Mimic panel – uses JMRI LogixNG to throw turnouts and set LEDs
turnouts connected via a different DCC++EX command station or CMRI, etc.

This was done using MCP23017 module.

5 momentary push buttons
6 Red / 6 Green LEDs

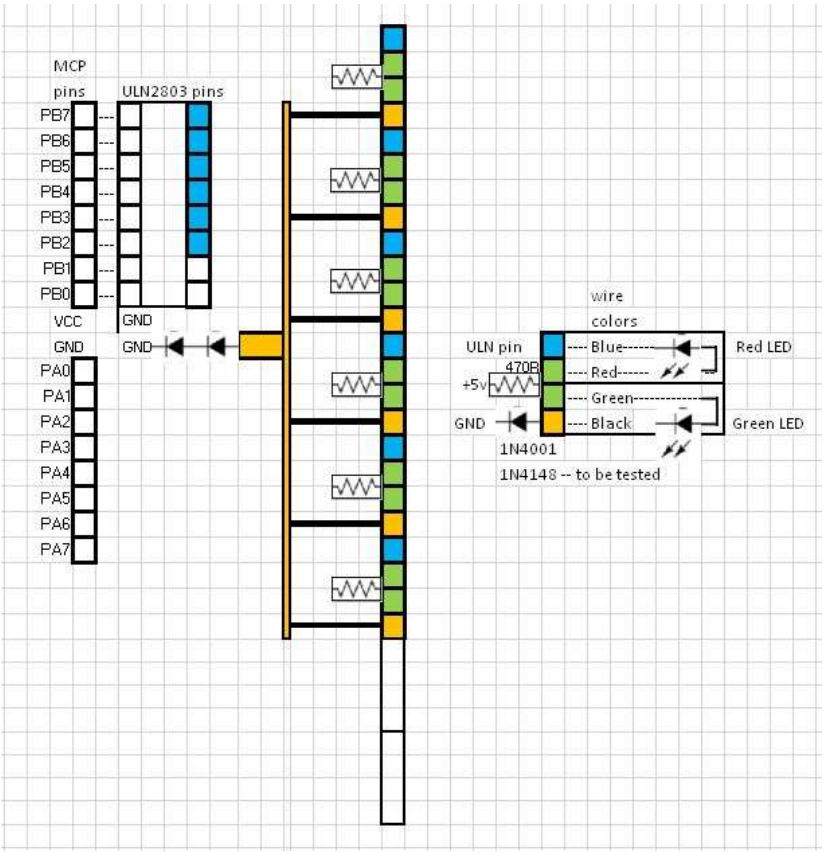
mySetup.h

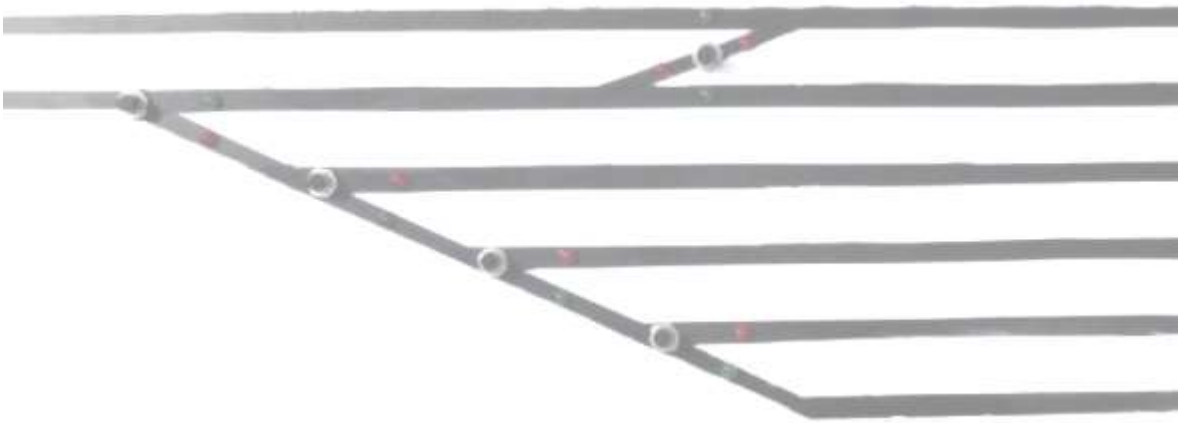
```
//  first MCP23017 module – pins 164-179
//  6 Red LEDs on pins PB2-PB7
SETUP("<Z 174 174 0>");
SETUP("<Z 175 175 0>");
SETUP("<Z 176 176 0>");
SETUP("<Z 177 177 0>");
SETUP("<Z 178 178 0>");
SETUP("<Z 179 179 0>");
// 5 buttons on PA3-PA7
SETUP("<S 167 167 1>");
SETUP("<S 168 168 1>");
SETUP("<S 169 169 1>");
SETUP("<S 170 170 1>");
SETUP("<S 171 171 1>");
```

JMRI obtains accessory definitions at startup

```
<* PARSING:T *>
<X>
<* PARSING:S *>
<Q 171 171 1>
<Q 170 170 1>
<Q 169 169 1>
<Q 168 168 1>
<Q 167 167 1>
<* PARSING:Z *>
<Y 174 174 0 0>
<Y 175 175 0 0>
<Y 176 176 0 0>
<Y 177 177 0 0>
<Y 178 178 0 0>
<Y 179 179 0 0>
```

Two diodes in series with negative side of Green LED
 – Green LED is on until Red LED is switched on
ULN2803 provides switching to GND





Connection D: DCC++EX - Command Station connected via USB
Connection D2: DCC++EX connected via WiFi as Accessory Controller only
Sensor D2S167 is a momentary push button; D2T174 is the output LED

```
PanelPro 4.25.10ish+mstev+20220110T0109Z+R12f72b4a82, part of the JMRI® project
http://jmri.org/PanelPro

Active Profile: test4
DCC++: using DCC++ Serial Port on COM4
DCC++2: using DCC++ Ethernet on 192.168.1.42:2560

Java version 11.0.13 (en)
```