



```

MM      MM      TTTTTTTTTT  HH      HH      SSSSSSSS  IIIIII  GGGGGGGG  NN      NN
MM      MM      TTTTTTTTTT  HH      HH      SSSSSSSS  IIIIII  GGGGGGGG  NN      NN
MMMM    MMMM      TT          HH      HH      SS          II       GG          NN      NN
MMMM    MMMM      TT          HH      HH      SS          II       GG          NN      NN
MM      MM      TT          HH      HH      SS          II       GG          NN      NN
MM      MM      TT          HH      HH      SS          II       GG          NN      NN
MM      MM      TT          HHHHHHHHHH  SSSSSS  II       GG          NN      NN
MM      MM      TT          HHHHHHHHHH  SSSSSS  II       GG          NN      NN
MM      MM      TT          HH      HH      SS          II       GG          NN      NN
MM      MM      TT          HH      HH      SS          II       GG          NN      NN
MM      MM      TT          HH      HH      SS          II       GG          NN      NN
MM      MM      TT          HH      HH      SSSSSSSS  IIIIII  GGGGGG   NN      NN
MM      MM      TT          HH      HH      SSSSSSSS  IIIIII  GGGGGG   NN      NN

```

```

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

```



(2)	49	HISTORY	; Detailed Current Edit History
(3)	58	DECLARATIONS	
(4)	89	MTHSSIGN	

```

0000 1      .TITLE MTH$SIGN      SIGN function
0000 2      .IDENT /1-002/      ; File: MTH$SIGN.MAR
0000 3
0000 4
0000 5 *****
0000 6 *
0000 7 *  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY *
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0000 23 *  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL. *
0000 24 *
0000 25 *
0000 26 *****
0000 27
0000 28
0000 29 FACILITY: MATH LIBRARY
0000 30 ++
0000 31 ABSTRACT:
0000 32     This module contains routine MTH$SIGN
0000 33
0000 34
0000 35 --
0000 36
0000 37 VERSION: 0
0000 38
0000 39 HISTORY:
0000 40
0000 41 AUTHOR:
0000 42     Jonathan M. Taylor, 14-JUL-77: Version 0
0000 43
0000 44 MODIFIED BY:
0000 45
0000 46
0000 47

```



MTHSSIGN  
1-002

SIGN function D 10 16-SEP-1984 01:48:50 VAX/VMS Macro V04-00  
HISTORY ; Detailed Current Edit History 6-SEP-1984 11:26:54 [MTHRTL.SRC]MTHSIGN.MAR;1

```
0000 49      .SBTTL HISTORY      ; Detailed Current Edit History
0000 50
0000 51
0000 52 : Edit History for Version 0 of MTHSSIGN
0000 53 :
0000 54 : 0-3 - Remove MTH$FLAG_JACKET. TNH 5-July-78
0000 55 : 1-001 - Update version number and copyright notice. JBS 16-NOV-78
0000 56 : 1-002 - Add "_" to the PSECT directive. JBS 22-DEC-78
```

```
0000 58      .SBTTL DECLARATIONS
0000 59
0000 60 :
0000 61 : INCLUDE FILES:
0000 62 :   oerr.mar
0000 63 :
0000 64 :
0000 65 :
0000 66 : EXTERNAL SYMBOLS:
0000 67 :   NONE
0000 68 :
0000 69 :
0000 70 :
0000 71 : MACROS:
0000 72 :   NONE
0000 73 :
0000 74 :
0000 75 :
0000 76 : PSECT DECLARATIONS:
0000 77 :   .PSECT _MTH$CODE      PIC, SHR, LONG, EXE, NOWRT
0000 78 :
0000 79 :
0000 80 : EQUATED SYMBOLS:
0000 81 :   NONE
0000 82 :
0000 83 :
0000 84 :
0000 85 : OWN STORAGE:
0000 86 :   NONE
0000 87 :
```



```

0000 89      .SBTTL MTH$SIGN
0000 90
0000 91      :++
0000 92      : FUNCTIONAL DESCRIPTION:
0000 93      :   Return arg1 with sign of arg2.
0000 94
0000 95
0000 96      : CALLING SEQUENCE:
0000 97      :   Transfer_of_sign.wf.v = MTH$SIGN (arg1.rf.r, arg2.rf.r)
0000 98
0000 99
0000 100
0000 101     : INPUT PARAMETERS:
0000 102     :   The two parameters are single-precision floating-point values
0000 103     :   and are call-by-reference.
0000 104
0000 105
0000 106     : IMPLICIT INPUTS:
0000 107     :   NONE
0000 108
0000 109     : OUTPUT PARAMETERS:
0000 110     :   NONE
0000 111
0000 112     : IMPLICIT OUTPUTS:
0000 113     :   NONE
0000 114
0000 115     : COMPLETION CODES:
0000 116     :   NONE
0000 117
0000 118     : SIDE EFFECTS:
0000 119     :   Reserved Operand exception can occur.
0000 120
0000 121
0000 122     :--
0000 123
0000 124     .ENTRY MTH$SIGN,      ^M<>
0002 125
50  04 BC  50 0002 126     MOVF    @4(AP), R0      ; R0 = arg1
   09  19  19 0006 127     BLSS    NEGARG      ; branch if negative arg1
0008 128
   08 BC  53 0008 129     ; arg1 is non-negative, check sign of arg2
   03  18  18 0008 130     ;
   50  50  52 000D 131     TSTF    @8(AP)
   04  04  04 000B 132     BGEQ    EXIT          ; both args positive, nothing to do
   04  04  04 000D 133     NEGATE: MNEGF   R0, R0      ; negate arg1
   04  04  04 0010 134     EXIT:
   04  04  04 0010 135     RET
   04  04  04 0011 136
   04  04  04 0011 137     ; arg1 is negative, check sign of arg2
   04  04  04 0011 138     ;
   08 BC  53 0011 139     NEGARG:
   F7  18  18 0011 141     TSTF    @8(AP)
   04  04  04 0014 142     BGEQ    NEGATE      ; arg2 positive negate arg1
   04  04  04 0016 143     RET
   04  04  04 0017 144
   04  04  04 0017 145

```

MTHSSIGN  
1-002

SIGN function  
MTHSSIGN

G 10

16-SEP-1984 01:48:50 VAX/VMS Macro V04-00  
6-SEP-1984 11:26:54 [MTHRTL.SRC]MTHSIGN.MAR;1

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(4)

0017 146 .END



MTH\$SIGN  
Symbol table

SIGN function

H 10

16-SEP-1984 01:48:50  
6-SEP-1984 11:26:54

VAX/VMS Macro V04-00  
[MTHRTL.SRC]MTH\$SIGN.MAR;1

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(4)

EXIT	00000010	R	01
MTH\$SIGN	00000000	RG	01
NEGARG	00000011	R	01
NEGATE	0000000D	R	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		
MTH\$CODE	00000017 ( 23.)	01 ( 1.)	PIC	USR	CON	REL	LCL	SHR	EXE	RD	NOWRT	NOVEC	LONG		

-----  
! Performance indicators !  
-----

Phase	Page faults	CPU Time	Elapsed Time
Initialization	30	00:00:00.08	00:00:00.85
Command processing	112	00:00:00.54	00:00:04.19
Pass 1	67	00:00:00.44	00:00:02.12
Symbol table sort	0	00:00:00.00	00:00:00.00
Pass 2	42	00:00:00.35	00:00:01.47
Symbol table output	2	00:00:00.01	00:00:00.07
Psect synopsis output	2	00:00:00.02	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	257	00:00:01.44	00:00:08.72

The working set limit was 750 pages.  
 1414 bytes (3 pages) of virtual memory were used to buffer the intermediate code.  
 There were 10 pages of symbol table space allocated to hold 4 non-local and 0 local symbols.  
 146 source lines were read in Pass 1, producing 10 object records in Pass 2.  
 0 pages of virtual memory were used to define 0 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/DISABLE=(GLOBAL,TRACEBACK)/LIS=LIS\$:MTH\$SIGN/OBJ=OBJ\$:MTH\$SIGN MSRC\$:MTH\$SIGN/UPDATE=(ENH\$:MTH\$SIGN)



Thumbnail 1	Thumbnail 2	Thumbnail 3	Thumbnail 4	Thumbnail 5	Thumbnail 6	Thumbnail 7	Thumbnail 8	Thumbnail 9	Thumbnail 10
Thumbnail 11	Thumbnail 12	Thumbnail 13	MTHMINO LIS	Thumbnail 15	Thumbnail 16	MTHMSG LIS	Thumbnail 18	Thumbnail 19	Thumbnail 20
Thumbnail 21	Thumbnail 22	Thumbnail 23	Thumbnail 24	Thumbnail 25	Thumbnail 26	Thumbnail 27	Thumbnail 28	Thumbnail 29	Thumbnail 30
MTHMINO LIS	Thumbnail 32	Thumbnail 33	Thumbnail 34	MTHMAXI LIS	Thumbnail 36	Thumbnail 37	Thumbnail 38	Thumbnail 39	Thumbnail 40
Thumbnail 42	MTHJDMNT LIS	Thumbnail 44	Thumbnail 45	Thumbnail 46	Thumbnail 47	MTHMSGDEF LIS	Thumbnail 49	Thumbnail 50	Thumbnail 51
Thumbnail 53	Thumbnail 54	MTHJDMNT LIS	Thumbnail 56	Thumbnail 57	Thumbnail 58	Thumbnail 59	MTHSGN LIS	Thumbnail 61	Thumbnail 62
Thumbnail 64	Thumbnail 65	Thumbnail 66	MTHMAXO LIS	Thumbnail 68	Thumbnail 69	Thumbnail 70	MTHMOD LIS	Thumbnail 72	Thumbnail 73
Thumbnail 75	Thumbnail 76	Thumbnail 77	Thumbnail 78	Thumbnail 79	Thumbnail 80	Thumbnail 81	Thumbnail 82	MTHSIGNAL LIS	Thumbnail 84
Thumbnail 86	Thumbnail 87	Thumbnail 88	Thumbnail 89	Thumbnail 90	Thumbnail 91	Thumbnail 92	Thumbnail 93	Thumbnail 94	MTHSQRTR2 LIS
Thumbnail 96	Thumbnail 97	Thumbnail 98	MTHJNINT LIS	Thumbnail 100	Thumbnail 101	Thumbnail 102	Thumbnail 103	MTHSINCO LIS	Thumbnail 105
MTHININT LIS	Thumbnail 107	Thumbnail 108	Thumbnail 109	Thumbnail 110	Thumbnail 111	MTHRANDOM LIS	Thumbnail 113	Thumbnail 114	Thumbnail 115
Thumbnail 117	MTHJIGNNT LIS	Thumbnail 119	Thumbnail 120	Thumbnail 121	MTHMINI LIS	Thumbnail 123	Thumbnail 124	Thumbnail 125	Thumbnail 126
Thumbnail 128	Thumbnail 129	MTHJISGN LIS	Thumbnail 131	Thumbnail 132	Thumbnail 133	Thumbnail 134	MTHSIGN LIS	Thumbnail 136	Thumbnail 137
Thumbnail 139	Thumbnail 140	Thumbnail 141	Thumbnail 142	Thumbnail 143	Thumbnail 144	Thumbnail 145	Thumbnail 146	MTHSINH LIS	Thumbnail 148