



BigButton M

Repair

Manual

How to contact us

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1. Maintenance Disclaimer

Before you begin, please read and understand the following carefully:

- Professional Knowledge Required: Repairing electronic devices is not simple disassembly and reassembly; you must be technically competent. This includes knowing how to safely handle components, prevent static discharge damage to sensitive parts, and properly use professional tools.
- Risks You Will Face:
 - Equipment Damage: Mishandling may cause permanent, irreversible damage to the device, such as circuit board burnout, screen cracking, data loss, or complete functional failure.
 - Loss of Official Warranty: Once you open the device on your own, the manufacturer will no longer provide any free warranty services for it, regardless of any future issues.

I hereby confirm that I voluntarily decide to repair the device myself and make the following irrevocable statement and confirmation.

2. Self-Repair Liability Waiver

2.1 My Competence: I declare that I possess the technical knowledge, practical experience, and judgment required to safely handle and service this type of electronic equipment.

2.2 Acknowledgement of Risks: I fully understand and acknowledge the potential risks involved in the self-repair process.

2.3 Personal Responsibility: I clearly understand that once I begin the repair, all related risks and responsibilities shall be borne solely by me.

3. About This Document

3.1 This document provides step-by-step instructions for equipment maintenance and repair to support professional technicians and individuals wishing to perform self-repairs.

3.2 Scope: This guide covers:

- Safe disassembly and reassembly procedures
- Replacement of specific hardware components
- Basic troubleshooting and visual inspection

3.3 This guide does not cover:

- Advanced electrical diagnostics
- Software-level repairs or firmware issues
- Modifications beyond manufacturer specifications

3.4 Intended Users: This guide is intended for technicians and repair professionals.

4. Ecodesign Directive

4.1 The repair guide structure is organized as follows:

- Safety Information
- Required Tools and Materials
- Component Replacement
- Disassembly Procedures
- Assembly Instructions
- Troubleshooting

Each chapter includes checklists, simple step-by-step instructions, and references to relevant parts of this document.

5. General Precautions

Before repairing the product, please read all precautions in this document.

5.1 Caution Before Starting Repairs

Opening or repairing the device may cause electric shock, equipment damage, fire, personal injury, or other hazards.

- Ensure the work surface is clean and free of debris to prevent contamination of internal components.
- Wear an ESD wrist strap to prevent static discharge damage to sensitive electronics.
- Perform repairs in a clean, dry, well-ventilated area free of flammable materials.
- Ensure that no components are damaged during disassembly.
- Replace any damaged parts as necessary.
- Ensure no extra screws or small parts remain inside the device after reassembly.
- Always tighten screws securely.
- Disconnect the device from all power sources before any disassembly.

5.2 Battery

Batteries should be handled carefully; improper handling can be dangerous.

- Before attempting repairs, remove the battery and place it in a safe area.
- Never pierce the battery with tweezers, screwdrivers, or blades to avoid leakage.
- After replacement, immediately store the new battery in its packaging in a safe location.
- Do not attempt to disassemble a swollen or damaged battery, or one that emits heat or a strong odor. Contact Opel support.
- If a battery starts leaking, cover it with sand or dispose of it in a fireproof container using gloves and pliers.
- Avoid unacceptable battery conditions such as torn bags, exposed wires, scratches, stains, dents, bubbles, or electrolyte leakage.
- Do not short-circuit or damage battery terminals—it may cause fire or overheating.
- Do not dispose of old batteries in household waste. Follow local regulations for battery disposal.

5.3 Glass Handling

When handling broken components, wear protective gloves and safety glasses.

Apply protective film before removing broken glass parts.

After replacement, place the broken glass directly into a packaging bag to prevent injury.

5.4 Repair Tools

It is strongly recommended to use proper tools and fixtures for all repairs.

Do not attempt to repair the device without the correct tools and equipment.

Improper use of tools may cause injury or product damage.

6. Required Tools and Materials

6.1 Phillips Screwdriver – for removing screws.



6.2 Tweezers – for removing or positioning small components and wires.



6.3 Suction Cup with Pull Ring – to assist in removing the main screen glass.



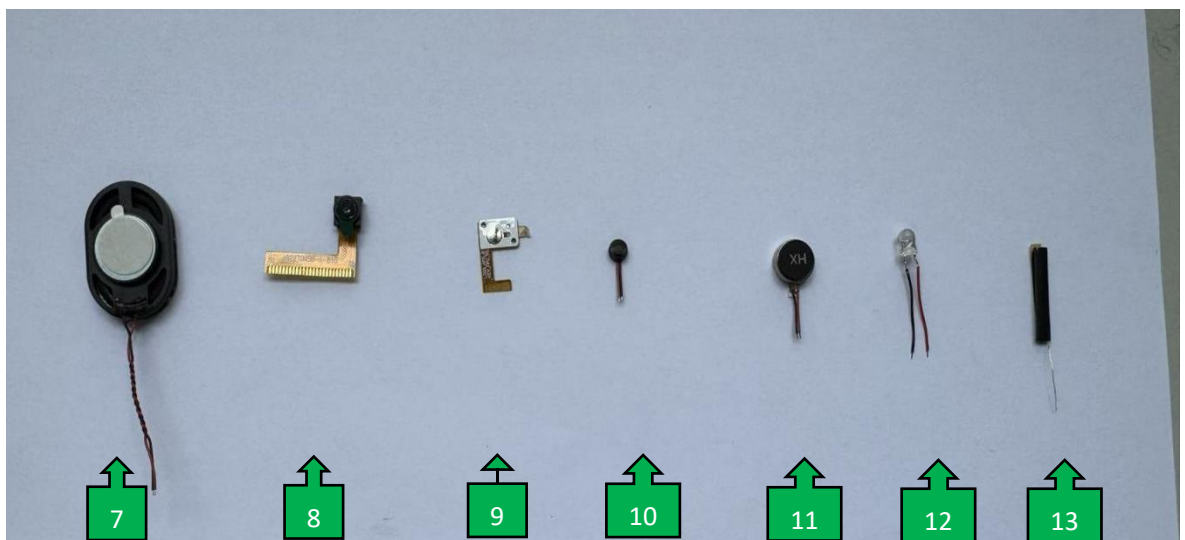
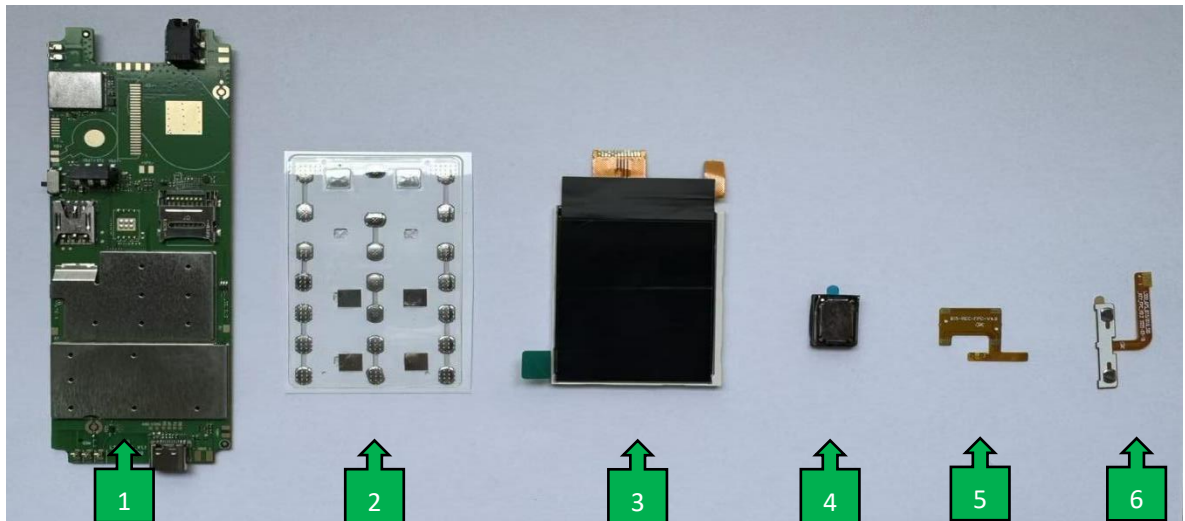
6.4 Constant Temperature Soldering Iron – for soldering speaker, earpiece, microphone, and flashlight connections.

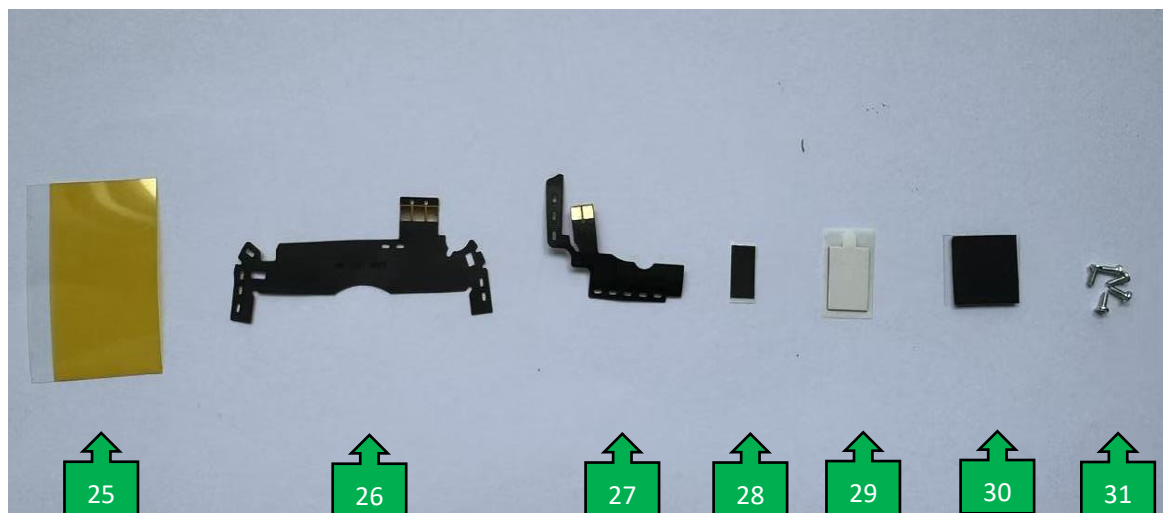


6.5 Materials: Alcohol ($\geq 70\%$), stored in a proper alcohol bottle, sealed tightly, and kept in a safe area.



Schematic images of related devices:





7 List of Related Components and Quantities

| No. | Component Name | Quantity |
|-----|--------------------|----------|
| 1 | Main Board PCBA | 1 |
| 2 | DOME Sheet | 1 |
| 3 | LCD Display Screen | 1 |
| 4 | Earpiece | 1 |
| 5 | Earpiece FPC | 1 |
| 6 | Side Key FPC | 1 |
| 7 | Speaker | 1 |

| No. | Component Name | Quantity |
|-----|---------------------------------------|----------|
| 8 | Camera | 1 |
| 9 | SOS Key FPC | 1 |
| 10 | Microphone | 1 |
| 11 | Motor | 1 |
| 12 | Flashlight | 1 |
| 13 | FM Radio Antenna | 1 |
| 14 | Bluetooth Antenna | 1 |
| 15 | Main Screen Glass Lens | 1 |
| 16 | Camera Lens | 1 |
| 17 | Flashlight Switch Side Key | 1 |
| 18 | Volume Side Key | 1 |
| 19 | Speaker Bracket | 1 |
| 20 | Flashlight Fixed Bracket | 1 |
| 21 | Lower Case Assembly | 1 |
| 22 | Front Case Assembly | 1 |
| 23 | Keypad Assembly | 1 |
| 24 | Battery Cover Assembly | 1 |
| 25 | LCD Pad Insulating Tape | 1 |
| 26 | Main Antenna FPC | 1 |
| 27 | GPS Antenna FPC | 1 |
| 28 | SIM Card Spacer | 1 |
| 29 | Speaker Bracket Double-sided Adhesive | 1 |
| 30 | Main Board Memory Foam | 1 |
| 31 | Screws | 6 |

8. How to Power On and Power Off the BigButton M

Before performing any maintenance, the device must be powered off to prevent damage to internal components and ensure safety during disassembly. After maintenance is completed and the device is fully reassembled, you need to power it on again to verify that it operates as expected.

8.1 Powering On the BigButton M

Press and hold the phone's power button for 5 seconds until the screen turns on.



8.2 Powering Off the BigButton M

Similarly, press and hold the phone's power button for 5 seconds until the screen turns off.

9. How to Replace the Battery

9.1 Steps for Replacing the Battery

Accessory required: 1 battery

Steps:

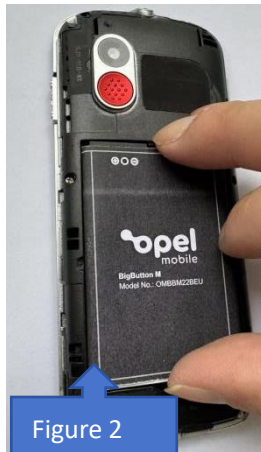
- 1. Remove the battery cover assembly:** There is a slot for removing the battery cover at the lower-left corner of the battery cover assembly. Insert your thumb into the slot and gently lift the battery cover upwards (see Figure 1) to remove it. Place the removed battery cover in a safe area to prevent damage.
- 2. Remove the battery:** There is a slot for removing the battery at the center-bottom of the battery. Insert your thumb into the slot and gently lift the battery upwards (see Figure 2) to remove it. Be careful not to damage the battery connector on the motherboard. Place the removed battery in a safe area.

9.2 Layout Description

Remove the battery cover



Remove the battery

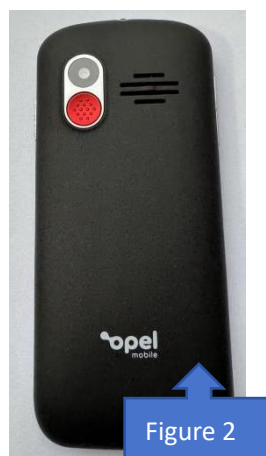


The battery that has been removed



9.3 Install the New Battery

Insert the new battery into the device's battery compartment. When assembling, make sure to first align the battery slot with the alignment points of the lower case, then insert the battery at an angle (see Figure 1). After the battery is properly installed, securely snap the battery cover onto the device (see Figure 2).



10. How to Replace the LCD Screen

(Fault diagnosis: distorted display, no display, cracked screen indicates an LCD screen issue)

10.1 Steps for Replacing the Screen

Accessory required: 1 LCD screen

10.2 Required Tools:

- Phillips screwdriver
- Tweezers
- Temperature-controlled soldering iron

10.3 Required Materials:

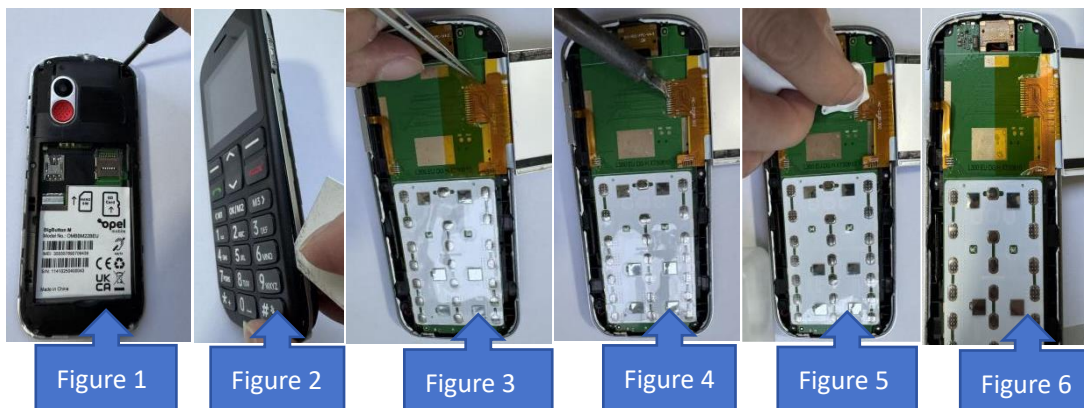
- LCD screen
- Insulating tape
- Tamper-evident screw labels

10.4 Precautions:

Before disassembly, take proper protective measures. Wear an anti-static wrist strap and carefully control the soldering iron temperature.

Steps:

- Remove the battery cover, then use a Phillips screwdriver to remove the six screws from the lower case (see Figure 1)
- Use a prying tool to remove the A-case (upper frame) (see Figure 2).
- Use tweezers to remove the insulating tape from the LCD screen's solder pads (see Figure 3).
- Use a soldering iron to remove the LCD screen, then replace it with a new LCD screen (see Figure 4).
- After soldering the new screen, clean the LCD flex cable solder pads with alcohol, then reapply the insulating tape onto the solder pads. Make sure the tape is applied flat and smooth without wrinkles (see Figures 5 and 6).



11. How to Replace the DOME Sheet

(Fault diagnosis: unresponsive buttons, button failure, or INT button issues may indicate a DOME sheet problem)

11.1 Steps for Replacing the DOME Sheet

Accessory required: 1 DOME sheet

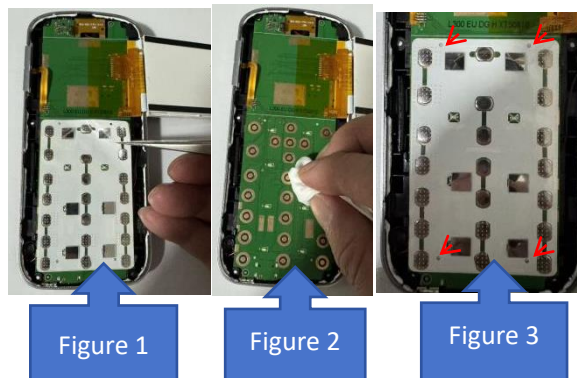
11.2 Required Tools and Materials:

- Tweezers
- Lint-free cloth
- Alcohol

11.3 Follow the steps in **10.1, Figures 1 and 2** for disassembling and replacing the LCD screen, then continue to replace the DOME sheet component.

11.4 Use tweezers to gently lift the edge of the DOME sheet and peel it off (see Figure 1).

11.5 Clean the contact area of the DOME sheet “gold fingers” on the PCBA motherboard with alcohol. After cleaning, align the new DOME sheet with the positioning white dots on the PCBA motherboard (see Figures 2 and 3).



12. How to Replace the Speaker

(Fault diagnosis: no sound, distorted sound, or low volume may indicate a faulty speaker that needs replacement)

12.1 Steps for Replacing the Speaker

Accessory required: 1 speaker

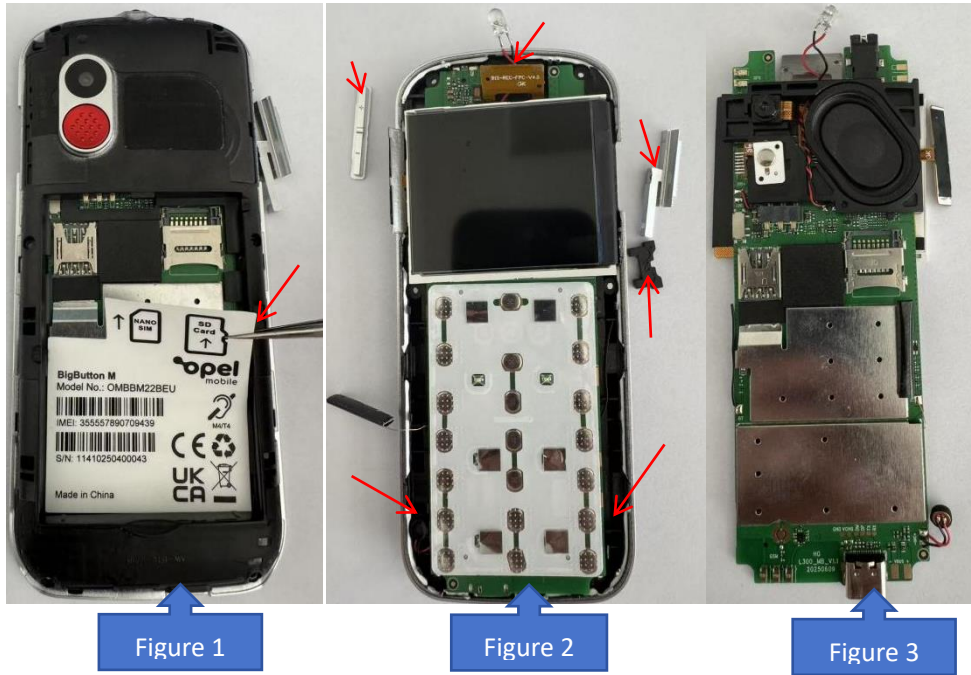
12.2 Required Tools and Materials:

- Tweezers
- Soldering iron

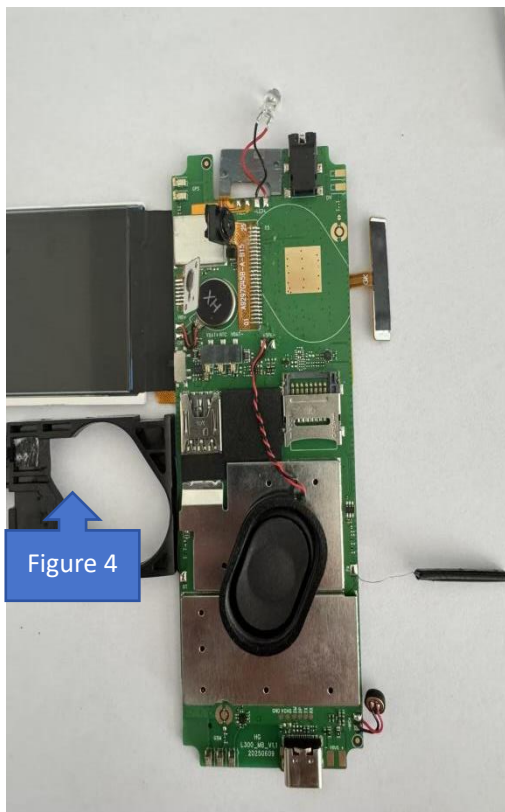
12.3 Follow the steps in **10.1, Figures 1 and 2** for disassembling and replacing the LCD screen, then continue to replace the speaker.

12.4 Use tweezers to remove the device label attached to the lower case (see Figure 1).

12.5 Remove the side keys and flashlight button. Use tweezers to lift and flip up the earpiece FPC, then remove the flashlight bracket (see Figure 2). Next, pry open the lower case clips holding the PCBA motherboard, lift them upwards, and then pull the motherboard assembly backward to remove it (see Figure 3).



12.6 Use tweezers to remove the SOS key FPC, speaker, and camera from the speaker bracket, then disassemble the speaker bracket (see Figure 4).



12.7 Use a soldering iron to remove the speaker that needs to be replaced, then solder the new component onto the motherboard (see Figure 5).

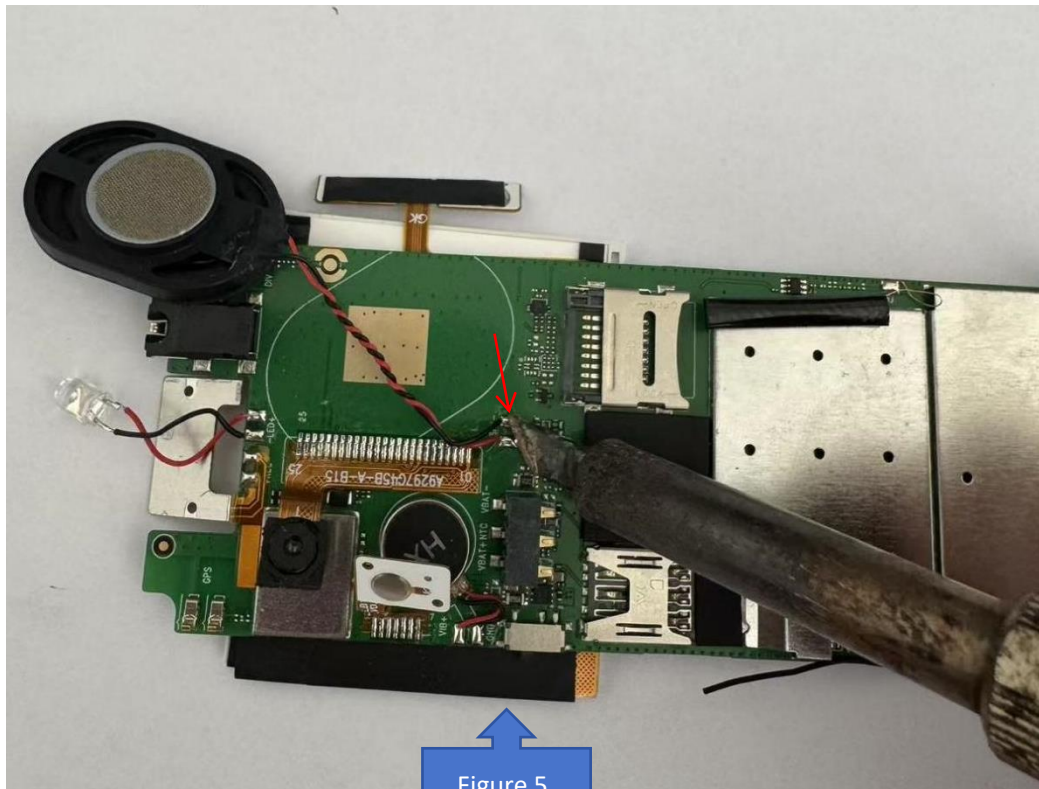


Figure 5

13. How to Replace the Camera

(Fault diagnosis: distorted photos, unable to take photos, black shadows in photos, or flickering photos indicate a faulty camera)

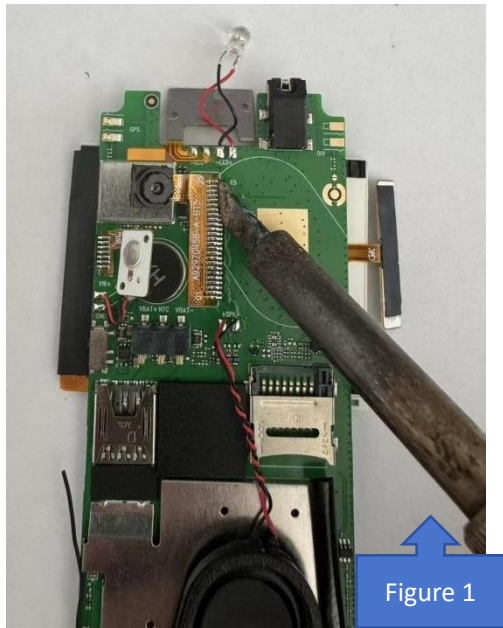
13.1 Steps for Replacing the Camera

Accessory required: 1 camera

13.2 Required Tool:

- Temperature-controlled soldering iron

13.3 Use the soldering iron to remove the camera that needs to be replaced, then solder the new component onto the motherboard (see Figure 1).



14. How to Replace the Flashlight LED

(Fault diagnosis: flashlight does not turn on, is dim, or flickers, indicating a faulty flashlight LED)

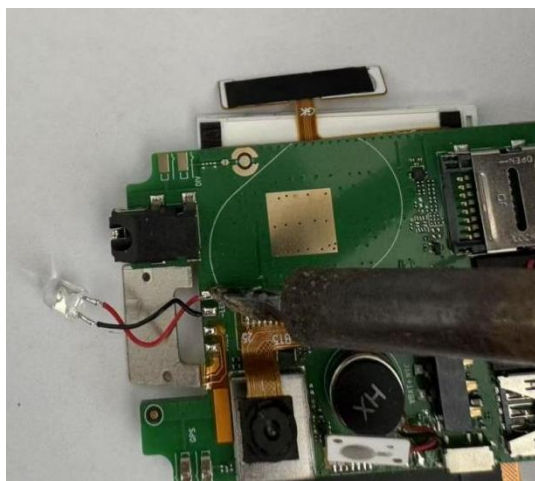
14.1 Steps for Replacing the Flashlight LED

Accessory required: 1 flashlight LED

14.2 Required Tool:

- Temperature-controlled soldering iron

14.3 Use the soldering iron to remove the flashlight LED that needs to be replaced, then solder the new component onto the motherboard (see Figure 1).



15. How to Replace the Earpiece FPC

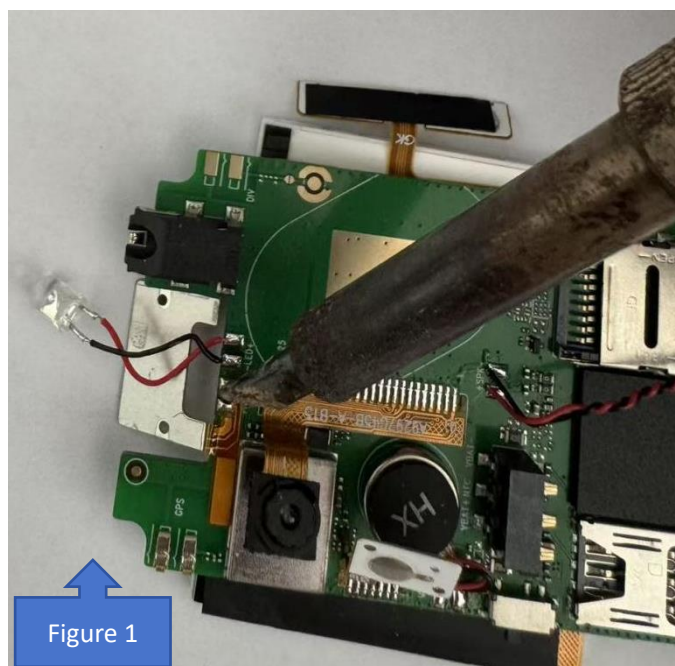
(Fault Diagnosis: If there is no sound from the earpiece, it is determined that the earpiece FPC is defective.)

15.1 This step is for replacing the earpiece FPC.

Part: Earpiece FPC × 1

15.2 Required tool: Constant-temperature soldering iron

15.3 Use the soldering iron to remove the defective earpiece FPC, then solder the new component onto the mainboard, as shown in Figure 1.



16. How to Replace the Motor

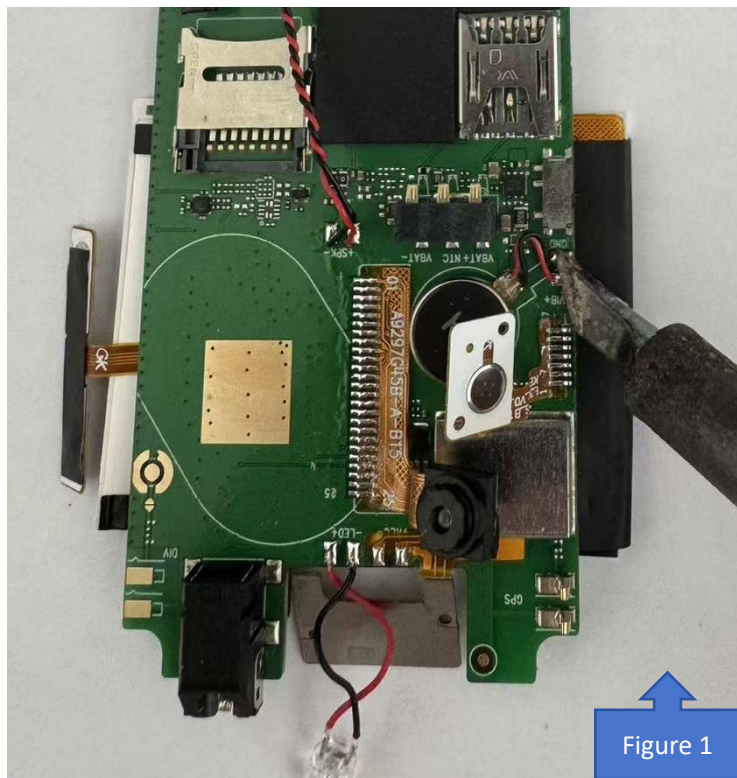
(Fault Diagnosis: If there is no vibration, it is determined that the motor is defective.)

16.1 This step is for replacing the motor.

Part: Motor × 1

16.2 Required tool: Constant-temperature soldering iron

16.3 Use the soldering iron to remove the defective motor, then solder the new component onto the mainboard, as shown in Figure 1.



17. How to Replace the SOS Key FPC

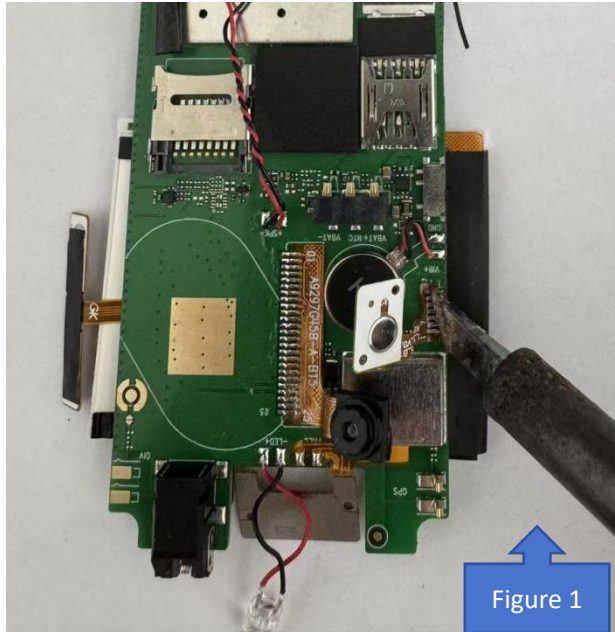
(Fault Diagnosis: If the SOS key does not function, it is determined that the SOS key FPC is defective.)

17.1 This step is for replacing the SOS key FPC.

Part: SOS Key FPC × 1

17.2 Required tool: Constant-temperature soldering iron

17.3 Use the soldering iron to remove the defective SOS key FPC, then solder the new component onto the mainboard, as shown in Figure 1.



18. How to Replace the Microphone

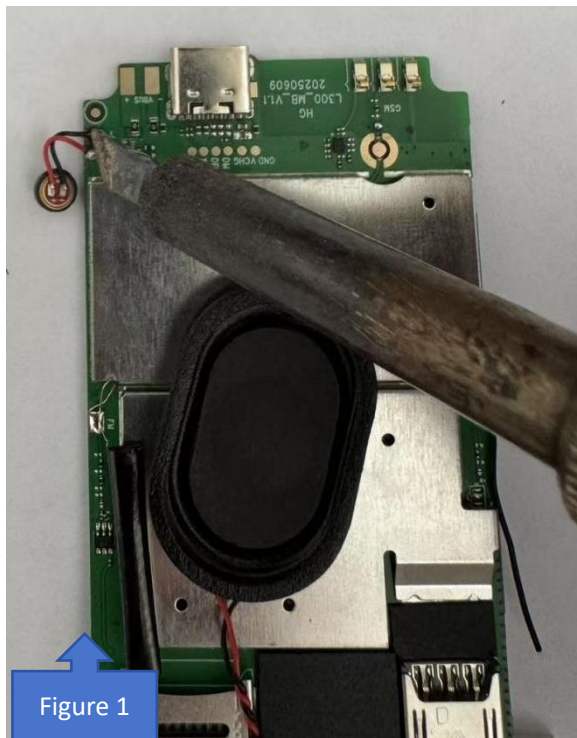
(Fault Diagnosis: If, during a call between two phones, the other party cannot hear any sound, it is determined that the microphone is defective.)

18.1 This step is for replacing the microphone.

Part: Microphone × 1

18.2 Required tool: Constant-temperature soldering iron

18.3 Use the soldering iron to remove the defective microphone, then solder the new component onto the mainboard, as shown in Figure 1.



19. How to Replace the Volume Key FPC

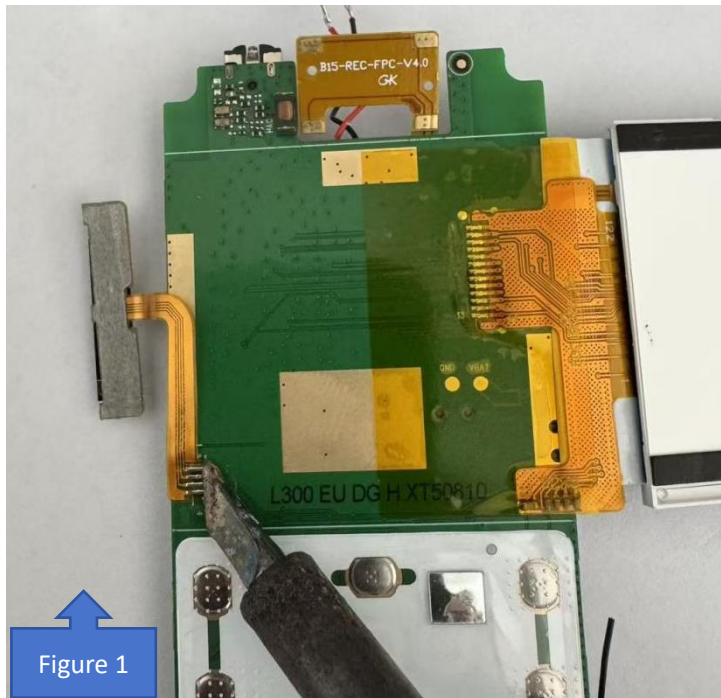
(Fault Diagnosis: If the volume key cannot adjust the sound up or down, it is determined that the volume key FPC is defective.)

19.1 This step is for replacing the volume key FPC.

Part: Volume Key FPC × 1

19.2 Required tool: Constant-temperature soldering iron

19.3 Use the soldering iron to remove the defective volume key FPC, then solder the new component onto the mainboard, as shown in Figure 1.



20. How to Assemble the Speaker Bracket, Camera, SOS Key, and Speaker

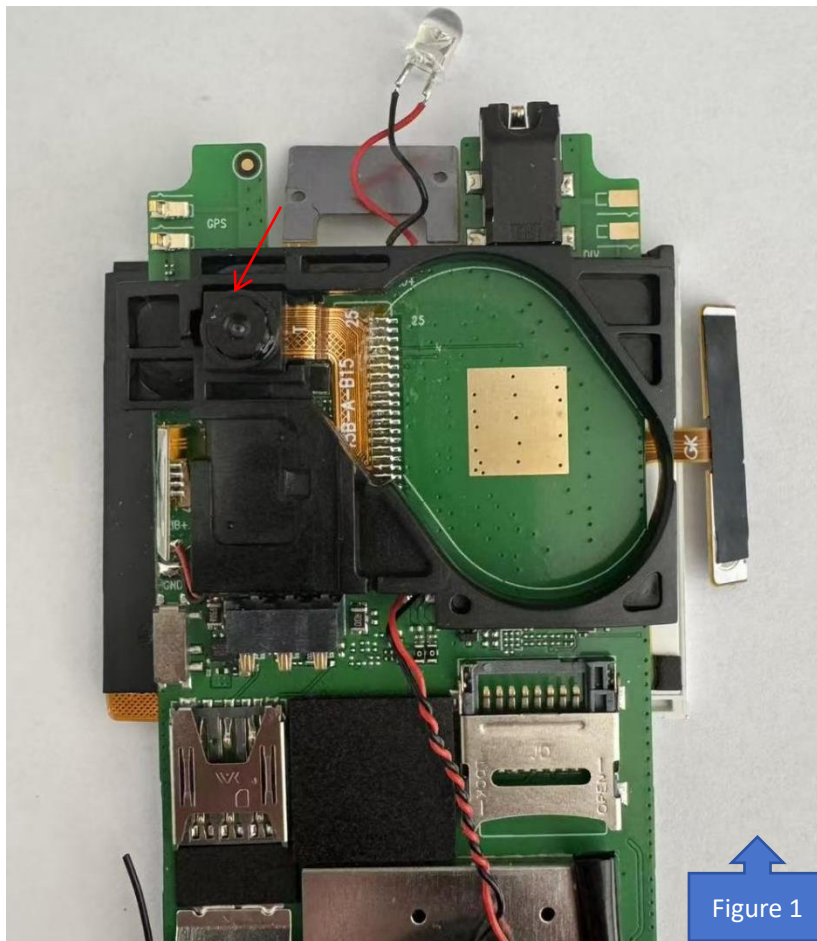
20.1 This step describes how to assemble the speaker bracket.

Parts: Mainboard semi-finished assembly, Speaker bracket × 1

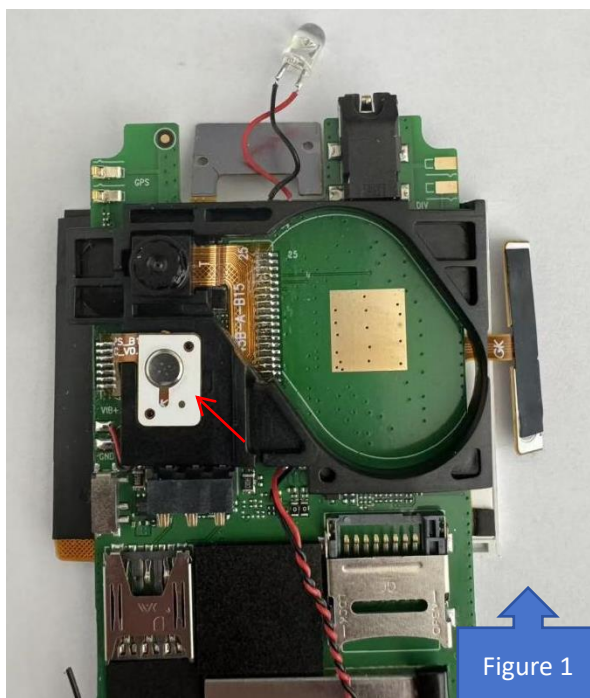
20.2 Fix the speaker bracket onto the corresponding position on the mainboard, as shown in Figure 1.



20.3 Remove the double-sided adhesive tape from the camera, then fix the camera onto the camera slot of the speaker bracket, as shown in Figure 1.



20.4 Remove the double-sided adhesive tape from the SOS key FPC, align the positioning hole with the locating post on the SOS key slot of the speaker bracket, and secure it properly, as shown in Figure 1.



20.5 Fix the speaker into the slot of the speaker bracket, and place the speaker wires into the designated wire routing groove, as shown in Figure 1.



21. How to Replace the GPS Antenna FPC

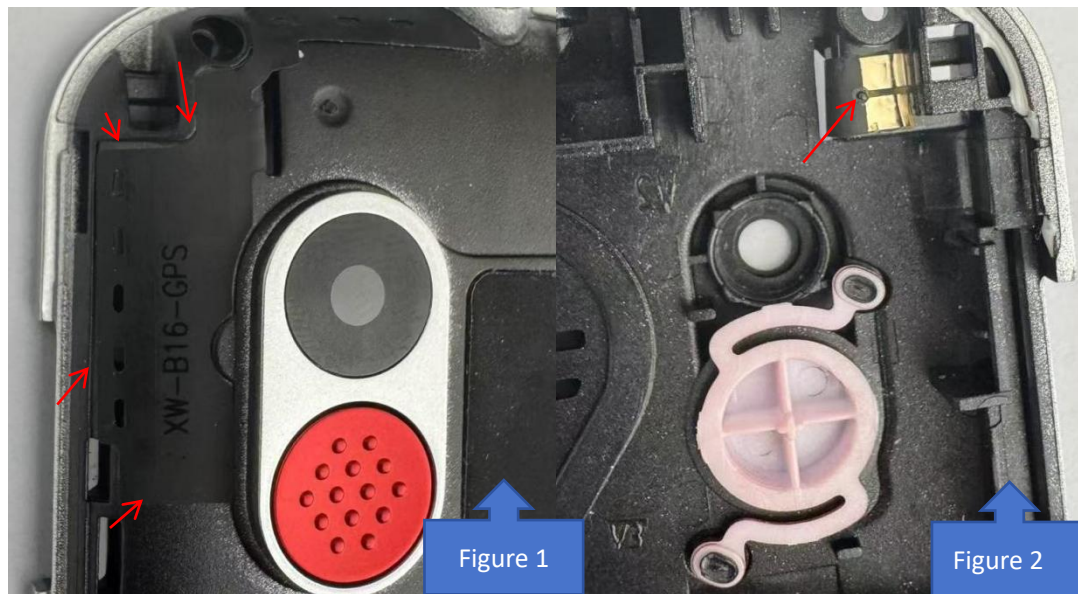
21.1 This step is for replacing the GPS antenna FPC.

Part: GPS Antenna FPC × 1

21.2 Required tool: Tweezers

21.3 Remove the backing from the double-sided adhesive on the GPS antenna FPC, then align it with the edge of the slot on the bottom shell and stick it in place, as shown in Figure 1.

21.4 Align the positioning hole on the FPC's gold finger contact area with the locating post, and press it firmly into place, as shown in Figure 2.



22. How to Replace the Main Antenna FPC

22.1 This step is for replacing the main antenna FPC.

Part: Main Antenna FPC × 1

22.2 Required tool: Tweezers

22.3 Remove the backing from the double-sided adhesive on the main antenna FPC, then align it with the edge of the slot on the bottom shell and stick it in place, as shown in Figure 1.



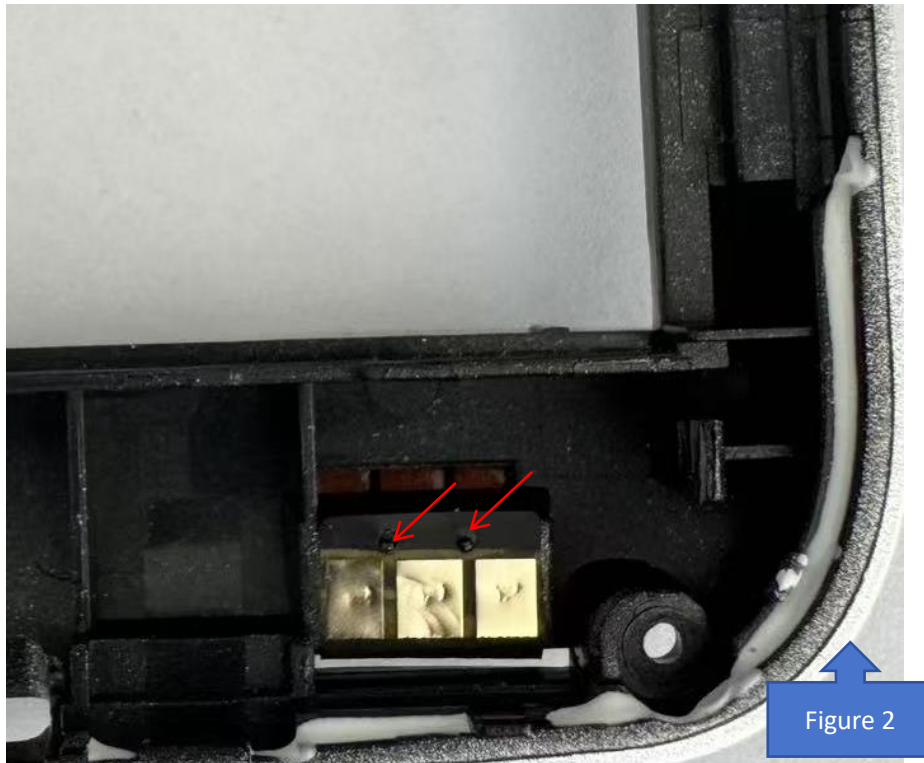
23. How to Replace the Main Antenna FPC

23.1 This step is for replacing the main antenna FPC.

Part: Main Antenna FPC × 1

23.2 Required tool: Tweezers

23.3 Remove the backing from the double-sided adhesive on the main antenna FPC, then align it with the edge of the slot on the bottom shell and stick it in place, as shown in Figure 1.



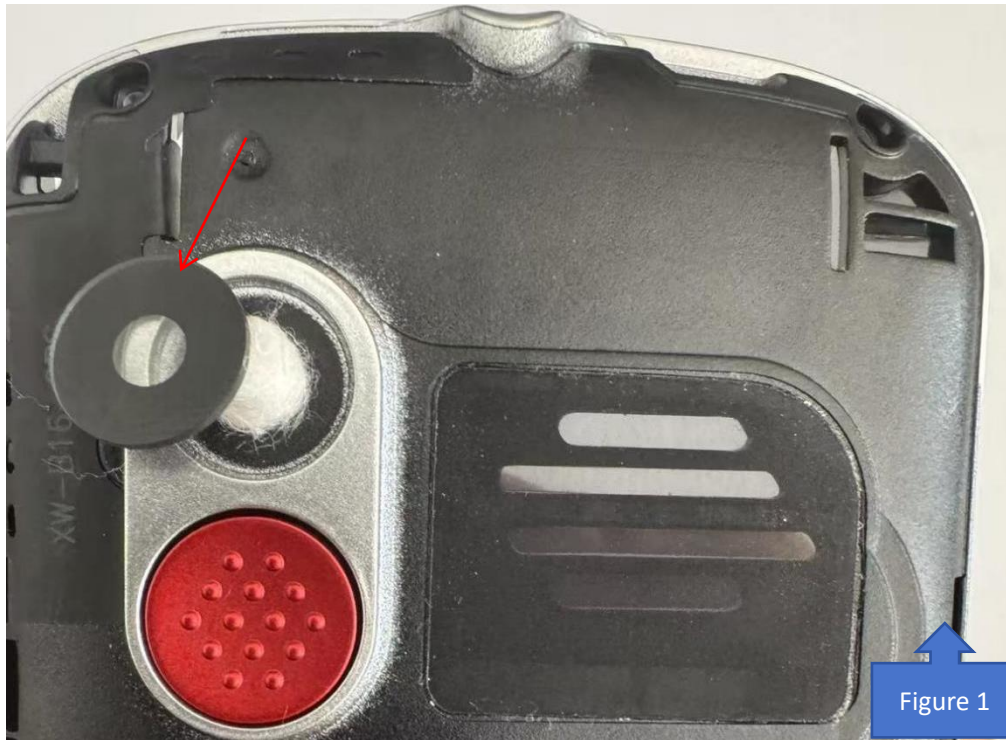
24. How to Replace the Camera Lens

24.1 This step is for replacing the camera lens.

Part: Camera lens × 1

24.2 Required tool: Cotton swab × 1

24.3 Use the cotton swab to gently push the camera lens outward and remove it, as shown in Figure 1.



25. How to Assemble the Bottom Case

25.1 This step describes how to assemble the bottom case.

Parts: Semi-finished assembly × 1, Bottom case × 1

25.2 Align the headphone jack on the mainboard with the headphone hole on the bottom case, then tilt and insert the mainboard into the bottom case, as shown in Figure 1.



Figure 1

25.3 Align the flashlight with the flashlight hole on the bottom case, and insert the flashlight directly into the hole. After installing the flashlight, place the flashlight bracket into its corresponding slot and secure it completely, as shown in Figure 2.

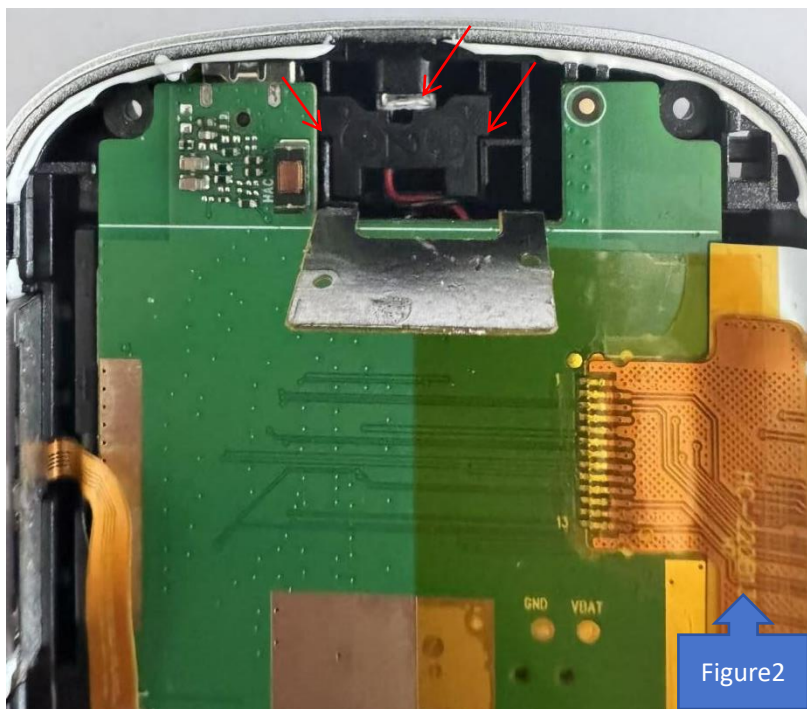
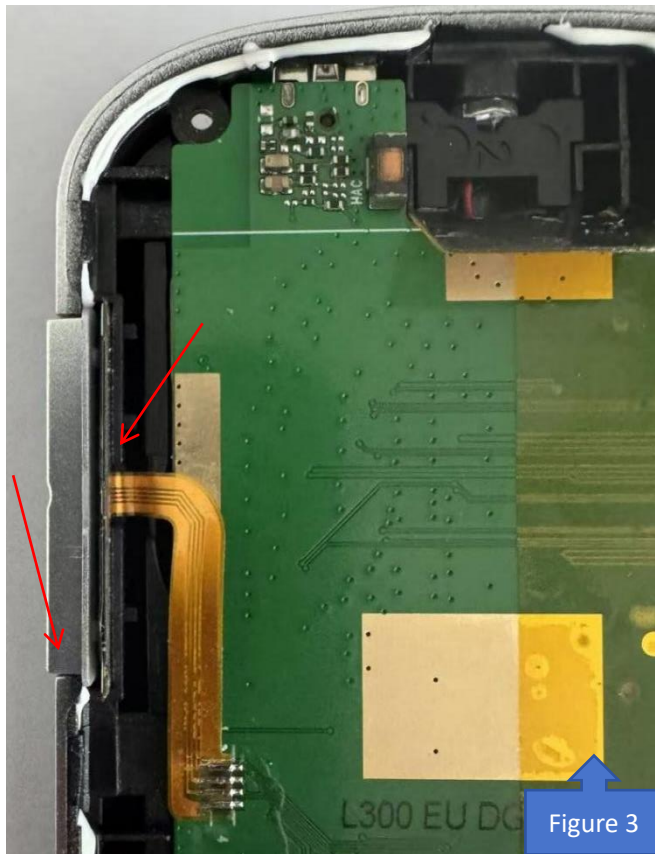


Figure2

25.4 Secure the side key FPC in the slot on the side of the bottom case. After it is fixed, install the volume side key, as shown in Figure 3.



25.4 Install the flashlight switch side key into the slot on the side of the bottom case, as shown in Figure 4.



25.5 Secure the Bluetooth wire in the slot on the side of the bottom case, then insert the microphone into its corresponding slot, and position the FM antenna properly, as shown in Figure 5.

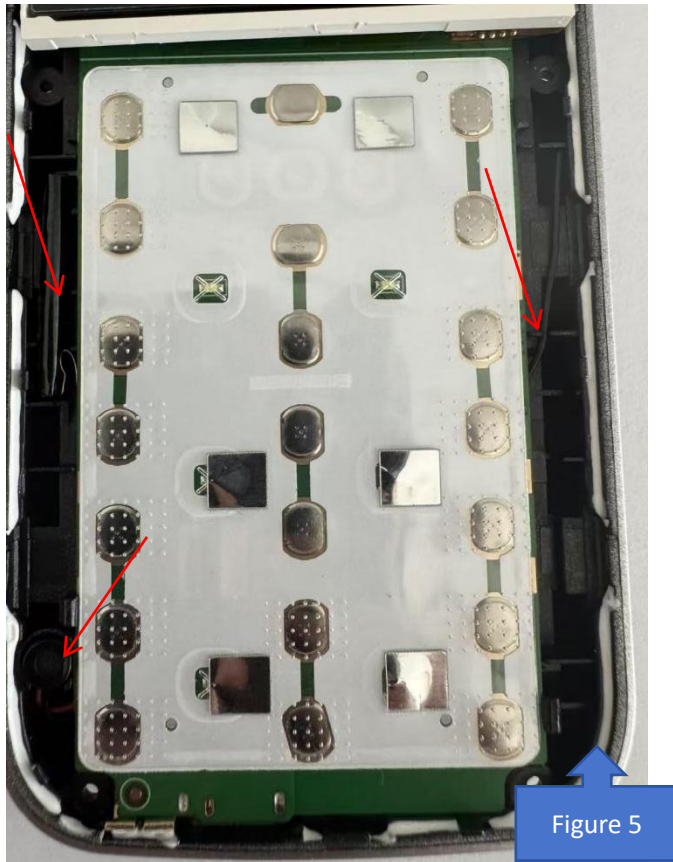


Figure 5

26. Replacing the Earpiece on the Front Case

(Fault Diagnosis: If the earpiece has no sound or produces noise, it is determined that the earpiece is defective.)

26.1 This step is for replacing the earpiece.

Part: Earpiece × 1

26.2 Remove the defective earpiece, peel off the protective film from the new earpiece, and install it into the corresponding earpiece slot on the front case, as shown in Figure 1.



Figure 1

27. How to Assemble the Front Case

27.1 This step describes how to assemble the front case.

Part: Front case × 1

27.2 First, align the LCD screen with the LCD frame on the front case. Then, install the front case onto the corresponding locking positions of the bottom case, pressing the front case and bottom case locks firmly together, as shown in Figures 1 and 2.



Figure 1



Figure 2

28. Apply Phone Labels, Secure Screws, and Attach Screw Tamper-Evident Stickers

28.1 Fully apply the phone label inside the battery compartment of the bottom case, as shown in Figure 1.



Figure 1

28.2 Screw in the six screws into the screw holes of the bottom case, as shown in Figure 1. Then, apply the tamper-evident sticker to the screw in the bottom-right corner, as shown in Figure 2.



Figure 1

Figure 2

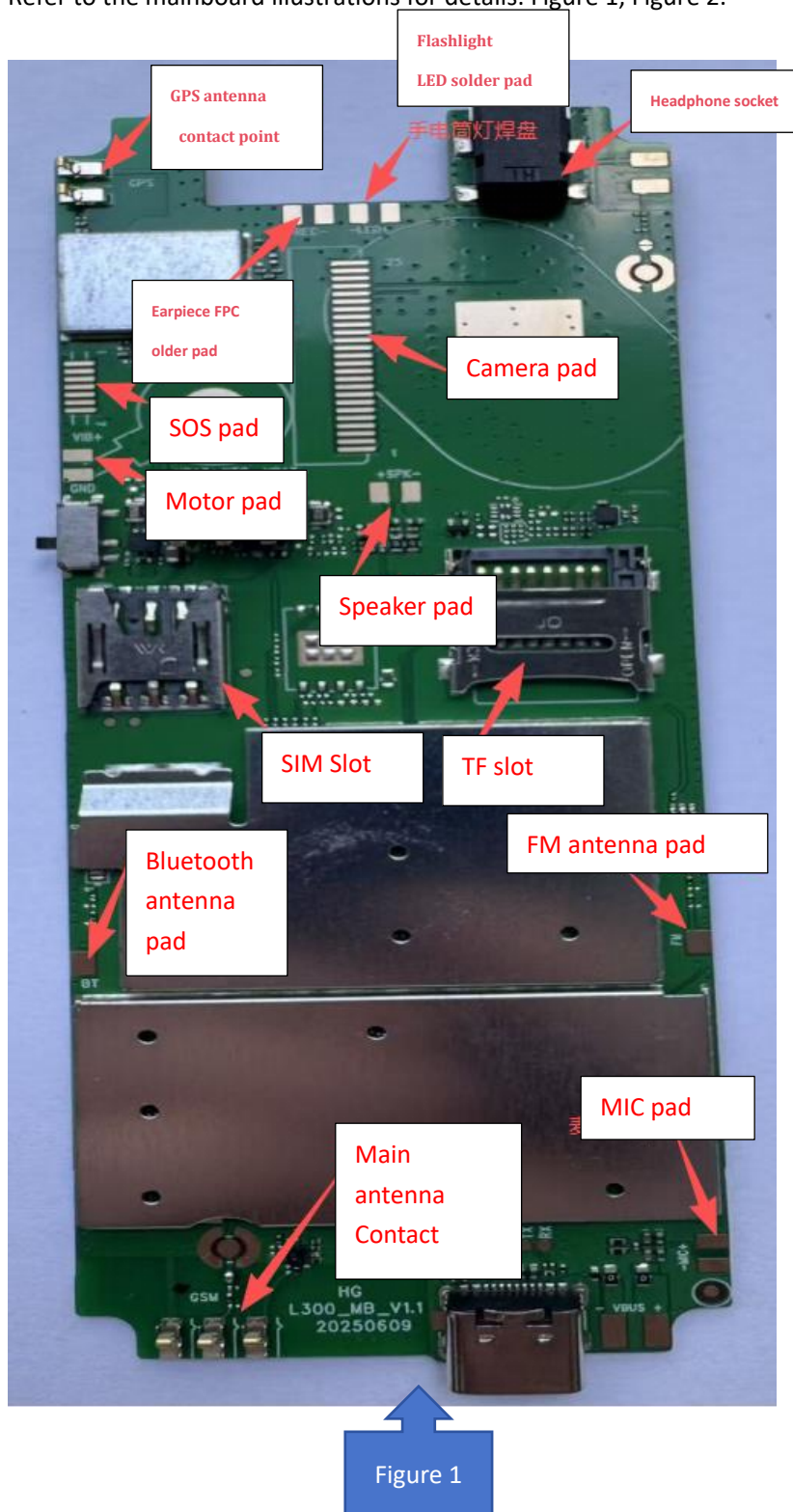
29. After Assembling the Front Case, Attach the Battery Cover

Once the front case is assembled, snap the battery cover into place. Complete device overview:



30. Detailed Description of the PCBA

Refer to the mainboard illustrations for details: Figure 1, Figure 2.



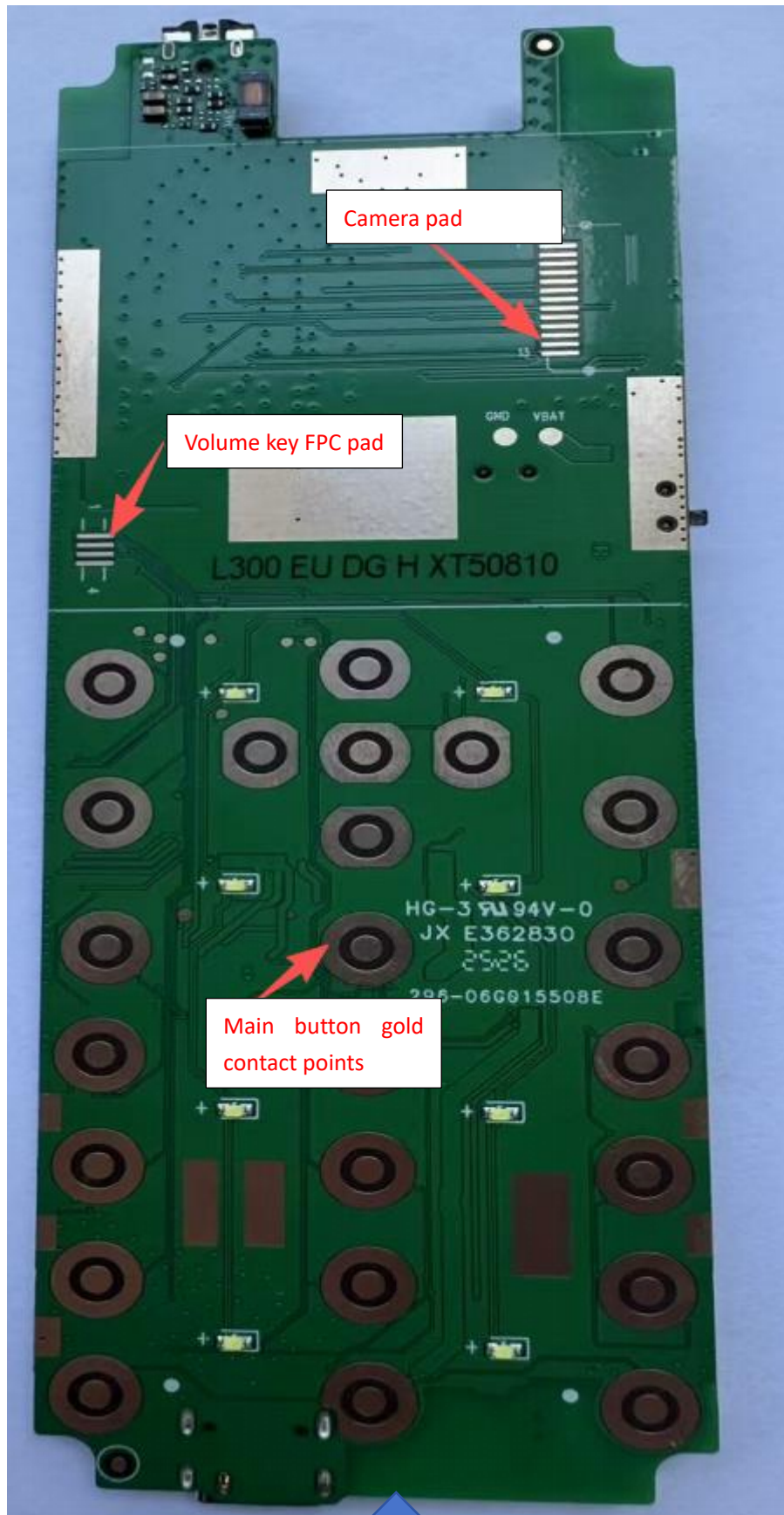
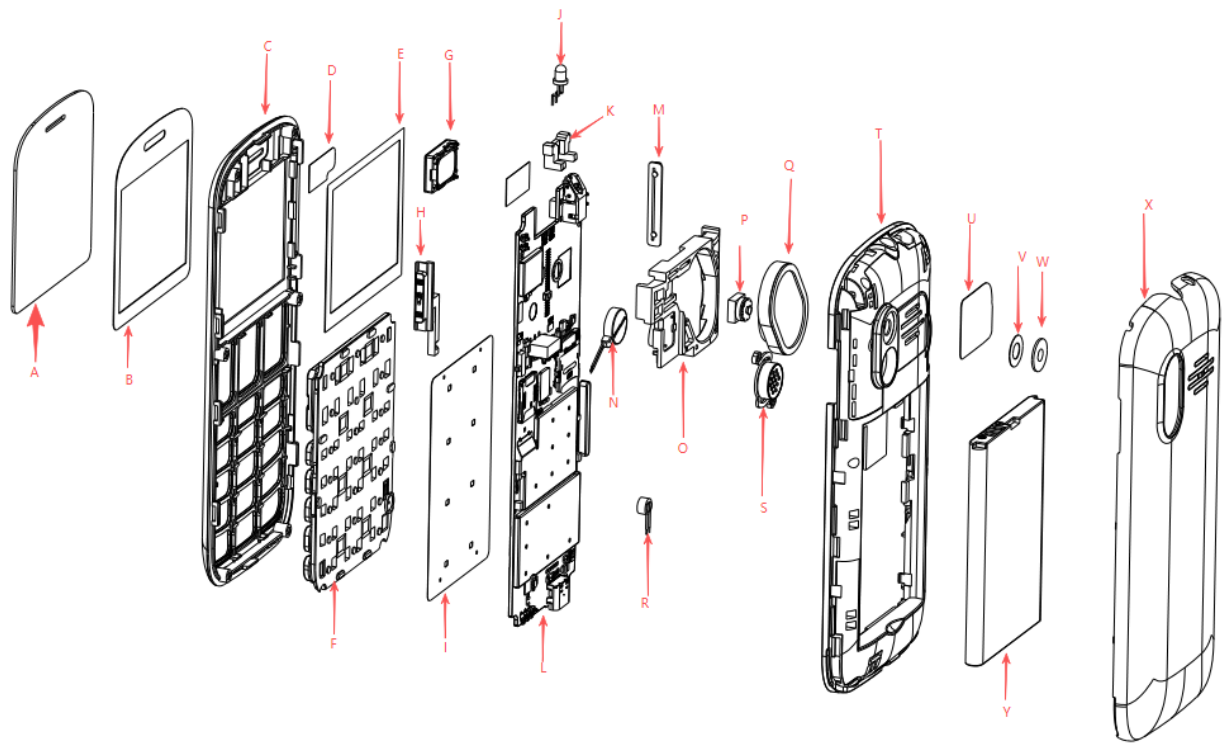


Figure 2

31. Exploded View

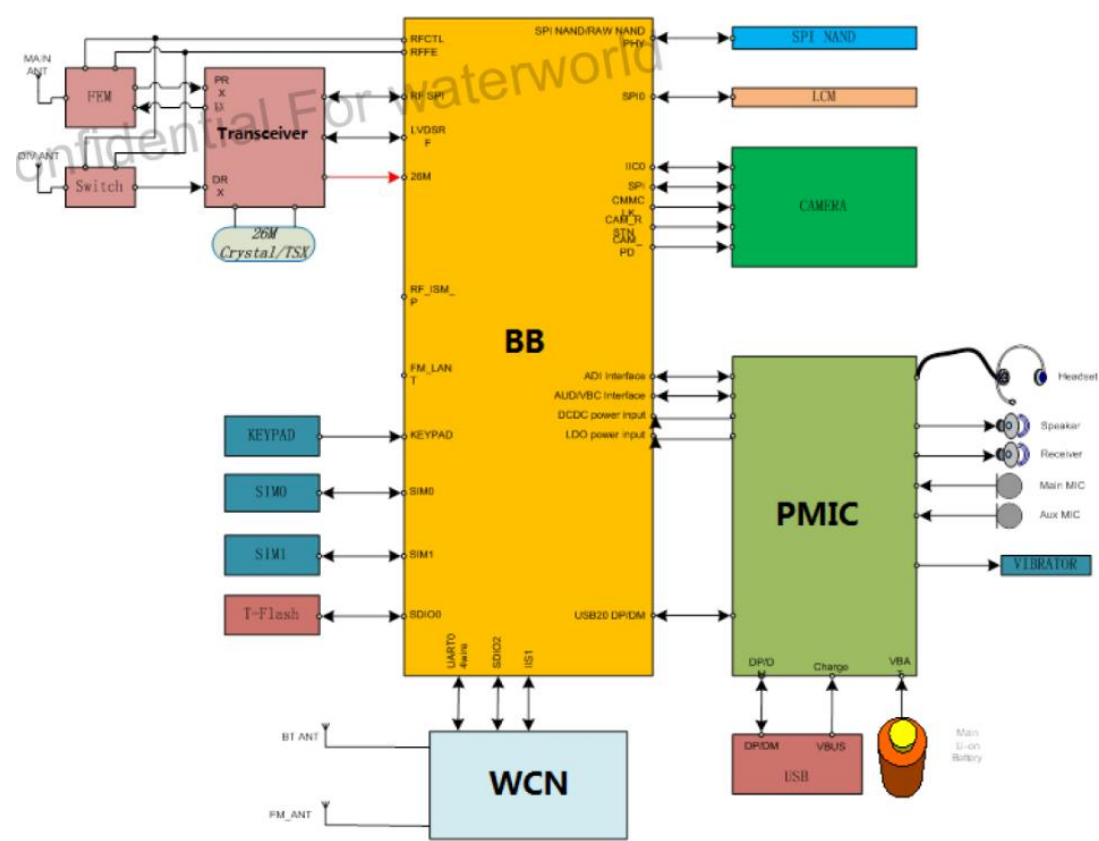
Refer to the exploded diagram below:



| Item | Name | Qty |
|------|--------------------------------|-----|
| A | Screen protector | 1 |
| B | Main screen lens | 1 |
| C | Front housing assembly | 1 |
| D | Receiver mesh | 1 |
| E | LCD screen | 1 |
| F | Key assembly | 1 |
| G | Receiver | 1 |
| H | Side key for flashlight switch | 1 |
| I | DOME | 1 |
| J | Flashlight LED | 1 |
| K | Flashlight mounting bracket | 1 |
| L | PCBA | 1 |
| M | Volume side key | 1 |
| N | Motor | 1 |
| O | Speaker holder | 1 |
| P | Camera | 1 |
| Q | Speaker | 1 |
| R | MIC | 1 |

| | | |
|---|------------------------------|---|
| S | SOS button | 1 |
| T | Bottom case assembly | 1 |
| U | Speaker mesh | 1 |
| V | Camera lens adhesive backing | 1 |
| W | Camera lens | 1 |
| X | Battery cover assembly | 1 |
| Y | Battery | 1 |

30. **Circuit Block Diagram**(See the figure below)



Version 1.0

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BigButton M Repair Manual

How to contact us

Email us at help@opelmobile.com or call

☎ **0808 160 7167** in UK (8am to 4pm, Mon to Fri – excluding national holidays)

☎ **1800 456 902** in Ireland (8am to 4pm, Mon to Fri – excluding national holidays)