

“Documentation for two Switch and three 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 : two switches and three Dimmer

Module Description : “Control two switches and three 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 Touch Panel 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

```
//RELAYS and switches
#define RELAY1 RF1 // 2nd SW
#define FAN RF0 //1sw sw
#define RELAY2 RE5//DIMMER1
#define RELAY3 RA3//DIMMER2
#define RELAY4 RA2//DIMMER3
```

```
#define SW5 RF7//DIMMER1
#define SW4 RF5//DIMMER2
#define SW3 RF3//DIMMER3
#define SW2 RF2
#define SW1 RA5
```

