

UNIVERSITY OF ILLINOIS
DIGITAL COMPUTER

AUXILIARY D-3
LIBRARY ROUTINE 35

TITLE Sequence Checking Routine (SADOI Only)

TYPE Special

NUMBER OF WORDS 30

TEMPORARY STORAGE None- Outside routine

DURATION 3 Printing times per order sequenced

PARAMETER S3 Storage location 3 should contain OOF OOnF during the input of this subroutine.

DESCRIPTION The original program is read into the memory, but not started. Then this subroutine is read into some unoccupied part of the memory. While it is being read into the memory, the order pair in n is removed and replaced by a blocking order pair. When the original program is started it will be allowed to proceed - unfettered by the checking routine - until control reaches the blocking order pair. Then control is taken by the checking subroutine, the old order pair is replaced in n and thereafter as each order of the program is obeyed, its 2 sexadecimal characters are printed followed by a space. Whenever a control transfer is executed a new line of printing is begun. The program up to n must not use n as a constant in addition to an order pair. If the original program is made up with a stop transfer of control then it is easy to use a checking routine without altering the original program.

7/6/61

DATE <u>December 18, 1953</u>
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APPROVED BY <u>J.P. Nash</u>

LOCATION	ORDER	NOTES	PAGE 1	D3
	OOK(D3)			
0	00 F			
	00 4L		A	
1	L5 S3			
	40 1L	Interlude	Q	
2	L5 5L			
	40 S3			
3	LL 6L		+ OOF	
	40 3L		- 40L	Basis of working order
4	L5 L			
	22 1014F			
5	40 L			
	26 16L			
6	00 F			
	40 L			
7	00 F			
	26 1L			
	26 1N			
4	LL 4095F			
	00 F		Ones	
5	K0 F		Constant	
	LL 4L	From 19		
6	L4 7L		Increase address by 1	
	46 7L	From 29		
7	L5 (102383) By 6'		Select store order and put in 2L	
	40 2L	From 20'		
8	50 2L			
	J0 4L		Extract left hand order = f p	
9	S5 21L			
	L6 3L		Form order pair	
10	40 16L			
	L4 26L		Determine whether a 2 or 3 order	
11	32 13L			
	L4 5L			
12	32 13L			
	L5 9L		Replace address in 16L by 21L, if it is	

LOCATION	ORDER	NOTES	
13	46 16L 92 961F	←	a 2 or 3 order. Space
14	15 2L 82 8F		Print function digits
15	15 L 50 1L		Restore A, Q
16	(15 1L) (40 S3)		Entry
17	S5 F 40 1L	From 25'	Copy Q
18	11 3L 40 3L		Change phase
19	32 5L 15 2L		Move right hand order to left hand side
20	00 20F 22 7L	By 22'	Left hand transfers come here from 16L Right hand transfers come here from 16L.
21	22 26L 40 L		Insert p in 7L and 24L
22	15 2L 46 24L		Carriage return and line feed
23	46 7L 92 129F	By 22'	Copy new order pair.
24	15 ()F 40 2L	From 21	Adjust phase
25	13 3L 22 18L		Constant
26	NO F 40 L		Copy A
27	17 3L 40 3L	From 21	Adjust phase
28	92 129F 15 2L		Carriage return and line feed
29	22 6L 00 F		