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===== Convert
PROGRAM CONVERT Convert
===== Convert
VERSION 75-1 (APRIL 1975) Convert
VERSION 78-1 (JANUARY 1978) Convert
VERSION 80-1 (AUGUST 1980) IBM VERSION Convert
VERSION 80-2 (DECEMBER 1980) Convert
VERSION 82-1 (JANUARY 1982) Convert
VERSION 83-1 (JANUARY 1983) Convert
VERSION 86-1 (JANUARY 1986) *NEW PROGRAM Convert
*FORTRAN-77/H VERSION Convert
*MULTIPLE INPUT OPTIONS Convert
VERSION 88-1 (AUGUST 1988) *OPTION...INTERNALLY DEFINE ALL I/O Convert
FILE NAMES (SEE, SUBROUTINE FILEIO Convert
FOR DETAILS). Convert
*IMPROVED BASED ON USER COMMENTS. Convert
*ADDED NAMES OPTION TO TURN ON/OFF Convert
STANDARD FILE NAMES. Convert
*ADDED REWIND OPTION TO TURN ON/OFF Convert
REWIND AT START OF PROGRAMS. Convert
*DELETED HARWELL AND JAERI OPTIONS Convert
(PREVIOUSLY ONLY REQUIRED FOR GRAPHIC Convert
INTERFACE. NO LONGER REQUIRED). Convert
VERSION 89-1 (JANUARY 1989) *PSYCHOANALYZED BY PROGRAM FREUD TO Convert
INSURE PROGRAM WILL NOT DO ANYTHING Convert
CRAZY. Convert
*IMPROVED BASED ON USER COMMENTS. Convert
*ADDED LIVERMORE CIVIC COMPILER Convert
CONVENTIONS. Convert
*UPDATED TO USE NEW PROGRAM CONVERT Convert
KEYWORDS. Convert
*ADDED ENDFILE OPTION TO OPTIONALLY Convert
ALLOW END OF FILE TO BE WRITTEN Convert
VERSION 91-1 (JUNE 1991) *ADDED FORTRAN SAVE OPTION Convert
VERSION 92-1 (JANUARY 1992) *ADDED ACTION OPTION - TO CONTROL Convert
INTERACTIVE INPUT TO CODES Convert
*ADDED BLANK DELIMITED KEYWORD INPUT Convert
(REPLACES EARLIER FIXED FIELD INPUT) Convert
*WARNING...THE INPUT PARAMETER FORMAT Convert
HAS BEEN GENERALIZED - FOR DETAILS Convert
SEE BELOW. Convert
VERSION 94-1 (JANUARY 1994) *VARIABLE PROGRAM FILENAMES Convert
TO ALLOW ACCESS TO FILE STRUCTURES Convert
(WARNING - INPUT PARAMETER FORMAT Convert
HAS BEEN CHANGED) Convert
*CLOSE ALL FILES BEFORE TERMINATING Convert
(SEE, SUBROUTINE ENDIT) Convert
*ADDED KEYWORD CLOSE. Convert
VERSION 96-1 (JANUARY 1996) *COMPLETE RE-WRITE Convert
*IMPROVED COMPUTER INDEPENDENCE Convert
*ALL DOUBLE PRECISION Convert
*ON SCREEN OUTPUT Convert
VERSION 99-1 (MARCH 1999) *GENERAL IMPROVEMENTS BASED ON Convert
USER FEEDBACK Convert
VERS. 2000-1 (FEBRUARY 2000) *GENERAL IMPROVEMENTS BASED ON Convert
USER FEEDBACK Convert
VERS. 2002-1 (MAY 2002) *OPTIONAL INPUT PARAMETERS Convert
VERS. 2004-1 (MARCH 2004) *GENERAL UPDATE Convert
VERS. 2007-1 (JAN. 2007) *GENERAL UPDATE Convert
VERS. 2007-2 (DEC. 2007) *72 CHARACTER FILE NAMES. Convert
VERS. 2010-1 (Apr. 2010) *General update based on user feedback Convert
VERS. 2012-1 (Aug. 2012) *Added CODENAME Convert
*32 and 64 bit Compatible Convert
*Added ERROR stop Convert
VERS. 2015-1 (Jan. 2015) *Replaced ALL 3 way IF Statements Convert
OWNED, MAINTAINED AND DISTRIBUTED BY Convert
----- Convert
THE NUCLEAR DATA SECTION Convert
INTERNATIONAL ATOMIC ENERGY AGENCY Convert

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C***** SAVE ***** SAVE VARIABLES BETWEEN SUBROUTINE CALLS          Convert
C***** ACTION ***** ACTIVATE INTERACTIVE INPUT TO CODES           Convert
C***** CLOSE ***** ACTIVATE CLOSE ALL FILES BEFORE TERMINATING     Convert
Convert
IF THE USER DOES NOT SELECT,                                           Convert
(1) DOUBLE OR SINGLE          - THE PROGRAM WILL ACTIVATE DOUBLE       Convert
(2) CHARACTER OR INTEGER      - THE PROGRAM WILL ACTIVATE CHARACTER     Convert
(3) STOP OR EXIT              - THE PROGRAM WILL ACTIVATE STOP         Convert
Convert
IF THE USER SELECTS,                                                  Convert
(1) DOUBLE AND SINGLE         - THE PROGRAM WILL ACTIVATE DOUBLE       Convert
(2) CHARACTER AND INTEGER     - THE PROGRAM WILL ACTIVATE CHARACTER     Convert
(3) STOP AND EXIT             - THE PROGRAM WILL ACTIVATE STOP         Convert
Convert
IF THE USER DOES NOT SELECT PROGRAM, NAMES, REWIND, ENDFILE,          Convert
CIVIC, NOID, SAVE OR ACTION THESE OPTIONS WILL BE TURNED OFF.        Convert
Convert
WHERE CODING IS COMPUTER OR COMPILER DEPENDENT CODING WILL BE         Convert
PRESENT FOR ALL POSSIBLE OPTIONS. THIS PROGRAM WILL ALLOW THE         Convert
THE USER TO CONVERT PROGRAMS FOR USE WITH ANY COMBINATION OF         Convert
OPTIONS. FOR EXAMPLES OF HOW THIS CONVENTION IS USED SEE THE         Convert
LISTING OF THIS PROGRAM AND THE COMMENTS BELOW ON COMPUTER           Convert
DEPENDENT CODING.                                                     Convert
Convert
INPUT LINES                                                            Convert
-----                                                                Convert
LINE   COLS.  DESCRIPTION                                             Convert
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1     1-72    BLANK DELIMITED KEYWORDS                               Convert
2     1-60    ENDF/B INPUT DATA FILENAME                             Convert
              (STANDARD OPTION = ENDFB.IN)                           Convert
3     1-60    ENDF/B OUTPUT DATA FILENAME                           Convert
              (STANDARD OPTION = ENDFB.OUT)                           Convert
Convert
*THE FIRST INPUT LINE IS 72 CHARACTERS.                                Convert
*KEYWORDS MAY BE LOCATED ANYWHERE WITHIN THESE 72 CHARACTERS         Convert
*THERE MAY BE ANY NUMBER OF KEYWORDS INPUT                            Convert
*EACH KEYWORD MUST BE BLANK DELIMITED, E.G., DOUBLE CHARACTER        Convert
IS LEGAL INPUT - DOUBLECHARACTER IS NOT LEGAL INPUT.                 Convert
*THERE MUST BE ONE OR MORE BLANKS BETWEEN KEYWORDS                   Convert
Convert
*NOTE, THIS NEW INPUT PARAMETER FORMAT (VERSION 92-1) IS COMPLETELY   Convert
COMPATIBLE WITH THE OLDER FIXED FIELD FORMAT. SO THAT IF YOU HAVE    Convert
INPUT THAT YOU HAVE USED IN THE PAST YOU CAN CONTINUE TO USE IT.     Convert
Convert
LEGAL KEYWORDS INCLUDE,                                               Convert
Convert
DOUBLE          ACTIVATE DOUBLE PRECISION (DEFAULT)                   Convert
SINGLE           ACTIVATE SINGLE PRECISION                             Convert
CHARACTER       TREAT CHARACTER ARRAYS AS CHARACTERS (DEFAULT)        Convert
INTEGER         TREAT CHARACTER ARRAYS AS INTEGERS                    Convert
PROGRAM         ACTIVATE PROGRAM LINE AND CONTINUATIONS               Convert
NAMES           ACTIVATE STANDARD FILENAMES                           Convert
REWIND          ACTIVATE REWIND FILES AT START OF PROGRAM             Convert
ENDFILE         ACTIVATE ENDFILE AT END OF PROGRAM                    Convert
CIVIC           ACTIVATE LIVERMORE CIVIC COMPILER CONVENTIONS         Convert
NOID            REMOVE LINE ID IN COLUMNS 73-80 (73-80=BLANK)        Convert
SAVE            SAVE VARIABLES BETWEEN SUBROUTINE CALLS               Convert
ACTION          ACTIVATE INTERACTIVE INPUT FOR CODES                  Convert
CLOSE           ACTIVATE CLOSE ALL FILES BEFORE TERMINATING           Convert
Convert
EXAMPLE INPUT NO. 1                                                  Convert
-----                                                                Convert
TO USE A PROGRAM IN SINGLE PRECISION, USE THE STANDARD FILE NAMES,   Convert
REWIND ALL UNITS AT THE START OF THE PROGRAM AND TREAT CHARACTER     Convert
ARRAYS AS CHARACTER (FORTRAN-77 CONVENTION).                          Convert
Convert
READ  \PREPRO93\RECENT\RECENT.OLD AND                                 Convert
WRITE \PREPRO93\RECENT\RECENT.NEW                                     Convert
Convert
THE FOLLOWING 3 INPUT LINES ARE REQUIRED,                               Convert

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SINGLE NAMES REWIND CHARACTER	Convert
\PREPRO93\RECENT\RECENT.OLD	Convert
\PREPRO93\RECENT\RECENT.NEW	Convert
NOTE, SINCE CHARACTER IS THE STANDARD OPTION THE KEYWORD CHARACTER	Convert
NEED NOT APPEAR ON THE ABOVE INPUT LINE.	Convert
EXAMPLE INPUT NO. 2	Convert
-----	Convert
TO USE A PROGRAM IN DOUBLE PRECISION AND TREAT ALL CHARACTER	Convert
ARRAYS AS INTEGER (FORTRAN-H CONVENTION).	Convert
USE THE STANDARD FILENAMES TO READ = CONVERT.IN AND WRITE =	Convert
CONVERT.OUT (THIS CAN BE DONE BY LEAVING THE SECOND AND THIRD	Convert
INPUT LINES BLANK).	Convert
THE FOLLOWING 3 INPUT LINES ARE REQUIRED,	Convert
DOUBLE INTEGER	Convert
(NOTE, THIS IS A BLANK LINE)	Convert
(NOTE, THIS IS A BLANK LINE)	Convert
NOTE, SINCE DOUBLE IS THE STANDARD OPTION THE KEYWORD DOUBLE	Convert
NEED NOT APPEAR ON THE ABOVE INPUT LINE.	Convert
EXAMPLE INPUT NO. 3	Convert
-----	Convert
TO ACTIVATE THE PROGRAM LINE, USE DOUBLE PRECISION AND TREAT ALL	Convert
CHARACTER ARRAYS AS CHARACTER.	Convert
READ \PREPRO93\RECENT\RECENT.OLD AND	Convert
WRITE THE STANDARD FILENAME = CONVERT.OUT (LEAVE THE THIRD INPUT	Convert
LINE BLANK).	Convert
THE FOLLOWING 3 INPUT LINES ARE REQUIRED,	Convert
PROGRAM	Convert
\PREPRO93\RECENT\RECENT.OLD	Convert
(NOTE, THIS IS A BLANK LINE)	Convert
NOTE, SINCE DOUBLE, CHARACTER AND EXIT ARE THE STANDARD OPTIONS	Convert
THEY NEED NOT APPEAR ON THE ABOVE INPUT LINE AND IN THIS EXAMPLE	Convert
HAVE BEEN OMITTED.	Convert
WARNING	Convert
-----	Convert
(1) THE PROGRAM WILL ALWAYS ACTIVATE DOUBLE OR SINGLE, CHARACTER	Convert
OR INTEGER (AS DESCRIBED ABOVE).	Convert
(2) CODING IN THE PROGRAM FOR ANY KEYWORDS THAT ARE NOT ACTIVATED	Convert
WILL BE CONVERTED TO COMMENT LINES AND AS SUCH WILL EFFECTIVELY	Convert
DISAPPEAR FROM THE PROGRAM. THEREFORE IF THE KEYWORDS PROGRAM,	Convert
NAMES, REWIND, ENDFILE, CIVIC OR NOID ARE NOT INPUT BY THE USER	Convert
THESE OPTIONS WILL BE TURNED OFF AND ANY CODING USING THESE	Convert
KEYWORDS WILL EFFECTIVELY DISAPPEAR FROM THE PROGRAM.	Convert
(3) THE SERIES OF CODES THAT ARE DESIGNED TO BE AUTOMATICALLY	Convert
TRANSLATED BY THIS PROGRAM REQUIRE THAT ALL CALCULATIONS BE	Convert
PERFORMED IN DOUBLE PRECISION ON SHORT WORD LENGTH COMPUTERS	Convert
(E.G., IBM COMPUTERS). THIS PROGRAM WILL ALLOW YOU TO SPECIFY	Convert
EITHER DOUBLE OR SINGLE PRECISION. HOWEVER, IF YOU SPECIFY	Convert
SINGLE PRECISION THIS PROGRAM WILL PRINT A WARNING MESSAGE THAT	Convert
THE CONVERTED PROGRAM SHOULD ONLY BE USED ON LONG WORD LENGTH	Convert
COMPUTERS (E.G., CDC COMPUTERS).	Convert
PROGRAM OPERATION	Convert
-----	Convert
THE PROGRAM WILL SEARCH FOR COMMENT LINES THAT START WITH C**	Convert
IN COLUMNS 1-3 FOLLOWED BY ANY ONE OF THE ALLOWED KEYWORDS	Convert

IF THE KEYWORD IS THE SAME AS ONE OF THE KEYWORDS INPUT BY THE USER ALL LINES UP TO THE NEXT LINE WITH C\*\* IN COLUMNS 1-3 FOLLOWED BY THE SAME KEYWORD WILL BE SET ACTIVE BY SETTING COLUMN 1 TO BLANK. IF THE KEYWORDS DIFFERS FROM THAT INPUT BY THE USER ALL LINES UP TO THE NEXT LINE WITH C\*\* IN COLUMNS 1-3 FOLLOWED BY THE SAME KEYWORD WILL BE SET INACTIVE BY SETTING COLUMN 1 TO C.

Convert  
Convert  
Convert  
Convert  
Convert  
Convert

KEYWORDS MAY NOT BE NESTED (I.E., THIS PROGRAM WILL ONLY OPERATE PROPERLY IF KEYWORDS APPEAR IN PAIRS. ONCE A LINE IS FOUND THAT CONTAINS A KEYWORD, THE NEXT LINE THAT CONTAINS A KEYWORD MUST CONTAIN THE SAME KEYWORD).

Convert  
Convert  
Convert  
Convert  
Convert

PROGRAM LINE  
-----

Convert  
Convert

THE FORTRAN FILE MAY START WITH A PROGRAM LINE AND CONTINUATIONS. FOR USE ON CDC-7600 OR CRAY-1 COMPUTERS THIS PROGRAM CAN ACTIVATE THE PROGRAM LINE AND CONTINUATION LINES. FOR USE ON OTHER TYPES OF COMPUTERS THIS PROGRAM WILL AUTOMATICALLY DE-ACTIVATE THE PROGRAM LINE AND CONTINUATION LINES. THIS CONVENTIONS HAS BEEN INTRODUCED BECAUSE SOME CDC-7600 COMPILERS CONSIDER IT AN ERROR IF THE FIRST LINE IS NOT A PROGRAM LINE. PRECEEDING COMMENT LINES ARE NOT ALLOWED. THEREFORE THE NORMAL CONVENTION, DESCRIBED ABOVE, OF USING PRECEDING AND FOLLOWING COMMENT LINES, CANNOT BE USED AT THE BEGINNING OF THE PROGRAM.

Convert  
Convert  
Convert  
Convert  
Convert  
Convert  
Convert  
Convert  
Convert  
Convert

COMMENT LINES  
-----

Convert  
Convert

COMMENT LINES MAY APPEAR ON LINES BETWEEN PAIRS OF KEYWORD LINES ONLY IF THE COMMENT LINES CONTAINS C-- IN COLUMNS 1-3. ANY LINE THAT CONTAINS ANYTHING ELSE IN COLUMNS 1-3 MAY BE ACTIVATED BY THIS PROGRAM BY SETTING COLUMN 1 BLANK AND CAN LEAD TO ERRORS DURING COMPILATION AND/OR EXECUTION.

Convert  
Convert  
Convert  
Convert  
Convert  
Convert

INPUT FILES  
-----

Convert  
Convert

UNIT DESCRIPTION

Convert

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Convert

2 INPUT LINE (BCD - 80 CHARACTERS/RECORD)  
10 ORIGINAL PROGRAM (BCD - 80 CHARACTERS/RECORD)

Convert  
Convert

OUTPUT FILES  
-----

Convert  
Convert

UNIT DESCRIPTION

Convert

-----

Convert

3 OUTPUT REPORT (BCD - 120 CHARACTERS/RECORD)  
11 RE-FORMATTED PROGRAM (BCD - 80 CHARACTERS/RECORD)

Convert  
Convert

OPTIONAL STANDARD FILE NAMES (SEE SUBROUTINE FILIO1 AND FILIO2)

Convert

UNIT FILE NAME

Convert

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Convert

2 CONVERT.INP  
3 CONVERT.LST  
10 CONVERT.IN  
11 CONVERT.OUT

Convert  
Convert  
Convert  
Convert

=====  
Convert