

THE ENGLISH  ELECTRIC CO., LTD.

NELSON RESEARCH LABORATORIES

STAFFORD

MATHEMATICAL PHYSICS LABORATORY.

Report No. NS t 123.

Date 9.4.56.

Reference

Order No.

Telephone:—Stafford 700.

Front Sheet.

Data sheet 1.

Figure sheets S6/10449

DEUCE Subroutine No.133.

Report by

R.A.E.

SUMMARY

The attached document contains details of a DEUCE Subroutine which has been prepared and tested by "R.A.E."

MATHEMATICAL PHYSICS LABORATORY.

133

HEF

Description. Converts one single length integer to decimal and punches on card with sign. First order subroutine.

Data. a, the binary integer.

Result. a, converted to decimal and punched on a card with sign (Y positive, X negative) in column 1 and 10 decimal digits in columns 2 to 11.

Instructions for Use.

Stores Used.	13	14	15	16	19	20	21
Contents at Entry.	Link a	-	-	-	-	-	-
Contents at Exit.	-9P <sub>1</sub>	P <sub>12</sub>	-	2 <sup>28</sup> 10 <sup>-9</sup> (32b.p.) rounded up.	-	-	-
Occupies.	m.c.0-31.						
Entry.	in m.c.17.						
Time.	1 m.s. to Y row if punch running continuously; 8 m.c. after 9's row.						
Useful constants.	P <sub>12</sub> in m.c. 2. 2 <sup>28</sup> 10 <sup>-9</sup> , rounded up, 32b.p. in m.c.4.						
Waste instruction.	1,0-0,0,1 in m.c.27.						
Clear punch.	The subroutine begins with the instruction 10-24, but no 9-24 instruction at the finish. The waste instruction in m.c. 27 may be altered to 9-24 for clearing the punch if desired.						

D.L. 2		Track						
Card No.								
mc	NIS	S	D	C	W	T		
							Y	
							X	
							0	
							1	
0	2	2	15	0	1		2	
1	2	2	16	1	5		3	
2			P <sub>12</sub>				4	
3	2	27	14	0	0		5	
4			1, 29, 11, 16, 11, 2, 1				6	
5	2	24	14	0	0		7	
6	2	21	28	1	2		8	
7	2	25	28	0	12		9	
8	2	30	21	2	0	2	Y	
9	2	30	13		31	19	X	
10	2	26	15		0	2	0	
11	2	30	21		0	1	1	
12	2	14	27		0	1	2	
13	2	14	21		0	8	X	
14	2	21	20	2	0	2	4	
15	2	27	29		0	28	X	
16	2	14	23		1	1	X	
17	2	10	24		0	1	7	
18	2	20	22	1	0	17	8	
19	2	27	29		0	2	X	
20	2	13	1		8	11	Y	
21	2	13	22		0	15	X	
22	2	26	29		0	0	X	
23	2	0	24		0	16	1	
24	2	2	24		0	0	2	
25	2	27	22		1	2	3	
26	2	27	26		0	0	4	
27	1	0	0		0	1	5	
28	2	19	21	2	0	2	6	
29	2	21	19	2	0	1	7	
30	2	22	21	1	0	31	8	
31	2	22	21	1	1	24	9	

