DEUCE Programme Nos.346&347 (ZP36 & 37)
Set up Clock Track and Sync with Clock Track

SUMMARY

Two one card programs, one to write a clock track in 15/15, and one to synchronise with that clock track.

NELSON RESEARCH LABORATORIES
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DEUCE Programme Nos. 346 & 347 (ZP36 & 37)

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OPERATING INSTRUCTIONS.

Set Up Clock Track — Read in with TS Count clear in mc 0 and 1_0 clear. The computer can be stopped or normal.

Stores Used.	1_0	11	Track 15/15	Reading Heads	TC4
Contents at entry.	zero	-	-	-	-
Contents at exit.	zero	zeros	clock track	15	off

Operating Details. Loads to 1_0. IT CANNOT BE THE FIRST CARD OF A PROGRAM
A program pack usually starts Initial Card
Clear Drum - ZP13/1
Set Clock Track

Sync with Clock Track — Read in with TS Count clear and computer NORMAL.

Stores Used.	1	11	Track 15/15	Reading Heads	TC4	TSB	OPS	Alarm
Contents at entry.	-	-	clock track	-	-	-	-	-
Contents at exit.	zeros	zeros	clock track	15	off	off	clear	off

Operating Details. Loads to 1_0. (If the computer is stopped this card does not synchronise but preserves the phase in which it is read Nor does it clear DL1 or TC4)

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STAFFORD E. E. CO. LTD.
N.R.L. MARCONI HOUSE.

Description

A clock track is a characteristic pattern that is used by a special synchronising program to regain control of the minor cycle numberings when this has been lost (e.g. after falling out or using initial input).

Set up Clock Track is a one card program that is obeyed from the reader and writes in track 15/15 a clock track that any of the following will synchronise with

Sync with Clock Track
Set or Sync Clock Track - ZP34
Post Mortem - ZP29

Sync with Clock Track is a one card program that is obeyed from the reader and synchronises with the clock track written by Set up Clock Track.

D.L. 1 Track

Card Nos.

TRC	NIS	S D	C	W T		
	1	15 - 31	1	0 28	X	Y
						X
	1	16 - 16		0 28	X	0
						1
0	1	0 - 11	1	29 28	X	2
1	1	0 - 0		0 1		3
2	1	0 - 11		12 28	X	4
3	1	30 - 1	1	15 14(1)		5
4	1	15 - 30	1	0 28	X	6
5						7
6	1	30 - 11	1	29 28	X	8
7						9
8						Y
9						X
10						0
11						1
12						2
13						3
14						4
15						5
16						6
17						7
18						8
19						9
20						Y
21						X
22						0
23						1
24						2
25						3
26						4
27						5
28						6
29						7
30						8
31						9

Q_2 15 - 31 (ℓ)

Q_2 16 -16 (clears TCA)

Q_2 0 - 11 X (32 m.c.) (0-0,0 1)

Q_2 0 - 11_{16} X (30-1ℓ) 15 14(1))

Q_2 15 - 30(ℓ)

Q_2 30 - 11 (32 m c.)

l_0 0's

FLOW DIAGRAM & CODING FOR PROGRAM No. 346 (ZT 36)

Set up Clock Track

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D.L. 1 Track

Card Nos. 1

mc	NIS	S D	C	W T		
	1	30 - 1	1	29 28	X	Y
						X
	1	15 - 31		0 28		0
	1	16 - 16		0 28		1
0	1	4 - 24		0 28		2
1	1	15 - 30		0 28		3
2	1	6 - 24		0 28		4
3	1	11 - 1	1	13 12		5
4	1	8 - 24		0 28	X	6
5						7
6	1	30 - 11	1	29 28	X	8
7						9
8						Y
9						X
10						0
11						1
12						2
13						3
14						4
15						5
16						6
17						7
18						8
19						9
20						Y
21						X
22						0
23						1
24						2
25						3
26						4
27						5
28						6
29						7
30						8
31						9

If read with computer normal

Q_2 15 - 31
Q_2 16 - 16
Q_2 4 - 24
Q_2 15 - 30
Q_2 6 - 24
Q_2 11 - 1 (32 m.c.)
(Old 1_{16} 0 - 0)
(Old 1_{19} 0 - 0)

(New 1_{13} 0 - 0)
New 1_{16} 30 - 1 (32 m.c.)
Q_2 8 - 24
Q_2 30 - 11 (32 m.c.)
1_0 0's

If read with computer stopped

Q_2 15 - 31	obeyed on 1-row
Q_2 4 - 24	3-row
Q_2 6 - 24	5-row
Q_2 8 - 24	Y-row
Q_2 30 - 11 (32 m.c.)	9-row
1_0 0's	

FLOW DIAGRAM & CODING FOR PROGRAM No 347 (ZP 37)
Synchronise" with 'Clock Track

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