



```

FFFFFFFFF 000000 RRRRRRRR WW WW RRRRRRRR IIIIII TTTTTTTTT IIIIII FFFFFFFFFF
FFFFFFFFF 000000 RRRRRRRR WW WW RRRRRRRR IIIIII TTTTTTTTT IIIIII FFFFFFFFFF
FF 00 00 RR RR WW WW RR RR IIII TT IIII FF
FF 00 00 RR RR WW WW RR RR IIII TT IIII FF
FF 00 00 RR RR WW WW RR RR IIII TT IIII FF
FFFFFFFF 00 00 RRRRRRRR WW WW RRRRRRRR IIII TT IIII FFFFFFFF
FFFFFFFF 00 00 RRRRRRRR WW WW RRRRRRRR IIII TT IIII FFFFFFFF
FF 00 00 RR RR WW WW RR RR IIII TT IIII FF
FF 00 00 RR RR WW WW RR RR IIII TT IIII FF
FF 00 00 RR RR WWW WWW RR RR IIII TT IIII FF
FF 00 00 RR RR WWW WWW RR RR IIII TT IIII FF
FF 000000 RR RR WW WW RR RR IIIIII TT IIIIII FFF
FF 000000 RR RR WW WW RR RR IIIIII TT IIIIII FFF

```

```

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 IIIIII SSSSSSSS
LLLLLLLLLL IIIIII SSSSSSSS
LLLLLLLLLL IIIIII SSSSSSSS

```

FOR\$WRITE\_IF  
Table of Contents

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HISTORY ; Detailed Current Edit History  
DECLARATIONS  
FOR\$WRITE\_IF - WRITE INTERNAL formatted

```

0000 1      .TITLE FOR$WRITE_IF - entry point for FORTRAN WRITE INTERNAL FORMATTED
0000 2      .IDENT /1-013/          File: FORWRITIF.MAR Edit: JAW1013
0000 3      :
0000 4      :*****
0000 5      :*
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0000 22     :*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
0000 23     :*
0000 24     :*
0000 25     :*****
0000 26     :
0000 27     :
0000 28     :++
0000 29     : FACILITY: FORTRAN Support Library - user callable
0000 30     :
0000 31     : ABSTRACT:
0000 32     :
0000 33     :   This module contains the entry point for the FORTRAN
0000 34     :   WRITE INTERNAL FORMATTED I/O statement. It is simply
0000 35     :   a call to FOR$$IO_BEG with bits in R0 which describe the
0000 36     :   parameter list. FOR$$IO_BEG interprets the parameters.
0000 37     :
0000 38     : MAINTENANCE NOTE:
0000 39     :   The transfer vector (RTLVECTOR+ALLGBL) must have the following:
0000 40     :
0000 41     :   .TRANSFER      FOR$WRITE_IF
0000 42     :   .MASK          FOR$$IO_BEG
0000 43     :   BRW           FOR$WRITE_IF+2
0000 44     :
0000 45     :   This puts the correct mask in entry vector, that is FOR$$IO_BEG entry mask.
0000 46     :   Furthermore this module must only use R0 and R1
0000 47     :   since any other register might not be in the entry mask for FOR$$IO_BEG.
0000 48     :
0000 49     : ENVIRONMENT: User access mode; mixture of AST level or not
0000 50     :
0000 51     : AUTHOR:          Richard B. Grove, CREATION DATE: 28-May-78
0000 52     :
0000 53     : MODIFIED BY:
0000 54     :   T. Hastings, 29-July-78

```

```
0000 56      .SBTTL HISTORY      ; Detailed Current Edit History
0000 57
0000 58
0000 59 : Edit History for Version 1
0000 60 :
0000 61 : 0-10 - Add comment about vectors. TNH 23-June-78
0000 62 : 0-12 - Pass arg in R0, not ROR, add comments. TNH 29-July-78
0000 63 : 1-001 - Update version number and copyright notice. JBS 16-NOV-78
0000 64 : 1-002 - Change statement type symbols to be LUB$K... JBS 07-DEC-78
0000 65 : 1-003 - Change statement type symbols to be ISB$K... JBS 11-DEC-78
0000 66 : 1-004 - Add " " to the PSECT directive. JBS 22-DEC-78
0000 67 : 1-005 - Add FOR$READ_KF, FOR$READ_KO, FOR$REWRITE_SF, FOR$REWRITE_SO,
0000 68 : FOR$READ_IF, FOR$READ_IO, FOR$WRITE_IF, FOR$WRITE_IO,
0000 69 : FOR$READ_KU, FOR$REWRITE_SU,
0000 70 : SBL 2-May-1979
0000 71 : 1-006 - Remove all entry points that need object time formatting,
0000 72 : putting them in FOR$ENTRY_OBJ so that we can arrange to
0000 73 : load the format compiler only when it is needed.
0000 74 : JBS 26-JUN-1979
0000 75 : 1-007 - Remove entry point FOR$ENCODE_MF; we will code a new module
0000 76 : for it and FOR$$IO_BEG, to see how much I/O initiation time
0000 77 : improves. JBS 02-JUL-1979
0000 78 : 1-008 - Do likewise for FOR$READ_DU and FOR$WRITE_DU. JBS 03-JUL-1979
0000 79 : 1-009 - Remove all entry points except FOR$WRITE_IF; each of the
0000 80 : others gets its own module so we can selectively load
0000 81 : the necessary UDF and REC modules. JBS 09-JUL-1979
0000 82 : 1-010 - Correct a typo that caused a data truncation error. JBS 10-JUL-1979
0000 83 : 1-011 - New parameter format for FOR$$IO_BEG. SBL 5-Dec-1979
0000 84 : 1-012 - Change BRW FOR$$IO_BEG+2 to JMP G^FOR$$IO_BEG+2. JAW 21-Feb-1981
0000 85 : 1-013 - Correct typos in the EXTRN statements which caused FOR$$UDF_RF
0000 86 : rather than FOR$$UDF_WF to be loaded. JAW 22-SEP-1981
```

```
0000 88      .SBTTL  DECLARATIONS
0000 89
0000 90      :
0000 91      : INCLUDE FILES:
0000 92      :
0000 93
0000 94      $FORPAR      ; Define inter-module FORTRAN symbols
0000 95      $ISBDEF      ; Define statement type symbols
0000 96
0000 97      :
0000 98      : EXTERNAL SYMBOLS:
0000 99      :
0000 100
0000 101     .DSABL  GBL      ; Declare all external symbols
0000 102     .EXTRN  FOR$$IO_BEG      ; common I/O statement processing
0000 103     :+
0000 104     : The following references are to make sure the necessary UDF and REC
0000 105     : modules are loaded. These are the routines which are called through
0000 106     : the dispatch tables in FOR$$DISPAT.
0000 107     :-
0000 108     .EXTRN  FOR$$UDF_WF0, FOR$$UDF_WF1, FOR$$UDF_WF9
0000 109     .EXTRN  FOR$$REC_WIF0, FOR$$REC_WIF1, FOR$$REC_WIF9
0000 110
0000 111     :
0000 112     : MACROS:
0000 113     :
0000 114     : NONE
0000 115     :
0000 116     : PSECT DECLARATIONS:
0000 117     :
0000 118
0000 119     .PSECT  _FOR$CODE PIC,USR,CON,REL,LCL,SHR,EXE,RD,NOWRT,LONG
0000 120
0000 121     :
0000 122     : EQUATED SYMBOLS:
0000 123     :
0000 124
0000 125
0000 126     :
0000 127     : OWN STORAGE:
0000 128     :
0000 129     : NONE
0000 130     :
```

```

0000 132          .SBTTL FOR$WRITE_IF - WRITE INTERNAL formatted
0000 133
0000 134 :++
0000 135 : FUNCTIONAL DESCRIPTION:
0000 136 :
0000 137 :     Initialize the FORTRAN I/O system to perform
0000 138 :     a WRITE INTERNAL formatted I/O statement.
0000 139 :
0000 140 : CALLING SEQUENCE:
0000 141 :
0000 142 :     CALL FOR$WRITE_IF (user_vbl.rt.dx, format_adr.mbu.ra
0000 143 :     [, err_adr.j.r [, end_adr.j.r]])
0000 144 :
0000 145 : INPUT PARAMETERS:
0000 146 :
0000 147 :     user_vbl.rt.dx      User's string variable
0000 148 :     format_adr.mbu.ra  adr. of compiled format byte array
0000 149 :     [err_adr.j.r]      optional ERR= address
0000 150 :     [end_adr.j.r]      optional END= address
0000 151 :
0000 152 : IMPLICIT INPUTS:
0000 153 :
0000 154 :     NONE except those used by FOR$$IO_BEG.
0000 155 :
0000 156 : OUTPUT PARAMETERS:
0000 157 :
0000 158 :     NONE
0000 159 :
0000 160 : IMPLICIT OUTPUTS:
0000 161 :
0000 162 :     NONE except those left by FOR$$IO_BEG.
0000 163 :
0000 164 : COMPLETION CODES:
0000 165 :
0000 166 :     NONE
0000 167 :
0000 168 : SIDE EFFECTS:
0000 169 :
0000 170 :     NONE except those of FOR$$IO_BEG.
0000 171 :
0000 172 :--
0000 173
0000 174 FOR$WRITE_IF:: .MASK FOR$$IO_BEG
50 11 0000' 0002 175 MOVZBL #ISB$K ST_TY WIF, R0 ; Statement type
00000002'GF 17 0005 176 JMP G^FOR$$IO_BEG+2 ; branch past call mask
000B 177
000B 178
000B 179          .END

```

FORWRITE IF  
Symbol table

FOR\$\$IO_BEG	*****	X	00
FOR\$\$REC_WIF0	*****	X	00
FOR\$\$REC_WIF1	*****	X	00
FOR\$\$REC_WIF9	*****	X	00
FOR\$\$UDF_WF0	*****	X	00
FOR\$\$UDF_WF1	*****	X	00
FOR\$\$UDF_WF9	*****	X	00
FORWRITE IF	00000000	RG	01
ISB&K_ST_TY_WIF	= 00000011		

! Psect synopsis !

PSECT name	Allocation	PSECT No.	Attributes												
ABS	00000000 ( 0.)	00 ( 0.)	NOPIC USR	CON	ABS	LCL	NOSHR	NOEXE	NORD	NOWRT	NOVEC	BYTE			
_FOR\$CODE	0000000B ( 11.)	01 ( 1.)	PIC USR	CON	REL	LCL	SHR	EXE	RD	NOWRT	NOVEC	LONG			

! Performance indicators !

Phase	Page faults	CPU Time	Elapsed Time
Initialization	29	00:00:00.08	00:00:00.72
Command processing	133	00:00:00.64	00:00:03.04
Pass 1	125	00:00:01.23	00:00:05.47
Symbol table sort	0	00:00:00.18	00:00:00.81
Pass 2	46	00:00:00.46	00:00:02.24
Symbol table output	2	00:00:00.02	00:00:00.02
Psect synopsis output	3	00:00:00.02	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	340	00:00:02.63	00:00:12.32

The working set limit was 1050 pages.  
6694 bytes (14 pages) of virtual memory were used to buffer the intermediate code.  
There were 20 pages of symbol table space allocated to hold 187 non-local and 0 local symbols.  
179 source lines were read in Pass 1, producing 8 object records in Pass 2.  
9 pages of virtual memory were used to define 2 macros.

! Macro library statistics !

Macro library name	Macros defined
\$_\$255\$DUA28:[FORRTL.OBJ]FORRTL.MLB;1	2
\$_\$255\$DUA28:[SYSLIB]STARLET.MLB;2	0
TOTALS (all libraries)	2

183 GETS were required to define 2 macros.

There were no errors, warnings or information messages.

MACRO/ENABLE=SUPPRESSION/DISABLE=(GLOBAL,TRACEBACK)/LIS=LIS\$:FORWRITIF/OBJ=OBJ\$:FORWRITIF MSRCS\$:FORWRITIF/UPDATE=(ENH\$:FORWRITIF)+LI

FO  
Sy  
FO  
FO  
FO  
FO  
FO  
FO  
FO  
FO  
FO  
FO  
FO  
IS  
PS  
--  
:F  
Ph  
--  
In  
Co  
Pa  
Sy  
Pa  
Sy  
Ps  
Cr  
As  
Th  
67  
Th  
18  
9  
Ma  
--  
-s  
-s  
TC  
18  
Th



