M 1

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

```
**FILE**ID**BASCVTRP                                N 7
```

```
BBBBBBBB      AAAAAA      SSSSSSSS    CCCCCCCC  VV      VV  TTTTTTTTTT  RRRRRRRR    PPPPPPPP
BBBBBBBB      AAAAAA      SSSSSSSS    CCCCCCCC  VV      VV  TTTTTTTTTT  RRRRRRRR    PPPPPPPP
BB      BB  AA      AA  SS          CC          VV      VV      TT      RR      RR  PP      PP
BB      BB  AA      AA  SS          CC          VV      VV      TT      RR      RR  PP      PP
BB      BB  AA      AA  SS          CC          VV      VV      TT      RR      RR  PP      PP
BB      BB  AA      AA  SS          CC          VV      VV      TT      RR      RR  PP      PP
BBBBBBBB    AA      AA    SSSSSS    CC          VV      VV      TT      RRRRRRRR    PPPPPPPP
BBBBBBBB    AA      AA    SSSSSS    CC          VV      VV      TT      RRRRRRRR    PPPPPPPP
BB      BB  AAAAAAAAAA          SS  CC          VV      VV      TT      RR  RR      PP
BB      BB  AAAAAAAAAA          SS  CC          VV      VV      TT      RR  RR      PP
BB      BB  AA      AA          SS  CC            VV  VV        TT      RR    RR    PP              ....
BB      BB  AA      AA          SS  CC            VV  VV        TT      RR    RR    PP              ....
BBBBBBBB    AA      AA  SSSSSSSS      CCCCCCCC      VV          TT      RR      RR  PP              ....
BBBBBBBB    AA      AA  SSSSSSSS      CCCCCCCC      VV          TT      RR      RR  PP              ....

LL            IIIIII      SSSSSSSS
LL            IIIIII      SSSSSSSS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II        SSSSSS
LL              II        SSSSSS
LL              II              SS
LL              II              SS
LL              II              SS
LL              II              SS
LLLLLLLLLL    IIIIII    SSSSSSSS
LLLLLLLLLL    IIIIII    SSSSSSSS
```

```
0 %TITLE 'BAS$CVTRP - Convert real to packed'
0 MODULE BAS$CVTRP (                                    ! Convert real to packed
0                   IDENT = '1-004'             ! File: BASCVTRP.B32 Edit: PLL1004
0                   ) =
1 BEGIN
1 !
1 !****************************************************************************
1 !*                                                                          *
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1 !*                                                                          *
1 !*                                                                          *
1 !****************************************************************************
1 !
1
1 !++
1 ! FACILITY:     Basic Language Support
1 !
1 ! ABSTRACT:
1 !
1 ! This module contains routines to convert real data types to packed decimal.
1 ! It also contains routines to convert from packed to a real type.
1 !
1 ! These jacket routines are necessary because the OTS routines are JSB routines
1 ! and use R9 to pass a parameter.  If an error occurs R9 will not automatically
1 ! be restored and the Basic compiler expects R9 to point at some local storage.
1 ! Note that CALL entry points cause R9 to be saved in the frame.
1 !
1 ! ENVIRONMENT:  Runs at any access mode - AST reentrant
1 !
1 ! AUTHOR: Pamela L. Levesque, CREATION DATE: 15-April-1982
1 !
1 ! MODIFIED BY:
1 !
1 ! 1-001 - Original.  PLL 15-Apr-1982
1 ! 1-002 - Clean up some comments.  PLL 21-Apr-1982
1 ! 1-003 - Add entry points for rounding.  PLL 7-Jun-1982
1 ! 1-004 - Before reporting decimal overflow error, must check BASIC frame to
1 !         ensure that "/OVERFLOW=NODEC" was not specified during the compile.
1 !         DG 7-Mar-1984
1 !--
1
```

```
  1 %SBTTL 'Declarations'
  1 !
  1 ! SWITCHES:
  1 !
  1
  1 SWITCHES ADDRESSING_MODE (EXTERNAL = GENERAL, NONEXTERNAL = WORD_RELATIVE);
  1
  1 !
  1 ! LINKAGES:
  1 !
  1
  1 LINKAGE
  1     JSB_CVT = JSB (REGISTER = 6, REGISTER = 7, REGISTER = 8, REGISTER = 9)
  1                 : PRESERVE (2, 3, 4, 5, 10, 11);
  1 !
  1 ! TABLE OF CONTENTS:
  1 !
  1
  1 FORWARD ROUTINE
  1
  1     BAS$CVTFP : NOVALUE,                ! convert float to packed
  1     BAS$CVTDP : NOVALUE,                ! convert double to packed
  1     BAS$CVTGP : NOVALUE,                ! convert gfloat to packed
  1     BAS$CVTHP : NOVALUE,                ! convert hfloat to packed
  1     BAS$CVTRFP : NOVALUE,               ! convert float to packed (rounded)
  1     BAS$CVTRDP : NOVALUE,               ! convert double to packed (rounded)
  1     BAS$CVTRGP : NOVALUE,               ! convert gfloat to packed (rounded)
  1     BAS$CVTRHP : NOVALUE,               ! convert hfloat to packed (rounded)
  1     BAS$CVTPF : NOVALUE,                ! convert packed to float
  1     BAS$CVTPD : NOVALUE,                ! convert packed to double
  1     BAS$CVTPG : NOVALUE,                ! convert packed to gfloat
  1     BAS$CVTPH : NOVALUE;                ! convert packed to hfloat
  1
  1 !
  1 ! INCLUDE FILES:
  1 !
  1
  1 LIBRARY 'RTLSTARLE';                             ! System symbols, typically from SYS$LIBRARY:STARLET.L32
  1
  1 REQUIRE 'RTLIN:RTLPSECT';                        ! Define PSECT declarations macros
  1 REQUIRE 'RTLIN:BASFRAME.REQ';                    ! BSF symbols
  1
  1 !
  1 ! MACROS:
  1 !
  1
  1 MACRO
M 1     FIND_FRAME (F) =
M 1         BEGIN
M 1
M 1         BUILTIN
M 1             FP;                                  ! Frame pointer
M 1
M 1         F = .FP;
M 1             DO
M 1             BEGIN                                ! search back for Basic frame
M 1             F = .F [BSF$A_SAVED_FP];
```

```
;  116        M 0411   1              END
;  117        M 0412   1         UNTIL (.F [BSF$A_HANDLER] EQLA BAS$HANDLER OR
;  118        M 0413   1                 .F EQL 0);
;  119        M 0414   1
;  120        M 0415   1         END;
;  121          0416   1 %;
;  122          0417   1 !
;  123          0418   1 ! EQUATED SYMBOLS:
;  124          0419   1 !
;  125          0420   1 !       NONE
;  126          0421   1 !
;  127          0422   1 ! FIELDS:
;  128          0423   1 !
;  129          0424   1 !       NONE
;  130          0425   1 !
;  131          0426   1 ! PSECTS:
;  132          0427   1 !
;  133          0428   1 DECLARE_PSECTS (BAS);                        ! Declare PSECTs for BAS$ facility
;  134          0429   1 !
;  135          0430   1 ! OWN STORAGE:
;  136          0431   1 !
;  137          0432   1 !       NONE
;  138          0433   1 !
;  139          0434   1 ! EXTERNAL REFERENCES:
;  140          0435   1 !
;  141          0436   1
;  142          0437   1 EXTERNAL ROUTINE
;  143          0438   1
;  144          0439   1     BAS$HANDLER,
;  145          0440   1     OTS$CVTFP_R9 : JSB_CVT,             ! OTS conv float to packed
;  146          0441   1     OTS$CVTDP_R9 : JSB_CVT,             ! OTS conv dbl to packed
;  147          0442   1     OTS$CVTGP_R9 : JSB_CVT,             ! OTS conv gfloat to packed
;  148          0443   1     OTS$CVTHP_R9 : JSB_CVT,             ! OTS conv hfloat to packed
;  149          0444   1     OTS$CVTRFP_R9 : JSB_CVT,            ! OTS conv float to packed (rounded)
;  150          0445   1     OTS$CVTRDP_R9 : JSB_CVT,            ! OTS conv dbl to packed (rounded)
;  151          0446   1     OTS$CVTRGP_R9 : JSB_CVT,            ! OTS conv gfloat to packed (rounded)
;  152          0447   1     OTS$CVTRHP_R9 : JSB_CVT,            ! OTS conv hfloat to packed (rounded)
;  153          0448   1     OTS$CVTPF_R9 : JSB_CVT,             ! OTS conv packed to float
;  154          0449   1     OTS$CVTPD_R9 : JSB_CVT,             ! OTS conv packed to dbl
;  155          0450   1     OTS$CVTPG_R9 : JSB_CVT,             ! OTS conv packed to gfloat
;  156          0451   1     OTS$CVTPH_R9 : JSB_CVT,             ! OTS conv packed to hfloat
;  157          0452   1     BAS$$SIGNAL : NOVALUE;              ! signal non-fatal error
;  158          0453   1
;  159          0454   1 EXTERNAL LITERAL                            ! Condition value symbols
;  160          0455   1     BAS$K_DECERR : UNSIGNED (8);        ! decimal error or overflow
```

```
1 %SBTTL 'BAS$CVT'FP - Convert float to packed'
1 GLOBAL ROUTINE BAS$CVTFP (                                 ! Convert float to packed
1           DEST,                                   ! place to store conv. number
1           DESTLEN,                                ! number of digits in dest
1           SRC,                                    ! number to be converted
1           SCALE                                   ! power of ten to mult src
1     ) : NOVALUE =
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !         Converts a single floating number to packed.
1 !
1 ! CALLING SEQUENCE:
1 !
1 !         BAS$CVTFP (DEST.wp.r, DESTLEN.rl.v, SRC.rf.r, SCALE.rl.v)
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !         DEST.wp.r       place to store the converted number
1 !         DESTLEN.rl.v    number of digits in the destination
1 !         SRC.rf.r        number to be converted
1 !         SCALE.rl.v      power of ten by which the internal
1 !                         representation of the sourc must be
1 !                         multiplied to scale the same as the
1 !                         internal representation of the dest.
1 !
1 ! IMPLICIT INPUTS:
1 !
1 !         NONE
1 !
1 ! IMPLICIT OUTPUTS:
1 !
1 !         NONE
1 !
1 ! COMPLETION STATUS:
1 !
1 !         NONE
1 !
1 ! SIDE EFFECTS:
1 !
1 !         May signal decimal overflow if an error occurs in the OTS
1 !         conversion routine
1 !
1 !--
1
2     BEGIN
2
2     LOCAL
2         FMP : REF BLOCK [0,BYTE] FIELD (BSF$FCD),       ! Ptr to BASIC frame
2         STATUS;
2
2     STATUS = OTS$CVTFP_R9 (.SCALE, .SRC, .DESTLEN, .DEST);
3     IF (NOT .STATUS)
2     THEN
3         BEGIN
3
```

```
;  219         0513  3         FIND_FRAME (FMP);                                           ! Find BASIC frame
;  220         0514  3         IF (.FMP NEQ 0) AND (.FMP [BSF$W_FCD_FLAGS] AND BSF$M_FCD_DV) NEQ 0
;  221         0515  3         THEN                                                        ! If "/OVERFLOW = NODEC" not set
;  222         0516  3             BAS$$SIGNAL (BAS$K_DECERR);
;  223         0517  3
;  224         0518  2         END;
;  225         0519  1     END;                                                 ! routine BAS$CVTFP


                                                                 .TITLE  BAS$CVTRP BAS$CVTRP - Convert real to packed
                                                                 .IDENT  \1-004\

                                                                 .EXTRN  BAS$HANDLER, OTS$CVTFP_R9
                                                                 .EXTRN  OTS$CVTDP_R9, OTS$CVTGP_R9
                                                                 .EXTRN  OTS$CVTHP_R9, OTS$CVTRFP_R9
                                                                 .EXTRN  OTS$CVTRDP_R9, OTS$CVTRGP_R9
                                                                 .EXTRN  OTS$CVTRHP_R9, OTS$CVTPF_R9
                                                                 .EXTRN  OTS$CVTPD_R9, OTS$CVTPG_R9
                                                                 .EXTRN  OTS$CVTPH_R9, BAS$$SIGNAL
                                                                 .EXTRN  BAS$K_DECERR

                                                                 .PSECT  _BAS$CODE,NOWRT,  SHR,  PIC,2

                                        0FFC 00000               .ENTRY  BAS$CVTFP, Save R2,R3,R4,R5,R6,R7,R8,R9,-      ; 0457
                                                                         R10,R11                                        ;
                      59        04   AC  D0 00002                MOVL    DEST, R9                                       ; 0508
                      58        08   AC  D0 00006                MOVL    DESTLEN, R8                                    ;
                      57        0C   AC  D0 0000A                MOVL    SRC, R7                                        ;
                      56        10   AC  D0 0000E                MOVL    SCALE, R6                                      ;
                        00000000G    00  16 00012                JSB     OTS$CVTFP_R9                                   ;
                      2B             50  E8 00018                BLBS    STATUS, 3$                                     ; 0509
                      50             5D  D0 0001B                MOVL    FP, FMP                                        ; 0513
                      50        0C   A0  D0 0001E  1$:           MOVL    12(FMP), FMP                                   ;
                      51 00000000G   00  9E 00022                MOVAB   BAS$HANDLER, R1                                ;
                      51             60  D1 00029                CMPL    (FMP), R1                                      ;
                                     04  13 0002C                BEQL    2$                                             ;
                                     50  D5 0002E                TSTL    FMP                                            ;
                                     EC  12 00030                BNEQ    1$                                             ;
                                     50  D5 00032  2$:           TSTL    FMP                                            ; 0514
                                     10  13 00034                BEQL    3$                                             ;
          0B        E6   A0          0A  E1 00036                BBC     #10, -26(FMP), 3$                              ;
                      7E       00G   8F  9A 0003B                MOVZBL  #BAS$K_DECERR, -(SP)                           ; 0516
             00000000G   00          01  FB 0003F                CALLS   #1, BAS$$SIGNAL                                ;
                                     04  00046  3$:              RET                                                    ; 0519

; Routine Size:  71 bytes,    Routine Base:  _BAS$CODE + 0000
```

```
1 %SBTTL 'BAS$CVTDP - Convert double to packed'
1 GLOBAL ROUTINE BAS$CVTDP (                                    ! Convert double to packed
1           DEST,                                           ! place to store conv. number
1           DESTLEN,                                        ! number of digits in dest
1           SRC,                                            ! number to be converted
1           SCALE                                           ! power of ten to mult src
1       ) : NOVALUE =
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !         Converts a double floating number to packed.
1 !
1 ! CALLING SEQUENCE:
1 !
1 !         BAS$CVTDP (DEST.wp.r, DESTLEN.rl.v, SRC.rd.r, SCALE.rl.v)
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !         DEST.wp.r       place to store the converted number
1 !         DESTLEN.rl.v    number of digits in the destination
1 !         SRC.rd.r        number to be converted
1 !         SCALE.rl.v      power of ten by which the internal
1 !                         representation of the sourc must be
1 !                         multiplied to scale the same as the
1 !                         internal representation of the dest.
1 !
1 ! IMPLICIT INPUTS:
1 !
1 !         NONE
1 !
1 ! IMPLICIT OUTPUTS:
1 !
1 !         NONE
1 !
1 ! COMPLETION STATUS:
1 !
1 !         NONE
1 !
1 ! SIDE EFFECTS:
1 !
1 !         May signal decimal overflow if overflow occurs in the OTS
1 !         conversion routine
1 !
1 !--
1
2     BEGIN
2
2     LOCAL
2         FMP : REF BLOCK [0,BYTE] FIELD (BSF$FCD),       ! Ptr to BASIC frame
2         STATUS;
2
2     STATUS = OTS$CVTDP_R9 (.SCALE, .SRC, .DESTLEN, .DEST);
3     IF (NOT .STATUS)
2     THEN
3         BEGIN
3
```

```
      0577  3          FIND_FRAME (FMP);                                   ! Find BASIC frame
      0578  3          IF (.FMP NEQ 0) AND (.FMP [BSF$W_FCD_FLAGS] AND BSF$M_FCD_DV) NEQ 0
      0579  3          THEN                                                ! If "/OVERFLOW = NODEC" not set
      0580  3              BAS$$SIGNAL (BAS$K_DECERR);
      0581  3
      0582  2          END;
      0583  2
      0584  1      END;                                                ! End of routine BAS$CVTDP



                                             0FFC 00000           .ENTRY  BAS$CVTDP, Save R2,R3,R4,R5,R6,R7,R8,R9,-         ; 0521
                                                                          R10,R11                                            ;
                         59        04    AC    D0 00002           MOVL    DEST, R9                                           ; 0572
                         58        08    AC    D0 00006           MOVL    DESTLEN, R8                                        ;
                         57        0C    AC    D0 0000A           MOVL    SRC, R7                                            ;
                         56        10    AC    D0 0000E           MOVL    SCALE, R6                                          ;
                            00000000G    00    16 00012           JSB     OTS$CVTDP_R9                                       ;
                         2B              50    E8 00018           BLBS    STATUS, 3$                                         ; 0573
                         50              5D    D0 0001B           MOVL    FP, FMP                                            ; 0577
                         50        0C    A0    D0 0001E 1$:       MOVL    12(FMP), FMP                                       ;
                         51 00000000G    00    9E 00022           MOVAB   BAS$HANDLER, R1                                    ;
                         51              60    D1 00029           CMPL    (FMP), R1                                          ;
                                         04    13 0002C           BEQL    2$                                                 ;
                                         50    D5 0002E           TSTL    FMP                                                ;
                                         EC    12 00030           BNEQ    1$                                                 ;
                                         50    D5 00032 2$:       TSTL    FMP                                                ; 0578
                                         10    13 00034           BEQL    3$                                                 ;
            0B         E6    A0                0A E1 00036        BBC     #10, -26(FMP), 3$                                  ;
                         7E       00G    8F    9A 0003B           MOVZBL  #BAS$K_DECERR, -(SP)                               ; 0580
               00000000G 00                    01 FB 0003F        CALLS   #1, BAS$$SIGNAL                                    ;
                                               04 00046 3$:       RET                                                        ; 0584

; Routine Size:  71 bytes,    Routine Base:  _BAS$CODE + 0047
```

```
1 %SBTTL 'BAS$CVTGP - Convert gfloat to packed'
1 GLOBAL ROUTINE BAS$CVTGP (                                    ! Convert gfloat to packed
1           DEST,                                       ! place to store conv. number
1           DESTLEN,                                    ! number of digits in dest
1           SRC,                                        ! number to be converted
1           SCALE                                       ! power of ten to mult src
1       ) : NOVALUE =
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !         Converts a g floating number to packed.
1 !
1 ! CALLING SEQUENCE:
1 !
1 !         BAS$CVTGP (DEST.wp.r, DESTLEN.rl.v, SRC.rg.r, SCALE.rl.v)
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !         DEST.wp.r       place to store the converted number
1 !         DESTLEN.rl.v    number of digits in the destination
1 !         SRC.rg.r        number to be converted
1 !         SCALE.rl.v      power of ten by which the internal
1 !                         representation of the sourc must be
1 !                         multiplied to scale the same as the
1 !                         internal representation of the dest.
1 !
1 ! IMPLICIT INPUTS:
1 !
1 !         NONE
1 !
1 ! IMPLICIT OUTPUTS:
1 !
1 !         NONE
1 !
1 ! COMPLETION STATUS:
1 !
1 !         NONE
1 !
1 ! SIDE EFFECTS:
1 !
1 !         May signal decimal overflow if that error occurs in the OTS
1 !         conversion routine
1 !
1 !--
1
2     BEGIN
2
2     LOCAL
2         FMP : REF BLOCK [0,BYTE] FIELD (BSF$FCD),       ! Ptr to BASIC frame
2         STATUS;
2
2     STATUS = OTS$CVTGP_R9 (.SCALE, .SRC, .DESTLEN, .DEST);
3     IF (NOT .STATUS)
2     THEN
3         BEGIN
3
```

```
;   350         0642 3          FIND_FRAME (FMP);                                   ! Find BASIC frame
;   351         0643 3          IF (.FMP NEQ 0) AND (.FMP [BSF$W_FCD_FLAGS] AND BSF$M_FCD_DV) NEQ 0
;   352         0644 3          THEN                                                ! If "/OVERFLOW = NODEC" not set
;   353         0645 3              BAS$$SIGNAL (BAS$K_DECERR);
;   354         0646 3
;   355         0647 2          END;
;   356         0648 1      END;                                            ! End of routine BAS$CVTGP



                                        0FFC 00000          .ENTRY  BAS$CVTGP, Save R2,R3,R4,R5,R6,R7,R8,R9,-   ; 0586
                                                                    R10,R11                                     ;
                      59        04  AC   D0 00002           MOVL    DEST, R9                                    ; 0637
                      58        08  AC   D0 00006           MOVL    DESTLEN, R8                                 ;
                      57        0C  AC   D0 0000A           MOVL    SRC, R7                                     ;
                      56        10  AC   D0 0000E           MOVL    SCALE, R6                                   ;
                        00000000G   00   16 00012           JSB     OTS$CVTGP_R9                                ;
                      2B            50   E8 00018           BLBS    STATUS, 3$                                  ; 0638
                      50            5D   D0 0001B           MOVL    FP, FMP                                     ; 0642
                      50        0C  A0   D0 0001E 1$:       MOVL    12(FMP), FMP                                ;
                      51 00000000G  00   9E 00022           MOVAB   BAS$HANDLER, R1                             ;
                      51            60   D1 00029           CMPL    (FMP), R1                                   ;
                                    04   13 0002C           BEQL    2$                                          ;
                                    50   D5 0002E           TSTL    FMP                                         ;
                                    EC   12 00030           BNEQ    1$                                          ;
                                    50   D5 00032 2$:       TSTL    FMP                                         ; 0643
                                    10   13 00034           BEQL    3$                                          ;
       0B        E6   A0            0A   E1 00036           BBC     #10, -26(FMP), 3$                           ;
                      7E       00G  8F   9A 0003B           MOVZBL  #BAS$K_DECERR, -(SP)                        ; 0645
          00000000G   00            01   FB 0003F           CALLS   #1, BAS$$SIGNAL                             ;
                                         04 00046 3$:       RET                                                 ; 0648

; Routine Size:  71 bytes,    Routine Base:  _BAS$CODE + 008E
```

```
1 %SBTTL 'BAS$CVTHP - Convert hfloat to packed'
1 GLOBAL ROUTINE BAS$CVTHP (                                  ! Convert hfloat to packed
1               DEST,                                      ! place to store conv. number
1               DESTLEN,                                   ! number of digits in dest
1               SRC,                                       ! number to be converted
1               SCALE                                      ! power of ten to mult src
1           ) : NOVALUE =
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !             Converts a h floating number to packed.
1 !
1 ! CALLING SEQUENCE:
1 !
1 !             BAS$CVTHP (DEST.wp.r, DESTLEN.rl.v, SRC.rh.r, SCALE.rl.v)
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !             DEST.wp.r        place to store the converted number
1 !             DESTLEN.rl.v     number of digits in the destination
1 !             SRC.rh.r         number to be converted
1 !             SCALE.rl.v       power of ten by which the internal
1 !                              representation of the sourc must be
1 !                              multiplied to scale the same as the
1 !                              internal representation of the dest.
1 !
1 ! IMPLICIT INPUTS:
1 !
1 !             NONE
1 !
1 ! IMPLICIT OUTPUTS:
1 !
1 !             NONE
1 !
1 ! COMPLETION STATUS:
1 !
1 !             May signal decimal overflow if that error occurs in the OTS
1 !             conversion routine
1 !
1 ! SIDE EFFECTS:
1 !
1 !             NONE
1 !
1 !--
1
2       BEGIN
2
2       LOCAL
2           FMP : REF BLOCK [0,BYTE] FIELD (BSF$FCD),         ! Ptr to BASIC frame
2           STATUS;
2
2       STATUS = OTS$CVTHP_R9 (.SCALE, .SRC, .DESTLEN, .DEST);
3       IF (NOT .STATUS)
2       THEN
3           BEGIN
3
```

```
;  415          0706  3          FIND_FRAME (FMP);                                ! Find BASIC frame
;  416          0707  3          IF (.FMP NEQ 0) AND (.FMP [BSF$W_FCD_FLAGS] AND BSF$M_FCD_DV) NEQ 0
;  417          0708  3          THEN                                             ! If "/OVERFLOW = NODEC" not set
;  418          0709  3              BAS$$SIGNAL (BAS$K_DECERR);
;  419          0710  3
;  420          0711  2          END;
;  421          07'2  1      END;                                        ! End of routine BAS$CVTHP



                                          0FFC 00000        .ENTRY  BAS$CVTHP, Save R2,R3,R4,R5,R6,R7,R8,R9,-    ; 0650
                                                                    R10,R11
                          59       04   AC   D0 00002        MOVL    DEST, R9                                    ; 0701
                          58       08   AC   D0 00006        MOVL    DESTLEN, R8                                 ;
                          57       0C   AC   D0 0000A        MOVL    SRC, R7                                     ;
                          56       10   AC   D0 0000E        MOVL    SCALE, R6                                   ;
                            00000000G   00   16 00012        JSB     OTS$CVTHP_R9                                ;
                          2B            50   E8 00018        BLBS    STATUS, 3$                                  ; 0702
                          50            5D   D0 0001B        MOVL    FP, FMP                                     ; 0706
                          50       0C   A0   D0 0001E 1$:    MOVL    12(FMP), FMP                                ;
                          51 00000000G  00   9E 00022        MOVAB   BAS$HANDLER, R1                             ;
                          51            60   D1 00029        CMPL    (FMP), R1                                   ;
                                        04   13 0002C        BEQL    2$                                          ;
                                        50   D5 0002E        TSTL    FMP                                         ;
                                        EC   12 00030        BNEQ    1$                                          ;
                                        50   D5 00032 2$:    TSTL    FMP                                         ; 0707
                                        10   13 00034        BEQL    3$                                          ;
             0B        E6   A0          0A   E1 00036        BBC     #10, -26(FMP), 3$                           ;
                          7E      00G   8F   9A 0003B        MOVZBL  #BAS$K_DECERR, -(SP)                        ; 0709
                 00000000G  00          01   FB 0003F        CALLS   #1, BAS$$SIGNAL                             ;
                                             04 00046 3$:    RET                                                 ; 0712

; Routine Size:  71 bytes,    Routine Base:  _BAS$CODE + 00D5
```

```
1 %SBTTL 'BAS$CVTRFP - Convert float to packed (rounded)'
1 GLOBAL ROUTINE BAS$CVTRFP (                           ! Convert float to packed (rounded)
1               DEST,                                   ! place to store conv. number
1               DESTLEN,                                ! number of digits in dest
1               SRC,                                    ! number to be converted
1               SCALE                                   ! power of ten to mult src
1           ) : NOVALUE =
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !             Converts a single floating number to packed using rounding.
1 !
1 ! CALLING SEQUENCE:
1 !
1 !             BAS$CVTRFP (DEST.wp.r, DESTLEN.rl.v, SRC.rf.r, SCALE.rl.v)
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !             DEST.wp.r       place to store the converted number
1 !             DESTLEN.rl.v    number of digits in the destination
1 !             SRC.rf.r        number to be converted
1 !             SCALE.rl.v      power of ten by which the internal
1 !                             representation of the sourc must be
1 !                             multiplied to scale the same as the
1 !                             internal representation of the dest.
1 !
1 ! IMPLICIT INPUTS:
1 !
1 !             NONE
1 !
1 ! IMPLICIT OUTPUTS:
1 !
1 !             NONE
1 !
1 ! COMPLETION STATUS:
1 !
1 !             NONE
1 !
1 ! SIDE EFFECTS:
1 !
1 !             May signal decimal overflow if an error occurs in the OTS
1 !             conversion routine
1 !
1 !--
1
2           BEGIN
2
2           LOCAL
2               FMP : REF BLOCK [0,BYTE] FIELD (BSF$FCD),       ! Ptr to BASIC frame
2               STATUS;
2
2           STATUS = OTS$CVTRFP_R9 (.SCALE, .SRC, .DESTLEN, .DEST);
3           IF (NOT .STATUS)
2           THEN
3               BEGIN
3
```

```
;  480          0770  3             FIND_FRAME (FMP);                                   ! Find BASIC frame
;  481          0771  3             IF (.FMP NEQ 0) AND (.FMP [BSF$W_FCD_FLAGS] AND BSF$M_FCD_DV) NEQ 0
;  482          0772  3             THEN                                                ! If "/OVERFLOW = NODEC'' not set
;  483          0773  3                 BAS$$SIGNAL (BAS$K_DECERR);
;  484          0774  3
;  485          0775  2             END;
;  486          0776  1         END;                                                ! routine BAS$CVTRFP



                                                       0FFC 00000           .ENTRY  BAS$CVTRFP, Save R2,R3,R4,R5,R6,R7,R8,R9,-  ; 0714
                                                                                    R10,R11                                     ;
                                  59        04    AC    D0 00002            MOVL    DEST, R9                                    ; 0765
                                  58        08    AC    D0 00006            MOVL    DESTLEN, R8                                 ;
                                  57        0C    AC    D0 0000A            MOVL    SRC, R7                                     ;
                                  56        10    AC    D0 0000E            MOVL    SCALE, R6                                   ;
                                     00000000G    00    16 00012            JSB     OTS$CVTRFP_R9                               ;
                                  2B              50    E8 00018            BLBS    STATUS, 3$                                  ; 0766
                                  50              5D    D0 0001B            MOVL    FP, FMP                                     ; 0770
                                  50        0C    A0    D0 0001E 1$:        MOVL    12(FMP), FMP                                ;
                                  51 00000000G    00    9E 00022 .          MOVAB   BAS$HANDLER, R1                             ;
                                  51              60    D1 00029            CMPL    (FMP), R1                                   ;
                                                  04    13 0002C            BEQL    2$                                          ;
                                                  50    D5 0002E            TSTL    FMP                                         ;
                                                  EC    12 00030            BNEQ    1$                                          ;
                                                  50    D5 00032 2$:        TSTL    FMP                                         ; 0771
                                                  10    13 00034            BEQL    3$                                          ;
                      0B          E6      A0      0A    E1 00036            BBC     #10, -26(FMP), 3$                           ;
                                  7E       00G    8F    9A 0003B            MOVZBL  #BAS$K_DECERR, -(SP)                        ; 0773
                         00000000G  00            01    FB 0003F            CALLS   #1, BAS$$SIGNAL                             ;
                                                        04 00046 3$:        RET                                                 ; 0776

; Routine Size:  71 bytes,    Routine Base:  _BAS$CODE + 011C
```

```
1 %SBTTL 'BAS$CVTRDP - Convert double to packed (rounded)'
1 GLOBAL ROUTINE BAS$CVTRDP (                           ! Convert double to packed (rounded)
1         DEST,                                         ! place to store conv. number
1         DESTLEN,                                      ! number of digits in dest
1         SRC,                                          ! number to be converted
1         SCALE                                         ! power of ten to mult src
1     ) : NOVALUE =
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !       Converts a double floating number to packed using rounding.
1 !
1 ! CALLING SEQUENCE:
1 !
1 !       BAS$CVTRDP (DEST.wp.r, DESTLEN.rl.v, SRC.rd.r, SCALE.rl.v)
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !       DEST.wp.r       place to store the converted number
1 !       DESTLEN.rl.v    number of digits in the destination
1 !       SRC.rd.r        number to be converted
1 !       SCALE.rl.v      power of ten by which the internal
1 !                       representation of the sourc must be
1 !                       multiplied to scale the same as the
1 !                       internal representation of the dest.
1 !
1 ! IMPLICIT INPUTS:
1 !
1 !       NONE
1 !
1 ! IMPLICIT OUTPUTS:
1 !
1 !       NONE
1 !
1 ! COMPLETION STATUS:
1 !
1 !       NONE
1 !
1 ! SIDE EFFECTS:
1 !
1 !       May signal decimal overflow if overflow occurs in the OTS
1 !       conversion routine
1 !
1 !--
1
2     BEGIN
2
2     LOCAL
2         FMP : REF BLOCK [0,BYTE] FIELD (BSF$FCD),       ! Ptr to BASIC frame
2         STATUS;
2
2     STATUS = OTS$CVTRDP_R9 (.SCALE, .SRC, .DESTLEN, .DEST);
3     IF (NOT .STATUS)
2     THEN
3         BEGIN
3
```

```
;  545          0834  3             FIND_FRAME (FMP);                                   ! Find BASIC frame
;  546          0835  3             IF (.FMP NEQ 0) AND (.FMP [BSF$W_FCD_FLAGS] AND BSF$M_FCD_DV) NEQ 0
;  547          0836  3             THEN                                                ! If "/OVERFLOW = NODEC'' not set
;  548          0837  3                 BAS$$SIGNAL (BAS$K_DECERR);
;  549          0838  3
;  550          0839  2             END;
;  551          0840  1         END;                                            ! End of routine BAS$CVTRDP



                                              OFFC 00000          .ENTRY  BAS$CVTRDP, Save R2,R3,R4,R5,R6,R7,R8,R9,-  ; 0778
                                                                          R10,R11                                     ;
                              59       04  AC   D0 00002          MOVL    DEST, R9                                    ; 0829
                              58       08  AC   D0 00006          MOVL    DESTLEN, R8                                 ;
                              57       0C  AC   D0 0000A          MOVL    SRC, R7                                     ;
                              56       10  AC   D0 0000E          MOVL    SCALE, R6                                   ;
                                00000000G  00   16 00012          JSB     OTS$CVTRDP_R9                               ;
                              2B           50   E8 00018          BLBS    STATUS, 3$                                  ; 0830
                              50           5D   D0 0001B          MOVL    FP, FMP                                     ; 0834
                              50       0C  A0   D0 0001E  1$:     MOVL    12(FMP), FMP                                ;
                              51 00000000G  00   9E 00022          MOVAB   BAS$HANDLER, R1                             ;
                              51           60   D1 00029          CMPL    (FMP), R1                                   ;
                                           04   13 0002C          BEQL    2$                                          ;
                                           50   D5 0002E          TSTL    FMP                                         ;
                                           EC   12 00030          BNEQ    1$                                          ;
                                           50   D5 00032  2$:     TSTL    FMP                                         ; 0835
                                           10   13 00034          BEQL    3$                                          ;
                 0B        E6  A0          0A   E1 00036          BBC     #10, -26(FMP), 3$                           ;
                              7E      00G  8F   9A 0003B          MOVZBL  #BAS$K_DECERR, -(SP)                        ; 0837
                   00000000G  00           01   FB 0003F          CALLS   #1, BAS$$SIGNAL                             ;
                                                04 00046  3$:     RET                                                 ; 0840

; Routine Size:  71 bytes,    Routine Base:  _BAS$CODE + 0163
```

```
1 %SBTTL 'BAS$CVTRGP - Convert gfloat to packed (rounded)'
1 GLOBAL ROUTINE BAS$CVTRGP (                               ! Convert gfloat to packed (rounded)
1         DEST,                                             ! place to store conv. number
1         DESTLEN,                                          ! number of digits in dest
1         SRC,                                              ! number to be converted
1         SCALE                                             ! power of ten to mult src
1     ) : NOVALUE =
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !       Converts a g floating number to packed using rounding.
1 !
1 ! CALLING SEQUENCE:
1 !
1 !       BAS$CVTRGP (DEST.wp.r, DESTLEN.rl.v, SRC.rg.r, SCALE.rl.v)
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !       DEST.wp.r       place to store the converted number
1 !       DESTLEN.rl.v    number of digits in the destination
1 !       SRC.rg.r        number to be converted
1 !       SCALE.rl.v      power of ten by which the internal
1 !                       representation of the sourc must be
1 !                       multiplied to scale the same as the
1 !                       internal representation of the dest.
1 !
1 ! IMPLICIT INPUTS:
1 !
1 !       NONE
1 !
1 ! IMPLICIT OUTPUTS:
1 !
1 !       NONE
1 !
1 ! COMPLETION STATUS:
1 !
1 !       NONE
1 !
1 ! SIDE EFFECTS:
1 !
1 !       May signal decimal overflow if that error occurs in the OTS
1 !       conversion routine
1 !
1 !--
1
2     BEGIN
2
2     LOCAL
2         FMP : REF BLOCK [0,BYTE] FIELD (BSF$FCD),       ! Ptr to BASIC frame
2         STATUS;
2
2     STATUS = OTS$CVTRGP_R9 (.SCALE, .SRC, .DESTLEN, .DEST);
3     IF (NOT .STATUS)
2     THEN
3         BEGIN
3
```

```
;  610          0898  3          FIND_FRAME (FMP);                                    ! Find BASIC frame
;  611          0899  3          IF (.FMP NEQ 0) AND (.FMP [BSF$W_FCD_FLAGS] AND BSF$M_FCD_DV) NEQ 0
;  612          0900  3          THEN                                                 ! If "/OVERFLOW = NODEC" not set
;  613          0901  3              BAS$$SIGNAL (BAS$K_DECERR);
;  614          0902  3
;  615          0903  2          END;
;  616          0904  1      END;                                            ! End of routine BAS$CVTRGP



                                                    0FFC 00000          .ENTRY  BAS$CVTRGP, Save R2,R3,R4,R5,R6,R7,R8,R9,-  ; 0842
                                                                                R10,R11                                     :
                               59        04   AC   D0 00002             MOVL    DEST, R9                                    ; 0893
                               58        08   AC   D0 00006             MOVL    DESTLEN, R8                                 :
                               57        0C   AC   D0 0000A             MOVL    SRC, R7                                     :
                               56        10   AC   D0 0000E             MOVL    SCALE, R6                                   :
                                  00000000G   00   16 00012             JSB     OTS$CVTRGP_R9                               :
                               2B             50   E8 00018             BLBS    STATUS, 3$                                  ; 0894
                               50             5D   D0 0001B             MOVL    FP, FMP                                     ; 0898
                               50        0C   A0   D0 0001E  1$:        MOVL    12(FMP), FMP                                :
                               51 00000000G   00   9E 00022             MOVAB   BAS$HANDLER, R1                             :
                               51             60   D1 00029             CMPL    (FMP), R1                                   :
                                              04   13 0002C             BEQL    2$                                          :
                                              50   D5 0002E             TSTL    FMP                                         :
                                              EC   12 00030             BNEQ    1$                                          :
                                              50   D5 00032  2$:        TSTL    FMP                                         ; 0899
                                              10   13 00034             BEQL    3$                                          :
                  0B         E6   A0          0A   E1 00036             BBC     #10, -26(FMP), 3$                           :
                               7E       00G   8F   9A 0003B             MOVZBL  #BAS$K_DECERR, -(SP)                        ; 0901
                       00000000G  00          01   FB 0003F             CALLS   #1, BAS$$SIGNAL                             :
                                                   04 00046  3$:        RET                                                 ; 0904

; Routine Size:  71 bytes,    Routine Base:  _BAS$CODE + 01AA
```

```
1 %SBTTL 'BAS$CVTRHP - Convert hfloat to packed (rounded)'
1 GLOBAL ROUTINE BAS$CVTRHP (                     ! Convert hfloat to packed (rounded)
1         DEST,                                   ! place to store conv. number
1         DESTLEN,                                ! number of digits in dest
1         SRC,                                    ! number to be converted
1         SCALE                                   ! power of ten to mult src
1     ) : NOVALUE =
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !       Converts a h floating number to packed using rounding.
1 !
1 ! CALLING SEQUENCE:
1 !
1 !       BAS$CVTRHP (DEST.wp.r, DESTLEN.rl.v, SRC.rh.r, SCALE.rl.v)
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !       DEST.wp.r       place to store the converted number
1 !       DESTLEN.rl.v    number of digits in the destination
1 !       SRC.rh.r        number to be converted
1 !       SCALE.rl.v      power of ten by which the internal
1 !                       representation of the sourc must be
1 !                       multiplied to scale the same as the
1 !                       internal representation of the dest.
1 !
1 ! IMPLICIT INPUTS:
1 !
1 !       NONE
1 !
1 ! IMPLICIT OUTPUTS:
1 !
1 !       NONE
1 !
1 ! COMPLETION STATUS:
1 !
1 !       May signal decimal overflow if that error occurs in the OTS
1 !       conversion routine
1 !
1 ! SIDE EFFECTS:
1 !
1 !       NONE
1 !
1 !--
1
2     BEGIN
2
2     LOCAL
2         FMP : REF BLOCK [0,BYTE] FIELD (BSF$FCD),       ! Ptr to BASIC frame
2         STATUS;
2
2     STATUS = OTS$CVTRHP_R9 (.SCALE, .SRC, .DESTLEN, .DEST);
3     IF (NOT .STATUS)
2     THEN
3         BEGIN
3
```

```
; 675           0962  3         FIND_FRAME (FMP);                               ! Find BASIC frame
; 676           0963  3         IF (.FMP NEQ 0) AND (.FMP [BSF$W_FCD_FLAGS] AND BSF$M_FCD_DV) NEQ 0
; 677           0964  3         THEN                                            ! If "/OVERFLOW = NODEC" not set
; 678           0965  3             BAS$$SIGNAL (BAS$K_DECERR);
; 679           0966  3
; 680           0967  2         END;
; 681           0968  1     END;                                         ! End of routine BAS$CVTRHP



                                                       OFFC 00000          .ENTRY  BAS$CVTRHP, Save R2,R3,R4,R5,R6,R7,R8,R9,-  ; 0906
                                                                                   R10,R11                                     :
                                        59       04  AC  D0 00002          MOVL    DEST, R9                                    ; 0957
                                        58       08  AC  D0 00006          MOVL    DESTLEN, R8                                 :
                                        57       0C  AC  D0 0000A          MOVL    SRC, R7                                     :
                                        56       10  AC  D0 0000E          MOVL    SCALE, R6                                   :
                                          00000000G  00  16 00012          JSB     OTS$CVTRHP_R9                               :
                                        2B           50  E8 00018          BLBS    STATUS, 3$                                  ; 0958
                                        50           5D  D0 0001B          MOVL    FP, FMP                                     ; 0962
                                        50       0C  A0  D0 0001E 1$:      MOVL    12(FMP), FMP                                :
                                        51 00000000G  00  9E 00022          MOVAB   BAS$HANDLER, R1                             :
                                        51           60  D1 00029          CMPL    (FMP), R1                                   :
                                                     04  13 0002C          BEQL    2$                                          :
                                                     50  D5 0002E          TSTL    FMP                                         :
                                                     EC  12 00030          BNEQ    1$                                          :
                                                     50  D5 00032 2$:      TSTL    FMP                                         ; 0963
                                                     10  13 00034          BEQL    3$                                          :
                          0B      E6    A0           0A  E1 00036          BBC     #10, -26(FMP), 3$                           :
                                        7E      00G  8F  9A 0003B          MOVZBL  #BAS$K_DECERR, -(SP)                        ; 0965
                            00000000G   00           01  FB 0003F          CALLS   #1, BAS$$SIGNAL                             :
                                                         04 00046 3$:      RET                                                 ; 0968

; Routine Size:  71 bytes,    Routine Base:  _BAS$CODE + 01F1
;  683          0969  1 %SBTTL 'BAS$CVTPF - Convert packed to float'
;  684          0970  1 GLOBAL ROUTINE BAS$CVTPF (                                      ! Convert packed to float
;  685          0971  1         DEST,                                           ! place to store conv. number
;  686          0972  1         SRC,                                            ! number to be converted
;  687          0973  1         SRCLEN,                                         ! number of digits in source
;  688          0974  1         SCALE                                           ! power of ten to mult src
;  689          0975  1     ) : NOVALUE =
;  690          0976  1
;  691          0977  1 !++
;  692          0978  1 ! FUNCTIONAL DESCRIPTION:
;  693          0979  1 !
;  694          0980  1 !       Converts a packed number to single floating.
;  695          0981  1 !
;  696          0982  1 ! CALLING SEQUENCE:
;  697          0983  1 !
;  698          0984  1 !       BAS$CVTPF (DEST.wf.r, SRC.rp.r, SRCLEN.rl.v, SCALE.rl.v)
;  699          0985  1 !
;  700          0986  1 ! FORMAL PARAMETERS:
;  701          0987  1 !
;  702          0988  1 !       DEST.wf.r       place to store the converted number
;  703          0989  1 !       SRC.rf.r        number to be converted
;  704          0990  1 !       SRCLEN.rl.v     number of digits in the source
;  705          0991  1 !       SCALE.rl.v      power of ten by which the internal
;  706          0992  1 !                       representation of the sourc must be
;  707          0993  1 !                       multiplied to scale the same as the
;  708          0994  1 !                       internal representation of the dest.
;  709          0995  1 !
;  710          0996  1 ! IMPLICIT INPUTS:
;  711          0997  1 !
;  712          0998  1 !       NONE
;  713          0999  1 !
;  714          1000  1 ! IMPLICIT OUTPUTS:
;  715          1001  1 !
;  716          1002  1 !       NONE
;  717          1003  1 !
;  718          1004  1 ! COMPLETION STATUS:
;  719          1005  1 !
;  720          1006  1 !       NONE
;  721          1007  1 !
;  722          1008  1 ! SIDE EFFECTS:
;  723          1009  1 !
.  724          1010  1 !       NONE
;  725          1011  1 !
;  726          1012  1 !--
;  727          1013  1
;  728          1014  2     BEGIN
;  729          1015  2
;  730          1016  2     OTS$CVTPF_R9 (.SCALE, .SRCLEN, .SRC, .DEST);
;  731          1017  2
;  732          1018  1     END;                                                ! End of routine BAS$CVTPF


                                              0FFC 00000        .ENTRY  BAS$CVTPF, Save R2,R3,R4,R5,R6,R7,R8,R9,-   ; 0970
                                                                        R10,R11                                     ;
```

```
                          59          04    AC   D0 00002           MOVL     DEST, R9                              ; 1016
                          58          08    AC   D0 00006           MOVL     SRC, R8                               ;
                          57          0C    AC   D0 0000A           MOVL     SRCLEN, R7                            ;
                          56          10    AC   D0 0000E           MOVL     SCALE, R6                             ;
                             00000000G  00       16 00012           JSB      OTS$CVTPF_R9                          ;
                                                 04 00018           RET                                            ; 1018

; Routine Size:  25 bytes,    Routine Base:  _BAS$CODE + 0238
;   734          1019  1 %SBTTL 'BAS$CVTPD - Convert packed to double'
;   735          1020  1 GLOBAL ROUTINE BAS$CVTPD (                                     ! Convert packed to double
;   736          1021  1         DEST,                                         ! place to store conv. number
;   737          1022  1         SRC,                                          ! number to be converted
;   738          1023  1         SRCLEN,                                       ! number of digits in source
;   739          1024  1         SCALE                                         ! power of ten to mult src
;   740          1025  1     ) : NOVALUE =
;   741          1026  1
;   742          1027  1 !++
;   743          1028  1 ! FUNCTIONAL DESCRIPTION:
;   744          1029  1 !
;   745          1030  1 !       Converts a packed number to double floating.
;   746          1031  1 !
;   747          1032  1 ! CALLING SEQUENCE:
;   748          1033  1 !
;   749          1034  1 !       BAS$CVTPD (DEST.wp.r, SRC.rf.r, SRCLEN.rl.v, SCALE.rl.v)
;   750          1035  1 !
;   751          1036  1 ! FORMAL PARAMETERS:
;   752          1037  1 !
;   753          1038  1 !       DEST.wd.r       place to store the converted number
;   754          1039  1 !       SRC.rp.r        number to be converted
;   755          1040  1 !       SRCLEN.rl.v     number of digits in source
;   756          1041  1 !       SCALE.rl.v      power of ten by which the internal
;   757          1042  1 !                       representation of the sourc must be
;   758          1043  1 !                       multiplied to scale the same as the
;   759          1044  1 !                       internal representation of the dest.
;   760          1045  1 !
;   761          1046  1 ! IMPLICIT INPUTS:
;   762          1047  1 !
;   763          1048  1 !       NONE
;   764          1049  1 !
;   765          1050  1 ! IMPLICIT OUTPUTS:
;   766          1051  1 !
;   767          1052  1 !       NONE
;   768          1053  1 !
;   769          1054  1 ! COMPLETION STATUS:
;   770          1055  1 !
;   771          1056  1 !       NONE
;   772          1057  1 !
;   773          1058  1 ! SIDE EFFECTS:
;   774          1059  1 !
;   775          1060  1 !       NONE
;   776          1061  1 !
;   777          1062  1 !--
;   778          1063  1
;   779          1064  2     BEGIN
;   780          1065  2
;   781          1066  2     OTS$CVTPD_R9 (.SCALE, .SRCLEN, .SRC, .DEST);
;   782          1067  2
;   783          1068  1     END;                                          ! End of routine BAS$CVTPD


                                       OFFC 00000        .ENTRY  BAS$CVTPD, Save R2,R3,R4,R5,R6,R7,R8,R9,-   ; 1020
                                                                 R10,R11                                     ;
```

```
                                   59          04    AC   D0 00002          MOVL     DEST, R9                             ; 1066
                                   58          08    AC   D0 00006          MOVL     SRC, R8                              ;
                                   57          0C    AC   D0 0000A          MOVL     SRCLEN, R7                           ;
                                   56          10    AC   D0 0000E          MOVL     SCALE, R6                            ;
                                      00000000G  00   16 00012          JSB      OTS$CVTPD_R9                         ;
                                                      04 00018          RET                                           ; 1068

; Routine Size:  25 bytes,    Routine Base:  _BAS$CODE + 0251
;  785          1069  1 %SBTTL 'BAS$CVTPG - Convert packed to gfloat'
;  786          1070  1 GLOBAL ROUTINE BAS$CVTPG (                              ! Convert packed to gfloat
;  787          1071  1         DEST,                                    ! place to store conv. number
;  788          1072  1         SRC,                                     ! number to be converted
;  789          1073  1         SRCLEN,                                  ! number of digits in source
;  790          1074  1         SCALE                                    ! power of ten to mult src
;  791          1075  1     ) : NOVALUE =
;  792          1076  1
;  793          1077  1 !++
;  794          1078  1 ! FUNCTIONAL DESCRIPTION:
;  795          1079  1 !
;  796          1080  1 !       Converts a packed number to g floating.
;  797          1081  1 !
;  798          1082  1 ! CALLING SEQUENCE:
;  799          1083  1 !
;  800          1084  1 !       BAS$CVTPG (DEST.wg.r, SRC.rp.r, SRCLEN.rl.v, SCALE.rl.v)
;  801          1085  1 !
;  802          1086  1 ! FORMAL PARAMETERS:
;  803          1087  1 !
;  804          1088  1 !       DEST.wg.r       place to store the converted number
;  805          1089  1 !       SRC.rp.r        number to be converted
;  806          1090  1 !       SRCLEN.rl.v     number of digits in the destination
;  807          1091  1 !       SCALE.rl.v      power of ten by which the internal
;  808          1092  1 !                       representation of the sourc must be
;  809          1093  1 !                       multiplied to scale the same as the
;  810          1094  1 !                       internal representation of the dest.
;  811          1095  1 !
;  812          1096  1 ! IMPLICIT INPUTS:
;  813          1097  1 !
;  814          1098  1 !       NONE
;  815          1099  1 !
;  816          1100  1 ! IMPLICIT OUTPUTS:
;  817          1101  1 !
;  818          1102  1 !       NONE
;  819          1103  1 !
;  820          1104  1 ! COMPLETION STATUS:
;  821          1105  1 !
;  822          1106  1 !       NONE
;  823          1107  1 !
;  824          1108  1 ! SIDE EFFECTS:
;  825          1109  1 !
;  826          1110  1 !       NONE
;  827          1111  1 !
;  828          1112  1 !--
;  829          1113  1
;  830          1114  2     BEGIN
;  831          1115  2
;  832          1116  2     OTS$CVTPG_R9 (.SCALE, .SRCLEN, .SRC, .DEST);
;  833          1117  2
;  834          1118  1     END;                                         ! End of routine BAS$CVTPG



                                          0FFC 00000      .ENTRY  BAS$CVTPG, Save R2,R3,R4,R5,R6,R7,R8,R9,-   ; 1070
                                                                  R10,R11                                   ;
```

```
                        59        04   AC  D0 00002          MOVL    DEST, R9                                ; 1116
                        58        08   AC  D0 00006          MOVL    SRC, R8                                 ;
                        57        0C   AC  D0 0000A          MOVL    SRCLEN, R7                              ;
                        56        10   AC  D0 0000E          MOVL    SCALE, R6                               ;
                           00000000G   00  16 00012          JSB     OTS$CVTPG_R9                            ;
                                           04 00018          RET                                             ; 1118

; Routine Size:  25 bytes,    Routine Base:  _BAS$CODE + 026A
;  836        1119  1 %SBTTL 'BAS$CVTPH - Convert packed to hfloat'
;  837        1120  1 GLOBAL ROUTINE BAS$CVTPH (                               ! Convert packed to hfloat
;  838        1121  1         DEST,                                    ! place to store conv. number
;  839        1122  1         SRC,                                     ! number to be converted
;  840        1123  1         SRCLEN,                                  ! number of digits in the source
;  841        1124  1         SCALE                                    ! power of ten to mult src
;  842        1125  1     ) : NOVALUE =
;  843        1126  1
;  844        1127  1 !++
;  845        1128  1 ! FUNCTIONAL DESCRIPTION:
;  846        1129  1 !
;  847        1130  1 !       Converts a packed number to hfloating.
;  848        1131  1 !
;  849        1132  1 ! CALLING SEQUENCE:
;  850        1133  1 !
;  851        1134  1 !       BAS$CVTPH (DEST.wh.r, SRC.rp.r, SRCLEN.rl.v, SCALE.rl.v)
;  852        1135  1 !
;  853        1136  1 ! FORMAL PARAMETERS:
;  854        1137  1 !
;  855        1138  1 !       DEST.wh.r       place to store the converted number
;  856        1139  1 !       SRC.rp.r        number to be converted
;  857        1140  1 !       SRCLEN.rl.v     number of digits in the source
;  858        1141  1 !       SCALE.rl.v      power of ten by which the internal
;  859        1142  1 !                       representation of the sourc must be
;  860        1143  1 !                       multiplied to scale the same as the
;  861        1144  1 !                       internal representation of the dest.
;  862        1145  1 !
;  863        1146  1 ! IMPLICIT INPUTS:
;  864        1147  1 !
;  865        1148  1 !       NONE
;  866        1149  1 !
;  867        1150  1 ! IMPLICIT OUTPUTS:
;  868        1151  1 !
;  869        1152  1 !       NONE
;  870        1153  1 !
;  871        1154  1 ! COMPLETION STATUS:
;  872        1155  1 !
;  873        1156  1 !       NONE
;  874        1157  1 !
;  875        1158  1 ! SIDE EFFECTS:
;  876        1159  1 !
;  877        1160  1 !       NONE
;  878        1161  1 !
;  879        1162  1 !--
;  880        1163  1
;  881        1164  2     BEGIN
;  882        1165  2
;  883        1166  2     OTS$CVTPH_R9 (.SCALE, .SRCLEN, .SRC, .DEST);
;  884        1167  2
;  885        1168  1     END;                                         ! End of routine BAS$CVTPH



                                      0FFC 00000        .ENTRY  BAS$CVTPH, Save R2,R3,R4,R5,R6,R7,R8,R9,-   ; 1120
                                                                R10,R11                                     ;
```

```
                               59       04   AC  D0 00002         MOVL    DEST, R9                            ; 1166
                               58       08   AC  D0 00006         MOVL    SRC, R8                             ;
                               57       0C   AC  D0 0000A         MOVL    SRCLEN, R7                          ;
                               56       10   AC  D0 0000E         MOVL    SCALE, R6                           ;
                                  00000000G  00  16 00012         JSB     OTS$CVTPH_R9                        ;
                                                 04 00018         RET                                         ; 1168

; Routine Size:  25 bytes,    Routine Base:  _BAS$CODE + 0283


;  886          1169  1 !<BLF/PAGE>
;  888         1170  1 END                                             ! End of module BAS$CVTRP
;  889         1171  1
;  890         1172  0 ELUDOM



;                                 PSECT SUMMARY
;
;      Name                      Bytes                        Attributes
;
;  _BAS$CODE                         668  NOVEC,NOWRT,  RD ,  EXE,  SHR,  LCL,  REL,  CON,  PIC,ALIGN(2)



;                          Library Statistics
;
;                                                 -------- Symbols --------        Pages        Processing
;      File                                       Total     Loaded   Percent      Mapped       Time
;
;  _$255$DUA28:[SYSLIB]STARLET.L32;1               9776          0         0       581          00:01.1



;                                   COMMAND QUALIFIERS

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

; Size:         668 code + 0 data bytes
; Run Time:        00:15.1
; Elapsed Time:    00:32.6
; Lines/CPU Min:    4669
; Lexemes/CPU-Min: 14836
; Memory Used:  67 pages
; Compilation Complete
```

0021 AH-BT13A-SE
VAX/VMS V4.0

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