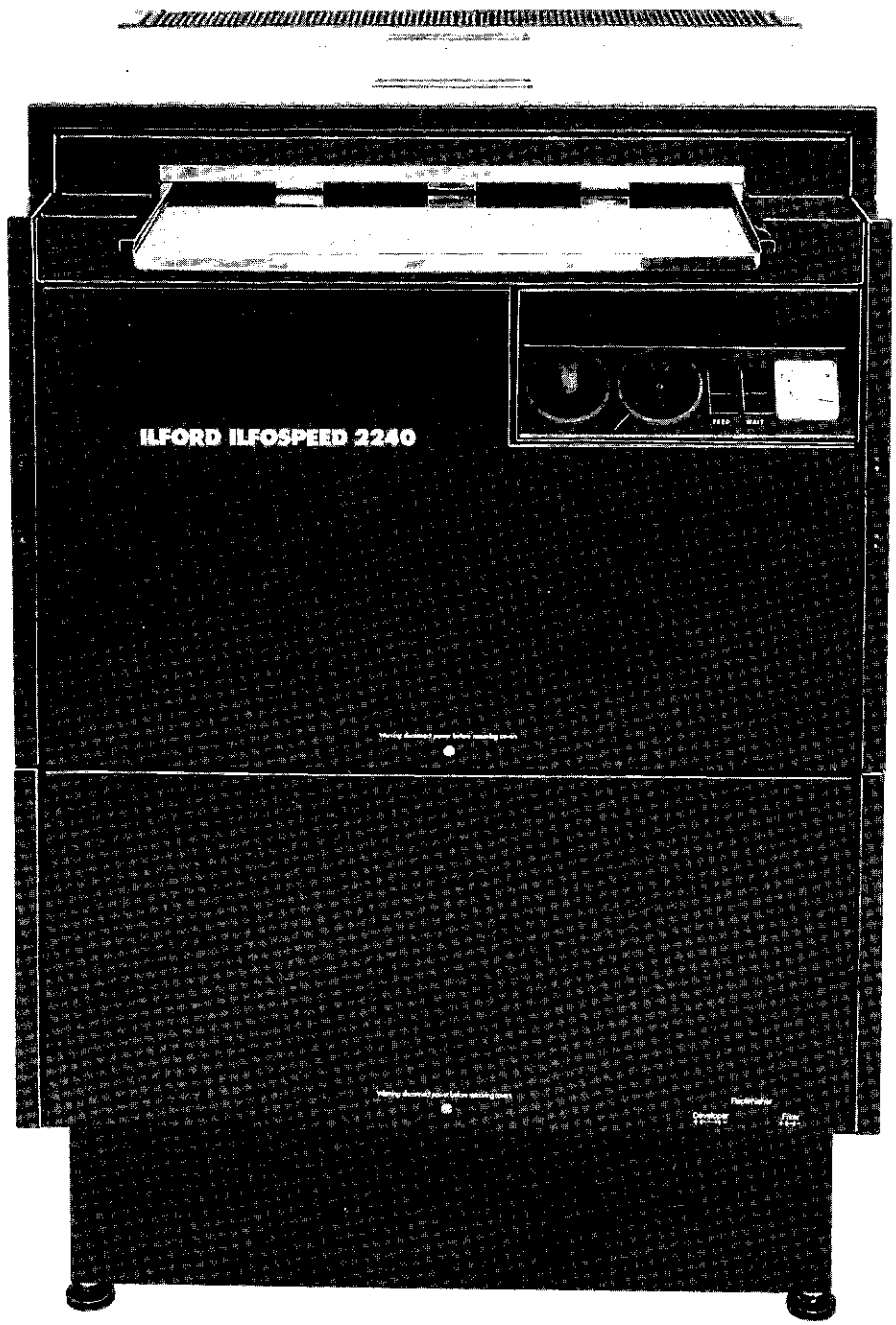
ADVANCE SERVICE INFORMATION

ILFOSPEED 2240

PROCESSORS PRIOR TO SERIAL NUMBER 21810
NOTES FOR SERVICE ENGINEERS
JANUARY 1985



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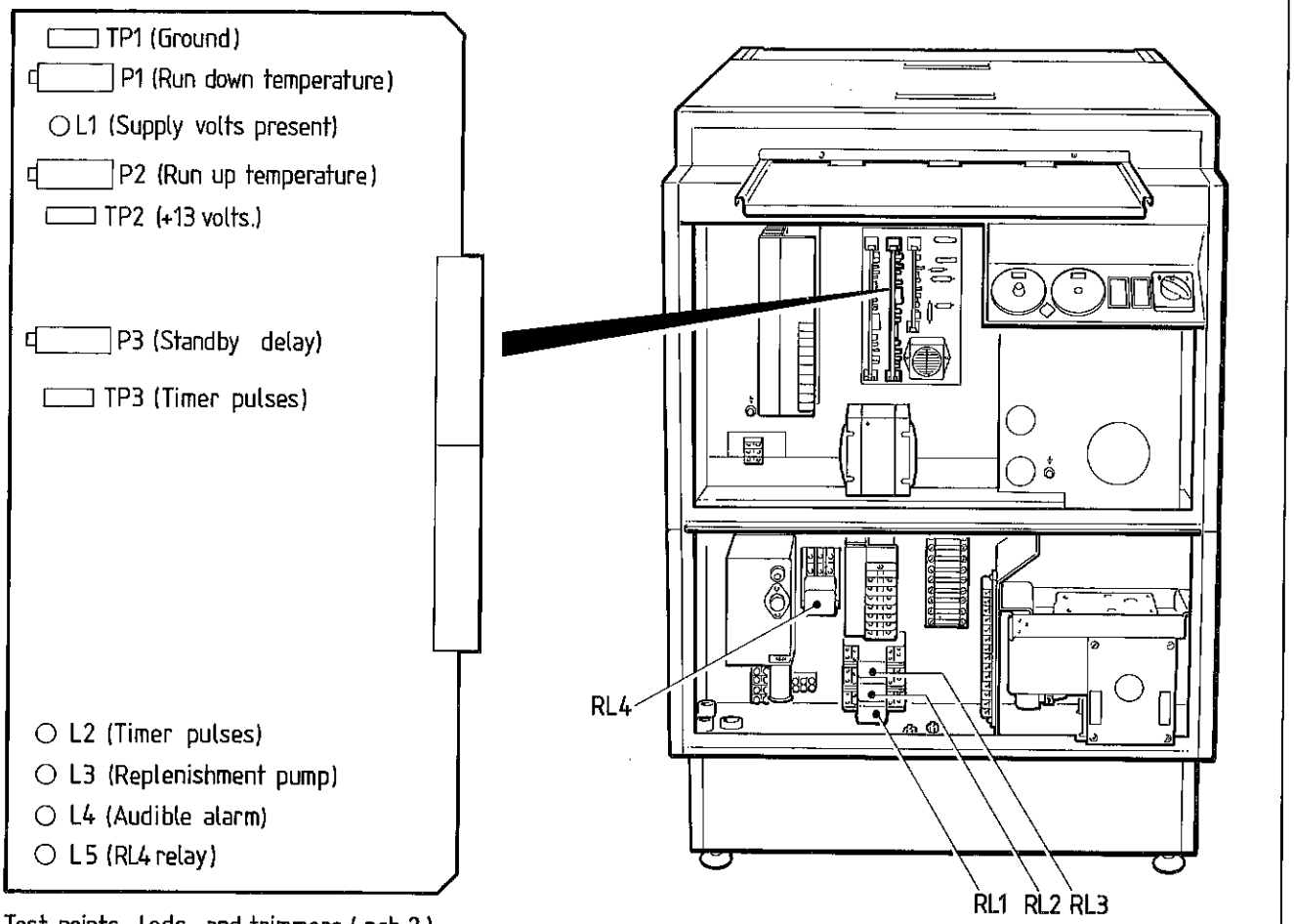

Test points, leds and trimmers (pcb 2)

Led sequence diagram (pcb 2)

Processor mode	Standby	Processing	
Print	On feed tray	Going in	In processor
Detector flap	Down	Up	Down

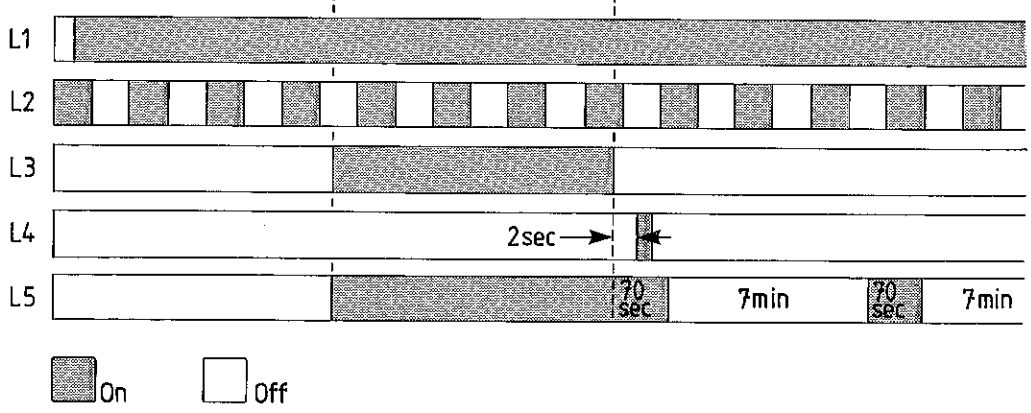

Figure 2.1

1 DESCRIPTION

This leaflet describes the functions of the automatic standby and economiser control printed circuit board (pcb2) on ILFOSPEED 2240 processors prior to serial number 21810.

WARNING
It is most important that the checks and adjustments described in this leaflet are carried out by qualified service engineers.

The automatic standby and economiser control printed circuit board pcb2 (see figure 2.1) has six main functions:

1 It controls the 2x750 watt dryer heaters 70 second run period, via relay RL4, during processing.
2 It controls the 70 second dryer run period during each consecutive 420 seconds (7 minutes) automatic standby period.
3 It controls the replenishment pump, via relay RL2.
4 It controls the audible signal.
5* It controls the dryer cool-down period, ie 'run down'.
6+ It controls the 'wait' light, ie 'run up'.

* 'Run down' is defined as the time from when the processor control switch is set to position 1 to when the dryer fans switch off.
+ 'Run up' is defined as the time from when the processor control switch is turned to position 2 (from position 1) to when the 'wait' light switches off.

2 FUNCTIONAL TESTS

Refer to the following figures:
Figure 2.1 Test points, leds and trimmers (pcb2). Sequence diagram (leds).
Figure 2.2 Sequence diagram (ILFOSPEED 2240 processor control).
Figure 2.3 Pcb2 component layout.
Figure 2.4 Pcb2 circuit diagram.

Pcb2 has three test points for checking the circuits, five leds to indicate that the circuits are operating correctly and three trimmers for making minor adjustments.

2.1 Equipment required

1 Multi-meter having a 25 volt dc scale.
2 Insulated probes for bridging test points.
3 A minutes/seconds timer.

2.2 Test 1. To check for positive volts

With the control switch set to position 2 and the processor running normally, connect the multi-meter across test points TP1 and TP2. The reading obtained should be 13 volts $\pm$1 volt.

Note
Led L1 switches on to indicate the presence of positive volts.

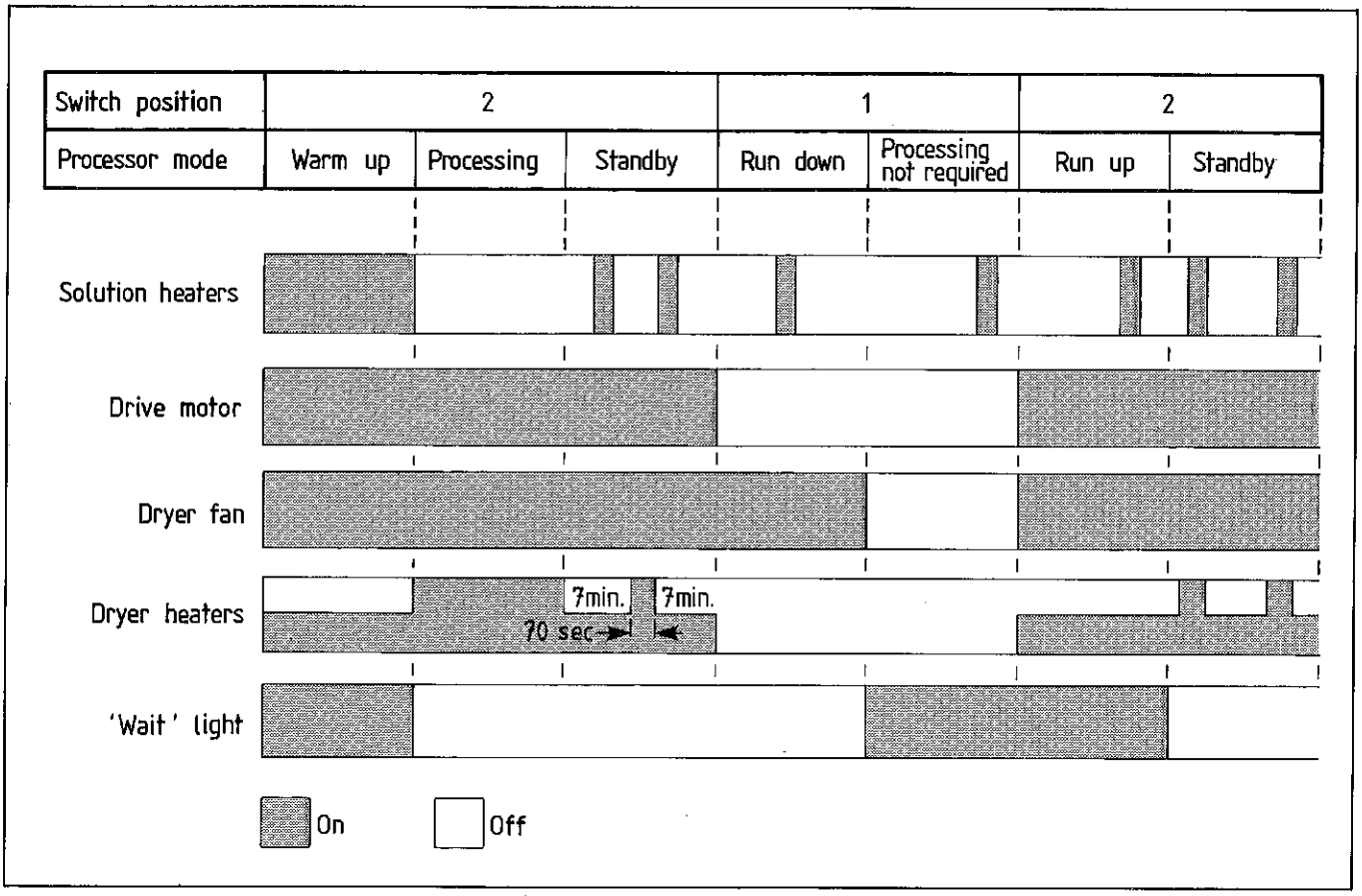

Figure 2.2

2.3 Test 2. Checking the timing circuit

With the control switch set to position 2, connect the multi-meter across test points TP1 and TP3. The reading obtained should be approximately 13 volts until the processing solutions reach operating temperature. The multi-meter indicator and led L2 will then pulse with the timer controlled signals to the solution heaters.

To adjust the frequency of the timer pulses, thereby adjusting the standby delay, turn trimmer P3 clockwise to decrease the pulse frequency or anti-clockwise to increase the pulse frequency. The standby delay should be 70 seconds ±5 seconds, and is measured from when the audible signal sounds until the repeat led on the dryer temperature control switches off.

2.4 Test 3. 'Run up' control

To check the 'run up' control, proceed as follows:

Note

It is important to carry out operations 5 and 6 to initiate the standby cycle timer and thereby provide seven minutes to complete the test.

1 Ensure all processor side panels and dryer covers are fitted.
2 Ensure the processing solutions are at operating temperature.
3 Ensure the dryer roller rack has cooled down fully, ie is at ambient temperature. If the dryer has been running for some time, remove the processor lid and set the processor control

switch to position 2. This switches off the processor main drive motor and dryer heaters, but maintains operation of the dryer fans to cool the dryer rapidly to ambient temperature. This will take approximately 10 minutes.

4 Set the processor control switch to position 1 and refit the processor lid.

5 Operate the paper feed detector.

Note

With the processor control switch set to position 1, the dryer heaters, dryer fans and the main drive motor will not operate.

6 Allow the processor to run for approximately 70 seconds.

7 Set the processor control switch to position 2 and measure the time until the 'wait' light switches off. The time should be $5\frac{1}{2}$ minutes $\pm\frac{1}{2}$ minute.

8 To adjust the 'run up' time, turn trimmer P2 clockwise to increase the time or anti-clockwise to decrease the time. If adjustment is necessary, repeat the sequence 1-7 to confirm accuracy of the adjustment.

2.5 Test 4. 'Run down' control

To check the 'run down' time, proceed as follows:

1 Check the 'run up' time (see section 2.4).

2 Set the dryer temperature control to position 6 and operate the paper feed detector. Allow the processor to run for approximately one minute.

3 Set the processor control switch to position 1 and measure the time until the dryer fans switch off. The time should be 150 seconds $\pm$30 seconds.

4 To adjust the 'run down' time, turn trimmer P1 clockwise to decrease the time or anti-clockwise to increase the time. If adjustment is necessary, repeat the test to confirm accuracy of the adjustment.

Note

It is not possible to re-start the dryer fans by turning trimmer P1 anti-clockwise. To check the 'run down' time after adjustment, set the processor control switch to position 2 and repeat operations 2 and 3.

3 OTHER FACILITIES PROVIDED BY PCB2

1 When a print is in the paper feed detector, led L3 switches on and relay RL2 is energised to control the replenishment pump.

2 When a sheet of paper has cleared the paper feed detector, led L4 switches on and off and is synchronised with the audible alarm.

3 Led L5 switches on to indicate that relay RL4 is energised to control power to the 2x750 watt dryer heaters.

4 PREVIOUS INFORMATION

This document replaces the provisional leaflet issued by engineering at the 1984 Equipment Conference. Please destroy the provisional leaflet.

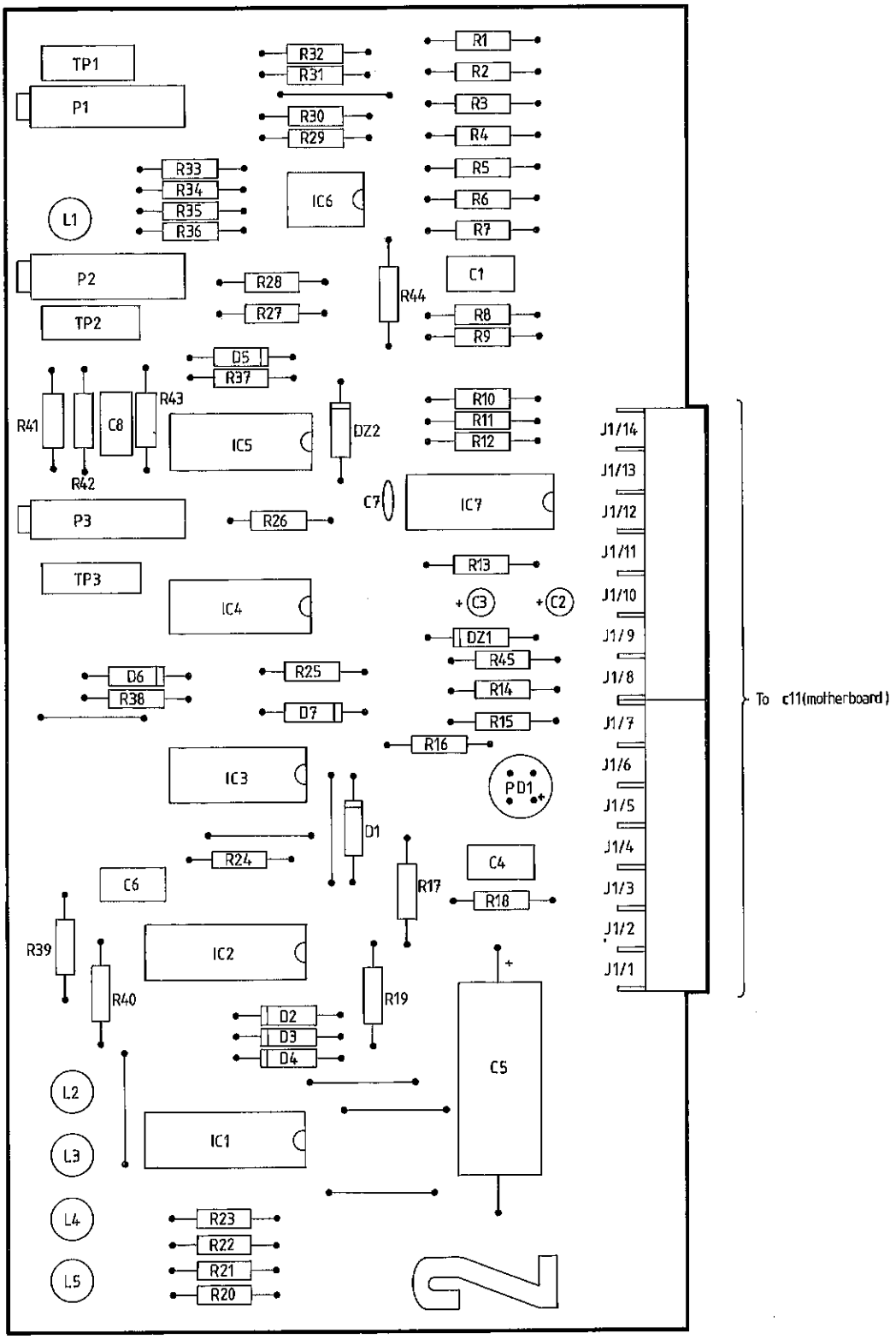
TP1
P1
R32
R31
R30
R29
R1
R2
R3
R4
R5
R6
R7
R33
R34
R35
R36
IC6
L1
P2
TP2
R28
R27
R44
C1
R8
R9
D5
R37
R41
R42
C8
R43
IC5
DZ2
R10
R11
R12
C7
IC7
P3
R26
TP3
IC4
R13
C3
C2
DZ1
R45
R14
R15
R16
D6
R38
R25
D7
IC3
PD1
D1
R24
C6
R17
C4
R18
R39
IC2
R40
R19
D2
D3
D4
C5
L2
L3
L4
L5
IC1
R23
R22
R21
R20
J1/14
J1/13
J1/12
J1/11
J1/10
J1/9
J1/8
J1/7
J1/6
J1/5
J1/4
J1/3
J1/2
J1/1
To c11(motherboard)

Figure 2.3

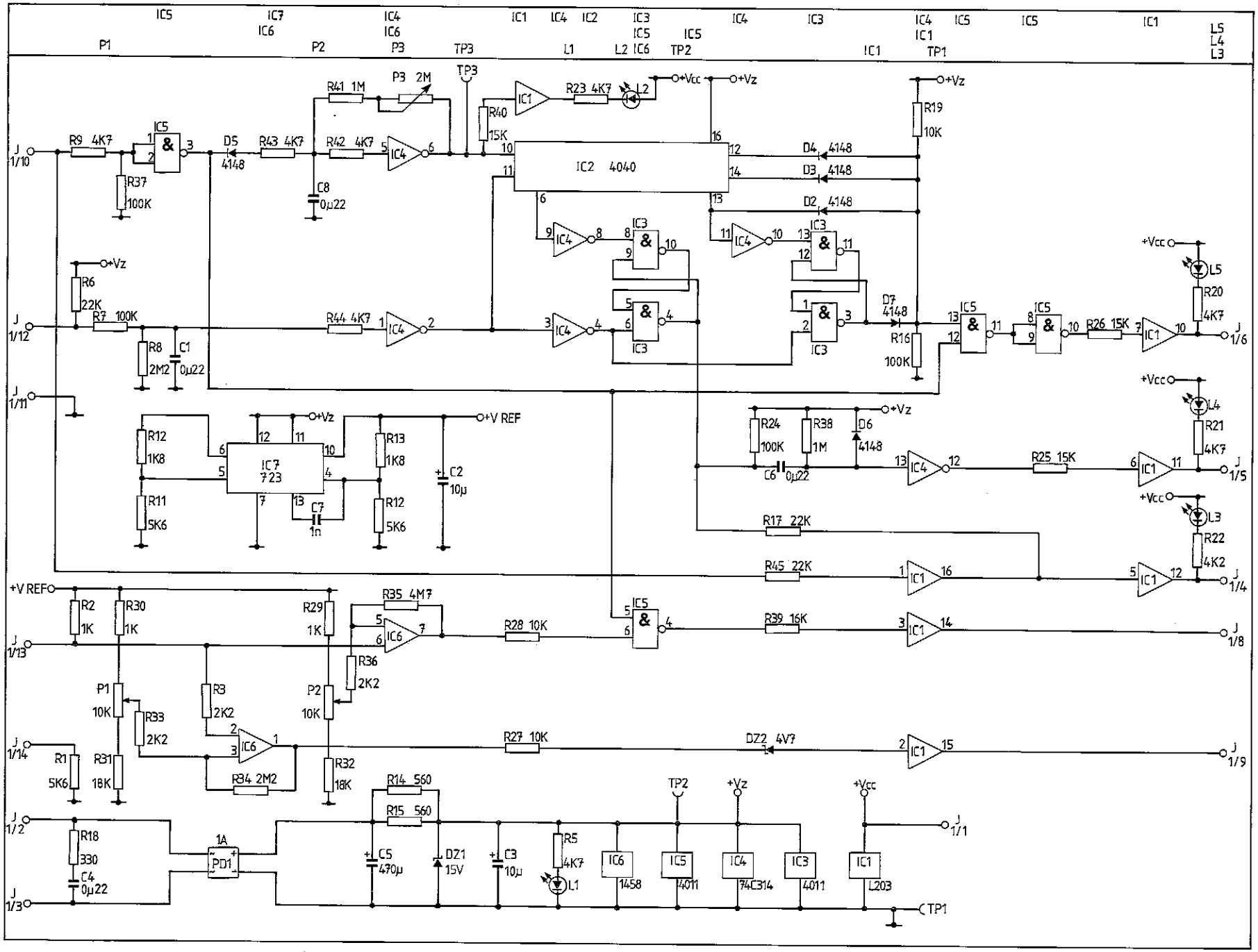
IC5 IC7 IC6 IC4 IC6 IC1 IC4 IC2 IC3 IC5 IC5 IC4 IC3 IC4 IC1 IC5 IC5 IC1 L5 L4 L3
P1 P2 P3 TP3 L1 L2 IC6 TP2 IC1 TP1
P3 2M
TP3
R41 1M
R23 4K7
L2
+Vcc
+Vz
R40 15K
IC1
R19 10K
J 1/10
R9 4K7
IC5
D5 4148
R43 4K7
R42 4K7
IC4
R37 100K
C8 0µ22
IC2 4040
D4 4148
D3 4148
D2 4148
R6 22K
R7 100K
J 1/12
R44 4K7
R8 2M2
C1 0µ22
J 1/11
D7 4148
R16 100K
R20 4K7
L5
J 1/6
R26 15K
R12 1K8
R11 5K6
IC7 723
C7 1n
R13 1K8
R12 5K6
+V REF
C2 10µ
R24 100K
R38 1M
D6 4148
C6 0µ22
L4
R21 4K7
J 1/5
R25 15K
R17 22K
L3
R22 4K2
J 1/4
R45 22K
R2 1K
R30 1K
R29 1K
R35 4M7
R28 10K
R39 16K
J 1/8
J 1/13
R36 2K2
P1 10K
P2 10K
R3 2K2
R33 2K2
R27 10K
DZ2 4V7
J 1/9
J 1/14
R1 5K6
R31 18K
R34 2M2
R32 18K
R14 560
R15 560
J 1/2
R18 330
C4 0µ22
J 1/3
1A
PD1
C5 470µ
DZ1 15V
C3 10µ
R5 4K7
L1
IC6 1458
IC5 4011
IC4 74C314
IC3 4011
IC1 L203
TP2
+Vz
+Vcc
J 1/1
TP1

Figure 2.4