

# **DIGITAL CAMERA**

# SAMSUNG WB200F/WB201F/WB202F

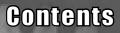
# SERVICE Manual

# **DIGITAL CAMERA**



# CONTENTS

- 1. Repair information
- 2. Product specifications
- 3. Disassembly and reassembly
- 4. Troubleshooting
- 5. PCB diagrams
- 6. Block diagram
- 7. Firmware update
- 8. Adjustment
- 9. Exploded view and parts list



# **1. Repair information**

| 1-1 Customer satisfaction statement           | 1-1 |
|---|-----|
| 1-2 Warranty and repair service information   | 1-1 |
| 1-3 Precaution for disassembly and reassembly | 1-4 |

# **2. Product specifications**

| 2-1 Specifications          | 2-1 |
|-----------------------------|-----|
| 2-2 Product comparison      | 2-2 |
| 2-3 Accessories information | 2-3 |
| 2-4 About the memory card   | 2-5 |
| 2-5 About the battery       | 2-6 |

# 3. Disassembly and reassembly

| 3-1 Disassembly of main unit                            | 3-1  |
|---|------|
| 3-2 Barrel Disassembly                                  | 3-13 |
| 3-3 Reassembly of barrel                                | 3-18 |
| 3-3-1 How to use the lubricant for anti-friction to the |      |
| ASSY BARREL assembly                                    | 3-18 |
| 3-3-2 Reassembly of BARREL ASSY                         | 3-21 |

# 4. Troubleshooting

| 4-1 SD CARD detect failA/error                  | 4-1 |
|---|-----|
| 4-2 Switch problems on TOP (Power/Release/Zoom) | 4-2 |
| 4-3 MAIN PCB connection issues                  | 4-3 |
| 4-4 Flash related problems                      | 4-4 |
| 4-5 Image output related problems               | 4-6 |
| 4-6 When you cannot hear the recorded sound     | 4-7 |

# 5. PCB diagrams

| 5-1 MAIN PCB  | 5-1 |
|---------------|-----|
| 5-2 POPUP PCB | 5-2 |
| 5-3 TOP PCB   | 5-2 |
| 5-4 CIS FPCB  | 5-2 |

# Contents

# 6. Block diagram

# 7. Firmware update

| 7-1 Product reset               | 7-1 |
|---------------------------------|-----|
| 7-2 Version check               | 7-3 |
| 7-3 Update                      | 7-4 |
| 7-4 How to recover the MAIN PCB | 7-6 |

# 8. Adjustment

| 8-1 Basic guide for adjustment        | 8-1  |
|---------------------------------------|------|
| 8-2 OIS CENTERING ADJ                 | 8-3  |
| 8-3 PUNT(Auto Focus) ADJ              | 8-3  |
| 8-4 SHUTTER CLOSE, CIS GAIN, IRIS ADJ | 8-5  |
| 8-5 LENS SHADING ADJ                  | 8-6  |
| 8-6 FLASH & AWB ADJ                   | 8-7  |
| 8-7 CIS DEFECT PIXEL ADJ              | 8-8  |
| 8-8 COUNTRY CODE(Wi-Fi) Input         | 8-8  |
| 8-9 MAC ADDRESS(Wi-Fi) Input          | 8-9  |
| 8-10 SERIAL NO. Input                 | 8-9  |
| 8-11 Input confirm                    | 8-10 |

# 9. Exploded view and parts list

| 9-1 BODY ASSEMBLY      | .9-1 |
|------------------------|------|
| 9-2 MAIN ASSEMBLY      | .9-2 |
| 9-3 CHAMBER ASSEMBLY   | .9-3 |
| 9-4 TOP COVER ASSEMBLY | .9-5 |
| 9-5 TOP PCB ASSEMBLY   | .9-6 |
| 9-6 BARREL ASSEMBLY    | .9-7 |
|                        |      |

# 1. Repair information

# **1-1 Customer satisfaction statement**

We hold ourselves to the highest standards of customer satisfaction and service.

- Combining perfect technical solutions with a customer-oriented approach is our top priority.
- We treat our customers we serve with kindness, loyalty, respect and dignity.
- We are committed to earn customers' trust continuously through excellence in repair solutions.
- We keep our promises and commitments to our customers.
- Committed to quick and easy resolution of all support issues, we deliver industry-leading response times.

#### Guide

1

We listen carefully to our customers' requirements and always find an optimum solution for their needs. We are committed to your satisfaction and have procedures in place to provide you with a fair, timely and effective means to resolve problems. It combines industry leading preventive assistance with responsive support that helps us address problems quickly and effectively. We will continuously maintain and improve our services to satisfy the needs of our customers.

# 1-2 Warranty and repair service information

#### (1) General terms and conditions

It is guaranteed to be free of charge from defects in material and workmanship under normal use for a period of one year from date of purchase.

Digital Camera and lens come with a one year limited warranty from the date of purchase.

#### \* The duration of the warranty depends on the laws in the country in which it was purchased.

The following information will be required to process warranty requests:

- a. We imply warranties to one year from the original date of purchase. In the event that the purchaser is unable to provide a warranty card or proof of purchase, the warranty period will be determined by the date of manufacture. The warranty period shall be decreased to three months from the original product manufactured date.
- b. The coverage under this warranty begins on the date of your purchase of the product. In the event that a warranty card or proof of purchase is not available, a purchase receipt, preferably the purchase invoice, to confirm the date of purchase is required for warranty service.
- c. In the event that a valid date of purchase is not available, the warranty period will be determined by the date of manufacture. The warranty period shall be decreased to three months from the original product manufactured date.

#### Precautions

#### (2) Limited Warranty

It reserves the right to retain any parts or components replaced at its discretion in the event of a defect noticed in the product. The period with respect to retaining components may vary respectively depending on its components. We are not liable to repair or replace its faulty product after the Warranty Period has expired.

#### \* We warrant its retaining camera and lenses for five years and three years for the accessories.

- a. If a warranty claim is filed after the product has been discontinued, we reserves the right to honor the components warranty. Warranty period may vary depending on the type of components.
- b. In the event that no identical warranty information is available for service repair, company has the right to provide warranty. The warranty does not affect the consumers' rights against the company related to its information.

For the length of the period indicated on the chart below, it starts with the date of original purchase.

#### (3) Warranty Period for components

Our liability under this warranty shall be limited to the following:

- a. In the event of a same malfunction problem within two months after repair service by Samsung authorized technician, we will repair or replace free of charge the component of the product which is found to be defective.
- b. In the event of the component that you have paid the replacement cost is returned under normal use within one year at our premises, such components will be replaced free of charge component of the product which is found to be defective.

#### <Table. 1-1 Warranty Periods for Parts>

| Part Name        | Warranty Period |  |
|------------------|-----------------|--|
| Battery Charger  | - Six months    |  |
| AC Adaptor       |                 |  |
| Battery          |                 |  |
| Remote Control   |                 |  |
| CD Software      | Thursday        |  |
| Earphone         | Three months    |  |
| Pouch for camera | Natawilashia    |  |
| Cable            | Not applicable  |  |

#### (4) Repair Claims

Essentially, the following causes of damage are covered:

- a. Failing to function properly under normal use during the limited warranty period.
- b. Repair Services free of charge is granted for the performance of a specific contract.

#### 2) Repair charges

This warranty does not cover damage caused by:

- a. Defect occurring after the expiration of the Warranty Period.
- b. Damage due to negligence, immersion in water, impact, loss and tampering.
- c. Repair or alteration performed by any party other than Samsung authorized technicians.
- d. Misuse or other improper use of the power button.
- e. Exhausted parts such as batteries, lamps and filters, etc.
- f. Defect that occurs due to sand, dirt liquid, etc. entering the inside of the product casing.
- g. Consumable parts which have ceased working through normal use such as as earphone, battery discharger and various accessories.
- h. Products purchased second hand or any damage that occurs due to a second hand or repair performed by anyone other than Samsung or a Samsung authorized service station.
- i. Fire, earthquake, flood or other natural disasters.

The warranty cover period for components is listed below as per table 1-2.

#### <Table. 1-2 Warranty Period for components>

| Types of consumer damages   |   |   |   | Compensation  |
|---|---|---|---|---|
|   | Required for essential repair within 10 days after the purchase   |   | Replace the prod-<br>uct or refund              | -   |
|   | Required for essential repair within or month after the purchase  |   | Replace the product or repair at free of charge | Repair charges  |
| Failing to perform or   |   | Problem occurred twice due to same malfunction                  |   | Free of charge  |
| failing to function properly<br>under normal use  | Applicable<br>to repair   | Problem occurred three<br>times due to same<br>malfunction      | Replace the prod-<br>uct or refund              | Danciasharras   |
|   |   | Problem occurred four<br>times due to some other<br>malfunction |   | Repair charges  |
|   | Not applicable to repair  | Within the period with respect to retaining components          |   | dep   |
|   | Applicable repair   |   |   | Repair charges  |
| Failing to perform or<br>failing to function properly<br>as a result of willful intent<br>and negligence of<br>customer | Not applicable to repair<br>(Except for defects or malfunction as a result<br>of fire or flood or other natural disasters |   | Replacement<br>charge                           | Repair charge and replace the prod-<br>uct at the cost of the depreciated value |

# **1-3 Precaution for disassembly and reassembly**

# CAUTION 1. Use the anti-static handing procedures included with the anti-static mat to ensure that there is no electrostatic discharge and component damage. 2. Static electricity is the biggest danger to the PCB parts you are about to disassemble or assemble. It's important to use your anti-static wrist strap to prevent damage to these components. 3. Dismantling a discrete electronic component such as main capacitor is dangerous. The capacitor contains high voltage, which can cause a severe electric shock if you touch it. This holds a charge even when the unit is not plugged in and is capable of delivering a fatal shock. 4. Using excessive force during disassembly and assembly can damage locking parts. Use care when handling "Locking parts" to avoid damage to FPCB or wire. Apply pressure only at the points designated in the maintenance instructions. 5. Due to increasing environmental concerns, a number of restrictions have been placed on the material content of electronic components and electronic assemblies. It requires utilizing Lead-Free (Pb-free) Soldering. 6. The following precautions must be observed when handling such components below.

#### <Table. 1-3 Precaution for disassembly and reassembly>

| Component                                | Precautions  |
|--|--|
| FPCB                                     | FPCB is brittle material. It can be easily damaged thus it should be handled with care.<br>It is recommended to use wooden or plastic tweezers for manual placement.   |
| CCD (CMOS)<br>IR CUT Filter<br>LCD, LENS | Be careful not to stained your finger. It is recommended to use wooden or plastic tweezers for manual placement. Stain is often caused by the Alcohol used in these components. Find a clean, well-ventilated place to do your work. |
| РСВ                                      | Use an anti-static mat as well as an anti-static wrist strap to avoid ESD damage to PCB.   |
| CONNECTOR                                | The use wooden or plastic tweezers is recommended for manual placement.<br>Metal tip tweezer might make marks or damage.   |
| BARREL                                   | Always follow proper direction while assembling the components of the barrel.  |

# **2-1 Specifications**

#### <Table. 2-1 Specifications>

| Image sensor             |   |
|--------------------------|---|
| -                        | $1/2.2^{\circ}$ (Approx. 7.76 mm) CCD   |
| Type                     | 1/2.3" (Approx. 7.76 mm) CCD  |
| Effective pixels         | Approx. 14.2 mega-pixels  |
| Total pixels             | Approx. 16.4 mega-pixels  |
| Lens                     |   |
| Focal length             | Samsung Lens f = 4.0–72.0 mm<br>(35 mm film equivalent: 24–432 mm)  |
| F-stop range             | F3.2(W)–F5.8(T)   |
| Zoom                     | <ul> <li>Still image mode: 1.0–18.0X</li> <li>Playback mode: 1.0–14.4X (depending on image size)</li> </ul>   |
| Display                  |   |
| Туре                     | TFT LCD   |
| Feature                  | 3.0" (75.0 mm) 460K   |
| Shutter speed            |   |
| Shutter speed            | <ul> <li>Smart Auto: 1/8–1/2,000 sec.</li> <li>Program: 1–1/2,000 sec.</li> <li>Night: 8–1/2,000 sec.</li> <li>Manual: 16–1/2,000 sec.</li> </ul>   |
| Exposure                 |   |
| ISO equivalent           | Auto, ISO 100, ISO 200, ISO 400, ISO 800, ISO 1600, ISO 3200  |
| Flash                    |   |
| Range                    | Wide: 0.3–3.38 m (ISO Auto)     Tele: 0.5–1.51 m (ISO Auto)   |
| Shake reduction          |   |
| Туре                     | Optical Image Stabilization (OIS)   |
| Storage                  |   |
| Media                    | <ul> <li>Internal memory: Approx. 9.5 MB</li> <li>External memory (Optional): <ul> <li>SD card (2 GB guaranteed)</li> <li>SDHC card (up to 32 GB guaranteed)</li> <li>SDXC card (up to 64 GB guaranteed)</li> </ul> </li> </ul> |
| Interface                |   |
| Digital output connector | USB 2.0   |
| DC power input connector | 5.0 V   |
| Power source             |   |
| Rechargeable battery     | Lithium-ion battery (SLB-10A, 1,030 mAh)  |
| Connector Type           | Micro USB (5 pin)   |
| Wight & Dimensions       |   |
| Wight                    | 6.49 oz(without battery and memory card)  |
| Dimensions               | 4.18 X 2.43 X 0.85 in(excluding protrusions)  |

# 2-2 Product comparison

#### <Table. 2-2 Product comparison>

| Model<br>Specs               | WB200F   | WB150F   |  |
|------------------------------|--|--|--|
| Product<br>image             |  |  |  |
| Image Sensor                 | 1/2.3" (Approx. 7.76 mm) CCD   | 1/2.3" (Approx. 7.76 mm) CCD   |  |
| Effective pixels             | Approx. 14.2 mega-pixels   | Approx. 14.2 mega-pixels   |  |
| Total pixels                 | Approx. 16.4 mega-pixels   | Approx. 16.4 mega-pixels   |  |
| Wight                        | 6.49 oz(without battery and memory card)   | 6.64 oz(without battery and memory card)   |  |
| Dimensions                   | 4.18 X 2.43 X 0.85 in(excluding protrusions)   | 4.19 X 2.36 X 0.92 in(excluding protrusions)   |  |
| LCD                          | LCD TFT LCD, 3.0" (75.0 mm) 460K TFT LCD, 3.0" (7.62 cm) 460K  |  |  |
| Zoom                         | • Still image mode: 1.0–18.0X<br>• Playback mode: 1.0–14.4X  | • Still image mode: 1.0–18.0X<br>• Playback mode: 1.0–14.4X  |  |
| Shutter<br>Speeds            |  |  |  |
| ISO Range                    | Auto, ISO 100, ISO 200, ISO 400, ISO 800,<br>ISO 1600, ISO 3200  | Auto, ISO 80, ISO 100, ISO 200, ISO 400, ISO 800,<br>ISO 1600, ISO 3200  |  |
| Focal Length                 | Samsung Lens f = 4.0–72.0 mm<br>(35 mm film equivalent: 24–432 mm)   | Schneider-KREUZNACH Lens f = 4.0–72.0 mm<br>(35 mm film equivalent: 24–432 mm)   |  |
| Storage                      | <ul> <li>Internal memory: Over 9.5 MB</li> <li>External memory (Optional): <ul> <li>SD card (2 GB guaranteed)</li> <li>SDHC card (up to 32 GB guaranteed)</li> <li>SDXC card (up to 64 GB guaranteed)</li> </ul> </li> </ul>                                 | <ul> <li>Internal memory: Approximately 18 MB</li> <li>External memory (Optional):</li> <li>SD card (1–2 GB guaranteed)</li> <li>SDHC card (up to 32 GB guaranteed)</li> <li>SDXC card (up to 64 GB guaranteed)</li> </ul> |  |
| Image<br>Stabilization       | Optical Image Stabilization (OIS)  | Optical Image Stabilization (OIS)  |  |
| Wireless network             | Wireless network         MobileLink, Remote Viewfinder, SNS & Cloud, Email,<br>S/W Upgrade Notifier, AllShare Play, Auto Backup,<br>AutoShare         Social Sharing, Email, MobileLink, Remote V<br>Cloud, Auto Backup, TV Link, Wi-Fi Direct, A<br>Browser |  |  |
| Battery Source               | Lithium-ion battery (SLB-10A, 1,030 mAh)   | Lithium-ion battery (SLB-10A, 1,030 mAh)   |  |
| Power source<br>connect type | Micro USB (5 pin)  | Micro USB (5 pin)  |  |

# 2-3 Accessories information

#### <Table. 2-3 Packing items information>

|                  | image   | Description       |                   | Parts No.                    |
|------------------|---|-------------------|-------------------|------------------------------|
|                  | THE REAL PROPERTY OF THE REAL | Camera            |                   | WB200F<br>/WB201F<br>/WB202F |
|                  |   |                   | AD5055_EXP        | AD44-00183A                  |
|                  |   |                   | AD5055_CHI        | AD44-00184A                  |
|                  |   |                   | AD5055_USA        | AD44-00179A                  |
|                  | - North   | AC adaptar        | AD5055_UK         | AD44-00182A                  |
|                  |   | AC adapter        | AD5055_AUS        | AD44-00185A                  |
|                  |   |                   | AD5055_ARG        | AD44-00181A                  |
|                  |   |                   | AD5055_INDIA      | AD44-00205A                  |
|                  |   |                   | AD5055_BRA        | AD44-00180A                  |
|                  |   | USB cable         |                   | AD39-00190A                  |
| Packing<br>items | © SAMSUNG<br>⇒ SLB-10A<br>SYUS 10 000mb/em 100mb/1390<br>3703.78 000mb/em 100mb/1390<br>U-ba halfy = U unit Jond compositions   | Battery           |                   | 4302-001221                  |
|                  |   |                   | BLACK             | AD63-07111A                  |
|                  |   | Strap             | SILVER AD63-07    | AD63-07112A                  |
| -                |   |                   | WHITE             | AD63-07284A                  |
|                  |   |                   | QSG_S.CHI_WB200F  | AD68-07669A                  |
|                  |   |                   | QSG_EUR1_WB200F   | AD68-07670A                  |
|                  |   | Quick Start Guide | QSG_EUR2_WB200F   | AD68-07671A                  |
|                  |   |                   | QSG_EUR3_WB200F   | AD68-07672A                  |
|                  |   |                   | QSG_ASIA_WB200F   | AD68-07673A                  |
|                  | it there.   |                   | QSG_CANADA_WB200F | AD68-07674A                  |
|                  |   |                   | QSG_SEA_WB200F    | AD68-07675A                  |
|                  |   |                   | QSG_TUR_WB200F    | AD68-07676A                  |

#### <Table. 2-4 Optional items information>

|                   | image                              | Description |                     | Parts No.   |
|-------------------|------------------------------------|-------------|---------------------|-------------|
|                   |                                    | Camera case | CC9S71N             | AD69-03285A |
|                   |                                    |             | CC9S70B             | AD69-03284A |
|                   |                                    |             | CC9S30B             | AD69-03283A |
|                   |                                    |             | CC9U21B/P           | AD69-02964A |
| Optional<br>items |                                    |             |                     | AD69-03010A |
|                   | TROOP                              |             | CC9U11B             | AD69-02397B |
|                   |                                    | A/V cable   |                     | AD39-00191A |
|                   | Sam)isk<br>2 car<br>mgs<br>SAMSUNG |             | 2G                  | 1109-001378 |
|                   |                                    | Memory card | 4G                  | 1109-001420 |
|                   |                                    |             | 8G                  | 1109-001396 |
|                   | Adepter                            |             | Memory card adapter | 3719-001319 |

# 2-4 About the memory card

The memory capacity may differ depending on shooting scenes or shooting conditions. These capacities are based on a 2 GB microSD card:

|        | Size |               | Super Fine | Fine   | Normal |
|--------|------|---------------|------------|--------|--------|
|        | 14m  | 4,320 X 3,240 | 248        | 489    | 722    |
|        | 12mp | 4,320 X 2,880 | 277        | 546    | 805    |
| _      | 10m  | 4,320 X 2,432 | 325        | 638    | 940    |
| P<br>h | 10m  | 3,648 X 2,736 | 341        | 669    | 984    |
| o<br>t | BM   | 2,832 X 2,832 | 418        | 817    | 1,196  |
| 0      | SM   | 2,592 X 1,944 | 638        | 1,228  | 1,777  |
| S      | ME   | 1,984 X 1,488 | 1,006      | 1,897  | 2,692  |
|        | ZM   | 1,920 X 1,080 | 1,329      | 2,461  | 3,437  |
|        | 1m   | 1,024 X 768   | 2,508      | 4,359  | 5,780  |
| Size   |      |               |            | 30 FPS |        |

#### <Table. 2-5 Memory card capacity>

| Size   |            |             | 30 FPS           |
|--------|------------|-------------|------------------|
| *V     | HD         | 1,280 X 720 | Approx. 25' 53"  |
| i<br>d | VGA        | 640 X 480   | Approx. 46' 12"  |
| e      | QVGA       | 320 X 240   | Approx. 257' 31" |
| 0<br>S | 240<br>Was | For Sharing | Approx. 257' 31" |

\* The figures above are measured without using the zoom function. Available recording time may vary if you use the zoom. Several videos were recorded in succession to determine the total recording time.

# 2-5 About the battery

#### <Table. 2-6 Battery specifications>

| Specification                                       | Description         |
|---|---------------------|
| Model   | SLB-10A             |
| Туре  | Lithium-ion battery |
| Cell capacity                                       | 1,030 mAh           |
| Voltage   | 3.7 V               |
| Charging time<br>*(when the camera is switched off) | Approx. 240 min     |

\* Charging the battery by connecting it to a computer may take longer.

#### <Table. 2-5 Battery life>

| Average shooting time/ Number of photos |  | Test conditions (when the battery is fully charged)   |
|---|--|---|
| Photos                                  | Approx. 170 min/<br>Approx. 340 photos | <ul> <li>The battery life was measured under the following conditions: in P mode, in darkness, resolution, Fine quality OIS on.</li> <li>1. Set the flash option to Fill in, take a single shot, and zoom in or out.</li> <li>2. Set the flash option to Off, take a single shot, and zoom in or out.</li> <li>3. Perform steps 1 and 2, waiting 30 seconds between each step. Repeat the process for 5 minutes, and then turn off the camera for 1 minute.</li> <li>4. Repeat steps 1 to 3.</li> </ul> |
| Videos                                  | Approx. 130 min                        | Record videos at HD resolution and 30 FPS.  |

• The figures above are measured by Samsung's standards. Your results may differ, depending on your actual usage.

• Several videos were recorded in succession to determine the total recording time.

• When using network functions, the battery will be depleted more quickly.

# 3. Disassembly and reassembly

# 3-1 Disassembly of main unit

1. Remove the two SCREWS on the right side, two SCREWS on the left side, two SCREWS on the bottom side.





2. Insert open pry tool around the join of locking structure part to release the ASSY COVER BACK as illustrated in image below.

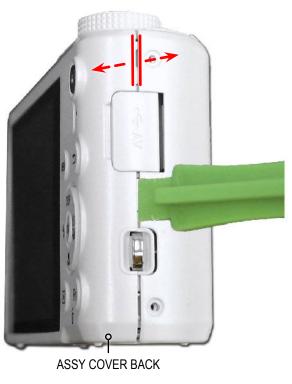


Fig. 3-2

3. Remove the ASSY COVER FRONT with ASSY COVER BACK.

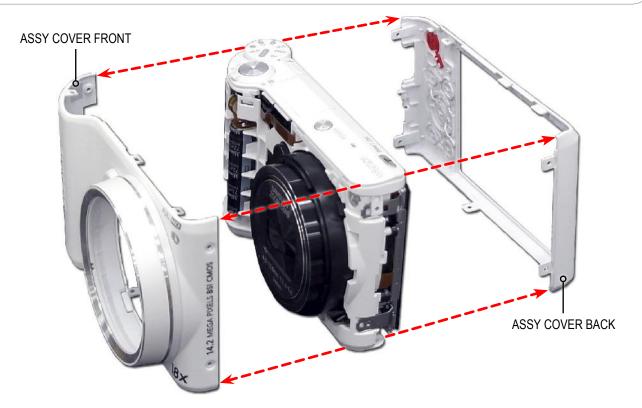


Fig. 3-3

4. Remove the four SCREWS of ASSY COVER FRONT.

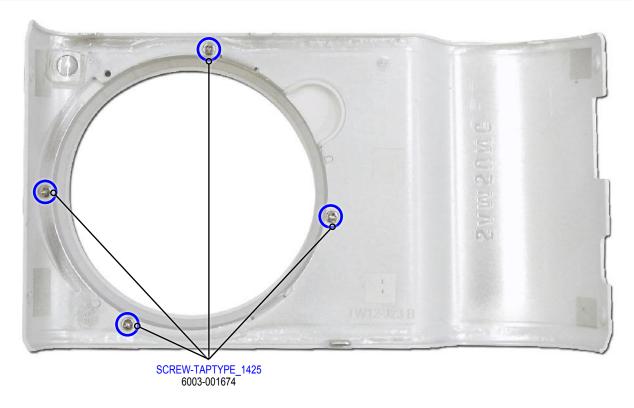


Fig. 3-4



6. Discharge.

CAUTION It must be processed for discharge to the main condenser as shown in the below picture.

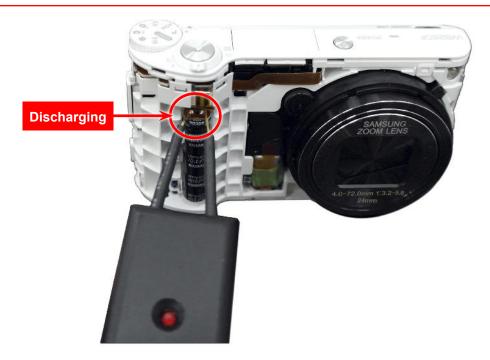


Fig. 3-6

7. Remove the one SCREW of ASSY-KEY\_FPCB.

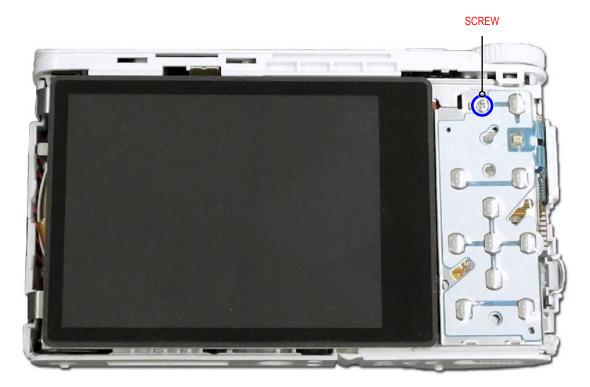
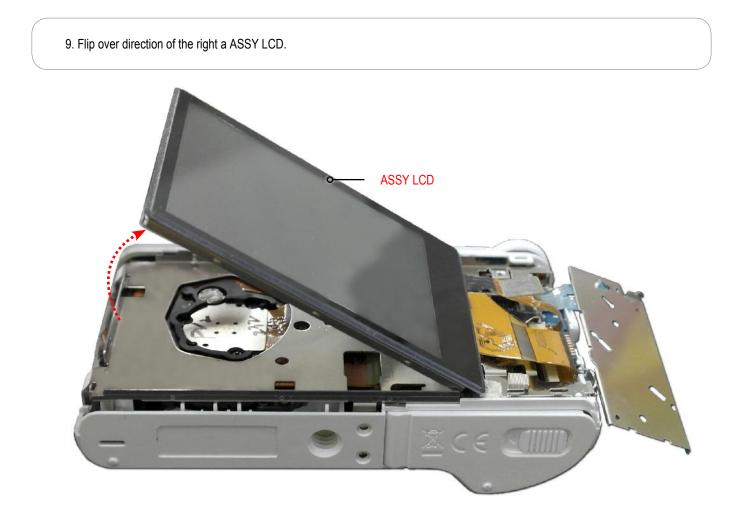


Fig. 3-7

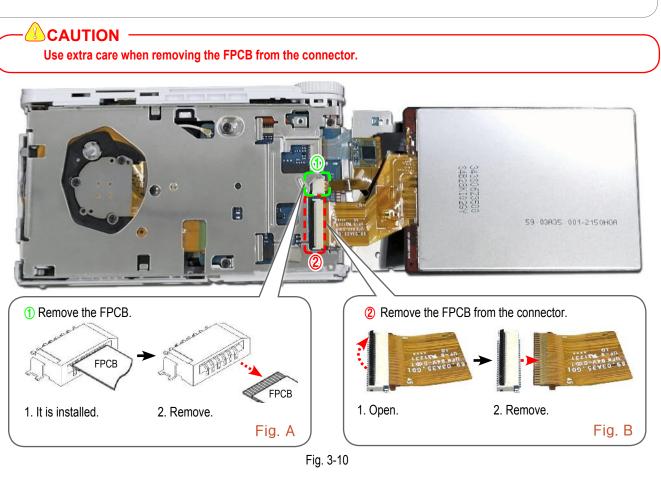
8. Flip over direction of the right a ASSY-KEY\_FPCB.



Fig. 3-8



10. Remove the two FPCB as illustrated in "Fig. A", "Fig. B".



11. Remove the three SCREW.

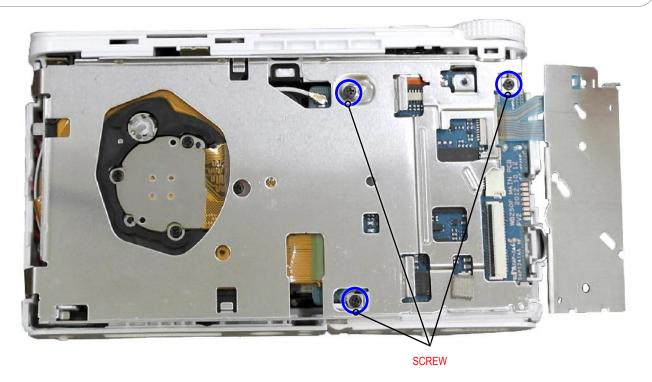


Fig. 3-11

#### 12. Remove the ASSY FRAME-MAIN.

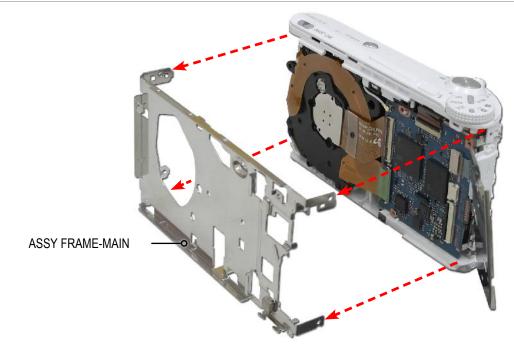


Fig. 3-12

13. Remove the WI-FI antena and FPCB adhesion part as illustrated in " Fig. C". 14. Remove the FPCB from the CONNECTOR as indicated in " Fig. D", " Fig. E".

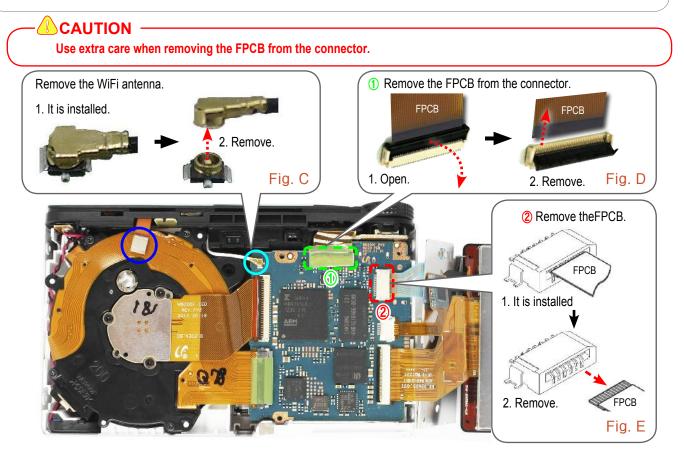


Fig. 3-13

#### 15. Remove the ASSY-BARREL MAIN PCB.

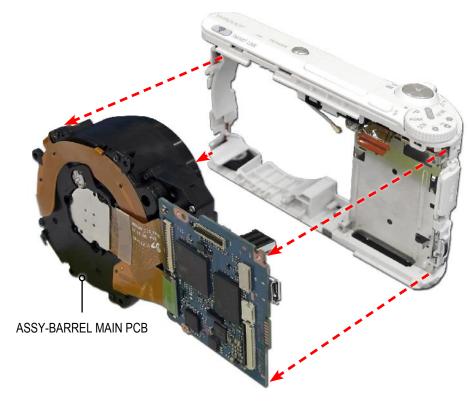
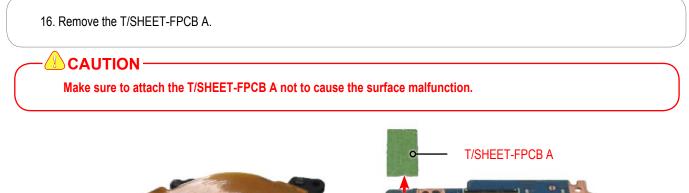


Fig. 3-14



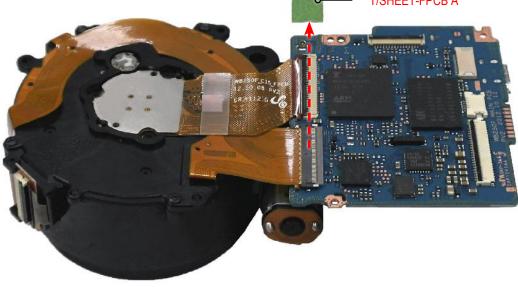


Fig. 3-15

17. Remove the two FPCB from the connector as illustrated in "Fig. F", "Fig. G".

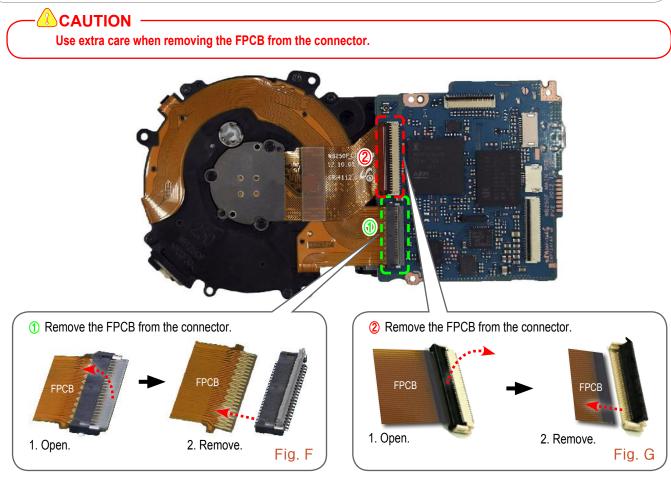


Fig. 3-16

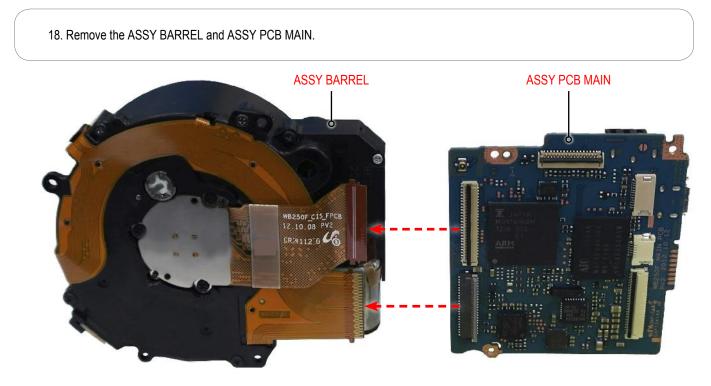


Fig. 3-17

19. Remove the MAIN CONDENSER.

20. Use a tweezers at locking of part shown in five green circle of COVER TOP and remove it.

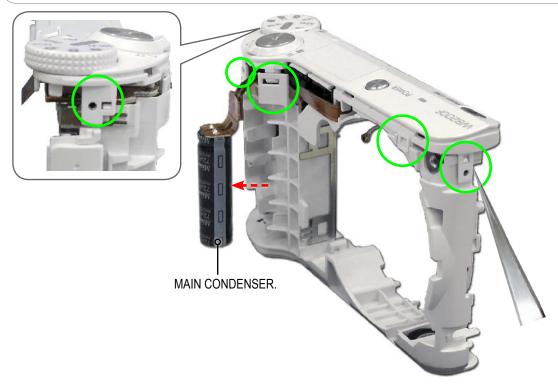
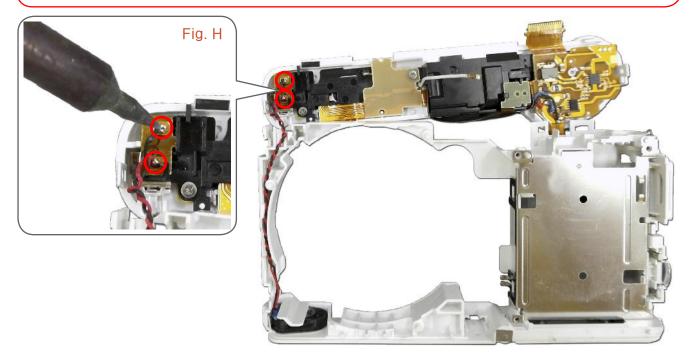


Fig. 3-18

21 . Remove the two solder marked in red circle as illustrated in "Fig. H".

### CAUTION

Be especially careful not to touch the surrounding circuitry and components when removing the solder.



#### 22. Remove the ASSY COVER TOP.

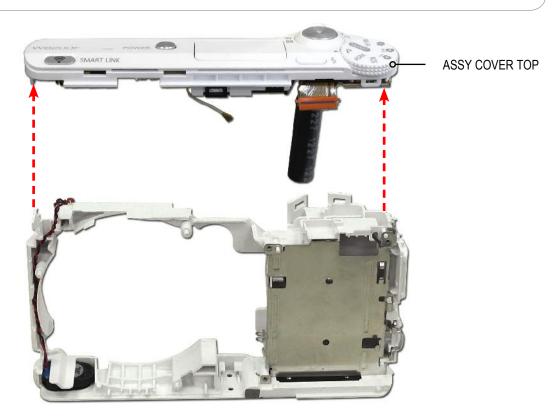


Fig. 3-20







#### 24. Remove the three SCREWS.

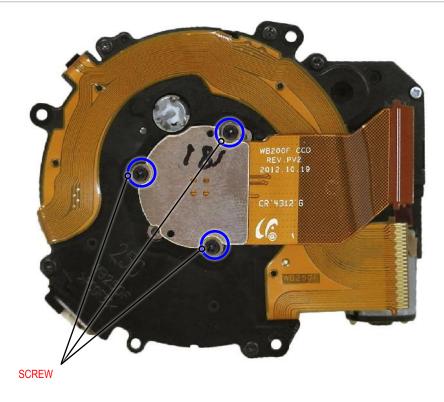
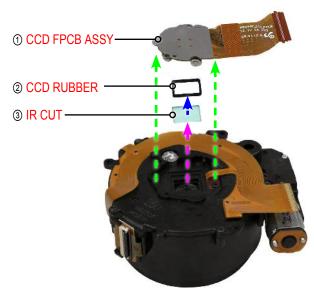


Fig. 3-22

25. Remove the following parts in the order indicated below.
① CCD FPCB ASSY
② CCD RUBBER
③ IR CUT





# 3-2 Barrel Disassembly

#### 1. Remove the six SCREWS.

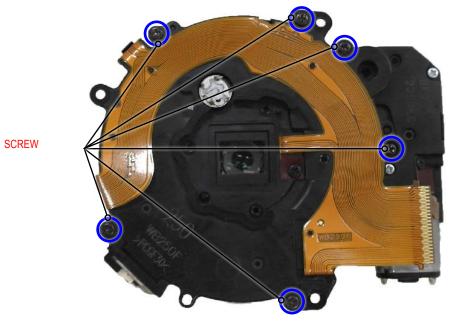
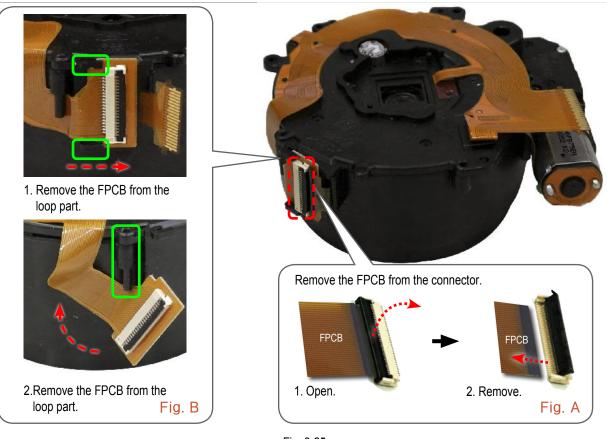


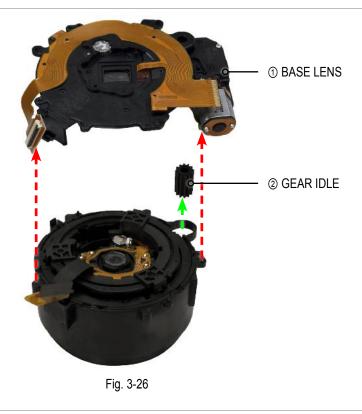
Fig. 3-24

- 2. Remove the FPCB from the connector as illustrated in "Fig. A".
- 3. Remove the loop part by slightly move the FPCB as shown in the "Fig.B".

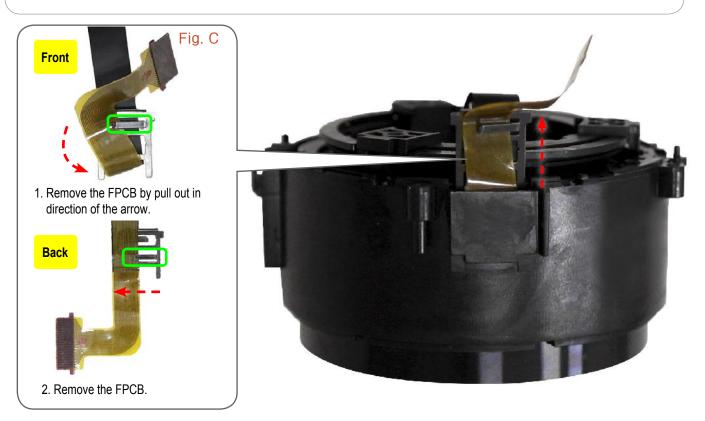




- 4. Remove the following parts in the order indicated below. ① **BASE LENS**
- ② GEAR IDLE



- 5. Remove the FPCB HOLDER.
- 6. Remove the FPCB from the loop part of FPCB HOLDER as indicated.





7. Remove the BARREL-OUTER GUIDE.



Fig. 3-28

8. Remove the BARREL-OUTER CAM.

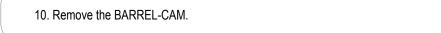




9. Remove the BARREL-OUTER GUIDE PLATE.



Fig. 3-30





11. Remove the BARREL-ZOOM RING.



Fig. 3-32

12. Remove the SUB BARREL ASSY-2ND.



Â

# 3-3 Reassembly of barrel

## 3-3-1 How to use the lubricant for anti-friction to the ASSY BARREL assembly.

Anti-friction lubricant serves to prevent from the possibility of defective parts.

■ Replacement parts are required to apply the lubricant before installing the ASSY BARREL.

#### 

HANARL is volatile product. Keep its container tightly covered.

Make sure to shake the HANARL well first before you use it because it has a lot of particles in the bottom. (Otherwise it becomes ineffective.)

Shake the HANARL until there are no lumps at all and apply it with brush.

#### 1. Type of lubricant

#### <Table. 3-1 lubricant Information>

| Component Name    | Where to apply                       | Name of lubricant |
|-------------------|--------------------------------------|-------------------|
| Lens Base         | Sliding contact surfaces of AF Lens. | Grease KG-513     |
| Others components | Inside and outside friction surface  | HANARL UD-420K    |

% Lubricant brand name : Kanto Kasei (http://www.kanto-kasei.co.jp/e/index.html)

Please contact us (KIHYUNG CO., LTD Distributor) by email if you are interested in purchasing.

e-mail : keeheung2000@yahoo.co.kr

#### 2. Instructions

#### <Table. 3-3 Lubricating with Grease: Lens Base>

#### The pins that work AF Lens

- 1) Apply the Grease KG-513 to the two pins of AF Lens.
- 2) Do not get any Grease on the AF lens.
- 3) Apply a light coating of the Grease KG-513 and make sure not to get any on the AF lens and other components.





Fig. 3-34

#### 3. Lubricating with HANARL: Others components

Apply the HANARL to the Inside and outside friction surface of the components such as ZOOMRING, CAM BARREL, GUIDE PLATE as illustrated in image below.

#### 

- Make sure to shake the HANARL well first before you use it until there are no lumps.
- Apply the HANARL with a clean and good-quality brush, making sure the surface is clean.
- HANARL is volatile product. Keep its container tightly covered.









# 3-3-2 Reassembly of BARREL ASSY.

1. Align the corresponding position of (a), (b), (c) as illustrated in "Fig. A" then install the SUB BARREL ASSY-2ND.

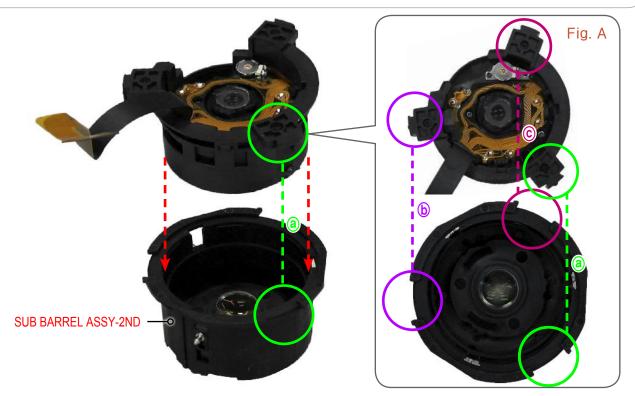


Fig. 3-37

2. Flip over the BARREL-ZOOM RING as illustrated in "Fig. B".
 3. Align the corresponding position of (a) as illustrated in "Fig. A" then install the BARREL-ZOOM RING.



4. Align the corresponding position of (a), (b) as illustrated in "Fig. D" then install the BARREL-CAM.

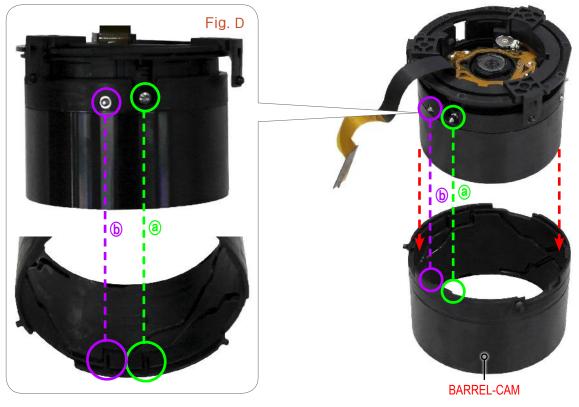
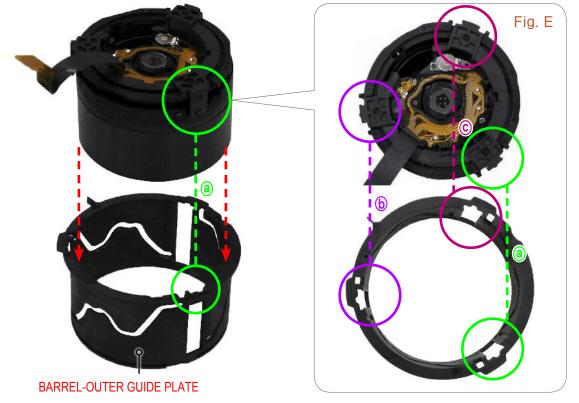
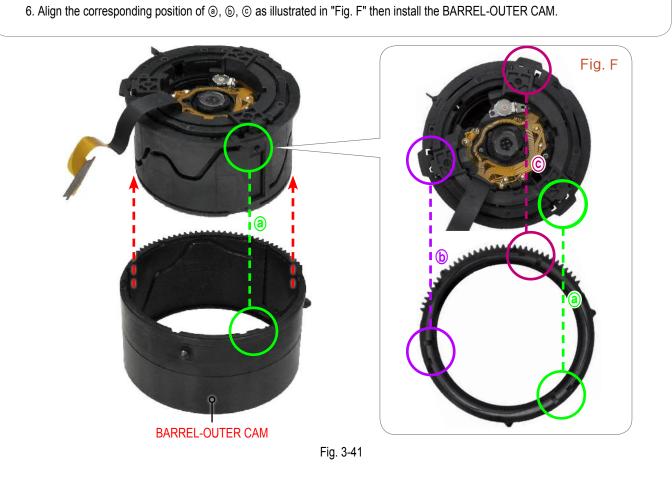


Fig. 3-39

5. Align the corresponding position of (a), (b), (c) as illustrated in "Fig. E" then install the BARREL-OUTER GUIDE PLATE.







7. Align the corresponding position of (a), (b), (c) as illustrated in "Fig. G" then install the BARREL-OUTER GUIDE.

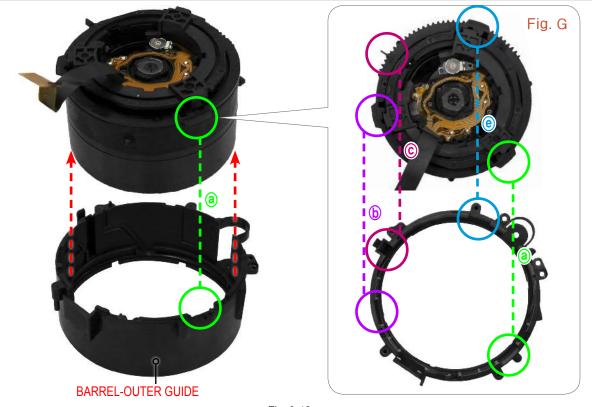


Fig. 3-42

- 8. Insert the FPCB into the groove of FPCB HOLDER as illustrated in "Fig. H".
- 9. Install the FPCB HOLDER.

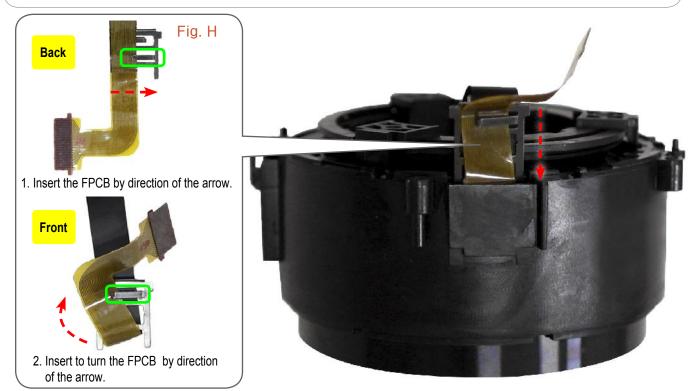


Fig. 3-43

10. Install the GEAR IDLE.

11. Align the corresponding position of (a), (b) as illustrated in "Fig. I" then install the BASE LENS.

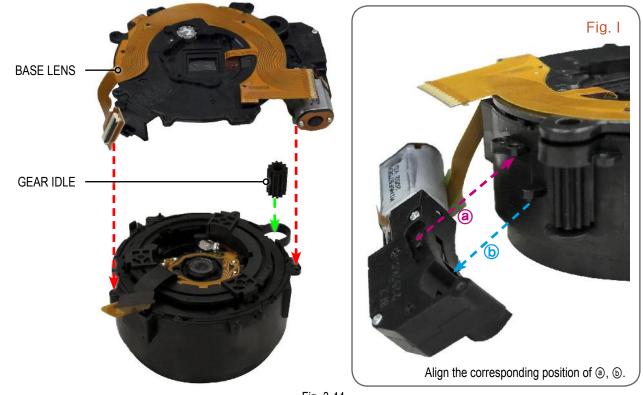
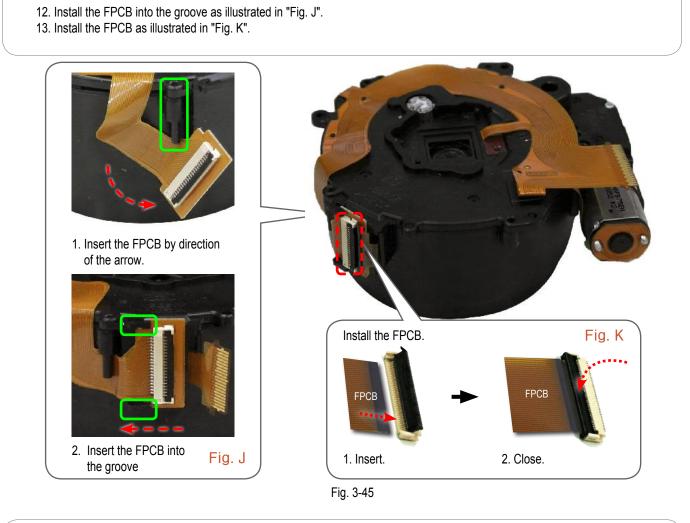


Fig. 3-44



14. Tighten the six screws.

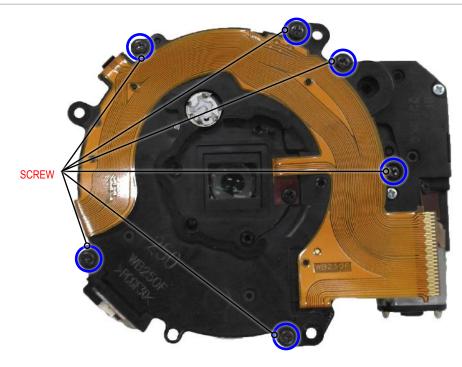


Fig. 3-46

## 4. Troubleshooting

## 4-1 SD CARD detect failA/error

|   | Situation Not recogniz  | e the memory card |                                       |
|---|---|-------------------|---------------------------------------|
|   | Suggested re  | medies            | Reference                             |
| 1 | Reinsert SD card after cle<br>PAD pin.  | eaning card's     | C C C C C C C C C C C C C C C C C C C |
| 2 | Check the mechanical de<br>socket's detect.<br>Check the SMD states of<br>nearby devices. |                   | C278<br>C278<br>C278                  |

## 4-2 Switch problems on TOP (Power/Release/Zoom)

|        | Situation The power, release, mode dial, zoom shutter does not work.   |           |  |  |  |  |
|--------|--|-----------|--|--|--|--|
| $\geq$ | Suggested remedies   | Reference |  |  |  |  |
| 1      | Check the MAIN PCB -TOP FPCB connecting condition.   |           |  |  |  |  |
| 2      | Check the SMD states of each shutter &<br>zoom switches related devices.<br>Check each switch's mechanical defects.  |           |  |  |  |  |
| 3      | Check the SMD states of each power & smart link switches related devices.<br>Check each switch's mechanical defects. |           |  |  |  |  |

## 4-3 MAIN PCB connection issues

## Situation 1.

Cannot turn on the camera.

|   | Suggested remedies  | Reference |
|---|---|-----------|
| 1 | <ol> <li>Check the MAIN PCB -TOP FPCB connecting condition.</li> <li>Check the BARREL FPCB connecting condition.</li> <li>Check the Sensors FPCB connecting condition.</li> </ol> |           |

|--|

Situation 3. The touch does not work.

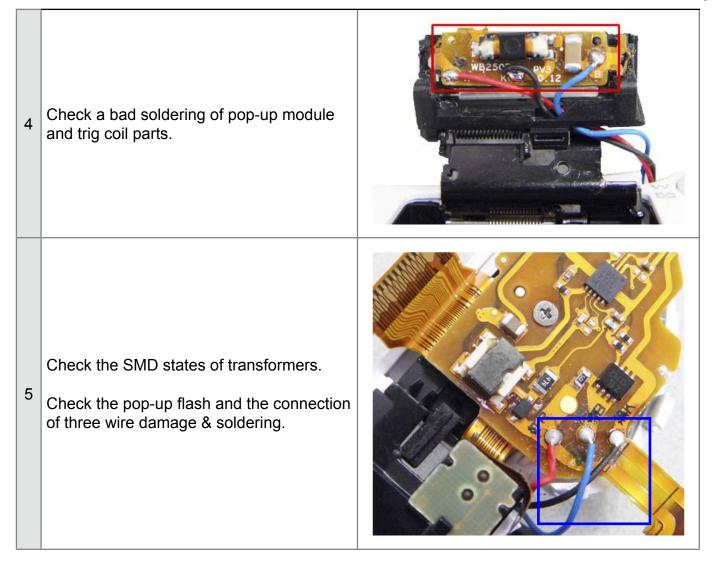
Situation 4. Does not input in Rear button.

|   | Suggested remedies  | Reference |
|---|---|-----------|
| 1 | <ul> <li>Situation 2.</li> <li>Check the LCD FPCB connecting condition</li> <li>Situation 3.</li> <li>Check the TSP FPCB connecting condition</li> <li>Situation 4.</li> <li>Check the KEY FPCB connecting condition</li> </ul> |           |

## 4-4 Flash related problems

|              | Situation The flash does not work.                     |                       |  |  |  |
|--------------|--|-----------------------|--|--|--|
| $\mathbf{i}$ | Suggested remedies                                     | Reference             |  |  |  |
| 1            | Check the MAIN PCB -TOP FPCB connecting condition.     |                       |  |  |  |
| 2            | Check a reverse insertion of Xe-TUBE.                  | means (-)<br>plus (+) |  |  |  |
| 3            | Check the connector and polarity of Main<br>Condenser. |                       |  |  |  |

### Troubleshooting



## 4-5 Image output related problems

# When horizontal/vertical noise preview Image or Situation emulsification occurs when preview black out occurs. Suggested remedies Reference Check the FPCB connecting condition 1 and SMD states of CMOS CONNECTOR. 07 Check the CMOS SENSOR ASSY crack. 2 Change the CMOS SENSOR ASSY & check. Check the FPCB connecting condition 3 and SMD states of CMOS connector.

## 4-6 When you cannot hear the recorded sound

| Situation       |   | Does not sound. |           |
|-----------------|---|-----------------|-----------|
| $\overline{\ }$ | Suggested rer   | nedies          | Reference |
| 1               | Check the connector and p<br>Check the soldering point an |                 |           |

Situation

## Be heard sound of button but have no sound of voice recording

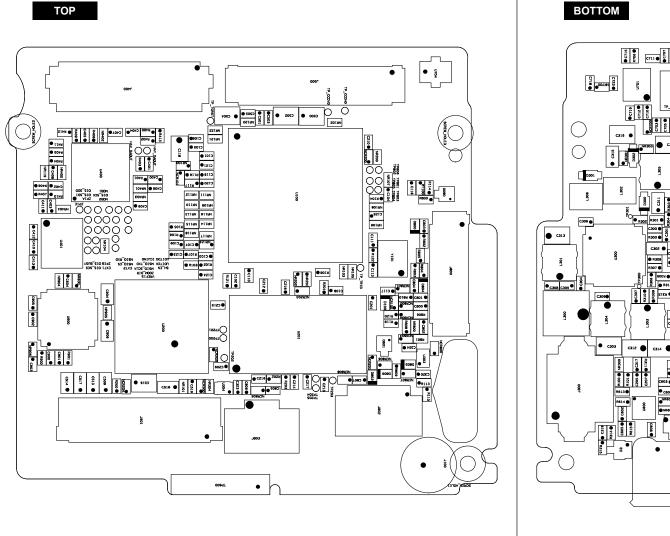
| $\searrow$ | Suggested remedies  | Reference |
|------------|---|-----------|
| 1          | Check the polarity to soldering of MIC.<br>Check the damage states of MIC FPCB. |           |

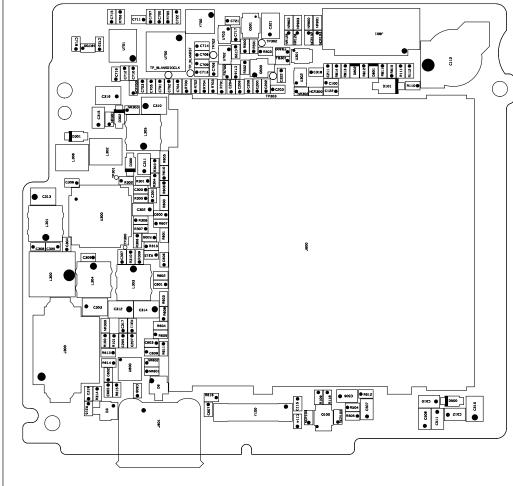
#### PCB diagrams

-----

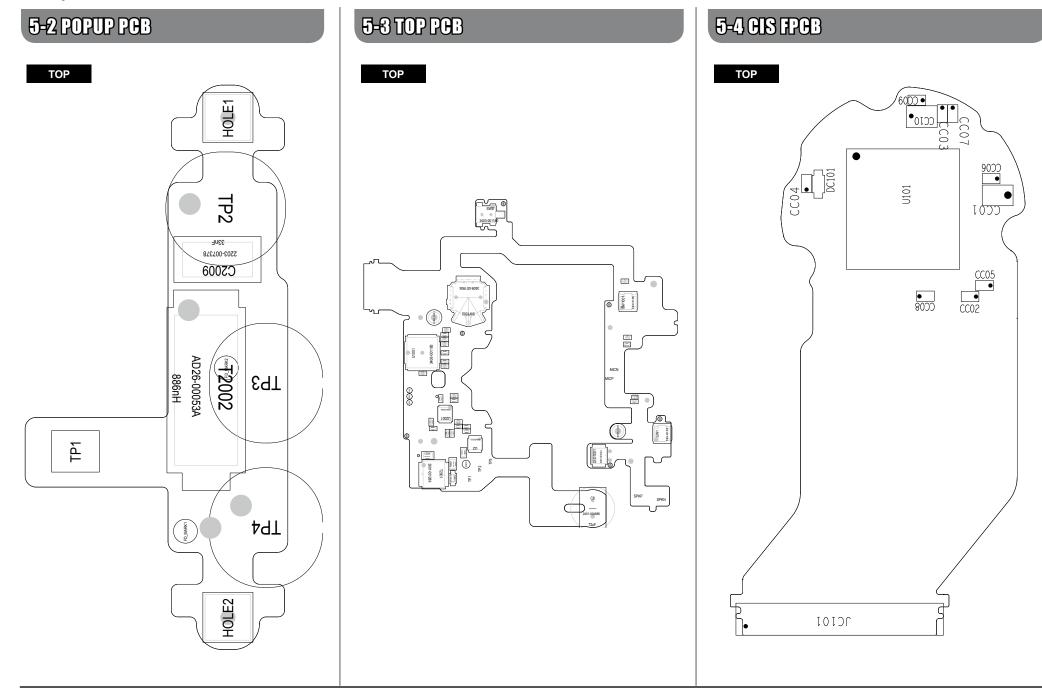
## 5. PCB diagrams

## 5-1 MAIN PCB

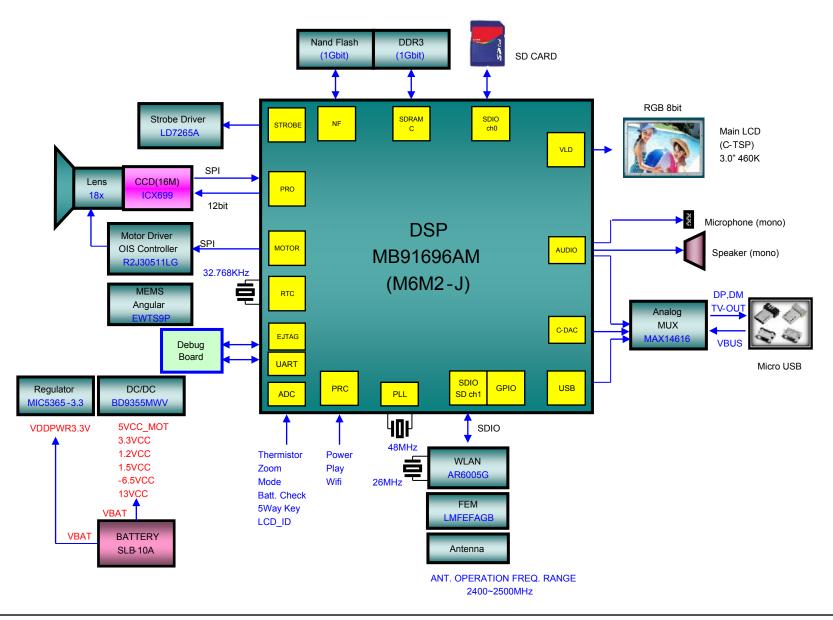




#### PCB diagrams



## 6. Block diagram



## 7. Firmware update

## 7-1 Product reset



This describes how to reset the camera to factory default setting.

### 1. First turn on the power of the camera.



Fig. 7-1

2. Press the (1) SHUTTER button + WIDE direction and then turn the (2) POWER off.

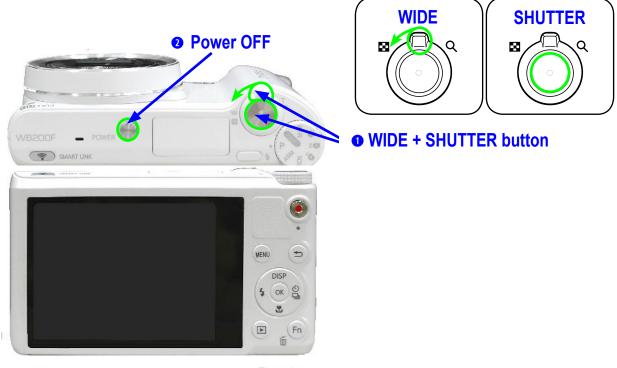


Fig. 7-2

### Firmware update

3. Turn the power of the camera on again to check whether it has been reset.

|                                  | General General     |           |
|----------------------------------|---------------------|-----------|
|                                  | Language            | English 🕽 |
|                                  | Time Zone           | Home >    |
|                                  | Date/Time Set       |           |
|                                  | Date Type           | MM/DD/ >  |
|                                  | <b>Exit</b>         | Select    |
|                                  | <b>5</b> Exit       | Select    |
| NAARY LINK V                     | 5 Exit              | Select    |
|                                  | Exit                | Select    |
|                                  | English >           | Select    |
| General                          |                     | Select    |
| Ceneral                          | English >           | Select    |
| Ceneral<br>Language<br>Time Zone | English ><br>Home > | Select    |

Fig. 7-3

## 7-2 Version check

This describes how to check the version of the current firmware of the camera.

- 1. Use fully charged battery for power.
- 2. First turn off the power of the camera.
- 3.Press the (1) SHUTTER button + WIDE direction, and then turn the (2) POWER on.

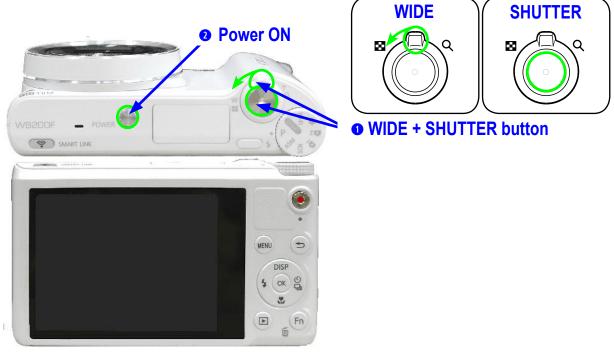


Fig. 7-4

4. Check the version of the firmware and then turn the power off.





## 7-3 Update

### How to execute the firmware

The firmware is configured in the following structure.

Code area is where the execution codes to operate the camera are located, and the Partition [1:3] area is where the various resources necessary to operate the camera are saved. Among these areas, Partition 3 area is where the Defective Pixel adjustment data and Lens Shading adjustment data are saved.

User Area is where the setting values are saved through the menu when the user uses the camera, and the adjusted data through integrated process is saved.

### <Table. 7-1>

|  | code | partition1 | partition2 | partition3 | User Area |
|--|------|------------|------------|------------|-----------|
|--|------|------------|------------|------------|-----------|

### Reference of general version:

- As the version to update the Code + Partition [1:2] area, this protects both the adjusted data saved in the User Area and the Partition 3 area.

### 1. Insert the memory card containing the firmware data file and Update Script file into the camera.

- \* You need two files to update the firmware and the required files are firmware data file and Update Script file. \* Because all data saved on the FLASH memory will be reset when you update the firmware, back up
- your data before proceeding with the update.

| fwup.txt      |   |
|---------------|---|
| DATAWB200.bin | ۱ |

### 2. Use the AC adaptor or fully charged batteries for the power.

\* You can proceed with the update only when the battery level is full (Icon showing full up to 3rd level).

### 3. Turn on the power of the camera.



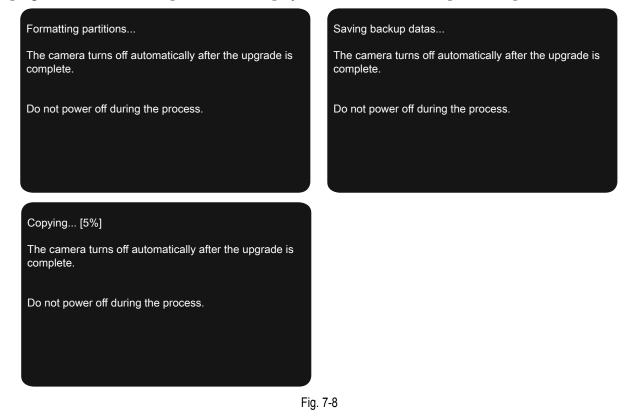


4. The version of the firmware to update will be displayed on the LCD screen. When you press the SHUTTER button, the firmware update will start.



Fig. 7-7

5. The progress of the firmware update will be displayed on the LCD and the update will proceed.



6. When the update is completed, the camera will automatically be turned off.

## 7-4 How to recover the MAIN PCB



• This section describes how to recover the MAIN PCB when camera stops functioning due to power failure or some other reasons during the firmware process.

It is not necessary to go over all the adjustment process again since the existing adjustment data is deleted.

### Required materials

- 1. SD card less than 1GB
- It is recommended to use a SD card with less than 1GB.
- 2. Soldering iron
- It is used to short out the TP on MAIN PCB.
- 3. The latest firmware files such as WB200F\_U\_SR\_SXXXXX.zip
- You can download the latest firmware file from the K-zone or Samsung website.
- Note that the name of the firmware file may vary depending on WB model.
- 1. Remove the camera as Fig. 7-9.
  - Removing the BACK COVER  $\rightarrow$  KEY PCB  $\rightarrow$  LCD  $\rightarrow$  MAIN FRAME.
- 2. Download the latest firmware file and copy it to the SD card .
  - Save the latest version firmware file into root folder in SD card.
    - (DATAWB200.bin)
  - Do not need to save the "fwup.txt" file. Only save the "DATAWB200.bin" file.
- 3. Insert the memory card containing the firmware data file into the camera.
- \* You can proceed with the upgrade only when the battery level is full (Icon showing full up to 3rd level).
- 4. Soldering the TP in red circle on Main PCB to short out the circuit. Then press the power button to turn on the camera.

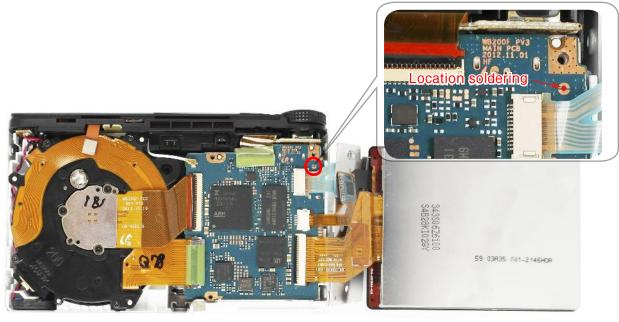


Fig. 7-9

- 5. LED will turn on blink when turn on the camera. The MAIN PCB recovery process will proceed. (It will takes about 2 minutes.)
- 6. LED will turn off when the recovery process is complete.
- 7. Remove the Soldering.
- 8. Remove the SD card and then assemble the camera. - Assemble the MAIN FRAME  $\rightarrow$  LCD  $\rightarrow$  KEY PCB  $\rightarrow$  BACK COVER
- 9. Turn the power of the camera on again to check whether camera has been functioning.

## 8. Adjustment

## 8-1 Basic guide for adjustment

- After replacing an electronic part, you must make changes for each adjustment item in the WB200F.
  - The following table shows the necessary adjustment item for replacing each part.
- The camera must be fixed with a tripod and levelled condition must be maintained.

### 1. After replacing an electronic part, you must make adjustments for each item by referring to the following table.

#### <Table. 8-1 Adjustment information>

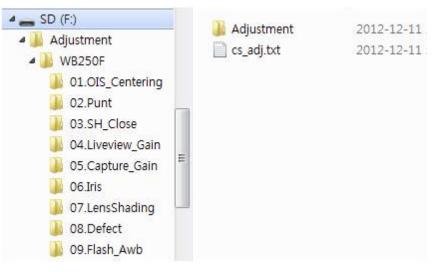
|   | MAIN PCB | TOP FPCB<br>POPUP PCB | BARREL ASSY | CIS ASSY |
|---|----------|-----------------------|-------------|----------|
| Firmware update                               | 0        | X                     | X           | Х        |
| OIS CENTERING ADJ                             | 0        | X                     | 0           | 0        |
| PUNT(Auto Focus) ADJ                          | 0        | X                     | 0           | 0        |
| SHUTER CLOSE, CCD, IRIS ADJ                   | 0        | X                     | 0           | 0        |
| LENS SHADING ADJ                              | 0        | X                     | 0           | 0        |
| CIS DEFECT PIXEL ADJ (DPC)                    | 0        | X                     | 0           | 0        |
| FLASH & AWB ADJ                               | 0        | 0                     | 0           | 0        |
| WIFI SETTING, MAC ADDR, SERIAL NO WRITE enter | 0        | X                     | X           | X        |

### 2. Adjustment equipment

- Light source box: Light source box that supporting LV 12.
- The colour temperature specification of the Light box is **3300K**.
- Infinity Collimator for PUNT adjustment.
- Gray chart (18%) and DARK BOX for FLASH & AWB adjustment.
- POWER SUPPLY: 4.2V/2A

### 3. Adjustment program file

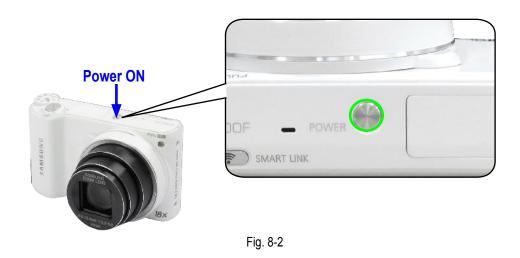
Save the "Adjustment" file and "cs\_adj.txt" file on memory card as follows.



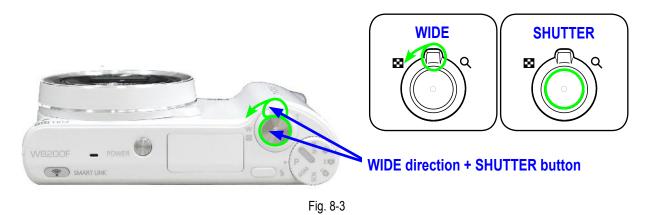


### 4. Adjustment mode entry process.

1) Insert the memory card containing the two adjustment file into the camera and then turn on the power of the camera.



2) Entering the adjustment mode to press the WIDE direction + SHUTTER button as shown below.



3) The adjustment can be performed by select the adjustment item desired from the menu below.



Fig. 8-4

## 8-2 OIS CENTERING ADJ



Process to check if OIS performs well or not.

#### <Adjustment method>

- 1. Insert the memory card containing the adjustment file into the camera and then entering the adjustment mode.
- 2. Select the OIS Centering of adjustment menu.
- 3. Adjustment is made automatically. - OIS module will be operated left/right/up/down 2-3 times.



4. When the adjustment is completed, the camera will be off automatically.

### 

Put your camera up straight on a steady surface such as a table or anything solid that won't move. Don't put your camera on a highly unstable surface. Also don't put your camera down or hold it. The noise may significantly affect degrading the Gyro Sensor and Hall Sensor performance.

## 8-3 PUNT(Auto Focus) ADJ

Adjustment objective: Adjustment for implement the performance of AF optimized by adjustment to assembly deviation of barrel(Lens).

Necessary equipment: Infinity Collimator

#### <Adjustment method>

0

#### 1. Refer to the following adjustment environment specification to adjust the focus.

1) Used specification of Infinity Collimator.

- Set the illuminance specification of the Collimator to 6 LV.
- Maintain distance of less than 1cm between the end of the camera body tube to the lens surface of the Infinity Collimator.
- The camera must be fixed while the adjustment is made.

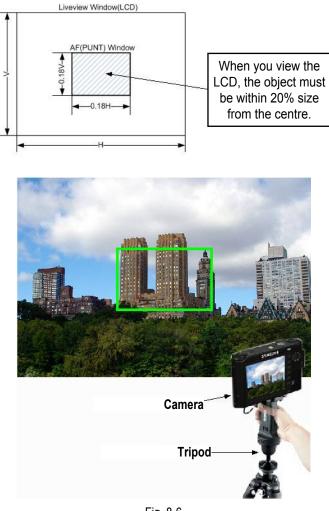




### Adjustment

### 2) Used specification for infinite object.

- The camera must be fixed with a tripod and levelled condition must be maintained.
- Set up the camera toward a building or object in infinite distance (more than 500m). (Do not use the chart)
- Set a cathedral, apartment or object with high contrast in day environment/AF area display.





### 

For the object, exclude full glass buildings or objects with low contrast, and this cannot be adjusted for night time. For the adjustment in these environments, AF may not be accurate when shooting Tele or macro.

- 2. Insert the memory card containing the adjustment file into the camera and then entering the adjustment mode.
- 3. Select the Punt(Auto Focus) of adjustment menu.
- 4. Adjustment is made automatically.
- 5. When the adjustment is completed, the camera will be off automatically.

## 8-4 SHUTTER CLOSE, CIS GAIN, IRIS ADJ



Adjust the Close timing of the device shutter by camera.

Because there is a deviation of shutter closing time by each set, make adjustments by each set to reduce this deviation.
 CCD Gain item and AWB LOW are adjusted simultaneously.

#### <Adjustment method>

- 1. Prepare the Light source box that can be adjusted to LV 12.
- 2. Insert the memory card containing the adjustment file into the camera and then install the camera to the Light source box.
  - \* Luminance specification of the Light box is LV 12.
  - \* The colour temperature specification of the Light box is 3300K.





#### 3. Select the Shutter Close Time of adjustment menu.

#### 4. The adjustment process will automatically start.

- Check the number of maximum adjustments which have been set, and adjust the Shutter close time, CMOS sensor gain, IRIS
- Carry out inspection by referring to the specifications for brightness.
   The line delay and sub delay, Gain, IRIS value are adjusted to find the proper values for the specifications for brightness.
- **3** If the result value are within spec, it is OK. Otherwise, it is NG.
- Write the adjustment value in the EEPROM by referring to the EEPROM WRITE data.
- Write the result of the adjustment value in the data file by referring to the CARD WRITE data.

#### 5. When the adjustment is completed, the camera will automatically be turned off.

6. Liveview Gain, Capture Gain, Iris are also perform in the same way.

## 8-5 LENS SHADING ADJ



- Adjust the lens shading for the brightness of the periphery of the lens for each camera.
- Because the surrounding brightness is lower compared to the centre for each set, separately adjust each set so that the surrounding brightness is higher.

#### <Adjustment method>

- 1. Prepare the Light source box.
  - \* Luminance specification of the Light box is LV 12.
  - \* The Light box is located at 10mm ± 1mm with the body tube open.
  - \* The colour temperature specification of the Light box is **3300K**.
- 2. Insert the memory card containing the adjustment file into the camera and then install the camera to the Light source box.



Fig. 8-8

### 4. Select the Lens Shading of adjustment menu.

### 5. The adjustment process will automatically start.

- Adjust the Lens Shading with large lense, Zoom 0 condition.
- **2** Refer to the EEPROM WRITE information and write the adjustment result to EEPROM.
- **3** Write the result of the adjustment value in the data file by referring to the CARD WRITE data.
- Set the lower and upper specification.

### 6. When the adjustment is completed, the camera will automatically be turned off.

## 8-6 FLASH & AWB ADJ



Set a limit to the illuminance by the Strobo light to classify the hardware defect.

Classify the set that deviates from the specifications by illuminating times and then calculate the flash R, B gain.

AWB HIGH item is adjusted simultaneously.

#### <Adjustment method>

- 1. Attach an 18% reflective paper in the dark room where the light is blocked.
- 2. Set up the camera in the dark room.
- 3. Set the distance between the reflective paper and camera to 50cm.



- 4. Insert the memory card containing the adjustment file into the camera and then entering the adjustment mode.
- 5. Select the Flash & AWB of adjustment menu.
- 6. The adjustment will automatically start.
  - Compare the reference illumination for 2 illuminations using the flash algorithm, and make a judgment.
  - By using the average value of the illuminance of 2 times, check the R and B gain to make Pass/No Pass judgment.
  - B Record the R and B gain to EEPROM during flash process and R, B gain success.
- 7. When the adjustment is completed, the camera will automatically be turned off.

## 8-7 CIS DEFECT PIXEL ADJ



Calibrate the Defective pixel of CIS for each camera.

#### <Adjustment method>

- 1. Insert the memory card containing the adjustment file into the camera and then entering the adjustment mode.
- 2. Select the Defect(CIS Defect Pixel) of adjustment menu.
- 3. The adjustment will automatically start.
  - Check the set reference level, exposure time and loop, and execute the Defective Pixel calibration.
  - **2** Refer to the specification (Maximum number of defective cells) and execute the check.
  - **3** Refer to the CARD WRITE information to write the number of defective cells to the data file.
- 4. When the adjustment is completed, the camera will automatically be turned off.

## 8-8 COUNTRY CODE(Wi-Fi) Input

- In case of Wi-Fi Built-in models, MAC Address Write procedure is required after replacing Main PCB.
- Symptom : If country is not selected after replacing Main PCB;
- Proper SNS for its country as below is not available.
- Keypad for its country when using Wi-Fi (English default)
- Wi-Fi data trasmission speed is low.

### <Adjustment method>

/@`

- **1**. Insert the memory card containing the adjustment file into the camera and then entering the adjustment mode.
- 2. Select the **Country Code** of adjustment menu.
- 3. Input the 3-digit country code in the screen below.

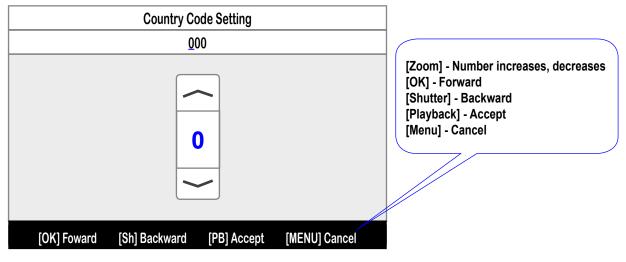


Fig. 8-10

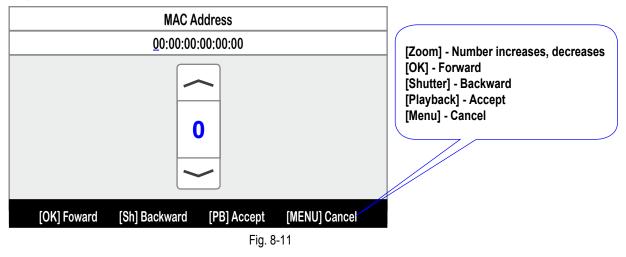
## 8-9 MAC ADDRESS(Wi-Fi) Input



When you can not find MAC Adress due to failure or malfunction of components in the Main PCB, contact to headquarter. It will offer the new MAC Adress.

#### <Adjustment method>

- **1**. Insert the memory card containing the adjustment file into the camera and then entering the adjustment mode.
- 2. Select the Mac Address of adjustment menu.
- 3. Input the 12-digit Mac Address in the screen below.



## 8-10 SERIAL NO. Input

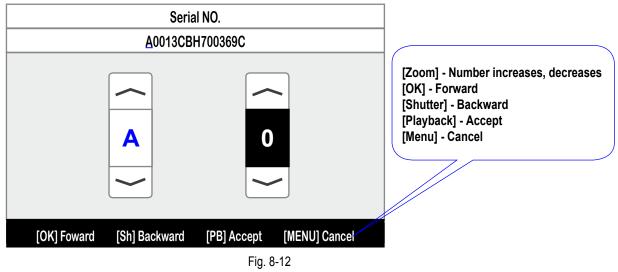
If the Serial Number label of the camera has been Erased, check the Serial Number into version check mode.

- Version check mode: Press the (1) SHUTTER button + WIDE button, and then turn the (2) POWER on.
- Check the repair history or genuine to through Serial Number of camera.

<Adjustment method>

∕₿\

- **1.** Insert the memory card containing the adjustment file into the camera and then entering the adjustment mode.
- 2. Select the Serial No. of adjustment menu.
- 3. Input the 15-digit Serial No. in the screen below.



## 8-11 Input confirm

1. When checking the version (Press SHUTTER button and WIDE direction to turn on), Mac address, Serial number, Nation appears on the screen.



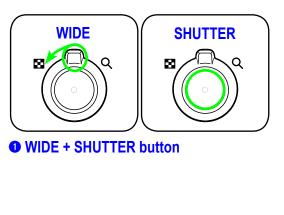


Fig. 8-13

2. Check the Mac address, Serial number, Nation.

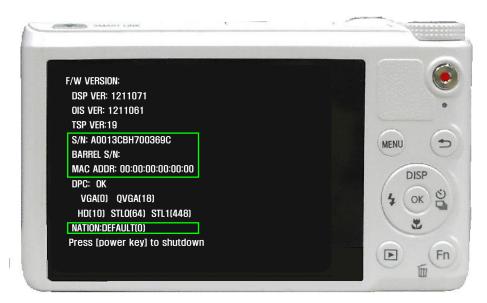
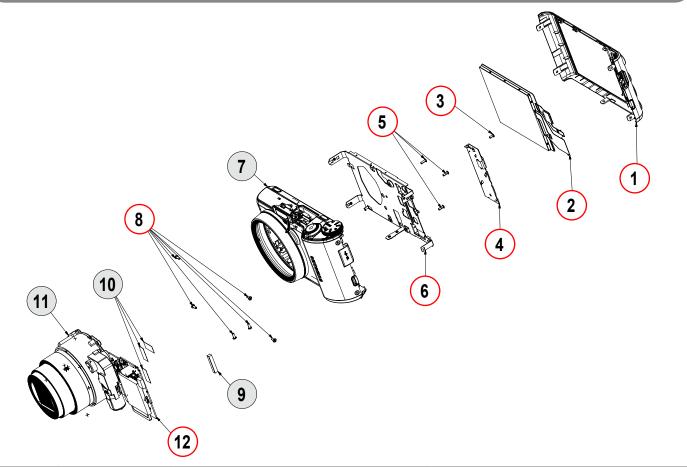


Fig. 8-14

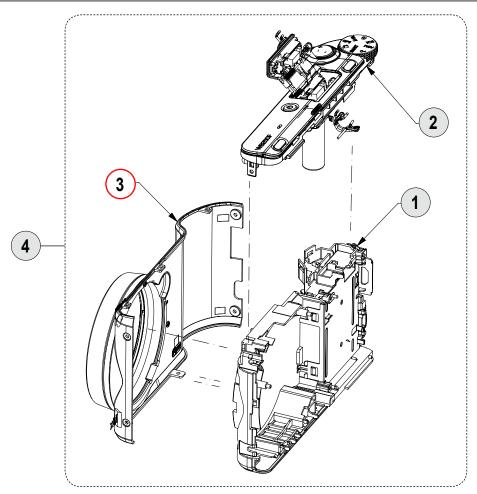
## 9. Exploded view and parts list

## 9-1 BODY ASSEMBLY



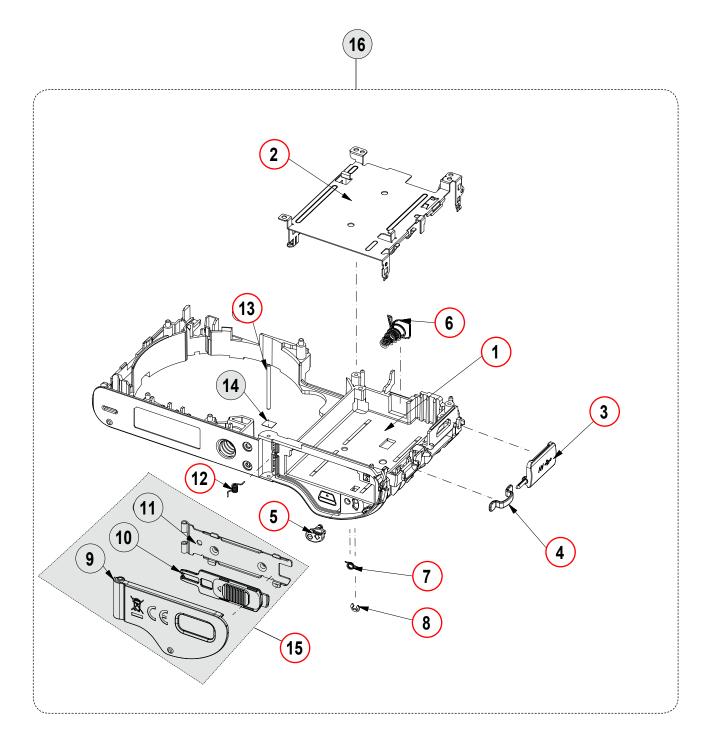
| Loc. No | Parts No.   | Description           | Q ty | Available | Remark    |
|---------|-------------|-----------------------|------|-----------|-----------|
|         | AD97-23035A | ASSY COVER BLACK_BK   | 1    | 0         | BLACK     |
| 1       | AD97-23035B | ASSY COVER BLACK_WT   | 1    | 0         | WHITE     |
|         | AD97-23035C | ASSY COVER BLACK_RD   | 1    | 0         | RED       |
| 2       | AD97-23145A | ASSY-LCD_TSP          | 1    | 0         |           |
| 3       | 6001-001811 | SCREW-MACHINE_1430_BK | 1    | 0         |           |
| 4       | AD92-02003A | ASSY-KEY PCB          | 1    | 0         |           |
| 5       | 6003-001659 | SCREW-TAPTYPE_1440_BK | 3    | 0         |           |
| 6       | AD97-23190B | ASSY FRAME MAIN       | 1    | 0         |           |
|         | AD97-23166A | ASSY MAIN_BK          | 1    | Х         | BLACK     |
| 7       | AD97-23166B | ASSY MAIN_WT          | 1    | Х         | WHITE     |
|         | AD97-23166C | ASSY MAIN_RD          | 1    | Х         | RED       |
| 0       | 6001-002152 | SCREW-MACHINE_1440_BK | 6    | 0         | BLACK/RED |
| 8       | 6001-002159 | SCREW-MACHINE_1440_SL | 6    | 0         | WHITE     |
| 9       | AD63-07409A | CUSHION-KEY PCB       | 1    | Х         |           |
| 10      | AD63-04837A | T/SHEET-FPCB A        | 3    | Х         |           |
| 11      | AD97-23167A | ASSY BARREL PCB MAIN  | 1    | Х         |           |
| 12      | AD92-02042A | ASSY PCB MAIN         | 1    | 0         |           |

## 9-2 MAIN ASSEMBLY



| Loc. No | Parts No.   | Description          | Q ty | Available | Remark |
|---------|-------------|----------------------|------|-----------|--------|
|         | AD97-23037A | ASSY- CHAMBER_BK     | 1    | Х         | BLACK  |
| 1       | AD97-23037B | ASSY- CHAMBER_WT     | 1    | Х         | WHITE  |
|         | AD97-23037C | ASSY- CHAMBER_RD     | 1    | Х         | RED    |
|         | AD97-23165A | ASSY-COVER TOP_BK    | 1    | Х         | BLACK  |
| 2       | AD97-23165D | ASSY-COVER TOP_WT    | 1    | Х         | WHITE  |
|         | AD97-23165D | ASSY-COVER TOP_RD    | 1    | Х         | RED    |
|         | AD97-23221A | ASSY- COVER FRONT_BK | 1    | 0         | BLACK  |
| 3       | AD97-23221B | ASSY- COVER FRONT_WT | 1    | 0         | WHITE  |
|         | AD97-23221C | ASSY- COVER FRONT_RD | 1    | 0         | RED    |
|         | AD97-23166A | ASSY MAIN_BK         | 1    | Х         | BLACK  |
| 4       | AD97-23166B | ASSY MAIN_WT         | 1    | Х         | WHITE  |
|         | AD97-23166C | ASSY MAIN_RD         | 1    | Х         | RED    |

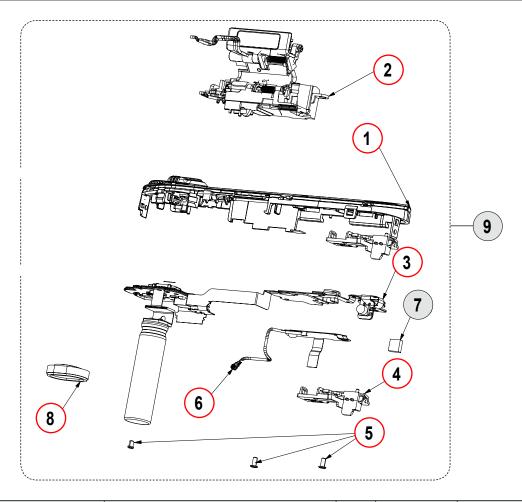
## 9-3 CHAMBER ASSEMBLY



Exploded view and parts list

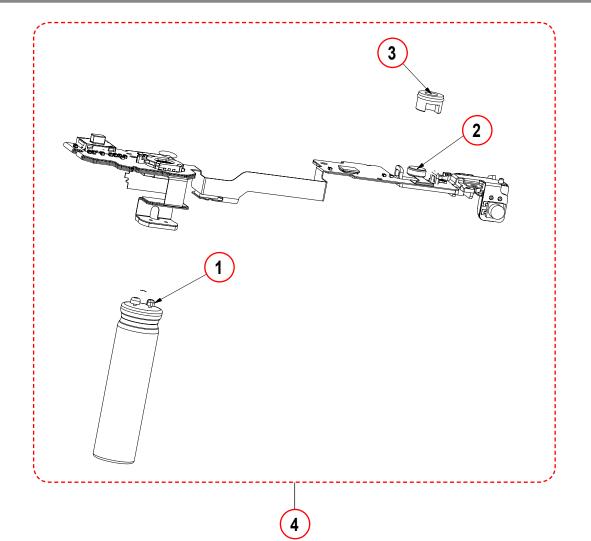
| Loc. No | Parts No.   | Description             | Q ty | Available | Remark |
|---------|-------------|-------------------------|------|-----------|--------|
|         | AD62-00208A | CHAMBER BODY_BK         | 1    | 0         | BLACK  |
| 1       | AD62-00208B | CHAMBER BODY_WT         | 1    | 0         | WHITE  |
|         | AD62-00208C | CHAMBER BODY_RD         | 1    | 0         | RED    |
| 2       | AD61-05821A | PLATE-BATTERY HOLDER    | 1    | 0         |        |
|         | AD63-07177A | COVER SOCKET_BK         | 1    | 0         | BLACK  |
| 3       | AD63-07177B | COVER SOCKET_WT         | 1    | 0         | WHITE  |
| ſ       | AD63-07177C | COVER SOCKET_RD         | 1    | 0         | RED    |
| 4       | AD61-05834A | HOLDER-STRAP            | 1    | 0         |        |
| 5       | AD66-00655B | LEVER-BATTERY LOCK      | 1    | 0         |        |
| 6       | AD61-05213A | SPRING ETC-BATTERY PUSH | 1    | 0         |        |
| 7       | 6107-001678 | SPRING-TS               | 1    | 0         |        |
| 8       | 6044-001137 | RING-E                  | 1    | 0         |        |
|         | AD63-07178A | COVER-BATTERY-BK        | 1    | Х         | BLACK  |
| 9       | AD63-07178B | COVER-BATTERY-WT        | 1    | Х         | WHITE  |
| -       | AD63-07178C | COVER-BATTERY-RD        | 1    | Х         | RED    |
|         | AD63-06580A | COVER-BATTERY LOCK_BK   | 1    | Х         | BLACK  |
| 10      | AD63-06580C | COVER-BATTERY LOCK_WT   | 1    | Х         | WHITE  |
| -       | AD63-06580E | COVER-BATTERY LOCK_RD   | 1    | Х         | RED    |
| 11      | AD61-05818A | PLATE-COVER BATTERY     | 1    | Х         |        |
| 12      | AD61-05245A | SPRING-BATTERY COVER    | 1    | 0         |        |
| 13      | AD61-05863A | HINGE-COVER BATTERY     | 1    | 0         |        |
| 14      | AD63-07388A | SHEET-EMI               | 1    | Х         |        |
|         | AD97-23038A | ASSY COVER-BATTERY_BK   | 1    | 0         | BLACK  |
| 15      | AD97-23038B | ASSY COVER-BATTERY_WT   | 1    | 0         | WHITE  |
| -       | AD97-23038C | ASSY COVER-BATTERY_RD   | 1    | 0         | RED    |
|         | AD97-23037A | ASSY CHAMBER-BK         | 1    | Х         | BLACK  |
| 16      | AD97-23037B | ASSY CHAMBER-WT         | 1    | Х         | WHITE  |
|         | AD97-23037C | ASSY CHAMBER-RD         | 1    | Х         | RED    |

## 9-4 TOP COVER ASSEMBLY



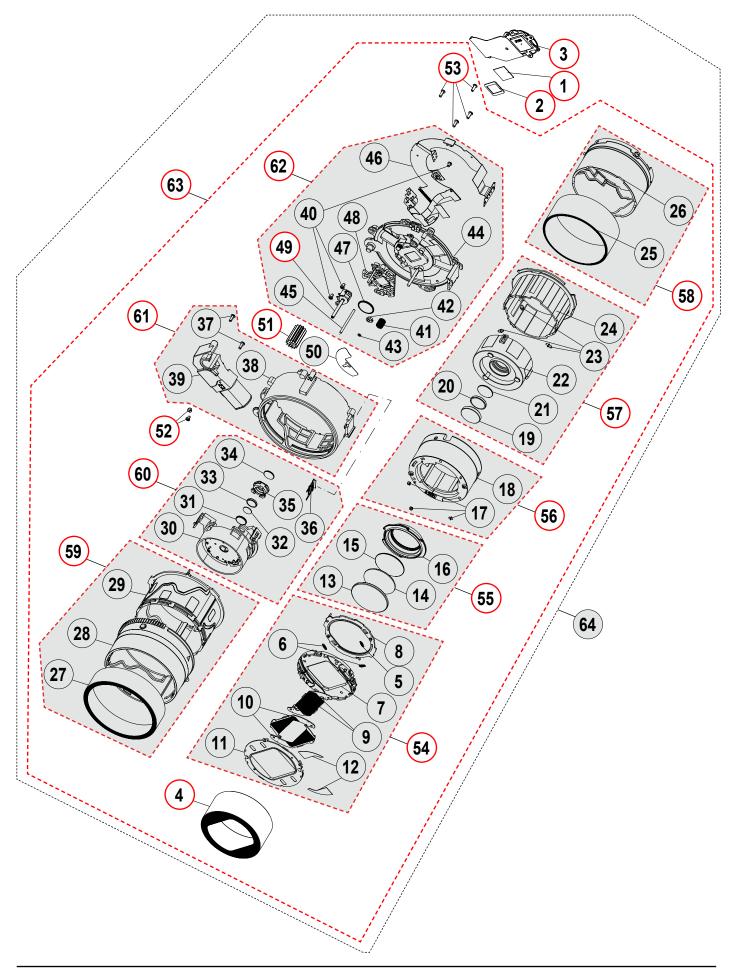
| Loc. No | Parts No.   | Description             | Q ty | Available | Remark          |
|---------|-------------|-------------------------|------|-----------|-----------------|
| 1       | AD97-23164A | ASSY-COVER TOP SUB_BK   | 1    | 0         | BLACK           |
|         | AD97-23165D | ASSY-COVER TOP SUB_BK   | 1    | 0         | WHITE/RED       |
| 2       | AD97-23046E | ASSY-POP UP_BK          | 1    | 0         | BLACK/WHITE/RED |
| 3       | AD92-01992A | ASSY-PCB TOP            | 1    | 0         |                 |
| 4       | AD61-05814A | HOLDER-MIC              | 1    | 0         |                 |
| 5       | 6003-001660 | SCREW-TAPTYPE -TOP      | 3    | 0         |                 |
| 6       | AD42-00023A | WIFI ANTENNA FPCB       | 1    | 0         |                 |
| 7       | AD63-02322A | CUSHION SHIELD FOAM-LCD | 1    | Х         |                 |
| 8       | 3001-002712 | SPEAKER                 | 1    | 0         |                 |
|         | AD97-23165A | ASSY COVER TOP_BK       | 1    | Х         | BLACK           |
| 9       | AD97-23165D | ASSY COVER TOP_WT       | 1    | Х         | WHITE/RED       |
|         | AD97-23165D | ASSY COVER TOP_RD       | 1    | Х         | RED             |

## 9-5 TOP PCB ASSEMBLY



| Loc. No | Parts No.   | Description    | Q ty | Available | Remark |
|---------|-------------|----------------|------|-----------|--------|
| 1       | 2401-004886 | MAIN CONDENSOR | 1    | 0         |        |
| 2       | 3003-001198 | MIC            | 1    | 0         |        |
| 3       | AD67-02581A | RUBBER-MIC     | 1    | 0         |        |
| 4       | AD92-01992A | ASSY PCB TOP   | 1    | 0         |        |

## 9-6 BARREL ASSEMBLY



Exploded view and parts list

| Loc. No | Parts No.   | Description                | Q ty | Available | Remark |
|---------|-------------|----------------------------|------|-----------|--------|
| 1       | AD63-03625A | CUSHION-IR CUT FILTER      | 1    | 0         |        |
| 2       | AD63-05607A | CUSHION-IR_FILTER          | 1    | 0         |        |
| 3       | AD92-02043A | ASSY PCB CCD-WB200F        | 1    | 0         |        |
| 4       | AD64-03846A | DECO RING-ZOOM RING-WB250F | 1    | 0         |        |
| 5       | 6107-002825 | SPRING-ES                  | 1    | Х         |        |
| 6       | 6107-003354 | SPRING-ES                  | 2    | Х         |        |
| 7       | AD63-05493A | BARRIER-BASE               | 1    | Х         |        |
| 8       | AD63-05494A | BARRIER-LEVER              | 1    | Х         |        |
| 9       | AD63-06037A | BARRIER-BLADE A_BL         | 2    | Х         |        |
| 10      | AD63-06038A | BARRIER-BLADE B_BL         | 2    | Х         |        |
| 11      | AD63-06039A | BARRIER-FRONT PANEL_BL     | 1    | Х         |        |
| 12      | AD63-07008A | T/SHEET-BARRIER-WB150      | 2    | Х         |        |
| 13      | AD67-01863A | LENS-G1                    | 1    | Х         |        |
| 14      | AD67-01864A | LENS-G2                    | 1    | Х         |        |
| 15      | AD67-01865A | LENS-G3                    | 1    | X         |        |
| 16      | AD67-01935A | BARREL-1ST LENS            | 1    | Х         |        |
| 17      | AD66-00845A | SHAFT-1ST MOVE             | 3    | Х         |        |
| 18      | AD67-01934A | BARREL-ZOOM RING           | 1    | Х         |        |
| 19      | AD67-01866A | LENS-G4                    | 1    | Х         |        |
| 20      | AD67-01867A | LENS-G5                    | 1    | Х         |        |
| 21      | AD67-01868A | LENS-G6                    | 1    | X         |        |
| 22      | AD67-01936A | BARREL-2ND LENS            | 1    | Х         |        |
| 23      | AD66-00846A | SHAFT-2ND MOVE             | 3    | X         |        |
| 24      | AD67-01933A | BARREL-GUIDE PLATE         | 1    | Х         |        |
| 25      | AD64-03852A | DECO RING-CAM-WB250F       | 1    | X         |        |
| 26      | AD67-01932A | BARREL-CAM                 | 1    | Х         |        |
| 27      | AD64-03853A | DECO RING-OUTER CAM-WB250F | 1    | Х         |        |
| 28      | AD67-01930A | BARREL-OUTER CAM           | 1    | Х         |        |
| 29      | AD67-01931A | BARREL-OUTER GUIDE PLATE   | 1    | Х         |        |
| 30      | AD97-23048A | ASSY SHUTTER-OIS           | 1    | Х         |        |
| 31      | AD67-01872A | LENS ASP LENS-G7           | 1    | Х         |        |
| 32      | AD67-01869A | LENS-G8                    | 1    | Х         |        |
| 33      | AD67-01870A | LENS-G9                    | 1    | Х         |        |
| 34      | AD67-01871A | LENS-G10                   | 1    | Х         |        |
| 35      | AD67-01937A | BARREL-3RD LENS            | 1    | Х         |        |
| 36      | AD61-04466A | HOLDER-FPCB_E14            | 1    | Х         |        |
| 37      | 6003-001659 | SCREW-TAPTYPE              | 2    | Х         |        |
| 38      | AD67-01929A | BARREL-OUTER GUIDE         | 1    | Х         |        |
| 39      | AD97-19970A | ASSY ZOOM                  | 1    | X         |        |
| 40      | 6003-001629 | SCREW-TAPTYPE              | 3    | X         |        |
| 41      | 6107-002826 | SPRING-CS                  | 1    | X         |        |
| 42      | AD61-04909A | CLIP-AF                    | 1    | X         |        |
| 43      | AD61-05239A | CLIP-AF_STOPPER            | 1    | X         |        |

| Loc. No | Parts No.   | Description                      | Q ty | Available | Remark |
|---------|-------------|----------------------------------|------|-----------|--------|
| 44      | AD61-05784A | BASE-LENS-WB200F                 | 1    | Х         |        |
| 45      | AD66-00847A | SHAFT-AF GUIDE BAR               | 1    | Х         |        |
| 46      | AD92-01990A | ASSY PCB LENS MAIN-WB250         | 1    | Х         |        |
| 47      | AD67-01873A | LENS ASP LENS-G11                | 1    | Х         |        |
| 48      | AD67-01938A | BARREL-4TH LENS                  | 1    | Х         |        |
| 49      | AD97-19969A | ASSY MOTOR-AF                    | 1    | 0         |        |
| 50      | AD63-06858A | SHEET-4TH-WB150                  | 1    | Х         |        |
| 51      | AD66-00839A | GEAR-IDLE                        | 1    | 0         |        |
| 52      | 6003-001288 | SCREW-TAPTYPE                    | 2    | 0         |        |
| 53      | 6003-001659 | SCREW-TAPTYPE                    | 4    | 0         |        |
| 54      | AD97-20707A | ASSY SUB BARREL-BARRIER_BL       | 1    | 0         |        |
| 55      | AD97-20070A | ASSY SUB BARREL-1ST LENS         | 1    | 0         |        |
| 56      | AD97-20428A | ASSY SUB BARREL-ZOOM RING        | 1    | 0         |        |
| 57      | AD97-20420A | ASSY SUB BARREL-2ND              | 1    | 0         |        |
| 58      | AD97-23255A | ASSY SUB BARREL-CAM-WB250F       | 1    | 0         |        |
| 59      | AD97-23256A | ASSY SUB BARREL-OUTER CAM-WB250F | 1    | 0         |        |
| 60      | AD97-23114A | ASSY SUB BARREL-3RD-WB250F       | 1    | 0         |        |
| 61      | AD97-20424A | ASSY SUB BARREL-OUTER GUIDE      | 1    | 0         |        |
| 62      | AD97-23168A | ASSY LENS BASE-WB200F            | 1    | 0         |        |
| 63      | AD97-23169A | ASSY BARREL                      | 1    | 0         |        |
| 64      | AD97-23065A | ASSY BARREL CCD                  | 1    | Х         |        |





| Area                         | Web Site                          |
|------------------------------|-----------------------------------|
| Europe, MENA, CIS, Africa    | https://gspn1.samsungcsportal.com |
| E.Asia, W.Asia, China, Japan | https://gspn2.samsungcsportal.com |
| N.America, S.America         | https://gspn3.samsungcsportal.com |

This Service Manual is a property of Samsung Electronics Co.,Ltd. Any unauthorized use of Manual can be punished under applicable International and/or domestic law. © 2012 SAMSUNG Electronics Co.,Ltd All rights reserved. Printed in Korea Code No: WB200F/WB201F/WB202F