1.0 Require Files For Each Compiler Module

This is a list of all of the BLISS modules in the FORTRAN
compiler along with a list of files REQUIREd by each module
(if any). All files required by a module must be available
on DSK: when recompiling that module.

Note that the require file FIRST requires IOFLG, so that
every mention of FIRST implies IOFLG also.

Module	Require file
------	------- ----
ACT0	
	ASHELP
	LEXNAM
	META72
	FIRST
	TABLES
ACT1	
	ASHELP
	LEXNAM
	META72
	FIRST
	TABLES
ALCBLO	
	FIRST
	TABLES
ARRXPN	
	FIRST

```
                              TABLES
            ASHELP
            BLIO
            BUILD
            CANNON
                              FIRST
                              TABLES
                              OPTMAC
            CGDO
                              FIRST
                              TABLES
            CGEXPR
                              FIRST
                              TABLES
            CGSTMN
                              FIRST
                              TABLES
            CMPBLO
                              FIRST
                              TABLES
            CMPLEX
                              FIRST
                              TABLES
            CODETA
                              LEXNAM
                              LEXAID
                              IOFLG
                              META72
            COMSUB
                              FIRST
                              TABLES
                              OPTMAC
            DATAST
                              FIRST
                              TABLES
            DEBUG
                              FIRST
                              TABLES
                              REQREL
            DEFLT
            DEFPT
                              FIRST
                              TABLES
                              OPTMAC
            DOALC
                              FIRST
                              TABLES
                              REQREL
            DOXPN
                              FIRST
                              TABLES
            DRIVER
                              DBUGIT
                              FIRST
```

```
                              FTTENX
                              TABLES
              ERROR0
              ERROUT
              ERROVA
              ERROVB
              ERROVC
              ERROVD
              ERROVG
              ERROVR
              EXPRES
                              LEXNAM
                              ASHELP
                              FIRST
                              TABLES
              F72BNF
              FAZ1
                              LEXNAM
                              F72BNF
                              LOOK72
                              FIRST
              FIRST
                              IOFLG
              FMTLEX
              FORMAT
                              FMTLEX
                              FRMBNF
                              LOOKFM
                              FIRST
              FRMBNF
              GCMNSB
                              FIRST
                              TABLES
                              OPTMAC
              GLOBAL
                              FIRST
                              REQREL
                              TABLES
              GNRCFN
                              FIRST
                              TABLES
              GOPT2
                              FIRST
                              TABLES
              GOPTIM
                              FIRST
                              TABLES
                              OPTMAC
              GRAPH
                              FIRST
                              TABLES
                              OPTMAC
              INOUT
                              DBUGIT
```

```
                              LEXAID
                              IOFLG
          INPT
                              FIRST
                              TABLES
          IOFLG
          IOPT
                              FIRST
                              TABLES
                              OPTMAC
          LEFT72
                              LEXNAM
                              F72BNF
          LEFTFM
                              FMTLEX
                              FRMBNF
          LEXAID
                              FTTENX
          LEXCLA
                              DBUGIT
                              IOFLG
                              LEXNAM
                              LEXAID
          LEXICA
                              DBUGIT
                              IOFLG
                              LEXNAM
                              LEXAID
          LEXNAM
          LEXSUP
                              DBUGIT
                              LEXNAM
                              FIRST
                              TABLES
          LISTNG
                              LEXAID
                              IOFLG
          LISTOU
                              FIRST
                              TABLES
                              REQREL
          LOOK72
          LOOKFM
          MAIN
                              FT1SEG
                              FTTENX
                              IOFLG
          MEMCMP
                              FIRST
                              TABLES
          META72
          METAFM
          MOVA
                              FIRST
```

```
                              TABLES
                              OPTMAC
          NUMIO1
          OPTAB
          OPTMAC
          OUTMOD
                              FIRST
                              TABLES
                              REQREL
          OUTZ
          P2S1
                              FIRST
                              TABLES
                              OPTMAC
          P2S2
                              FIRST
                              TABLES
          P3R
                              FIRST
                              TABLES
          PEEPOP
                              FIRST
                              TABLES
          PH2S
                              FIRST
                              TABLES
          PH3G
                              FIRST
                              TABLES
                              OPTMAC
          PHA2
                              FIRST
                              TABLES
                              OPTMAC
          PHA3
                              FIRST
                              TABLES
          PNROPT
                              FIRST
                              TABLES
                              OPTMAC
          REGAL2
                              FIRST
                              TABLES
          REGUTL
                              FIRST
                              TABLES
          RELBUF
                              FIRST
                              TABLES
                              REQREL
          REQREL
          SCAN0
          SCNR
```

```
SKSTMN
                    FIRST
                    TABLES
SRCA
                    FIRST
                    FTTENX
                    TABLES
STA0
                    LEXNAM
                    FIRST
                    TABLES
                    META72
                    ASHELP
STA1
                    LEXNAM
                    FIRST
                    TABLES
                    META72
                    ASHELP
STA2
                    FTTENX
                    LEXNAM
                    FIRST
                    TABLES
                    META72
                    ASHELP
STA3
                    LEXNAM
                    FIRST
                    TABLES
                    META72
                    ASHELP
STREGA
                    FIRST
                    TABLES
TABLES
TBL
TRACE1
TSTR
                    FIRST
                    TABLES
                    OPTMAC
UNEND
                    FIRST
                    FTTENX
UTIL
                    FIRST
                    TABLES
VER5
                    FIRST
                    TABLES
                    OPTMAC
VLTPPR
                    FIRST
```

TABLES

2.0 Require Files And Which Compiler Modules Use Them

This is a list of the files REQUIREd by BLISS modules in the
FORTRAN compiler and which compiler modules require them.

         Require file   Module
         ------- ----   ------

         ASHELP
                           ACT0
                           ACT1
                           EXPRES
                           STA0
                           STA1
                           STA2
                           STA3
         DBUGIT
                           DRIVER
                           INOUT
                           LEXCLA
                           LEXICA
                           LEXSUP
         F72BNF
                           FAZ1
                           LEFT72
         FIRST
                           ACT0
                           ACT1
                           ALCBLO
                           ARRXPN
                           CANNON
                           CGDO
                           CGEXPR
                           CGSTMN
                           CMPBLO
                           CMPLEX
                           COMSUB
                           DATAST
                           DEBUG
                           DEFPT
                           DOALC
                           DOXPN
                           DRIVER
                           EXPRES
                           FAZ1
                           FORMAT
                           GCMNSB
                           GLOBAL
                           GNRCFN
                           GOPT2
                           GOPTIM
                           GRAPH
                           INPT

```
                        IOPT
                        LEXSUP
                        LISTOU
                        MEMCMP
                        MOVA
                        OUTMOD
                        P2S1
                        P2S2
                        P3R
                        PEEPOP
                        PH2S
                        PH3G
                        PHA2
                        PHA3
                        PNROPT
                        REGAL2
                        REGUTL
                        RELBUF
                        SKSTMN
                        SRCA
                        STA0
                        STA1
                        STA2
                        STA3
                        STREGA
                        TSTR
                        UNEND
                        UTIL
                        VER5
                        VLTPPR
        FMTLEX
                        FORMAT
                        LEFTFM
        FRMBNF
                        FORMAT
                        LEFTFM
        FT1SEG
                        MAIN
        FTTENX
                        DRIVER
                        LISTNG
                        LEXAID
                        MAIN
                        SRCA
                        STA2
                        UNEND
        IOFLG
                        CODETA
                        FIRST (and all modules which require it)
                        INOUT
                        LEXCLA
                        LEXICA
                        LISTNG
                        MAIN
```

```
        LEXAID
                        CODETA
                        INOUT
                        LEXCLA
                        LEXICA
                        LISTNG
        LEXNAM
                        ACT0
                        ACT1
                        CODETA
                        EXPRES
                        FAZ1
                        LEFT72
                        LEXCLA
                        LEXICA
                        LEXSUP
                        STA0
                        STA1
                        STA2
                        STA3
        LOOK72
                        FAZ1
        LOOKFM
                        FORMAT
        META72
                        CODETA
                        STA0
                        STA1
                        STA2
                        STA3
        OPTMAC
                        CANNON
                        COMSUB
                        DEFPT
                        GCMNSB
                        GOPTIM
                        GRAPH
                        IOPT
                        MOVA
                        P2S1
                        PH3G
                        PHA2
                        PNROPT
                        TSTR
                        VER5
        REQREL
                        DEBUG
                        DOALC
                        GLOBAL
                        LISTOU
                        OUTMOD
                        RELBUF
        TABLES
                        ACT0
```

ACT1
ALCBLO
ARRXPN
CANNON
CGDO
CGEXPR
CGSTMN
CMPBLO
CMPLEX
COMSUB
DATAST
DEBUG
DEFPT
DOALC
DOXPN
DRIVER
EXPRES
GCMNSB
GLOBAL
GNRCFN
GOPT2
GOPTIM
GRAPH
INPT
IOPT
LEXSUP
LISTOU
MEMCMP
MOVA
OUTMOD
P2S1
P2S2
P3R
PEEPOP
PH2S
PH3G
PHA2
PHA3
PNROPT
REGAL2
REGUTL
RELBUF
SKSTMN
SRCA
STA0
STA1
STA2
STA3
STREGA
TSTR
UTIL
VER5
VLTPPR

3.0 Search Files For Each MACRO Source

The following is a list of MACRO files in the FORTRAN
compiler, FOROTS, FORLIB and FORDDT along with a list of any
universal files searched, or any relocatable modules
required by them. Note that the .REL files are loaded from
REL: under TOPS-10, and from SYS: under TOPS-20.

3.1 Forots / Forlib / Forddt MACRO source files

All source files search either the TV (Title and Version) or
FSRCH macros. FSRCH is searched by TV. FSRCH is a macro in
MTHPRM.MAC which searches the files MACSYM and MONSYM
(TOPS-20), MACTEN and UUOSYM (TOPS-10).

Macro file	Universal file	Relocatable file
----- ----	--------- ----	----------- ----
F10REL		
F10SHR		
F20REL		
F20SHR		
FDDT		
FORCHR		
	FORPRM	
	FSRCH*	
FORDST		
	FORPRM	
FORHST		
	FORPRM	
FORCNV		
	FORPRM	
FORDBM		
	FORPRM	
FORDDT		
	UUOSYM (TOPS-10 only)	
	MACTEN (TOPS-10 only)	
	MONSYM (TOPS-20 only)	
	MACSYM (TOPS-20 only)	
FORDUM		
	FORPRM	
	FSRCH*	
FOREND		
	FORPRM	
FORERR		
	FORPRM	
FORFMT		
	FORPRM	
FORHAK		
	FORPRM	
	FSRCH*	

```
     FORINI
                    FORPRM
     FORIO
                    FORPRM
     FORMEM
                    FORPRM
     FORMSC
                    FORPRM
                    FSRCH*
     FORMSG
                    FORPRM
     FORNML
                    FORPRM
     FOROP
                    FORPRM
                    FSRCH*
     FOROPN
                    FORPRM
                    FSRCH*
                    QSRMAC (TOPS-20 only)
                    QSRMC2 (TOPS-10 only)
                    GLXMAC (TOPS-20 only)
     FOROTS
                    FORPRM
     FORPL2
                    FORPRM
     FORPRM
                    For FORLIB:
                    F10REL,MTHPRM,FORPRM (TOPS-10 only)
                    F20REL,MTHPRM,FORPRM (TOPS-20 only)

                    For FOROTS:
                    F10SHR,MTHPRM,FORPRM (TOPS-10 only)
                    F20SHR,MTHPRM,FORPRM (TOPS-20 only)
     FORPSE
                    FORPRM
     FORRTF (TOPS-10 only)
                    FORPRM
     FORSRT
                    FORPRM
     FORXIT
                    FORPRM
     FSRCH*
                    JOBDAT
                    MACSYM (TOPS-20 only)
                    MACTEN (TOPS-10 only)
                    MONSYM (TOPS-20 only)
                    UUOSYM (TOPS-10 only)
     M10REL
     M20REL
     M10SHR
     M20SHR
     MTHCDX
                    MTHPRM
```

```
                        FSRCH*
        MTHCGX
                        MTHPRM
        MTHCPX
                        MTHPRM
        MTHDBL
                        MTHPRM
        MTHEPR
                        MTHPRM
        MTHERR
                        MTHPRM
        MTHGDB
                        MTHPRM
        MTHHST
                        MTHPRM
                        FSRCH*
        MTHMSC
                        MTHPRM
                        FSRCH*
        MTHMSG
                        MTHPRM
        MTHPRM
                        For FORLIB:
                        M10REL,MTHPRM,FORPRM (TOPS-10 only)
                        M20REL,MTHPRM,FORPRM (TOPS-20 only)

                        For FOROTS:
                        M10SHR,MTHPRM,FORPRM (TOPS-10 only)
                        M20SHR,MTHPRM,FORPRM (TOPS-20 only)

                        JOBDAT
                        MACSYM (TOPS-20 only)
                        MACTEN (TOPS-10 only)
                        MONSYM (TOPS-20 only)
                        UUOSYM (TOPS-10 only)
                        FSRCH*
        MTHSNG
                        MTHPRM
        MTHTRP
                        MTHPRM
```

* FSRCH is a macro in MTHPRM.MAC which searches the files
shown above.

3.2 Compiler MACRO sources

```
        Macro file        Universal file          Relocatable file
        ----- ----        --------- ----          ----------- ----

        CMND20 (TOPS-20 only)
                        GFOPDF
                        JOBDAT
```

```
                         MACSYM
                         MONSYM
           CNSTCM
                         GFOPDF
           COMMAN (TOPS-10 only)
                         FTTENX                      SCAN
                         UUOSYM                      HELPER
                         MACTEN                      WILD
                         SCNMAC
                         GFOPDF
           DGCMN
           DNPT
           DOPT
           ERR3
                         FTTENX
                         MACSYM (TOPS-20 only)
                         MONSYM (TOPS-20 only)
           ERRTB3
           EXOSUP
           FLTGEN
           FTTENX
           GFOPDF
           JOBD
           OPGNTA
                         GFOPDF
           OWNDM
           QTAB1
           REVHST
```

4.0 Compiler Segments And Which Modules Are In Them

The following is a complete list of the FORTRAN compiler
modules (.REL files) and which segment they are in. This
information is not applicable to the TOPS-20 compiler.

The "segment" column specifies the TOPS-10 overlay segment
for each file.   "A" is as an abbreviation for FORTRA, "B"
for FORTB, "C" for FORTC, etc..

The "single" column contains a comment if the module is NOT
in the single segment version of Fortran built with ALL.CMD
or ALL20.CMD.

The relinking of any particular segment can be easily
accomplished by running LINK and using the command files
A.CMD, B.CMD, etc., for FORTRA, FORTB, etc..   Notice the
particular versions of SCAN and WILD which are used, because
it is imperative that every segment uses the same versions
of these standard programs.

Module	Segment	Single
ACT0	B	
ACT1	B	
ALCBLO	E,F	
ARRXPN	B,E,F	
CANNON	C,D	
CGDO	G	
CGEXPR	G	
CGSTMN	G	
CMPBLO	E,F	
CMPLEX	E,F	
CNSTCM	B,C,D,E,F,G	
CODETA	B	
COMMAN	A,B,C,D,E,F,G	
COMSUB	C,D	
DATAST	E,F	
DEBUG	G	
DEFPT	D	
DGCMN	C	dummy declarations
DNPT	D	dummy declarations
DOALC	E,F	
DOPT	C	dummy declarations
DOXPN	B	
DRIVER	B	
ERR3	A,B,C,D,E,F,G	
ERROUT	B	
ERROVA	A	included in ERROUT

```
ERROVB          B                    included in ERROUT
ERROVC          C                    included in ERROUT
ERROVD          D                    included in ERROUT
ERROVG          G                    included in ERROUT
ERROVR          E,F                  included in ERROUT
EXOSUP          A,B,C,D,E,F,G
EXPRES          B

FAZ1            B
FLTGEN          B
FORMAT          B

GCMNSB          D
GLOBAL          A,B,C,D,E,F,G
GNRCFN          B
GOPT2           D,E
GOPTIM          C,D,E,F,G
GRAPH           D

HELPER          A

INOUT           A,B,C,D,E,F,G
INPT            C
IOPT            D

JOBD            A,B,C,D,E,F,G

LEXCLA          B
LEXICA          B
LEXSUP          B
LISTNG          B
LISTOU          G

MAIN            A,B,C,D,E,F,G
MEMCMP          C,D
MOVA            D

OPGNTA          G
OPTAB           G
OUTMOD          E,F
OWNDM           A                    dummy declarations

P2S1            C,D
P2S2            C,D
P3R             F
PEEPOP          G
PH2S            C
PH3G            E
PHA2            D
PHA3            G
PNROPT          D

REGAL2          E,F
REGUTL          E,F
```

```
RELBUF              E,F,G
REVHST              A,B,C,D,E,F,G

SCAN                A
SKSTMN              C,D
SRCA                B,C,D,E,F,G
STA0                B
STA1                B
STA2                B
STA3                B
STREGA              E,F

TSTR                D

UNEND               A,B
UTIL                C,D,E,F,G

VER5                D
VLTPPR              B,E,F

WILD                A
```

[End of MODULE.MEM]