

FFFFFFFFF	000000	RRRRRRRR	RRRRRRRR	EEEEEEEEEE	AAAAAA	DDDDDDDD	DDDDDDDD	FFFFFFFFF
FFFFFFFFF	000000	RRRRRRRR	RRRRRRRR	EEEEEEEEEE	AAAAAA	DDDDDDDD	DDDDDDDD	FFFFFFFFF
FF	00	RR	RR	EE	AA	DD	DD	FF
FF	00	RR	RR	EE	AA	DD	DD	FF
FF	00	RR	RR	EE	AA	DD	DD	FF
FF	00	RR	RR	EE	AA	DD	DD	FF
FFFFFFFFF	00	RRRRRRRR	RRRRRRRR	EEEEEEEEEE	AA	DD	DD	FFFFFFFFF
FFFFFFFFF	00	RRRRRRRR	RRRRRRRR	EEEEEEEEEE	AA	DD	DD	FFFFFFFFF
FF	00	RR	RR	EE	AAAAAA	DD	DD	FF
FF	00	RR	RR	EE	AAAAAA	DD	DD	FF
FF	00	RR	RR	EE	AA	DD	DD	FF
FF	00	RR	RR	EE	AA	DD	DD	FF
FF	00	RR	RR	EE	AA	DD	DD	FF
FF	000000	RR	RR	EEEEEEEEEE	AA	DDDDDDDD	DDDDDDDD	FF
FF	000000	RR	RR	EEEEEEEEEE	AA	DDDDDDDD	DDDDDDDD	FF

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)	56	HISTORY	; Detailed Current Edit History
(3)	87	DECLARATIONS	
(4)	131	FOR\$READ_DF - READ DIRECT	formatted


```
0000 1      .TITLE  FOR$READ_DF - entry point for FORTRAN READ DIRECT FORMATTED
0000 2      .IDENT  /1-012/      File: FORREADDF.MAR  Edit: JAW1012
0000 3      :
0000 4      :*****
0000 5      :
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0000 17     :*  THE INFORMATION IN THIS SOFTWARE IS SUBJECT TO CHANGE WITHOUT NOTICE
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0000 21     :*  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE OR RELIABILITY OF ITS
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     :   READ DIRECT 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$READ_DF
0000 42     :   .MASK          FOR$$IO_BEG
0000 43     :   BRW            FOR$READ_DF+2
0000 44     :
0000 45     :   This puts the correct mask in entry vector, that is FOR$$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 R0R, 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$$IO_BEG, to see how much I/O initiation time
0000 77 : improves.  JBS 02-JUL-1979
0000 78 : 1-008 - Do likewise for FOR$READ_DU and FOR$WRITE DU.  JBS 03-JUL-1979
0000 79 : 1-009 - Remove all entry points except FOR$READ_DF; each of the
0000 80 : others gets its own module so we can selectively load
0000 81 : the necessary UDF and REC modules.  JBS 09-JUL-1979
0000 82 : 1-010 - Correct some typos in the references to the
0000 83 : UDF and REC levels.  JBS 12-JUL-1979
0000 84 : 1-011 - New parameter format for FOR$$IO_BEG.  SBL 5-Dec-1979
0000 85 : 1-012 - Change BRW FOR$$IO_BEG+2 to JMP G^FOR$$IO_BEG+2.  JAW 21-Feb-1981

```



```
0000 87      .SBTTL  DECLARATIONS
0000 88
0000 89 :
0000 90 : INCLUDE FILES:
0000 91 :
0000 92
0000 93      $FORPAR      ; Define inter-module FORTRAN symbols
0000 94      $ISBDEF      ; Define statement type symbols
0000 95
0000 96 :
0000 97 : EXTERNAL SYMBOLS:
0000 98 :
0000 99
0000 100     .DSABL  GBL      ; Declare all external symbols
0000 101     .EXTRN  FOR$$IO_BEG ; common I/O statement processing
0000 102 :+
0000 103 : The following references are to make sure the necessary UDF and REC
0000 104 : modules are loaded. These are the routines which are called through
0000 105 : the dispatch tables in FOR$$DISPAT.
0000 106 :-
0000 107     .EXTRN  FOR$$UDF_RFO, FOR$$UDF_RF1, FOR$$UDF_RF9
0000 108     .EXTRN  FOR$$REC_RDO, FOR$$REC_RD1, FOR$$REC_RD9
0000 109
0000 110 :
0000 111 : MACROS:
0000 112 :
0000 113 :     NONE
0000 114 :
0000 115 : PSECT DECLARATIONS:
0000 116 :
0000 117
0000 118     .PSECT  _FOR$CODE PIC,USR,CON,REL,LCL,SHR,EXE,RD,NOWRT,LONG
0000 119
0000 120 :
0000 121 : EQUATED SYMBOLS:
0000 122 :
0000 123 :
0000 124 :
0000 125 :
0000 126 : OWN STORAGE:
0000 127 :
0000 128 :     NONE
0000 129 :
```



```
0000 131 .SBTTL FOR$READ_DF - READ DIRECT formatted
0000 132
0000 133 :++
0000 134 : FUNCTIONAL DESCRIPTION:
0000 135 :
0000 136 : Initialize the FORTRAN I/O system to perform
0000 137 : a READ DIRECT formatted I/O statement.
0000 138 :
0000 139 : CALLING SEQUENCE:
0000 140 :
0000 141 : CALL FOR$READ_DF (unit.rl.v, record_no.rl.v, format_adr.mbu.ra
0000 142 : [, err_adr.j.r [, end_adr.j.r]])
0000 143 :
0000 144 : INPUT PARAMETERS:
0000 145 :
0000 146 : unit.rl.v logical unit number
0000 147 : record_no.rl.v record number to read
0000 148 : format_adr.mbu.ra adr. of compiled format byte array
0000 149 : [err_adr.j.r] optional ERK= 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$$IO_BEG.
0000 171 :
0000 172 :--
0000 173
0000 174 FOR$READ_DF:: .MASK FOR$$IO_BEG
50 06 9A 0002 175 MOVZBL #ISB$K ST_TY_RDF, 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
```


FOR\$READ_DF
Symbol table

L 16

- entry point for FORTRAN READ DIRECT FO 15-SEP-1984 23:55:30 VAX/VMS Macro V04-00 Page 5
6-SEP-1984 10:58:54 [FORRTL.SRC]FORREADD.F.MAR;1 (4)

FOR\$\$IO_BEG
FOR\$\$REC_RDO
FOR\$\$REC_RD1
FOR\$\$REC_RD9
FOR\$\$UDF_RFO
FOR\$\$UDF_RF1
FOR\$\$UDF_RF9
FOR\$READ_DF
ISB\$K_ST_TY_RDF

```
***** X 00
***** X 00
***** X 00
***** X 00
***** X 00
***** X 00
***** X 00
00000000 RG 01
= 00000006
```

+-----+
! Psect synopsis !
+-----+

PSECT name

Allocation

PSECT No.

Attributes

ABS
_FOR\$CODE

```
00000000 ( 0.) 00 ( 0.) NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
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	00:00:00.09	00:00:00.54
Command processing	115	00:00:00.67	00:00:03.51
Pass 1	123	00:00:01.25	00:00:05.15
Symbol table sort	0	00:00:00.18	00:00:00.40
Pass 2	47	00:00:00.50	00:00:01.41
Symbol table output	2	00:00:00.01	00:00:00.03
Psect synopsis output	2	00:00:00.02	00:00:00.03
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	320	00:00:02.74	00:00:11.09

The working set limit was 900 pages.
6690 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
_\$255\$DUA28:[SYSLIB]STARLET.MLB;2
TOTALS (all libraries)

2
0
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\$:FORREADD.F/OBJ=OBJ\$:FORREADD.F MSRC\$:FORREADD.F/UPDATE=(ENH\$:FORREADD.F)+L I

0182 AH-BT13A-SE
VAX/VMS V4.0

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