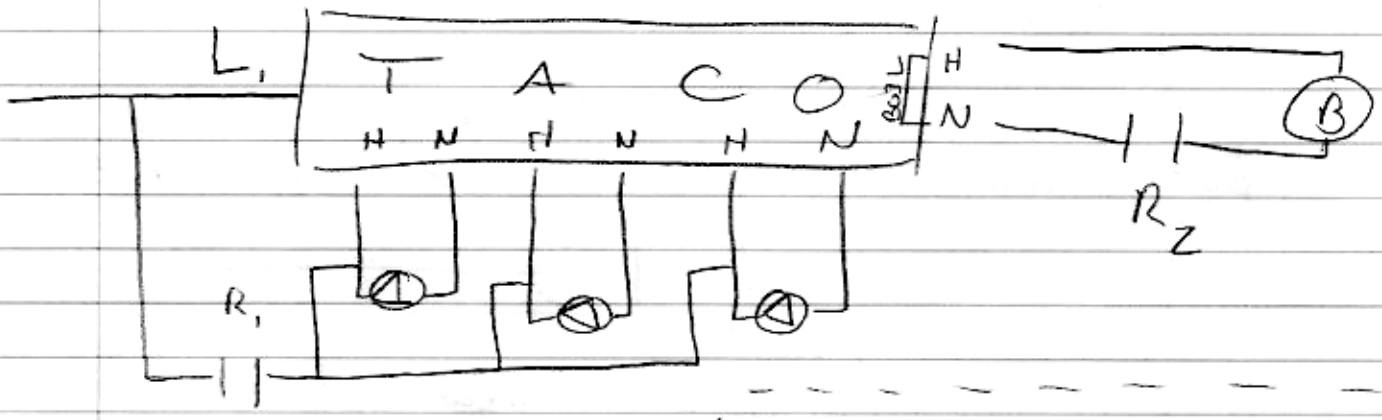
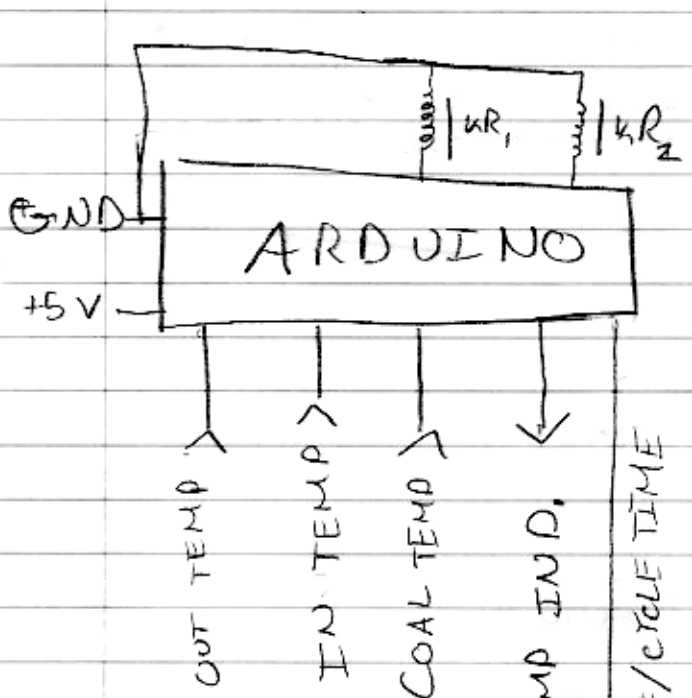
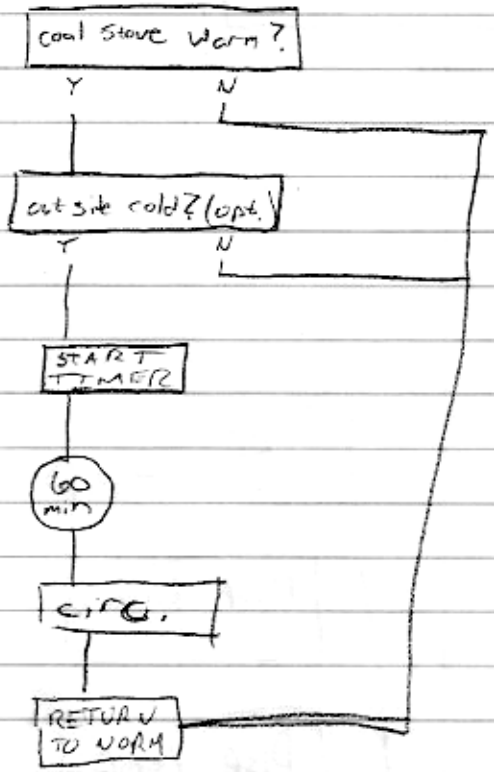






INTERFACE

Only on during certain times? other metrics?
- INDOOR TEMP
- OUTDOOR TEMP

only on when stove is hot
- COAL TEMP

linear Potentiometers
- wait
- CYCLE

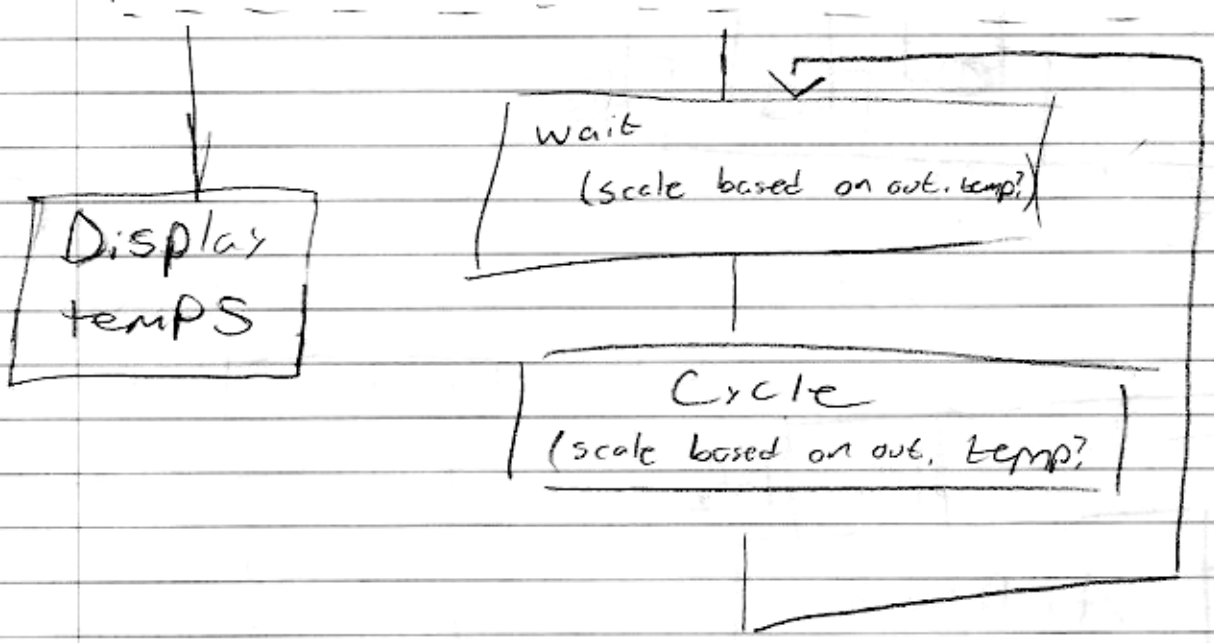
- LED Matrix?
- LCD digits?
- LCD digits w/ LED indicators?
  - ↳ ctl. settings from here

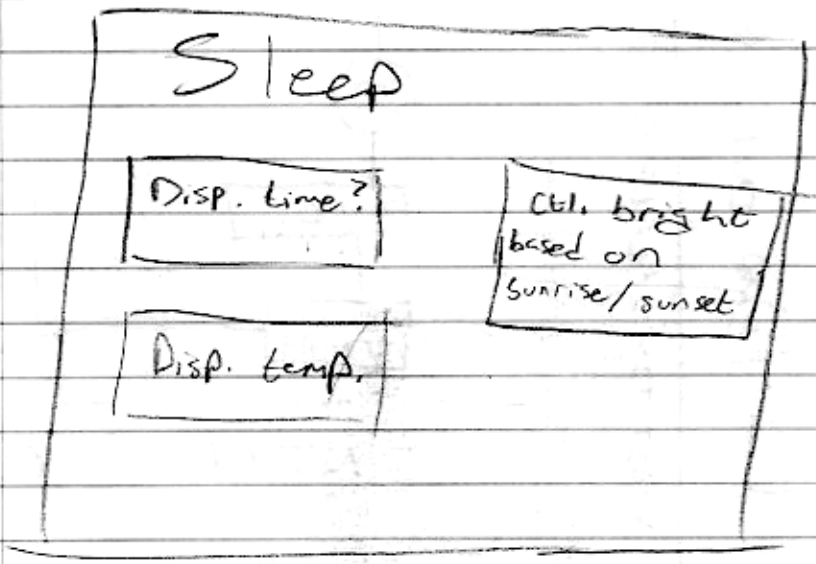
connects w/ I^2C? RS232?

Prog. Flow

Put Arduino to sleep when stove is cold

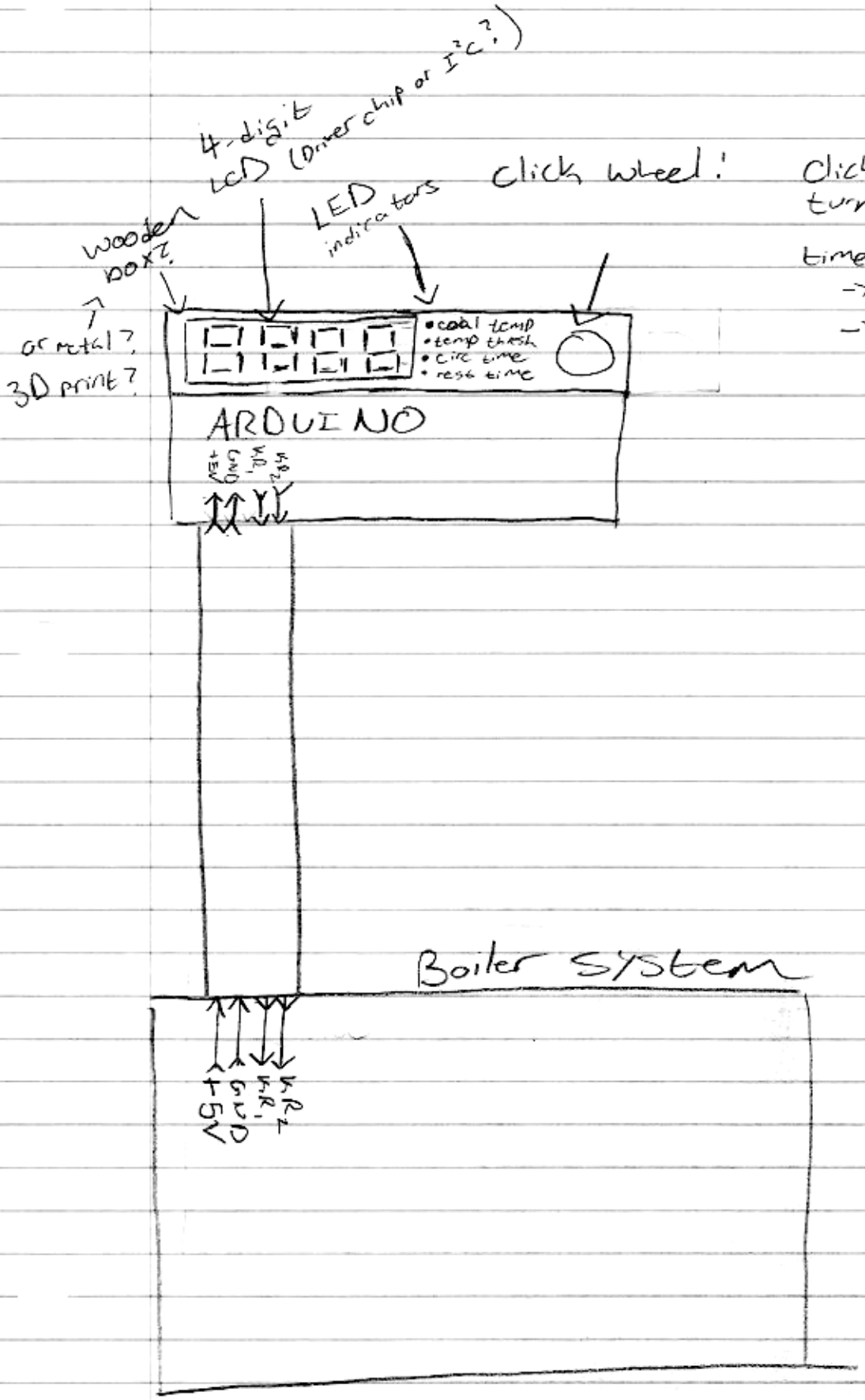
pull Arduino out of sleep when coal stove is hot

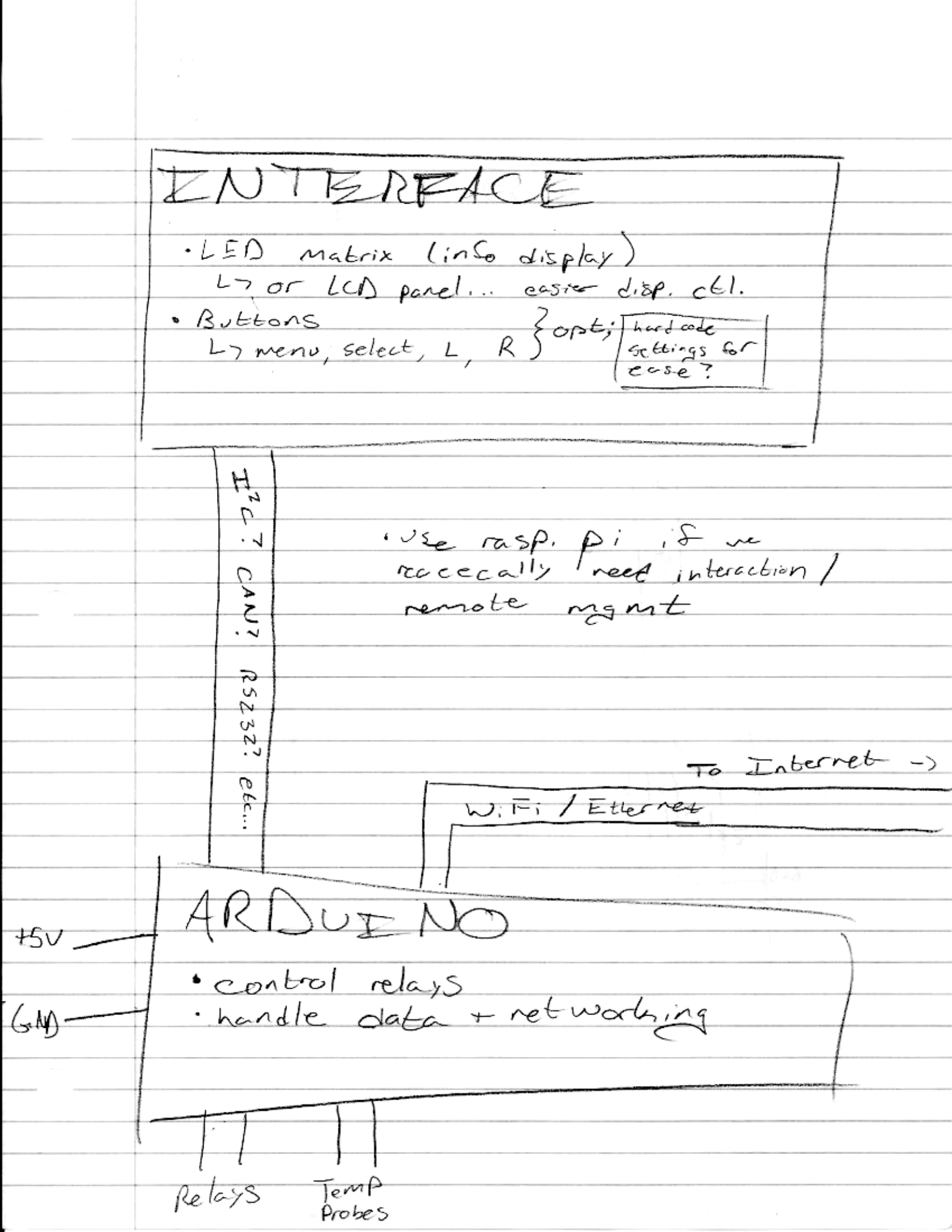


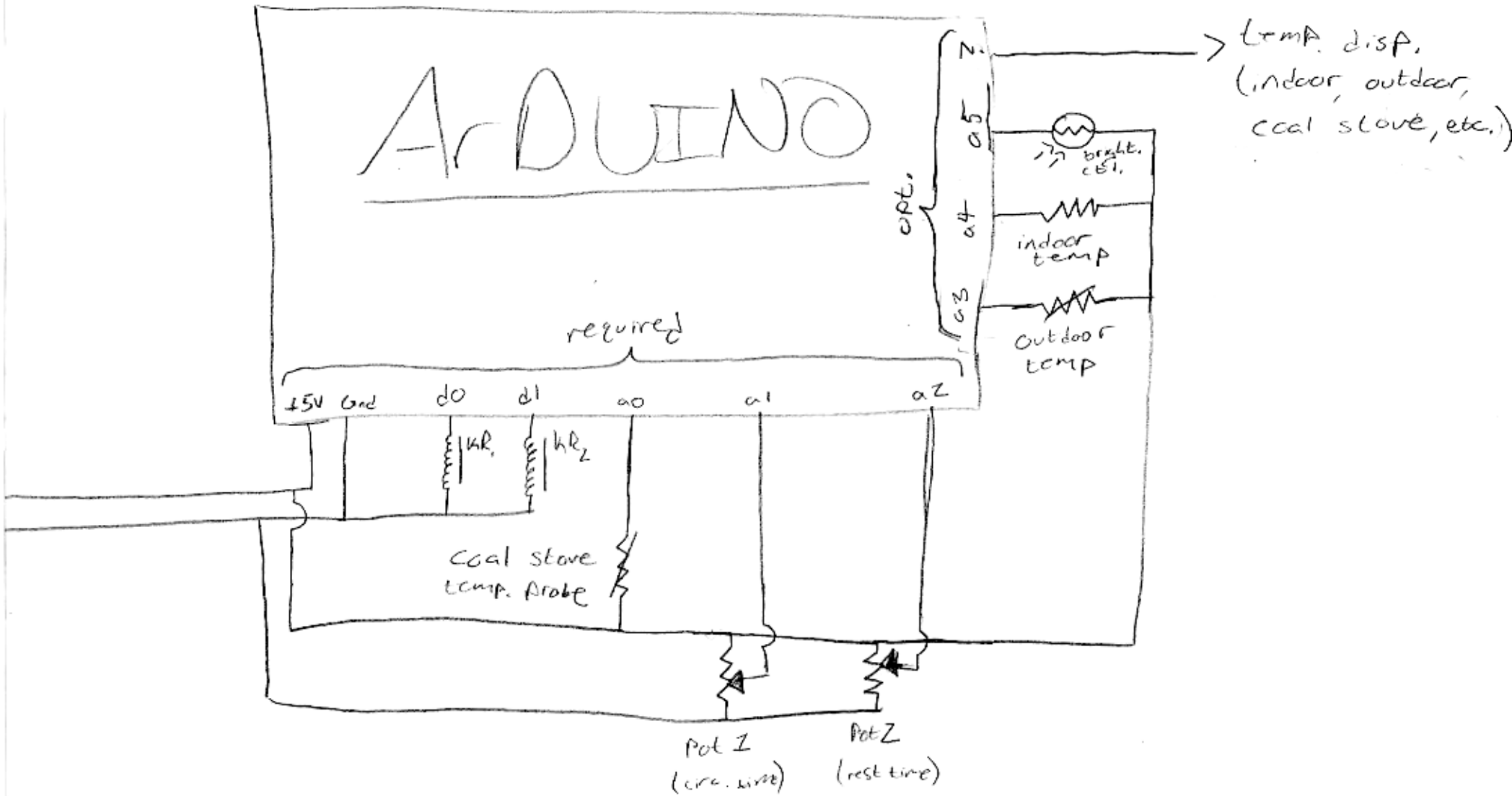


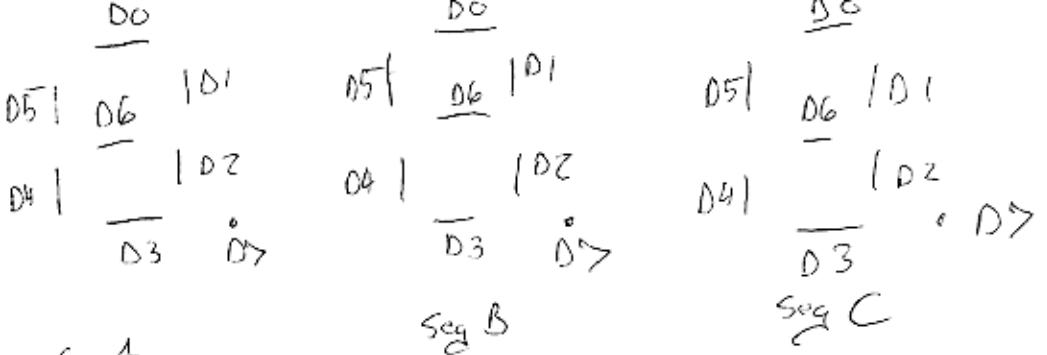
→ Network attatch Arduino (wifi?) to get time, temp, sunrise/sunset, etc.

↳ mgmt interface?


4-digit LCD (Driver chip or I²C?)
click wheel!
click = select
turn = adjust
timeout:
-> cool hot: to temp
-> cool cold: off
LED indicators
wooden box?
or metal?
3D print?
• cool temp
• temp thresh
• circ time
• resh time
ARDUINO
+5V
GND
HR1
HR2
Boiler System
+5V
GND
HR1
HR2


INTERFACE
• LED Matrix (info display)
↳ or LCD panel... easier disp. ctl.
• Buttons
↳ menu, select, L, R } opt; hard code settings for ease?
I²C? CAN? RS232? etc...
• use rasp. pi if we reeeeally need interaction / remote mgmt
To Internet ->
Wi Fi / Ethernet
ARDUINO
+5V
GND
• control relays
• handle data + networking
Relays
Temp Probes


ARDUINO
required
+5V
Gnd
d0
d1
a0
a1
a2
optional
a5
a4
a3
bright. cell
indoor temp
outdoor temp
temp. disp. (indoor, outdoor, coal stove, etc.)
kR1
kR2
coal stove temp. probe
Pot 1 (circ. time)
Pot 2 (rest time)



0: D0 D1 D2 D3 D4 D5

1: D1 D2

2: D0 D1 D3 D4 D6

3: D0 D1 D2 D3 D6

4: D1 D2 D5 D6

5: D0 D2 D3 D5 D6

6: D0 D2 D3 D4 D5 D6

7: D0 D1 D2 D5

8: D0 - D6

9: D0 D1 D2 D3 D5 D6

(us): D3

A: D0 D1 D2 D4 D5 D6

B: D2 D3 D4 D5 D6

c: D3 D4 D6

d: D1 D2 D3 D4 D6

E: D0 D3 - D6

F: D0 D4 - D6

h: D2 D4 D5 D6

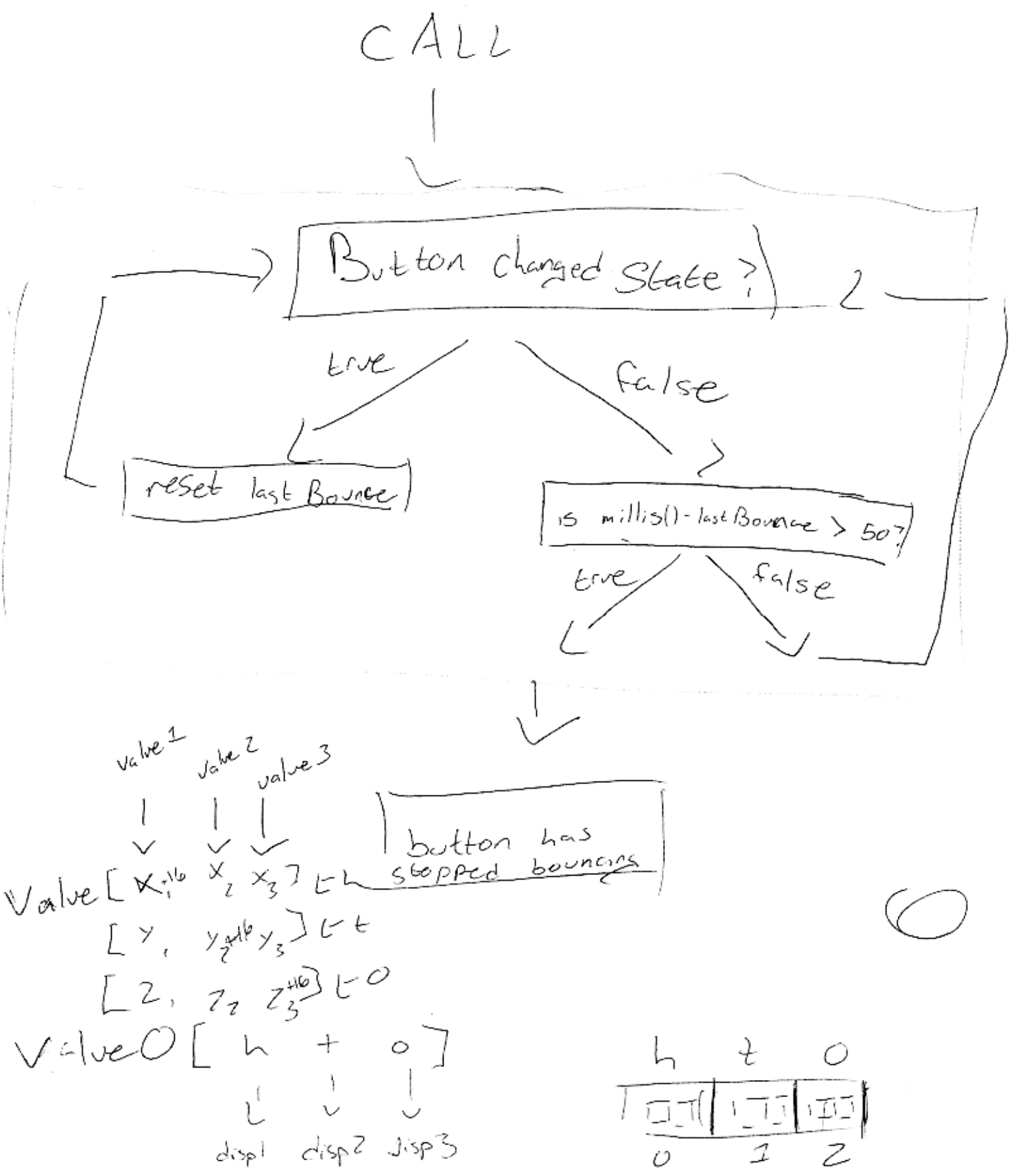
L: D3 D4 D5

O: D2 - D4 D6

P: D0 D1 D4 - D6

r: D4 D6

U: D2 - D4



Value_index [value][place]