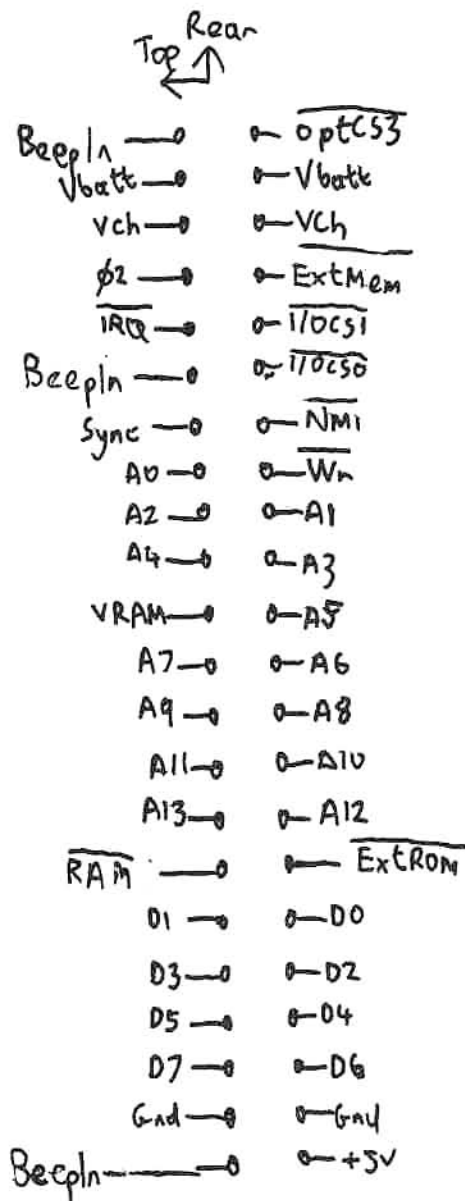


# PANASONIC HHC RL-H1400 SCHEMATICS

TONY DUELL

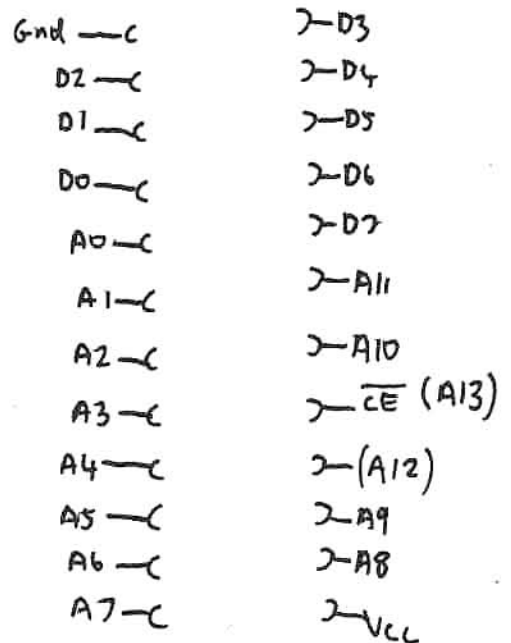
Schematics of the Panasonic HHC Hand-held Computer  
Traced from a working unit and drawn by Tony Duell  
Scanned by Dave Colver  
Minor image cleanup and PDF creation by Joachim Thiemann  
August 2012

# RL-H1400 Expansion Connector



## Option ROM socket

Rear  
↑



RL-H1400 CPU → Keyboard/Display Connections

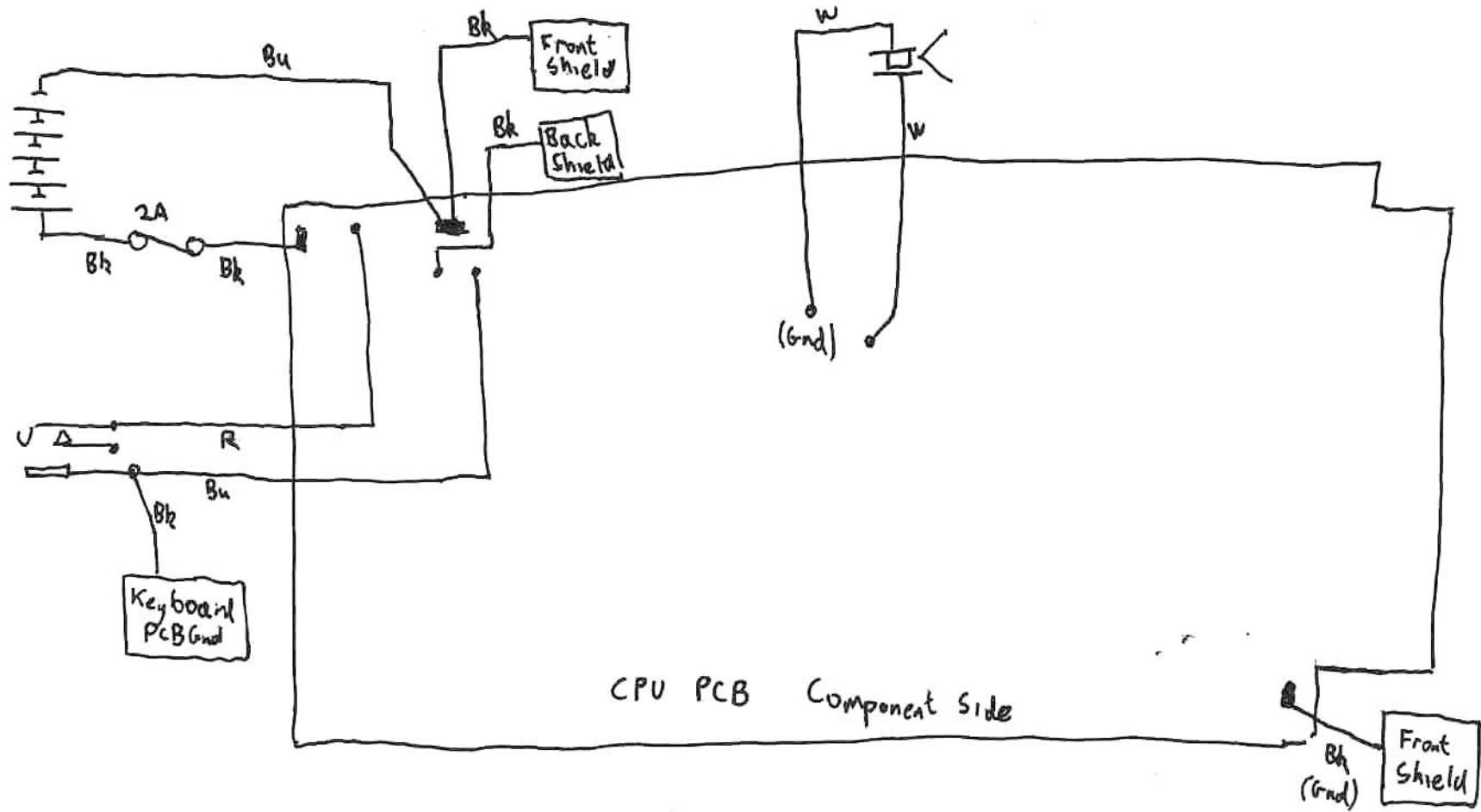
LHS  
↑

- On Key
- KCO
- KC1
- KC2
- KC3
- KC4
- KC5
- KC6
- KC7
- Gnd
- Key En
- BP7
- BP6
- BP5
- BP4
- BP3
- BP2
- BP1

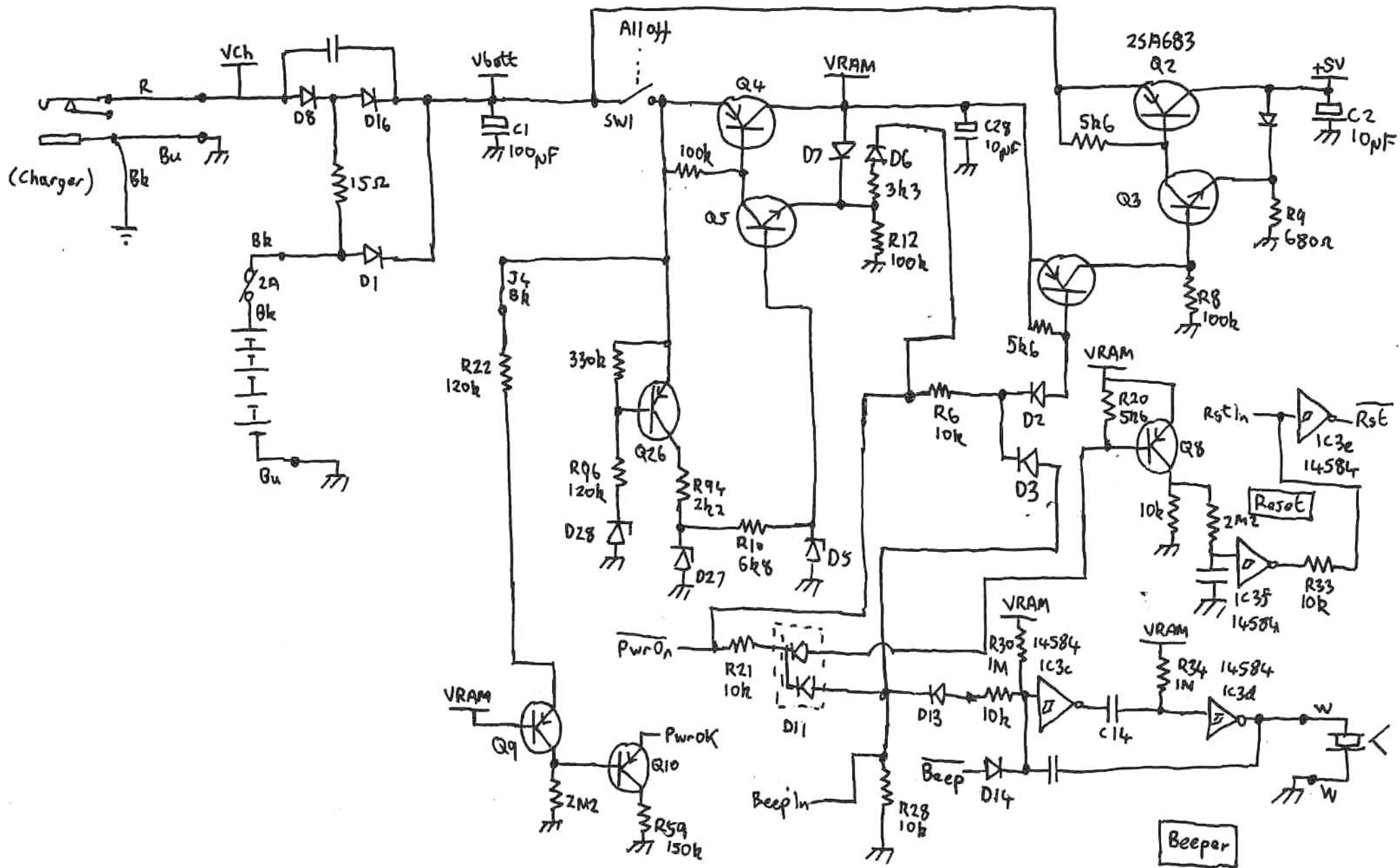
- BP6
- DData
- Dot/1
- Dot/2
- Dsync
- BP6
- VDisp
- VBP
- KCS
- A0
- A1
- A2

Driver 1/13 (59 → 13 Daisy chain)  
 Driver 1/10, Driver 1, 2/3  
 Driver 1/9, Driver 1, 2/4  
 Driver 1/11, Driver 1, 2/1  
 Driver 1/12  
 Driver 1/6, Driver 3/4  
 Driver 1/5, Driver 1/8.

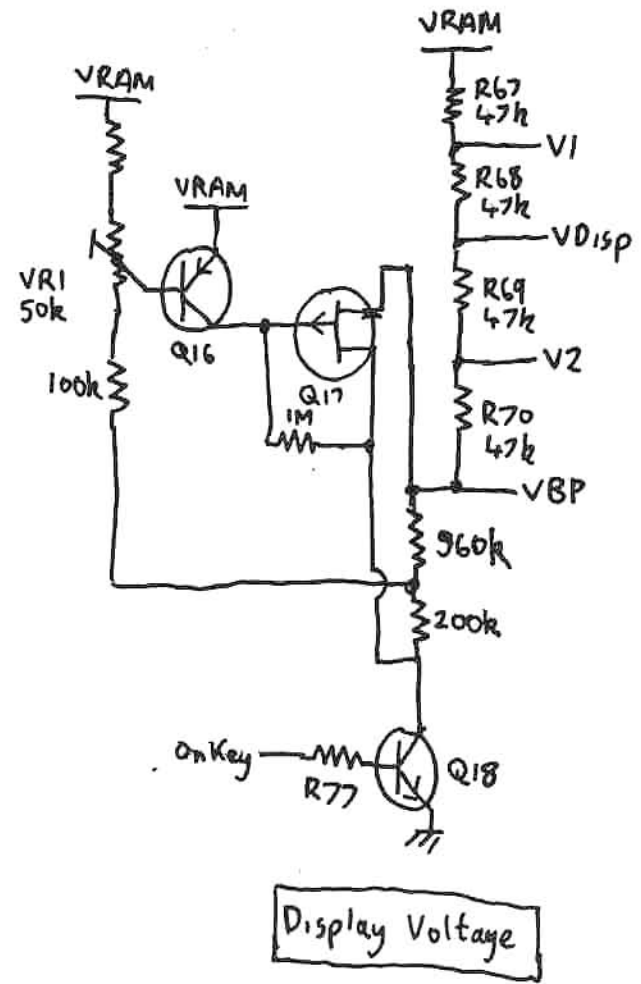
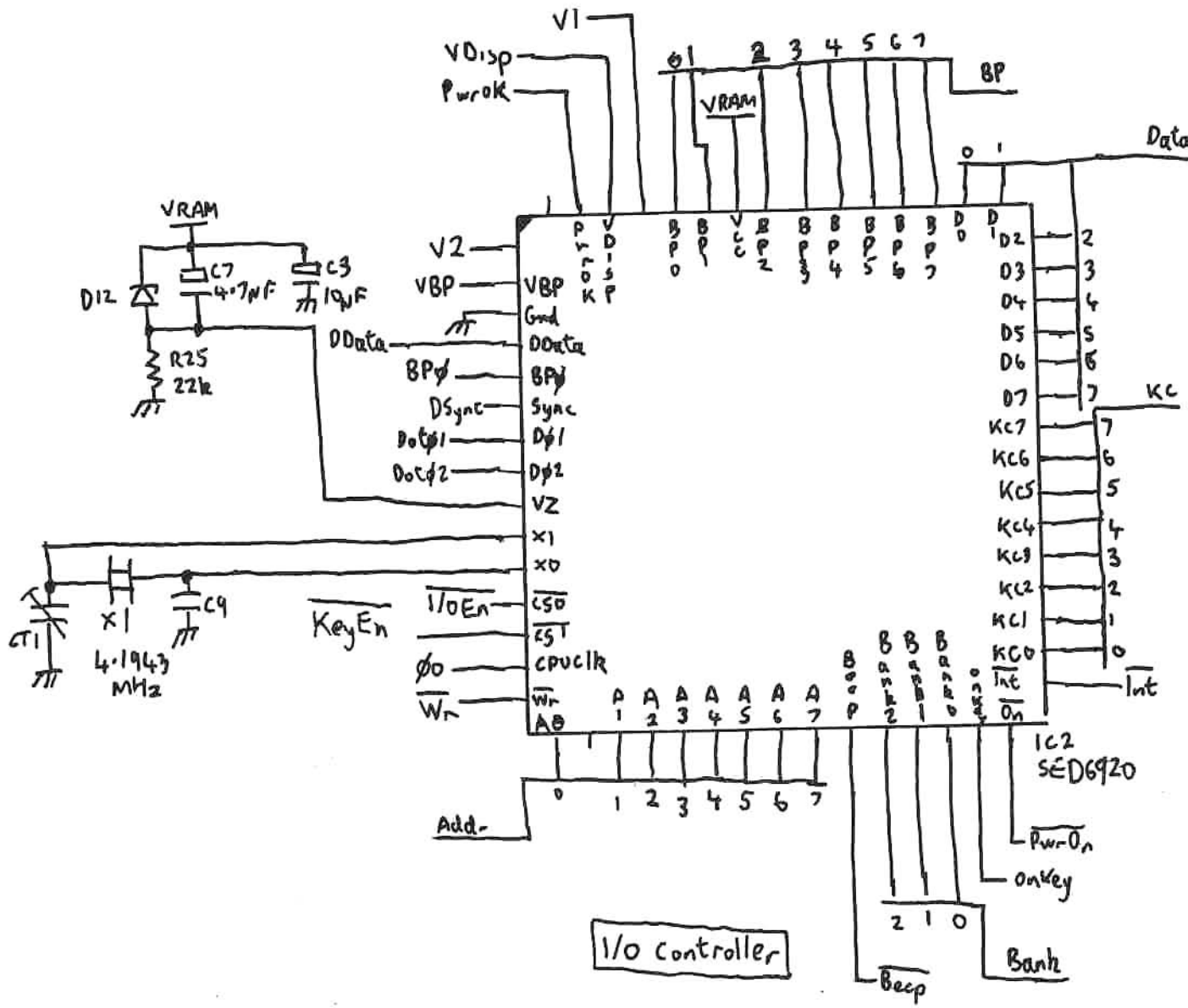
- A3
- A4
- A5
- A6
- A7
- VRAM

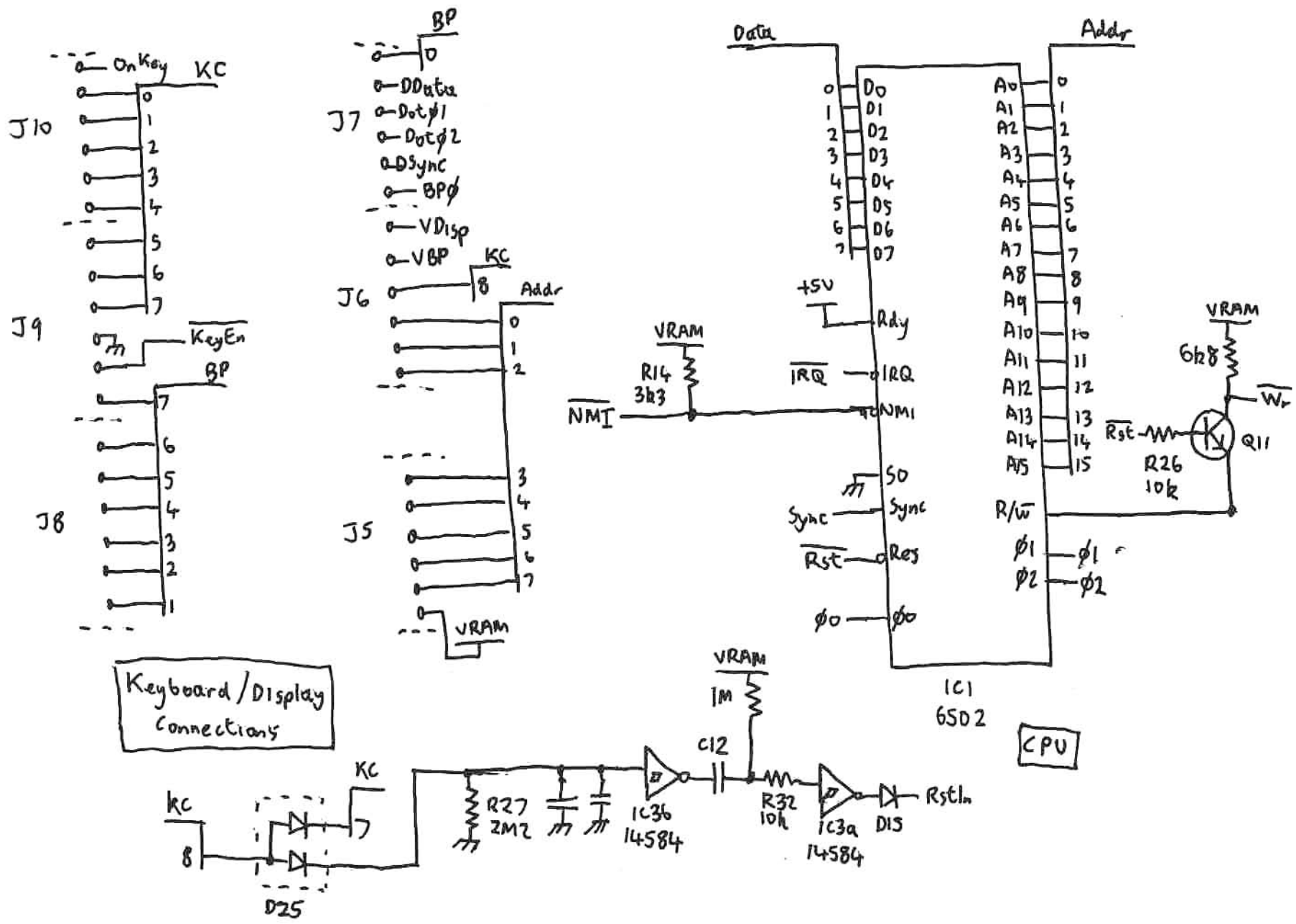


RL-H1400 Wiring

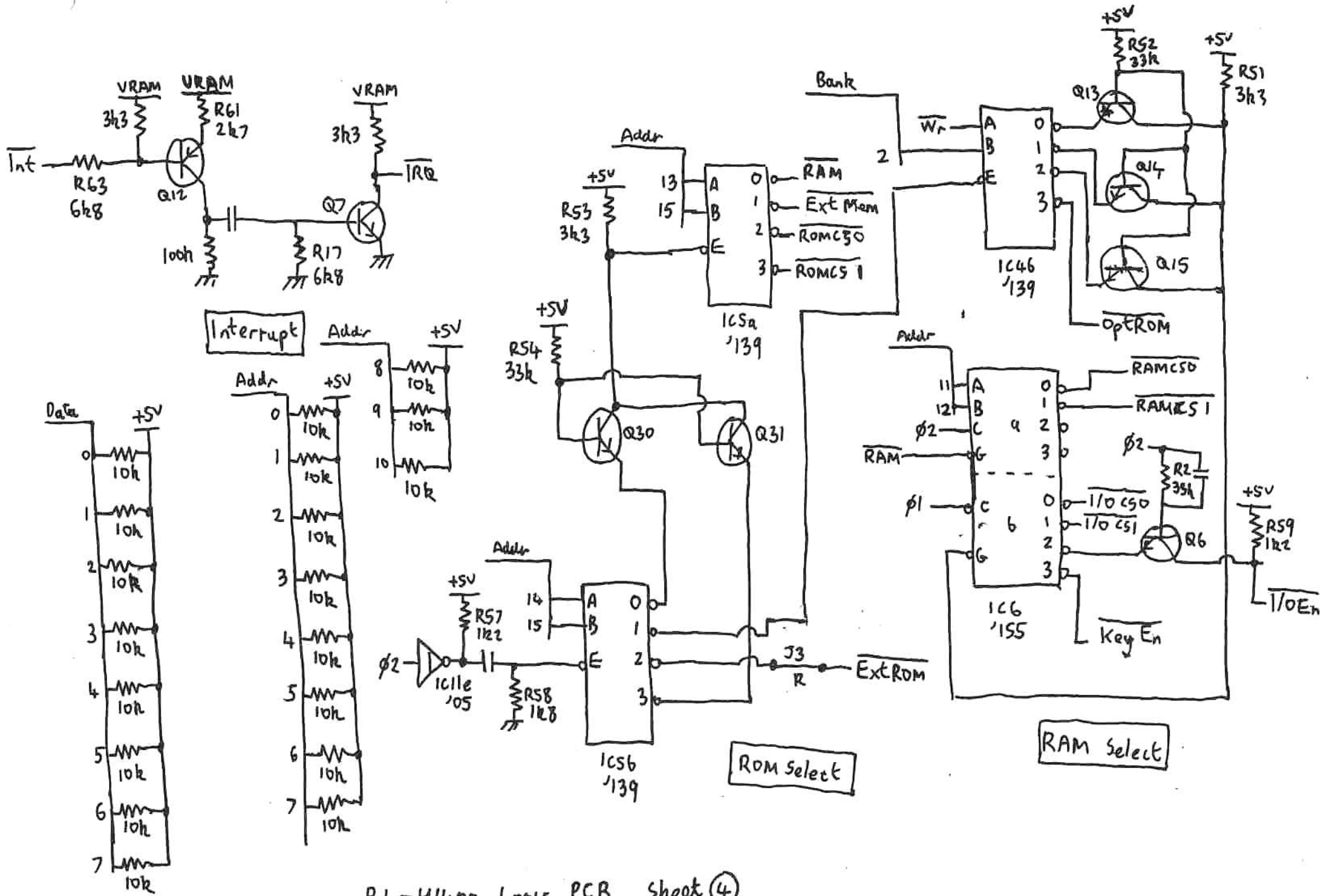


RL-M1400 Logic PCB Sheet (1)



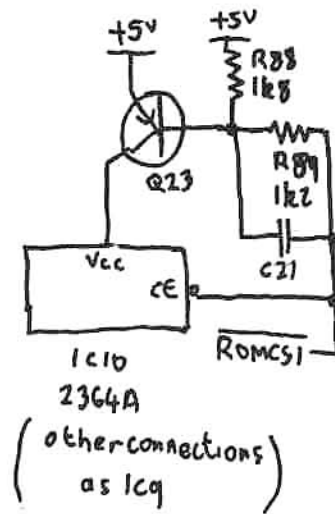
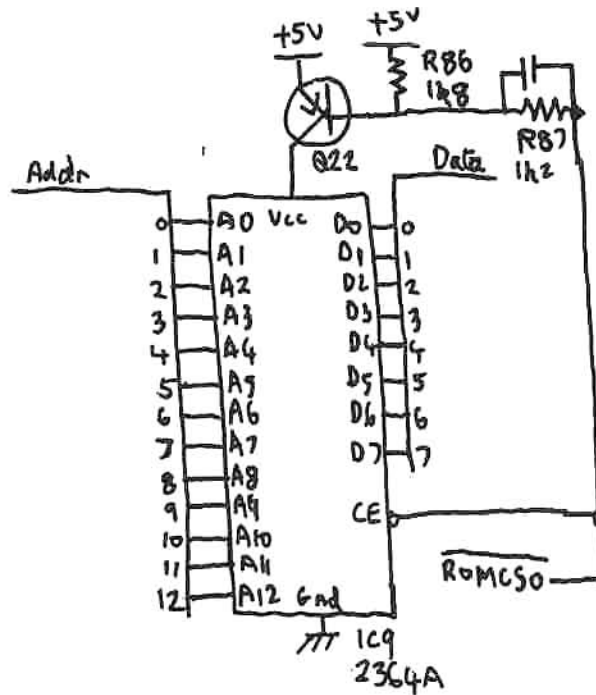
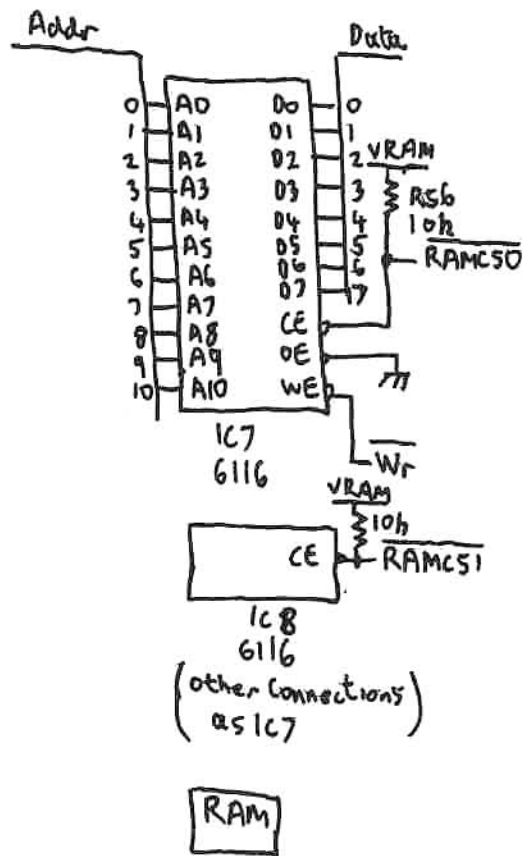


RL-H1400 Logic PCB Sheet (3)

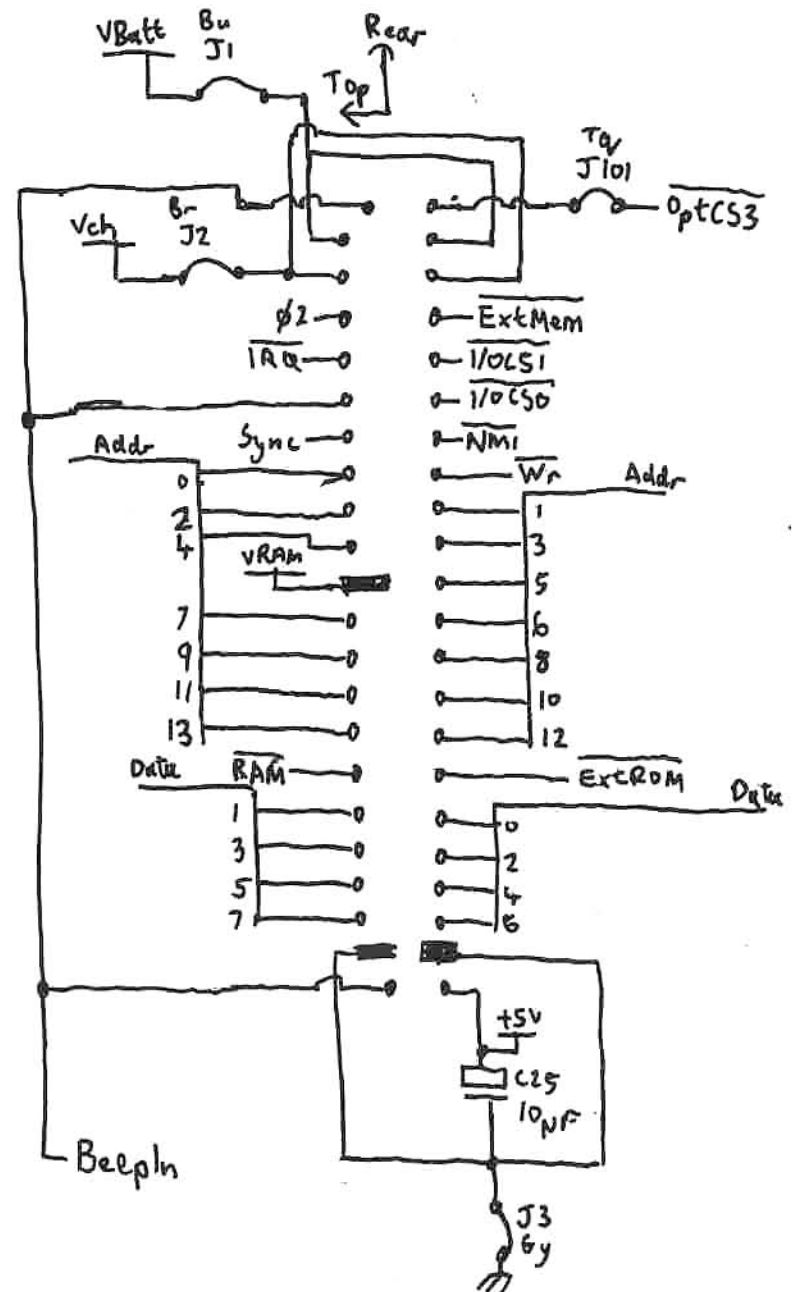


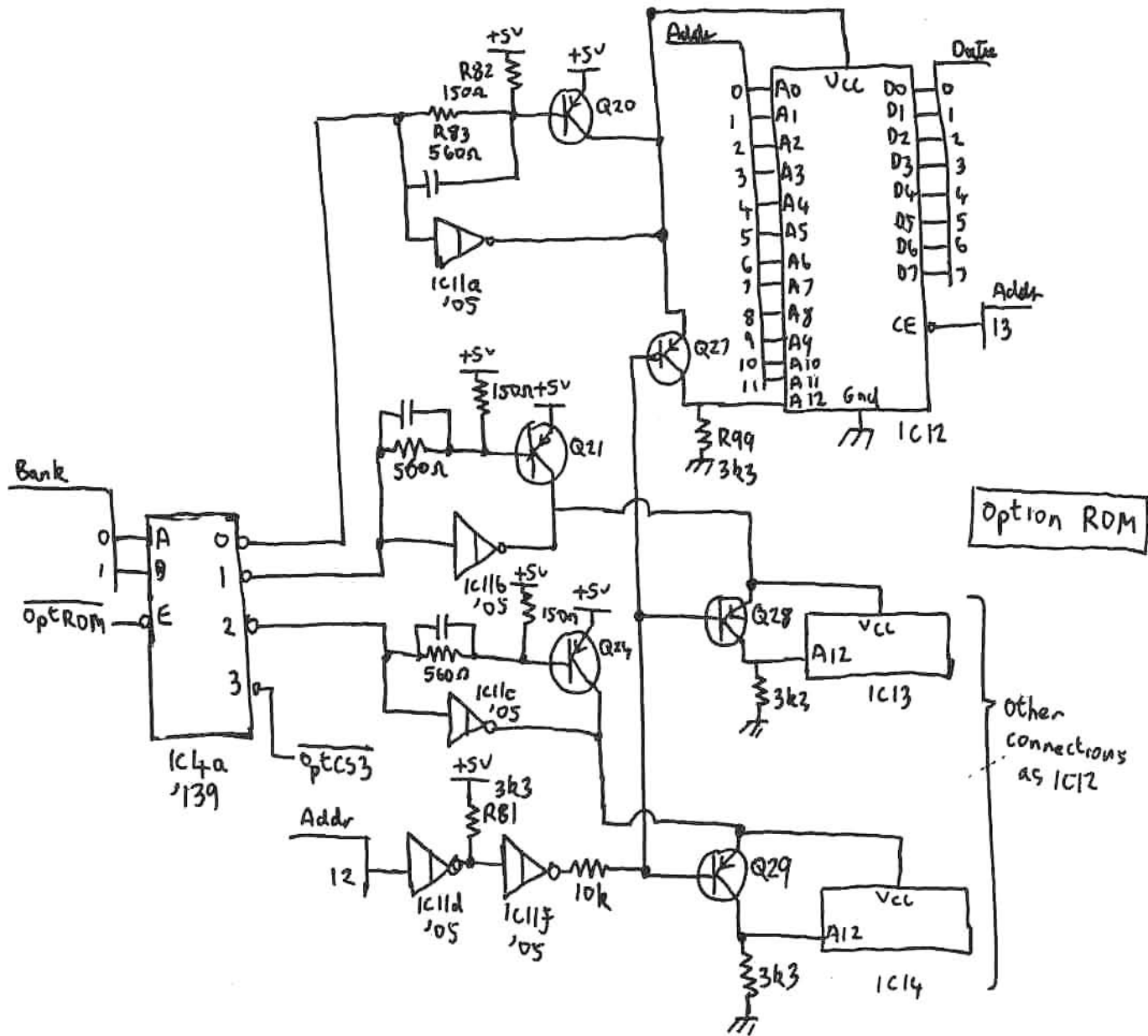
RL-M1400 Logic PCB Sheet (4)





System ROM

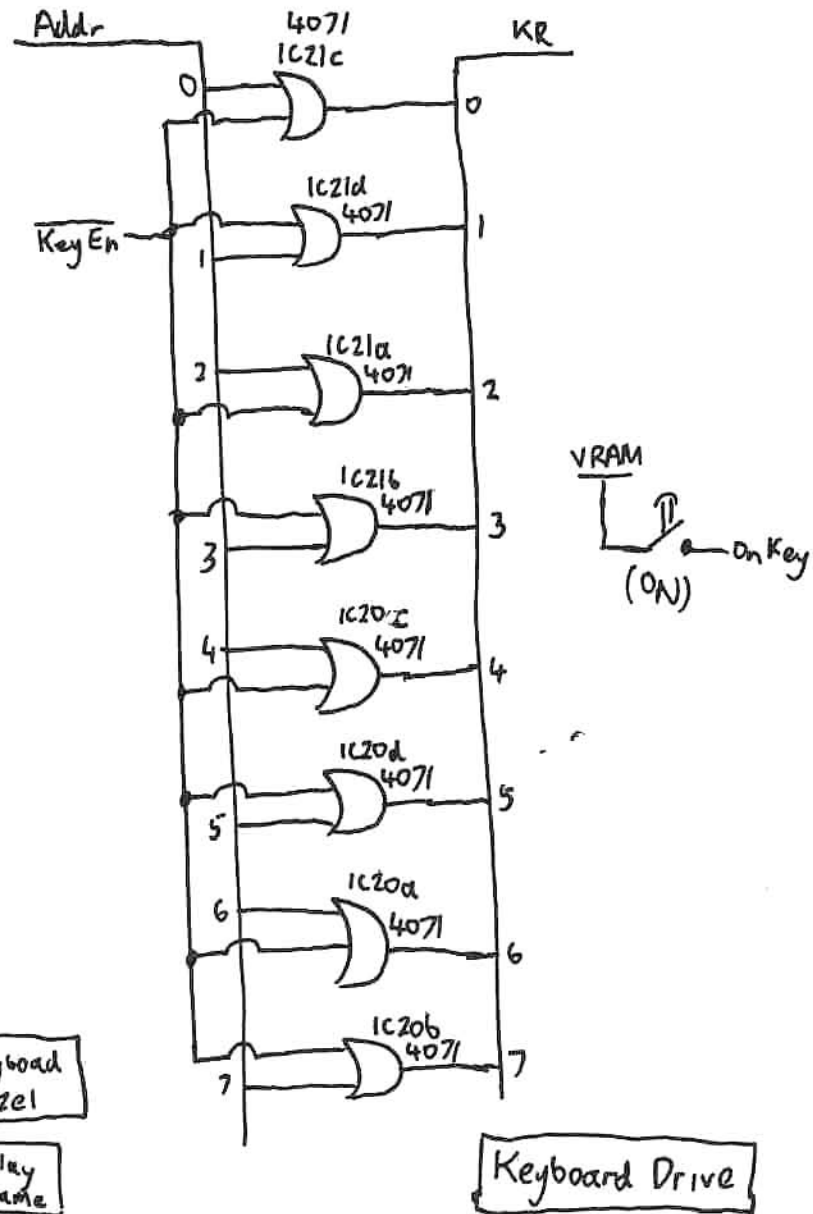
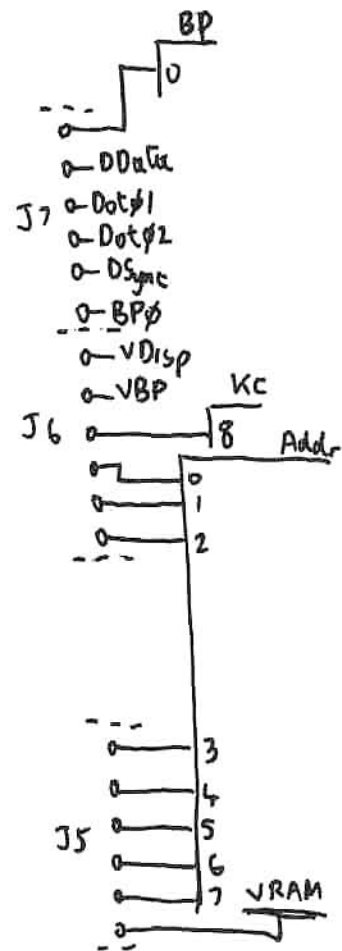
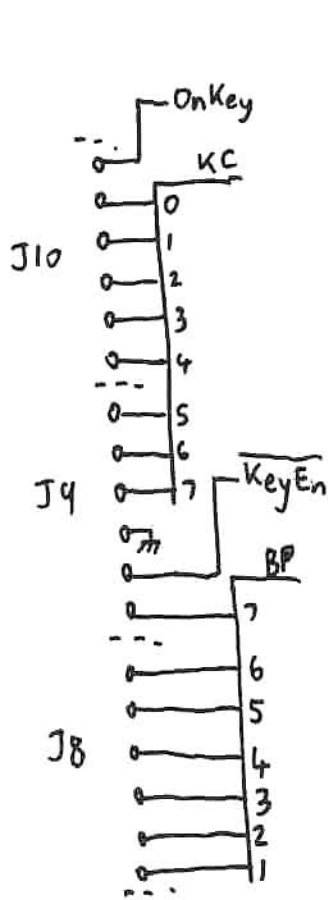




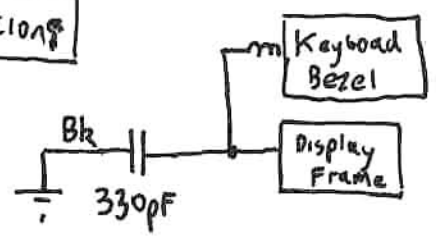
RL-H1400

Key	Row	Column
1	0	6
2	0	5
3	0	4
4	0	3
5	0	2
6	0	1
7	0	0
8	1	7
9	1	6
0	1	5
Help	1	4
↑	1	3
1/0	1	2
Q	2	6
W	2	5
E	2	4
R	2	3
T	2	2
Y	2	1
U	2	0
I	3	7
O	3	6
P	3	5
←	3	4
STP	3	3
→	3	2
OFF	7	2
A	4	6
S	4	5
D	4	4
F	4	3
G	4	2
H	4	1

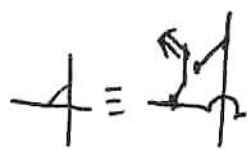
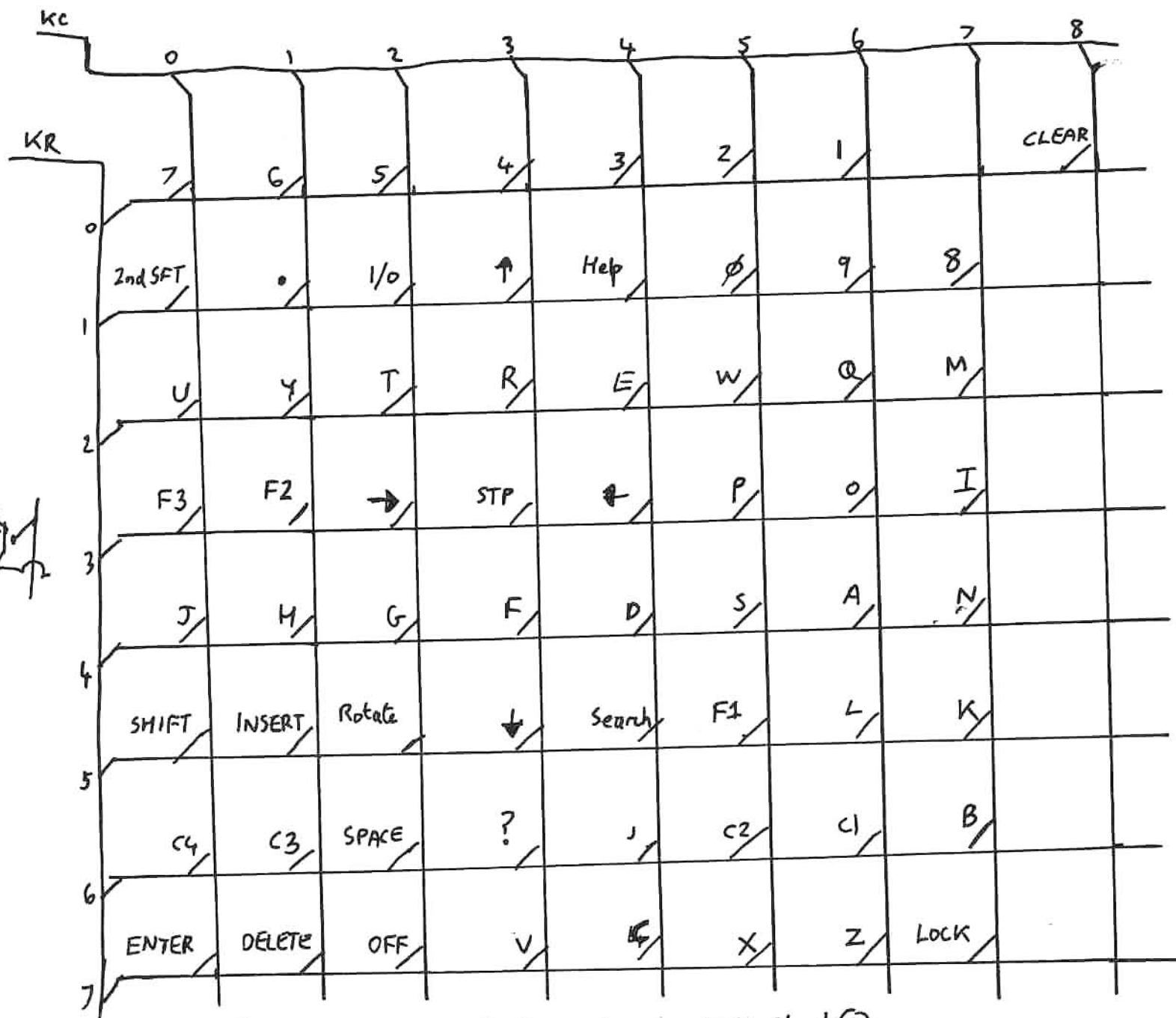
Key	Row	Column
J	4	0
K	5	7
L	5	6
F1	5	5
Search	5	4
↓	5	3
Rotate	5	2
Clear	0	8
Z	7	6
X	7	5
C	7	4
V	7	3
B	6	7
N	4	7
M	2	7
,	6	4
.	1	1
F2	3	1
Insert	5	1
Delete	7	1
Lock	7	7
C1	6	6
C2	6	5
C3	6	1
C4	6	0
?	6	3
.	6	3
Space	6	2
2ndSFT	1	0
F3	3	0
Enter	7	0
Shift	5	0



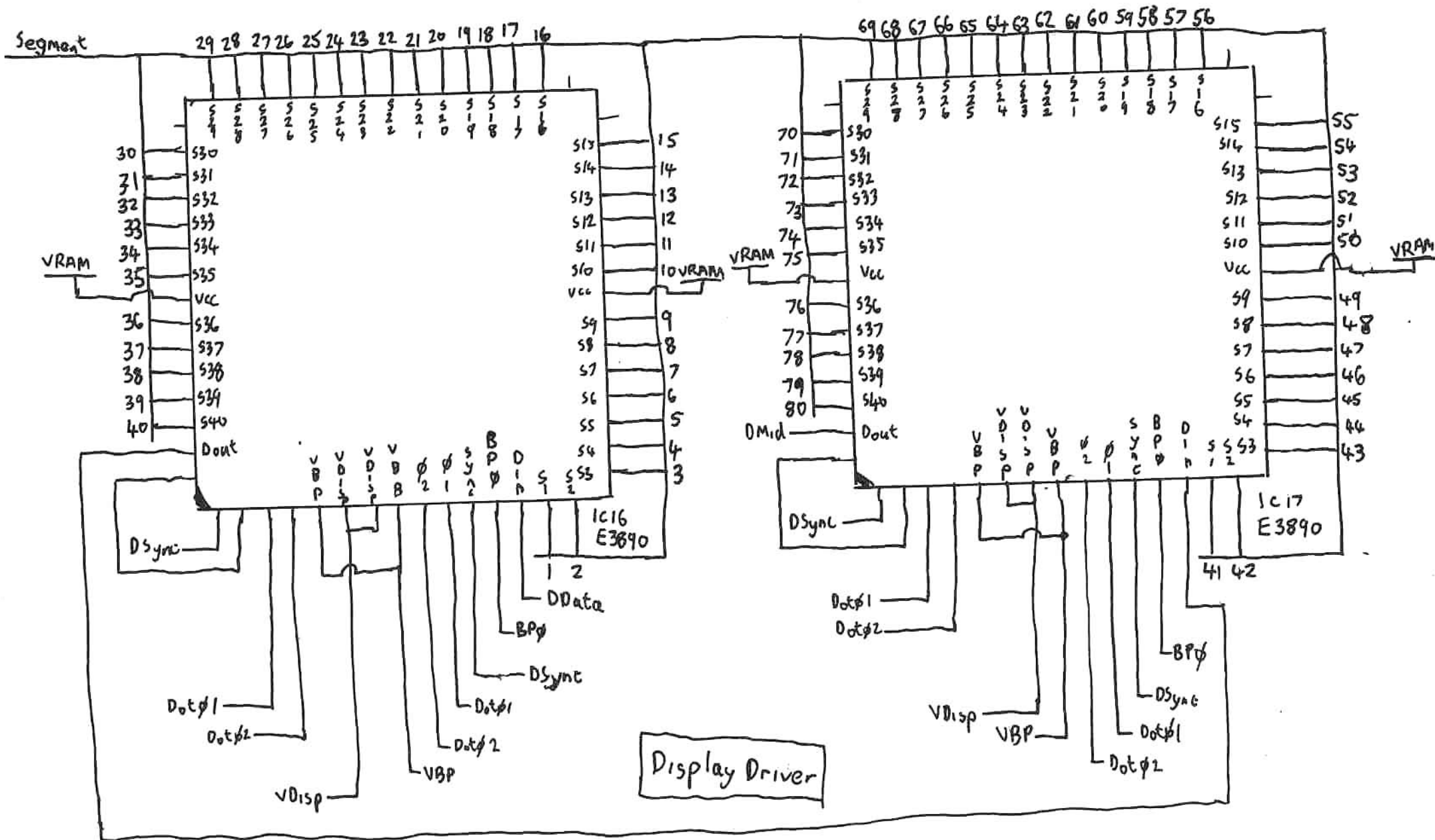
Logic PCB Connections

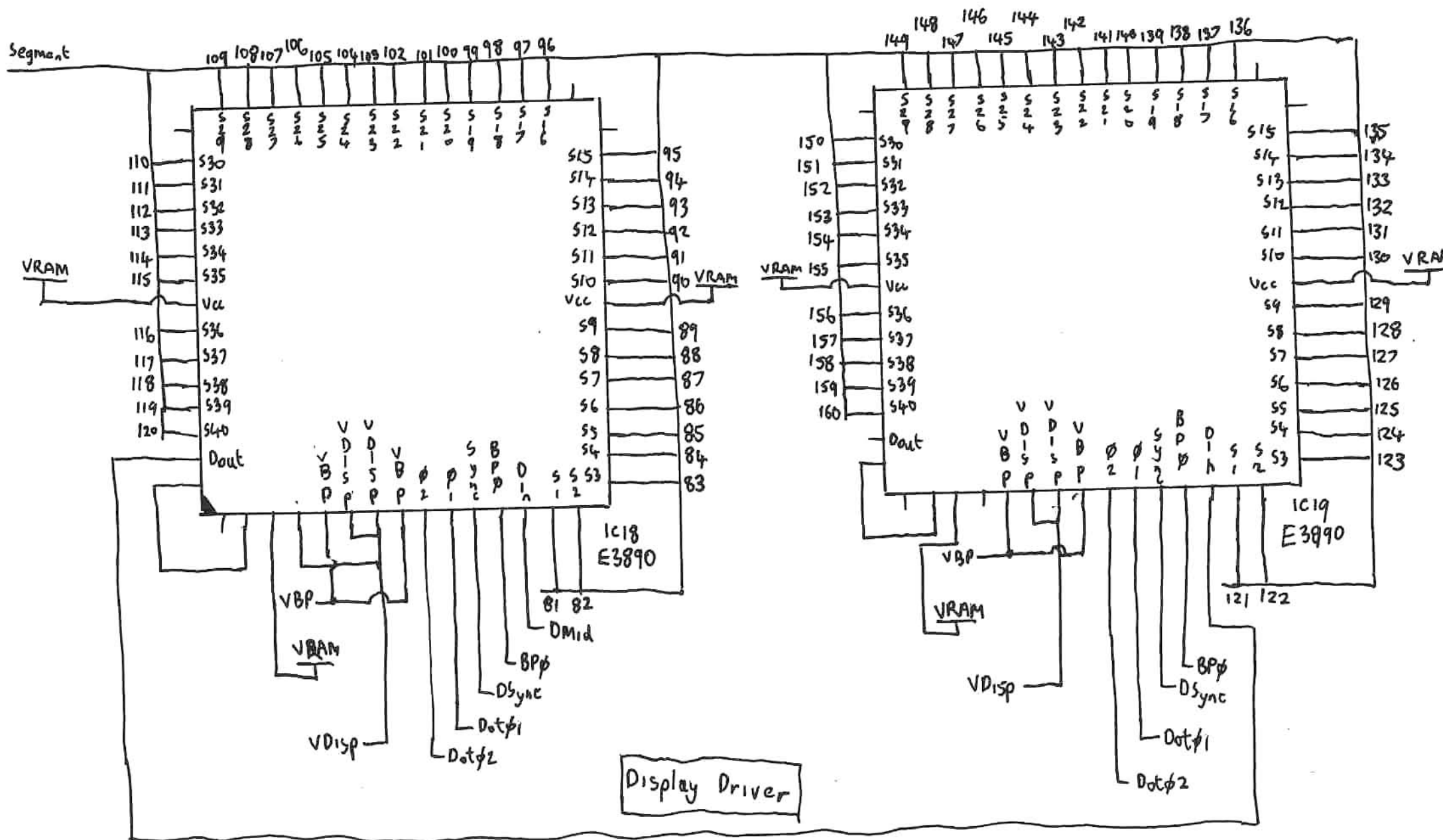


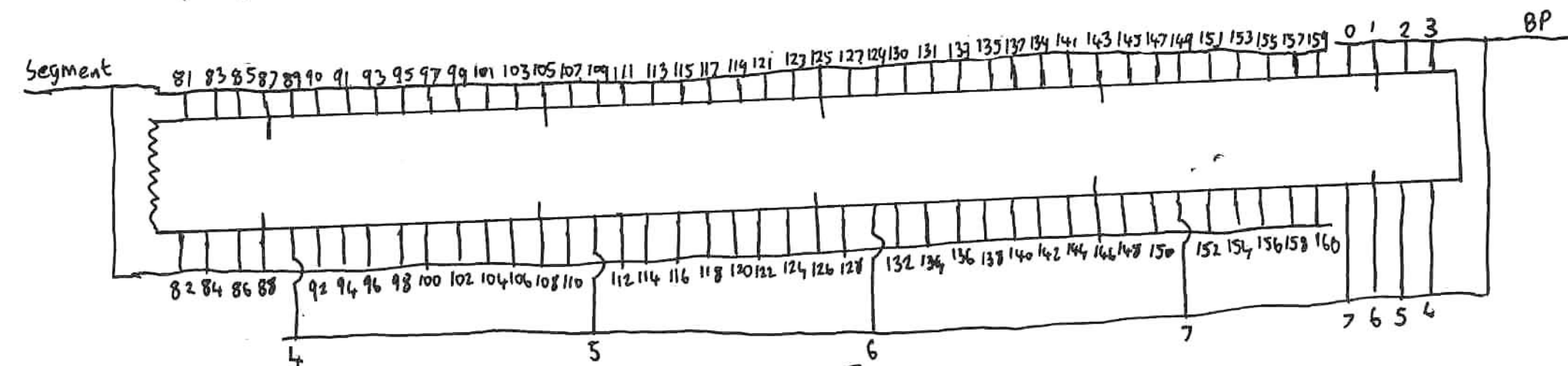
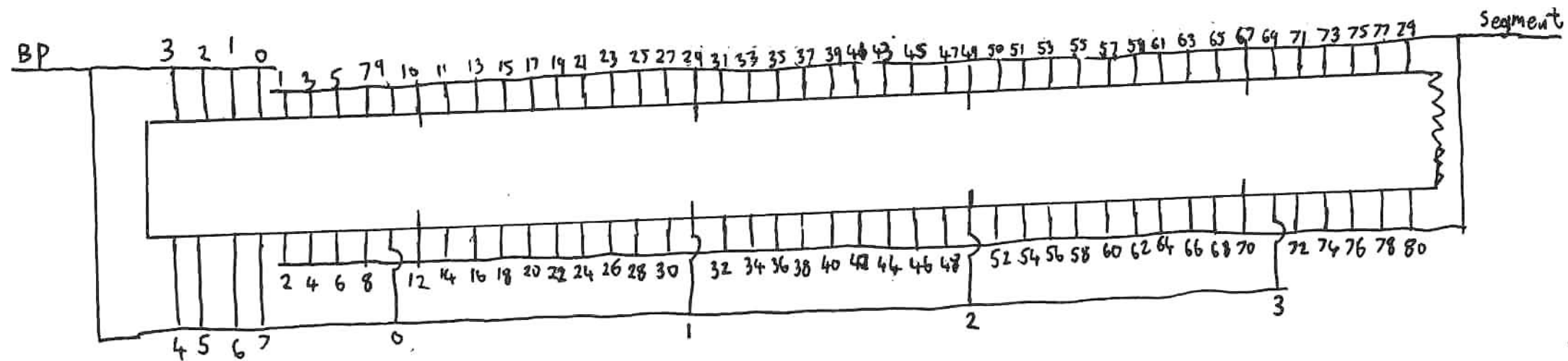
Keyboard Drive



Keyboard





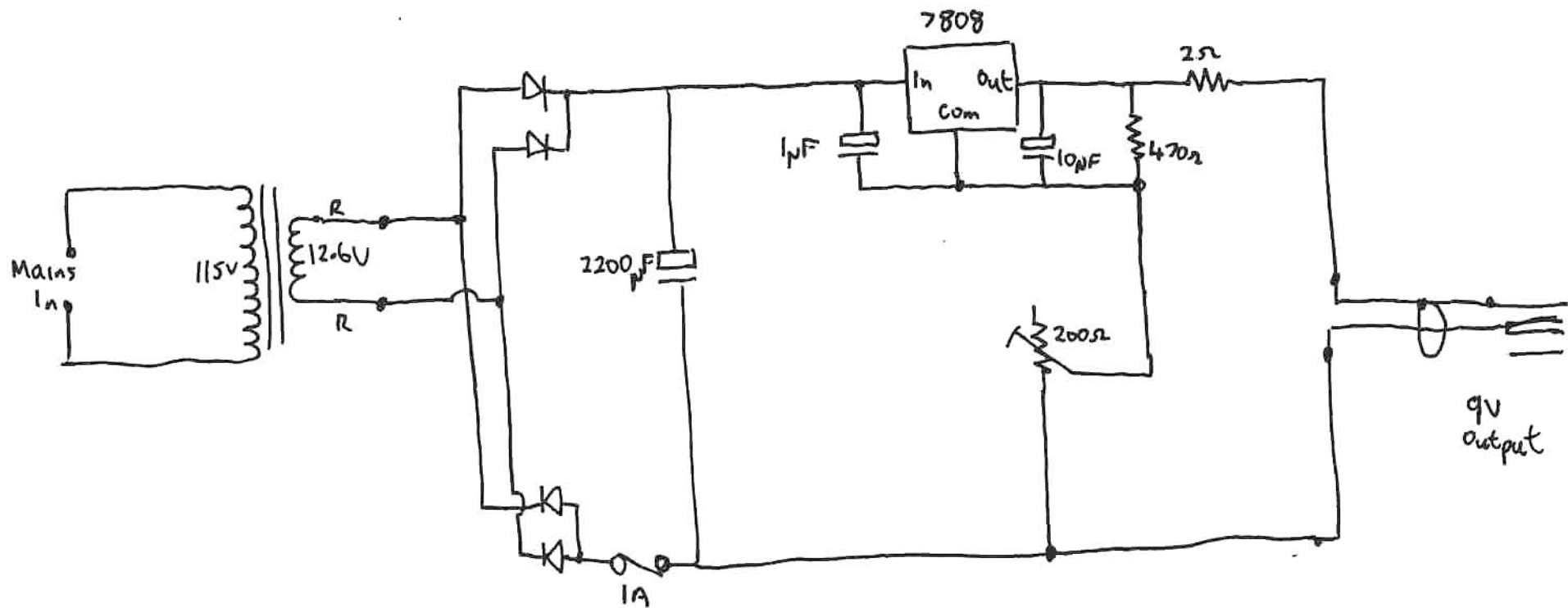


Display

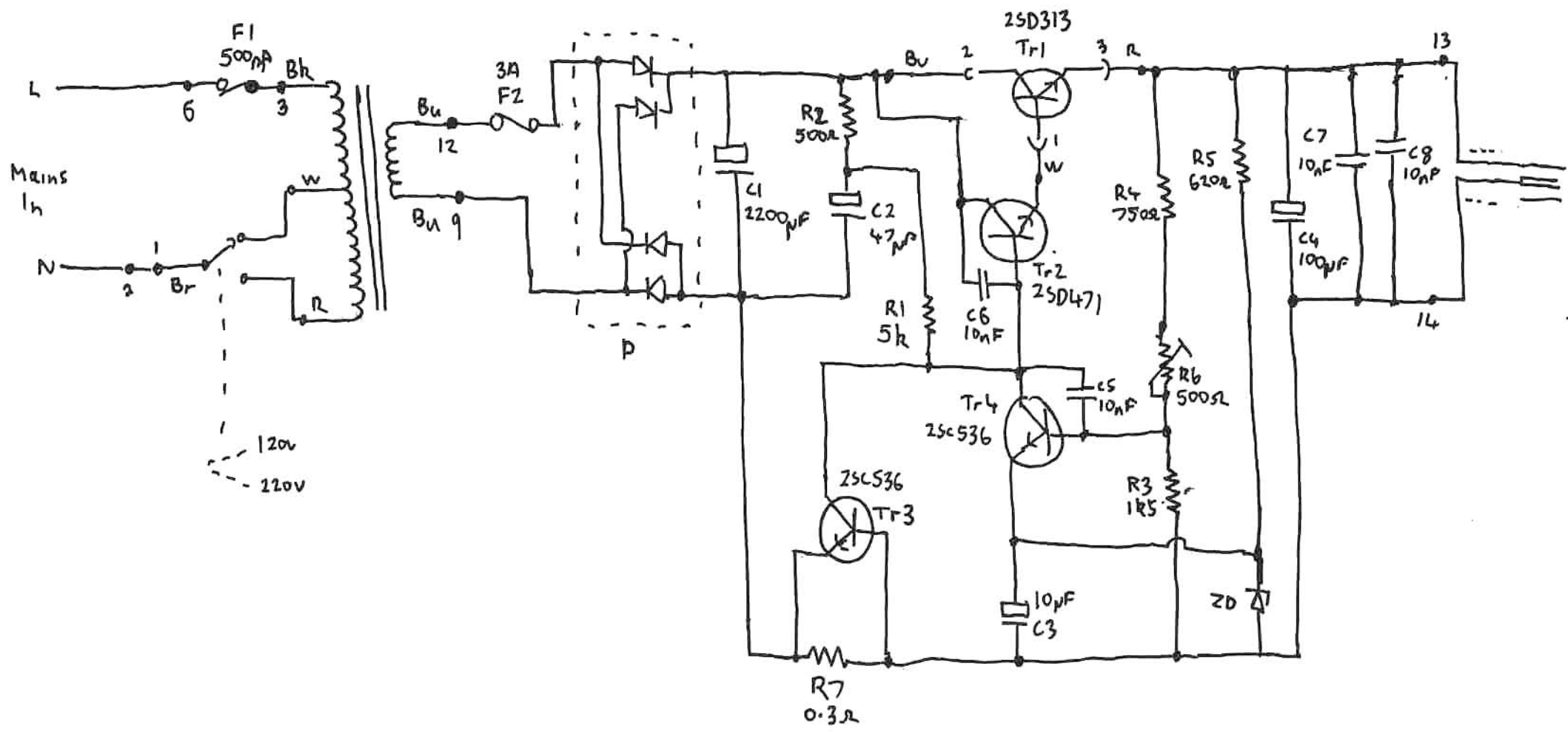
Note:

Segment 160 is the common connection for the 'BLIPS' (Annunciators). Other connections to the BP (Backplane) signals, as here

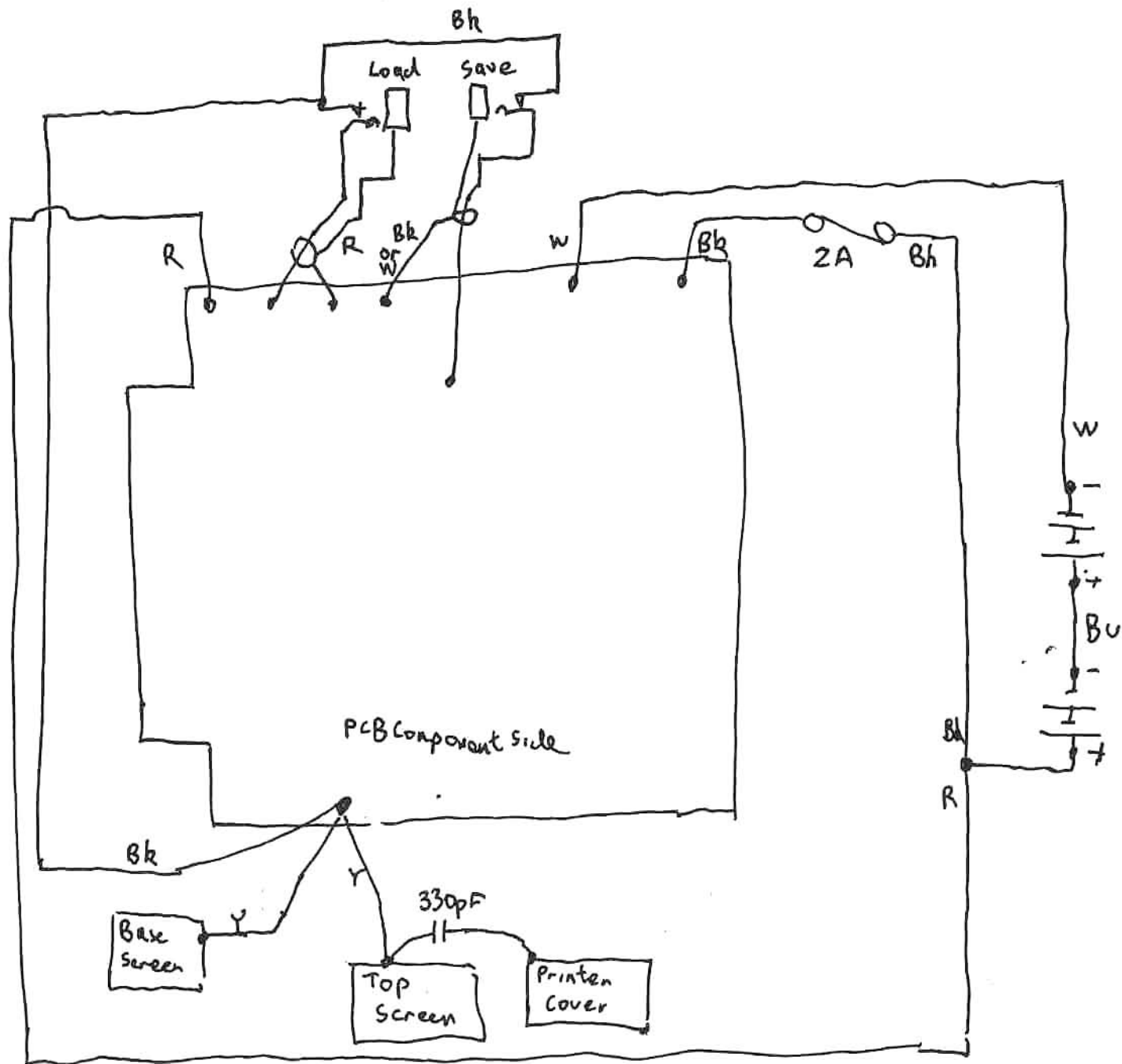




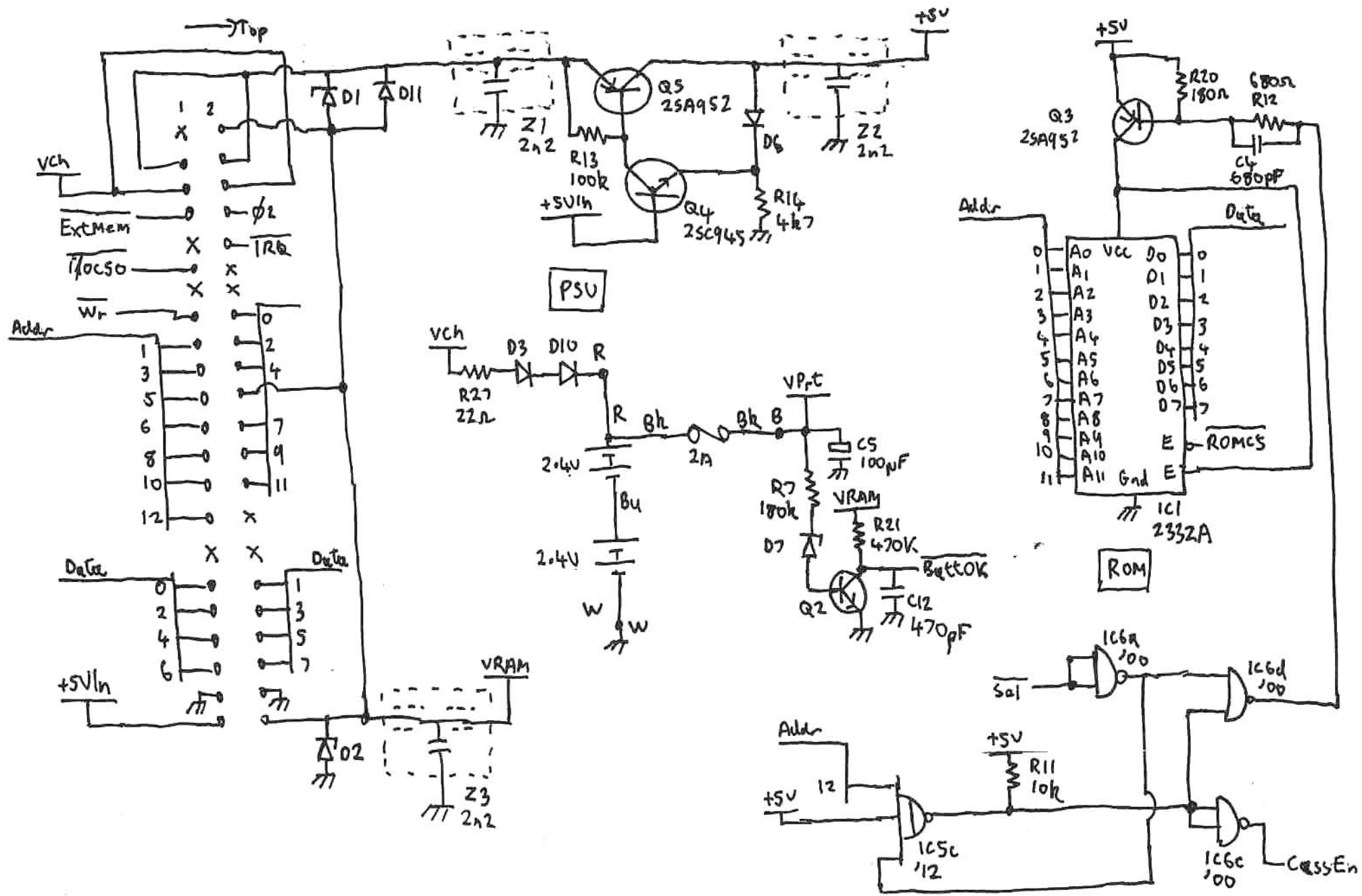
RD-9493 (US Charger)



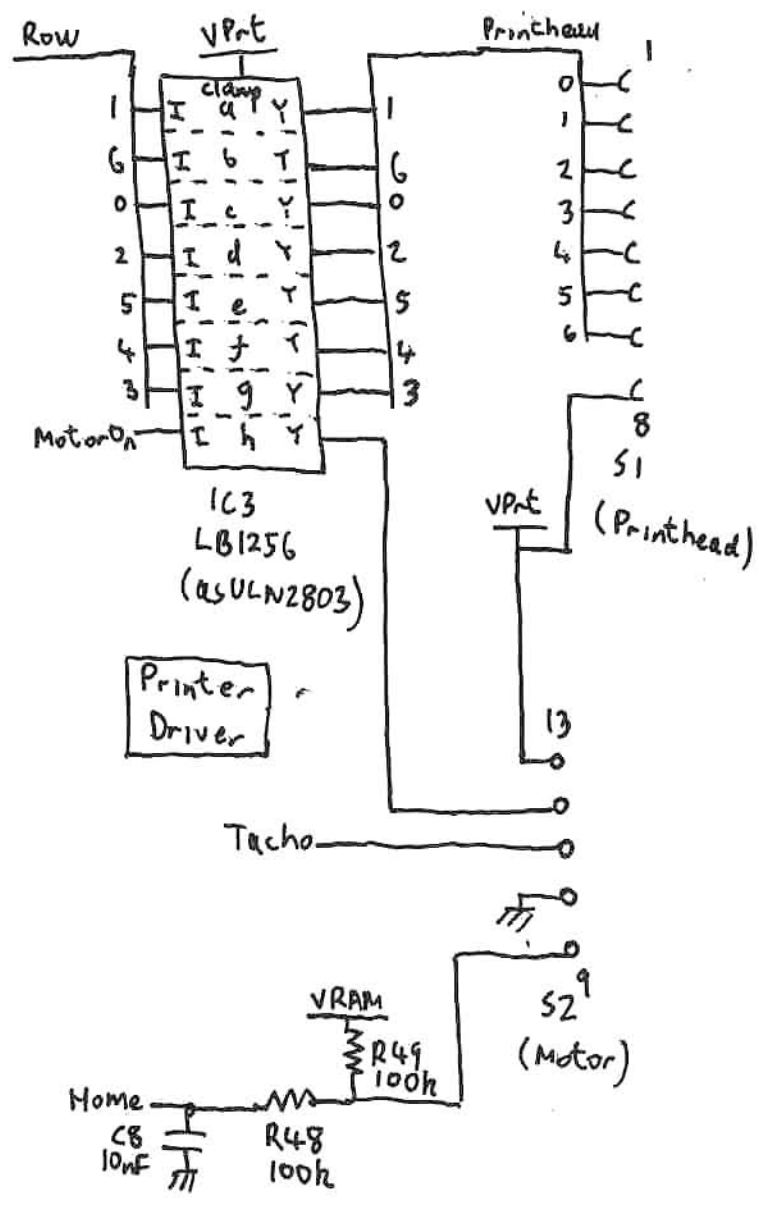
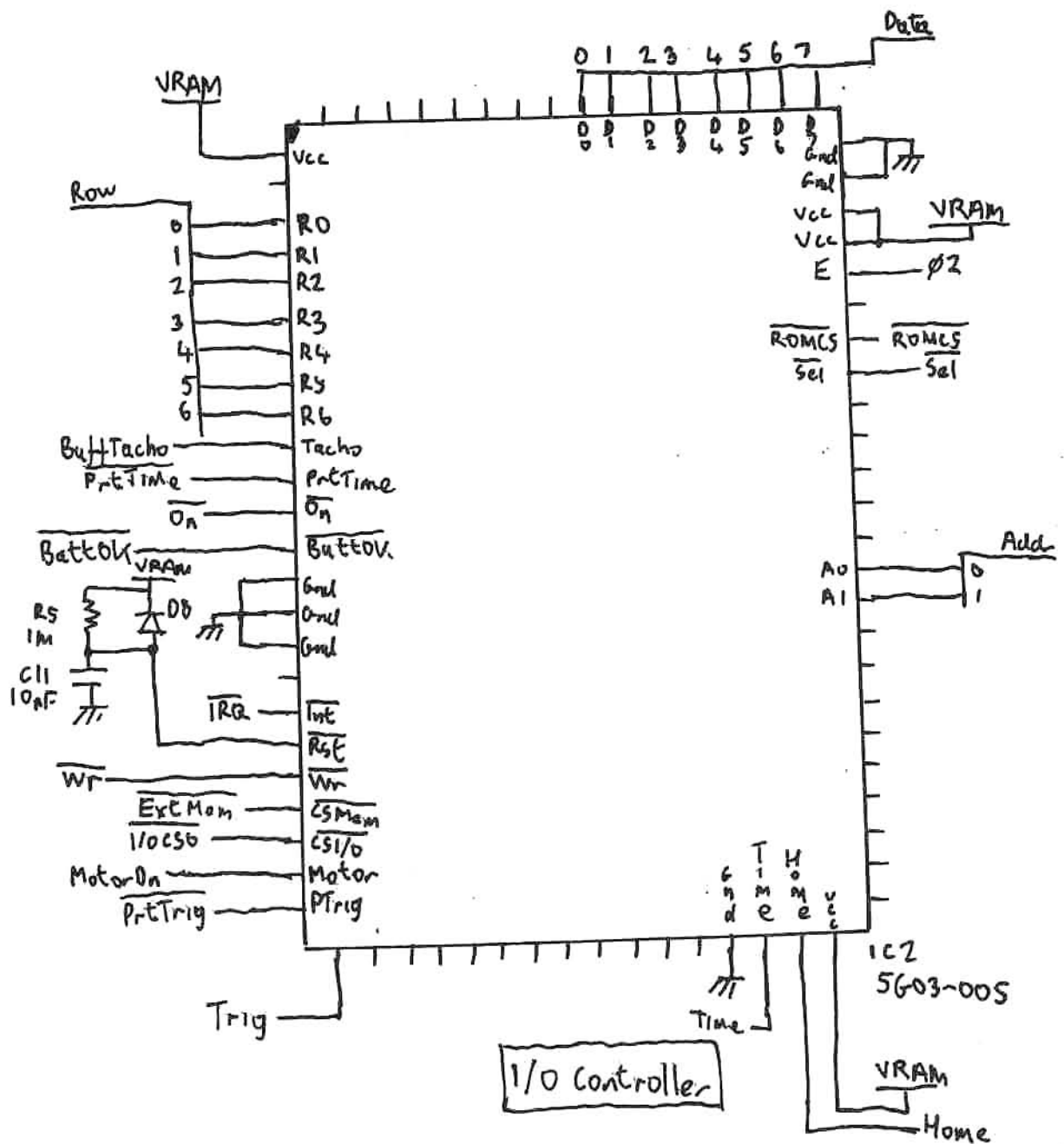
RD9498 (Universal Charger)



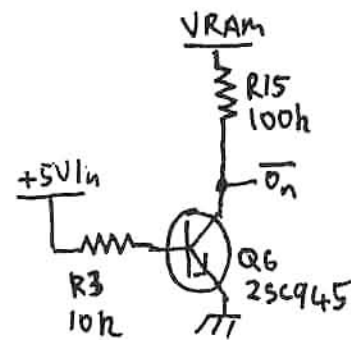
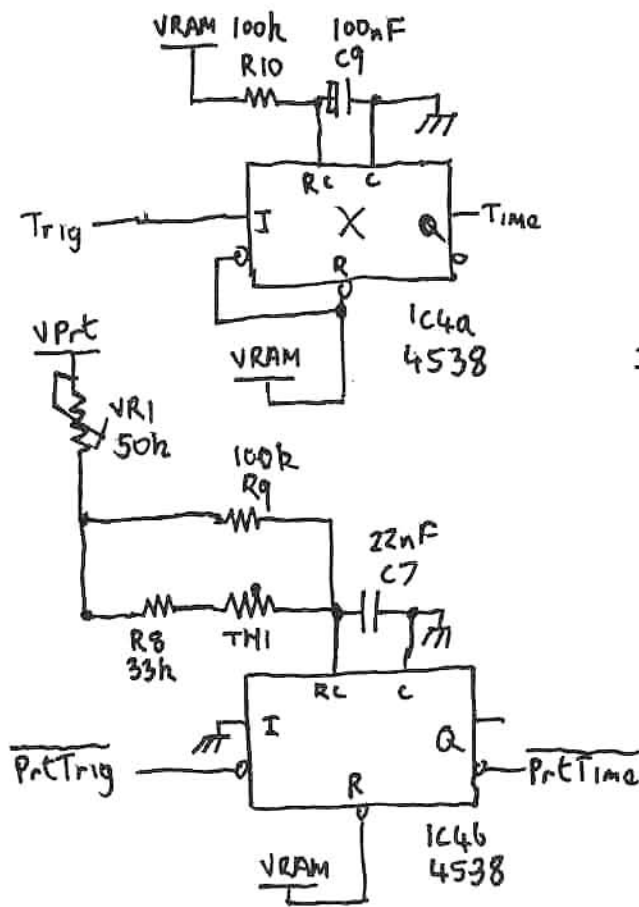
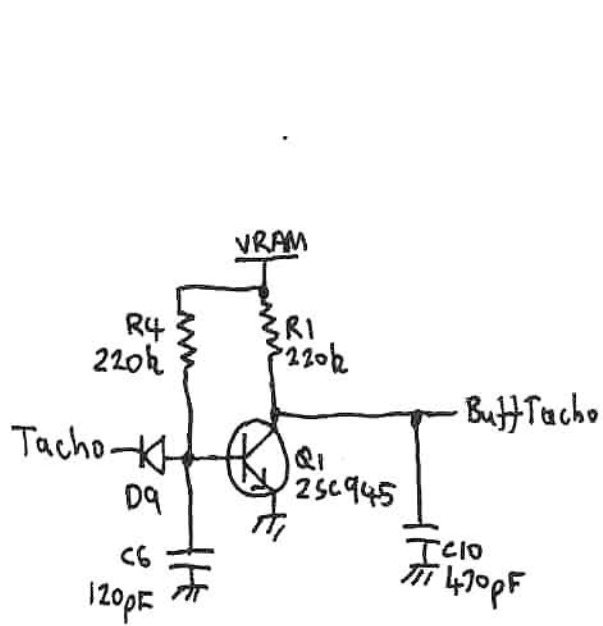
RL-P1004 Wiring



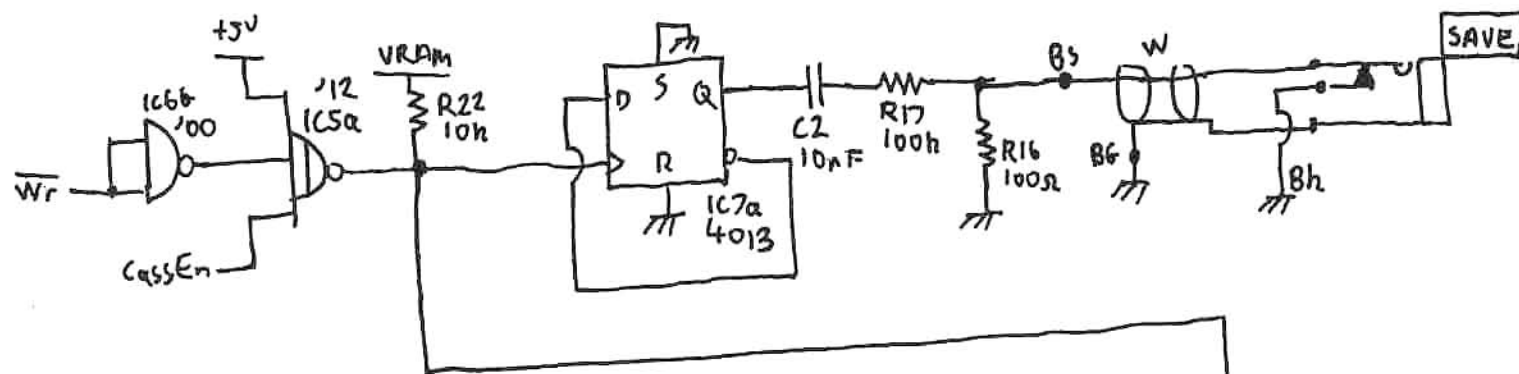
RL-P1004 Printer / Cassette Interface Sheet ①



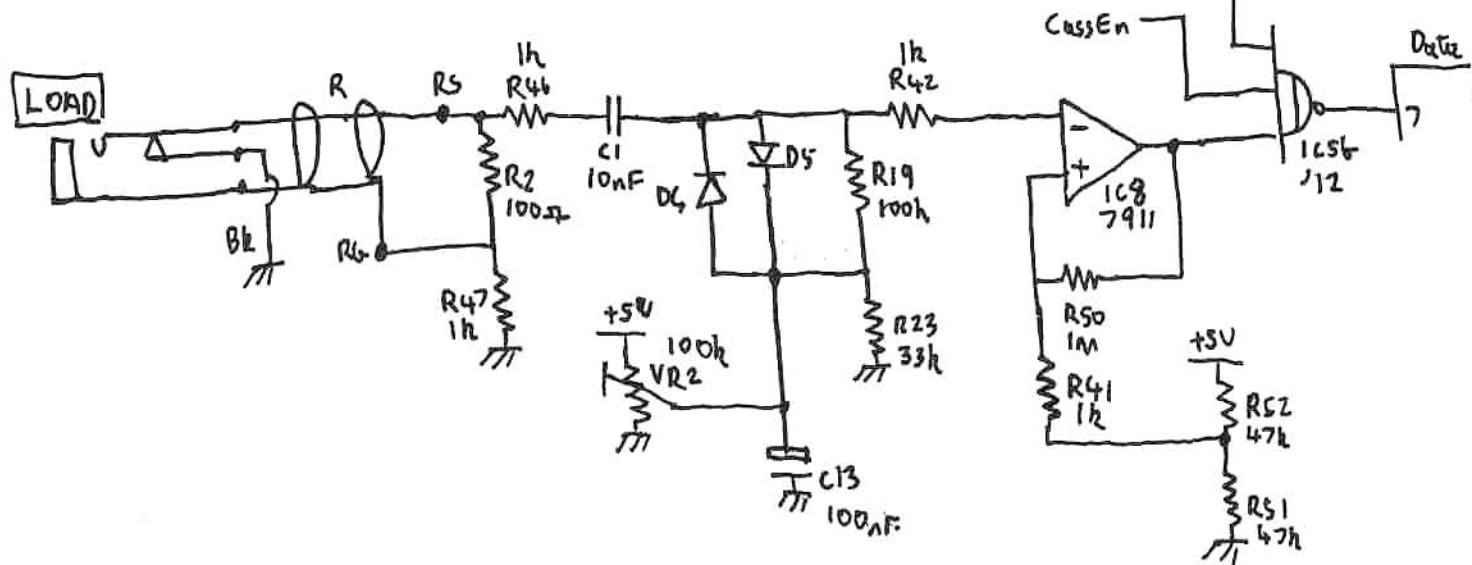
RL-P1004 Printer/Cassette Interface Sheet (2)

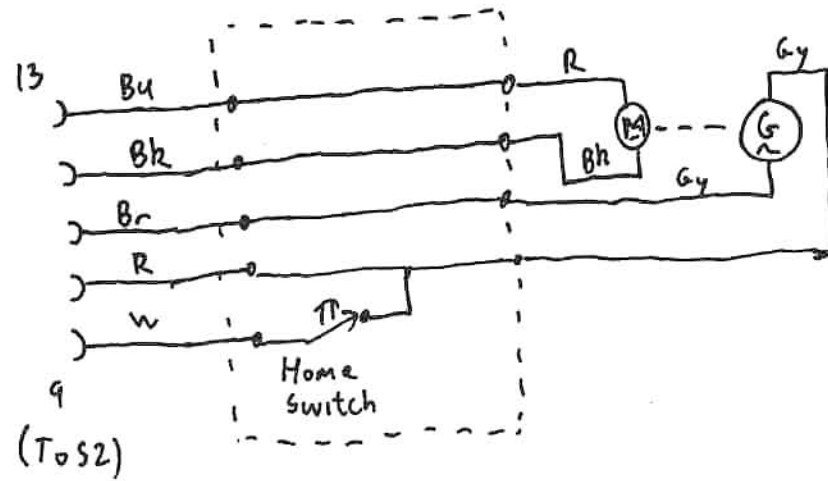
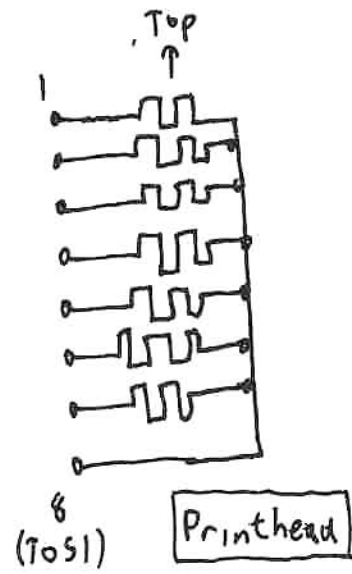


Printer Timing



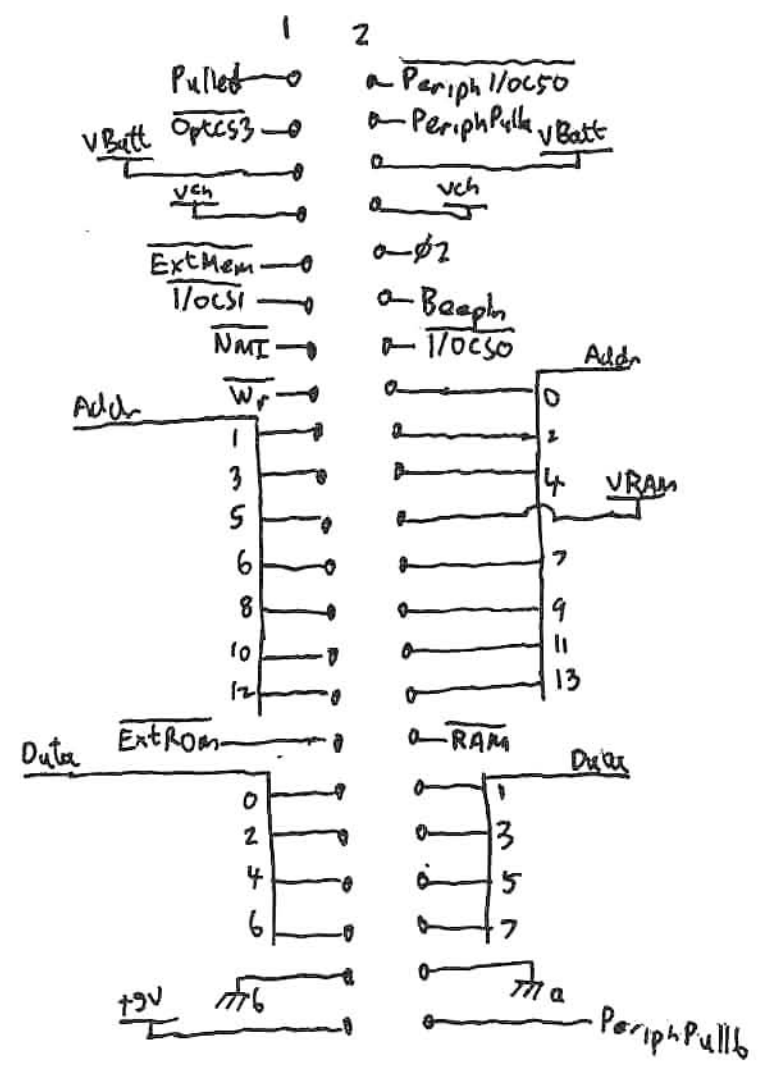
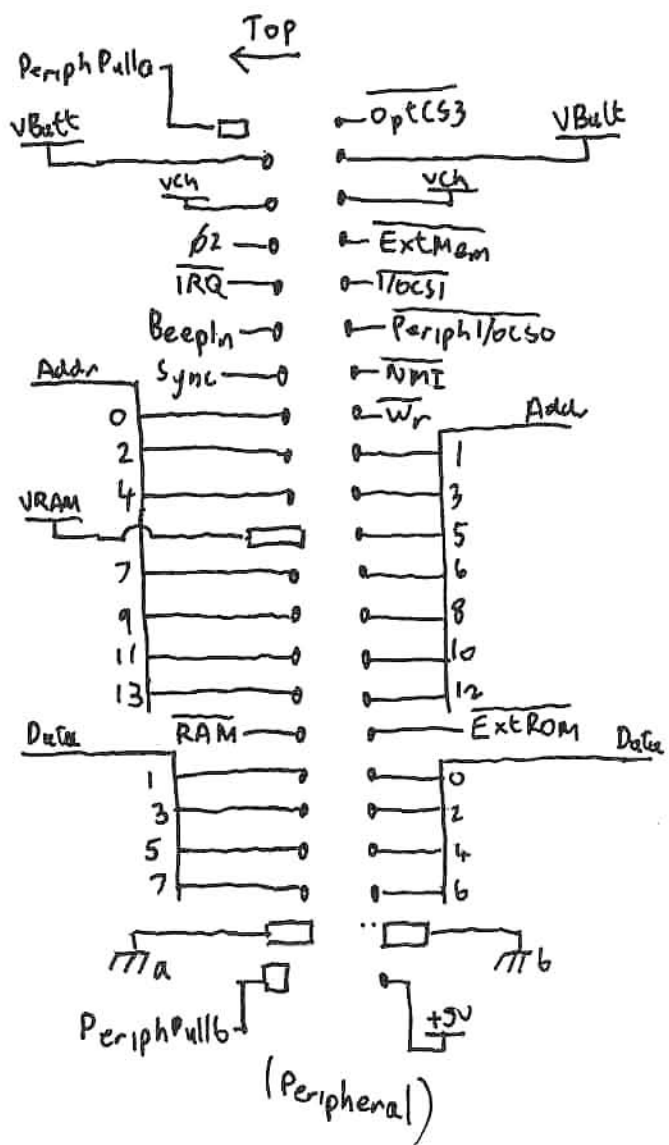
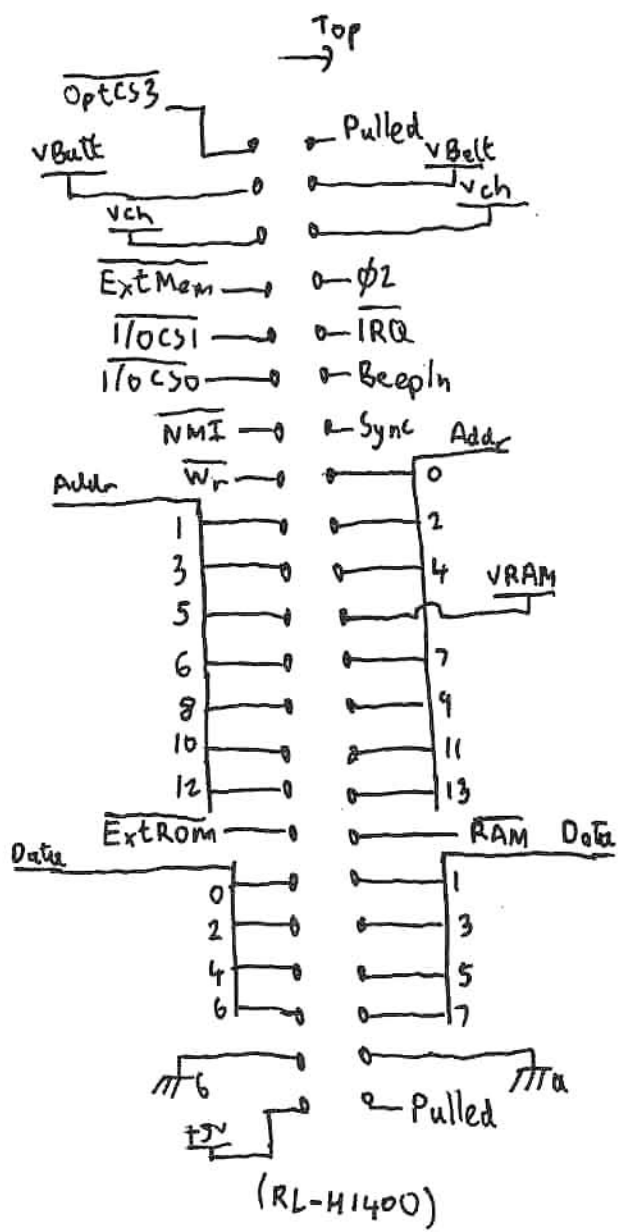
Cassette Interface





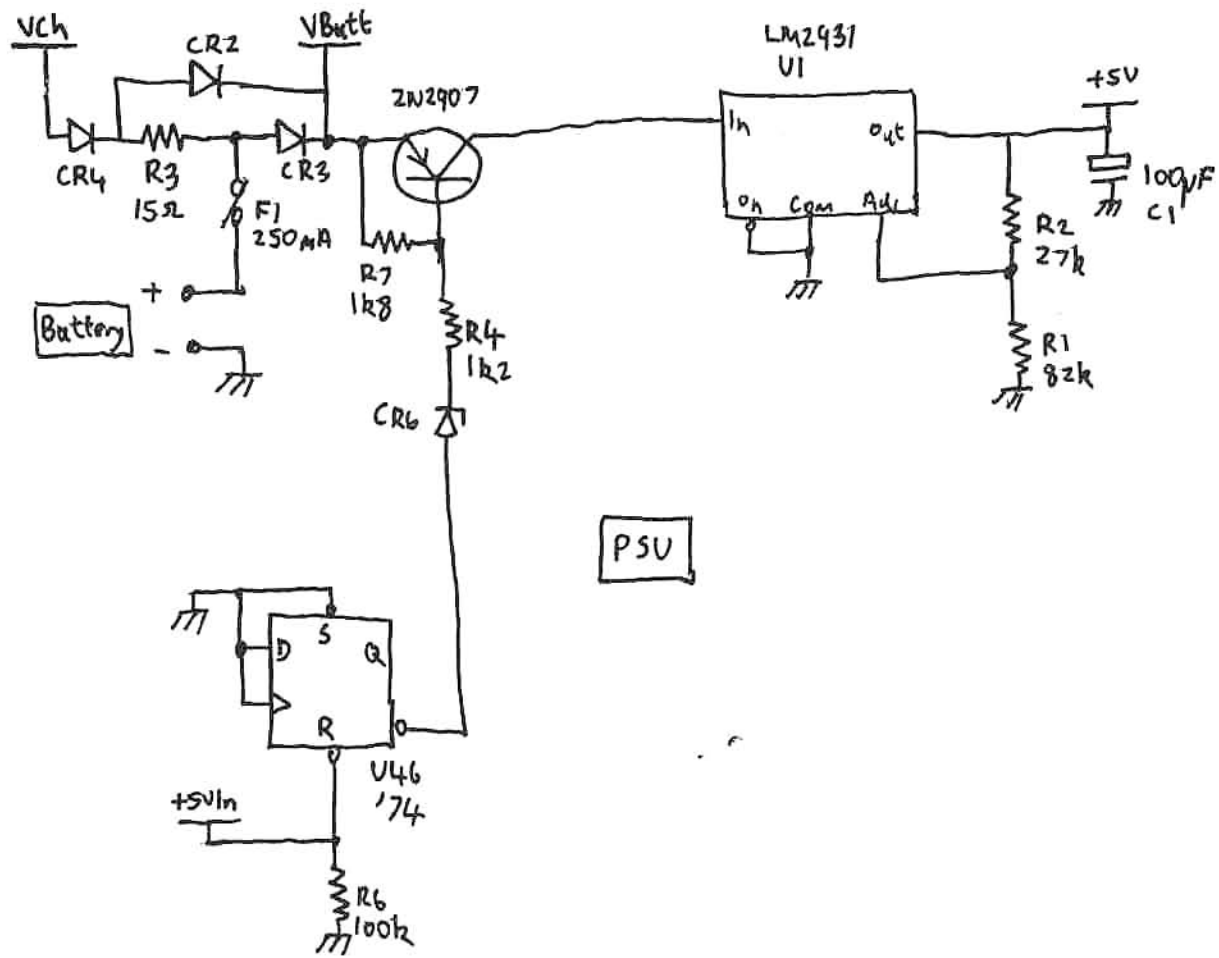
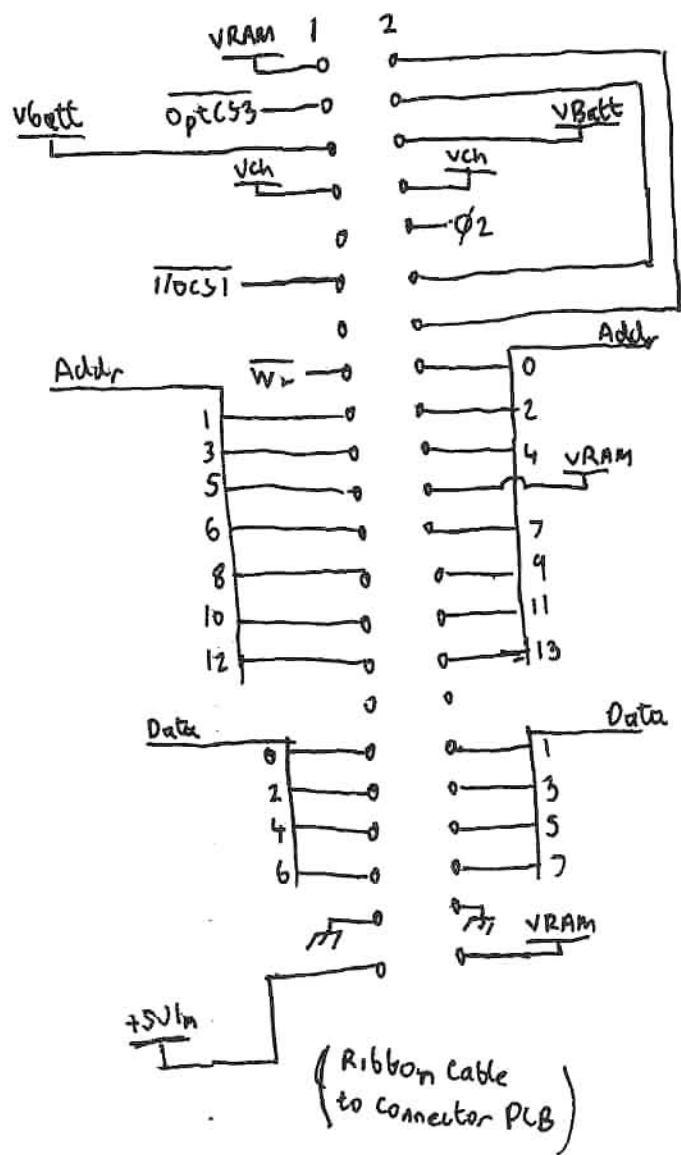
RL-P1004 Printer Wiring



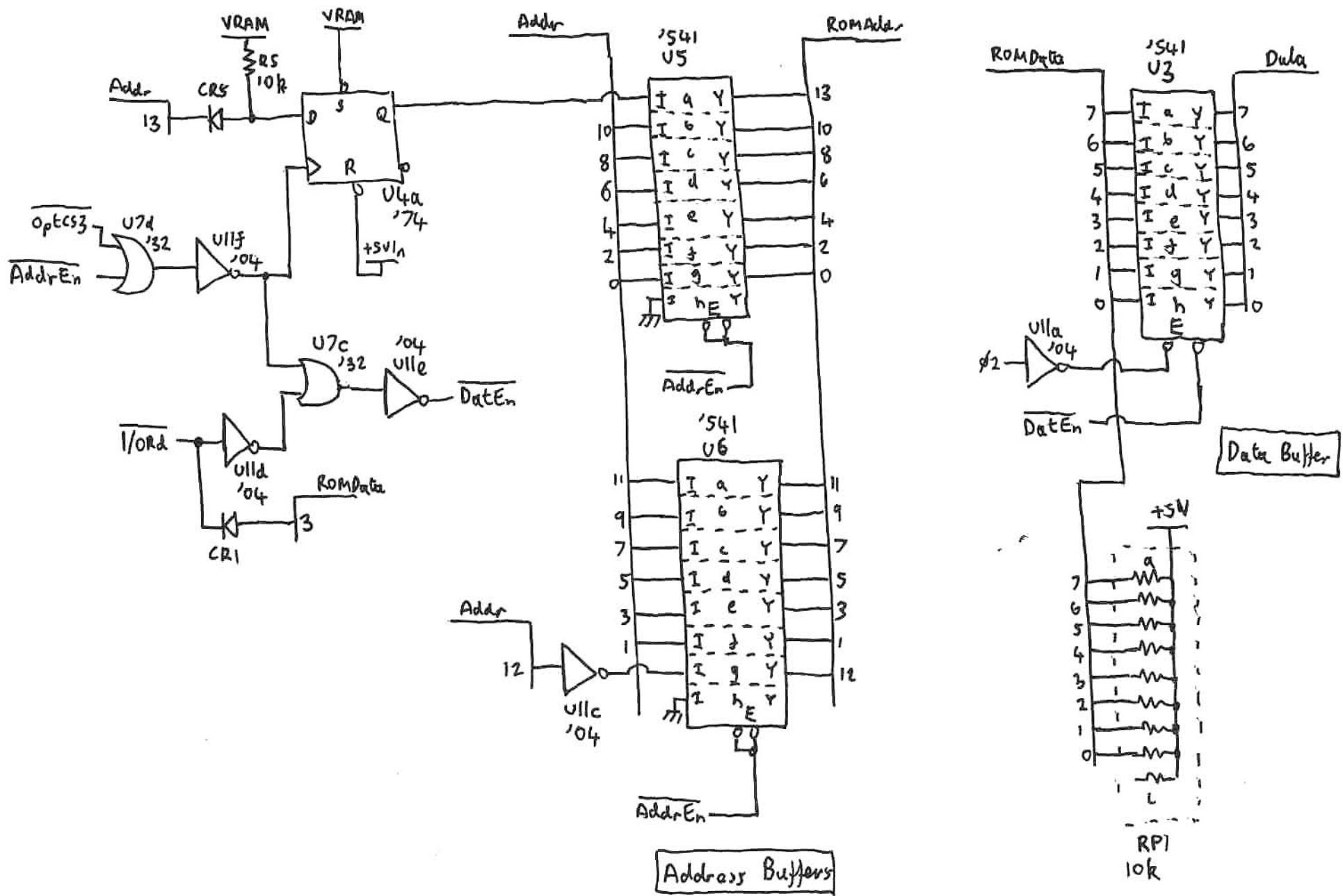


(Ribbon Cable to Logic PCB)

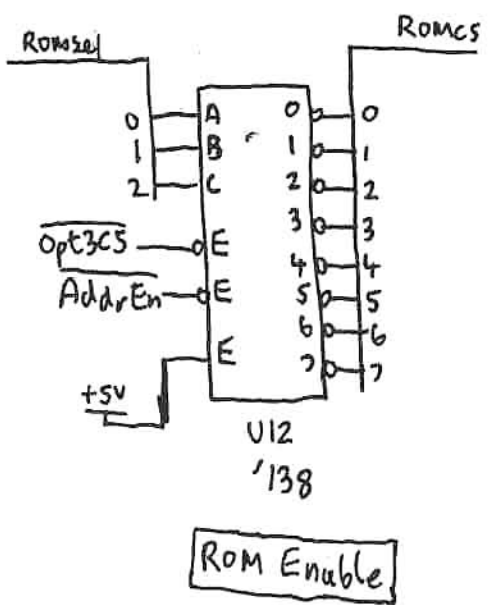
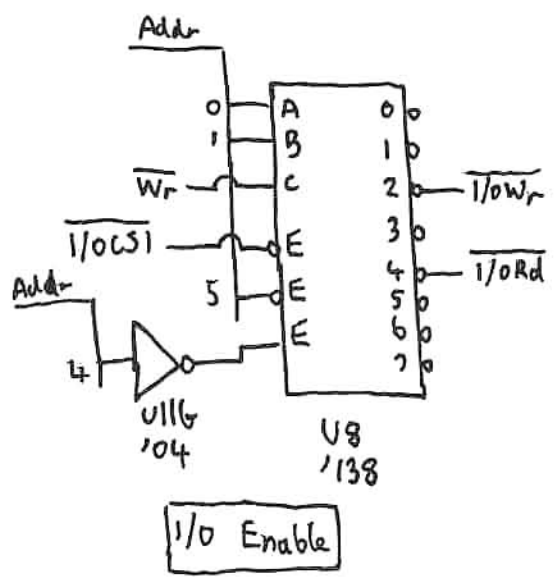
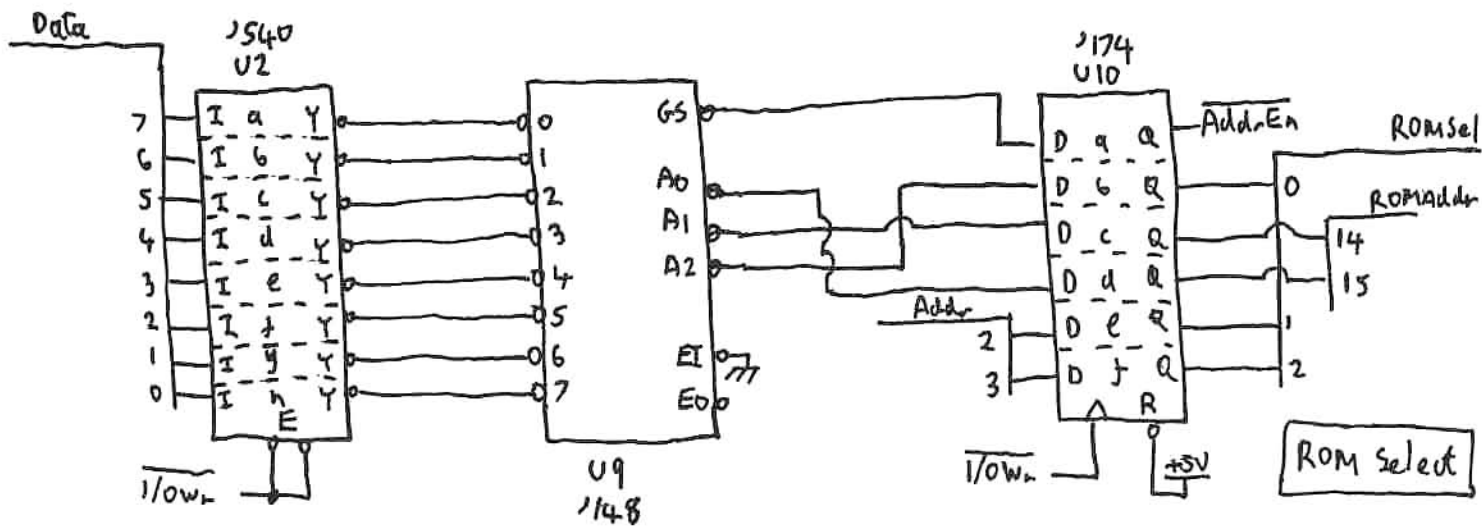
EPROM Expander Connector PCB

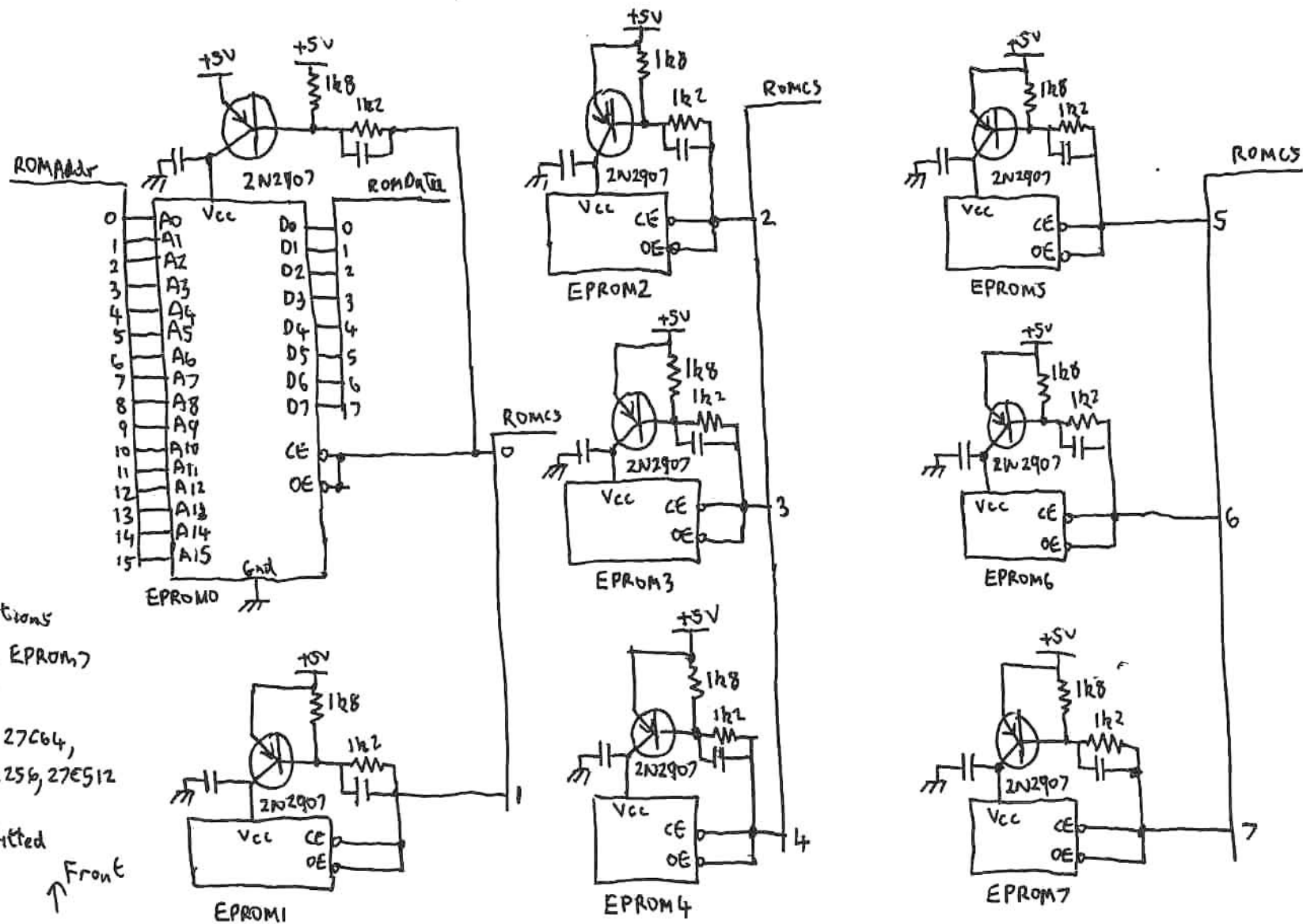


EPROM Expander Logic PCB sheet (1)



EPROM Expander Logic PCB sheet ②

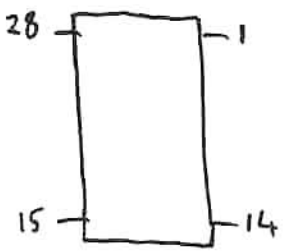




Notes

- 1) other connections to EPROM1... EPROM7 as EPROM0
- 2) EPROMs are 27C64, 27C128, 27C256, 27E512
- 3) EPROMs fitted pins up.

Front ↑



EPROM