

RECOMP II USERS' PROGRAM NO. 1088

PROGRAM TITLE:           BLOCK PRINTOUT, FLOATING POINT ARITHMETIC

PROGRAM CLASSIFICATION:   General

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PURPOSE:                To print out a block of floating point numbers in floating point mode according to a specified format.

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PROGRAM NO. W.H.C.I. 19  
ORIG. DATE November, 1960  
PROGRAMMER Jacqueline Webster

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1. PURPOSE

1.1 To print out a block of floating point numbers in floating point mode according to a specified format.

2,3 RESTRICTIONS AND METHOD

1. This subroutine uses Reomp subroutine AN-014 for printing. Therefore all restrictions of AN-014 apply.
2. The typewriter margins and tabs must be set up according to the number of characters required to be printed and the number of words per line.

4. USAGE

4.1 AN-014 is not included as part of the subroutine tape. It must be provided in location X+0050.0, where X is the first location occupied by FLOCK PRINTOUT. Or AN-014 may be located anywhere the user desires by inserting in location X+0017.0:

+30 00000 +57 XXXX.0

where XXXX.0 is the desired location of AN-014.

4.2 CALLING SEQUENCE

SLL

TRA PROUT

PZE OONW.0

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$\alpha + 1$  PZE OOSF.0  
           PZE CR SP.0  
 $\alpha + 2$  PZE BLOCK.0  
           PZE TOTAL.0

where, inoctal, NW, is the number of floating point numbers to be output per line.

SF is the number of significant figures to be output  $2 \leq SF \leq 11$  (in decimal)  
 $2 \leq SF \leq 11$

CR is the number of carriage returns between lines of output  
 $0 < CR \leq 8$   
 $0 < CR \leq 8$

SP is the number of spaces between floating point numbers on a line,  $0 < SP \leq 8$ . If SP=00, then tabs will be executed between each number output on a line.

BLOCK is the address of the first floating point number in the block to be printed out.

TOTAL is the total number of floating point numbers to be printed out.

4.3 There are no error provisions.

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- 4.4 The routine occupies 40 full words (0000-0047) and is relocatable.
- 4.5 WHOI's modified AN-014 may be substituted for AN-014.
- 4.6 Suppose that fixed point format rather than the floating point format of AN-014 is desired. Then, since the calling sequence of AN-016 requires the same number of spaces as that of AN-014, AN-016 may be substituted for AN-014,  $\alpha+1$  in the calling sequence to ELOCK PRINTOUT must be changed to

$\alpha+1$	PZE	LL RR
	PZE	CR SP.0

where LL and RR are the number of figures to be printed to the left and right of the decimal.

5. CODING INFORMATION

- 5.1 Constants: Alphanumeric coding for 8 spaces in 0034.0.  
Alphanumeric coding for 8 carriage returns in 0035.0.  
7 at binary 38 in 0036.0.  
7760 at binary 38 in 0037.0  
1 at binary 38 in 0040.0  
2 at binary 18 in 0041.0  
+0 in 0046.0

5.2 ERASABLE STORAGE: 0043, 0044, 0045.

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#### 5.3 TIMING

The time taken for printing a block is approximately  $(2800 + 150 \text{ NN})$  NW. This time will be increased slightly if the space bar provision is used instead of the tab provision and if more than one carriage return is used between lines.