


MV-217 X'TAL
Design


2020/08/20

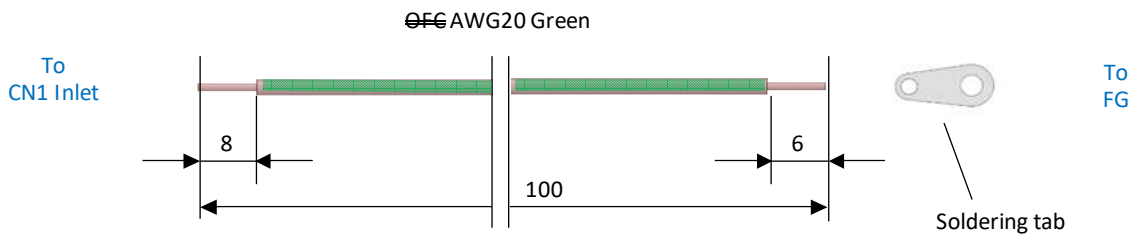
Assy

Wires

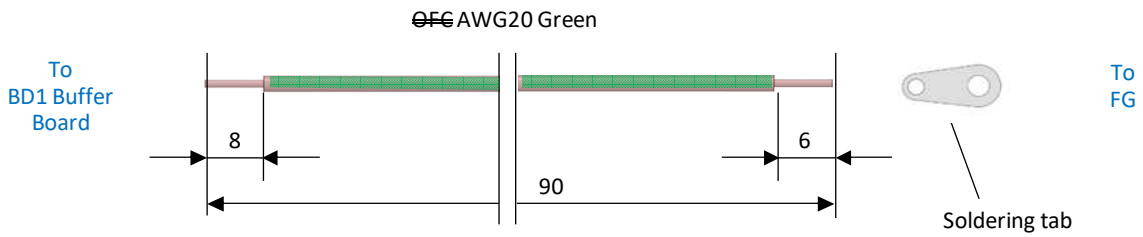
Tools: wire stripper, cutter, nipper, connector plier, soldering iron

Unit: mm

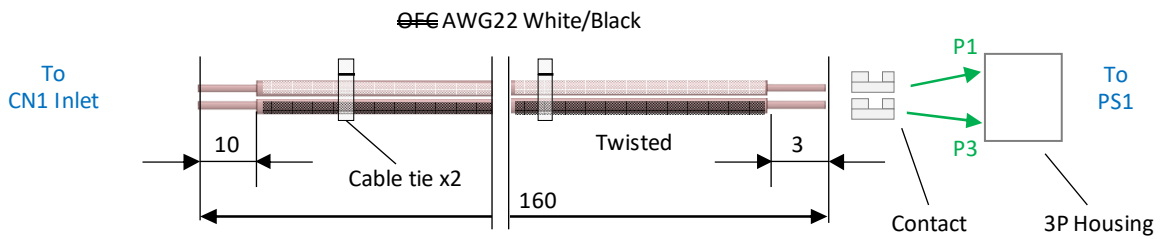
* W1 Ground wire



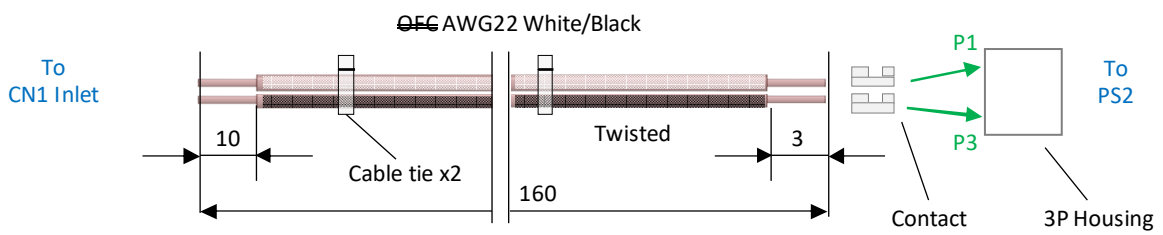
* W2: Ground wire



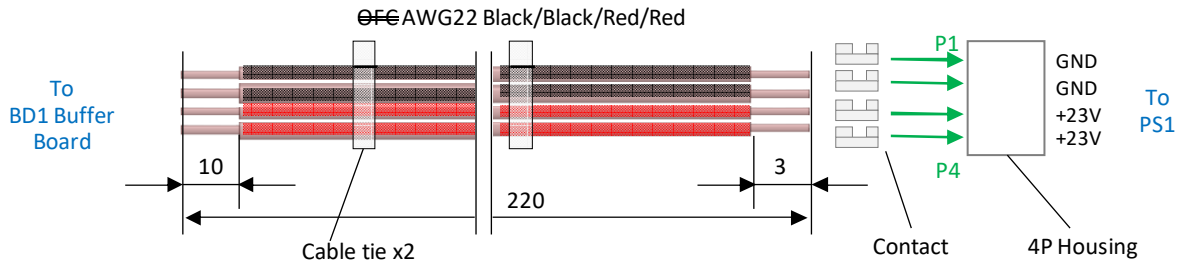
* W3: AC power



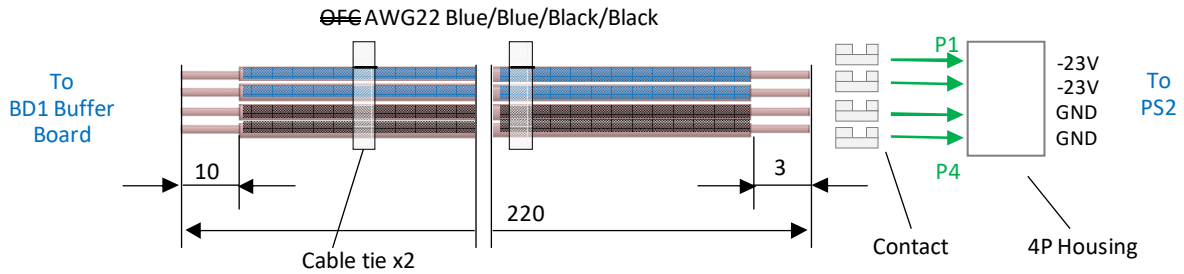
* W4: AC power



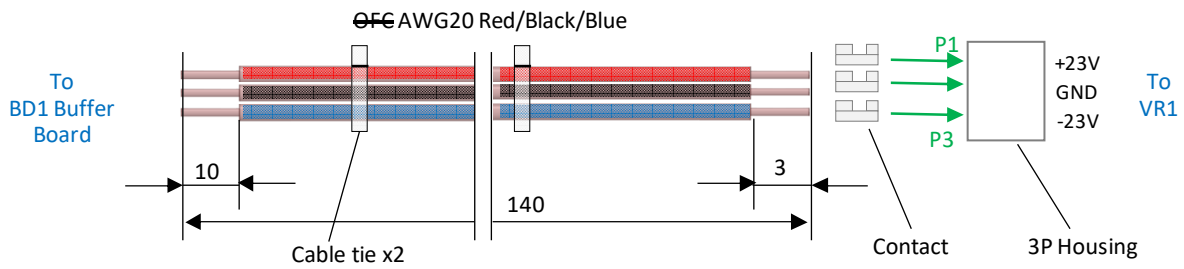
*** W5: DC power +23V**



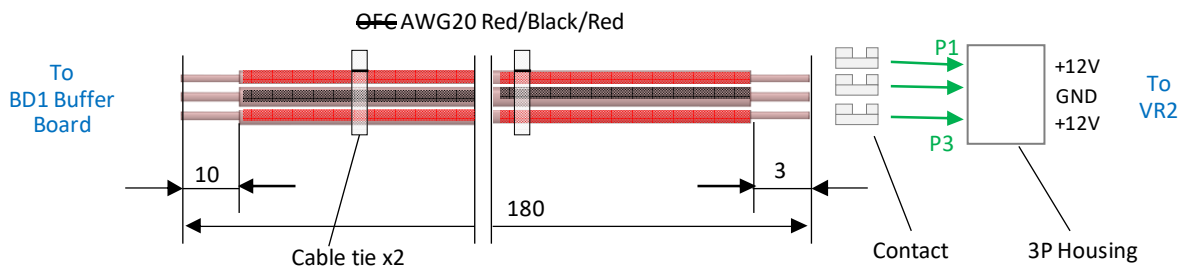
*** W6: DC power -23V**



*** W7: DC power +/-23V**

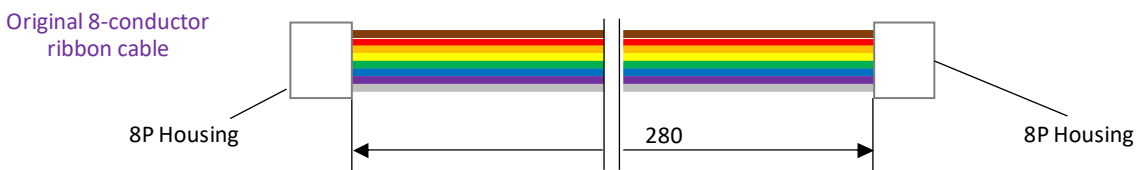


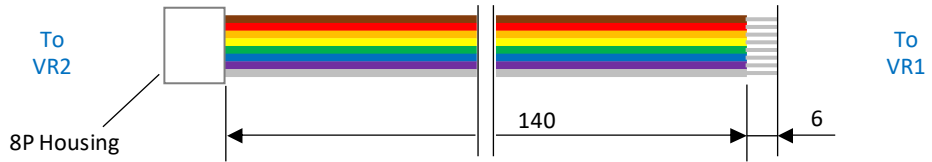
*** W8: DC power +12V**



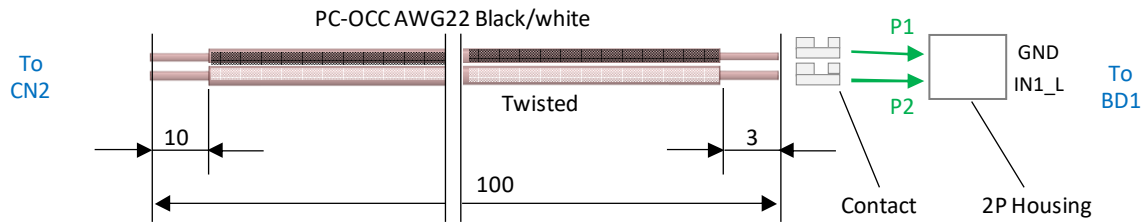
*** W9: Control signals**

This cable comes with VR2 (AEDIO EVR-DISP1). It is too long. Cut it in half.

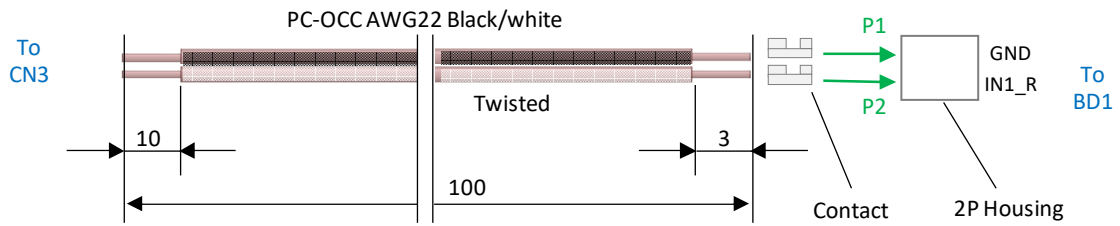




*** W10: Audio signal**



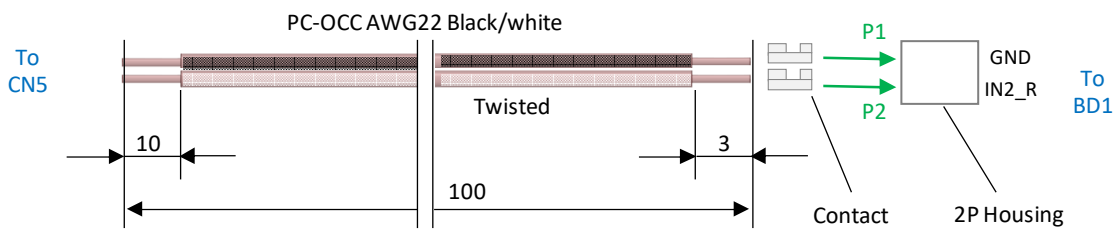
*** W11: Audio signal**



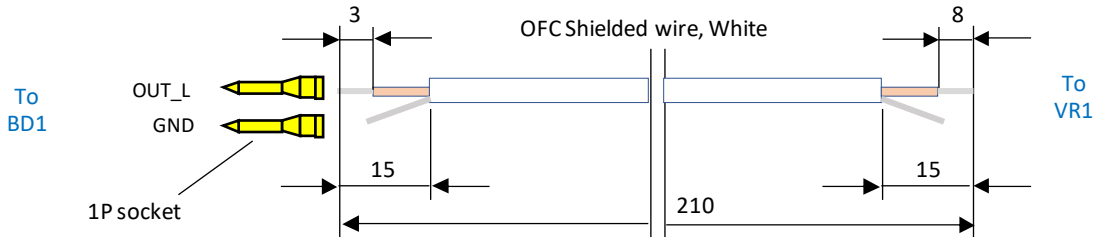
*** W12: Audio signal**



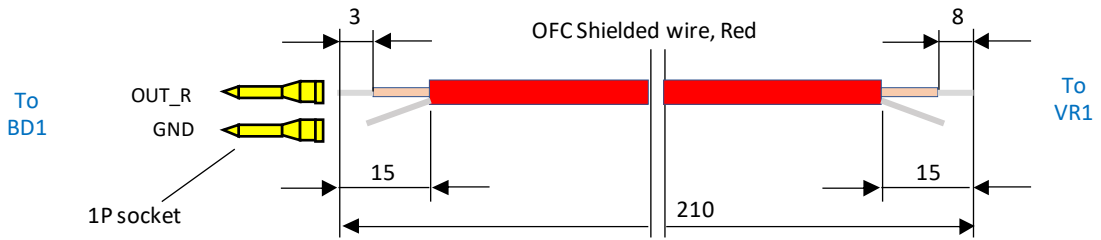
*** W13: Audio signal**



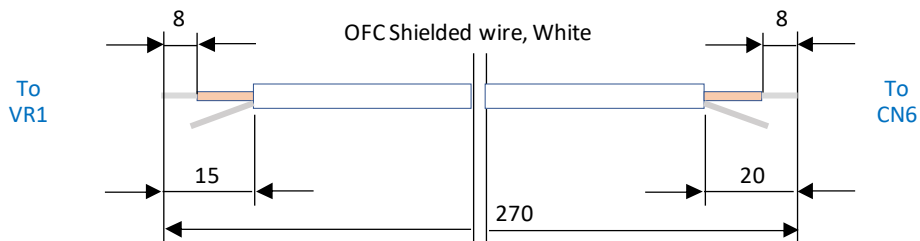
*** W14: Audio signal**



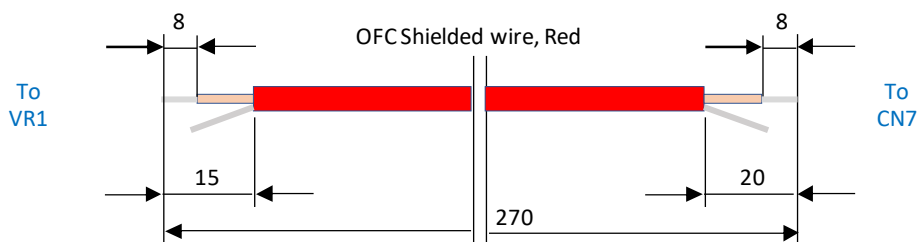
*** W15: Audio signal**



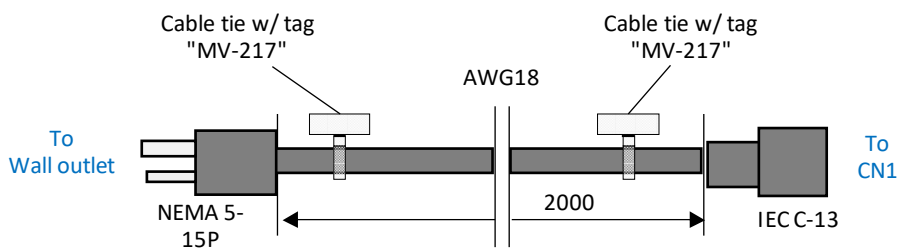
*** W16: Audio signal**



*** W17: Audio signal**



*** W18: AC power cable**

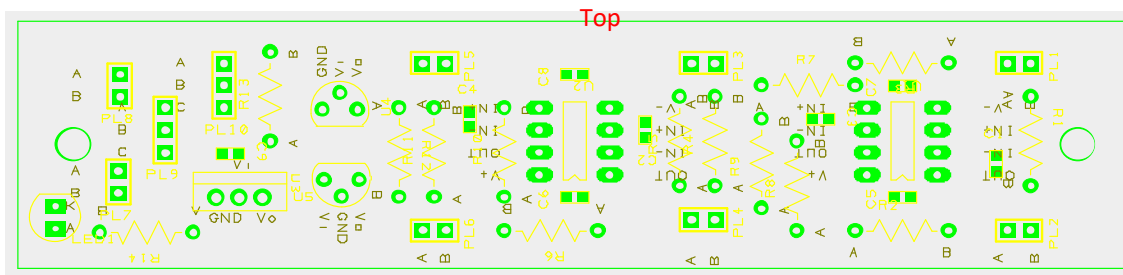


Buffer Board (BD1)

* Inserting

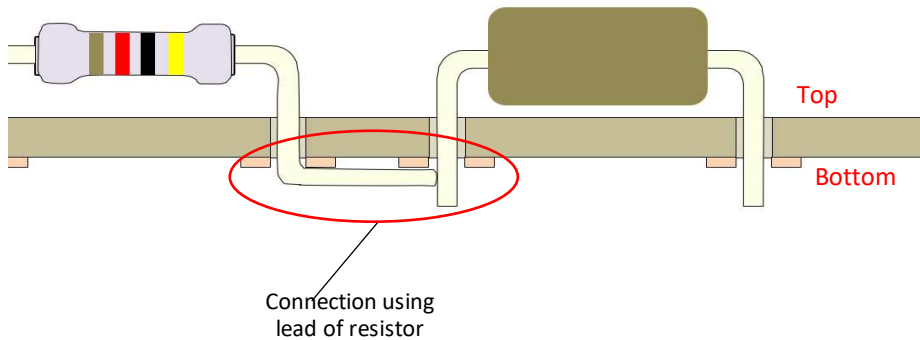
Insert components in the board, referring to the PCB design.

The following components are not inserted: capacitors C1-9, connectors PL7-10.



* Soldering

- (1) Connect the components by using the leads of the resistors.
- (2) Solder the soldering spots.



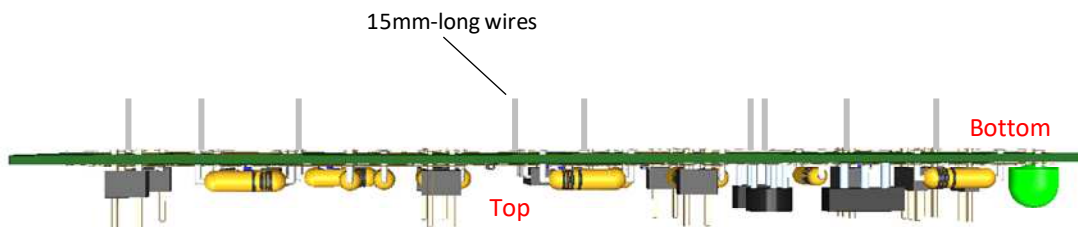
* Attaching bus-bars

- (1) Insert 15mm-long stripped wires into through holes of the GND, +V, -V pins of the ICs on the bottom side.

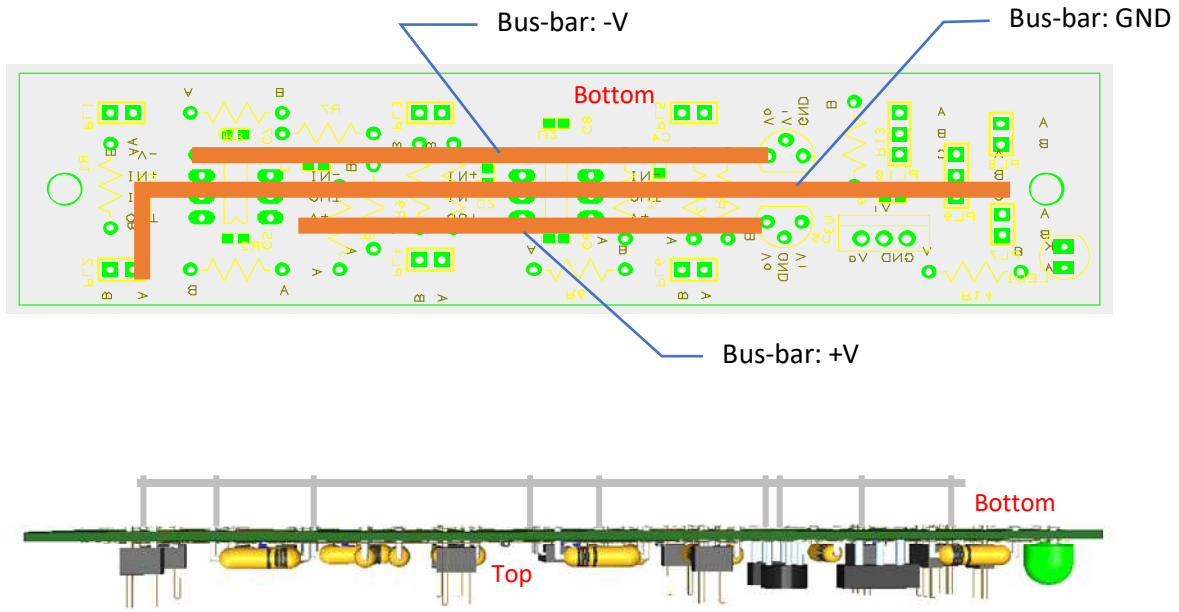
GND: P2 of U3, P1 of U4, P1 of U5, P1 of PL1, P1 of PL2, P2 of PL9

+V: P8 of U1 and U2, P1 of U3

-V: P4 of U1 and U2, P3 of U4



- (2) Solder the bus-bars of GND, +V, -V on the bottom side.

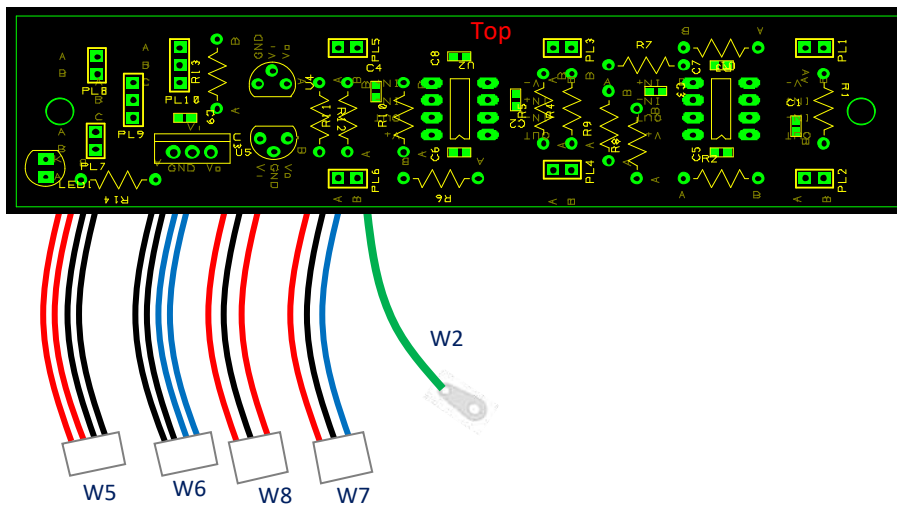


*** Soldering capacitors**

Solder the capacitors, C1-9, on the bottom side.

*** Soldering wires**

- (1) Solder W2 with the GND bus-bar near U3, U4.
- (2) Solder W5 with GND and +V bus-bars near the U3.
- (3) Solder W6 with GND and -V bus-bars near the U4.
- (4) Solder W7 with GND, +V and -V bus-bars near the U3 and U4.
- (5) Solder W8 with GND bus-bar and R13.



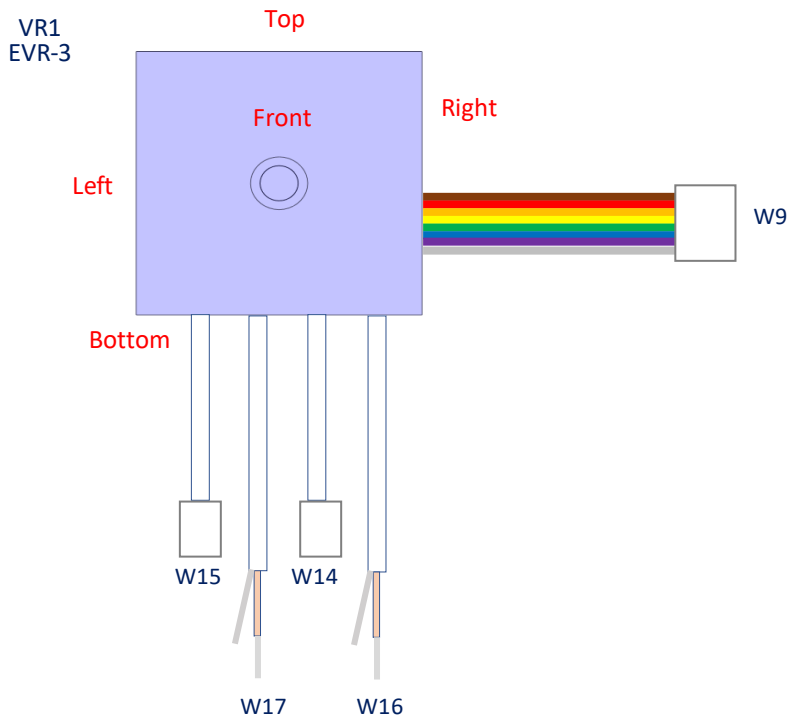
*** Finalize**

- (1) Ground the unused rounds with solder bridges.
- (2) Trim the leads of the components.
- (3) Clean the board.

Electronic Volume

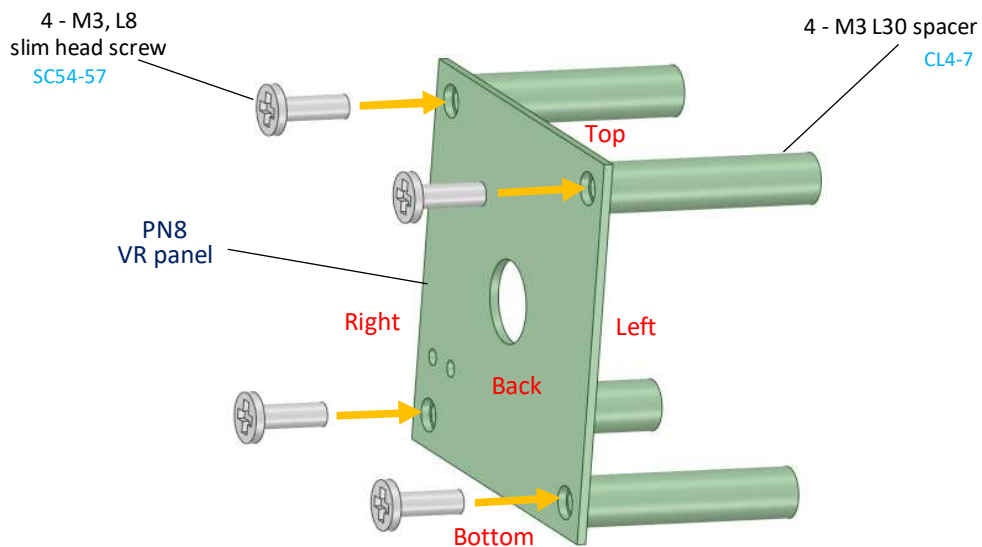
* Soldering wires

- (1) Solder W9 with the control signal pads.
- (2) Solder W14 with L_{IN} and GND pads.
- (3) Solder W15 with R_{IN} and GND pads.
- (4) Solder W16 with L_{OUT} and GND pads.
- (5) Solder W17 with R_{OUT} and GND pads.

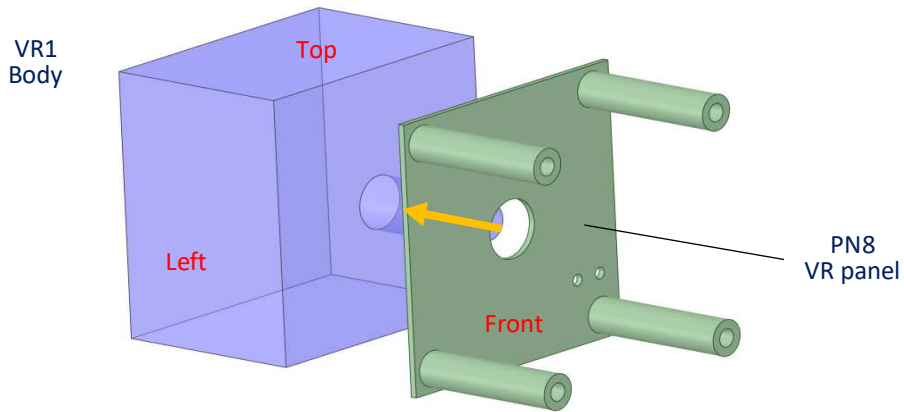


* Assembling VR Panel (PN8)

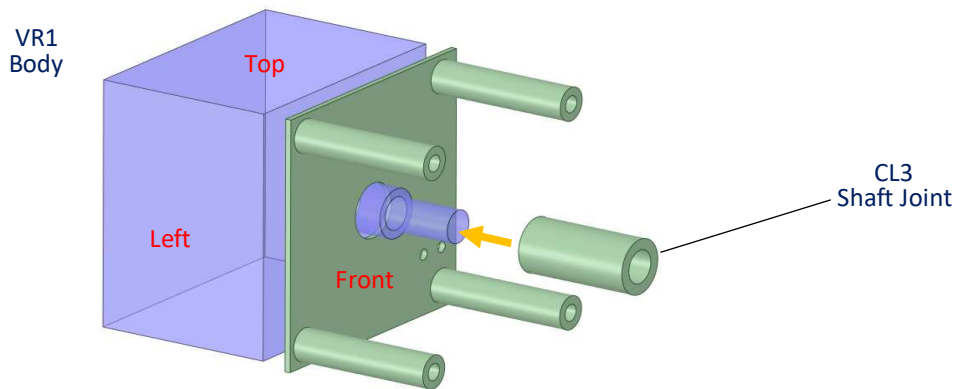
- (1) Attach spacers to VR Panel.



(2) Attach VR Panel to EVR-3.

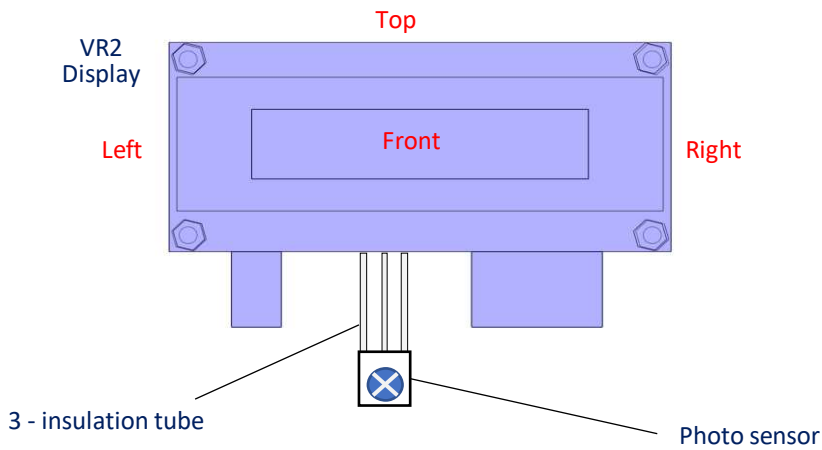


(3) Attach the shaft joint to EVR-3.



*** Assembling Display**

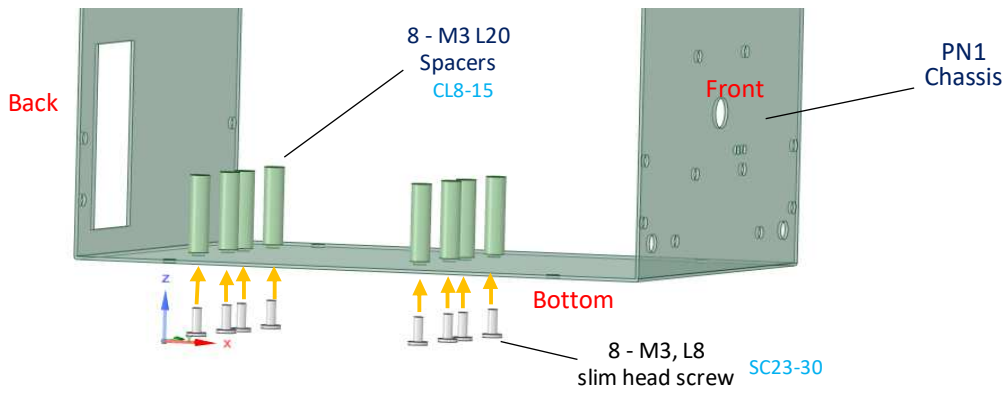
Solder the photo sensor to the display (VR2 Display).



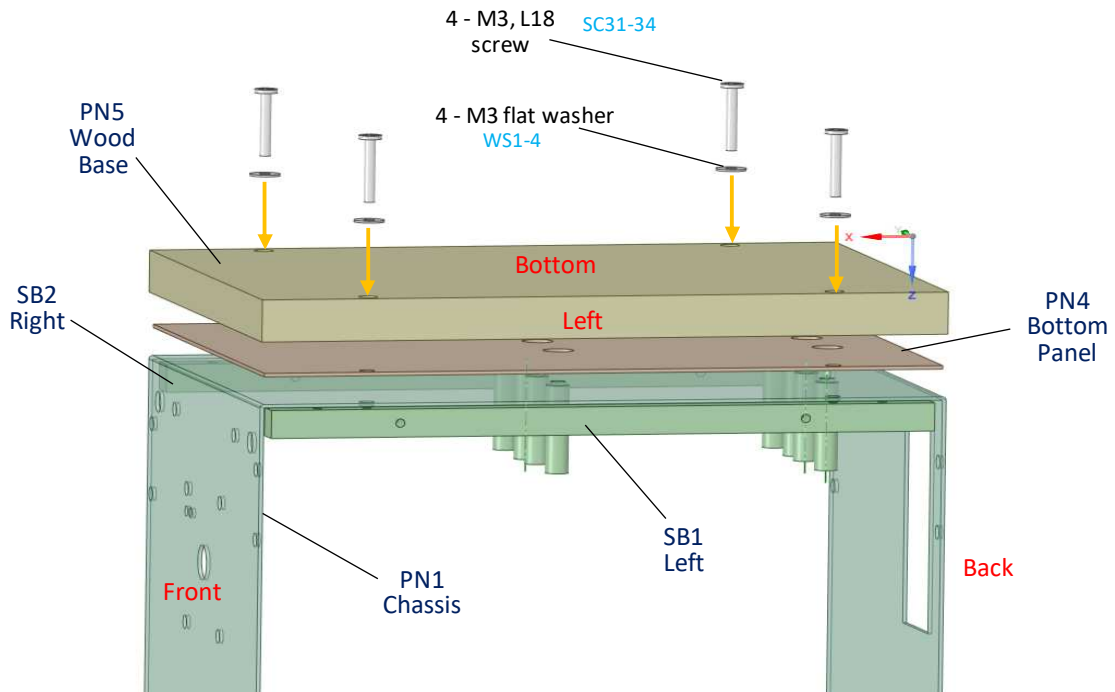
Chassis Assembly

* Attaching Wood Base

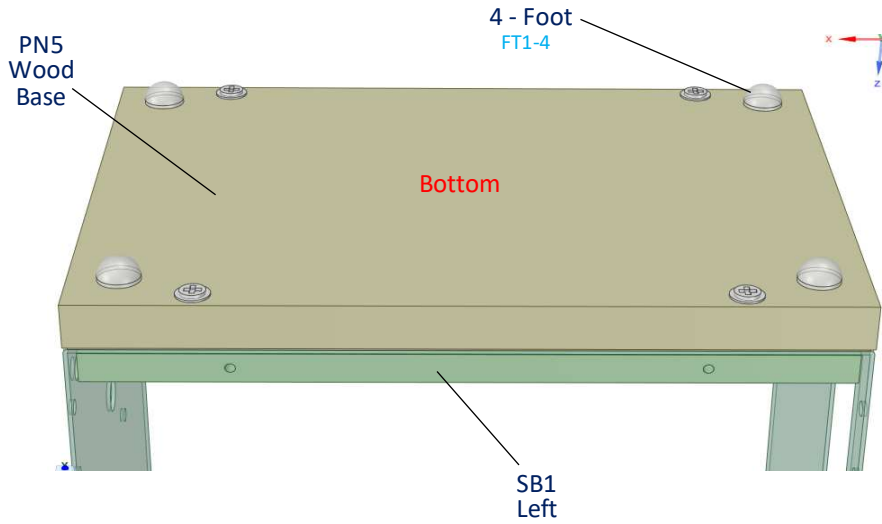
(1) Attach 25mm-long spacers to Chassis.



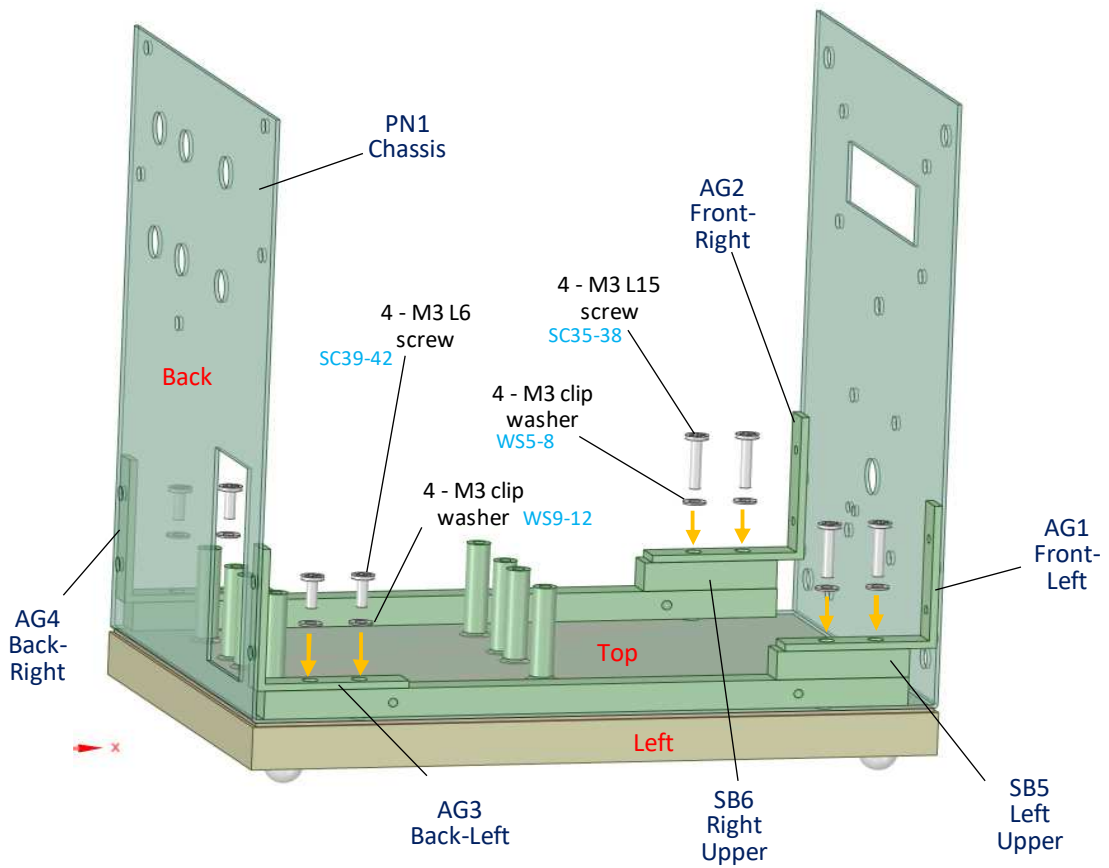
(2) Attach Bottom Panel and Wood Base to Chassis



(3) Attach four (4) feet to Wood Base

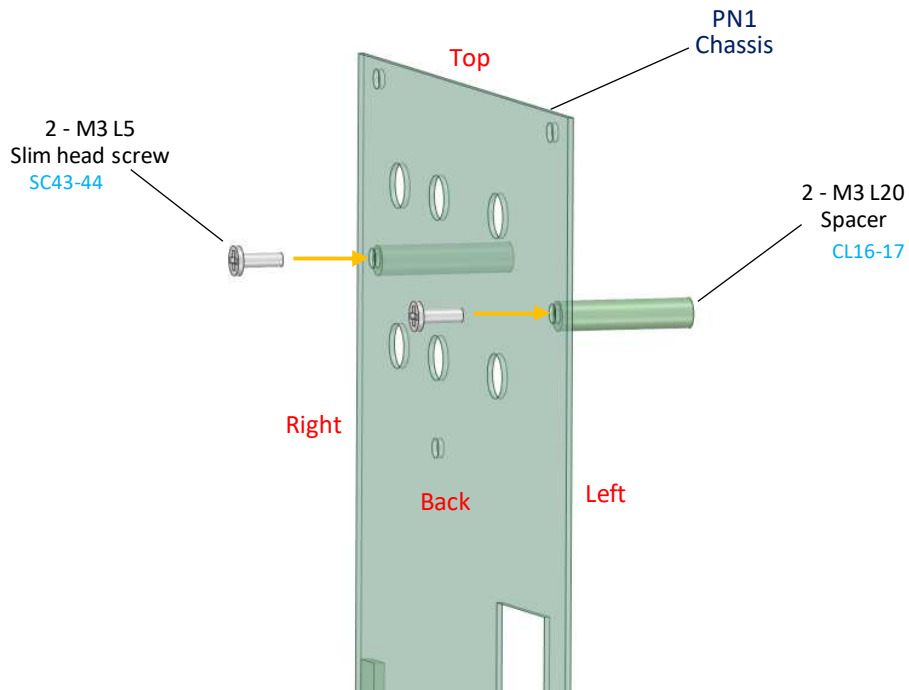


*** Attaching L-shape angles (AG1-4)**



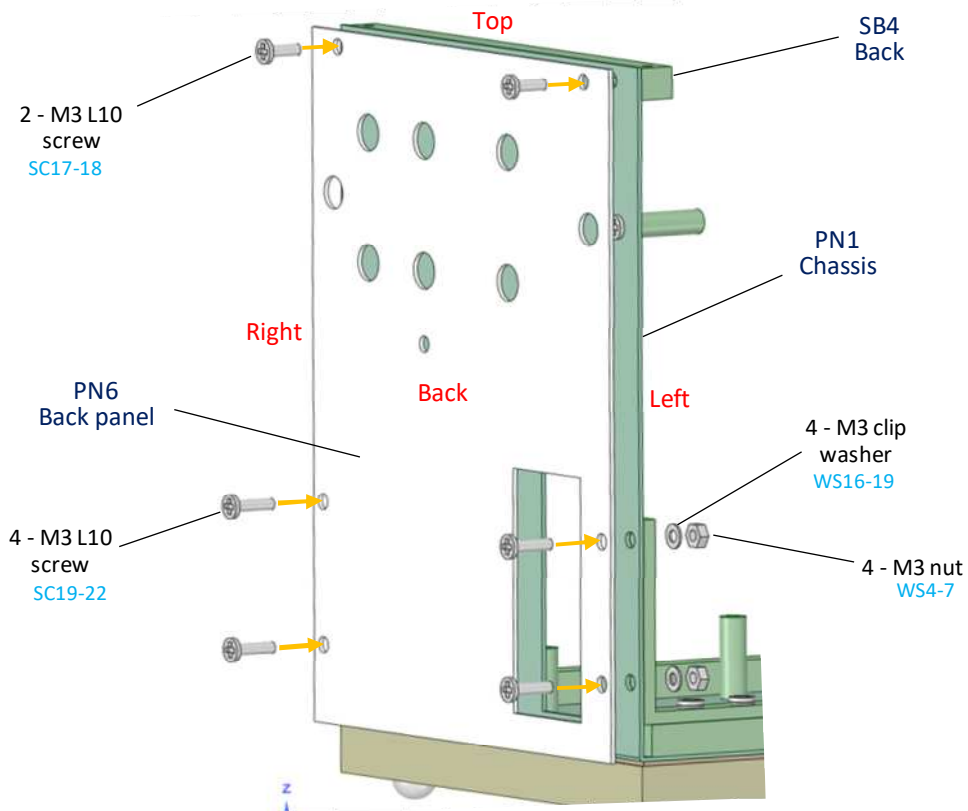
Back Panel Assembly

* Attaching spacers to Chassis

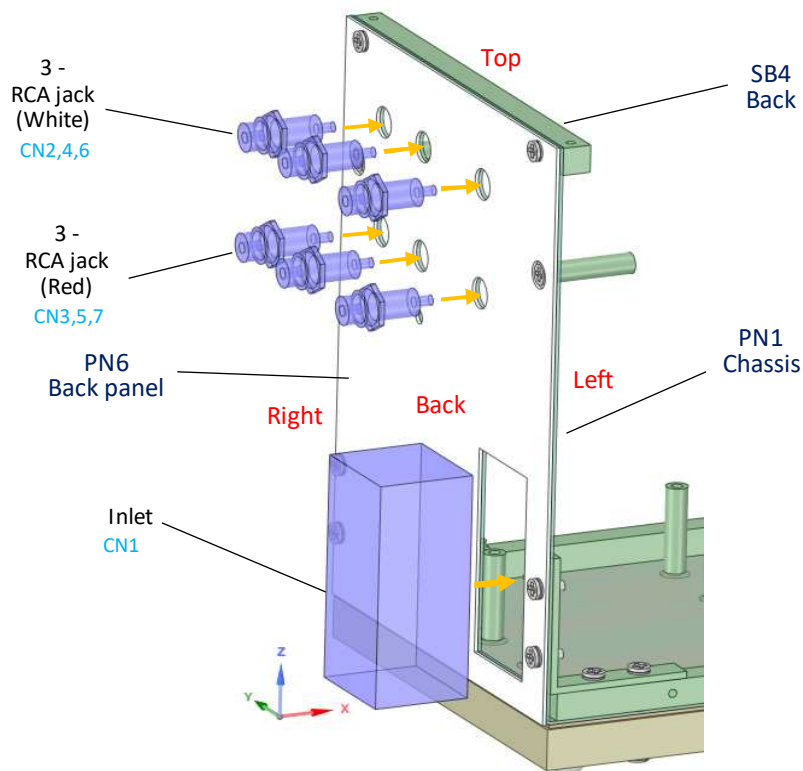


* Attaching Back Panel to Chassis

Before attaching Back Panel (PN6), affix Sticker1 (SK2) on Back Panel.

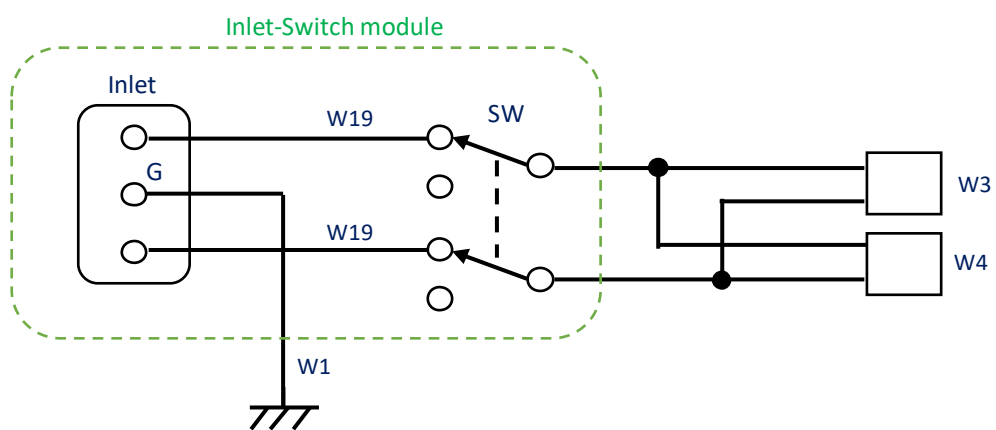
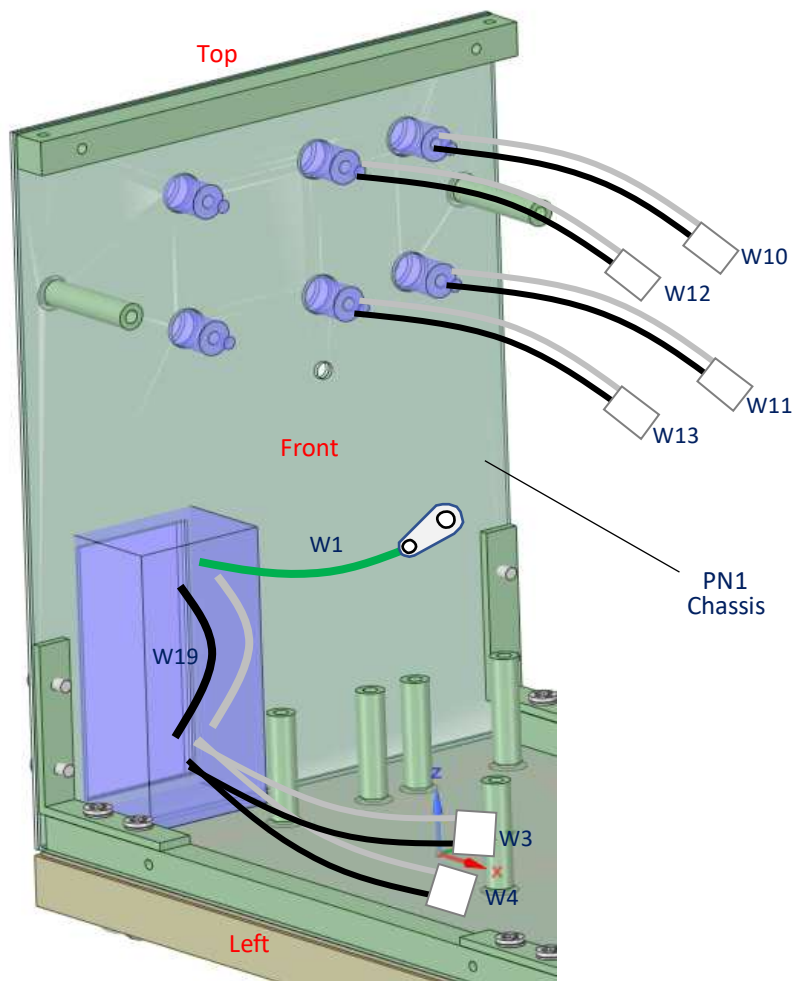


* Mounting connectors



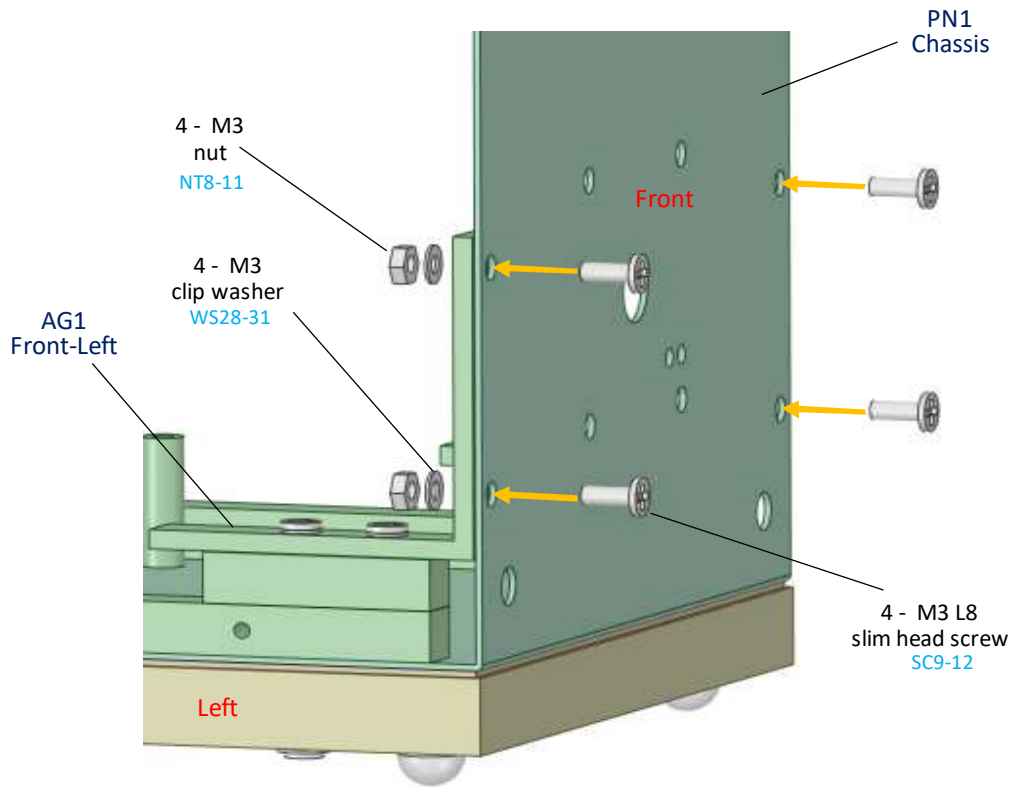
* Soldering wires

- (1) Solder W1 to the FG of the inlet.
- (2) Solder W19 to the inlet and switch.
- (3) Solder W3, W4 to the switch.
- (4) Solder W10 to CN2 (IN1_L).
- (5) Solder W11 to CN3 (IN1_R).
- (6) Solder W12 to CN4 (IN2_L).
- (7) Solder W13 to CN5 (IN2_R).

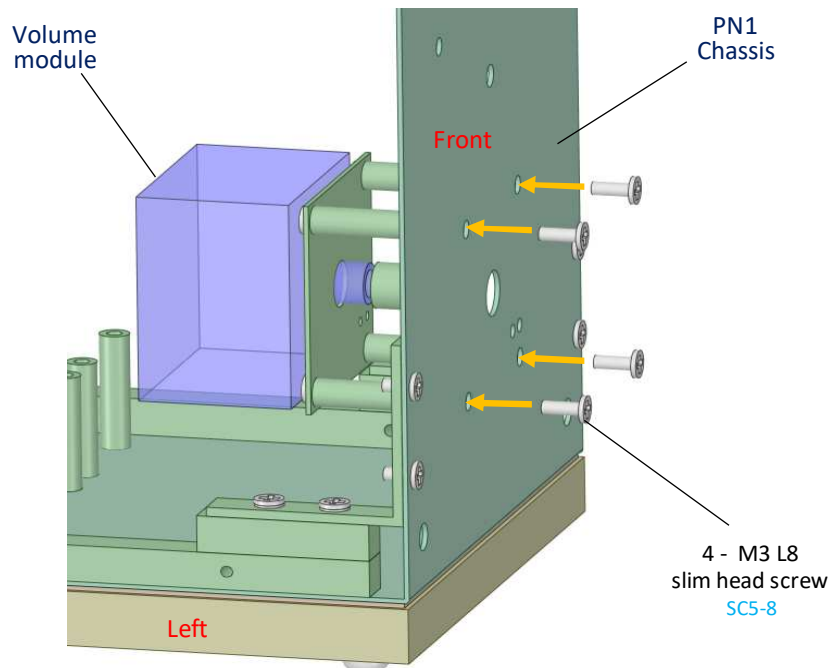


Front Panel Assembly

* Fixing angles to Chassis

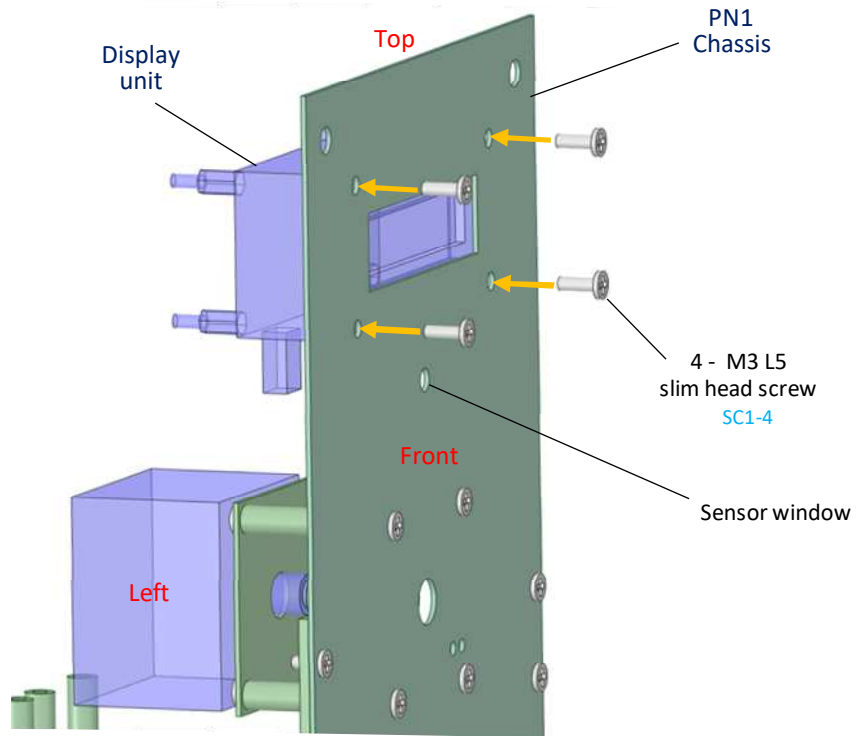


* Attaching volume module to Chassis

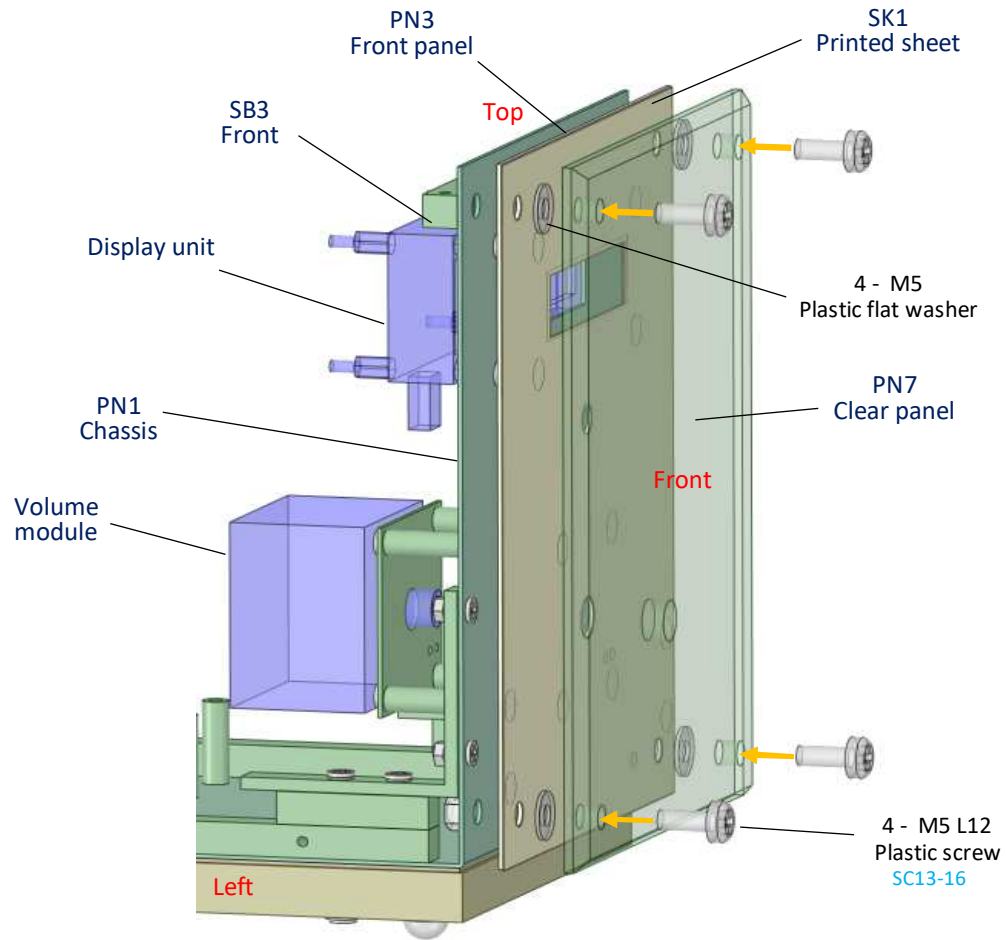


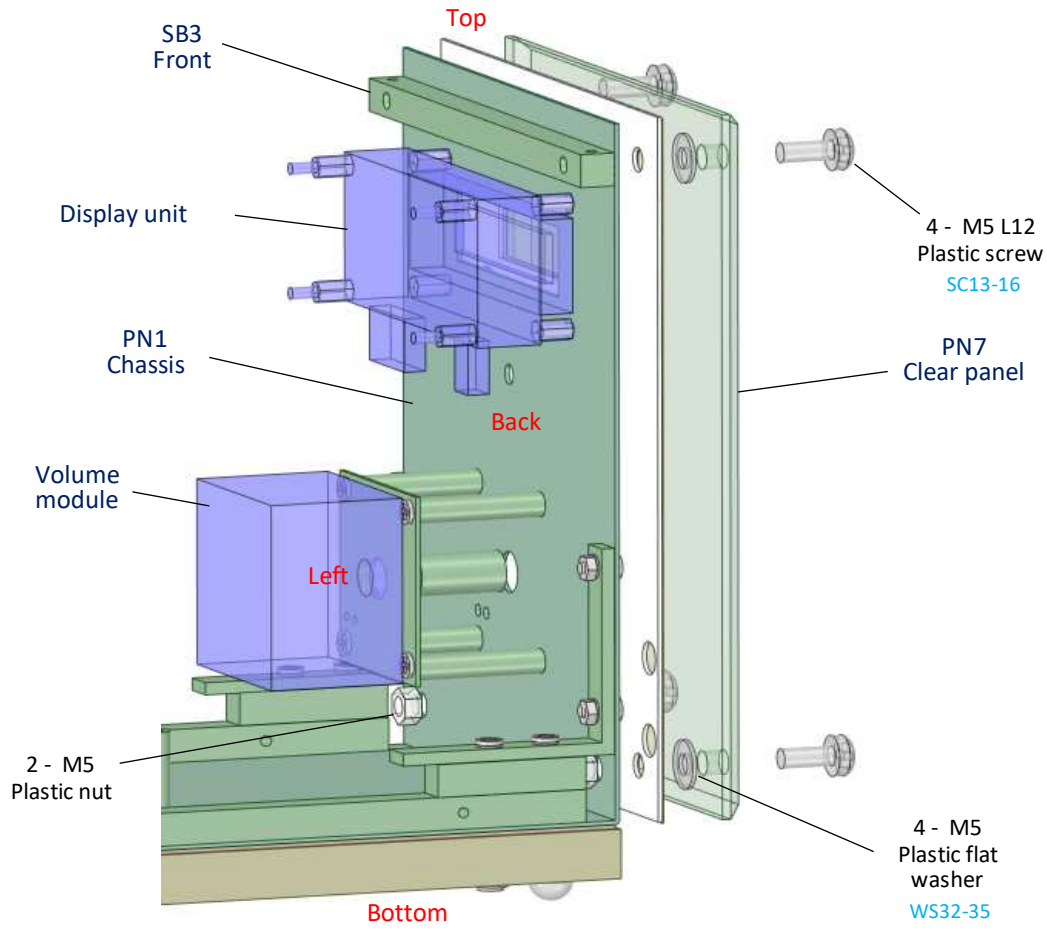
*** Attaching display to Chassis**

- (1) Fix the display unit to Chassis.
- (2) Put the photo sensor to the sensor window.



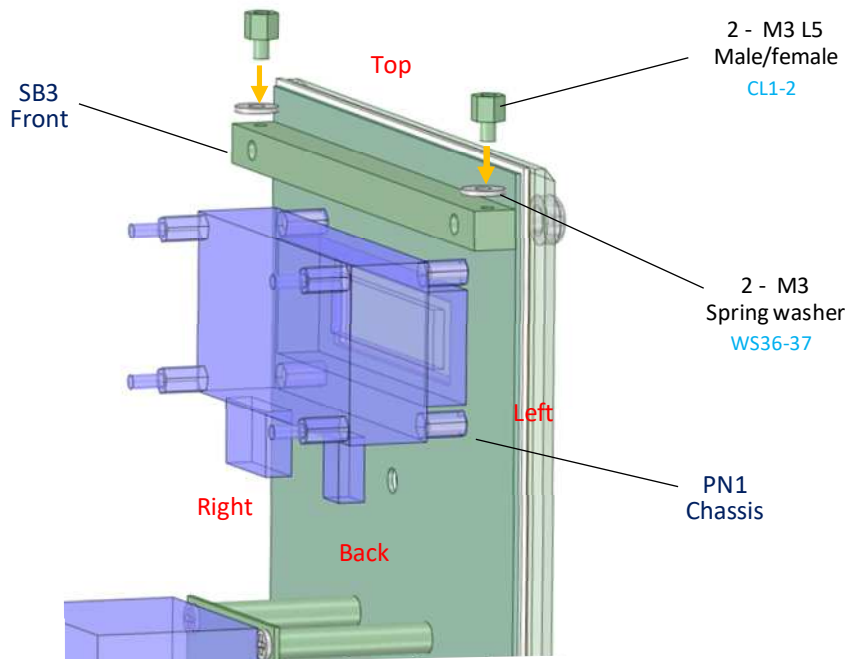
*** Attaching Front Panel and Clear Panel**





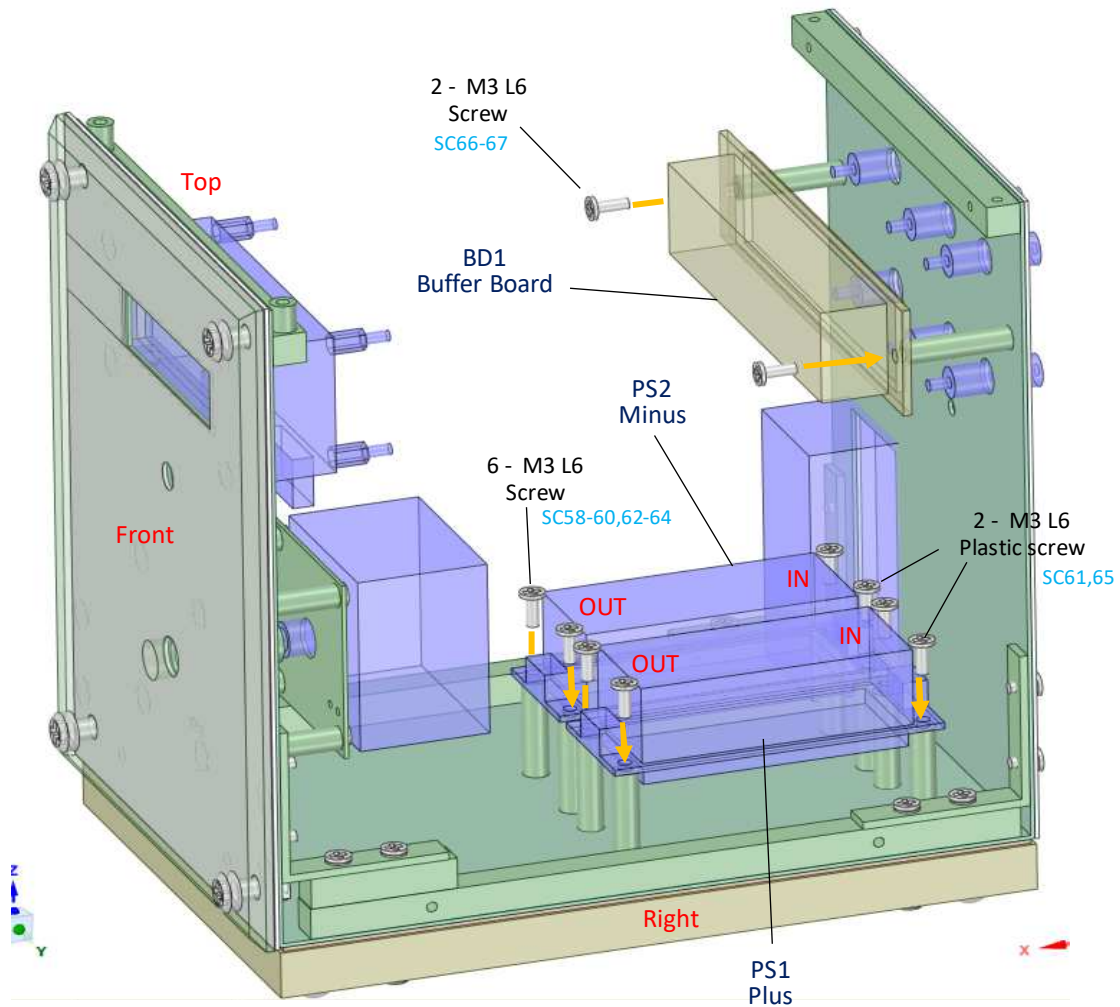
*** Fixing spacers to square bar (SB3)**

Fix the spacers with spring washers.



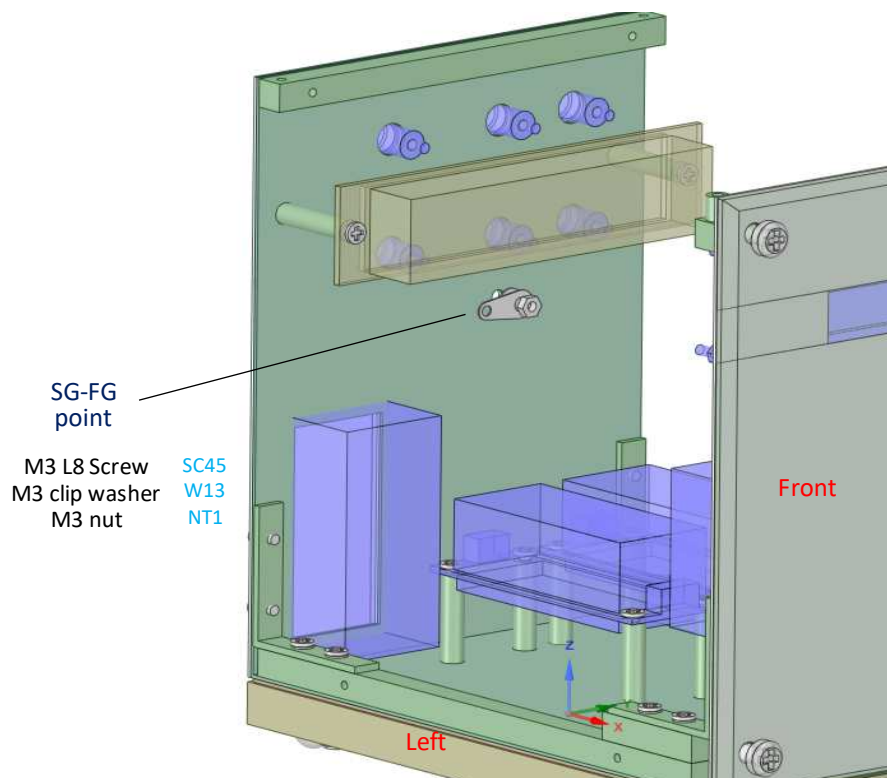
Mount of Remaining Modules

Fix the power supplies (PS1, PS2) and Buffer Board with M3 L6 screws.



Wiring

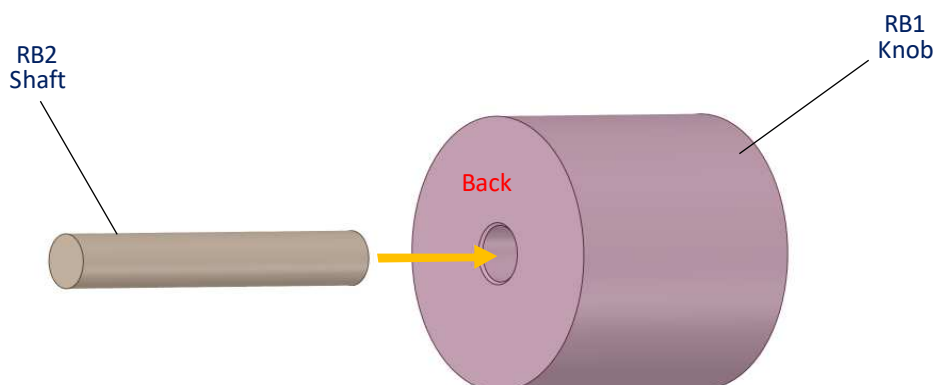
- (1) Fix the soldering tabs of W1, W2 to the SG-FG point with M3 L8 screw, M3 nut and M3 clip washer.
- (2) Connect W3, W4 to the inputs of the power supplies PS1, PS2, respectively.
- (3) Connect W5, W6 to the outputs of the power supplies PS1, PS2, respectively.
- (4) Connect W7 to the DC IN of VR1.
- (5) Connect W8 to the DC IN of VR2.
- (6) Connect W9 to the connector of VR2.
- (7) Connect W10-W13 to the inputs of Buffer Board, PL1-PL4, respectively.
- (8) Connect W14-W15 to the outputs of Buffer Board, PL5-PL6, respectively.
- (9) Solder W16-W17 to CN6, CN7, respectively.



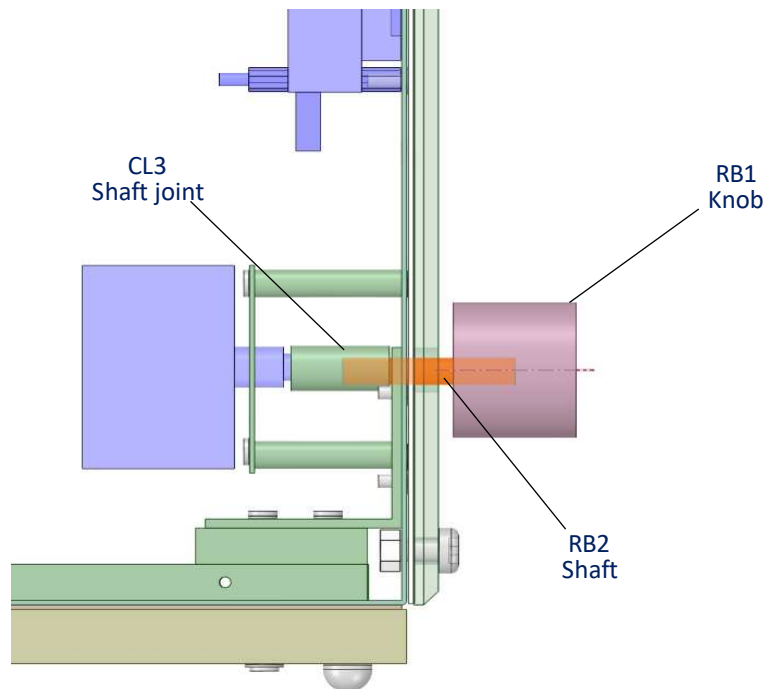
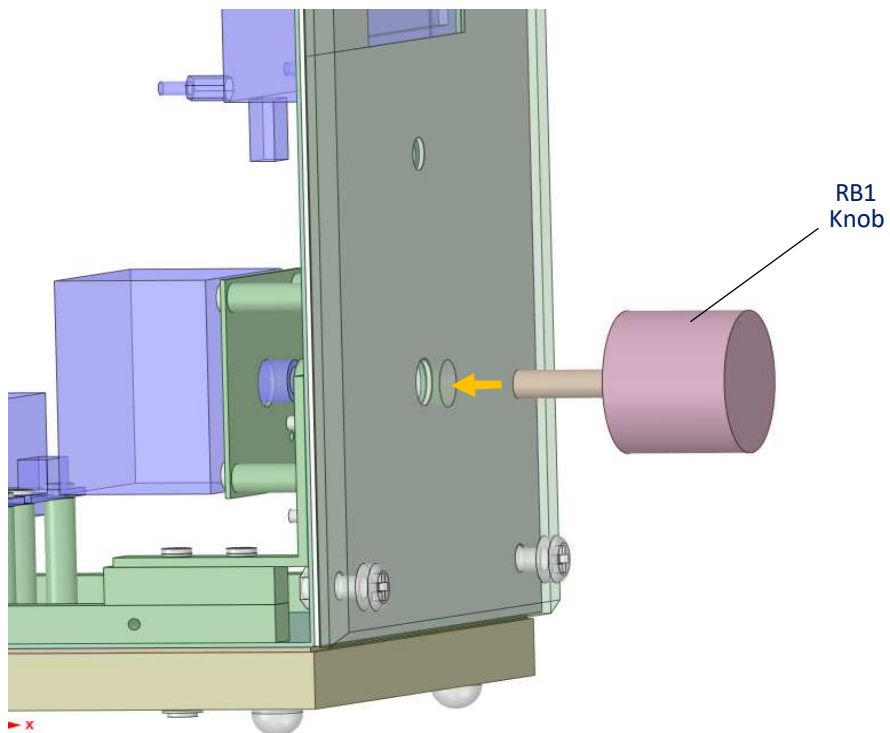
Attaching Knob

* Attaching the shaft to the knob

- (1) Insert the shaft into the knob.
- (2) Confirm the length of the shaft is right.
- (3) Glue the shaft to the knob.



*** Attaching the knob to the volume module**

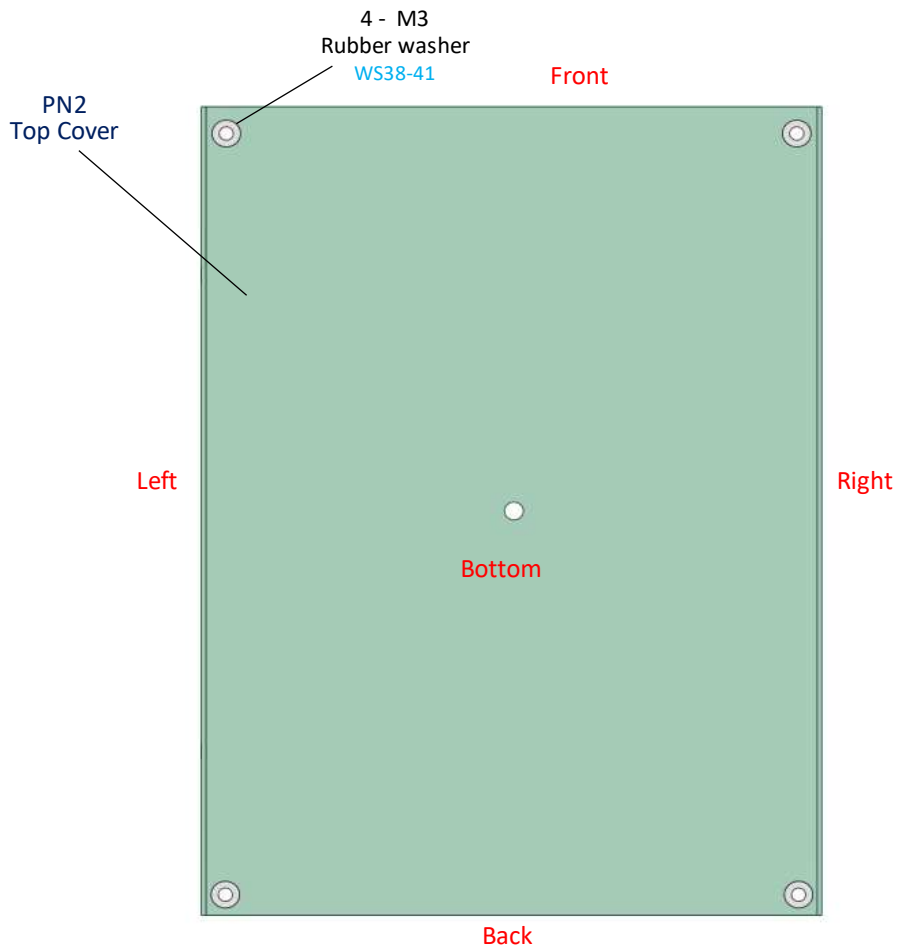


Fix the shaft (RB2) to the shaft joint (CL3).

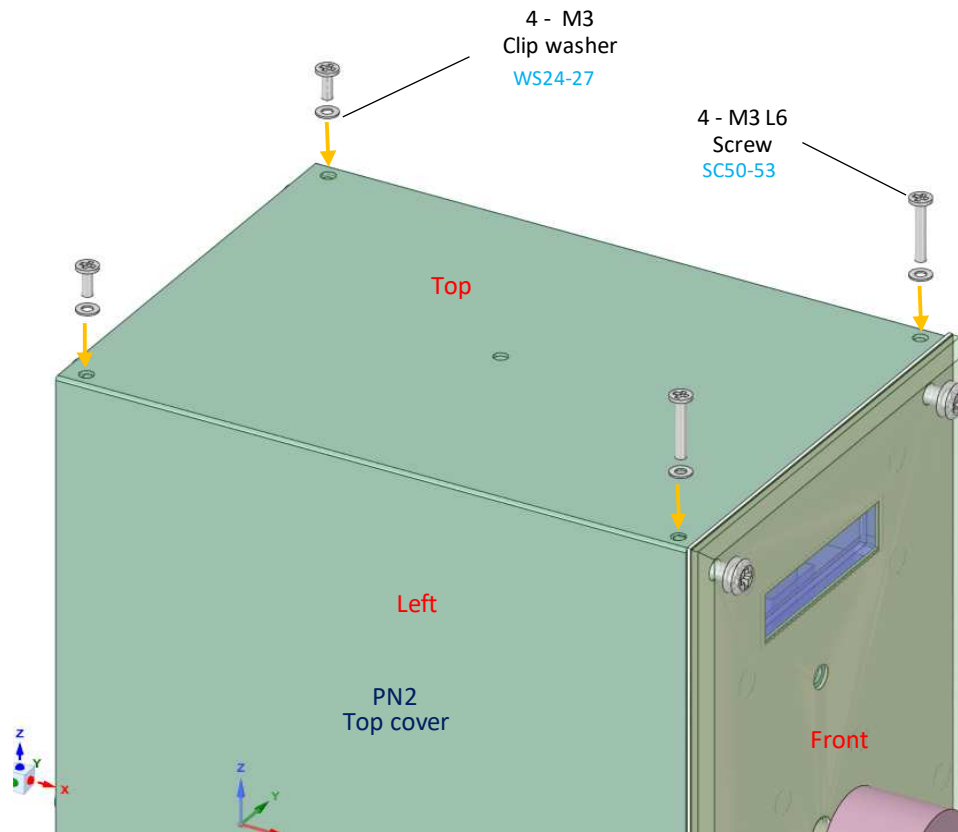
Attaching Top Cover

* Affixing rubber washers on Top Cover

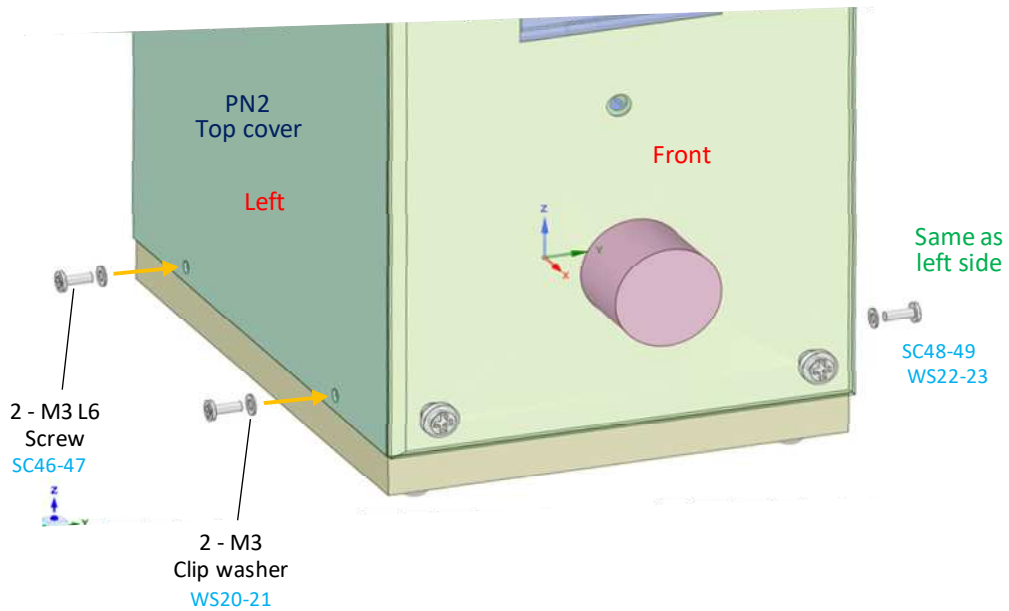
Affix rubber washers on the bottom side of Top Cover at the screw holes with bond.



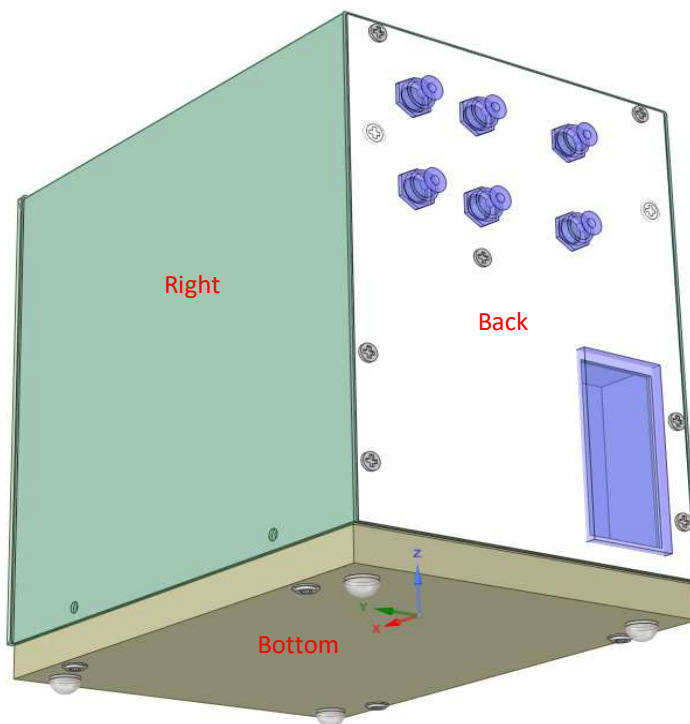
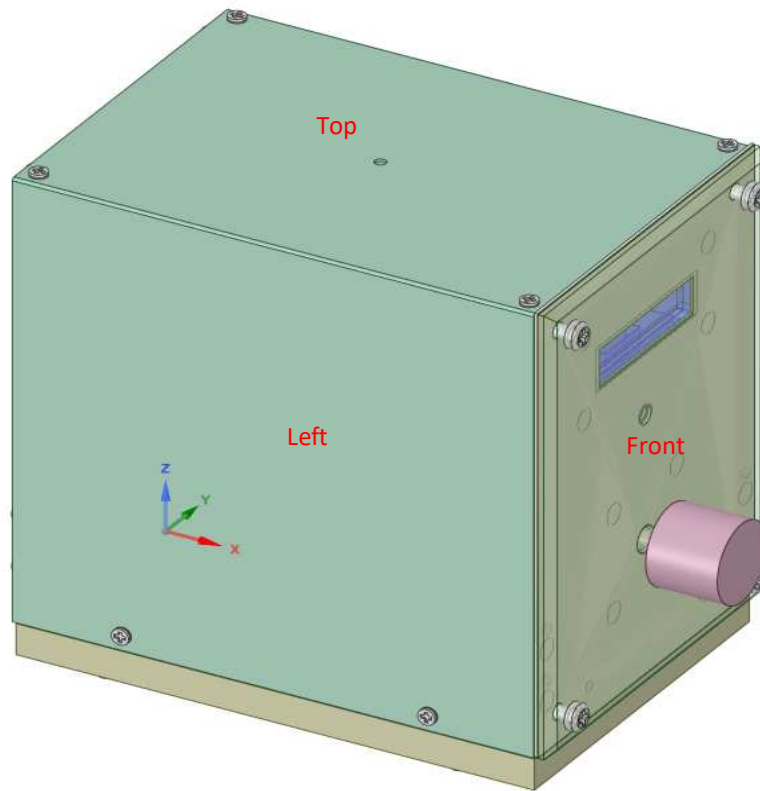
*** Fix the top side**



*** Fix the left and right sides**



Completed!



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