NELSON RESEARCH LABORATORIES
STAFFORD E. E. CO. LTD.

DEUCE Programme No. 25 (ZP04)
Track Assembly

SUMMARY

This report gives details of a programme which is used to read a block of programmes on to the drum in successive tracks starting at A_0/B_0.

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Track Assembly

OPERATING INSTRUCTIONS

A typical track A/B is defined by the head position A, and the head number B. If the tracks are considered to be numbered as N = 0–255, then N = 16A + B.

Order of Cards:

Initial Card
Programme Cards 1 to 3
Data Card
Block of Data
New Data Card
Block of Data
etc. until
Block of data
Programme to occupy D.L's.

The Data card has

Y row - Initial track N_o as Source Number, i.e. B_o in P_5 - P_8 position, A_o in P_9 - P_{12} position.

X row - Number of tracks to be filled as Source Number.

0 row - Non zero if a further block of programmes is to be read in.
Zero if the next block of programme is the last.

Notes

There are no clear read instructions in the programme. The tracks must be filled before the D.L's. The programme uses D.L.1 and 2.

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N.P.L. 22

D.L. 1 Track

Card Nos.

mc	s	D	C	T		
						Y
						X
						0
						1
0	1	12 24		0 6		2
1	[1	0 30	1	0 31	]	3
2	[1	0 31	1	0 2	]	4
3	1	20 14		1 1	X	5
4	0	21 0		0 0		6
5	1	16 20		0 4		7
6	1	25 22		1 1	X	8
7	1	30 1	1	24 23		9
8	1	0 21		0 2		Y
9	1	23 14	1	1 4		X
10	1	20 13		0 1		0
11	0	21 0		0 0		1
12	1	21 20		0 2		2
13	1	1 25		2 12		3
14	1	13 28		0 9		4
15	1	25 22		1 1	X	5
16	1	0 22		0 1	X	6
17		P5				7
18	1	1 15		0 1		8
19	1	0 20		0 2	X	9
20	2	0 11		30 31	X	Y
21	1	15 2	1	0 31		X
22	2	1 2		7 8		0
23	1	2 24		0 30	X	1
24	1	21 16		0 0		2
25	1	20 28		0 12		3
26	1	1 15		0 1		4
27	1	13 20		1 8		5
28		$P_{29}-8$				6
29	1	1 21	2	2 4	X	7
30						8
31	1	0 11		30 3	X	9

l_0 $12 - 24$ Read card

Initial track to be filled

l_8 $0 - 21_2$ X

l_{12} $21_2 - 20_2$

l_{16} $C - 22_2$ X — Data No. of track Read to be filled.

l_{19} $0 - 20_3$ X — Card Finother block to come?

l_{23} $2 - 24$ X — T&L

→ 2 ↓ nz

l_{24} $21_1 - 16$ Final track number.

→ l_{26} $l_{28} - 15$ [P5-8] for unpacking track numbers.

l_{29} $l_{1,2} - 21_{2,3}$ X Magnetic instructions

l_3 $20_2 - 14$ X Current track.

l_6 $25 - 22_3$ X Track number part.

l_9 $23 - 14$ (4mc.)

l_{16} $25 - 22_2$ X Head shift part

l_{18} $l_{20} - 15$ [2 0 -(11) 30 31 X]

l_{21} $15 - 2$ (32 mc.) l_{31} is 1 0-11 30 3 X

l_{22} $l_{31} - 2_{31}$ Read track into D.L.11.

Obey $2_0 - 2_{31}$ using instructions in DL2 and ignore first 4 rows.

l_{14} $21_2 - 0$

Q_6 (l_2 A − 31) Head shift to position A.

l_{10} $20_2 - 13$

l_{13} $l_{17} - 25$ [P5] Prepare for next track

l_{27} $13 - 20_2$

l_5 $16 - 26$ Subtract final track

l_{11} $21_3 - 0$

Q_{12} (l_1 B − 30) Write DL11 on track B.

l_{14} $13 - 28$ Finished?

nz ↓ Z

l_{25} $20_3 - 28$ Another block to come?

Z ↓ nz

l_7 $30 - 1$ (32mc.)

l_0

Read programme into D.L.

FLOW DIAGRAM AND CODING - FOR PROGRAMME NO.25. (ZP04). TRACK ASSEMBLY

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