User manual

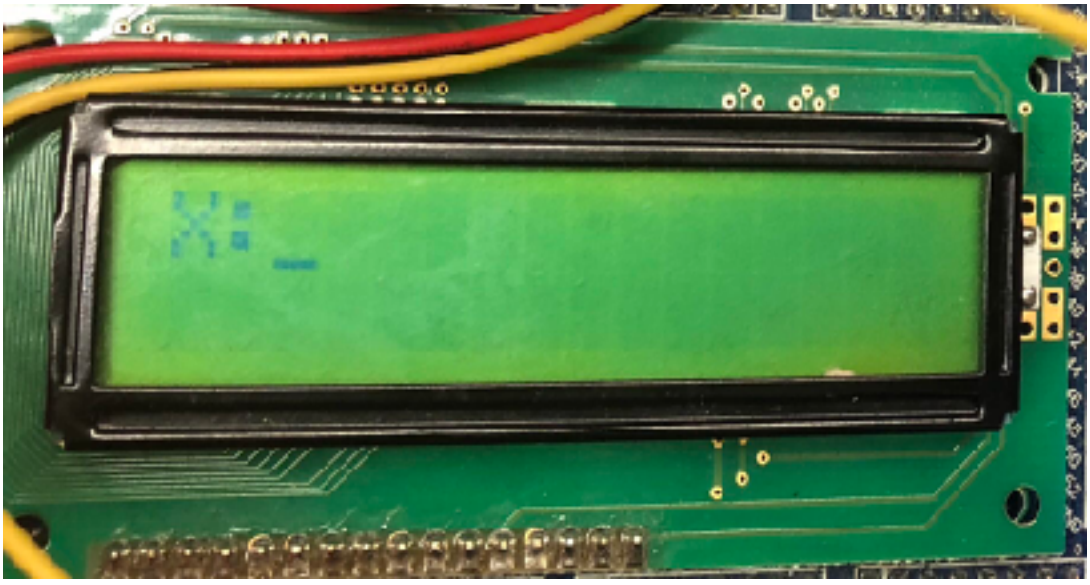
1. Wiring

For projfinall.hex, the following connections should be made. These connections are described in terms of the labelling on the board.

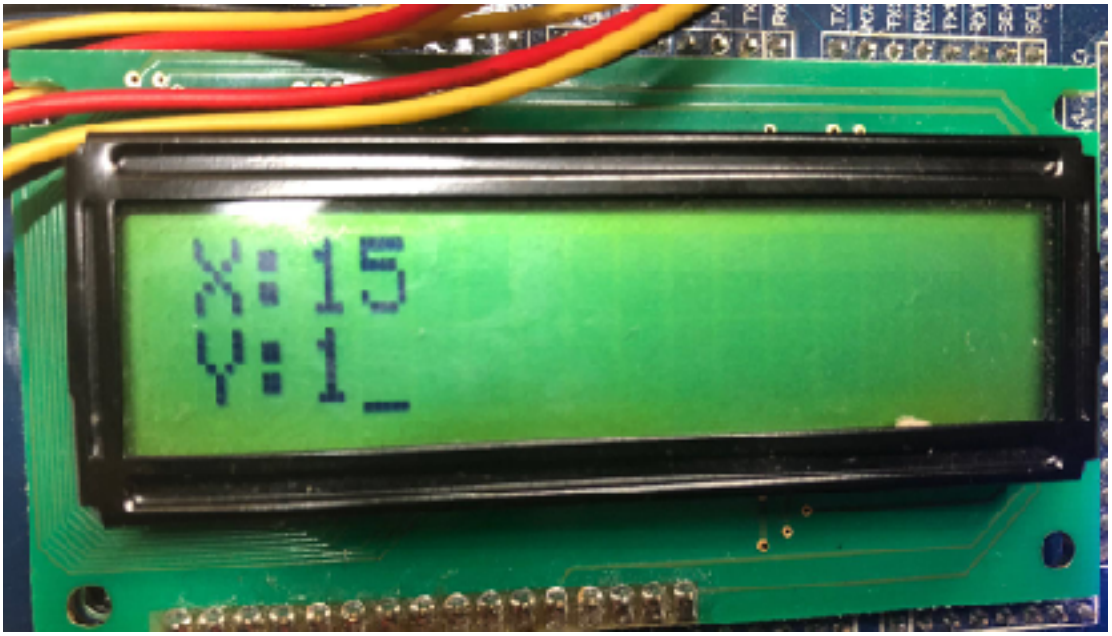
AVR Pins (top and bottom row)		Input/Output Device Pins (middle row)	
Port Group	Pin	Port Group	Pin
PORT F	PF0	LCD DATA	D0
PORT F	PF1	LCD DATA	D1
PORT F	PF2	LCD DATA	D2
PORT F	PF3	LCD DATA	D3
PORT F	PF4	LCD DATA	D4
PORT F	PF5	LCD DATA	D5
PORT F	PF6	LCD DATA	D6
PORT F	PF7	LCD DATA	D7
PORT E	PE5	LCD CTRL	BL
PORT E	PE2	MOTOR	MOT
PORT D	TDX2	MOTOR	OpO
PORT D	RDX2	INPUTS	PB1
PORT D	RDX3	INPUTS	PB0
PORT A	PA3	MOTOR	LED
PORT A	PA4	LCD CTRL	BE
PORT A	PA5	LCD CTRL	RW
PORT A	PA6	LCD CTRL	E
PORT A	PA7	LCD CTRL	RS
PORT L	PL0	LED BAR	LED0
PORT L	PL1	LED BAR	LED1
PORT L	PL2	LED BAR	LED2
PORT L	PL3	LED BAR	LED3
PORT L	PL4	LED BAR	LED4
PORT L	PL5	LED BAR	LED5
PORT L	PL6	LED BAR	LED6
PORT L	PL7	LED BAR	LED7
PORT C	PC0	KEYPAD	C3
PORT C	PC1	KEYPAD	C2

PORT C	PC2	KEYPAD	C1
PORT C	PC3	KEYPAD	C0
PORT C	PC4	KEYPAD	R3
PORT C	PC5	KEYPAD	R2
PORT C	PC6	KEYPAD	R1
PORT C	PC7	KEYPAD	R0
P11	+5V	MOTOR	OpE

2.Input and output
use keyboard to input (x,y)

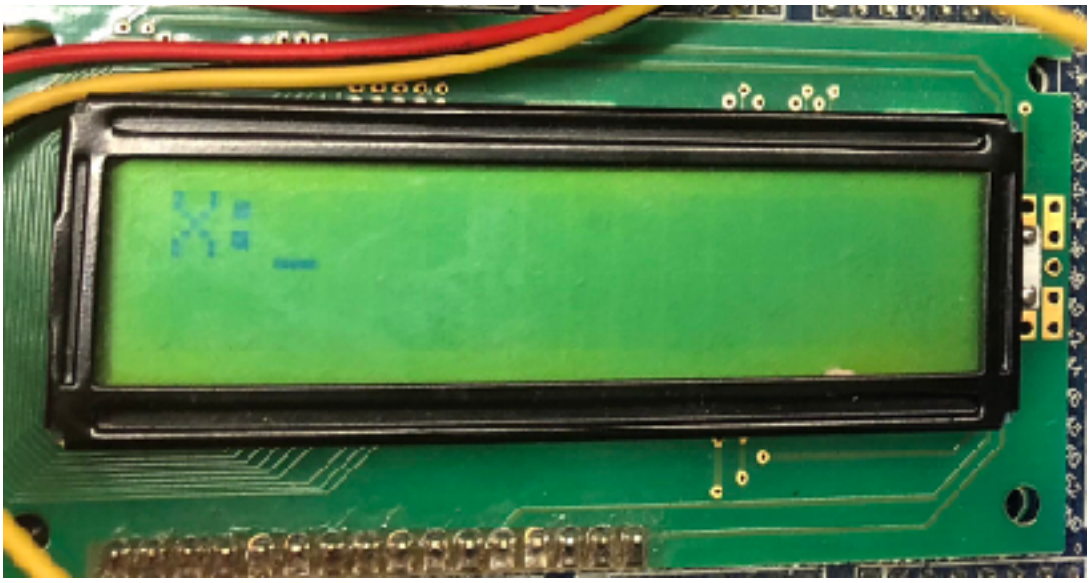


Press “*” to separate input x and y

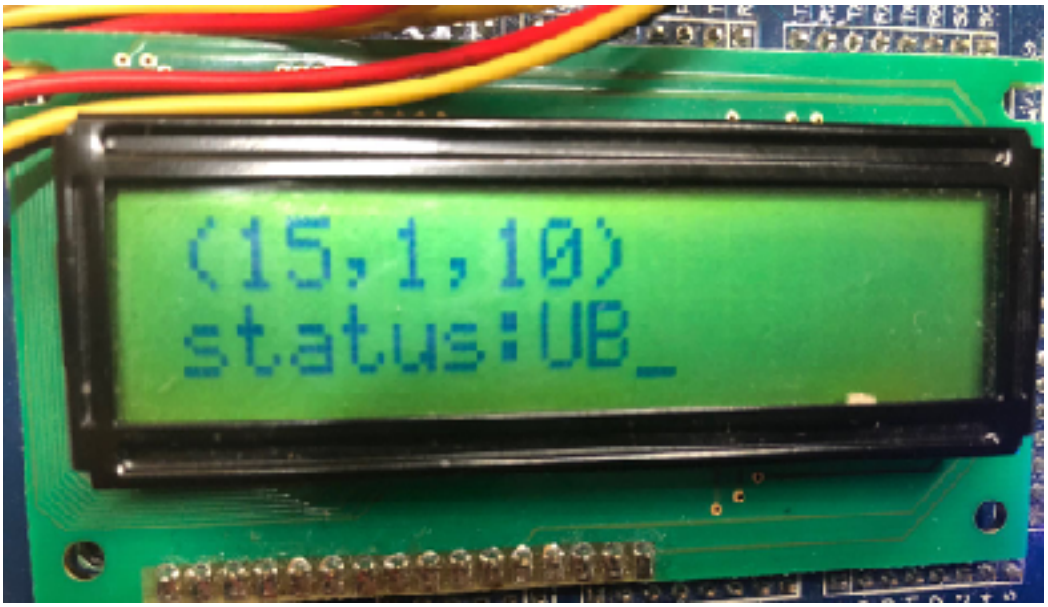


press “#” to end inputs
“x” + “*” + “y” + “#”
if x or y >63 show”wrong”:

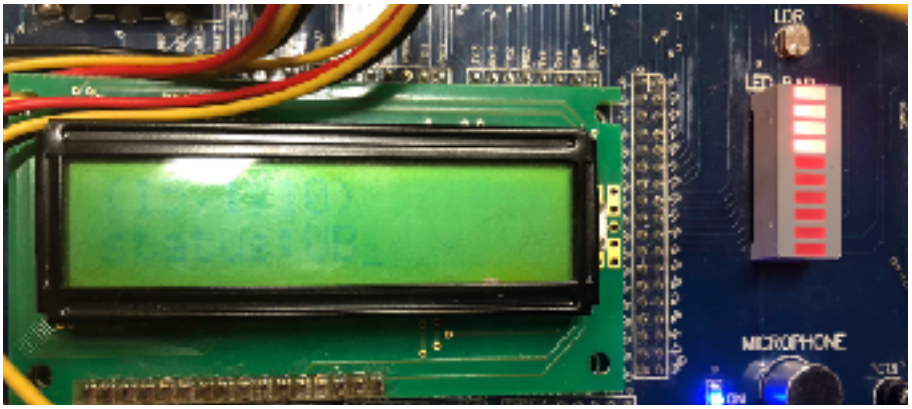
Input again



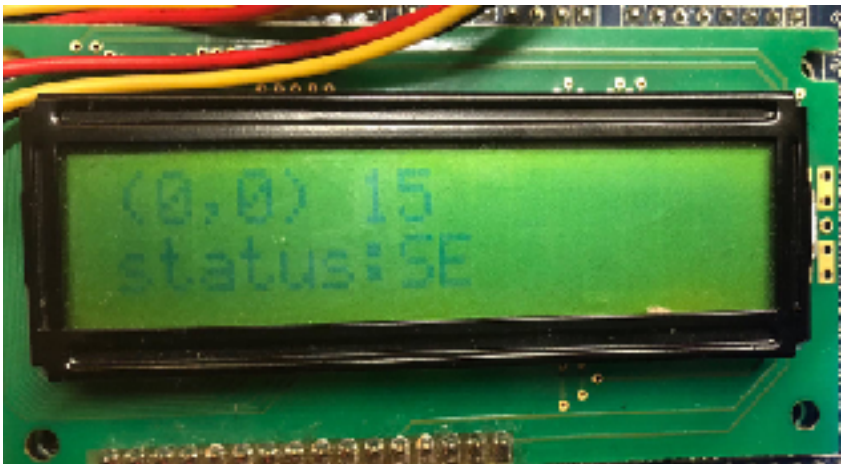
After get input the location of the set accident (x,y,z) will be shown on 1st line, the second line will show status”UB” megs unbegin



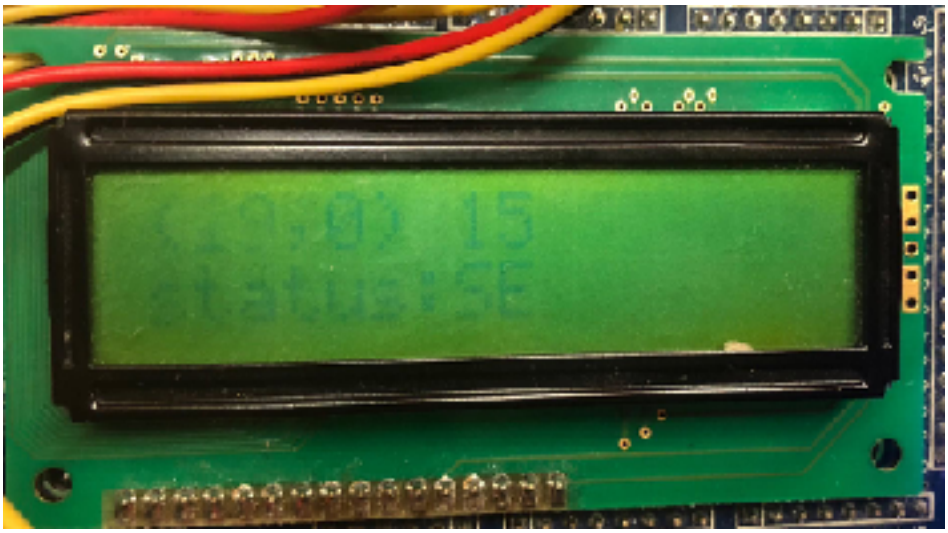
put input0,the search will begin and the led will flash

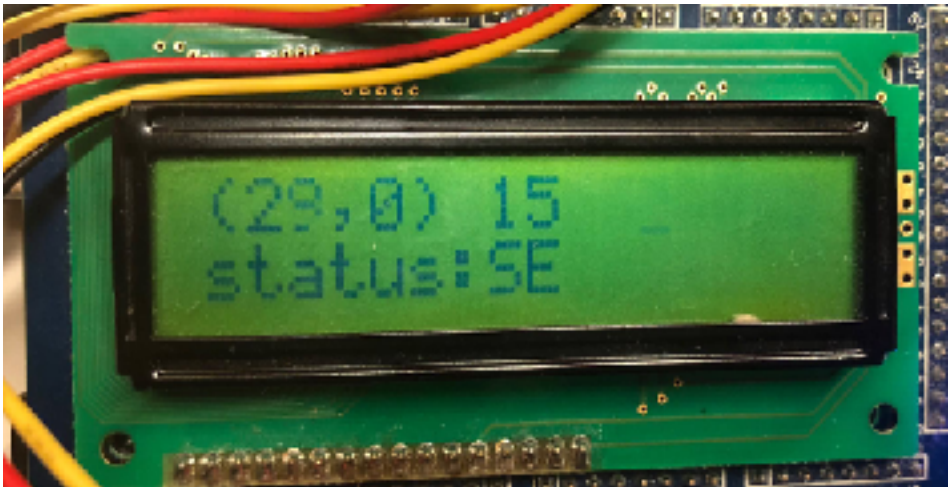


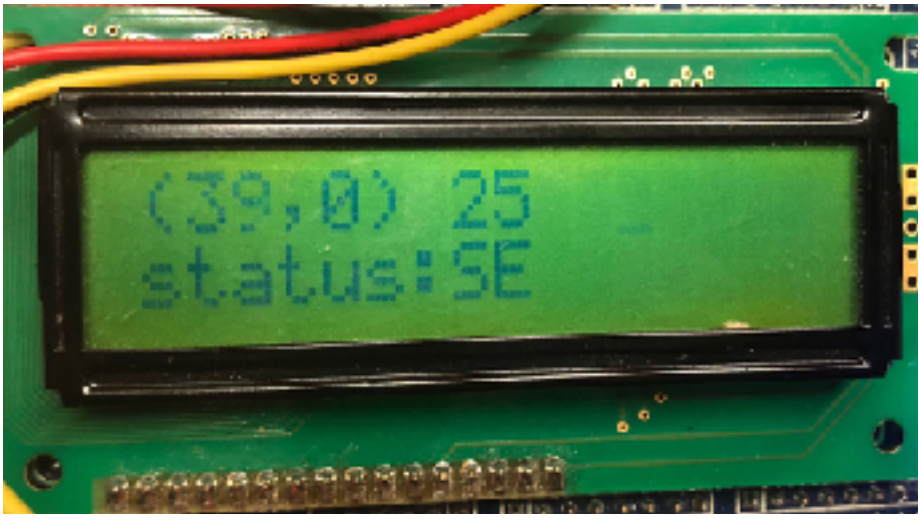
after begin the drone will be up till 5 meters higher than z
meanwhile the states “UP” means drone go up

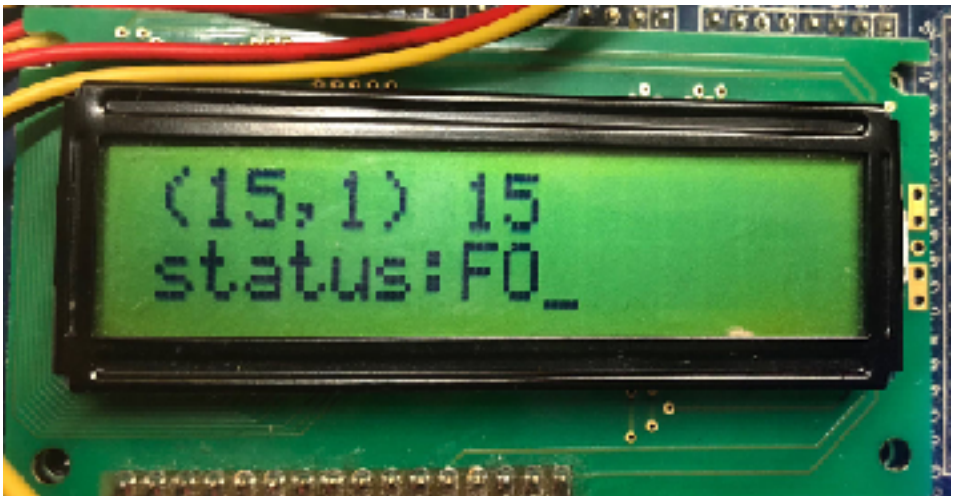


in “SE”(search status) it will search Line by line Head and tail cycle
（0，0）—-（63，0）—（63，1）—（0，1）—（0，2）……

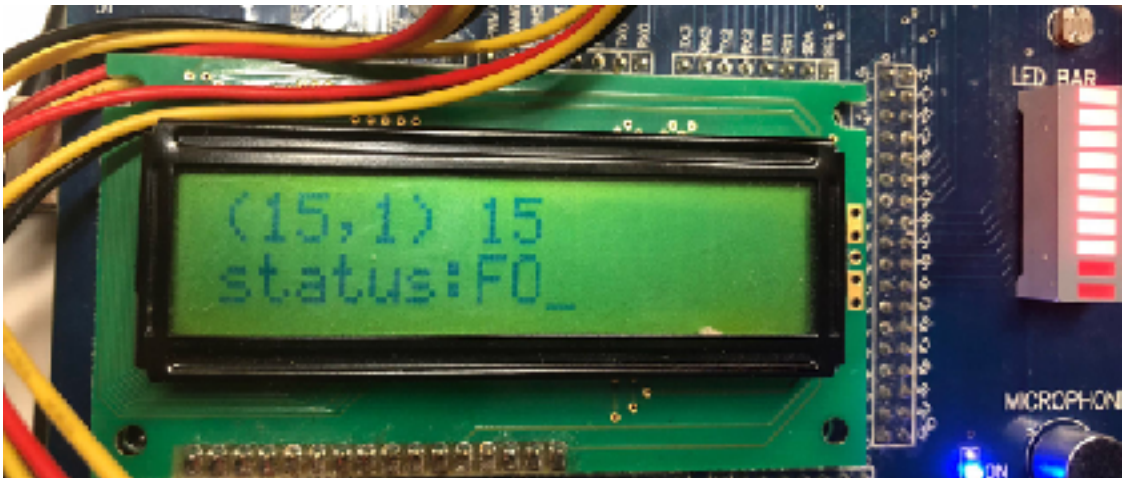




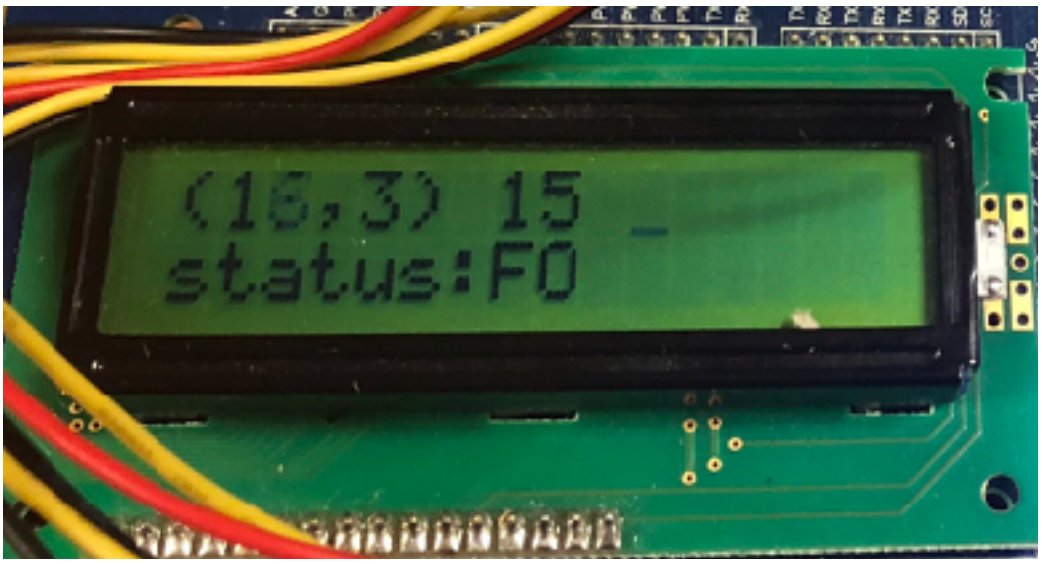




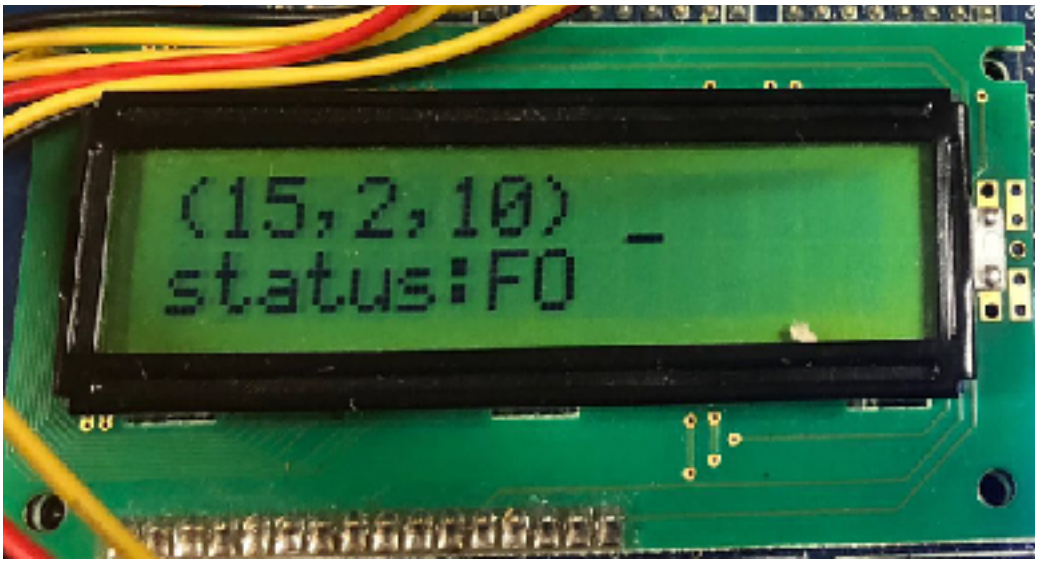
when find the accident pot the led flash for a few second and the drone halt for a few second.the status become”FO” means found.



after that the drone goes back through the original road

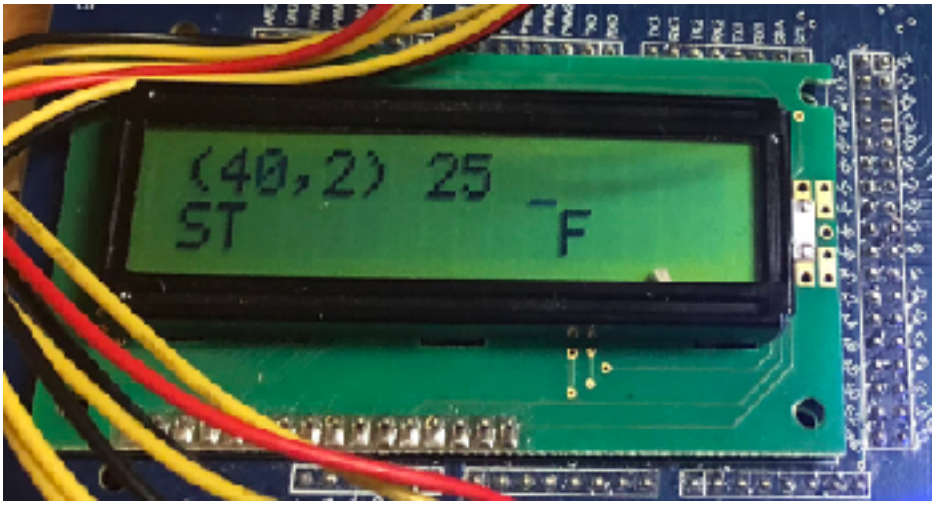


the 1st line show the way drone back
the second line status”FO” means already found

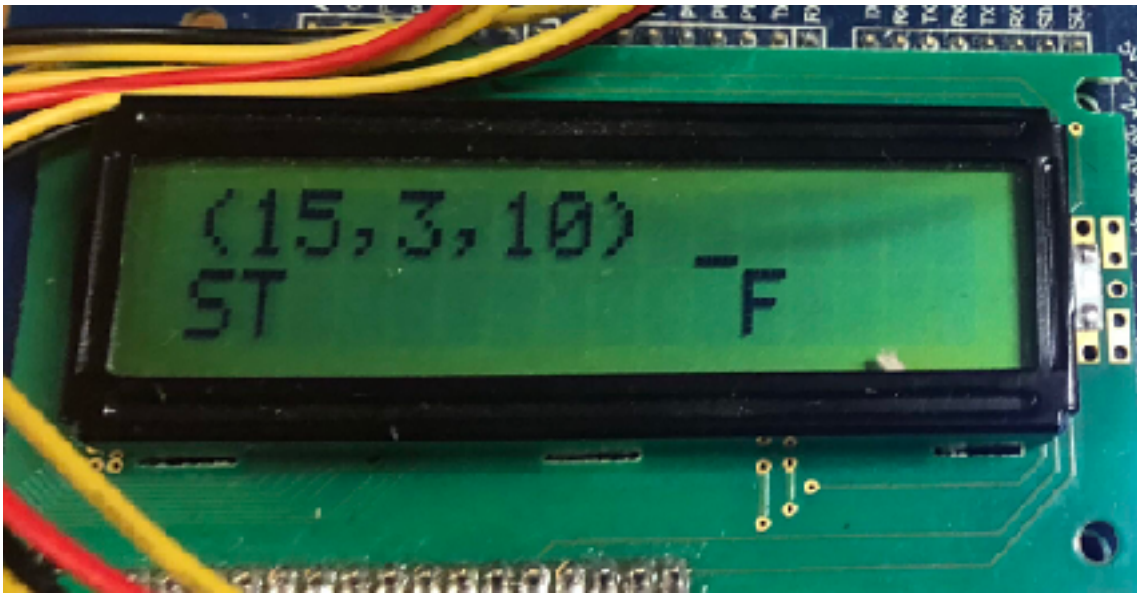


after go back to (0,0) it will show the location of accident
and the status of “FO”

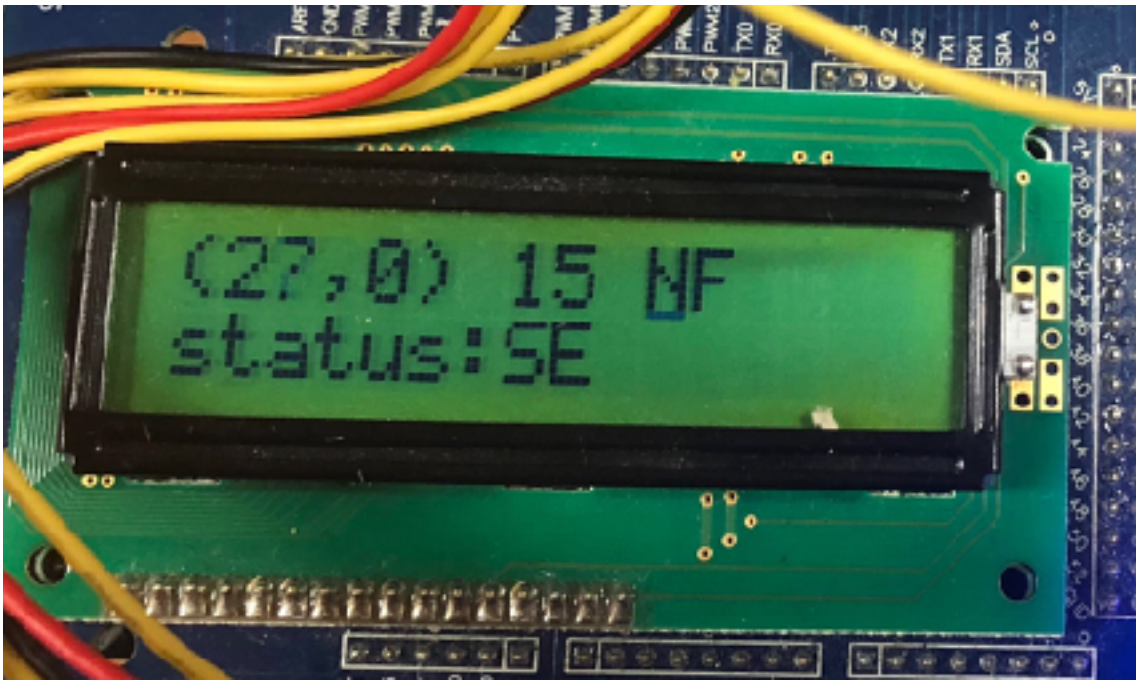
ABORT:
if after the drone find location push the abort button(INPUT1)
when the drone on the way back the status line show”ST”(stop search)
and”F”(find)



Finally after back to (0,0) it show location and status(stop and find)



if put abort button input1 before the drone find the location of accident the status will change to”NF” means not find



and when it back to(0,0)
it only show(0,0,0)
status”AB”:abort “NF” not find,”UF”:unfind