Task V1

Monday, March 4, 2024 2:36 PM

Phase 1

i/p :

1- PB1: fuel accelerator
   - On:
     - Yellow on
     - Turn off cross control
   - Off
     - Yellow off
2- PB2: Brake
   - On
     - Red on
   - Off
     - Red off
3- PB3: Cross control
   - On : tog green
4- PB4: State
   - GearBox
     - N
     - D
     - R

O/P

1- Yellow : fuel accelerator
2- Red: Brake
3- Green: Cross control
4- LCD :
   a. 1: Cross control state:
   b. 2: driving state
      i. R
      ii. N : default
      iii. D

GearBox
- Global var
  - Increment with button press from 0 to 2
  - If ==2 reset counter

Cross control (green)
- Tog with PB3
  - On
    - Test gear box state == D
    - Tog state
    - Lcd disp
    - Green on
  - Off
    - Tog state
    - Fuel on
    - Lcd disp
    - Green off

Phase 2

i/p :

1- PB1: fuel accelerator
   - On:
     - Blue on
     - Turn off cross control
   - Off
     - Blue off
2- PB2: Brake
   - On
     - Red on
   - Off
     - Red off
3- PB3: Cross control
   - On : tog green
   - Buzzer on for 10ms
4- PB4: State
   - Buzzer on for 10ms
   - GearBox
     - N
     - D
     - R

O/P

1- Yellow : "alert"
2- Red: Brake
3- Green: Cross control
4- Blue: fuel accelerator
5- LCD :
   a. 1: Cross control state:
   b. 2: driving state
      i. R
      ii. N : default
      iii. D

GearBox
- Global var
  - Increment with button press from 0 to 2
  - If ==2 reset counter

Cross control (green)
- Tog with PB3
  - On
    - Test gear box state == D
    - Tog state
    - Lcd disp
    - Green on
  - Off
    - Tog state
    - Fuel on
    - Lcd disp
    - Green off
- Alert state "yellow"
  - Push GearBox without brack
  - And gear not changed

Adc state :Brake assistance system
0 >> 10 m reading using ADC(0>>1023)

- **8>10 m : normal ccs**
- **6>8 m :alarm yel_led on , ccs off, Fuel PB off**
- **4>6 m :alarm yel_led on, "Brake"Red_led on , ccs off, Fuel PB off**
- **2>4 m :alarm yel_led flash, "Brake"Red_led on ,ccs off, Fuel led off**
- **0>2 m :Relay on 1S then off 1s, ccs off, Fuel PB off**

If the read < 10 m display in LCD line 3 : meters
If the read = 0 m display in LCD line 4 : airbag on

- **Enum DangerState**
  {
  - **State_8_10 = 0,**
  - **State_6_8,**
  - **State_4_6,**
  - **State_2_4,**
  - **State_0_2,**

}

- **Read ADC in adc**
- **Use**

Version 2

Saturday, March 16, 2024 12:01 PM

- [ ] Multi_screen:
  - Flip though two button
  - Indicator of page (dots)| | (i/3)

  1- S1 :
  2- S2 :
  3- S3 :
- [x] Keypad added

1	
2	
3	
4	
5	
6	
7	
8	
9	

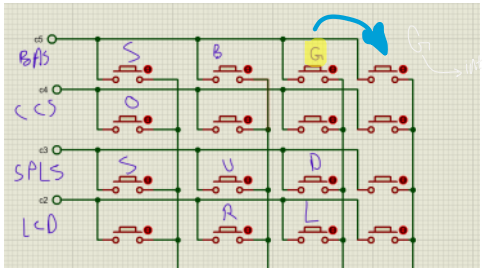
- [x] Add button to on BAS
  - on off and display on LCD and hold old function
- [x] Remove **gas PB and led blue**
- [x] No distance display on screen
- [x] Remove green led

Work progress

- [x] ▶ Relay function without delay
- [x] ▶ Test timer
- [x] ▶ Test keypad
- [x] ▶ Buttons function assignment
- [x] ▶ GearBox
- [x] ▶ Brake
- [x] ▶ BAS sys test
- [ ] ▶ CCS test
- [x] ▶ Speed limiter
- [x] ▶ Spead read

- Speed
  - Input is POT and mapped through small range
  - Display speed om lcd as KM with range 0 >> 200

- Speed limiter
  - Activate through PB
  - 2 PB : to adjust speed limit up and down +- 5 step
    - If we can use a while press to adjust it will be plus
  - If system on
    - Display value of speed limit on LCD (SP)
    - Speed > speed limit
      - Blink relay using timer not delay
  - Else
    - Relay off
    - Dislay ---

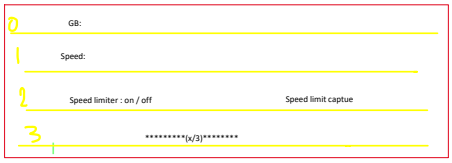


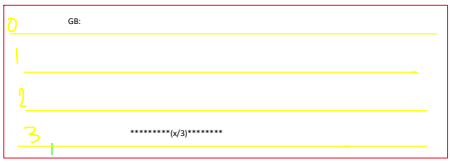

```
u8 Local_U8_KeypadValue [4][4] = {{ 'S' , 'B' , 'G' , '1' },
                                  { 'O' , '5' , '6' , '2' },
                                  { 'P' , 'U' , 'D' , '3' },
                                  { '*' , 'R' , 'L' , '4' }};
```

- [ ] CCS
  - If openned on speed X
  - If speed is X+- 3
    - CCS OFF

LCD design

Sunday, March 17, 2024 10:32 PM





- 3 all pages display the page number
  - *********(x/3)********