC	00001480	RG	01
\$\$FOR\$IO_FC_V	00000148	RG	01	\$\$LIB\$ANALYZE_SDESC_R2	00001488	RG	01
\$\$FOR\$IO_F_R	000000B0	RG	01	\$\$LIB\$AST_IN_PROG	000004B0	RG	01
\$\$FOR\$IO_F_V	000000B8	RG	01	\$\$LIB\$ATTACH	00000770	RG	01
\$\$FOR\$IO_GC_R	00000130	RG	01	\$\$LIB\$CRC	000004B8	RG	01
\$\$FOR\$IO_GC_V	00000638	RG	01	\$\$LIB\$CRC_TABLE	000004C0	RG	01
\$\$FOR\$IO_G_R	00000108	RG	01	\$\$LIB\$DEC_OVER	000004C8	RG	01
\$\$FOR\$IO_G_V	00000110	RG	01	\$\$LIB\$ESTABLISH	000004D0	RG	01
\$\$FOR\$IO_H_R	00000118	RG	01	\$\$LIB\$EXTV	000004D8	RG	01
\$\$FOR\$IO_H_V	00000120	RG	01	\$\$LIB\$EXTZV	000004E0	RG	01
\$\$FOR\$IO_LD_R	00000150	RG	01	\$\$LIB\$FFC	000004E8	RG	01
\$\$FOR\$IO_LU_V	00000158	RG	01	\$\$LIB\$FFS	000004F0	RG	01
\$\$FOR\$IO_L_R	000000D0	RG	01	\$\$LIB\$FILE_SCAN	000014A0	RG	01
\$\$FOR\$IO_L_V	000000D8	RG	01	\$\$LIB\$FIND_FILE	000014A8	RG	01
\$\$FOR\$IO_T_DS	000000F0	RG	01	\$\$LIB\$FIXUP_FLT	000004F8	RG	01
\$\$FOR\$IO_T_V_DS	00000138	RG	01	\$\$LIB\$FLT_UNDER	00000500	RG	01
\$\$FOR\$IO_WD_R	00000160	RG	01	\$\$LIB\$FREE_EF	00001468	RG	01
\$\$FOR\$IO_WU_V	00000168	RG	01	\$\$LIB\$FREE_LUN	00001458	RG	01
\$\$FOR\$IO_W_R	000000F8	RG	01	\$\$LIB\$FREE_VM	000005F0	RG	01
\$\$FOR\$IO_W_V	00000100	RG	01	\$\$LIB\$GET_COMMAND	00000510	RG	01

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\$\$LIB\$GET_EF	00001470	RG	01	\$\$MTH\$ATAND2	00000E28	RG	01
\$\$LIB\$GET_INPUT	00000508	RG	01	\$\$MTH\$ATAND_R4	00000E30	RG	01
\$\$LIB\$GET_LUN	00001460	RG	01	\$\$MTH\$ATANH	00000E00	RG	01
\$\$LIB\$GET_OPCODE	00000780	RG	01	\$\$MTH\$ATAN_R4	000002B8	RG	01
\$\$LIB\$GET_VM	000005F8	RG	01	\$\$MTH\$CABS	00000438	RG	01
\$\$LIB\$INDEX	00000518	RG	01	\$\$MTH\$CCOS	00000458	RG	01
\$\$LIB\$INSV	00000520	RG	01	\$\$MTH\$CEXP	00000440	RG	01
\$\$LIB\$INT_OVER	00000528	RG	01	\$\$MTH\$CLOG	00000448	RG	01
\$\$LIB\$LOCC	00000530	RG	01	\$\$MTH\$COS	00000368	RG	01
\$\$LIB\$MATCHC	00000538	RG	01	\$\$MTH\$COSD	00000E90	RG	01
\$\$LIB\$MATCH_COND	00000540	RG	01	\$\$MTH\$COSD_R4	00000E98	RG	01
\$\$LIB\$MOVTC	00000548	RG	01	\$\$MTH\$COSH	00000450	RG	01
\$\$LIB\$MOVTC	00000550	RG	01	\$\$MTH\$COS_R4	00000370	RG	01
\$\$LIB\$PUT_OUTPUT	00000558	RG	01	\$\$MTH\$CSIN	00000460	RG	01
\$\$LIB\$RESERVE_EF	00001478	RG	01	\$\$MTH\$CSQRT	00000468	RG	01
\$\$LIB\$REVERT	00000560	RG	01	\$\$MTH\$DACOS	000002C0	RG	01
\$\$LIB\$SCANC	00000568	RG	01	\$\$MTH\$DACOSD	00000E38	RG	01
\$\$LIB\$SCOPY_DXDX	00000570	RG	01	\$\$MTH\$DACOSD_R7	00000E40	RG	01
\$\$LIB\$SCOPY_DXDX6	00000578	RG	01	\$\$MTH\$DACOS_R7	000002C8	RG	01
\$\$LIB\$SCOPY_R_DX	00000580	RG	01	\$\$MTH\$DACOS_R9	000002C8	RG	01
\$\$LIB\$SCOPY_R_DX6	00000588	RG	01	\$\$MTH\$DASIN	000002D0	RG	01
\$\$LIB\$SFREET_DD	000005A0	RG	01	\$\$MTH\$DASIND	00000E48	RG	01
\$\$LIB\$SFREET_DD6	000005A8	RG	01	\$\$MTH\$DASIND_R7	00000E50	RG	01
\$\$LIB\$SFREEN_DD	000005B0	RG	01	\$\$MTH\$DASIN_R7	000002D8	RG	01
\$\$LIB\$SFREEN_DD6	000005B8	RG	01	\$\$MTH\$DASIN_R9	000002D8	RG	01
\$\$LIB\$SGET1_DD	00000590	RG	01	\$\$MTH\$DATAN	000002E0	RG	01
\$\$LIB\$SGET1_DD_R6	00000598	RG	01	\$\$MTH\$DATAN2	000002E8	RG	01
\$\$LIB\$SHOW_VM	00000600	RG	01	\$\$MTH\$DATAND	00000E58	RG	01
\$\$LIB\$SIGNAL	000005C8	RG	01	\$\$MTH\$DATAND2	00000E60	RG	01
\$\$LIB\$SIG_TO_RET	000005D8	RG	01	\$\$MTH\$DATAND_R7	00000E68	RG	01
\$\$LIB\$SKPC	000005E0	RG	01	\$\$MTH\$DATANH	00000ED8	RG	01
\$\$LIB\$SPANC	000005E8	RG	01	\$\$MTH\$DATAN_R7	000002F0	RG	01
\$\$LIB\$SPAWN	00000778	RG	01	\$\$MTH\$DCOS	00000328	RG	01
\$\$LIB\$STAT_VM	000005C0	RG	01	\$\$MTH\$DCOSD	00000E70	RG	01
\$\$LIB\$STOP	000005D0	RG	01	\$\$MTH\$DCOSD_R7	00000E78	RG	01
\$\$LIB\$TPARSE	00000B58	RG	01	\$\$MTH\$DCOSH	00000470	RG	01
\$\$MTH\$SAB ALOG_V	00000F48	RG	01	\$\$MTH\$DCOS_R7	00000330	RG	01
\$\$MTH\$SAB ATAN_V	00000F50	RG	01	\$\$MTH\$DEXP	000002F8	RG	01
\$\$MTH\$ACOS	00000268	RG	01	\$\$MTH\$DEXP_R6	00000300	RG	01
\$\$MTH\$ACOSD	00000E00	RG	01	\$\$MTH\$DEXP_R7	00000300	RG	01
\$\$MTH\$ACOSD_R4	00000E08	RG	01	\$\$MTH\$DLOG	00000308	RG	01
\$\$MTH\$ACOS_R4	00000270	RG	01	\$\$MTH\$DLOG10	00000310	RG	01
\$\$MTH\$ACOS_R5	00000270	RG	01	\$\$MTH\$DLOG10_R8	00000318	RG	01
\$\$MTH\$ALOG	00000278	RG	01	\$\$MTH\$DLOG2	00000F28	RG	01
\$\$MTH\$ALOG10	00000280	RG	01	\$\$MTH\$DLOG_R8	00000320	RG	01
\$\$MTH\$ALOG10_R5	00000288	RG	01	\$\$MTH\$DSIN	00000338	RG	01
\$\$MTH\$ALOG2	00000F20	RG	01	\$\$MTH\$DSINCOS	00000F00	RG	01
\$\$MTH\$ALOG_R5	00000290	RG	01	\$\$MTH\$DSINCOSD	00000F10	RG	01
\$\$MTH\$AL_4_OV_PI_V	00000F40	RG	01	\$\$MTH\$DSINCOSD_R7	00000F18	RG	01
\$\$MTH\$ASIN	00000298	RG	01	\$\$MTH\$DSINCOS_R7	00000F08	RG	01
\$\$MTH\$ASIND	00000E10	RG	01	\$\$MTH\$DSIND	00000E80	RG	01
\$\$MTH\$ASIND_R4	00000E18	RG	01	\$\$MTH\$DSIND_R7	00000E88	RG	01
\$\$MTH\$ASIN_R4	000002A0	RG	01	\$\$MTH\$DSINH	00000478	RG	01
\$\$MTH\$ASIN_R5	000002A0	RG	01	\$\$MTH\$DSIN_R7	00000340	RG	01
\$\$MTH\$ATAN	000002A8	RG	01	\$\$MTH\$DSQRT	00000348	RG	01
\$\$MTH\$ATAN2	000002B0	RG	01	\$\$MTH\$DSQRT_R5	00000350	RG	01
\$\$MTH\$ATAND	00000E20	RG	01	\$\$MTH\$DTAN	00000480	RG	01

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\$\$MTHSDTAND	00000E80	RG	01	\$\$OTSS\$FREE1_DD	00000418	RG	01
\$\$MTHSDTAND_R7	00000EB8	RG	01	\$\$OTSS\$FREE1_DD6	00000420	RG	01
\$\$MTHSDTANH	00000488	RG	01	\$\$OTSS\$FREE1_DD6	00000428	RG	01
\$\$MTHSDTAN_R7	00000710	RG	C1	\$\$OTSS\$FREE1_DD6	00000430	RG	01
\$\$MTHSEXP	00000358	RG	01	\$\$OTSS\$GET1_DD	00000408	RG	01
\$\$MTHSEXP_R4	00000360	RG	01	\$\$OTSS\$GET1_DD_R6	00000410	RG	01
\$\$MTHSRANDOM	00000490	RG	01	\$\$STR\$ANALYZE_SDESC	00001490	RG	01
\$\$MTHSSIN	00000378	RG	01	\$\$STR\$ANALYZE_SDESC_R1	00001498	RG	01
\$\$MTHSSINCOS	00000EE0	RG	01	\$\$STR\$APPEND	00000C60	RG	01
\$\$MTHSSINCOSD	00000EF0	RG	01	\$\$STR\$COMPARE	00000C68	RG	01
\$\$MTHSSINCOSD_R5	00000EF8	RG	01	\$\$STR\$COMPARE_EQL	00000C70	RG	01
\$\$MTHSSINCOS_R5	00000EE8	RG	01	\$\$STR\$CONCAT	00000800	RG	01
\$\$MTHSSIND	00000EA0	RG	01	\$\$STR\$COPY_DX	00000808	RG	01
\$\$MTHSSIND_R4	00000EA8	RG	01	\$\$STR\$COPY_DX_R8	00000C10	RG	01
\$\$MTHSSINH	00000498	RG	01	\$\$STR\$COPY_R	00000810	RG	01
\$\$MTHSSIN_R4	00000380	RG	01	\$\$STR\$COPY_R_R8	00000C18	RG	01
\$\$MTHSSQRT	00000388	RG	01	\$\$STR\$DUPL_CHAR	00000850	RG	01
\$\$MTHSSQRT_R2	00000390	RG	01	\$\$STR\$DUPL_CHARR8	00000C20	RG	01
\$\$MTHSSQRT_R3	00000720	RG	01	\$\$STR\$FREE1_DX	00000818	RG	01
\$\$MTHSTAN	000004A0	RG	01	\$\$STR\$FREE1_DX_R4	00000C28	RG	01
\$\$MTHSTAND	00000EC0	RG	01	\$\$STR\$GET1_DX	00000820	RG	01
\$\$MTHSTAND_R4	00000EC8	RG	01	\$\$STR\$GET1_DX_R4	00000C30	RG	01
\$\$MTHSTAND_R5	00000F38	RG	01	\$\$STR\$LEFT	00000828	RG	01
\$\$MTHSTANH	000004A8	RG	01	\$\$STR\$LEFT_R8	00000C38	RG	01
\$\$MTHSTAN_R4	00000718	RG	01	\$\$STR\$LEN_EXTR	00000830	RG	01
\$\$MTHSTAN_R5	00000F30	RG	01	\$\$STR\$LEN_EXTR_R8	00000C40	RG	01
\$\$OTSS\$CVT_D_T_R8	00000790	RG	01	\$\$STR\$POSITION	00000840	RG	01
\$\$OTSS\$CVT_G_T_R8	00000798	RG	01	\$\$STR\$POSITION_R6	00000C48	RG	01
\$\$OTSS\$CVT_H_T_R8	000007A0	RG	01	\$\$STR\$POS_EXTR	00000838	RG	01
\$\$OTSS\$CVT_L_TB	00000758	RG	01	\$\$STR\$POS_EXTR_R8	00000C50	RG	01
\$\$OTSS\$CVT_L_TI	00000690	RG	01	\$\$STR\$PREFIX	00000C78	RG	01
\$\$OTSS\$CVT_L_TL	000006A8	RG	01	\$\$STR\$REPLACE	00000C80	RG	01
\$\$OTSS\$CVT_L_TO	00000698	RG	01	\$\$STR\$REPLACE_R8	00000C88	RG	01
\$\$OTSS\$CVT_L_TZ	000006A0	RG	01	\$\$STR\$RIGHT	00000848	RG	01
\$\$OTSS\$CVT_TB_L	00000760	RG	01	\$\$STR\$RIGHT_R8	00000C58	RG	01
\$\$OTSS\$CVT_TI_L	00000210	RG	01	\$\$STR\$TRANSCATE	00000C90	RG	01
\$\$OTSS\$CVT_TL_L	00000218	RG	01	\$\$STR\$TRIM	00000858	RG	01
\$\$OTSS\$CVT_TO_L	00000220	RG	01	\$\$STR\$UPCASE	00000C98	RG	01
\$\$OTSS\$CVT_TZ_L	00000228	RG	01	BASS\$BLNK_LINE	*****	X	01
\$\$OTSS\$CVT_T_D	00000200	RG	01	BASS\$CB_GET	*****	X	01
\$\$OTSS\$CVT_T_F	00000768	RG	01	BASS\$CB_POP	*****	X	01
\$\$OTSS\$CVT_T_G	00000660	RG	01	BASS\$CB_PUSH	*****	X	01
\$\$OTSS\$CVT_T_H	00C 0688	RG	01	BASS\$CLOSE_ALL	*****	X	01
\$\$OTSS\$DIVC	00000398	RG	01	BASS\$CTRLC_INIT	*****	X	01
\$\$OTSS\$POWCJ	000003A0	RG	01	BASS\$ERR_INIT	*****	X	01
\$\$OTSS\$POWDD	000003A8	RG	01	BASS\$FORMAT_INT	*****	X	01
\$\$OTSS\$POWDJ	000003C0	RG	01	BASS\$HANDLER	*****	X	01
\$\$OTSS\$POWDR	000003B0	RG	01	BASS\$NEXT_LUN	*****	X	01
\$\$OTSS\$POWII	000003C8	RG	01	BASS\$OPEN_ZERO	*****	X	01
\$\$OTSS\$POWJJ	000003D0	RG	01	BASS\$RECOO_INIT	*****	X	01
\$\$OTSS\$POWRD	000003B8	RG	01	BASS\$REC_WSL1	*****	X	01
\$\$OTSS\$POWRJ	000003D8	RG	01	BASS\$SCALE_L_R1	*****	X	01
\$\$OTSS\$POWRR	000003E0	RG	01	BASS\$SCALE_RT	*****	X	01
\$\$OTSS\$SCOPY_DXDX	000003E8	RG	01	BASS\$SIGNAL	*****	X	01
\$\$OTSS\$SCOPY_DXDX6	000003F0	RG	01	BASS\$SIGNAL_IO	*****	X	01
\$\$OTSS\$SCOPY_R_DX	000003F8	RG	01	BASS\$STATU_INIT	*****	X	01
\$\$OTSS\$SCOPY_R_DX6	00000400	RG	01	BASS\$STOP	*****	X	01

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BASS\$STOP_IO	*****	X	01	BASS\$INIT_R8	*****	X	01
BASS\$STOP-RMS	*****	X	01	BASS\$INPUT	*****	X	01
BASS\$UDF_RL1	*****	X	01	BASS\$INPUT_LINE	*****	X	01
BASS\$UDF_WL1	*****	X	01	BASS\$INSTR	*****	X	01
BASS\$ANSI_INPUT	*****	X	01	BASS\$IN_B_R	*****	X	01
BASS\$ANSI_IO_END	*****	X	01	BASS\$IN_D_R	*****	X	01
BASS\$BUFSIZ	*****	X	01	BASS\$IN_F_R	*****	X	01
BASS\$CANTYPAHEAD	*****	X	01	BASS\$IN_G_R	*****	X	01
BASS\$CCPOS	*****	X	01	BASS\$IN_H_R	*****	X	01
BASS\$CHR	*****	X	01	BASS\$IN_L_R	*****	X	01
BASS\$CLOSE	*****	X	01	BASS\$IN_P_DX	*****	X	01
BASS\$CMPD_APP	*****	X	01	BASS\$IN_T_DX	*****	X	01
BASS\$CMPF_APP	*****	X	01	BASS\$IN_W_R	*****	X	01
BASS\$CMPG_APP	*****	X	01	BASS\$IO_END	*****	X	01
BASS\$CMPH_APP	*****	X	01	BASS\$INPUT	*****	X	01
BASS\$CTRLC	*****	X	01	BASS\$MAT_INPUT	*****	X	01
BASS\$CVT_OUT_D_E	*****	X	01	BASS\$MAT_LINPUT	*****	X	01
BASS\$CVT_OUT_D_F	*****	X	01	BASS\$MAT_PRINT	*****	X	01
BASS\$CVT_OUT_D_G	*****	X	01	BASS\$MAT_READ	*****	X	01
BASS\$CVT_OUT_F_E	*****	X	01	BASS\$NUMT_D	*****	X	01
BASS\$CVT_OUT_F_F	*****	X	01	BASS\$NUM1_F	*****	X	01
BASS\$CVT_OUT_G_E	*****	X	01	BASS\$NUM1_G	*****	X	01
BASS\$CVT_OUT_G_F	*****	X	01	BASS\$NUM1_H	*****	X	01
BASS\$CVT_OUT_G_G	*****	X	01	BASS\$NUM1_L	*****	X	01
BASS\$CVT_OUT_H_E	*****	X	01	BASS\$NUM1_P	*****	X	01
BASS\$CVT_OUT_H_F	*****	X	01	BASS\$NUM_B	*****	X	01
BASS\$CVT_OUT_H_G	*****	X	01	BASS\$NUM_F	*****	X	01
BASS\$CVT_OUT_P_E	*****	X	01	BASS\$NUM_G	*****	X	01
BASS\$CVT_OUT_P_F	*****	X	01	BASS\$NUM_H	*****	X	01
BASS\$CVT_OUT_P_G	*****	X	01	BASS\$NUM_L	*****	X	01
BASS\$CVT_T_P	*****	X	01	BASS\$NUM_P	*****	X	01
BASS\$DELETE	*****	X	01	BASS\$ON_ERR_BK	*****	X	01
BASS\$DSCALE_D_R1	*****	X	01	BASS\$ON_ERR_Z	*****	X	01
BASS\$EDIT	*****	X	01	BASS\$OPEN	*****	X	01
BASS\$END_DEF_R8	*****	X	01	BASS\$OUT_D_V_B	*****	X	01
BASS\$END_DFS_R8	*****	X	01	BASS\$OUT_D_V_C	*****	X	01
BASS\$END_GSB_R8	*****	X	01	BASS\$OUT_D_V_S	*****	X	01
BASS\$END_R8	*****	X	01	BASS\$OUT_F_V_B	*****	X	01
BASS\$ERL	*****	X	01	BASS\$OUT_F_V_C	*****	X	01
BASS\$ERN	*****	X	01	BASS\$OUT_F_V_S	*****	X	01
BASS\$ERR	*****	X	01	BASS\$OUT_G_V_B	*****	X	01
BASS\$ERROR	*****	X	01	BASS\$OUT_G_V_C	*****	X	01
BASS\$ERT	*****	X	01	BASS\$OUT_G_V_S	*****	X	01
BASS\$FIND	*****	X	01	BASS\$OUT_H_V_B	*****	X	01
BASS\$FIND_KEY	*****	X	01	BASS\$OUT_H_V_C	*****	X	01
BASS\$FIND_RECORD	*****	X	01	BASS\$OUT_H_V_S	*****	X	01
BASS\$FIND_RFA	*****	X	01	BASS\$OUT_L_V_B	*****	X	01
BASS\$FREE	*****	X	01	BASS\$OUT_L_V_C	*****	X	01
BASS\$GET	*****	X	01	BASS\$OUT_L_V_S	*****	X	01
BASS\$GETRFA	*****	X	01	BASS\$OUT_P_DX_B	*****	X	01
BASS\$GET_KEY	*****	X	01	BASS\$OUT_P_DX_C	*****	X	01
BASS\$GET_RECORD	*****	X	01	BASS\$OUT_P_DX_S	*****	X	01
BASS\$GET_RFA	*****	X	01	BASS\$OUT_T_DX_B	*****	X	01
BASS\$HANDLER	*****	X	01	BASS\$OUT_T_DX_C	*****	X	01
BASS\$INIT_DEF_R8	*****	X	01	BASS\$OUT_T_DX_S	*****	X	01
BASS\$INIT_DFS_R8	*****	X	01	BASS\$POP_ERR	*****	X	01
BASS\$INIT_GOSUB	*****	X	01	BASS\$PRINT	*****	X	01

VMSSVECTOR
Symbol table

- Define entry vectors for VMSRTL I 13

BASSPRINT_USING	*****	X	01	COBSCVTRIP_R9	*****	X	01
BASSPUSH_ERR	*****	X	01	COBSCVTRIQ_R8	*****	X	01
BASSPUT	*****	X	01	COBSCVTRIW_R8	*****	X	01
BASSPUT_COUNT	*****	X	01	COBSCVTRPQ_R9	*****	X	01
BASSPUT_RECORD	*****	X	01	COBSCVTRQP_R9	*****	X	01
BASSPUT_REC_CNT	*****	X	01	COBSCVTTI_R8	*****	X	01
BASSRCTRLC	*****	X	01	COBSCVTWI_R8	*****	X	01
BASSREAD	*****	X	01	COB\$DISPLAY	*****	X	01
BASSRECOUNT	*****	X	01	COB\$DISP_NO_ADV	*****	X	01
BASSRESTORE	*****	X	01	COB\$DIVI	*****	X	01
BASSRESTORE_DAT	*****	X	01	COB\$DIVI_OSE	*****	X	01
BASSRESTORE_KEY	*****	X	01	COB\$DIVQ_R8	*****	X	01
BASSRESUME	*****	X	01	COB\$ERROR	*****	X	01
BASSRESUME_Z	*****	X	01	COB\$HANDLER	*****	X	01
BASSRSET	*****	X	01	COB\$IOEXCEPTION	*****	X	01
BASSRSET_R	*****	X	01	COB\$MULI	*****	X	01
BASSSCALE_D_R1	*****	X	01	COB\$MULQ_R8	*****	X	01
BASSSCRATCH	*****	X	01	COB\$PAUSE	*****	X	01
BASSSTATUS	*****	X	01	COB\$SUBI	*****	X	01
BASSSTR_D	*****	X	01	FOR\$SCB_GET	*****	X	01
BASSSTR_F	*****	X	01	FOR\$SCB_POP	*****	X	01
BASSSTR_G	*****	X	01	FOR\$SCB_PUSH	*****	X	01
BASSSTR_H	*****	X	01	FOR\$SCB_RET	*****	X	01
BASSSTR_L	*****	X	01	FOR\$ERRSNS_SAV	*****	X	01
BASSSTR_P	*****	X	01	FOR\$SFP_MATCH	*****	X	01
BASSUNLOCK	*****	X	01	FOR\$IO_BEG	*****	X	01
BASSUPDATE	*****	X	01	FOR\$BACKSPACE	*****	X	01
BASSUPDATE_COUN	*****	X	01	FOR\$CLOSE	*****	X	01
BASSVAL_D	*****	X	01	FOR\$CNV_OUT_I	*****	X	01
BASSVAL_F	*****	X	01	FOR\$CNV_OUT_L	*****	X	01
BASSVAL_G	*****	X	01	FOR\$CNV_OUT_O	*****	X	01
BASSVAL_H	*****	X	01	FOR\$CNV_OUT_Z	*****	X	01
BASSVAL_L	*****	X	01	FOR\$CVT_D_TD	*****	X	01
BASSVAL_P	*****	X	01	FOR\$CVT_D_TE	*****	X	01
BASSWAIT	*****	X	01	FOR\$CVT_D_TF	*****	X	01
COB\$HANDLER	*****	X	01	FOR\$CVT_D_TG	*****	X	01
COB\$ACCEPT	*****	X	01	FOR\$CVT_G_TD	*****	X	01
COB\$ACC_DATE	*****	X	01	FOR\$CVT_G_TE	*****	X	01
COB\$ACC_DAY	*****	X	01	FOR\$CVT_G_TF	*****	X	01
COB\$ACC_DAYWEEK	*****	X	01	FOR\$CVT_G_TG	*****	X	01
COB\$ACC_TIME	*****	X	01	FOR\$CVT_H_TD	*****	X	01
COB\$ADDI	*****	X	01	FOR\$CVT_H_TE	*****	X	01
COB\$CMPI	*****	X	01	FOR\$CVT_H_TF	*****	X	01
COB\$CVTDI_R7	*****	X	01	FOR\$CVT_H_TG	*****	X	01
COB\$CVTFI_R7	*****	X	01	FOR\$DECODE_MF	*****	X	01
COB\$CVTID_R7	*****	X	01	FOR\$DECODE_MO	*****	X	01
COB\$CVTIF_R7	*****	X	01	FOR\$DEF_FICE	*****	X	01
COB\$CVTIL_R8	*****	X	01	FOR\$DEF_FILE_W	*****	X	01
COB\$CVTIP_R9	*****	X	01	FOR\$DELETE	*****	X	01
COB\$CVTIQ_R8	*****	X	01	FOR\$DELETE_D	*****	X	01
COB\$CVTIW_R8	*****	X	01	FOR\$ENCODE_MF	*****	X	01
COB\$CVTLI_R8	*****	X	01	FOR\$ENCODE_MO	*****	X	01
COB\$CVTPI_R9	*****	X	01	FOR\$ENDFILE	*****	X	01
COB\$CVTPQ_R9	*****	X	01	FOR\$ERRSNS	*****	X	01
COB\$CVTQI_R8	*****	X	01	FOR\$ERRSNS_W	*****	X	01
COB\$CVTQP_R9	*****	X	01	FOR\$EXIT	*****	X	01
COB\$CVTRIC_R8	*****	X	01	FOR\$EXIT_W	*****	X	01

VMSSVECTOR
Symbol table

- Define entry vectors for VMSRTL J 13

16-SEP-1984 02:15:59 VAX/VMS Macro V04-00
6-SEP-1984 11:48:04 [VMSRTL.SRC]VMSVECTOR.MAR;1

FORSFIND	*****	X	01	FORS\$STOP	*****	X	01
FORSINI_DES1_R2	*****	X	01	FORSUNLOCK	*****	X	01
FORSINI_DES2_R3	*****	X	01	FORSWRITE_DF	*****	X	01
FORSINI_DESC_R6	*****	X	01	FORSWRITE_DO	*****	X	01
FORSINQUIRE	*****	X	01	FORSWRITE_DU	*****	X	01
FORSIO_B_R	*****	X	01	FORSWRITE_IF	*****	X	01
FORSIO_B_V	*****	X	01	FORSWRITE_IO	*****	X	01
FORSIO_DC_R	*****	X	01	FORSWRITE_SF	*****	X	01
FORSIO_DC_V	*****	X	01	FORSWRITE_SL	*****	X	01
FORSIO_D_R	*****	X	01	FORSWRITE_SN	*****	X	01
FORSIO_D_V	*****	X	01	FORSWRITE_SO	*****	X	01
FORSIO_END	*****	X	01	FORSWRITE_SU	*****	X	01
FORSIO_FC_R	*****	X	01	LIB\$ANALYZE_SDESC	*****	X	01
FORSIO_FC_V	*****	X	01	LIB\$ANALYZE_SDESC_R2	*****	X	01
FORSIO_F_R	*****	X	01	LIB\$AST_IN_PROG	*****	X	01
FORSIO_F_V	*****	X	01	LIB\$ATTACH	*****	X	01
FORSIO_GC_R	*****	X	01	LIB\$CRC	*****	X	01
FORSIO_GC_V	*****	X	01	LIB\$CRC_TABLE	*****	X	01
FORSIO_G_R	*****	X	01	LIB\$DEC_OVER	*****	X	01
FORSIO_G_V	*****	X	01	LIB\$ESTABLISH	*****	X	01
FORSIO_H_R	*****	X	01	LIB\$EXTV	*****	X	01
FORSIO_H_V	*****	X	01	LIB\$EXTZV	*****	X	01
FORSIO_LO_R	*****	X	01	LIB\$FFC	*****	X	01
FORSIO_LU_V	*****	X	01	LIB\$FFS	*****	X	01
FORSIO_L_R	*****	X	01	LIB\$FILE_SCAN	*****	X	01
FORSIO_L_V	*****	X	01	LIB\$FIND_FILE	*****	X	01
FORSIO_T_DS	*****	X	01	LIB\$FIXUP_FLT	*****	X	01
FORSIO_T_V_DS	*****	X	01	LIB\$FLT_UNDER	*****	X	01
FORSIO_WO_R	*****	X	01	LIB\$FREE_EF	*****	X	01
FORSIO_WU_V	*****	X	01	LIB\$FREE_LUN	*****	X	01
FORSIO_W_R	*****	X	01	LIB\$FREE_VM	*****	X	01
FORSIO_W_V	*****	X	01	LIB\$GET_COMMAND	*****	X	01
FORSIO_X_DA	*****	X	01	LIB\$GET_EF	*****	X	01
FORSIO_X_NL	*****	X	01	LIB\$GET_INPUT	*****	X	01
FORSIO_X_SB	*****	X	01	LIB\$GET_LUN	*****	X	01
FORSIO_X_SE	*****	X	01	LIB\$GET_OPCODE	*****	X	01
FORSOPEN	*****	X	01	LIB\$GET_VM	*****	X	01
FORS\$PAUSE	*****	X	01	LIB\$INDEX	*****	X	01
FORS\$RAB	*****	X	01	LIB\$INSV	*****	X	01
FORS\$READ_DF	*****	X	01	LIB\$INT_OVER	*****	X	01
FORS\$READ_DO	*****	X	01	LIB\$LOCC	*****	X	01
FORS\$READ_DU	*****	X	01	LIB\$MATCHC	*****	X	01
FORS\$READ_IF	*****	X	01	LIB\$MATCH_COND	*****	X	01
FORS\$READ_IO	*****	X	01	LIB\$MOVTC	*****	X	01
FORS\$READ_KF	*****	X	01	LIB\$MOVTUC	*****	X	01
FORS\$READ_KO	*****	X	01	LIB\$PUT_OUTPUT	*****	X	01
FORS\$READ_KU	*****	X	01	LIB\$RESERVE_EF	*****	X	01
FORS\$READ_SF	*****	X	01	LIB\$REVERT	*****	X	01
FORS\$READ_SL	*****	X	01	LIB\$SCANC	*****	X	01
FORS\$READ_SN	*****	X	01	LIB\$SCOPY_DXDX	*****	X	01
FORS\$READ_SO	*****	X	01	LIB\$SCOPY_DXDX6	*****	X	01
FORS\$READ_SU	*****	X	01	LIB\$SCOPY_R_DX	*****	X	01
FORS\$REWIND	*****	X	01	LIB\$SCOPY_R_DX6	*****	X	01
FORS\$REWRITE_SF	*****	X	01	LIB\$SFREET_DD	*****	X	01
FORS\$REWRITE_SO	*****	X	01	LIB\$SFREET1_DD6	*****	X	01
FORS\$REWRITE_SU	*****	X	01	LIB\$SFREEN_DD	*****	X	01
FORS\$SECNDS	*****	X	01	LIB\$SFREEN_DD6	*****	X	01

VMSSVECTOR
Symbol table

- Define entry vectors for VMSRTL K 13

LIBSSGET1_DD	*****	X	01	MTHSDATAND_R7	*****	X	01
LIBSSGET1_DD_R6	*****	X	01	MTHSDATANH	*****	X	01
LIBSSHOW_VM	*****	X	01	MTHSDATAN_R7	*****	X	01
LIBSSIGNAL	*****	X	01	MTHSDCOS	*****	X	01
LIBSSIG_TO_RET	*****	X	01	MTHSDCOSD	*****	X	01
LIBSSKPC	*****	X	01	MTHSDCOSD_R7	*****	X	01
LIBSSPANC	*****	X	01	MTHSDCOSH	*****	X	01
LIBSSPAWN	*****	X	01	MTHSDCOS_R7	*****	X	01
LIBSSSTAT_VM	*****	X	01	MTHSDEXP	*****	X	01
LIBSSSTOP	*****	X	01	MTHSDEXP_R6	*****	X	01
LIBSTPARSE	*****	X	01	MTHSDLOG	*****	X	01
MTHSSAB ALOG	00001650	R	01	MTHSDLOG10	*****	X	01
MTHSSAB ATAN	00001750	R	01	MTHSDLOG10_R8	*****	X	01
MTHSACOS	*****	X	01	MTHSDLOG2	*****	X	01
MTHSACOSD	*****	X	01	MTHSDLOG_R8	*****	X	01
MTHSACOSD_R4	*****	X	01	MTHSDSIN	*****	X	01
MTHSACOS_R4	*****	X	01	MTHSDSINCOS	*****	X	01
MTHSALOG	*****	X	01	MTHSDSINCOSD	*****	X	01
MTHSALOG10	*****	X	01	MTHSDSINCOSD_R7	*****	X	01
MTHSALOG10_R5	*****	X	01	MTHSDSINCOS_R7	*****	X	01
MTHSALOG2	*****	X	01	MTHSDSIND	*****	X	01
MTHSALOG_R5	*****	X	01	MTHSDSIND_R7	*****	X	01
MTHSAL_4_OV_PI	*****	X	01	MTHSDSINH	*****	X	01
MTHSASIN	*****	X	01	MTHSDSIN_R7	*****	X	01
MTHSASIND	*****	X	01	MTHSDSQRT	*****	X	01
MTHSASIND_R4	*****	X	01	MTHSDSQRT_R5	*****	X	01
MTHSASIN_R4	*****	X	01	MTHSDTAN	*****	X	01
MTHSATAN	*****	X	01	MTHSDTAND	*****	X	01
MTHSATAN2	*****	X	01	MTHSDTAND_R7	*****	X	01
MTHSATAND	*****	X	01	MTHSDTANH	*****	X	01
MTHSATAND2	*****	X	01	MTHSDTAN_R7	*****	X	01
MTHSATAND_R4	*****	X	01	MTHSEXP	*****	X	01
MTHSATANH	*****	X	01	MTHSEXP_R4	*****	X	01
MTHSATAN_R4	*****	X	01	MTHSRANDOM	*****	X	01
MTHSCABS	*****	X	01	MTHSSIN	*****	X	01
MTHSCCOS	*****	X	01	MTHSSINCOS	*****	X	01
MTHSCEXP	*****	X	01	MTHSSINCOSD	*****	X	01
MTHSCLOG	*****	X	01	MTHSSINCOSD_R5	*****	X	01
MTHSCOS	*****	X	01	MTHSSINCOS_R5	*****	X	01
MTHSCOSD	*****	X	01	MTHSSIND	*****	X	01
MTHSCOSD_R4	*****	X	01	MTHSSIND_R4	*****	X	01
MTHSCOSH	*****	X	01	MTHSSINH	*****	X	01
MTHSCOS_R4	*****	X	01	MTHSSIN_R4	*****	X	01
MTHSCSIN	*****	X	01	MTHSSQRT	*****	X	01
MTHSCSQRT	*****	X	01	MTHSSQRT_R2	*****	X	01
MTHSDACOS	*****	X	01	MTHSSQRT_R3	*****	X	01
MTHSDACOSD	*****	X	01	MTHSTAN	*****	X	01
MTHSDACOSD_R7	*****	X	01	MTHSTAND	*****	X	01
MTHSDACOS_R7	*****	X	01	MTHSTAND_R4	*****	X	01
MTHSDASIN	*****	X	01	MTHSTAND_R5	*****	X	01
MTHSDASIND	*****	X	01	MTHSTANH	*****	X	01
MTHSDASIND_R7	*****	X	01	MTHSTAN_R4	*****	X	01
MTHSDASIN_R7	*****	X	01	MTHSTAN_R5	*****	X	01
MTHSDATAN	*****	X	01	OTSSSCVT_D_T_R8	*****	X	01
MTHSDATAN2	*****	X	01	OTSSSCVT_G_T_R8	*****	X	01
MTHSDATAND	*****	X	01	OTSSSCVT_H_T_R8	*****	X	01
MTHSDATAND2	*****	X	01	OTSSSCVT_C_TB	*****	X	01

VMSSVECTOR
Symbol table

- Define entry vectors for VMSRTL L 13

OTSS\$CVT_L_TI	*****	X	01	STR\$POS_EXTR_R8	*****	X	01
OTSS\$CVT_L_TL	*****	X	01	STR\$PREFIX	*****	X	01
OTSS\$CVT_L_TO	*****	X	01	STR\$REPLACE	*****	X	01
OTSS\$CVT_L_TZ	*****	X	01	STR\$REPLACE_R8	*****	X	01
OTSS\$CVT_TB_L	*****	X	01	STR\$RIGHT	*****	X	01
OTSS\$CVT_TI_L	*****	X	01	STR\$RIGHT_R8	*****	X	01
OTSS\$CVT_TL_L	*****	X	01	STR\$TRANSCATE	*****	X	01
OTSS\$CVT_TO_L	*****	X	01	STR\$TRIM	*****	X	01
OTSS\$CVT_TZ_L	*****	X	01	STR\$UPCASE	*****	X	01
OTSS\$CVT_T_D	*****	X	01				
OTSS\$CVT_T_F	*****	X	01				
OTSS\$CVT_T_G	*****	X	01				
OTSS\$CVT_T_H	*****	X	01				
OTSS\$DIVC	*****	X	01				
OTSS\$POWCJ	*****	X	01				
OTSS\$POWDD	*****	X	01				
OTSS\$POWDJ	*****	X	01				
OTSS\$POWDR	*****	X	01				
OTSS\$POWII	*****	X	01				
OTSS\$POWJJ	*****	X	01				
OTSS\$POWRD	*****	X	01				
OTSS\$POWRJ	*****	X	01				
OTSS\$POWRR	*****	X	01				
OTSS\$COPY_DXD	*****	X	01				
OTSS\$COPY_DXD6	*****	X	01				
OTSS\$COPY_R_DX	*****	X	01				
OTSS\$COPY_R_DX6	*****	X	01				
OTSS\$FREE1_DD	*****	X	01				
OTSS\$FREE1_DD6	*****	X	01				
OTSS\$FREE1_DD6	*****	X	01				
OTSS\$FREE1_DD6	*****	X	01				
OTSS\$GET1_DD	*****	X	01				
OTSS\$GET1_DD_R6	*****	X	01				
RTL\$STAR1	00000000	R	01				
STR\$ANALYZE_SDESC	*****	X	01				
STR\$ANALYZE_SDESC_R1	*****	X	01				
STR\$APPEND	*****	X	01				
STR\$COMPARE	*****	X	01				
STR\$COMPARE_EQ	*****	X	01				
STR\$CONCAT	*****	X	01				
STR\$COPY_DX	*****	X	01				
STR\$COPY_DX_R8	*****	X	01				
STR\$COPY_R	*****	X	01				
STR\$COPY_R_R8	*****	X	01				
STR\$DUPL_CHAR	*****	X	01				
STR\$DUPL_CHARR8	*****	X	01				
STR\$FREE1_DX	*****	X	01				
STR\$FREE1_DX_R4	*****	X	01				
STR\$GET1_DX	*****	X	01				
STR\$GET1_DX_R4	*****	X	01				
STR\$LEFT	*****	X	01				
STR\$LEFT_R8	*****	X	01				
STR\$LEN_EXTR	*****	X	01				
STR\$LEN_EXTR_R8	*****	X	01				
STR\$POSITION	*****	X	01				
STR\$POSITION_R6	*****	X	01				
STR\$POS_EXTR	*****	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	
\$VMSSVECTOR	00001787 (6023.)	01 (1.)	PIC	USR	CON	REL	LCL	SHR	EXE	RD	NOWRT	NOVEC	PAGE	

! Performance indicators !

Phase	Page faults	CPU Time	Elapsed Time
Initialization	29	00:00:00.09	00:00:00.72
Command processing	135	00:00:00.60	00:00:03.85
Pass 1	799	00:01:03.40	00:01:50.18
Symbol table sort	0	00:00:01.57	00:00:02.25
Pass 2	475	00:00:17.00	00:00:41.89
Symbol table output	1	00:00:00.79	00:00:01.75
Psect synopsis output	0	00:00:00.02	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	1441	00:01:23.48	00:02:40.68

The working set limit was 2400 pages.
319752 bytes (625 pages) of virtual memory were used to buffer the intermediate code.
There were 60 pages of symbol table space allocated to hold 1092 non-local and 0 local symbols.
3082 source lines were read in Pass 1, producing 93 object records in Pass 2.
3 pages of virtual memory were used to define 2 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=LISS:VMSVECTOR/OBJ=OBJ\$:VMSVECTOR MSRC\$:VMSVECTOR/UPDATE=(ENH\$:VMSVECTOR)

UMSVECTOR
LIS

UMSRTL

UMSRTL
MAP