

# BFX-UA300

## Mockup Assembly guide

|              |            |             |            |
|--------------|------------|-------------|------------|
|              |            |             | SH, SON    |
| First Update | 2020.09.22 | Last Update | 2020.09.22 |

# Read me before Mockup assembly

- Electric screwdriver use only unlock the screw.
- Highly recommend screwdriver by hand when lock the screw.
- The Mockup has limited life time.
  - If you assemble/reassemble more than 5 times, it may cause housing problems.
- Please assemble in slide order
- The sound test
  - Should be proceed after all screws are assembled.

# Assembling from the PCBA Assembly

- Among the 6 mockups status.
  - All mockup is unlock the screw or semi locked.
    - Mockup No.4 set is fully assembled
    - Mockup No.5~9 set are semi assembled with speaker units.
    -
- Please see the fully assembly reference - Mockup No.4
- Mockup No.8 and 9 are prepared bottom vent hole.
  - Please run the thermal test with vent hole and without vent hole.
  - If you don't need vent hole, please tape the vent hole and test

# Open the Cover

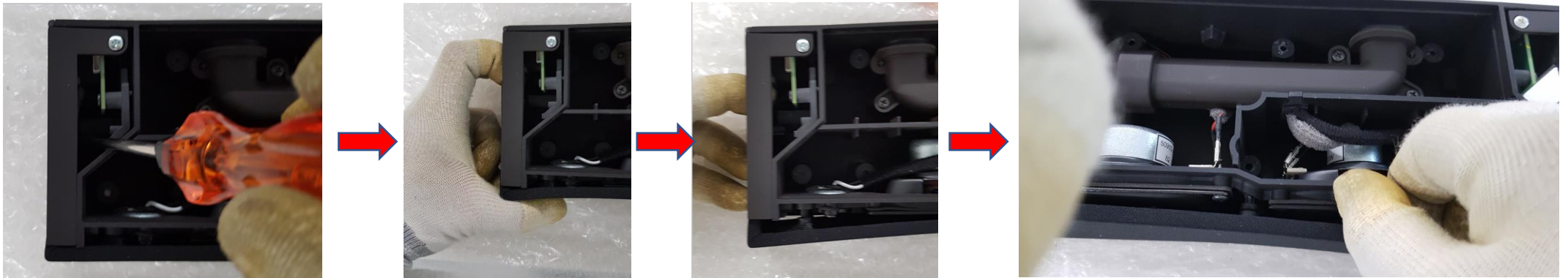
- Mockup No.4 need to unlock the screw
  - Locked below 4 point



# Open the Cover

Please see the disassemble video clip.

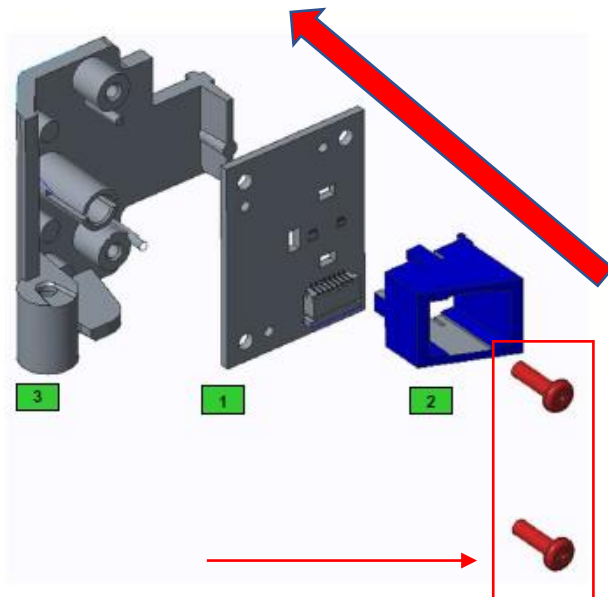
- 1. Open the Top cover
  - <https://drive.google.com/file/d/1ChD6VU7j2TG-x04YPKEpFLqUYchHeDJ7/view?usp=sharing>
- 2. Open the front grill
  - <https://drive.google.com/file/d/1QtUkCNSJKkbOTDqznmJGaA7q8G8afaJn/view?usp=sharing>



# Assembly PCBA

- Side LED assembly and insert the cable

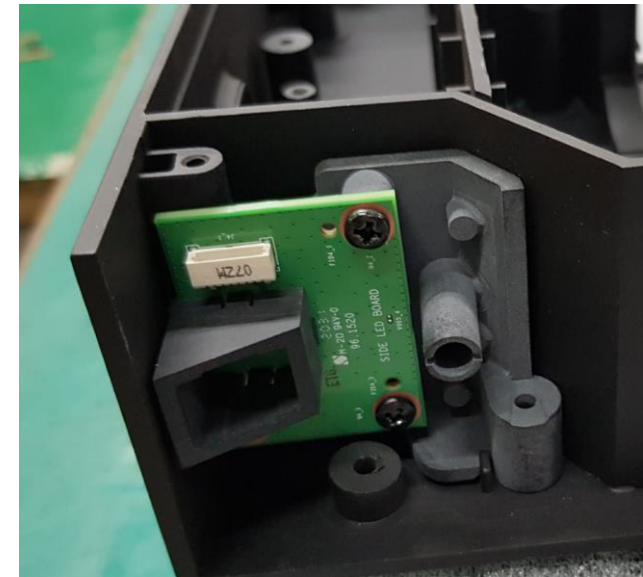
$6 = 1 + 2 + 3$  LEFT  
 $6.1 = 1 + 2 + 3$  RIGHT



PCBA\_SIDE\_LED\_LEFT,RIGHT\_screw BH\_3X10 TTS



Semi assembled.

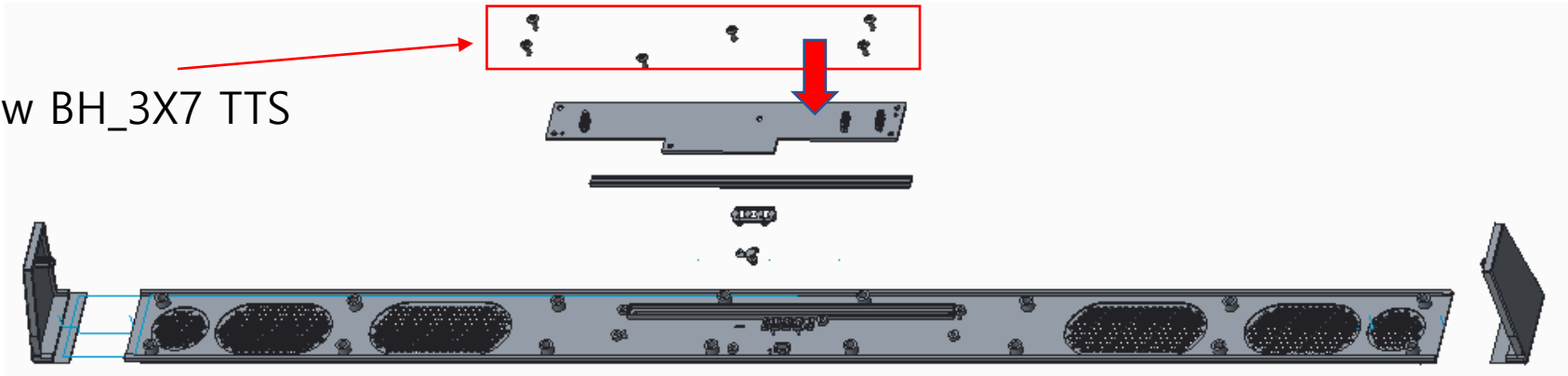


Fully assembled.

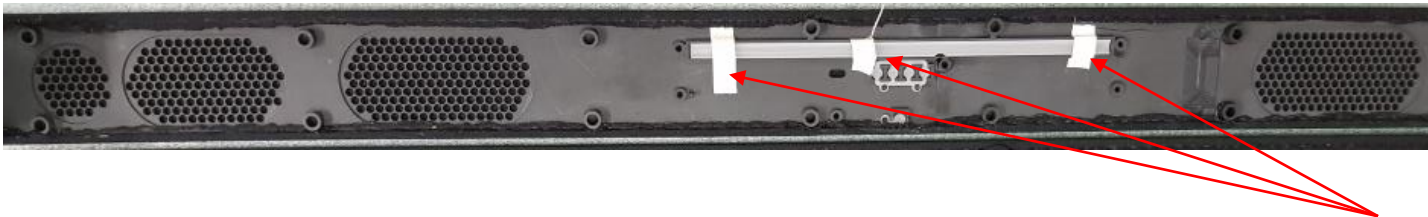
# Assembly PCBA

- Front LED PCBA assembly

LED PCBA screw BH\_3X7 TTS



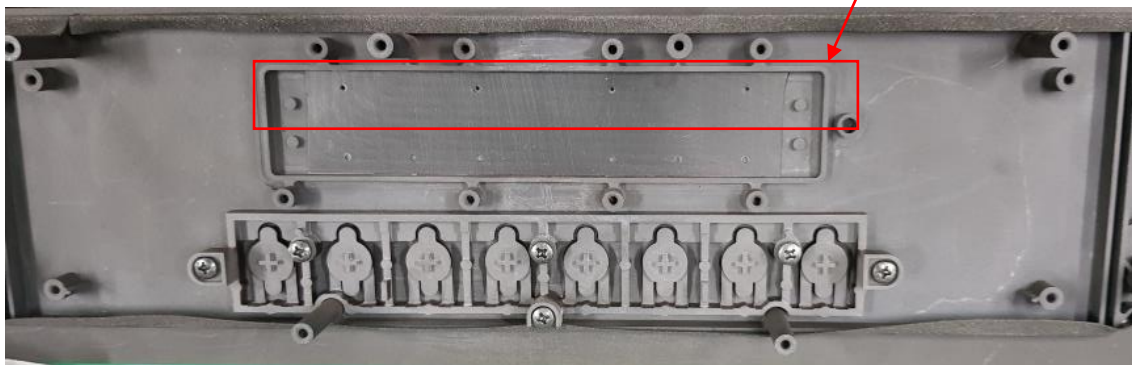
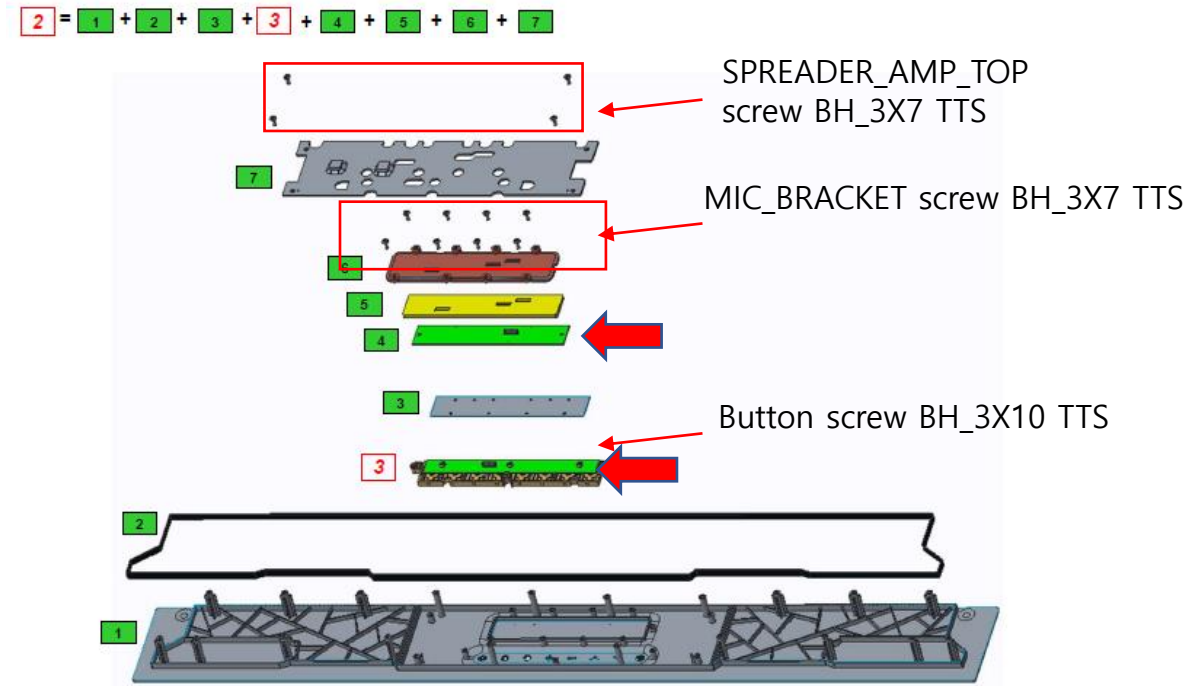
Semi assembled.



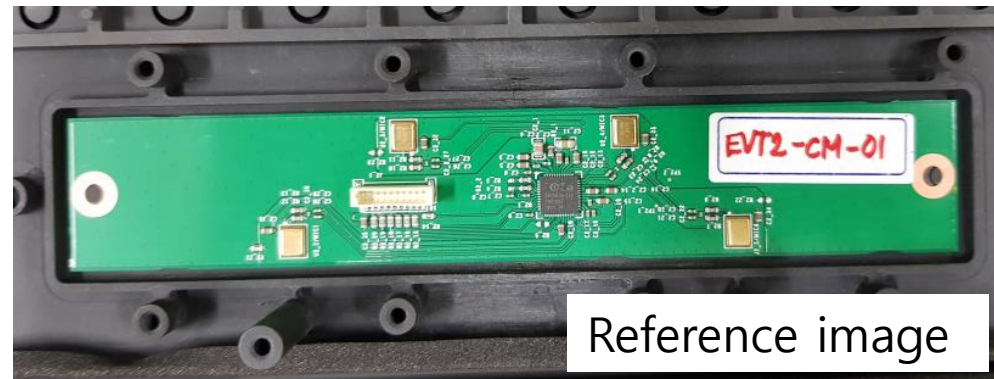
Temporary tape. Please removed before assembly

# Assembly PCBA

- MIC and Button PCBA assembly
- Note.
  - Please be sure alignment Mic hole when MIC PCB assembly



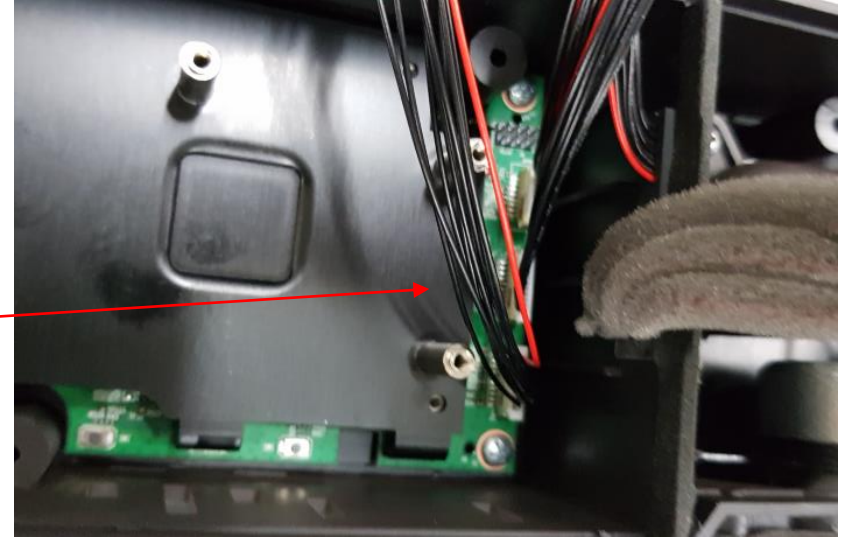
Semi assembled. With MIC bracket



MIC

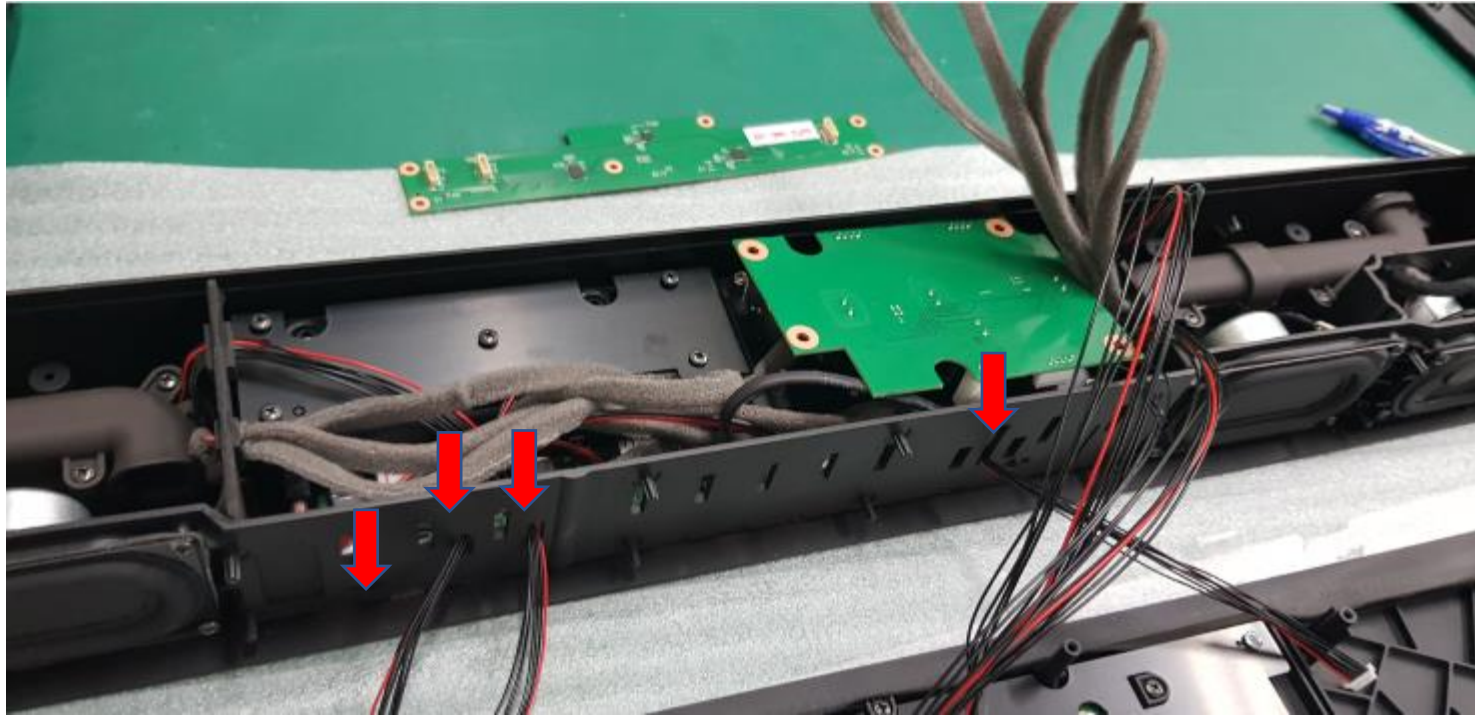
# Assembly PCBA

- SoC Main PCBA assembly. Please follow below step
  - Heat spreader SoC Bottom
  - SoC Main PCBA, BT antenna
    - Connect all of connector and cables
  - Heat spreader SoC Top
  - Heat spreader AMP Bottom
  - AMP PCBA
    - Before assembly, please connect all of amp board connectors
- Note
  - If you need trim the cable, it can be actable.
  - The Mock No. 4 speaker cable was trimmed.



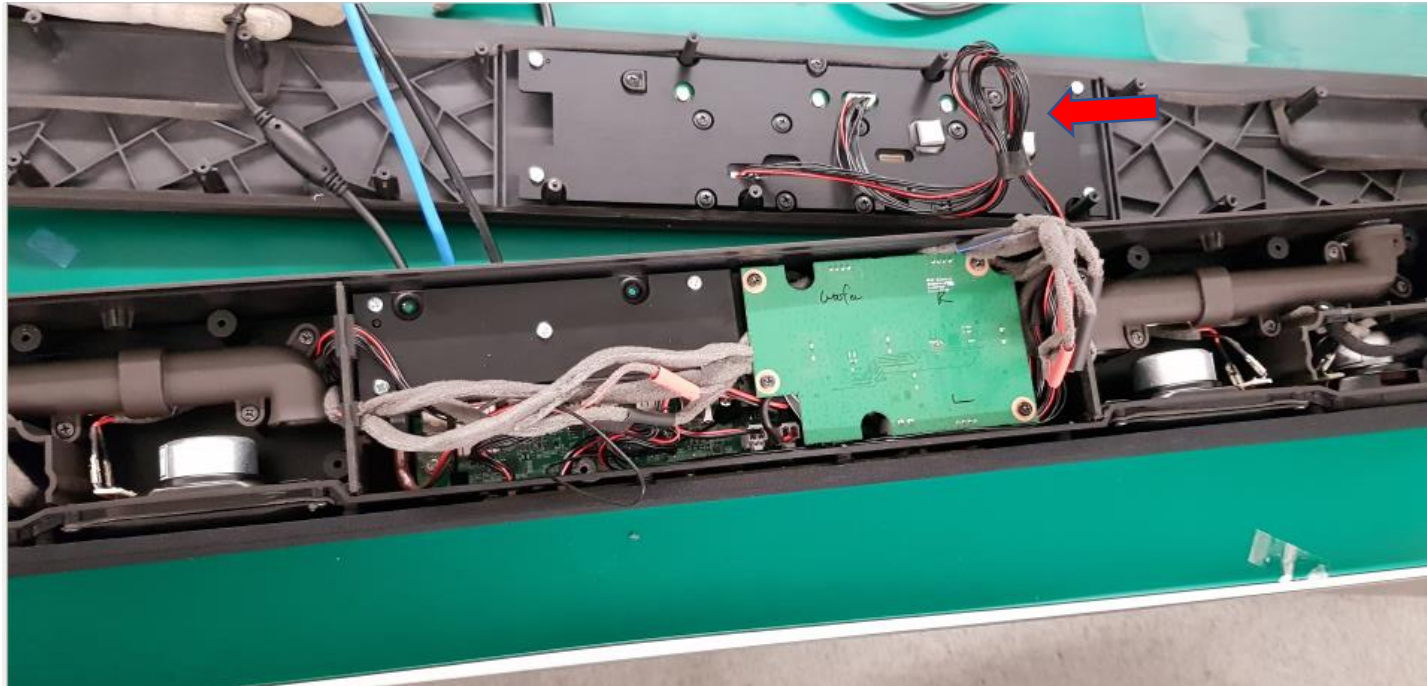
# Assembly PCBA

- Connect Grill housing PCBA : LED PCBA, BT antenna



# Assembly PCBA

- Connect Top housing PCBA : MIC and Button

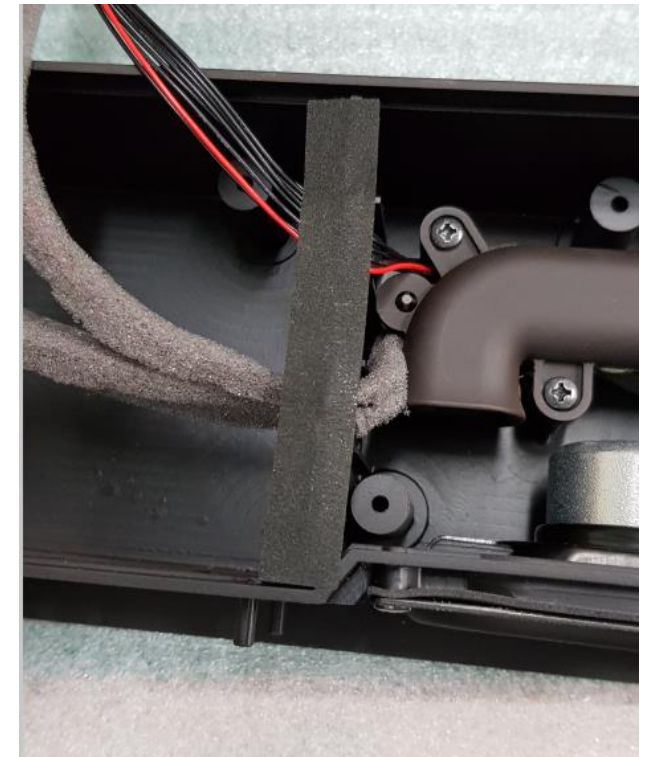
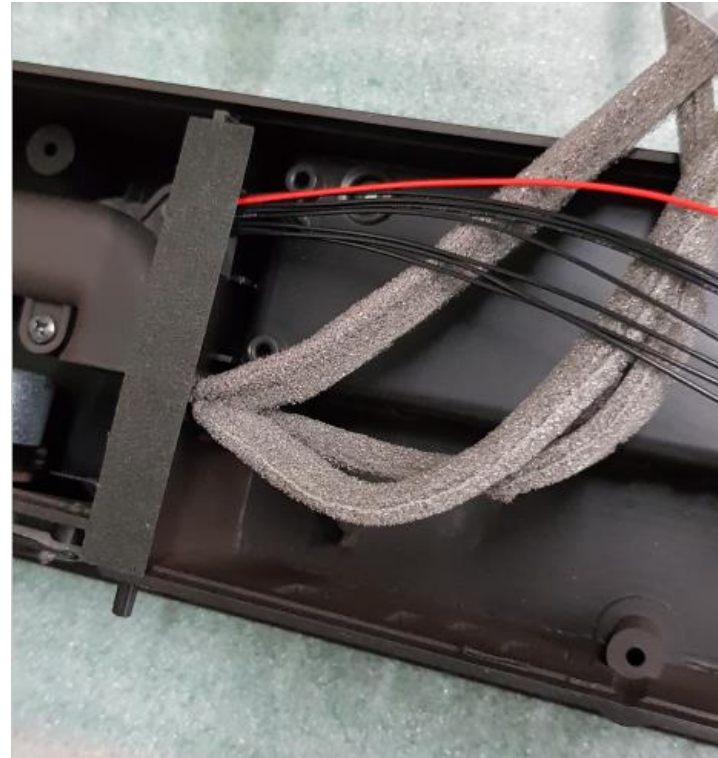
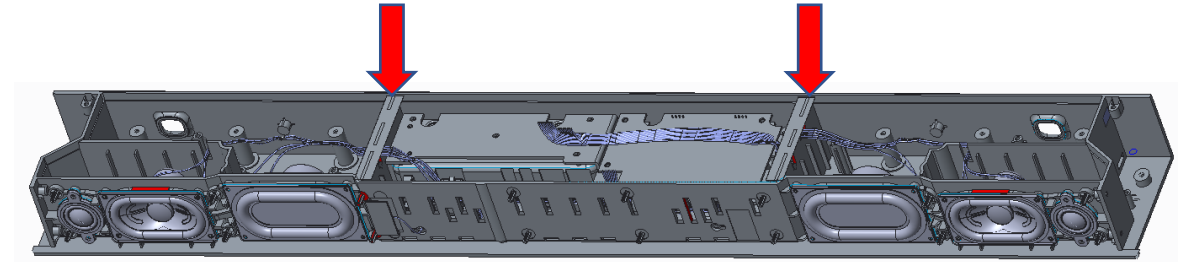


# Assembly housing

- Grill assembly
  - Please see the assemble video clip.
  - <https://drive.google.com/file/d/1EaDG6on-bYc0eBSkYdti3xOcflilb3Hp/view?usp=sharing>

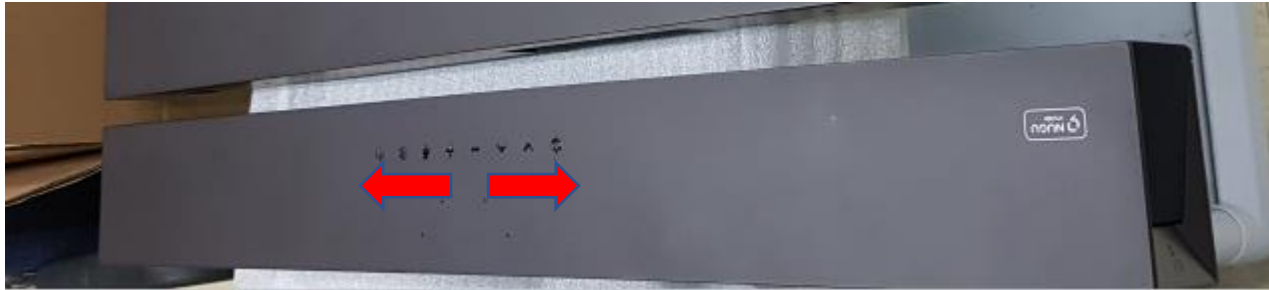
# Assembly housing

- Attached gasket inner \*2ea
  - This gasket is packed with screw



# Assembly housing

- Top assembly
  - Aline top and bottom housing
    - Press gently from the center to each side
  - Please see the assemble video clip.
    - <https://drive.google.com/file/d/1MkhYCeYYQNYbX3rwsKwFCxK-ABhrUYZK/view?usp=sharing>



CASE screw BH\_3X10 TTS



# Assembly housing

- Attached Bottom Foot and Screw cover

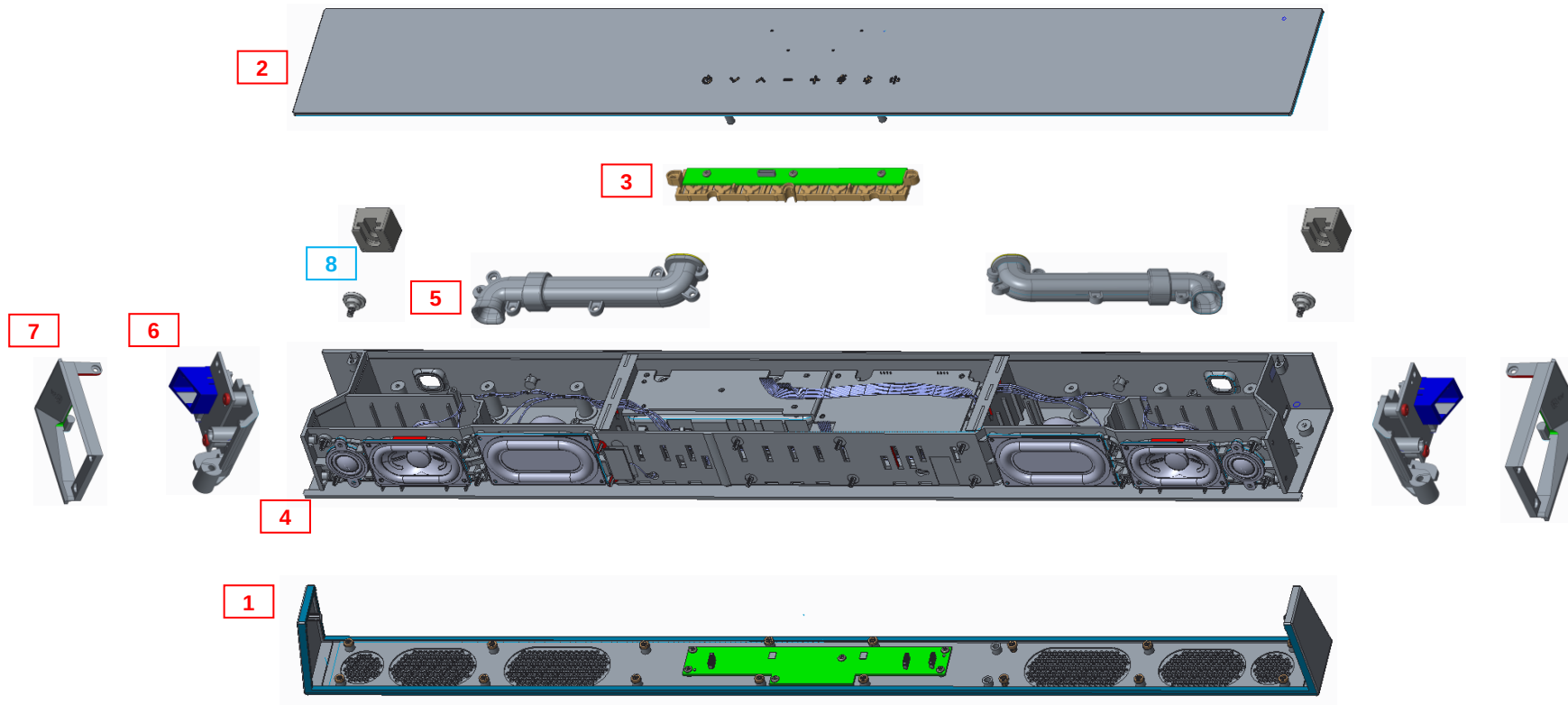
# Assembly from the sub assembly

- When you start the sub-assembly level, Please assemble in slide order
- Sub assembly owner is not defined yet. It is under discussion with vender. It is just for your reference.
- Mechanical structure and BOM may changed next revision.

# Overall structure

Exploded View (Total Ass'y)

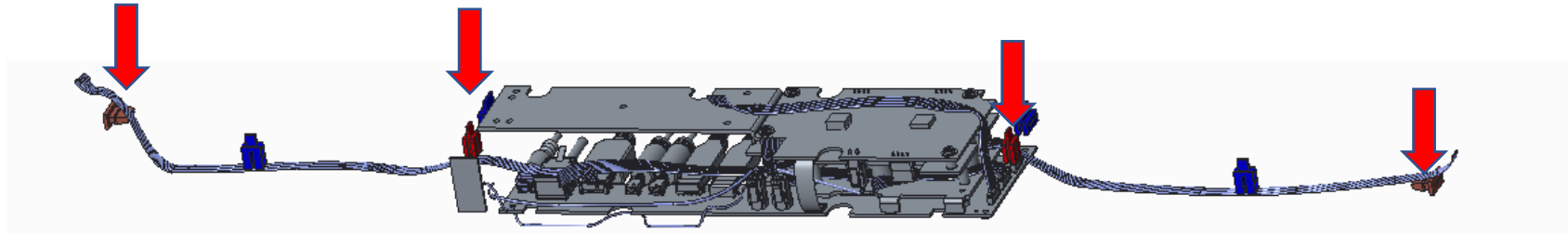
$$\text{SET} = 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8$$



# Sub assembly

Harness with bushing : side LED

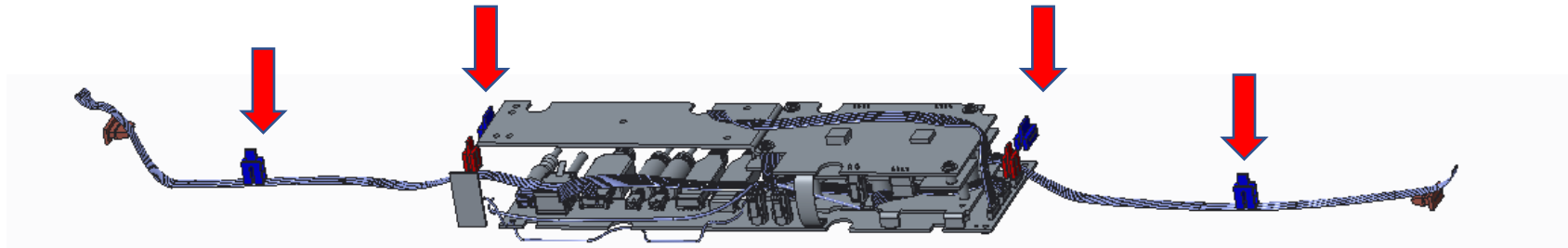
- Each side cable has 2 bushing (Red / Orange color)
  - For side led PCBA cable



# Sub assembly

Harness with bushing : Speaker units

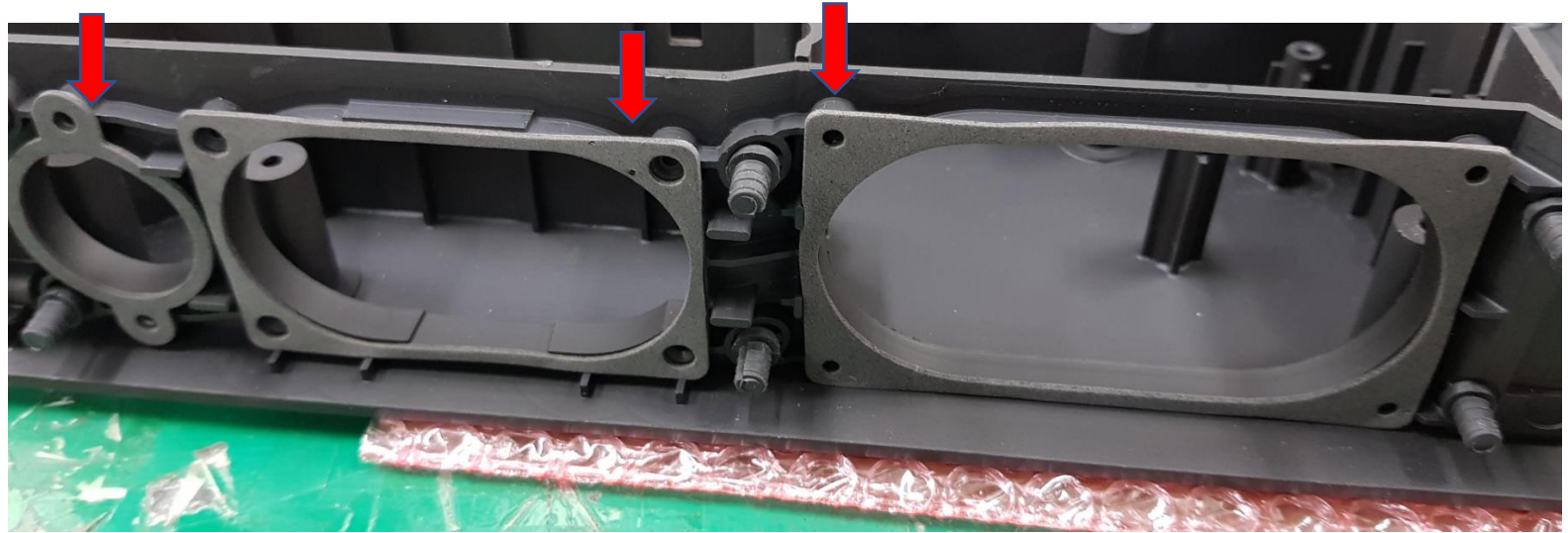
- Each side cable has 2 bushing (Blue color)
  - For Speaker unit cable



# Sub assembly

Speaker back gasket

- Need to attached EVA Gasket (Ethylene Vinyl Acetate) Foam on the rear Speaker units or housing



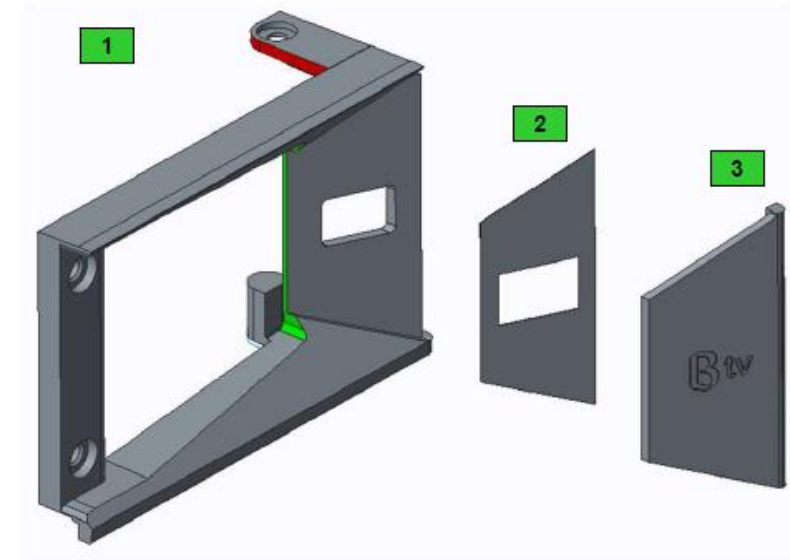
# Sub assembly

## 1-8. BFX-UA300 Part List –Exploded View (Side Deco\_Left / Right Ass'y)

|   |   |  |  |  |                             |                                          |  |   |    |  |  |
|---|---|--|--|--|-----------------------------|------------------------------------------|--|---|----|--|--|
| 7 |   |  |  |  | SIDE DECO LEFT ASS'Y        |                                          |  | 1 | EA |  |  |
|   | 1 |  |  |  | (DECO SIDE LEFT)            | ABS_V0_BLACK, SPRAY                      |  | 1 | EA |  |  |
|   | 2 |  |  |  | (ADHESIVE DOUBLE SIDE LEFT) | ADHESIVE_DOUBLE SIDED, T=0.2, BLACK, 3M社 |  | 1 | EA |  |  |
|   | 3 |  |  |  | (PLATE BTV LOGO LEFT)       | PMMA_MILKY, SPRAY_OUTER, LASER MARKING   |  | 1 | EA |  |  |

7 = 1 + 2 + 3 LEFT

7.1 = 1 + 2 + 3 RIGHT



# Sub assembly

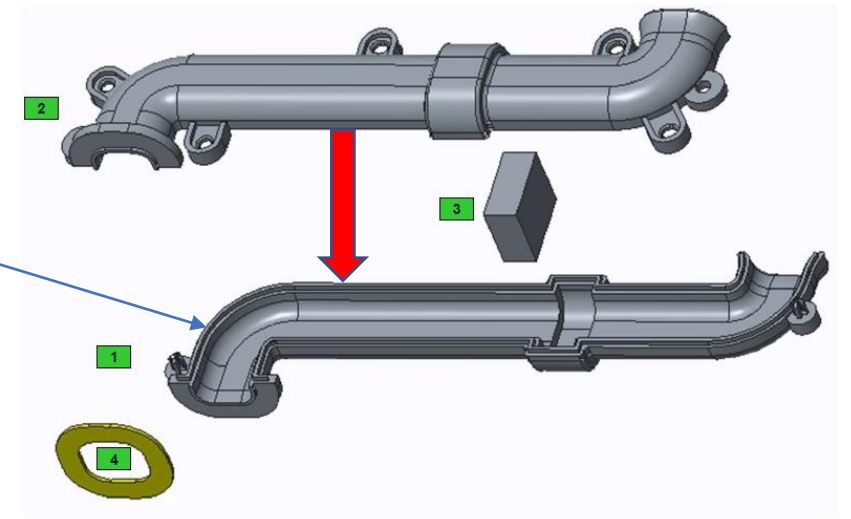
## 1-6. BFX-UA300 Part List –Exploded View (Port\_Left / Right Ass'y)

|   |   |  |  |                    |                                               |  |   |    |  |  |
|---|---|--|--|--------------------|-----------------------------------------------|--|---|----|--|--|
| 5 |   |  |  | PORT RIGHT ASS'Y   |                                               |  | 1 | EA |  |  |
|   | 1 |  |  | (PORT UPPER RIGHT) | ABS_V0_BLACK, SPRAY_INNER, ULTRASONIC WELDING |  | 1 | EA |  |  |
|   | 2 |  |  | (PORT LOWER RIGHT) | ABS_V0_BLACK, SPRAY_INNER, ULTRASONIC WELDING |  | 1 | EA |  |  |
|   | 3 |  |  | (Acoustic Foam)    | PU Foam, Detail spec TBD                      |  | 1 | EA |  |  |
|   | 4 |  |  | (GASKET PORT)      | EVA_BLACK_ADHESIVE, T=1.0                     |  | 1 | EA |  |  |
|   | 5 |  |  | (ADHESIVE GLUE)    | Detail spec TBD                               |  |   | g  |  |  |

**5** = **1** + **2** + **3** + **4** LEFT

**5.1** = **1** + **2** + **3** + **4** RIGHT

Apply ADHESIVE GLUE [5]

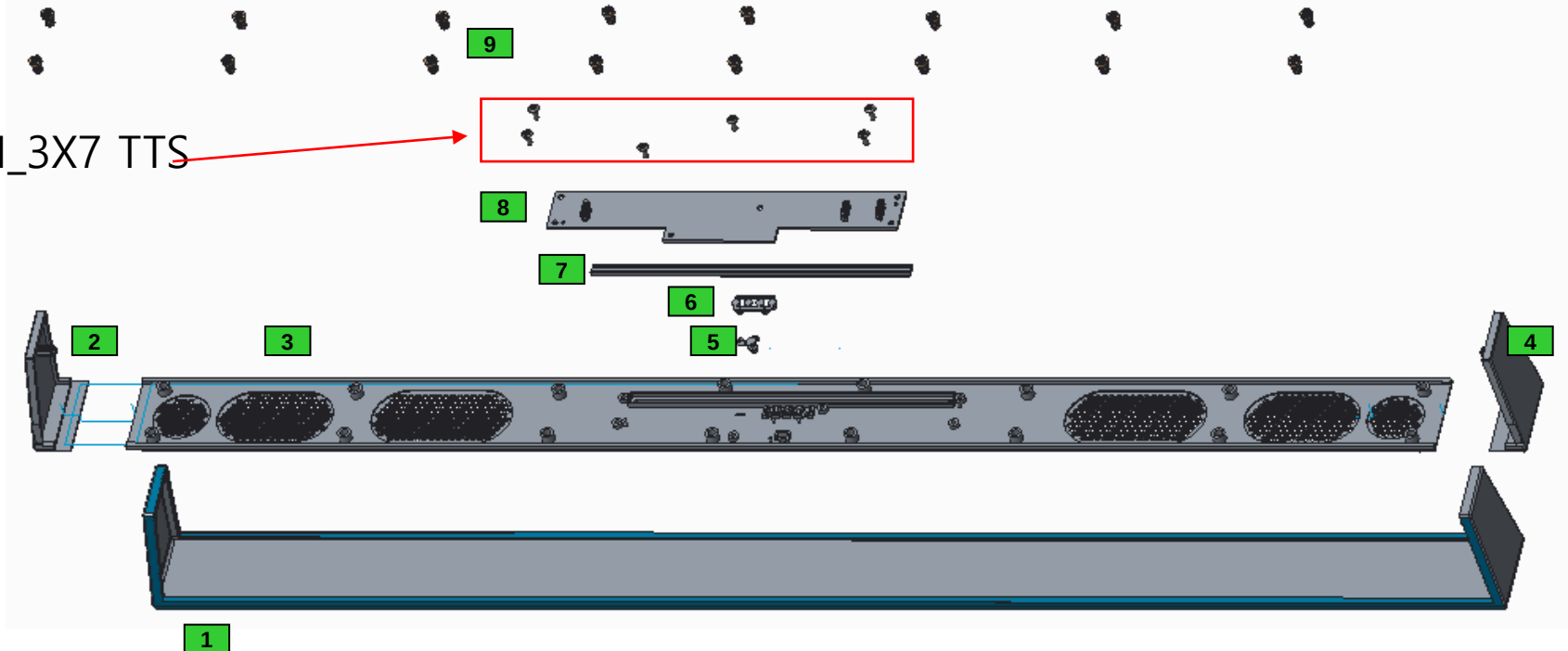


# Sub assembly : Front

## 1-2. BFX-UA300 Part List –Exploded View (Grill Fabric Ass'y)

|   |   |  |  |                        |  |                            |    |    |  |  |
|---|---|--|--|------------------------|--|----------------------------|----|----|--|--|
| 3 |   |  |  | GRILL FABRIC ASS'Y     |  |                            | 1  | EA |  |  |
|   | 1 |  |  | (NET FRAME_MIDDLE)     |  | ABS_V0_BLACK, HEAT STAKING | 1  | EA |  |  |
|   | 2 |  |  | (NET FRAME_SIDE_RIGHT) |  | ABS_V0_BLACK, HEAT STAKING | 1  | EA |  |  |
|   | 3 |  |  | (NET FRAME_SIDE_LEFT)  |  | ABS_V0_BLACK, HEAT STAKING | 1  | EA |  |  |
|   | 4 |  |  | (FABRIC_JERSEY)        |  | POLYESTER, COLOR: TBD      | 1  | EA |  |  |
|   | 5 |  |  | (LENS LED STATUS)      |  | PMMA_MILKY, HEAT STAKING   | 1  | EA |  |  |
|   | 6 |  |  | (LENS LED GOOGLE)      |  | PMMA_MILKY, HEAT STAKING   | 1  | EA |  |  |
|   | 7 |  |  | (LENS LED NUGU)        |  | PMMA_MILKY, HEAT STAKING   | 1  | EA |  |  |
|   | 8 |  |  | (LED PCBA)             |  | LED PCBA                   | 1  | EA |  |  |
|   | 9 |  |  | (HOLDER GRILL)         |  | TPE_BLACK, HARDNESS 20     | 16 | EA |  |  |

LED PCBA screw BH\_3X7 TTS

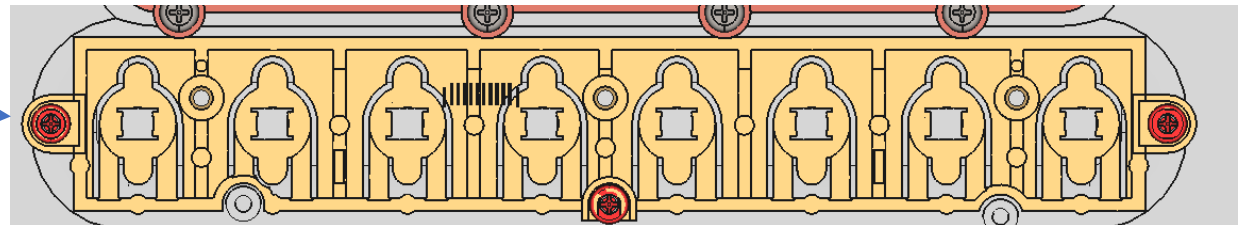


# Sub assembly : Top housing

## 1-4. BFX-UA300 Part List –Exploded View (Button Ass'y)

| LEVEL |   |  |  |  | Part Name         | Part No. | Spec.                           | Q'ty | Unit |
|-------|---|--|--|--|-------------------|----------|---------------------------------|------|------|
| 1     |   |  |  |  | CASE TOP ASS'Y    |          |                                 | 1    | EA   |
|       | 1 |  |  |  | (CASE TOP)        |          | ABS_V0_BLACK, SILK PRINT, SPRAY | 1    | EA   |
|       | 2 |  |  |  | (BUTTON FUNCTION) |          | ABS_BLACK, PLATED or DEPOSITION | 1    | EA   |

Button knob screw BH\_3X7 TTS



# Sub assembly – Foxconn

|   |   |  |  |                        |  |                                 |   |    |  |  |
|---|---|--|--|------------------------|--|---------------------------------|---|----|--|--|
| 1 |   |  |  | CASE TOP ASS'Y         |  |                                 | 1 | EA |  |  |
|   | 1 |  |  | (CASE TOP)             |  | ABS_V0_BLACK, SILK PRINT, SPRAY | 1 | EA |  |  |
|   | 2 |  |  | (BUTTON FUNCTION)      |  | ABS_BLACK, PLATED or DEPOSITION | 1 | EA |  |  |
|   | 3 |  |  | (BUTTON PCBA)          |  | ALT社 기록 요망                      | 1 | EA |  |  |
|   | 4 |  |  | (HOLDER BRACKET MIC)   |  | ABS_V0, BLACK                   | 1 | EA |  |  |
|   | 5 |  |  | (MIC PCBA)             |  | ALT社 기록 요망                      | 1 | EA |  |  |
|   | 6 |  |  | (SILICON MIC)          |  | SILICON_BLACK                   | 1 | EA |  |  |
|   | 7 |  |  | (HEATSPREADER AMP TOP) |  | ALT社 기록 요망                      | 1 | EA |  |  |
|   | 8 |  |  | (GASKET)               |  | EVA_BLACK_ADHESIVE, T=1.0       | 1 | EA |  |  |

$$2 = 1 + 2 + 3 + 3 + 4 + 5 + 6 + 7$$

Heat spreader Amp\_Top screw BH\_3X7 TTS

HOLDER BRACKET MIC screw BH\_3X7 TTS

(GASKET)

EVA\_BLACK\_ADHESIVE, T=1.0



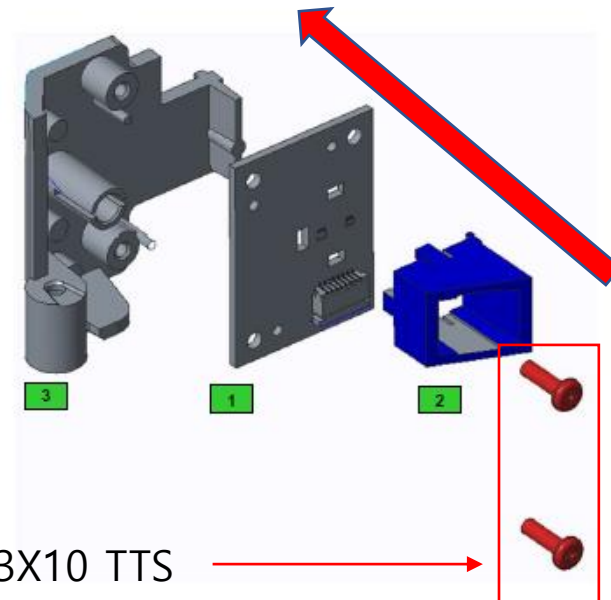
# Sub assembly – Inkel or FOXCONN

(best way to easy manufacturing)

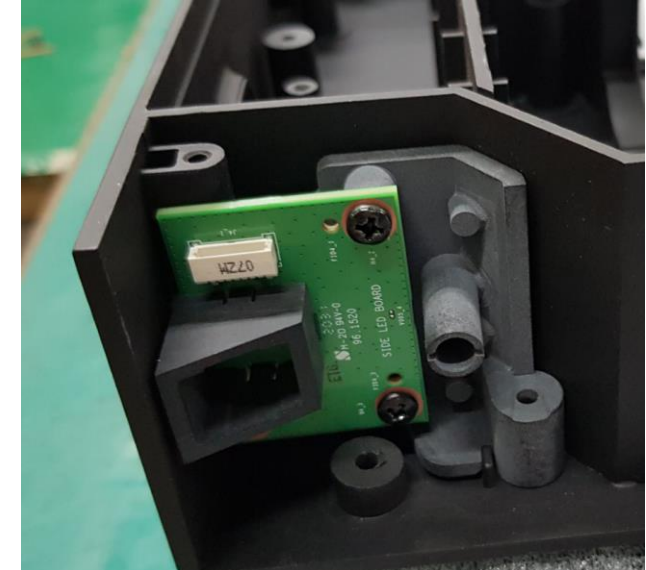
1-7. BFX-UA300 Part List –Exploded View (Side LED\_Left / Right Ass'y)

|   |   |  |  |                          |  |              |   |    |  |  |
|---|---|--|--|--------------------------|--|--------------|---|----|--|--|
| 8 |   |  |  | SIDE LED RIGHT ASS'Y     |  |              | 1 | EA |  |  |
|   | 1 |  |  | (BRACKET SIDE LED RIGHT) |  | ABS_V0_BLACK | 1 | EA |  |  |
|   | 2 |  |  | (SIDE LED PCBA)          |  | ALT社 기록 요망   | 1 | EA |  |  |
|   | 3 |  |  | (LIGHT PIPE)             |  | ABS_V0_BLACK | 1 | EA |  |  |
| 9 |   |  |  | SIDE LED LEFT ASS'Y      |  |              | 1 | EA |  |  |
|   | 1 |  |  | (BRACKET SIDE LED LEFT)  |  | ABS_V0_BLACK | 1 | EA |  |  |
|   | 2 |  |  | (SIDE LED PCBA)          |  | ALT社 기록 요망   | 1 | EA |  |  |
|   | 3 |  |  | (LIGHT PIPE)             |  | ABS_V0_BLACK | 1 | EA |  |  |

**6** = **1** + **2** + **3** LEFT  
**6.1** = **1** + **2** + **3** RIGHT



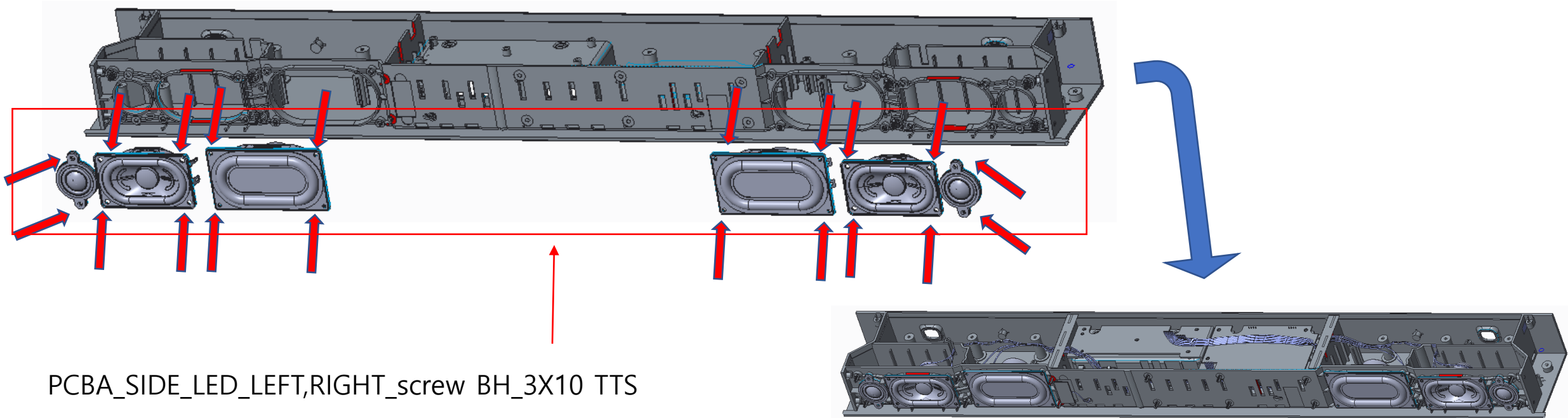
PCBA\_SIDE\_LED\_LEFT,RIGHT\_screw BH\_3X10 TTS



# Final assembly

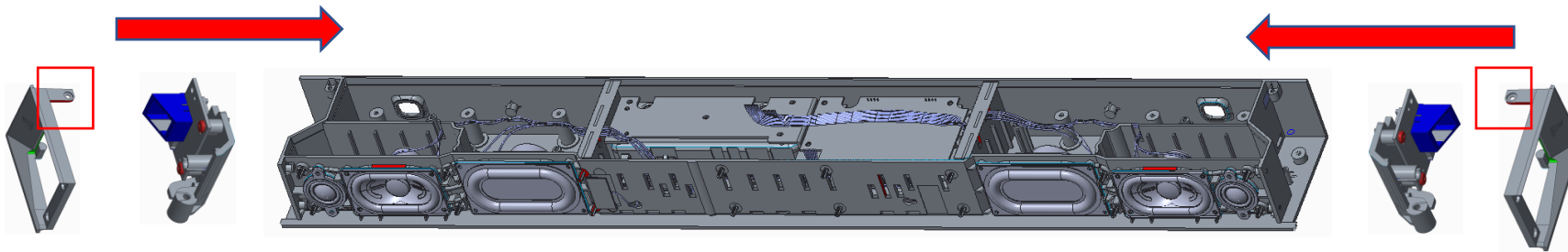
- Speaker unit assembly : Total 6 units

|                         |  |                    |    |    |
|-------------------------|--|--------------------|----|----|
| (SPEAKER UNIT TWEETER)  |  | ALT社 기록 요망         | 2  | EA |
| (SPEAKER UNIT MIDRAGNE) |  | ALT社 기록 요망         | 2  | EA |
| (SPEAKER UNIT WOOFER)   |  | ALT社 기록 요망         | 2  | EA |
| SCREW_SPEAKER_UNITS     |  | BH_3X10 TTS, BLACK | 20 | EA |
| CABLE Woofer            |  |                    |    |    |
| Cable Mid & Twittter    |  |                    |    |    |



# Final assembly

- Side LED module assembly



SIDE\_DECO\_LEFT,RIGHT\_screw BH\_3X10 TTS



# Final assembly

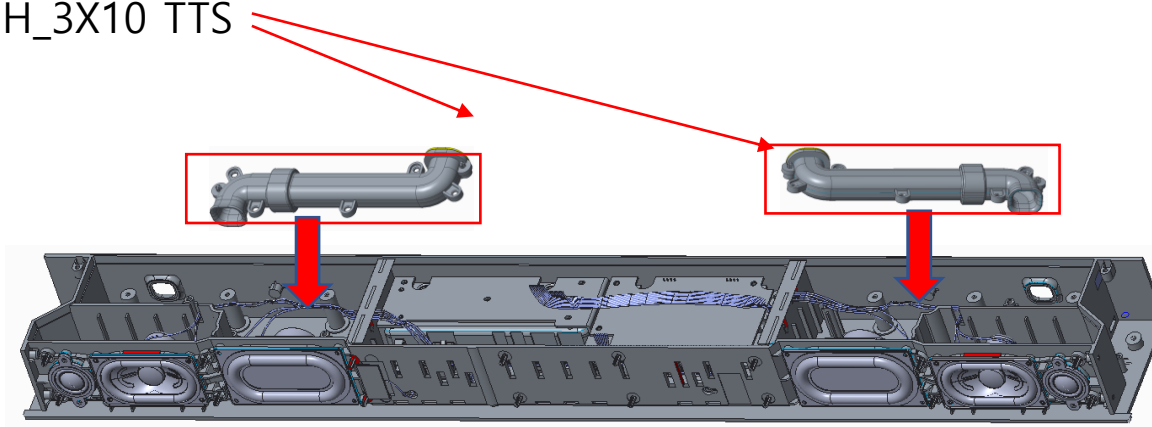
- Cable routing with bushing
  - Speaker cable
  - Side LED cable



# Final assembly

- Port assembly

PORT\_screw BH\_3X10 TTS



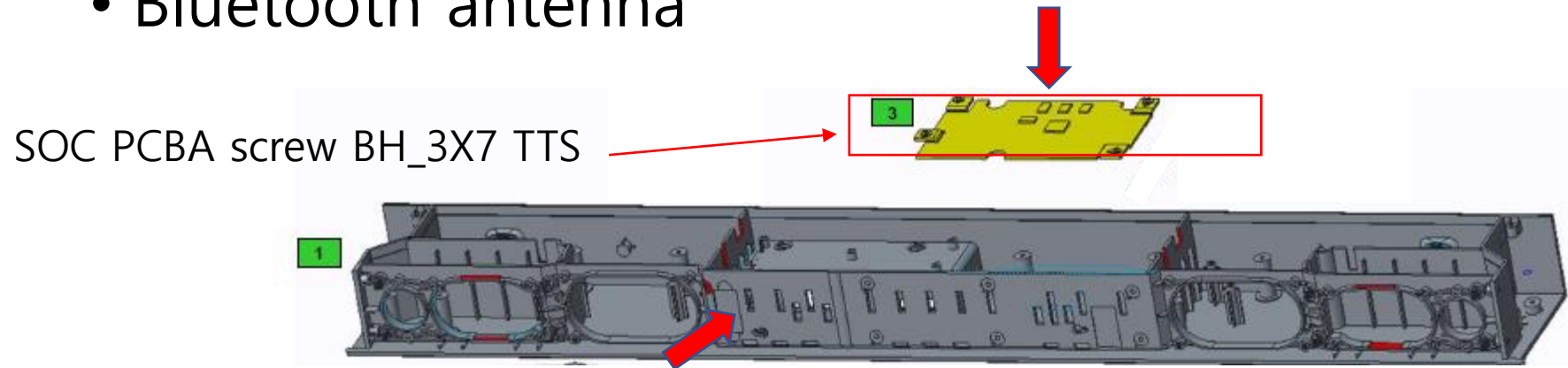
# Final assembly

- Cable routing reference
  - Speaker cable
  - Side LED cable
- Port assembly



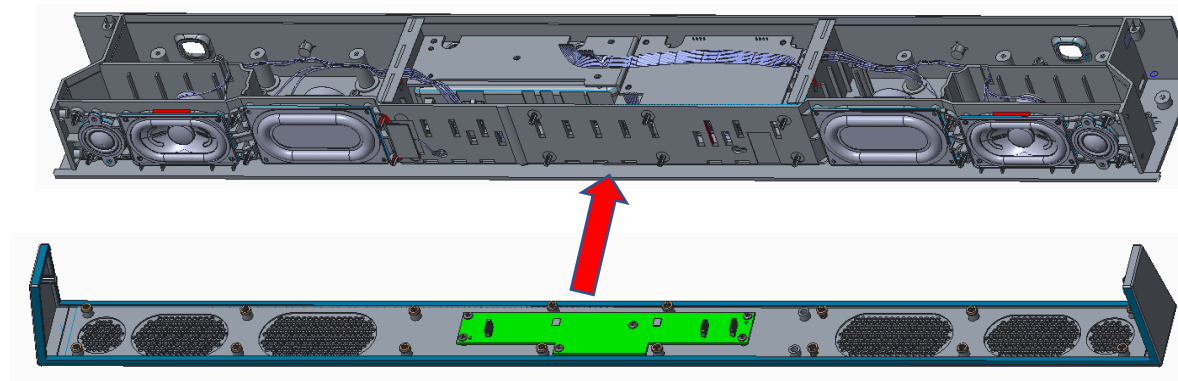
# final assembly – Foxconn

- Assembly
  - SoC Bottom heat spreader
  - PCBA SOC
- Bluetooth antenna



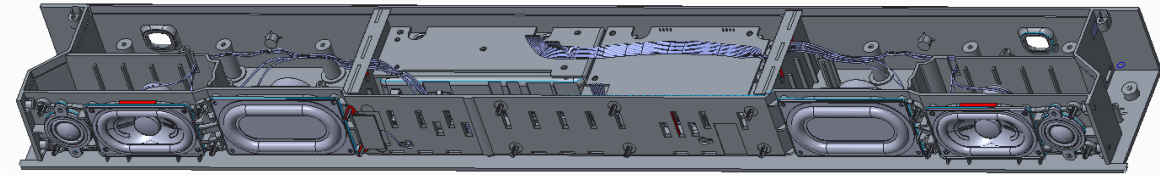
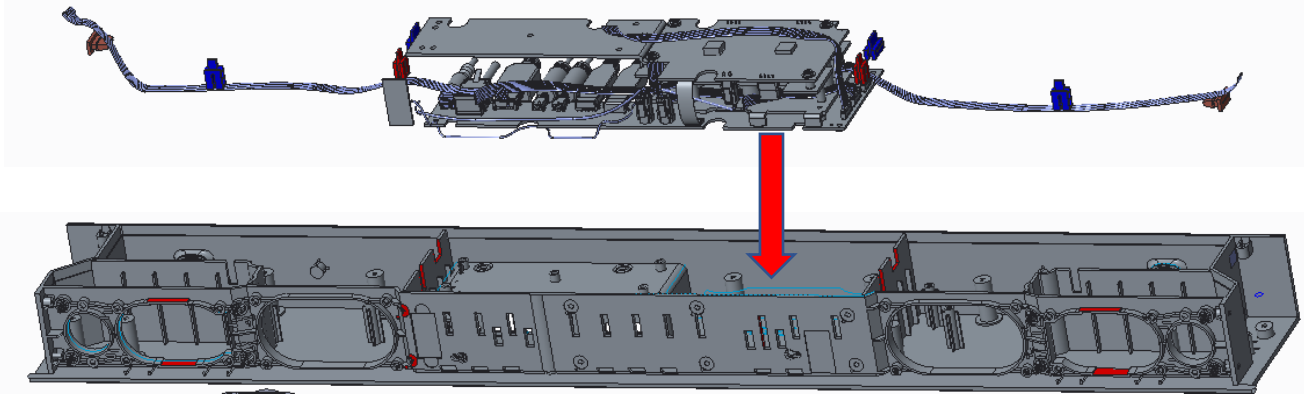
# Final assembly

- Assembly with Bottom housing and Front assy (Grill Fabric)



# Final assembly

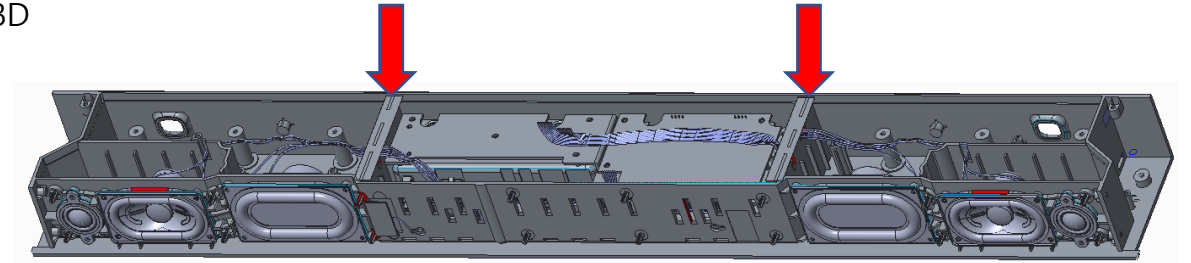
- AMP board assembly
  - Heat spreader SoC Top and Heat AMP bot
  - PCBA AMP
- Cable insert on the PCBA
  - AMP with Speaker



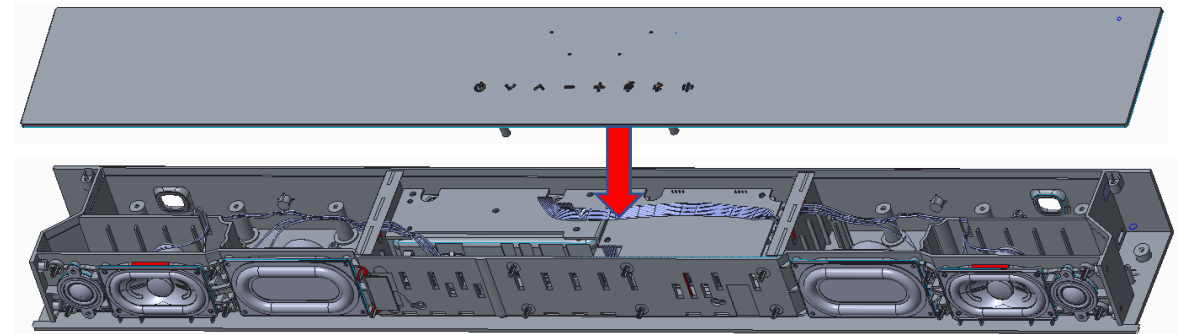
# Final assembly

- Attached gasket inner \*2ea

(GASKET\_INNER) NONWOVEN TAPE\_BLACK,ADHESIVE, T=0.2 2 EA TBD



- Top housing assy
  - Insert Mic & button cable
  - Assembly with Top and bottom housing



# Final assembly

- Screw on bottom side
- Insert the screw cover
- Attached Foot

|                |  |                             |    |    |  |
|----------------|--|-----------------------------|----|----|--|
| (FOOT)         |  | SILICON_COLOR: TBD          | 2  | EA |  |
| (COVER SCREW)  |  | TPE_COLOR: TBD, HARDNESS 50 | 16 | EA |  |
| (BOTTOM SCREW) |  |                             | 18 |    |  |

SOC PCBA screw BH\_3X10 TTS

