GENERAL PRECISION, INC. / COMMERCIAL COMPUTER DIVISION

REVISION NOTICE

This publication replaces previous descriptions of "Alphanumeric Output 2," program J4-19.1. The program reference has been changed to its present designation.

FUNCTION

"Alphanumeric Output 2" enables the user to output alphabetic and numeric information on the typewriter or the 20 character per second punch. BREAK POINT 32 button must be depressed when using the 20 character per second punch.

INPUT

A set of code words where each code word consists of 4 alphanumeric output codes must be placed in computer memory.

CALLING SEQUENCE

Location	Order	Address
XXXX	R	$(Lo + 02)_{10}$
XXXX + 1	U	$(Lo + 02)_{10}$
XXXX + 2	[Code word]	
(XXXX + 1) + n	[Code word containing "00"]	
(XXXX + 1) + (n + 1)	etc.	

where n is the number of code words.

ALPHANUMERIC OUTPUT 2

OUTPUT

This program provides the printing and/or punching of alphanumeric characters.

EXIT

The program exits to the location following the "00" exit code. All the codes consist of 2 characters; the desired alphabetic, numeric, or symbolic character followed by 0, 4, 8, or J as given below.

TIME

This program will print approximately 9 characters/second on the typewriter. It will punch approximately 18 characters/second on the high speed punch.

STORAGE

68 locations (1 track 4 sectors) of instructions and constants are required in memory. No temporary storage is used.

ALPHANUMERIC OUTPUT CODES

1. Follow the alphabetic character which corresponds to the basic LGP-30 commands by a 4.
2. Follow hexadecimal characters F, G, J, K, Q, and W by an 8.
3. Follow the remaining alphabetic characters V, O, and X by a J.
4. Follow numbers 0 through 9 by an 8.
5. Follow all punctuation symbols, signs, and spaces by a J.

ALPHANUMERIC OUTPUT CODES (Cont.)

Exit and typewriter controls are exceptions to the above rules and are obtained by the following codes:

Code to Use	Control to Execute
00	Exit from Alphanumeric Subroutine
10	Lower Case
20	Upper Case
30	Color Shift
40	Carriage Return
50	Backspace
60	Tab
80	Stop Code

Code to Use	Character to Print
Z4	Z
B4	B
Y4	Y
R4	R
I4	I
D4	D
N4	N
M4	M
P4	P
E4	E
U4	U
T4	T
H4	H
C4	C
A4	A
S4	S
F8	F
G8	G
J8	J
K8	K
Q8	Q
W8	W
VJ	V
OJ	O
XJ	X

ALPHANUMERIC OUTPUT CODES (Cont.)

Code to Use	Character to Print
08	0
18	1
28	2
38	3
48	4
58	5
68	6
78	7
88	8
98	9
)8	)
L8	L
*8	*
"8	"
Δ8	Δ
%8	%
$8	$
π8	π
Σ8	Σ
(8	(
;J	;
/J	/
.J	.
,J	,
+J	+
-J	-
zJ	Space
wJ	Delete
:J	:
?J	?
]J	]
[J	[
=J	=
-J	-
ZJ	Space
WJ	Delete

J4 - 19.1

LGP-30 CODING SHEET

PREPARED FOR

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JOB NO. 147 PROGRAM NO. J4-19.1 PROGRAM PREPARED BY [illegible] PROGRAM CHECKED BY

DATE 1-15-60

PROBLEM Alphanumeric Output

TRACK

,000
/000

PROGRAM LOCATION	INSTRUCTION (OPERATION / ADDRESS)	STOP	CARRIAGE RETURN	CONTENTS OF ADDRESS	NOTES
	XZ0016	'		1@25	
	XZ3244	'		Delay	
2	B[ ]	'			
	H0053	'	☒		
	M0040	'		1@18	
	E0041	'		3W00	
6	A0028	'		Ae0058	
	Y0010	'	☒		
	S0058	'		1@23	
	T0100	'		→ exit	
0	P[ ]	'			
	B0053	'	☒		
2	M0055	'		1@10	
	E0056	'		3W00	
4	A0050	'		XZ0009	
	Y0030	'	☒		
6	S0052	'		1@23	
7	T0100	'		→ exit	
18	U0029	'			
9	XZ3262	'	☒	Delay	
0	P[ ]	'			
	N0000	'		1@25	
	E0051	'		3W00	
	A0059	'	☒	XZ0027	
	U0026	'			
		'			
	Y0048	'			
	U0042	'	☒		
28	XZ0053	'		(0006)	
9	XZ3208	'		Delay	
30	P[ ]	'			
31	B0053	'	☒		

FORM

ROYAL MCBEE J1384[illegible]

☒ CARRIAGE RETURN

' CONDITIONAL STOP CODE

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PROGRAM CHECKED BY

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DATE 1-15-63

TRACK

Alphanumeric Input

	OPERATION	ADDRESS	STOP	CONTENTS OF ADDRESS	NOTES
	M	0061		1@2	
	E	0062		3W00	
	A	0063		X≠20063	
	Y	0020	X		
	S	0058			
	T	0100		→ exit	
	B	0058			
	U	0019	X		
00000032		2000		1018 (0004)	
		3W00		(0005)	
	S	0057		1@23	
	T	0100	X	→ exit	
	B	0002			
	A	0060		1@29	
	Y	0002			
	X≠	3226	X		
	P	[ ]			
	U	0001			
00000014		24		9@29	(0014)
		3W00	X		(0022)
		100		1@23	(0016)
	[	]			Temp
		200000	X	1@10	(0012)
		3W00		(0015)	
		100		1@23	(0042)
		100		1@23	(0008) (0036)
		63	X	X≠0029	(0023)
		4		1@29	(0045)
	2000	0000		1@2	(0032)
		3W00			(0033)
		WJ	X	X≠0063	(0034)

X CARRIAGE RETURN

/ CONDITIONAL STOP CODE

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JOB NO. 147 PROGRAM NO. 191

DATE 1-15-60

PROBLEM Alpha... Output

01	B0002	
02	A0060	1@29
03	Y0103	
04	U[ ]	
05		
06		
07		
08		
09		

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CARRIAGE RETURN

CONDITIONAL STOP CODE

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