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PROGRAM LIBRARY

DECUS NO.	8-511
TITLE	FPAK-4 INTERRUPTING FLOATING POINT PACKAGE
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DATE	September 28, 1970
SOURCE LANGUAGE	ASSM (AN LRL ASSEMBLY LANGUAGE SIMILAR TO PAL)

DEGUS

1900-1901



FPAK-4 INTERRUPTING FLOATING POINT PACKAGE

DECUS Program Library Write-up

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This is the DEC extended floating point package plus output controller with a number of useful modifications and additions. Memory required is one page greater than the standard DEC version, plus interrupt handler.

1. A general purpose buffered teletype output routine has been added. This routine is used by the floating point package and the user's routines. Entries are provided for single character and message output.
2. Interrupt handler. A short interrupt routine (18 words) services keyboard and printer interrupts. This routine may easily be expanded to service other interrupts.
3. The floating point interpreter has been modified to simulate autoindexing. All indirect references to addresses 10-17 cause the address to be incremented by three.
4. The normalizing routine has been modified to round the result, rather than truncate.
5. The floating output controller has been modified to automatically use E format whenever number size exceeds the field width.
6. The extended functions have been reorganized so that EXP, LOG, and ATN may be deleted without also deleting SIN and COS.
7. Additional entry points have been added:

FIX	Convert floating accumulator (FAC) to 12 bit integer.
FLA	Convert 12 bit integer in AC to floating point in FAC.
LIN	Type carriage return-line feed.

8. Additional interpreter commands have been added:

0010	ABS	Set FAC positive.
0011	INT	Truncate fractional part of FAC.
0012	CR	Type carriage return-line feed.
0013	RED	Floating input from keyboard.
0014	PRT	Floating output from FAC.
0015	NEG	Change sign of FAC.
0016	ZAC	Set FAC to zero.

Users who wish to obtain a source card deck may send a blank magnetic tape to the author which he will return to them with the card images of FPAK-4 and the assembler as well, if needed.

