



GENERAL PRECISION, INC. / COMMERCIAL COMPUTER DIVISION

REVISION NOTICE

This publication replaces previous descriptions of "Data Input 8," program J2-11.7. This program reference has been changed to its present designation.

FUNCTION

"Data Input 8" enables the user to:

1. Input a positive integer.
2. Shift the number left one binary bit.
3. Convert the decimal integer to a binary integer at $q = 30$.

INPUT

Input consists of the following data:

1. Calling Sequence 1: A positive decimal integer less than 40000000 read from tape or typed manually.
2. Calling Sequence 2: One binary coded decimal number in the accumulator with the least significant bit at $q = 31$.
3. Calling Sequence 3: One binary coded decimal number in the accumulator with the least significant bit at $q = 30$.

OUTPUT

One binary integer is left in the accumulator at $q = 30$.

DATA INPUT 8

CALLING SEQUENCE 1

To perform functions 1, 2, and 3.

<u>Location</u>	<u>Instruction</u>	<u>Address</u>
XXXX	R	$L_0 + 24$
XXXX + 1	U	$L_0 + 25$
XXXX + 2	etc.	

XXXX + 1 may be any order which leaves data required under "INPUT" in the accumulator.

CALLING SEQUENCE 2

To perform functions 2 and 3.

<u>Location</u>	<u>Instruction</u>	<u>Address</u>
XXXX - 1	B	L(decimal no.)
XXXX	R	$L_0 + 24$
XXXX + 1	U	$L_0 + 13$
XXXX + 2	etc.	

XXXX - 1 may be any order which leaves data required under "INPUT" in the accumulator.

CALLING SEQUENCE 3

To perform function 3.

<u>Location</u>	<u>Instruction</u>	<u>Address</u>
XXXX - 1	B	L(decimal no.)
XXXX	R	$L_0 + 24$
XXXX + 1	U	L_0
XXXX + 2	etc.	

XXXX - 1 may be any order which leaves data required under "INPUT" in the accumulator.

DATA INPUT 8

ACCURACY

The conversion is exact when the integer is $\leq + 39999999$.

TIME

For "CALLING SEQUENCE 1", 145 ms. are required.
For "CALLING SEQUENCE 2", 124 ms. are required.
For "CALLING SEQUENCE 3", 92 ms. are required.

STORAGE

33 locations are required in memory for storage of instructions, constants, and for temporary storage.

NOTE

One drum revolution may be saved when using "CALLING SEQUENCE 1" if the following change is made:

<u>Location</u>	<u>Instruction</u>	<u>Change to</u>
$L_0 + 25$	C0029	XC6361

This change requires that location 6361 be reserved for temporary storage.



LGP-30 CODING SHEET

PREPARED FOR: _____

JOB NO. 0130 PROGRAM NO. _____ PROGRAM PREPARED BY HUTCHINS PROGRAM CHECKED BY: _____ DATE _____

PROBLEM: INTEGER BINARIZATION SUBROUTINE PROGRAM # 11.7 TRACK _____

PROGRAM INPUT CODES	STOP	LOCATION	INSTRUCTION		STOP	CONTENTS OF ADDRESS	NOTES
			OPERATION	ADDRESS			
	/						
	/	X					
	/	10 10	h	0 10 12 12	/	N ₁	
	/	10 11	lu	0 10 10 15	/		
010101010101013	/	10 12	[/	N ₃	
	/	10 13	w w w q	0 10 10 10	/	X	Extractor
	/	10 14	9 3 8 8	0 10 10 10	/		-55536 at 16
	/	10 15	e	0 0 12 10	/	(Q1Q1Q1Q0)	6 th
	/	10 16	lm	0 10 12 18	/		-6 at 4
	/	10 17	la	0 10 12 12	/	X N ₁	
	/	10 18	th	0 10 13 10	/	N ₂	
	/	10 19	e	0 10 13 11	/	(WQ01WQ00)	
	/	11 10	lm	0 10 13 12	/		-156 at 8
	/	11 11	lu	0 10 11 15	/	X	
	/	11 12	ix i	0 10 10 10	/		Input A Number
	/	11 13	n	0 10 12 11	/		1 at 30
	/	11 14	lu	0 10 10 10	/		
	/	11 15	la	0 10 13 10	/	X N ₂	
	/	11 16	th	0 10 10 12	/	N ₃	
	/	11 17	e	0 10 10 13	/	(WWWQ0000)	
	/	11 18	m	0 10 10 14	/		-55536 at 16
	/	11 19	lu	0 10 12 13	/	X	
10101010101013	/	12 10	q l q l	q l q l 10	/		Extractor
	/	12 11			/	1 at 30	
	/	12 12	[/	N ₁	
	/	12 13	la	0 10 10 12	/	X N ₃	
	/	12 14	lu	[/		Exit
	/	12 15	lc	0 10 12 19	/		
	/	12 16	ix p	0 10 10 15	/		Start Reader
	/	12 17	lu	0 10 11 12	/	X	
10101010101015	/	12 18	k	0 10 10 10 10 10	/		-6 at 4
	/	12 19	[/	Temp	
	/	3 0	[/	N ₂	
	/	3 1	w q 0 1	w q 0 0	/	X	Extractor

LGP-30 CODING SHEET

PREPARED FOR:				PAGE 2 OF 2
JOB NO. 0130	PROGRAM NO. 11.7	PROGRAM PREPARED BY: HUTCHINS	PROGRAM CHECKED BY:	DATE
PROBLEM: INTEGER BINARIZATION SUBROUTINE - PROGRAM 11.7				TRACK

PROGRAM INPUT CODES	STOP	LOCATION	INSTRUCTION		STOP	CONTENTS OF ADDRESS	NOTES
			OPERATION	ADDRESS			
	/						
	/	3 12					
	/	3 13	81	2 0 0 0 0 0 0 0	/		-156 at 8
	/	3 14			/		
	/	3 15			/		
	/	3 16			/		
	/	3 17			/		
	/	3 18			/		
	/	3 19			/		
	/	4 10			/		
	/	4 11			/		
	/	4 12			/		
	/	4 13			/		
	/	4 14			/		
	/	4 15			/		
	/	4 16			/		
	/	4 17			/		
	/	4 18			/		
	/	4 19			/		
	/	5 10			/		
	/	5 11			/		
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	/	5 19			/		
	/	6 10			/		
	/	6 11			/		
	/	6 12			/		
	/	6 13			/		



CARRIAGE RETURN



CONDITIONAL STOP CODE