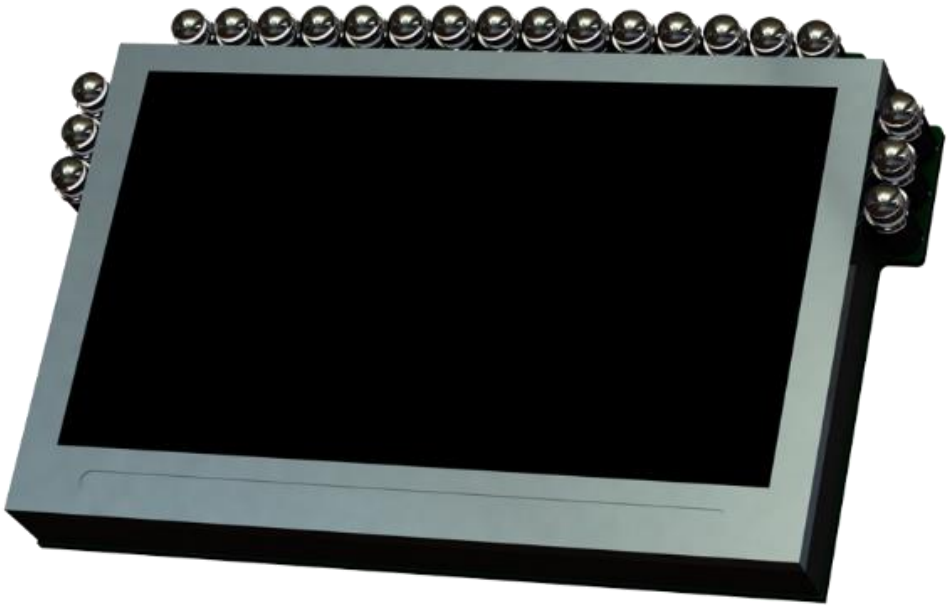
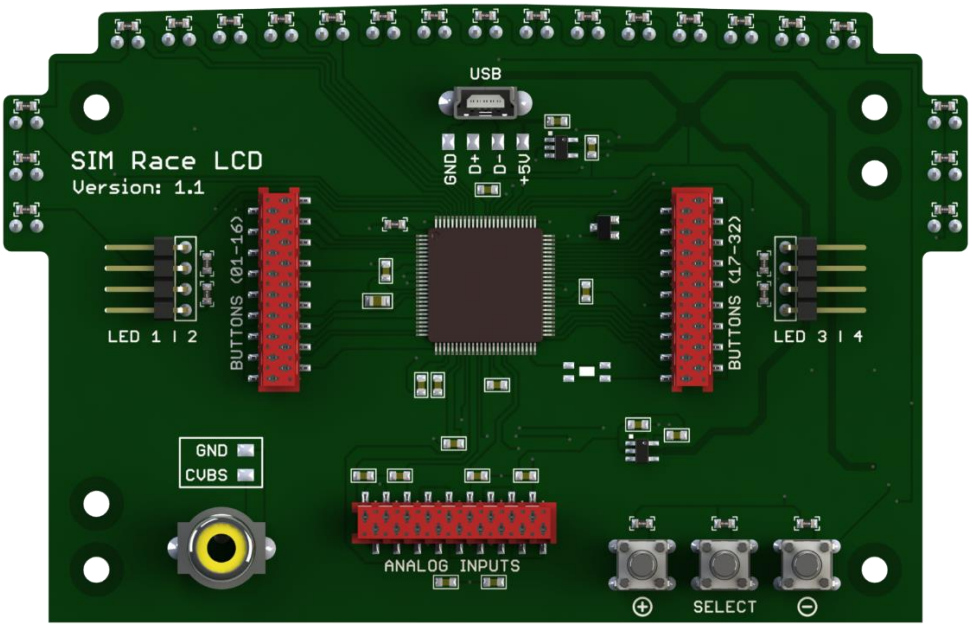
SIM RACE LCD

USER MANUAL

Version 1.0

Version 1.1





Connector (BUTTONS 01-16)

PIN	COLOR		PRIMARY FUNCTION	SECONDARY FUNCTION
1		Brown	**GND**	
2		Red	Button 1	**ROTARY ENCODER 1**
3		Orange	Button 2	
4		Yellow	Button 3	**ROTARY ENCODER 2**
5		Green	Button 4	
6		Blue	Button 5	**ROTARY ENCODER 3**
7		Violet	Button 6	
8		Gray	Button 7	**ROTARY ENCODER 4**
9		White	Button 8	
10		Black	Button 9	**ROTARY ENCODER 5**
11		Brown	Button 10	
12		Red	Button 11	**ROTARY ENCODER 6**
13		Orange	Button 12	
14		Yellow	Button 13	**ROTARY ENCODER 7**
15		Green	Button 14	
16		Blue	Button 15	**ROTARY ENCODER 8**
17		Violet	Button 16	
18		Gray	**GND**	

Connector (BUTTONS 17-32)

PIN	COLOR		PRIMARY FUNCTION	SECONDARY FUNCTION
1		Brown	**GND**	
2		Red	Button 17	**ROTARY ENCODER 9**
3		Orange	Button 18	
4		Yellow	Button 19	**ROTARY ENCODER 10**
5		Green	Button 20	
6		Blue	Button 21	**ROTARY ENCODER 11**
7		Violet	Button 22	
8		Gray	Button 23	**ROTARY ENCODER 12**
9		White	Button 24	
10		Black	Button 25	**ROTARY ENCODER 13**
11		Brown	Button 26	
12		Red	Button 27	**ROTARY ENCODER 14**
13		Orange	Button 28	
14		Yellow	Button 29	**ROTARY ENCODER 15**
15		Green	Button 30	
16		Blue	Button 31	**ROTARY ENCODER 16**
17		Violet	Button 32	
18		Gray	**GND**	

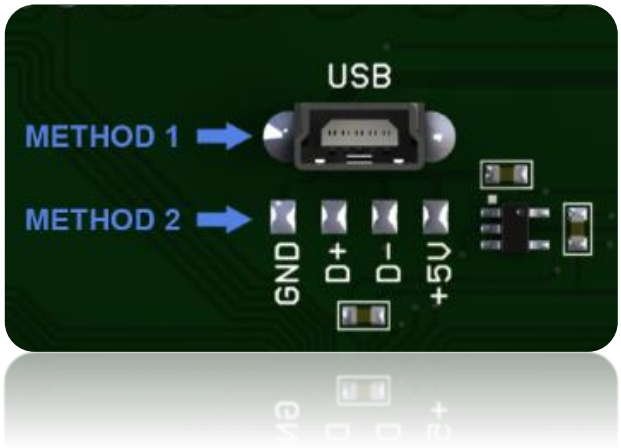
Connector (ANALOG INPUTS)

PIN	COLOR		PIN FUNCTION	DESCRIPTION
1		Brown	GND	**ANALOG INPUT 1** (12-bit resolution) (Pots, Sensors, Clutches)
2		Red	AN 1	
3		Orange	+3.3V	
4		Yellow	GND	**ANALOG INPUT 2** (12-bit resolution) (Pots, Sensors, Clutches)
5		Green	AN 2	
6		Blue	+3.3V	
7		Violet	GND	**ROTARY SWITCH 1**
8		Gray	AN 3	
9		White	+3.3V	
10		Black	GND	**ROTARY SWITCH 2**
11		Brown	AN 4	
12		Red	+3.3V	
13		Orange	GND	**ROTARY SWITCH 3**
14		Yellow	AN 5	
15		Green	+3.3V	
16		Blue	GND	**ROTARY SWITCH 4**
17		Violet	AN 6	
18		Gray	+3.3V	

Connector (USB)

Method 1: Plug and play

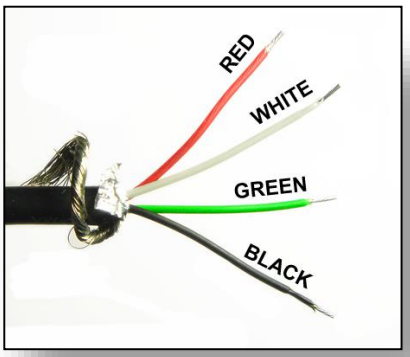
Use standard Mini USB B cable and plug it on USB socket on PCB. We recommend high quality USB cables with maximum length of 5 meters. The other end is connected to your USB port on PC.



Method 2: Soldering wires

You can also solder USB wires directly on PCB. This is very useful if you are installing PCB inside steering wheel and you want to save some space. This will also eliminate the need for large USB connector.

Important: You need some experience with soldering. Be careful and make sure you are following diagram below for correct wires order.

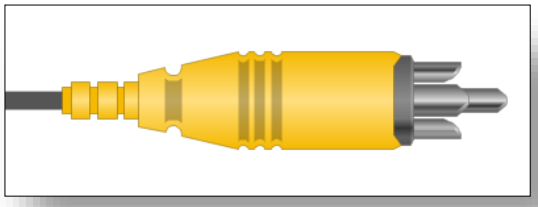


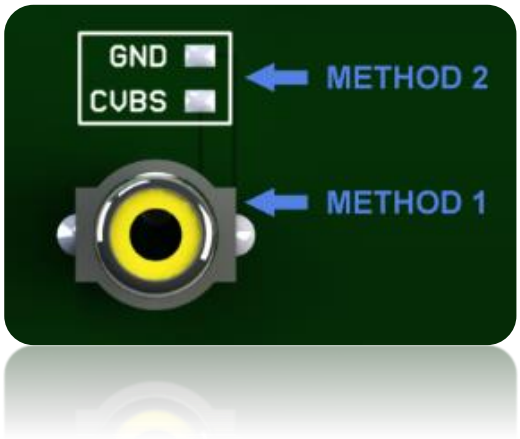
PIN	COLOR		DESCRIPTION
1		Red	**+5V**
2		White	**D-**
3		Green	**D+**
4		Black	**GND**

Connector (CVBS)

Method 1: Plug and play

Use standard video RCA (male) cable. This connection is **required** for LCD operation. The other end is connected to your GPU on PC. If your graphics card does not support CVBS video output, you can also use VGA or HDMI output on your computer (with HDMI → CVBS or VGA → CVBS converters).

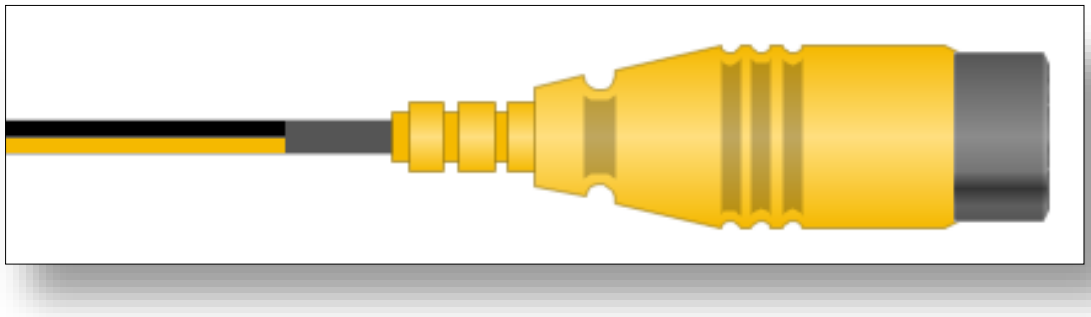




Method 2: Soldering wires

You can also solder 2 wires directly on PCB. This is very useful if you are installing PCB into steering wheel and you want to save some space. This will also eliminate the need for large RCA connector.

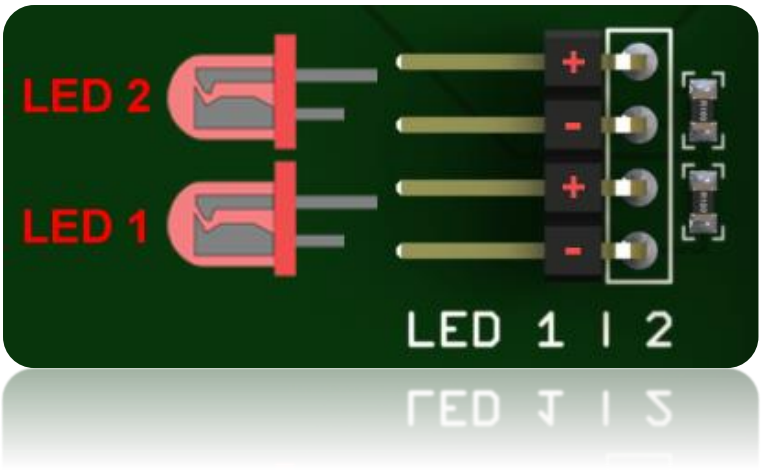
Important: You need some experience with soldering. Be careful and make sure you are following diagram below for correct wires order.



PIN	COLOR		DESCRIPTION
1		Black	**GND**
2		Yellow	**CVBS**

Connector (LED 1 | 2)

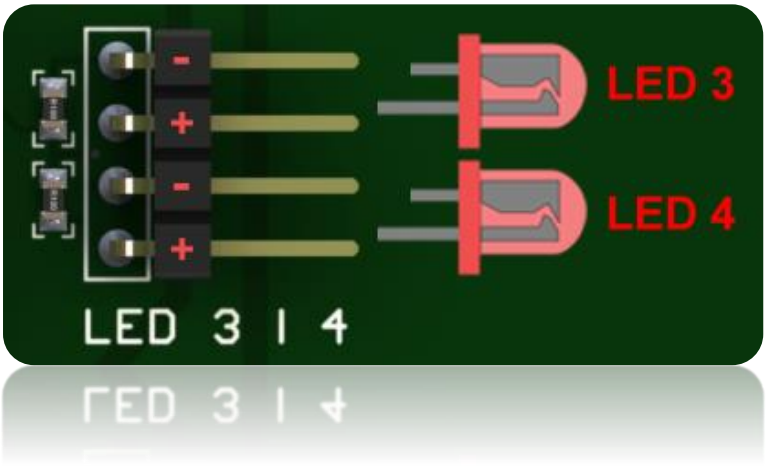
Connecting external LEDS is very simple. Use female headers or just solder LED wires directly on header pins. **No resistors required**.



Important: You need some experience with soldering. Be careful and make sure you use proper isolation if going for soldering method.

Connector (LED 3 | 4)

Connecting external LEDS is very simple. Use female headers or just solder LED wires directly on header pins. **No resistors required**.



Important: You need some experience with soldering. Be careful and make sure you use proper isolation if going for soldering method.

Example Connection

Picture below shows connection diagram using HDMI → CVBS converter.