“Documentation for One Switch and Two Light Dimmer”

Sample of RECEIVED FRAME

%
%
<Switch_Number_MSB>
<Switch_Number_LSB>
<Switch_State>
<Speed_MSB>
<Speed_LSB>
<Parental_Lock>
<Final_Frame_State>
0<Reserved_bit>
0<Reserved_bit>
0<Reserved_bit>
0<Reserved_bit>
0<Reserved_bit>
@
@

****

Module : 1 switch and 2 Dimmer

Module Description : “Control one switch and 2 dimmer”

- Sample Input Frames Received:

%
%
<Switch_Number_MSB>
<Switch_Number_LSB>
<Switch_State>
<Speed_MSB>
<Speed_LSB>
<Parental_Lock>
<Final_Frame_State>
0<Reserved_bit>
0<Reserved_bit>
0<Reserved_bit>
0<Reserved_bit>
0<Reserved_bit>
@
@

- Sample Output Frames Produced : <G/R> <SwitchStatus> <SwitchNumber_MSB> <SwitchNumber_LSB>

  <G/R> : Depends changes have been done thru Mobile or Touch Panel Switch

  - if Mobile request -> "G"
  - if manual switch request--> "R"

  <1/0> : Switch State ON/OFF

- Algorithm of code :

  Two Parts:

  1. Manual Switch changes:

     if(switch<number> is high)--> ON relay<number>

     if(switch<number> is low)--> OFF relay<number>

  2. Mobile Frame Changes :
     - ISR will be called
     - Receive that data into buffer
     - Parse the data and fetch out specific requirement
     - Take the decision

Steps to burn code into PIC:

Use ICD-3 -> connect MCLR, VCC, GND, PGD, PGC on the board --> use "Make and Program Device Main Project"

- Known issues in the code: no issues
- Assumptions made in the project:

  - I have define Macros for each pin initialization
  - I have added all 8 outputs because any relay output we use as functionality needed 8 switches PCB.

```
//RELAYS and switches
#define FAN RF0 //1sw sw
#define RELAY3 RA3//DIMMER2
#define RELAY4 RA2//DIMMER3
#define SW4 RF5//DIMMER2
#define SW3 RF3//DIMMER3
#define SW1 RA5//sw
```