

DSC-HX60/HX60V

SERVICE MANUAL

Ver. 1.0 2014.02



Photo: DSC-HX60V

US Model
Canadian Model
AEP Model
UK Model
Russian Model
E Model
Australian Model
Hong Kong Model
Chinese Model
Korea Model
Japanese Model

Note:

Be sure to keep your PC used for service and checking of this unit always updated with the latest version of your anti-virus software. In case a virus affected unit was found during service, contact your Service Headquarters.

注意:

修理時に使用するパソコンは、ウイルス検出ソフトが常にアップデートを行っているパソコンを使用してください。もし、修理を行うセット、もしくはパソコンがウイルスに感染している事が判明した場合は、ソニーグループ内は社内技術相談窓口、特約店様は特約店様専用電話窓口(修理窓口)にご相談ください。

Model information table

Model	DSC-HX60	DSC-HX60V	
Destination	AEP, UK, RU, CH	US, CND, E, KR, J	AEP, UK, E, AUS, HK
Color system	PAL	NTSC	PAL
GPS	-	✓	✓
Wi-Fi	✓	✓	✓
NFC	✓	✓	✓

- Abbreviation
AUS: Australian model
CH : Chinese model
CND: Canadian model
HK : Hong Kong model
J : Japanese model
KR : Korea model
RU : Russian model

DIGITAL STILL CAMERA
SONY®

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer.

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are “pinched” or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, through functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.
6. Flexible Circuit Board Repairing
 - Set the soldering iron tip temperature to 350 °C approximately.
 - Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
 - Be careful not to apply force on the conductor when soldering or unsoldering.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK \triangle OR DOTTED LINE WITH MARK \triangle ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

Caution

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.
Dispose of used batteries according to the instructions.

注意

如果电池更换不当会有爆炸危险。
只能用同样类型或等效类型的电池来更换。
务必按照说明处置用完的电池。

UNLEADED SOLDER

This unit uses unleaded solder.

Boards requiring use of unleaded solder are printed with the lead free mark (LF) indicating the solder contains no lead.

(**Caution:** Some printed circuit boards may not come printed with the lead free mark due to their particular size.)



LEAD FREE MARK

Be careful to the following points to solder or unsolder.

- Set the soldering iron tip temperature to 350 °C approximately.
If cannot control temperature, solder/unsolder at high temperature for a short time.
Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Be sure to control soldering iron tips used for unleaded solder and those for leaded solder so they are managed separately. Mixing unleaded solder and leaded solder will cause detachment phenomenon.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE \triangle SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

サービス、点検時には次のことにご注意ください。

1. 注意事項をお守りください。
サービスのとき特に注意を要する箇所については、キャビネット、シャーシ、部品などにラベルや捺印で注意事項を表示しています。これらの注意書き及び取扱説明書等の注意事項を必ずお守り下さい。
2. 指定部品のご使用を
セットの部品は難燃性や耐電圧など安全上の特性を持ったものとなっています。従って交換部品は、使用されていたものと同じ特性の部品を使用して下さい。特に回路図、部品表に△印で指定されている安全上重要な部品は必ず指定のものをご使用下さい。
3. 部品の取付けや配線の引きまわしはもとどおりに
安全上、チューブやテープなどの絶縁材料を使用したり、プリント基板から浮かして取付けた部品があります。また内部配線は引きまわしやクランプによって発熱部品や高圧部品に接近しないよう配慮されていますので、これらは必ずもとどおりにして下さい。
4. サービス後は安全点検を
サービスのために取外したネジ、部品、配線がもとどおりになっているか、またサービスした個所の周辺を劣化させてしまったところがないかなどを点検し、安全性が確保されていることを確認して下さい。
5. チップ部品交換時の注意
 - ・取外した部品は再使用しないで下さい。
 - ・タンタルコンデンサのマイナス側は熱に弱いため交換時は注意して下さい。
6. フレキシブルプリント基板の取扱いについて
 - ・半田こてのこて先温度は約350℃に設定して下さい。
 - ・同一パターンに何度もコテ先を当てないで下さい。(3回以内)
 - ・パターンに力が加わらないよう注意して下さい。

無鉛半田について

本機には無鉛半田が使用されています。
無鉛半田を使用している基板には、無鉛(Lead Free)を意味するレッドフリーマークがプリントされています。
(注意：基板サイズによっては、無鉛半田を使用しているもレッドフリーマークがプリントされていないものがあります)



：レッドフリーマーク

無鉛半田は、下記の点に注意して使用して下さい。

- ・半田こてのこて先温度は約350℃に設定して下さい。
温度調節が無理な場合は、高温短時間で作業を行ってください。
注意：半田こてを長く当てすぎると、基板のパターン(銅箔)がはがれてしまうことがありますので、注意してください。また、従来の半田よりも粘性が強いため、IC端子などが半田ブリッジしないように注意してください。
- ・半田こてのこて先は、必ず無鉛半田用と有鉛半田用に分けて管理して下さい。
無鉛半田と有鉛半田が混在すると剥離現象が発生してしまいます。

注意

電池の交換は、正しく行わないと破裂する恐れがあります。
電池を交換する場合には必ず同じ型名の電池又は同等品と交換してください。
使用済み電池は、取扱指示に従って処分してください。



Cyber-shot



SPECIFICATIONS

[System]

Image device: 7.82 mm (1/2.3 type)
 Exmor R™ CMOS sensor
 Total pixel number of camera:
 Approx. 21.1 Megapixels
 Effective pixel number of camera:
 Approx. 20.4 Megapixels
 Lens: Sony G 30× zoom lens
 f = 4.3 mm – 129 mm (24 mm – 720 mm (35 mm film equivalent))
 F3.5 (W) – F6.3 (T)
 While shooting movies (16:9):
 26.5 mm – 795 mm*
 While shooting movies (4:3):
 32.5 mm – 975 mm*
 * When [] SteadyShot] is set to [Standard]
 SteadyShot: Optical
 File format:
 Still images: JPEG compliant (DCF, Exif, MPF Baseline), DPOF compatible
 Movies (AVCHD format): AVCHD format Ver. 2.0 compatible
 Video: MPEG-4 AVC/H.264
 Audio: Dolby Digital 2ch, equipped with Dolby Digital Stereo Creator
 • Manufactured under license from Dolby Laboratories.
 Movies (MP4 format):
 Video: MPEG-4 AVC/H.264
 Audio: MPEG-4 AAC-LC 2ch
 Recording media: Memory Stick PRO Duo media, Memory Stick Micro media, SD cards, microSD memory cards
 Flash: Flash range (ISO sensitivity (Recommended Exposure Index) set to Auto):
 Approx. 0.25 m to 5.6 m (0.82 ft. to 18.37 ft.) (W)/
 Approx. 2.0 m to 3.0 m (6.56 ft. to 9.84 ft.) (T)

[Input and Output connectors]

HDMI connector: HDMI micro jack
 Multi/Micro USB Terminal*:
 USB communication
 USB communication: Hi-Speed USB (USB 2.0)
 * Supports Micro USB compatible device.

[Screen]

LCD screen:
 7.5 cm (3.0 type) TFT drive
 Total number of dots:
 921 600 dots

[Power, general]

Power: Rechargeable battery pack
 NP-BX1, 3.6 V
 AC Adaptor AC-UB10C/UB10D, 5 V
 Power consumption (during shooting):
 Approx. 1.2 W
 Operating temperature: 0 °C to 40 °C (32 °F to 104 °F)
 Storage temperature: –20 °C to +60 °C (–4 °F to +140 °F)
 Dimensions (CIPA compliant):
 108.1 mm × 63.6 mm × 38.3 mm (4 3/8 inches × 2 5/8 inches × 1 9/16 inches) (W/H/D)
 Mass (CIPA compliant) (Approx.):
 272 g (9.6 oz) (including NP-BX1 battery pack, Memory Stick PRO Duo media)
 Microphone: Stereo
 Speaker: Monaural
 Exif Print: Compatible
 PRINT Image Matching III:
 Compatible

[Wireless LAN]

Supported standard: IEEE 802.11 b/g/n
 Frequency: 2.4GHz
 Supported security protocols: WEP/WPA-PSK/WPA2-PSK
 Configuration method: WPS (Wi-Fi Protected Setup) / manual
 Access method: Infrastructure Mode
 NFC: NFC Forum Type 3 Tag compliant

AC Adaptor AC-UB10C/UB10D

Power requirements: AC 100 V to 240 V, 50 Hz/60 Hz, 70 mA
 Output voltage: DC 5 V, 0.5 A
 Operating temperature: 0 °C to 40 °C (32 °F to 104 °F)
 Storage temperature: –20 °C to +60 °C (–4 °F to +140 °F)
 Dimensions (Approx.):
 50 mm × 22 mm × 54 mm (2 inches × 7/8 inches × 2 1/4 inches) (W/H/D)

Rechargeable Battery Pack NP-BX1

Battery type: Lithium-ion battery
 Maximum voltage: DC 4.2 V
 Nominal voltage: DC 3.6 V
 Maximum charge voltage: DC 4.2 V
 Maximum charge current: 1.89 A
 Capacity: 4.5 Wh (1 240 mAh)

Design and specifications are subject to change without notice.



Cyber-shot



概略仕様

[システム]

撮像素子：7.82 mm (1/2.3型)
 Exmor R™ CMOSセンサー
 総画素数：約2110万画素
 カメラ有効画素数：約2040万画素
 レンズ：Sony G 30倍ズームレンズ
 f=4.3 mm～129 mm (24 mm～720 mm (35 mmフィルム換算値))、F3.5 (W)～F6.3 (T)
 動画撮影時 (16:9)：26.5 mm～795 mm*
 動画撮影時 (4:3)：32.5 mm～975 mm*
 * [] 手ブレ補正] が [スタンダード] のとき
 手ブレ補正：光学式
 記録方式：
 静止画記録方式：
 JPEG (DCF、Exif、MPF Baseline) 準拠、DPOF対応
 動画記録方式 (AVCHD方式)：
 AVCHD規格 Ver.2.0準拠
 映像：MPEG-4 AVC/H.264
 音声：Dolby Digital 2ch
 ドルビーデジタルステレオクリエイター搭載
 ・ドルビーラボラトリーズからの実施権に基づき製造されています。
 動画記録方式 (MP4方式)：
 映像：MPEG-4 AVC/H.264
 音声：MPEG-4 AAC-LC 2ch
 記録メディア：
 メモリースティック PRO デュオ、メモリースティック マイクロ、SDカード、microSD メモリーカード

フラッシュ：撮影範囲 (ISO感度 (推奨露光指数) がオートのと看)
 約0.25 m～5.6 m (W)/
 約2.0 m～3.0 m (T)

[入出力端子]

HDMI端子：HDMIマイクロ端子
 マルチ/マイクロUSB端子*：USB通信
 USB通信：Hi-Speed USB (USB 2.0)
 * この端子にはマイクロUSB規格に対応した機器をつなぐことができます。

[モニター]

液晶モニター：
 7.5 cm (3.0型)、TFT駆動
 総ドット数：921 600ドット

[電源・その他]

電源：リチャージャブルバッテリーパック
 NP-BX1、3.6 V
 ACアダプター AC-UB10C/UB10D、5 V
 消費電力 (撮影時)：約1.2 W
 動作温度：0 °C～40 °C
 保存温度：–20 °C～+60 °C
 外形寸法 (CIPA準拠) (約)：
 108.1 mm × 63.6 mm × 38.3 mm (幅 × 高さ × 奥行き)
 本体質量 (CIPA準拠) (約)：
 272 g (バッテリー NP-BX1、メモリースティック PRO デュオを含む)

マイクロホン：ステレオ
 スピーカー：モノラル
 Exif Print：対応
 PRINT Image Matching III：対応

[ワイヤレスLAN]

対応規格：IEEE 802.11b/g/n
 使用周波数帯：2.4GHz帯
 セキュリティ：WEP/WPA-PSK/WPA2-PSK
 接続方式：WPS (Wi-Fi Protected Setup) / マニュアル
 アクセス方式：インフラストラクチャーモード
 NFC：NFCフォーラム Type 3 Tag準拠

ACアダプター AC-UB10C/UB10D

定格入力：AC 100 V～240 V、50 Hz/60 Hz、70 mA
 定格出力：DC 5 V、0.5 A
 動作温度：0 °C～40 °C
 保存温度：–20 °C～+60 °C
 外形寸法 (約)：
 50 mm × 22 mm × 54 mm (幅 × 高さ × 奥行き)

リチャージャブルバッテリーパック NP-BX1

使用電池：リチウムイオン電池
 最大電圧：DC 4.2 V
 公称電圧：DC 3.6 V
 容量：4.5 Wh (1 240 mAh)

本機や付属品の仕様および外観は、改良のため予告なく変更することがありますが、ご了承ください。

1. REPAIR PARTS LIST

(ENGLISH)

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
uF: μ F

(JAPANESE)

【使用上の注意】

- ここに記載されている部品は、補修用部品であるため、回路図及びセットに付いている部品と異なる場合があります。
- -XX, -Xは標準化部品のため、セットに付いている部品と異なる場合があります。
- *印の部品は常備在庫しておりません。
- コンデンサの単位でuFは μ Fを示します。

The components identified by mark \triangle or dotted line with mark \triangle are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque \triangle sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

CAUTION

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.
Dispose of used batteries according to the instructions.

注意

如果电池更换不当会有爆炸危险。
只能用同样类型或等效类型的电池来更换。
务必按照说明处置用完的电池。

- Color Indication of Appearance Parts

Example:

(SILVER): Cabinet's Color

(Silver) : Parts Color

\triangle 印の部品、または \triangle 印付の点線で囲まれた部品は、安全性を維持するために、重要な部品です。
従って交換時は、必ず指定の部品を使用してください。

注意

電池の交換は、正しく行わないと破裂する恐れがあります。
電池を交換する場合には必ず同じ型名の電池又は同等品と交換してください。
使用済み電池は、取扱指示に従って処分してください。

- 外装部品色表示

例：

(SILVER)：セットの色を表す。

(Silver)：部品の色を表す。

- Abbreviation

AUS : Australian model

CH : Chinese model

CND : Canadian model

HK : Hong Kong model

J : Japanese model

KR : Korea model

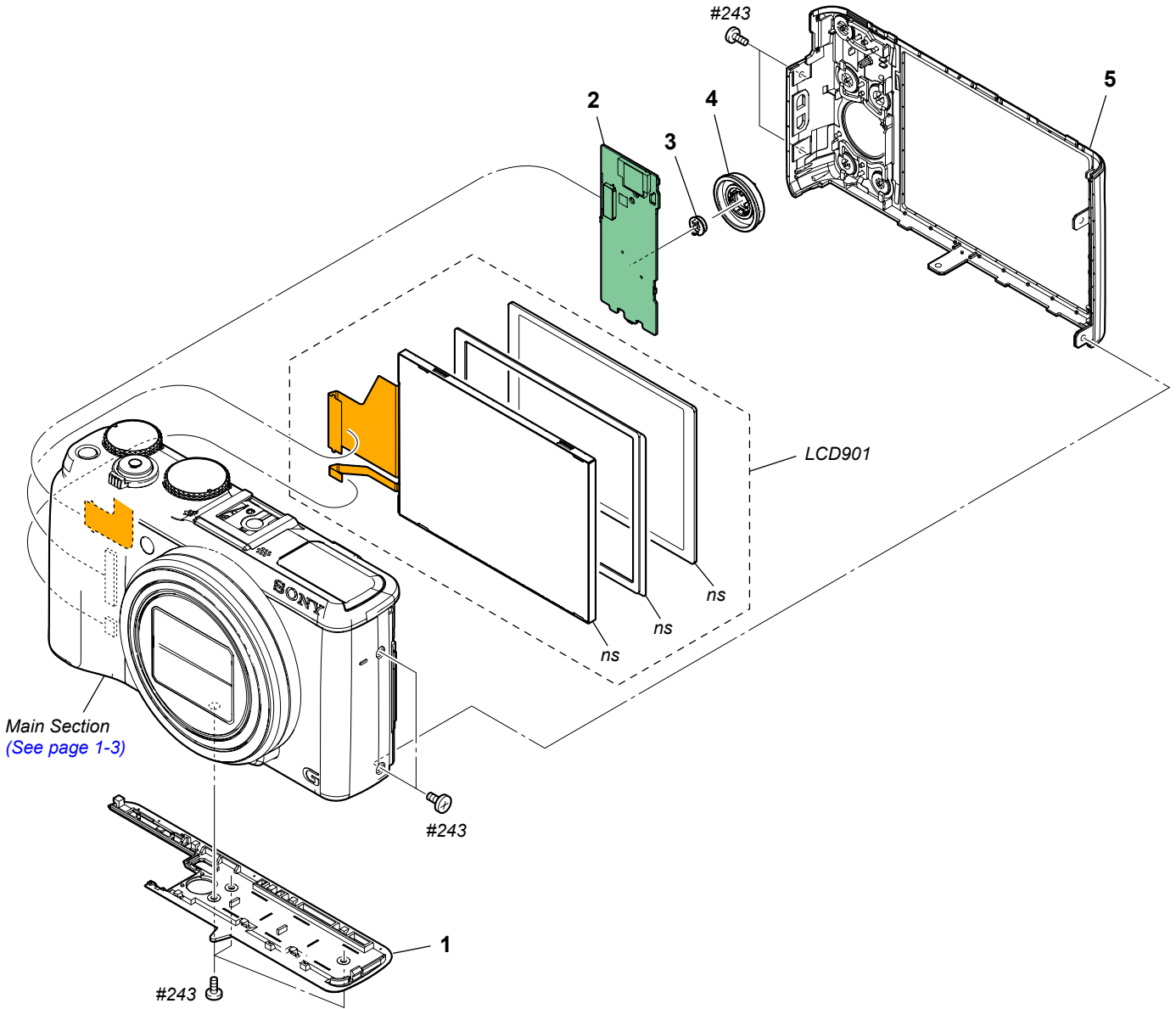
RU : Russian model

TW : Taiwan model

1-1. EXPLODED VIEWS

1-1-1. Rear Section

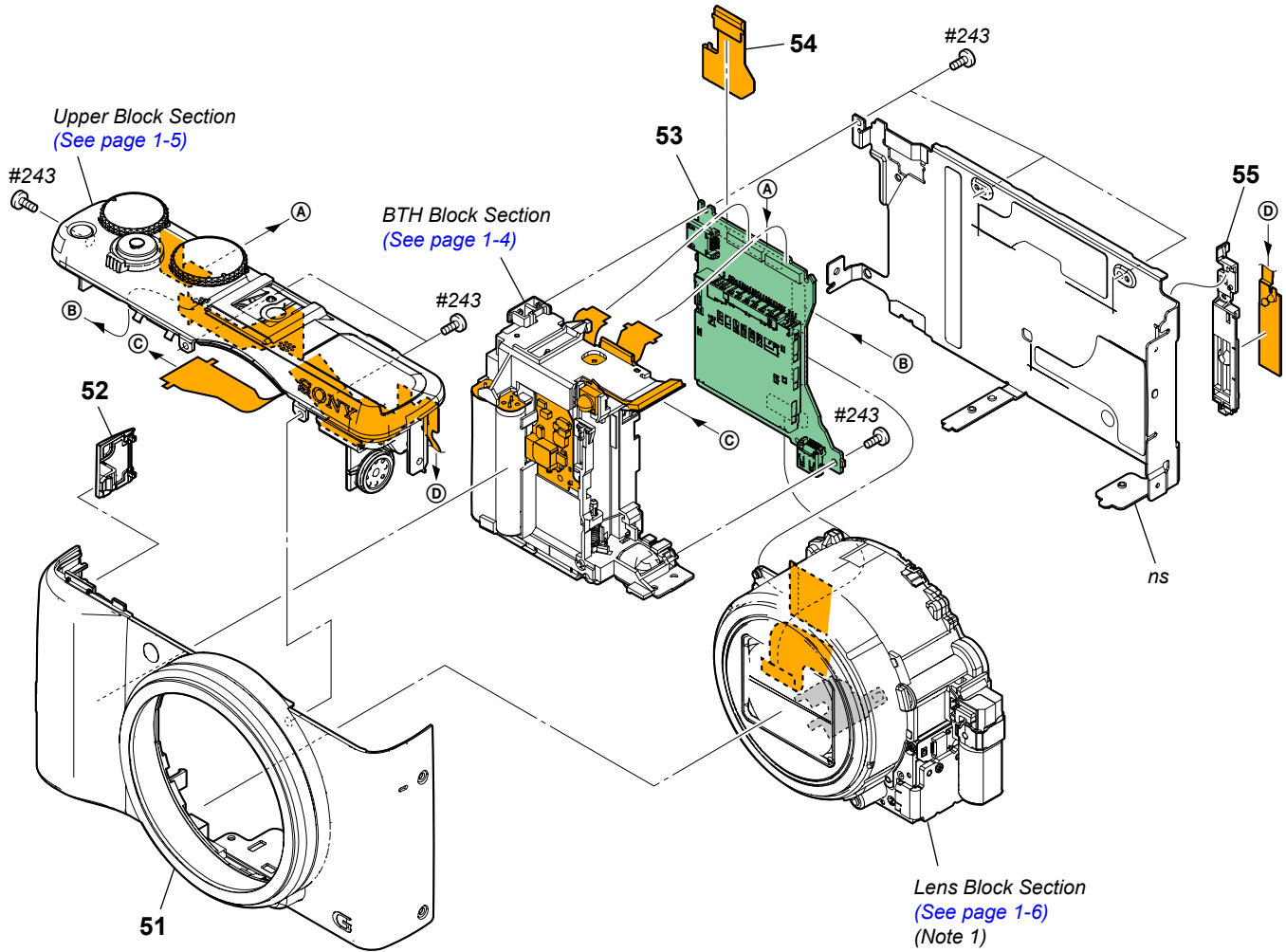
ns : not supplied



Ref. No.	Part No.	Description
1	4-463-246-02	BOTTOM (470), CABINET
2	A-1998-647-A	SW-1006 BOARD, COMPLETE
3	4-463-754-01	BUTTON (CENTER) (470)
4	4-463-753-01	BUTTON (KURUPON) (470)
5	X-2588-510-1	CABINET (REAR) ASSY (970C)
LCD901	A-1955-497-A	SERVICE, PANEL BLOCK ASSY
#243	4-412-769-01	SCREW (M1.4), NEW TRU-STAR, P2

1-1-2. Main Section

ns : not supplied

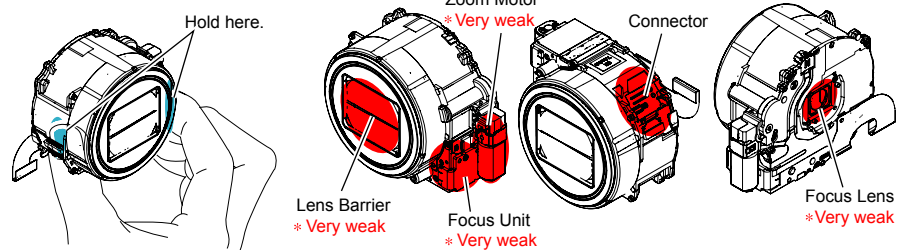


Note 1:

PRECAUTIONS WHEN HOLDING THE LENS BLOCK

Hold the Lens Block at the center of both sides.

Do not hold the following part.

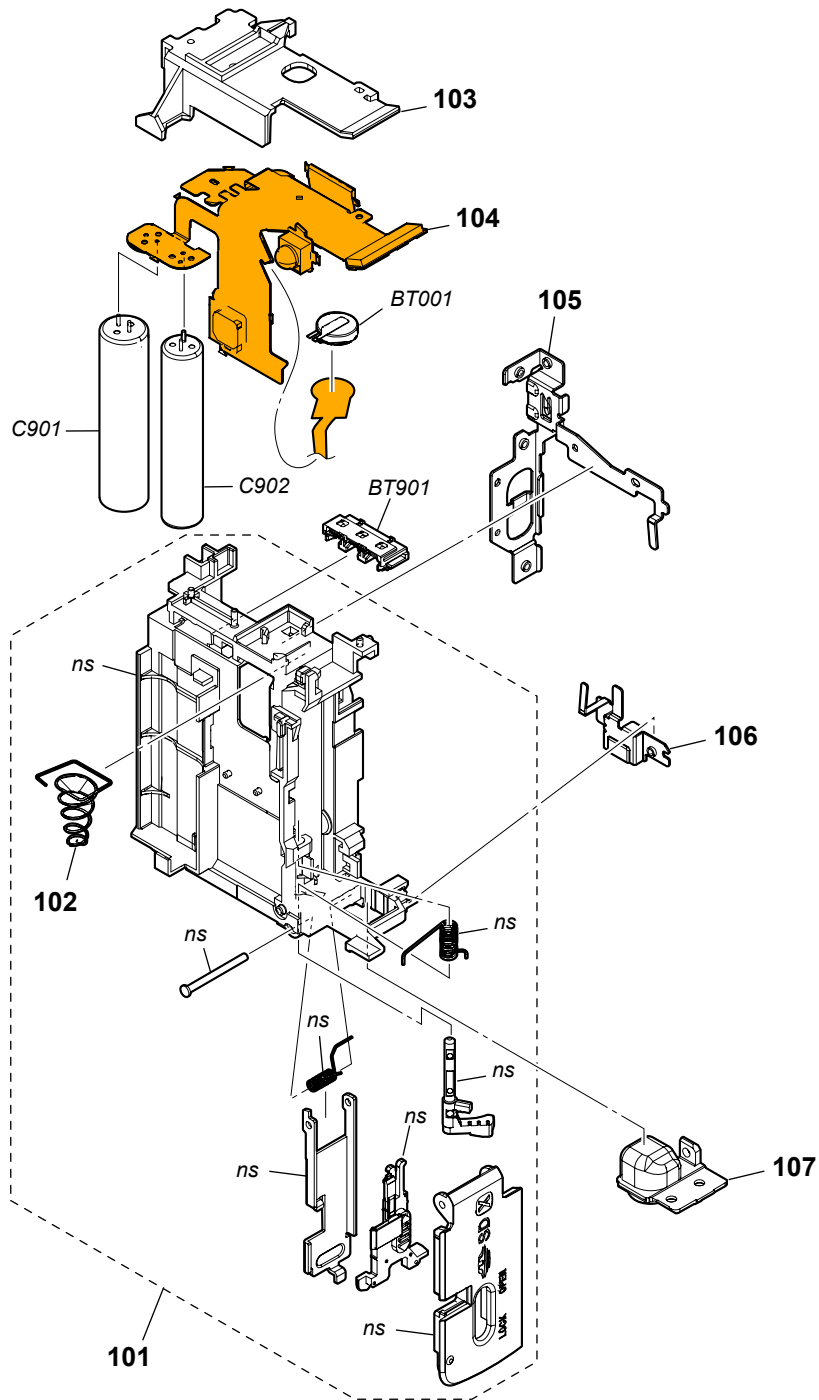


Ref. No.	Part No.	Description
51	A-1977-843-A	FRONT (970C), CABINET (HX60V)
51	A-1977-848-A	FRONT (961C), CABINET (HX60)
52	4-463-247-03	LID (470), MULTI
53	A-1998-721-A	SY-1032 BOARD, COMPLETE (SERVICE)
54	1-893-111-11	SW-1017 FLEXIBLE BOARD

Ref. No.	Part No.	Description
55	4-484-574-01	HOLDER (970), ANTENNA
#243	4-412-769-01	SCREW (M1.4), NEW TRU-STAR, P2

1-1-3. BTH Block Section

ns: not supplied

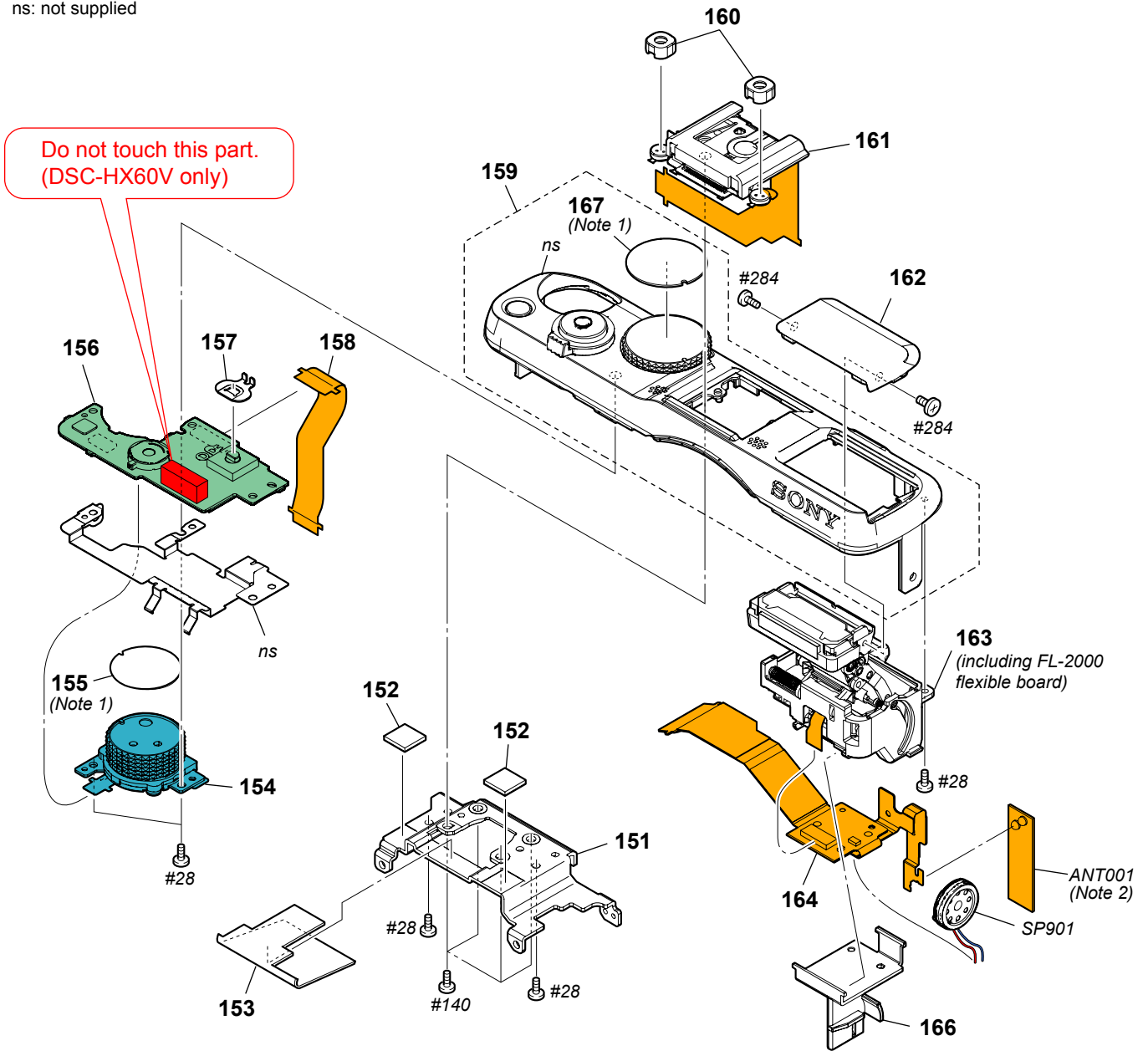


Ref. No.	Part No.	Description
101	X-2588-507-2	BTH ASSY (970C)
102	4-177-693-01	SPRING, BT DISCHARGE
103	4-463-210-01	COVER (470), BT FLEXIBLE
104	A-1998-650-A	BT-2010 FLEXIBLE BOARD, COMPLETE
105	4-463-244-02	PLATE (470), STRAP

Ref. No.	Part No.	Description
* 106	4-463-243-01	PLATE (470), HD
107	4-420-625-01	SCREW, TRIPOD (350)
△ BT001	1-756-710-12	LITHIUM RECHARGEABLE BATTERY
△*BT901	1-780-826-11	TERMINAL BOARD, BATTERY
△ C901	1-118-284-11	CAP, ALUMINIUM ELECT (55µF 330V)
△ C902	1-118-285-11	CAP, ALUMINIUM ELECT (35µF 330V)

1-1-4. Upper Block Section

ns: not supplied



Note 1: Do not reuse the Plate (Mode) (470) and the Plate (EV) (470), because their adhesive force decreases when they are removed once.

Note 2: Be careful not to break the NFC ANTENNA (SERVICE).

Note 1: Plate (Mode) (470) と Plate (EV) (470) は一度剥がすと粘着力が弱くなるため、再利用はしないでください。

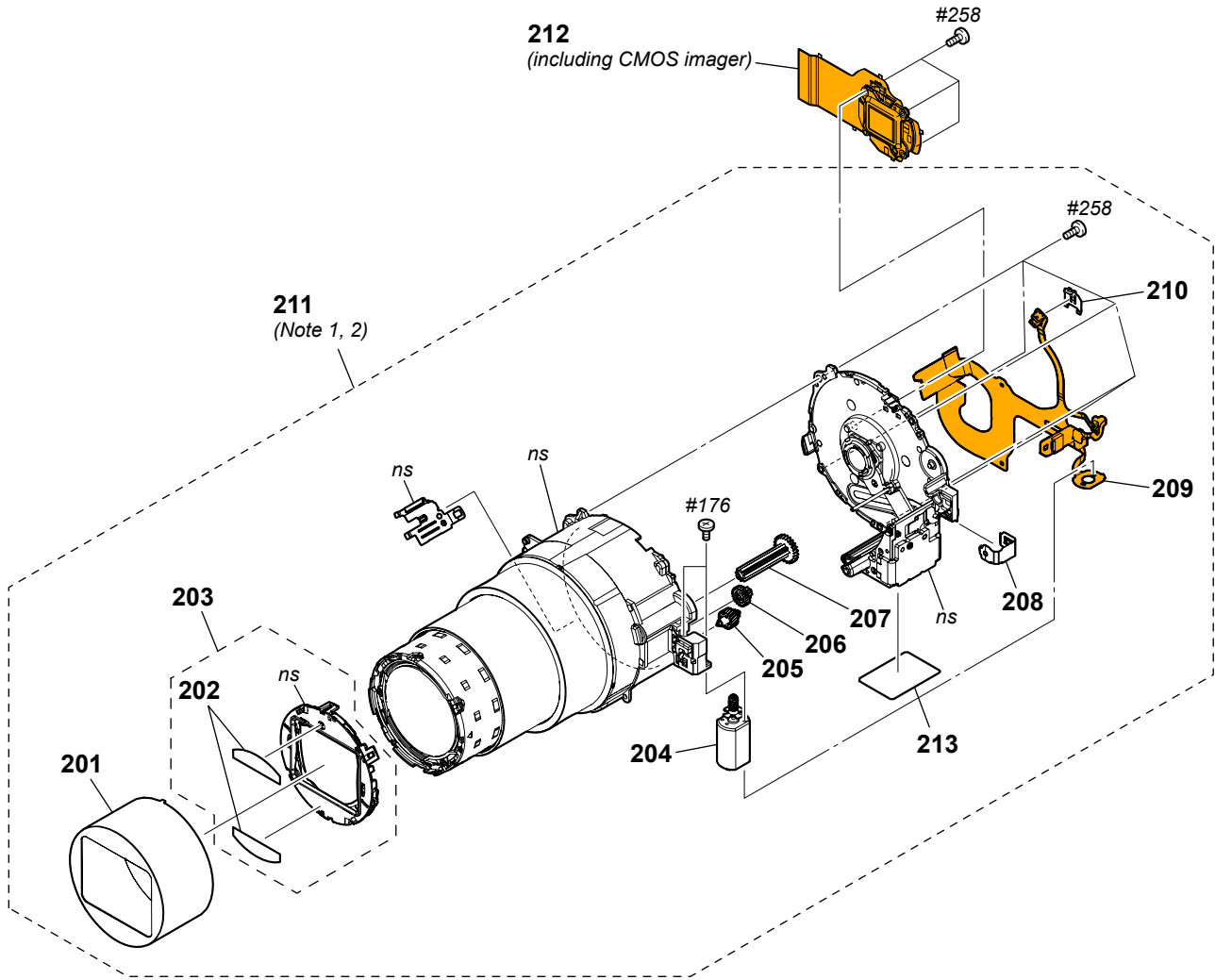
Note 2: NFC ANTENNA (SERVICE)を折らないよう注意してください。

Ref. No.	Part No.	Description
* 151	4-463-225-01	FRAME (470), SHOE
152	4-463-224-01	CUSHION (MIC) (470)
* 153	4-468-424-01	INSULATING SHEET (SH) (470)
154	1-492-451-11	CONTROL SWITCH BLOCK (SW63470)
155	4-468-986-01	PLATE (EV) (470) (Note 1)
156	A-1998-680-A	RL-1011 BOARD, COMPLETE (HX60)
156	A-1998-703-A	RL-1011 BOARD, COMPLETE (SERVICE) (HX60V)
157	4-433-866-01	PLATE (ROTARY BASE) (500)
158	1-887-951-11	RL-1012 FLEXIBLE BOARD
159	A-2037-950-B	SERVICE (970), CABINET UPPER
160	1-845-239-11	MIC HOLDER
161	A-1998-651-A	SH-1006 FLEXIBLE BOARD, COMPLETE

Ref. No.	Part No.	Description
162	4-463-240-21	COVER (470), ST
△ 163	A-1955-498-A	SERVICE (BLACK), ST BLOCK ASSY (including FL-2000 flexible board)
164	A-1998-649-A	ST-1021 FLEXIBLE BOARD, COMPLETE
166	4-463-241-03	HOLDER (470), ST SPEAKER
167	4-468-985-21	PLATE (MODE) (470) (Note 1)
ANT001	A-1975-721-A	ANTENNA (SERVICE), NFC (Note 2)
SP901	1-858-343-71	LOUDSPEAKER (1.0CM)
#28	3-348-998-61	SCREW (M1.4X4), TAPPING, PAN
#140	2-635-562-01	SCREW(M1.7)
#284	4-433-882-21	TAPPING (1.4) (ECOLOGY)

1-1-5. Lens Block Section

ns: not supplied



Note 1:
PRECAUTIONS WHEN HOLDING THE LENS BLOCK

Hold the Lens Block at the center of both sides.

Do not hold the following part.

Zoom Motor
*Very weak

Connector

Lens Barrier
*Very weak

Focus Unit
*Very weak

Focus Lens
*Very weak

Note 2: Refer to “4-4. LENS BLOCK” when you replace parts of Lens Block.

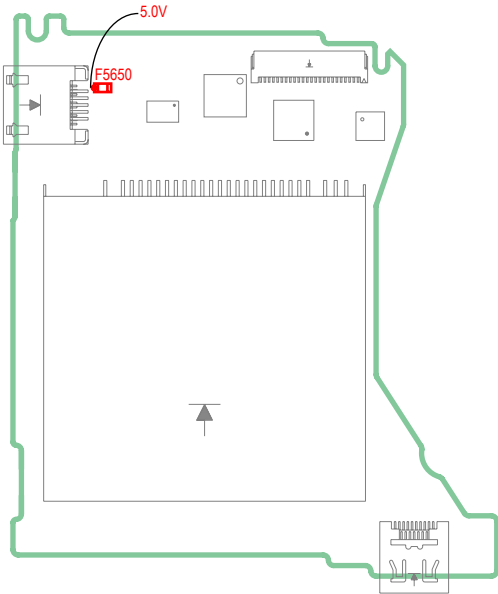
Note 2: レンズブロックの各部品を交換する際は、“4-4. LENS BLOCK”を参照してください。

Ref. No.	Part No.	Description
201	4-451-076-01	RING A, ORNAMENTAL
202	4-451-090-01	BARRIER TAPE
203	A-1940-522-A	BARRIER ASSY (1660A-BK)
204	A-1940-565-A	DC MOTOR WORM ASSY
205	A-1940-535-A	GEAR WH LUBRICATED ASSY
206	A-1940-536-A	GEAR A LUBRICATED ASSY
207	A-1940-537-A	GEAR B LUBRICATED ASSY
208	4-294-347-01	RETAINER, FG

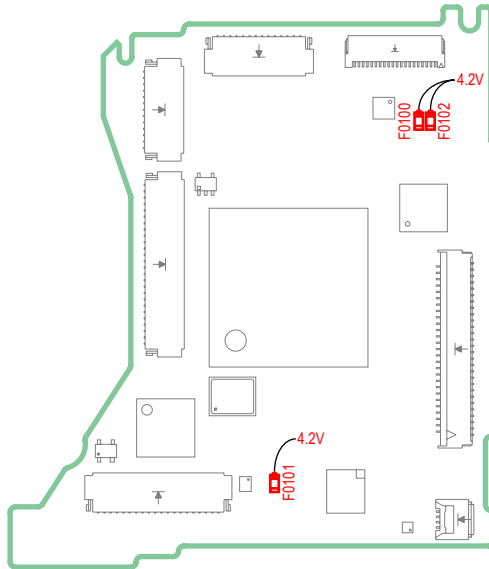
Ref. No.	Part No.	Description
* 209	A-1940-670-A	LF-2038 FLEXIBLE BOARD, COMPLETE
* 210	4-451-074-01	RETAINER, Z
211	8-848-910-01	DEVICE, LENS LSV-1660A-BK (Note 1, 2)
212	A-1940-465-A	CD-1005 FLEXIBLE BOARD, COMPLETE (including CMOS imager)
213	4-476-409-01	PLATE, MR
#176	3-947-504-31	SCREW (M1.2)
#258	4-299-468-11	SCREW, TAPPING UB1.2 (CH)


1-2. FUSE

**SY-1032 BOARD
(SIDE A)**



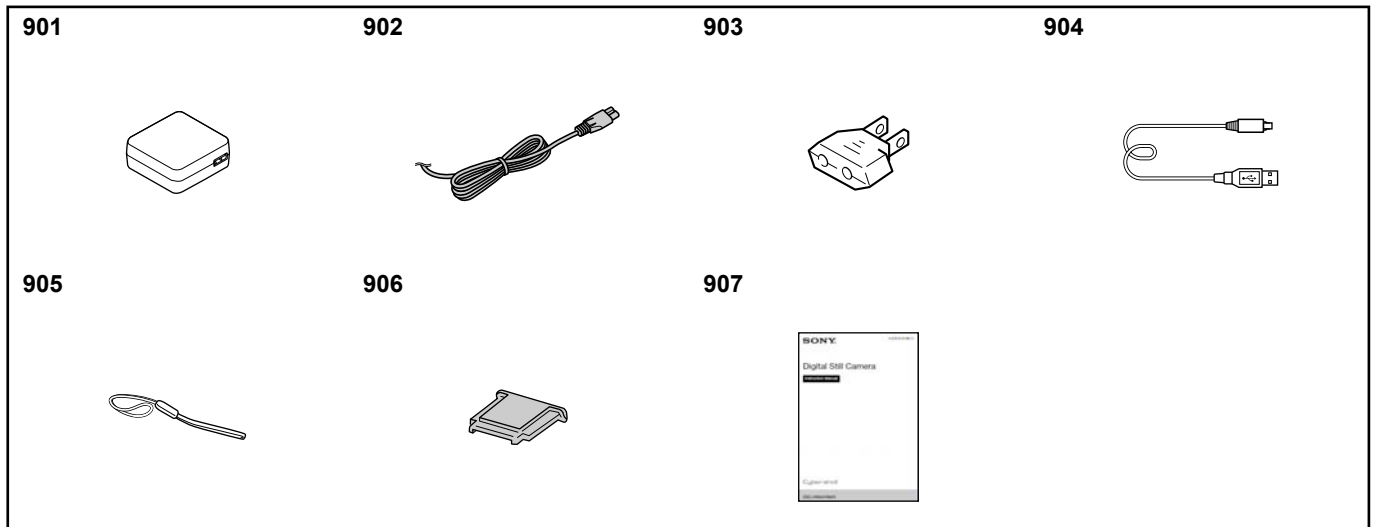
**SY-1032 BOARD
(SIDE B)**




 Primary side

Ref. No.	Part No.	Description
△ F0100	1-576-415-31	FUSE (2A/32V)
△*F0101	1-576-842-31	FUSE (0.63A/32V)
△*F0102	1-576-843-31	FUSE (0.8A/32V)
△ F5650	1-576-415-31	FUSE (2A/32V)

1-3. ACCESSORIES



Ref. No.	Part No.	Description
△ 901	1-490-429-21	AC Adaptor AC-UB10C/UB10D (US, CND)
△ 901	1-490-429-31	AC Adaptor AC-UB10C/UB10D (CH)
△ 901	1-490-429-51	AC Adaptor AC-UB10C/UB10D (J)
△ 901	1-490-429-61	AC Adaptor AC-UB10C/UB10D (EXCEPT CH, US, CND, J)
△ 902	1-837-421-13	Power Cord (mains lead) (UK, E (Saudi), HK)
△ 902	1-837-424-11	Power Cord (mains lead) (TW)
△ 902	1-837-427-11	Power Cord (mains lead) (AEP, RU, E (EXCEPT Saudi))
△ 902	1-837-428-12	Power Cord (mains lead) (KR)
△ 902	1-837-429-11	Power Cord (mains lead) (AUS)
△ 903	1-569-008-12	Conversion (2P) Adaptor (E: NTSC)
904	1-846-615-12	Micro USB Cable
905	4-470-899-11	Wrist Strap
906	4-438-734-02	Shoe Cap
* 907	4-529-917-01	Instruction Manual (JAPANESE)
* 907	4-529-917-11	Instruction Manual (SIMPLIFIED CHINESE)

Ref. No.	Part No.	Description
* 907	4-529-918-11	Instruction Manual (ENGLISH)
* 907	4-529-918-21	Instruction Manual (ENGLISH, SPANISH)
* 907	4-529-918-31	Instruction Manual (ENGLISH, FRENCH)
* 907	4-529-918-41	Instruction Manual (ENGLISH, RUSSIAN, UKRAINIAN)
* 907	4-529-918-51	Instruction Manual (ENGLISH, FRENCH, ITALIAN, SPANISH, PORTUGUESE, GERMAN, DUTCH, POLISH, CZECH, HUNGARIAN, SLOVAK, SWEDISH, FINNISH, NORWEGIAN, DANISH)
* 907	4-529-918-61	Instruction Manual (ENGLISH, TRADITIONAL CHINESE, SIMPLIFIED CHINESE, INDONESIAN, THAI, ARABIC, PERSIAN, TURKISH)
* 907	4-529-918-71	Instruction Manual (ENGLISH, SPANISH, BRAZILIAN PORTUGUESE)
* 907	4-529-918-81	Instruction Manual (ENGLISH, ARABIC, PERSIAN)
* 907	4-529-918-91	Instruction Manual (ENGLISH, TRADITIONAL CHINESE, SIMPLIFIED CHINESE)
* 907	4-529-936-11	Instruction Manual (KOREAN)
* 907	4-529-936-21	Instruction Manual (ENGLISH, TRADITIONAL CHINESE)

Ref. No.	Part No.	Description
△	8-022-359-00	Rechargeable Battery Pack NP-BX1/J (J)
△	8-022-359-31	Rechargeable Battery Pack NP-BX1/UC (US, CND)
△	8-022-359-50	Rechargeable Battery Pack NP-BX1/CE (EXCEPT US, CND, CH, J)
△	8-022-359-71	Rechargeable Battery Pack NP-BX1/CN (CH)

2. TROUBLE SHOOTING

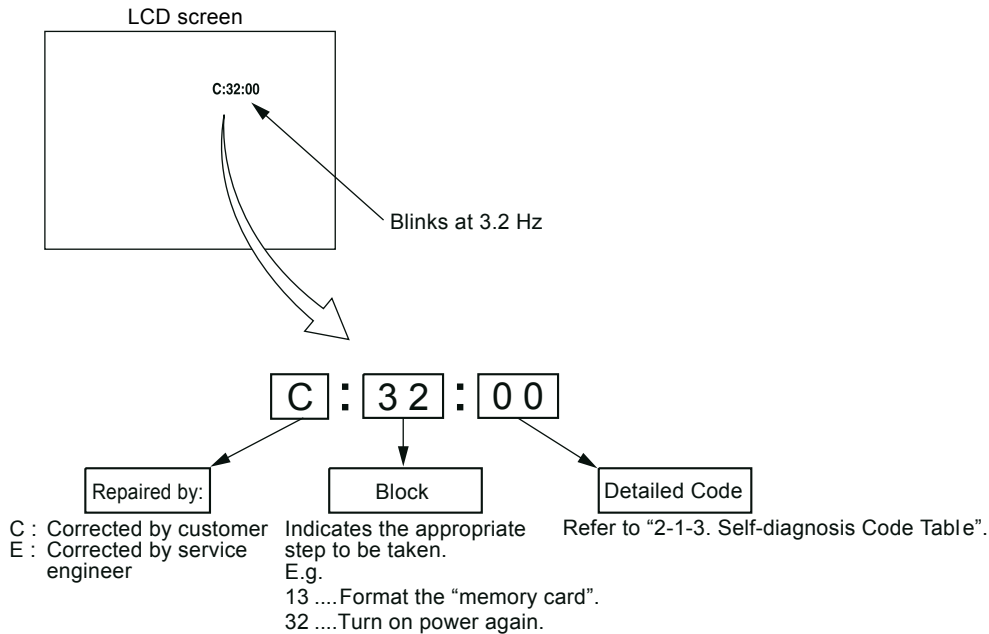
2-1. SELF-DIAGNOSIS FUNCTION

2-1-1. Self-diagnosis Function

When problems occur while the unit is operating, the self-diagnosis function starts working, and displays on the LCD screen what to do. This function consists of two display; self-diagnosis display and service mode display. Details of the self-diagnosis functions are provided in the Instruction manual.

2-1-2. Self-diagnosis Display

When problems occur while the unit is operating, the LCD screen shows a 4-digit display consisting of an alphabet and numbers, which blinks at 3.2 Hz. This 5-character display indicates the “repaired by:”, “block” in which the problem occurred, and “detailed code” of the problem.



2-1-3. Self-diagnosis Code Table

Self-diagnosis Code					Symptom/State	Correction
Repaired by:	Block Function	Detailed Code				
C	1	3	0	1	Memory card is unformatted.	Format the memory card.
					Memory card is broken.	Insert a new memory card.
					Memory card type error	Insert a supported memory card.
					The camera cannot read or write data on the memory card.	Turn the power off and on again, or taking out and inserting the memory card several times.
C	3	2	0	1	Trouble with hardware	Turn the power off and on again.
E	4	1	0	0	Abnormality of wireless LAN module or host CPU.	Replace the SY-1032 board.
E	6	1	0	0	Difficult to adjust focus (Cannot initialize focus)	Retry turn the power on by the power switch.
E	6	1	1	0	Zoom operations fault (Cannot initialize zoom lens.)	Retry turn the power on by the power switch.
E	6	1	3	0	Reset position detection error on the stepper iris initializing.	Turn the power off and on again.
E	6	2	0	2	Abnormality of IC for steadyspot.	Turn the power off and on again.
E	6	2	1	0	Lens initializing failure.	Turn the power off and on again.
E	6	2	1	1	Lens overheating (PITCH).	Turn the power off and on again.
E	6	2	1	2	Lens overheating (YAW).	Turn the power off and on again.
E	6	2	2	0	Abnormality of thermistor.	Turn the power off and on again.
E	9	1	0	1	Abnormality when flash is being charged.	Checking of flash unit or replacement of flash unit. (Note)
E	9	2	0	0	Battery / Dry cell distinction defect	Turn the power off and on again.
E	9	4	0	0	Internal memory fault	Turn the power off and on again.
E	9	5	0	0	GPS hardware error	Turn the power off and on again.
E	9	5	0	1	Acceleration sensor hardware error	Turn the power off and on again.
E	9	5	0	2	Electronic compass hardware error (GPS hardware error)	Turn the power off and on again.

Note: After repair, be sure to perform “3-5. PROCESS AFTER FIXING FLASH ERROR”.

3-1. PRECAUTION ON REPLACING THE SY-1032 BOARD

DESTINATION DATA

When you replace to a board for service, the written destination data of the board for service also might be changed to original setting. Start the Adjust Manual in the Adjust Station and execute the “DESTINATION DATA WRITE”.

RESTORE DATA

When you replace to the repairing board, get the data from the former one. Start the Adjust Manual in the Adjust Station and perform “RESTORE DATA” to get the data. The data getting for this model is as follows.

- PRODUCT ID & USB SERIAL No.
- AWB adj

USB Serial No. and Product ID

The unit is shipped after an ID (USB Serial No.) unique to each unit and an ID (Product ID) unique to each model have been written. These IDs have not been written in a new board for service, and therefore they must be entered after the board replacement. After the board has been replaced with a board for service, start the Adjust Manual in the Adjust Station and execute the “PRODUCT ID & USB SERIAL No. INPUT” and enter these IDs.

Note: A newly entered Product ID is not always equal to the ID before board replacement. If the new ID differs from the previous ID, it may cause a difference from the ID registered by the customer.

Update of MAC Address

When a board that contains Wi-Fi has been replaced or when replacing a board that contains the main IC (CPU), the IC’s unique number (MAC address) must be reloaded.

Perform the following procedure to reload the IC’s unique number (MAC address).

Note: Perform the following operations after all work has been done.

1. Download the latest-version Adjust Manual.
2. Install the downloaded Adjust Manual.
3. Start the Adjust Manual, and execute “Wireless LAN Setting (MAC Address)” on the ADJUST tab.
4. Perform the following operations for the unit to initialize of SSID/PW.

[MENU] → [Wireless] → [SSID/PW Reset] → [OK]

Applicable parts

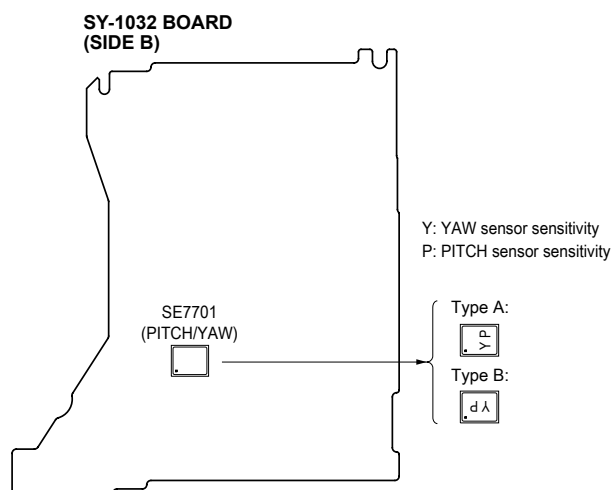
- SW-1006 BOARD, COMPLETE
- SY-1032 BOARD, COMPLETE (SERVICE)

Note: The LOAD AND WRITE function in ADJUSTMENT DATA BACKUP on the DATA tab in the Adjust manual overwrites all data of the unit. Therefore, the MAC address updated during the above procedure is also overwritten.

After the replacement and repair, the MAC address is changed, and thus the re-setting for connection devices is required. Accordingly, download the Flyer of WLAN Reset (Flyer of WLAN Reset_9834752[[]].pdf) and print out it, and attach it to the set when returning the set to customer.

Angular Velocity Sensor

When you replace to the repairing board, write down the sensitivity displayed on the angular velocity sensor (SE7701). Start the Adjust Manual in the Adjust Station and execute the “Angular velocity sensor sensitivity adj”.



Note: The sensor sensitivity of SE7701 of SY-1032 board is written only repair parts.

3-2. NOTES FOR FLEXIBLE BOARD

Make sure that the conductive side of a flexible board does not have any stain or foreign materials.

Do not touch the conductive side of flexible boards with bare hands.

Plug in a flexible board straight, fully into the connector until it reaches the end inside. (Fig. 1, Fig. 2, Fig. 3)

OK
(The flexible board was plugged in straight and completely)

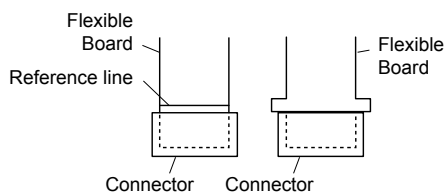


Fig. 1

NG
(The flexible board was plugged in crooked.)

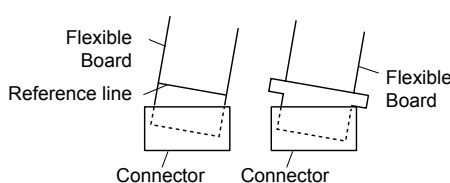


Fig. 2

NG
(The flexible board was not plugged in completely.)

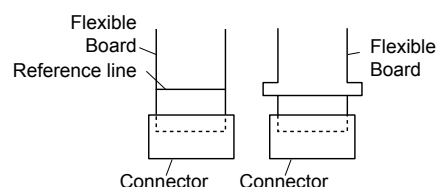
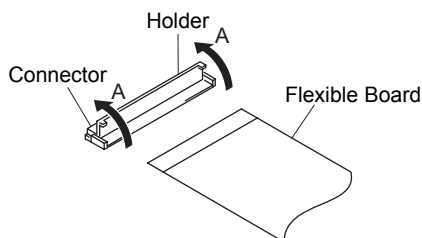
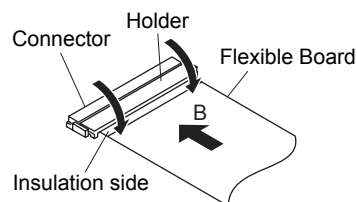


Fig. 3

When opening the connector's holder in direction A, do not open it with excessive force.

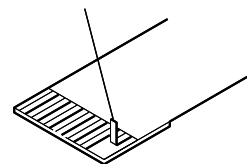


When closing the connector's holder, press it evenly while pushing a flexible board in direction B.



- Make sure that the flat cable and flexible board are not cracked or bent at the contact end.
- Do not apply excessive force to the gilded flexible board.

Cut and remove the part of gilt which comes off at the point.
(Be careful or some pieces of gilt may be left inside)



- The proper way to disconnect a connector is to grab the connector instead of the wires. If you pull on the wires, they might be broken.
- The proper way to connect a connector is to grab the connector instead of the wires. If you push on the wires, they might be broken.

3-3. DISCHARGING OF THE FLASH CAPACITOR

The charging capacitor for the flash has been charged at high voltage.

Therefore, there is a possibility of an electric shock if you directly handle this capacitor.

The high-voltage charge will not be discharged by simply turning off the unit's power.

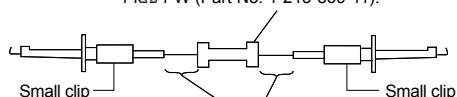
Make sure any remaining voltage is discharged by short-circuiting the flash capacitor with a Short Jig.

Preparing the Short Jig

Make a Short Jig by connecting a small clip to each lead of a resistor with a rated value of approximately 1 kΩ / 1 W.

In order to prevent an electric shock, wrap insulating tape completely around the resistor and its leads.

Resistor with a rated value of approximately 1 kΩ/1 W (Part No. 1-215-869-11).



Wrap insulating tape completely around the resistor and its leads.

3-4. CHECKING THE Wi-Fi FUNCTION

Perform the following procedure to check the Wi-Fi function.

Required equipment: Windows personal computer with Wi-Fi interface

1. Turn on the power of the unit.
2. Press **[▶]** (Playback) to enter playback mode.
3. Select **[MENU]** → **[Wi-Fi]** → [Send to Smartphone] → [Select on This Device] → [This Image].
4. When preparation for Wi-Fi has been completed, the following screen opens and a password for Wi-Fi connection is displayed.



5. Confirm on the personal computer that the unit is detected as a connectable wireless network.
6. To further confirm that the unit is connectable, connect the unit to the personal computer and double-click the “current connection” from the icon displayed on the notice field, make sure that the unit is displayed in the Wireless internet access column.



3-5. PROCESS AFTER FIXING FLASH ERROR

When “FLASH error” (Self-diagnosis Code E : 91 : 01) occurs, to prevent any abnormal situation caused by high voltage, setting of the flash is changed automatically to disabling charge and flash setting.
After fixing, this setting needs to be deactivated.

Method for Initializing the Flash Error Code

Reset Flash Error using the Flash Error Repair Tool Ver_[].[].exe.

3-1. SY-1032基板交換時の注意

仕向けデータ

補修用基板と交換する際、補修用基板に書かれている仕向けデータは元の設定と違う場合があります。Adjust StationからAdjust Manualを起動させて「DESTINATION DATA WRITE」を実行させてください。

リストアデータ

補修用基板と交換する時、交換前の基板よりデータを取得してください。データの取得はAdjust StationからAdjust Manualを起動させて「RESTORE DATA」を実行させてください。本機で取得されるデータは下記になります。

- PRODUCT ID & USB SERIAL No.
- AWB adj

USBシリアルNo.およびプロダクトIDについて

本機はセット固有のID(USBシリアルNo.)と機種固有のID(プロダクトID)を書き込んだ後に出荷されています。新品の補修用基板にはこれらのIDが書き込まれていないため、基板交換後にIDを入力する必要があります。補修用基板に交換した後はAdjust StationからAdjust Manualを起動し、「PRODUCT ID & USB SERIAL No. INPUT」を実行させてIDを入力してください。

Note: 新しくプロダクトIDを入力すると、必ずしも基板交換前のIDと同じIDになるとは限りません。新しいIDと元のIDが違う場合にはお客様がユーザー登録されているIDと相違が出てしまう可能性があります。

MAC アドレスの更新

Wi-Fi 搭載基板を交換した時、またはメイン IC (CPU) が搭載されている基板を交換した場合、IC の固有番号 (MAC アドレス) を取り込み直す必要があります。下記の作業を実施して、IC の固有番号 (MAC アドレス) を取り込み直してください。

Note: 下記の操作は全ての作業を実施した後に行ってください。

1. 最新版のAdjust Manualをダウンロードする。
2. ダウンロードしたAdjust Manualをインストールする。
3. Adjust Manualを起動し、ADJUSTタブにある「Wireless LAN Setting (MAC Address)」を実施する。
4. セット本体を下記のように操作し、SSID・PWリセットを行う。
 → → →

対象となる部品

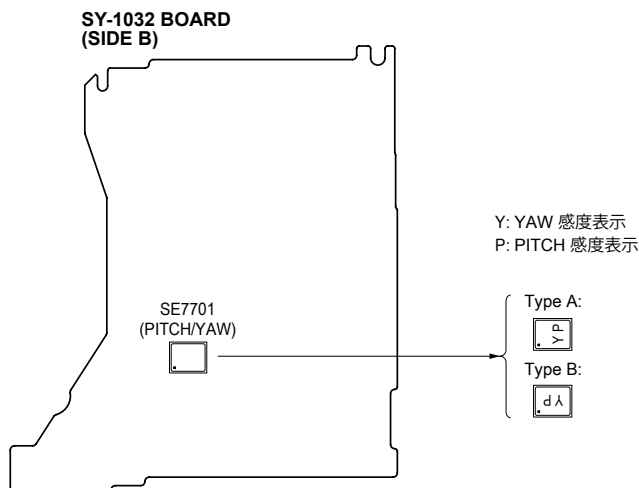
- SW-1006 BOARD, COMPLETE
- SY-1032 BOARD, COMPLETE (SERVICE)

Note: Adjust manual 内の DATA タブにある、ADJUSTMENT DATA BACKUP にある機能、LOAD AND WRITE は、セットの全てのデータを上書きします。そのため、上記の操作で更新した MAC アドレス も上書きされてしまいます。

交換修理後はMACアドレスが変更されていますので、お客様に接続機器の再設定をしていただく必要があります。そのためFlyer of WLAN Reset (Flyer of WLAN Reset_9834752[[[]].pdf)をダウンロードしてプリント出力し、セットに添付して返却してください。

角速度センサ

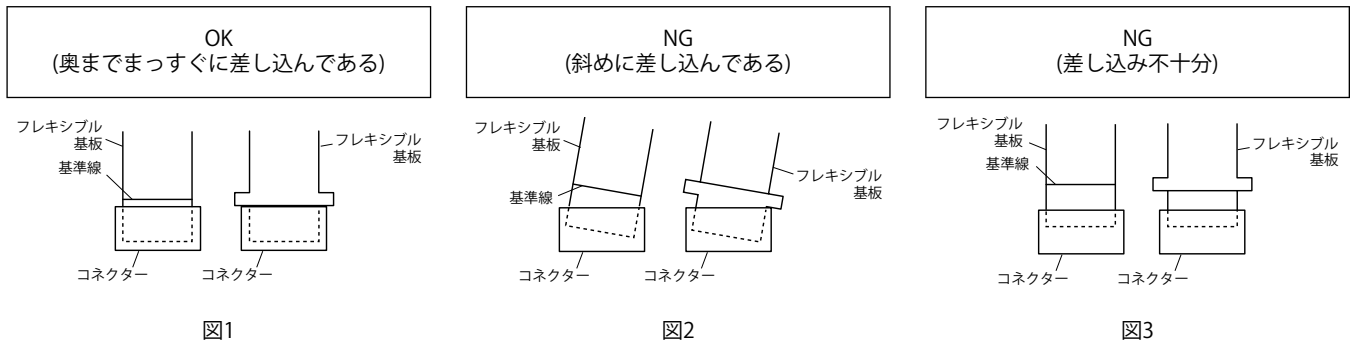
補修用基板と交換する時、角速度センサ(SE7701)の感度表示を書き留めてください。Adjust StationからAdjust Manualを起動させて「Angular velocity sensor sensitivity adj.」を実行させてください。



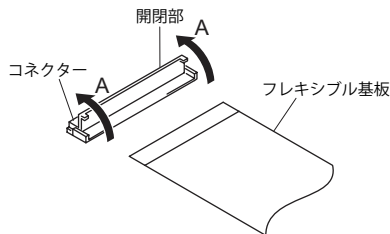
Note : SY-1032基板のSE7701感度表示は補修用基板にしか記載されておりません。

3-2. フレキシブル基板について

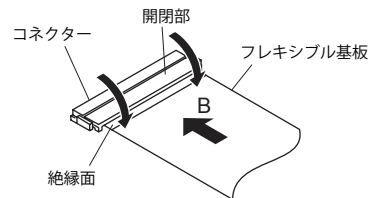
フレキシブル基板の導電面に汚れやごみなどが無いことを確認してください。
 フレキシブル基板の導電面を素手で触れないようにしてください。
 フレキシブル基板は、コネクタの奥までまっすぐに差し込んでください。(図1, 図2, 図3 参照)



コネクタの開閉部を開ける際、A方向に開け過ぎないようにしてください。

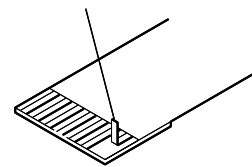


コネクタの開閉部を閉じる際、フレキシブル基板を矢印B方向に押しながら、開閉部を均一に押してください。



- ・フラットケーブルおよびフレキシブル基板の端子面に欠け、折れ等がないことを確認してください。
- ・金メッキされているフレキシブル基板には、強い負担をかけないでください。

先端の剥がれたメッキ部はカットして除去してください。
 (メッキ破片がコネクタ内に残っている場合もあるので注意してください)



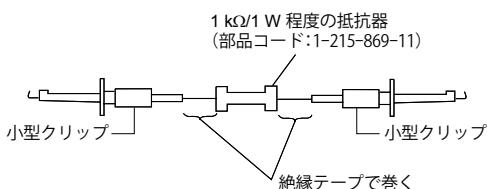
- ・コネクタを取り外す際に、線材部(極細)を持って引っ張ると断線する恐れがありますので、絶対に線材部(極細)を持って引っ張らないでください。
- ・線材部(極細)を押さえながらコネクタを差し込むと、線材部(極細)が断線する恐れがありますので、絶対に線材部(極細)には負担をかけないでください。

3-3. ストロボ用充電コンデンサの放電について

ストロボ用充電コンデンサは非常に高い電圧で充電されています。
 そのため、ストロボ用充電コンデンサに手を触れた場合には、感電する可能性があります。
 この高電圧は、本機の電源を切っただけでは放電されません。
 必ずショート治具をストロボ用充電コンデンサに接続して残留電圧を放電してください。

ショート治具の準備



ショート治具は1 kΩ/1 W程度の抵抗器の両端に小型のクリップを接続して作成します。
 抵抗器は絶縁テープで完全に覆い、感電しないように処理してください。



3-4. Wi-Fi機能の確認

Wi-Fi 機能を確認するときは以下の手順で行ってください。

用意する機器: Wi-Fi接続の可能なWindowsパソコン

1. 本機の電源を入れる。
2. 本機の  を押して、再生モードにする。
3. **[MENU]** →  → [スマートフォン転送] → [カメラから選ぶ] → [この画像]を選ぶ。
4. Wi-Fi準備が完了すると以下の画面に切り替わり、Wi-Fi接続のためのパスワードが表示される。



5. パソコン側で接続可能なワイヤレスネットワークとして、本機が検出されることを確認する。
6. さらに接続可能なことを確認したい場合には本機とパソコンを接続後、通知領域に表示されているアイコンから「現在の接続先」をダブルクリックし、ワイヤレスインターネットアクセスの欄に本機が表示される事を確認する。



3-5. フラッシュエラー発生時の対処法

本機はフラッシュエラー（自己診断コードE:91:01）が発生した場合、高電圧による異常を防止するために自動的にフラッシュ充電および発光禁止の設定になります。
フラッシュエラー発生後はエラーの解除を行う必要があります。

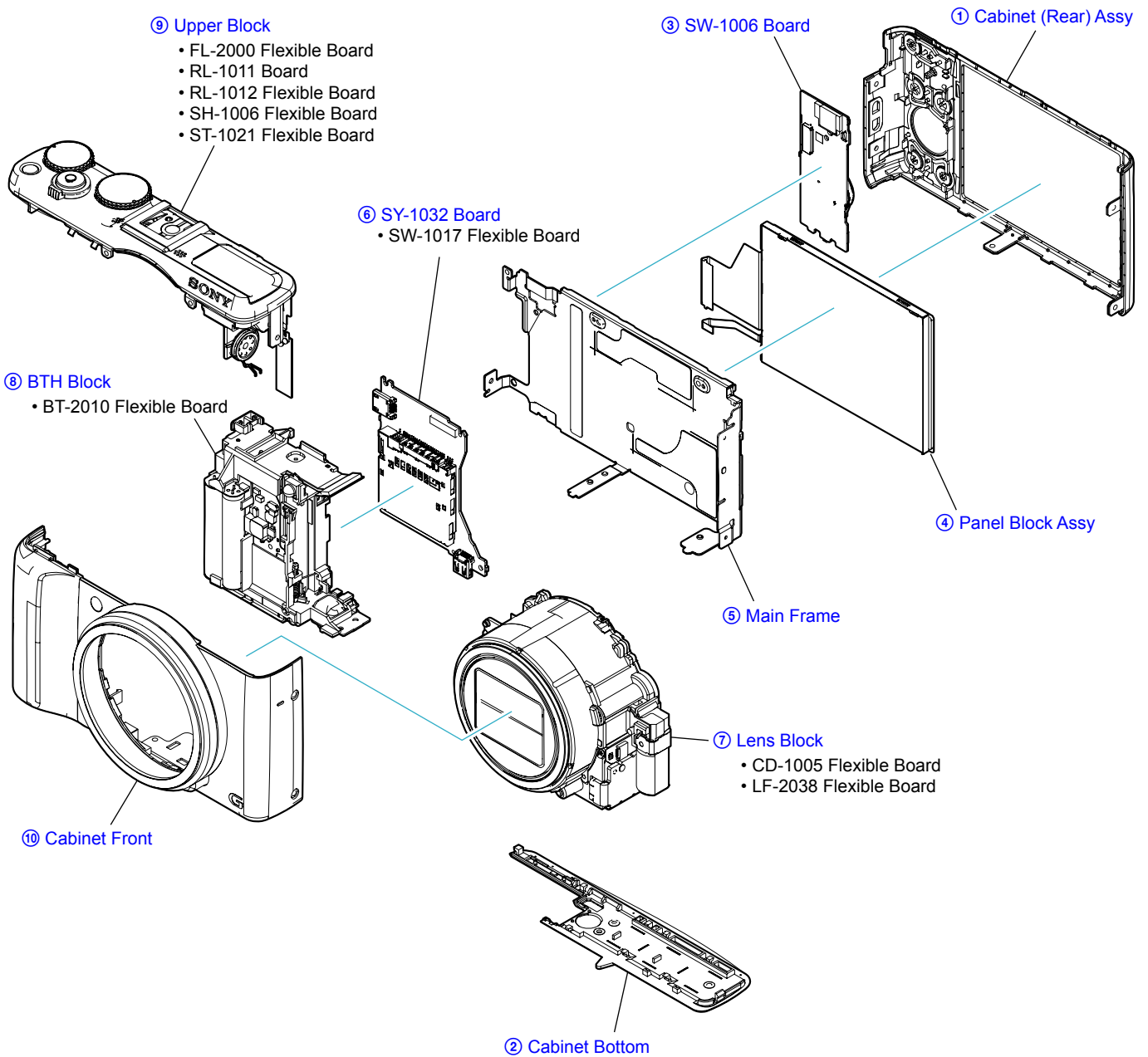
フラッシュエラーの解除方法

Flash Error Repair Tool Ver_[.].exe を使用して Flash Error を解除してください。

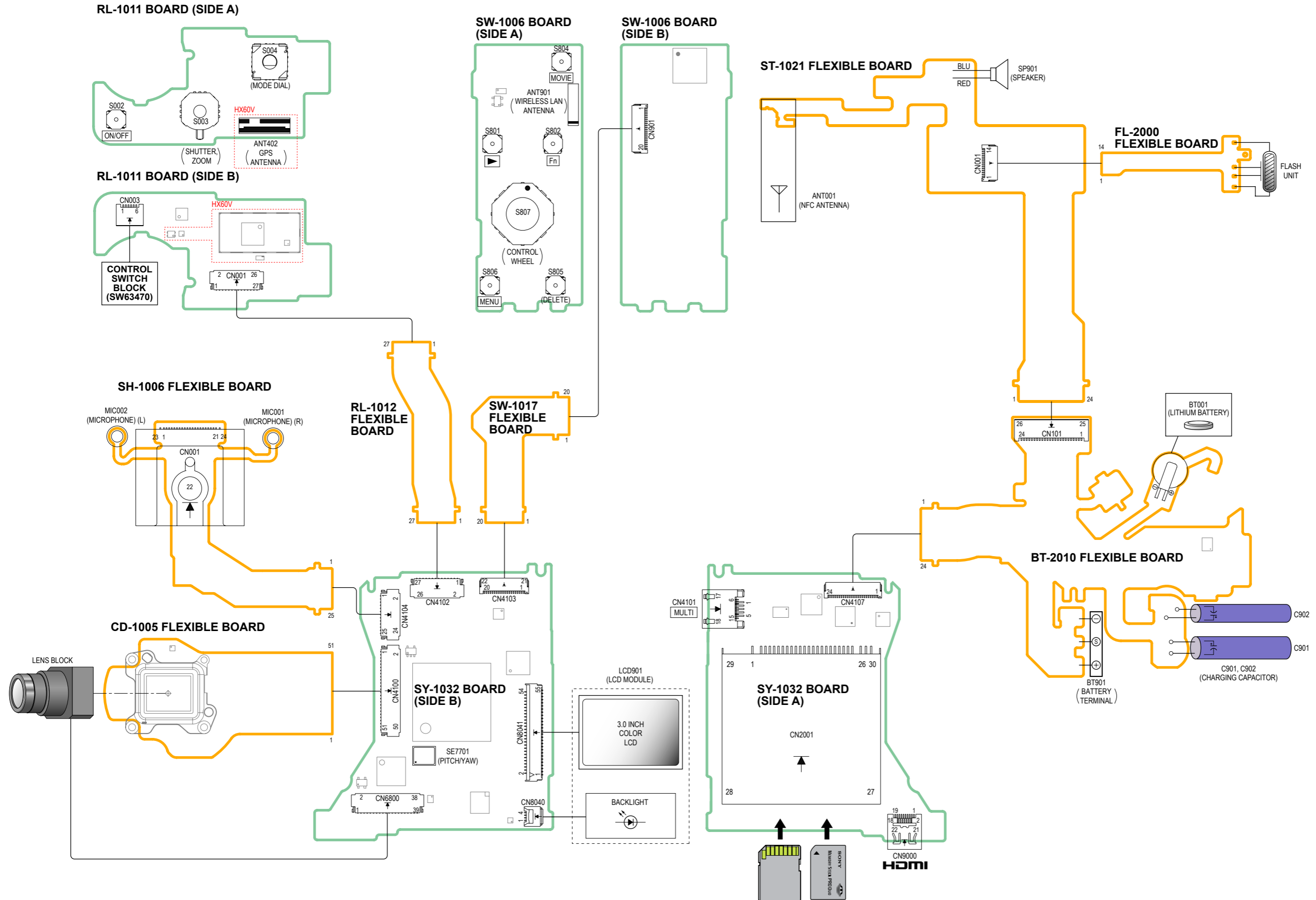
4. DISASSEMBLY & ASSEMBLY

4-1. IDENTIFYING PARTS

Follow the disassembly in the numerical order given.



4-2. FRAME SCHEMATIC DIAGRAMS

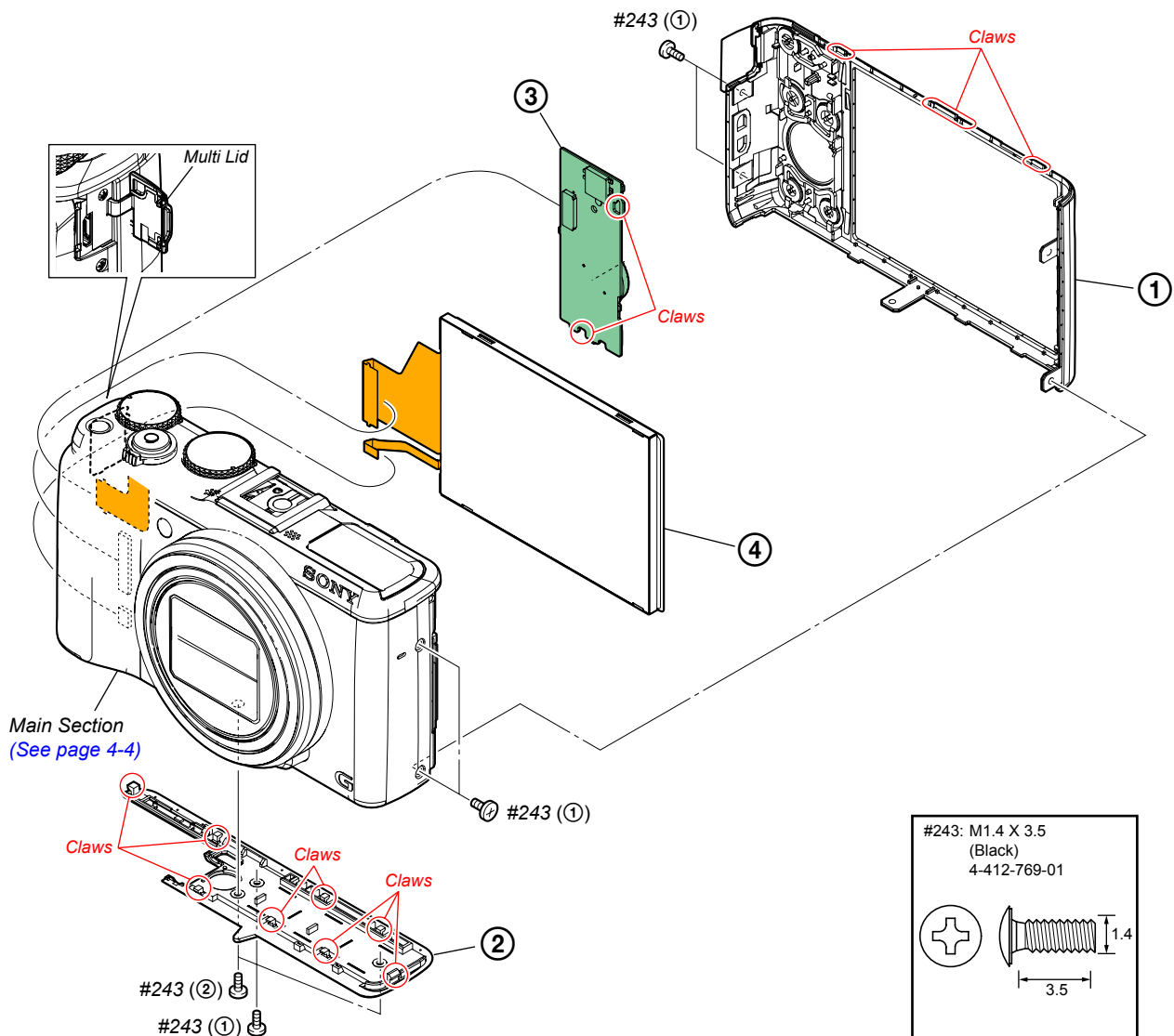


4-3. MAIN BLOCK

4-3-1. Rear Section

- Disassembly order

No.	Part	Item	Note
①	Cabinet (Rear) Assy	#243 x 5 Claw x 3	Open the Multi Lid.
②	Cabinet Bottom	#243 x 2 Claw x 8	
③	SW-1006 Board	Claw x 2 Connector x 1	Refer to “Notes on Assembling the Button (Center) and the Button (KURUPON)” when assembling. (page 4-6)
④	Panel Block Assy	Connector x 2	Refer to “Notes on Assembling the LCD unit” when assembling. (page 4-6)



4-3-2. Main Section

Disassembly order

No.	Part	Item	Note
①	Main Frame	#243 x 3	Remove the Antenna Holder. (Claw x 2)
②	SY-1032 Board, SW-1017 Flexible Board	#243 x 1 Connector x 6	Refer to “Notes on Assembling the SY-1032 Board” when assembling. (page 4-6)
③	Lens Block Section		
④	Charging Capacitor		Discharging of the Charging Capacitor.
⑤	BTH Block Section	#243 x 1 Connector x 1	
⑥	Upper Block Section	#243 x 2	Refer to “Notes on Assembling the Upper Block” when assembling. (page 4-7)
⑦	Multi Lid		
⑧	Cabinet Front		

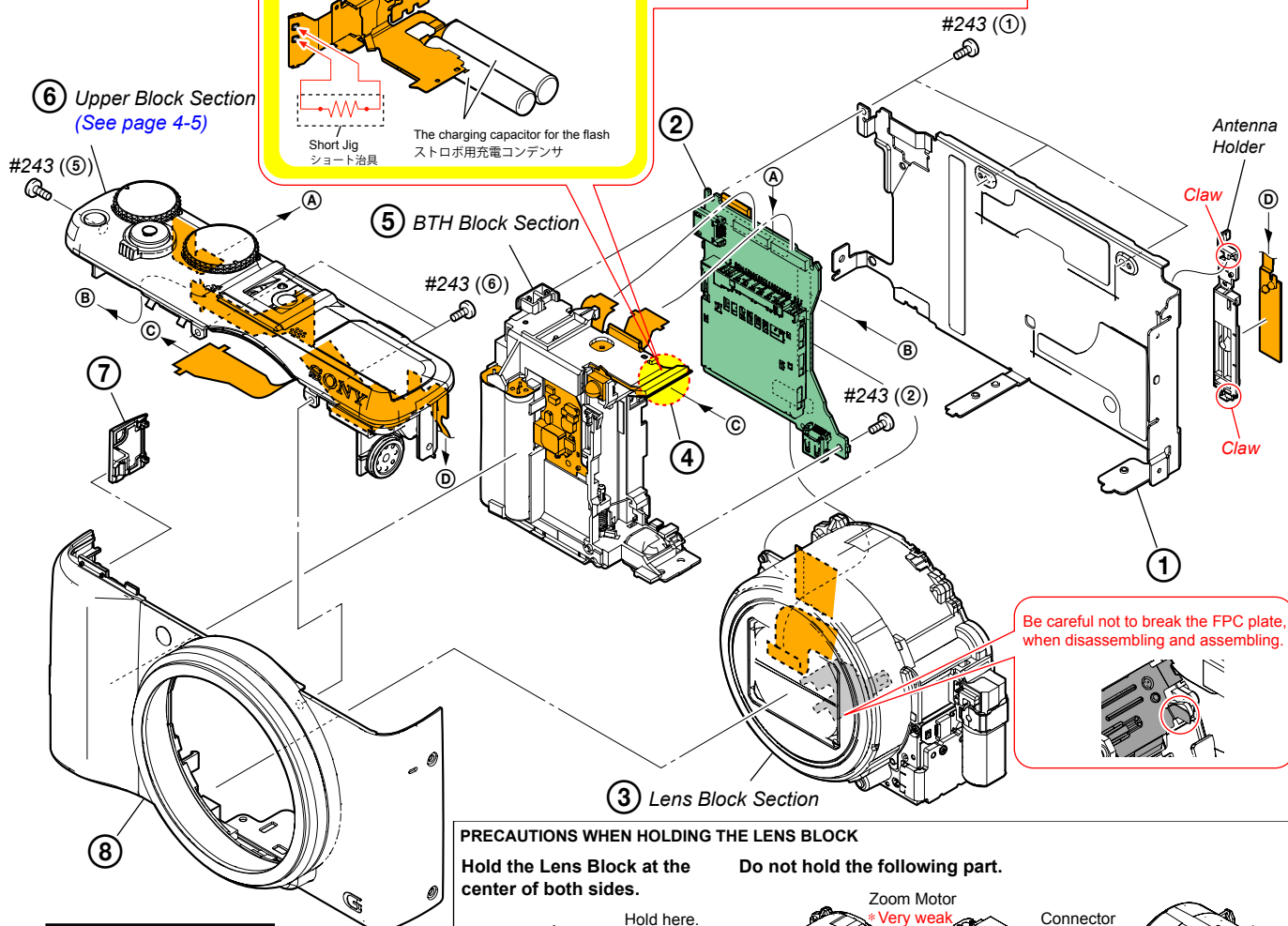
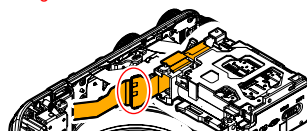
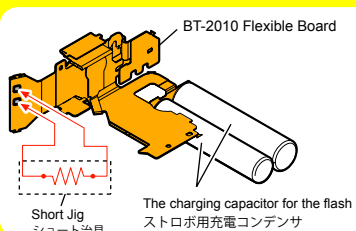
Note: 高電圧の警告

ストロボ用充電コンデンサの端子間にショート治具を接続し、約10秒間、放電を行ってください。ショート治具についてはサービスノートを参照してください。

Note: Warning of high voltage

Short-circuit the terminals of the flash capacitor with a Short Jig for approximately 10 seconds. Refer to the Service Note for a Short Jig.

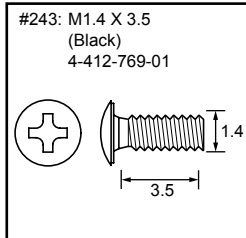
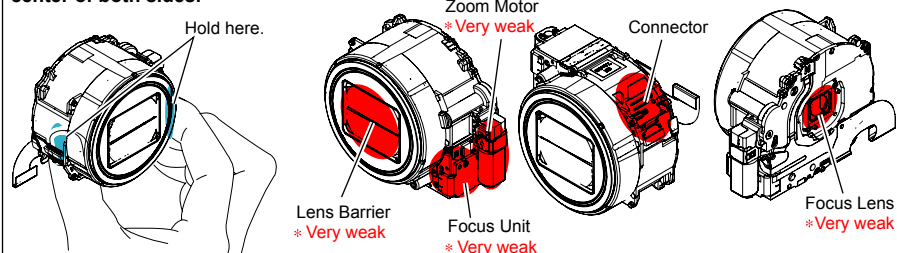
Be sure disconnect this connector, after removing the BTH Block from the main unit.



PRECAUTIONS WHEN HOLDING THE LENS BLOCK

Hold the Lens Block at the center of both sides.

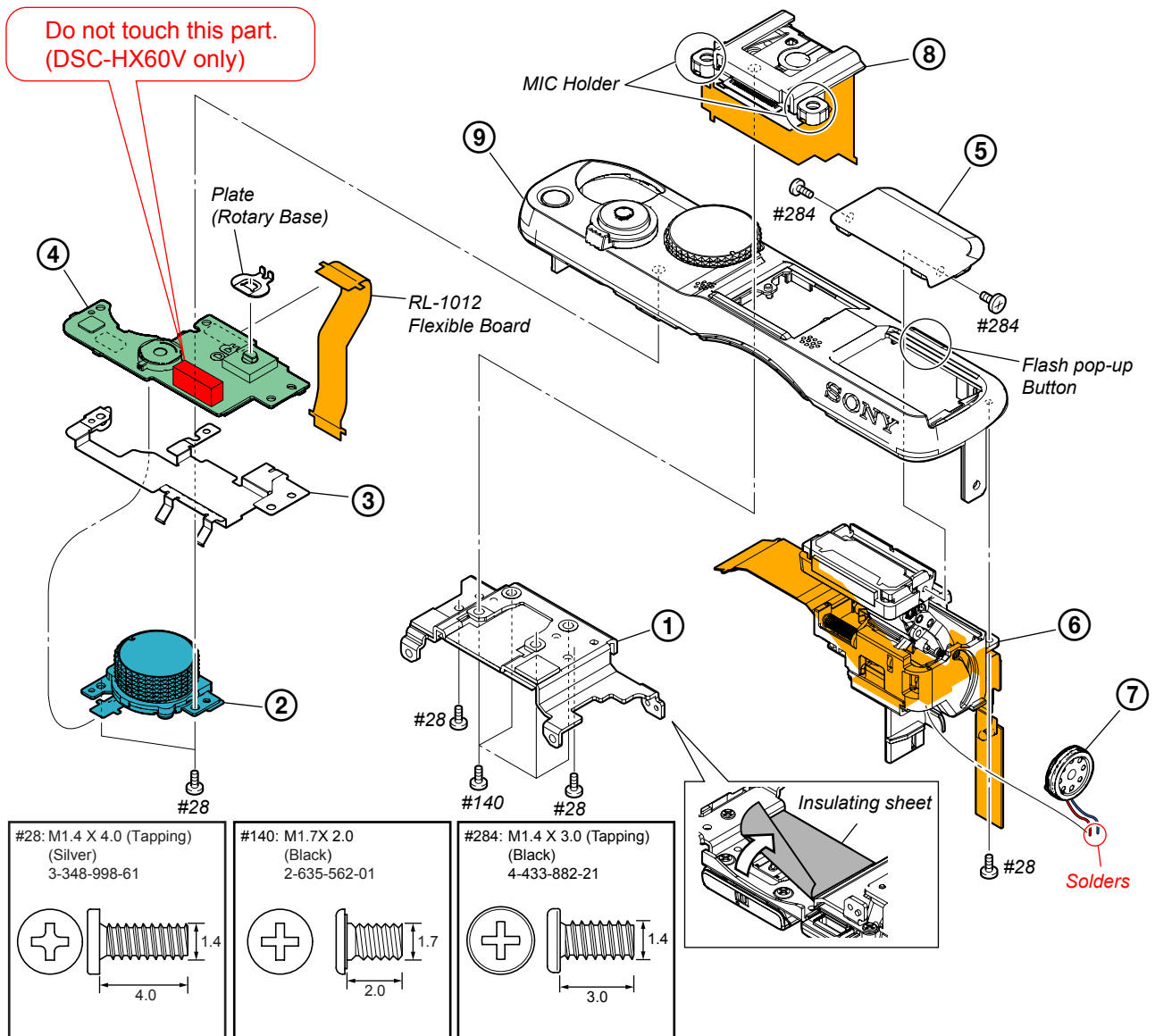
Do not hold the following part.



4-3-3. Upper Block Section

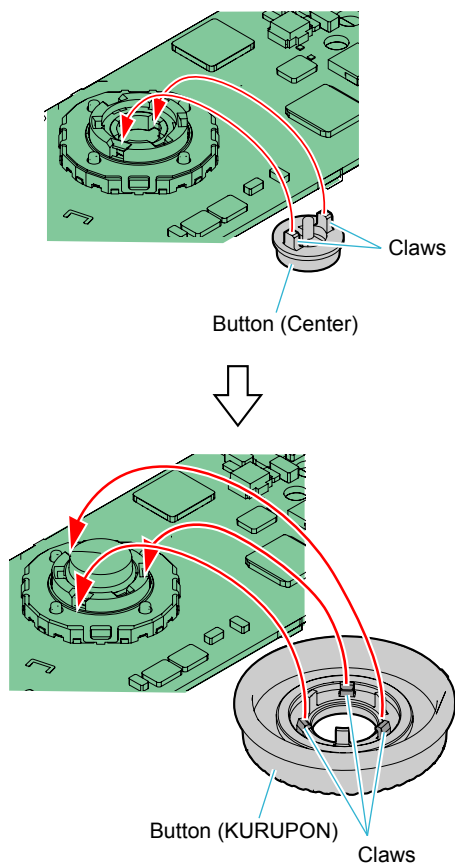
• Disassembly order

No.	Part	Item	Note
①	Shoe Frame	#28 x 2 #140 x 4	Peel the Insulating sheet.
②	Control Switch Block	#28 x 2 Connector x 1	
③	GPS Plate		
④	RL-1011 Board Plate (Rotary Base) RL-1012 Flexible Board		Refer to “Notes on Assembling the RL -1011 Board” when assembling. (Page 4-6)
⑤	ST Cover	#284 x 2	Push the Flash pop-up button.
⑥	ST Block Assy	#28 x 1	
⑦	Loudspeaker (1.0cm)	Solder x 2	
⑧	SH-1006 Board		Remove the Mic Holder from the Cabinet Upper, then remove the SH-1006 board.
⑨	Cabinet Upper		



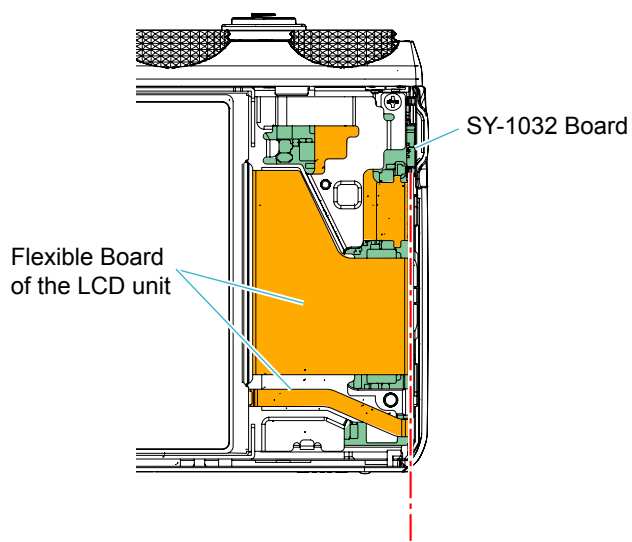
4-3-4. Complementary Information

(1) Notes on Assembling the Button (Center) and the Button (KURUPON)



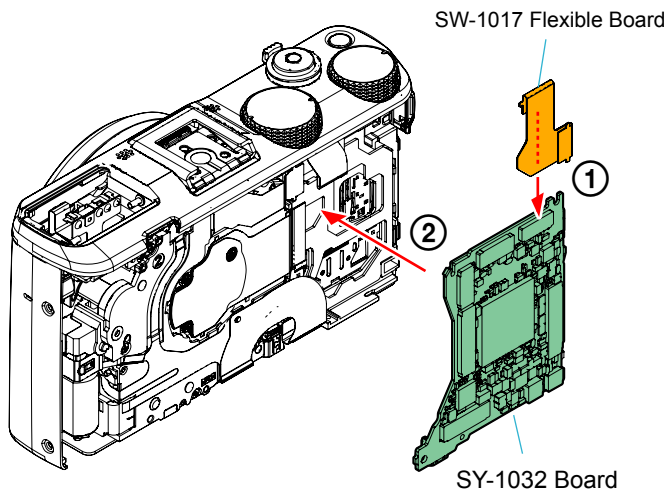
(2) Notes on Assembling the LCD unit

After the LCD unit has been installed, make sure that the Flexible Board of the LCD unit is arranged within the SY-1032 Board area.

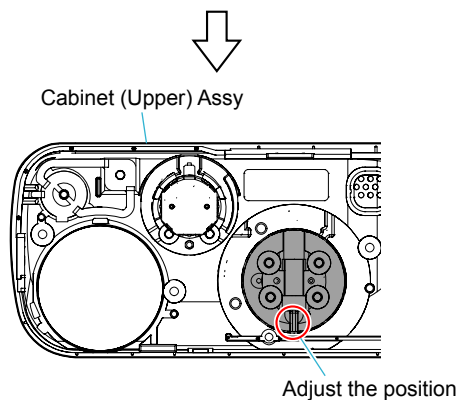
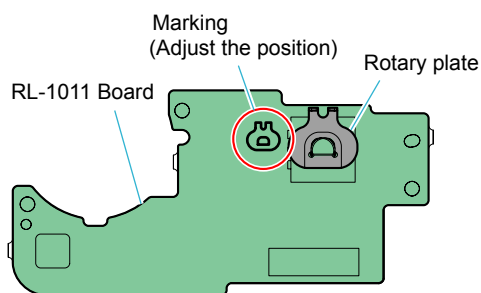


(3) Notes on Assembling the SY-1032 Board

Be sure install the SY-1032 Board to main unit, after install the SW-1017 Flexible Board to the SY-1032 Board.

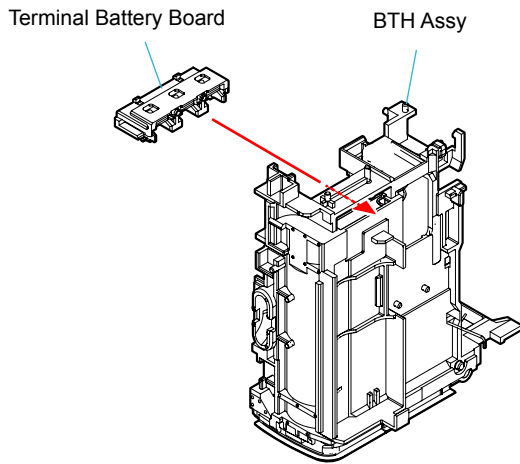


(4) Notes on Assembling the RL-1011 Board

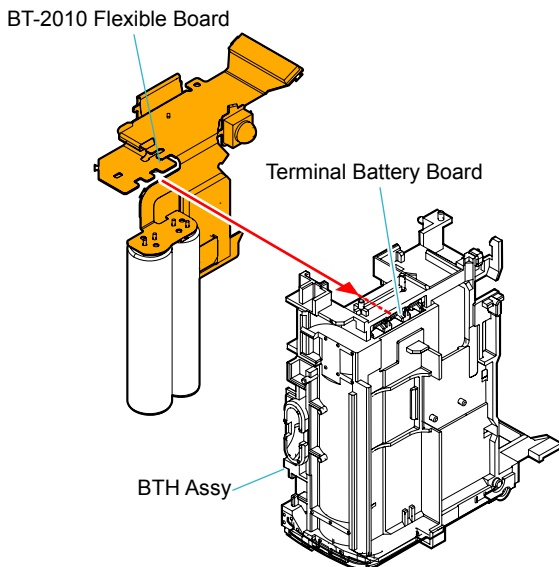


(5) The Method of attachment of the BT-2010 Flexible Board

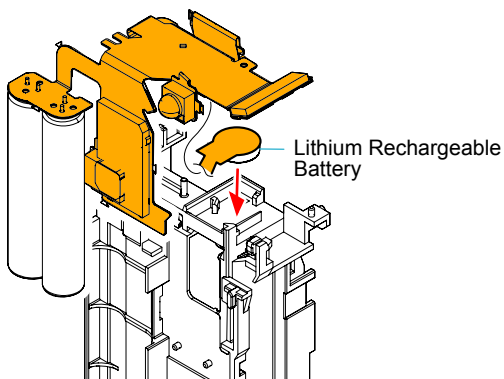
(1) Install the Terminal Battery Board to the BTH Assy.



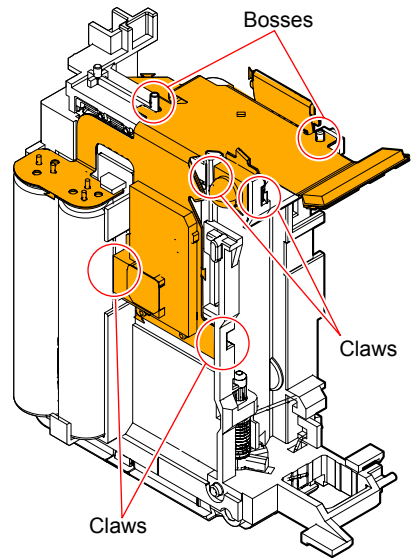
(2) Connect the BT-2010 Flexible Board to the Terminal Battery Board.



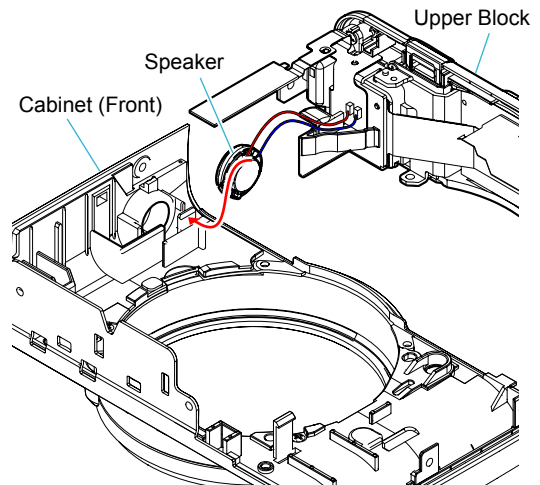
(3) Set the Lithium Rechargeable Battery.



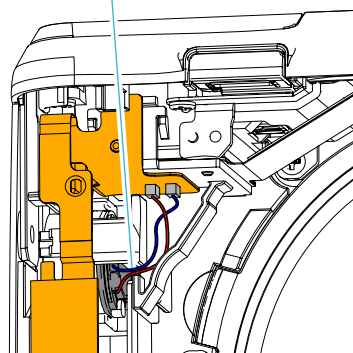
(4) Set the claws and bosses.



(6) Notes on Assembling the Upper Block



Route the speaker harnesses.



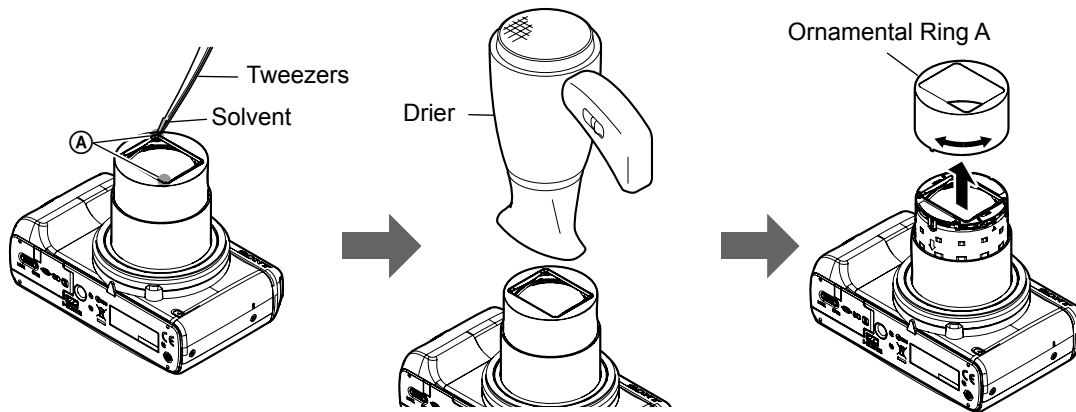
4-4. LENS BLOCK

4-4-1. Removal and Installation

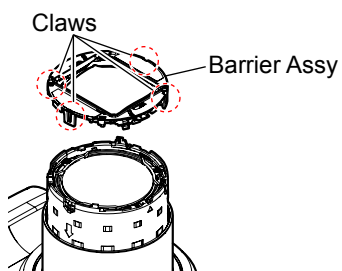
(1) Ornamental Ring A or Barrier Assy Replacing Method

Removal

1. Turn on the power switch and extend the lens (TELE end).
2. Detach the battery.
3. Pour a solvent such as alcohol to two gaps ① of the Ornamental Ring A with tweezers or a fine-tipped stick as shown below.
4. Heat the Ornamental Ring A with a drier.
5. Turn the Ornamental Ring A clockwise and counterclockwise to detach it.

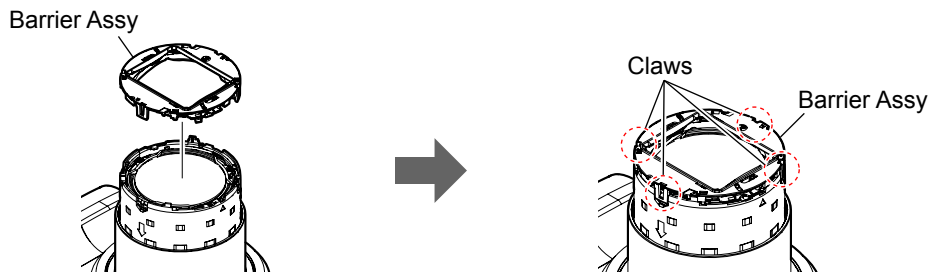


6. Disengage the four claws and remove the Barrier Assy.



Installation

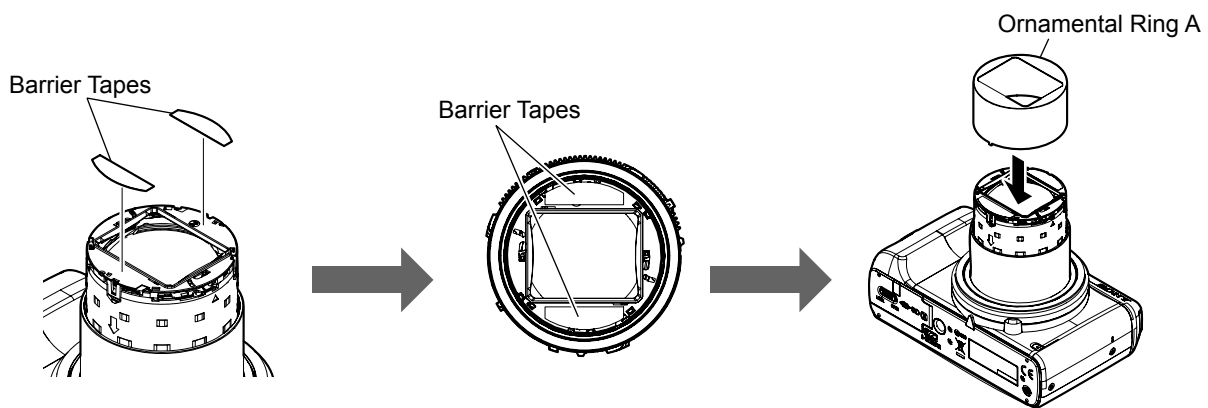
1. Fit the four claws and attach the Barrier Assy.



2. Attach two Barrier Tapes so that the end of each tape comes to the dent.

Note: Attach Barrier Tapes carefully so that they do not wrinkle.

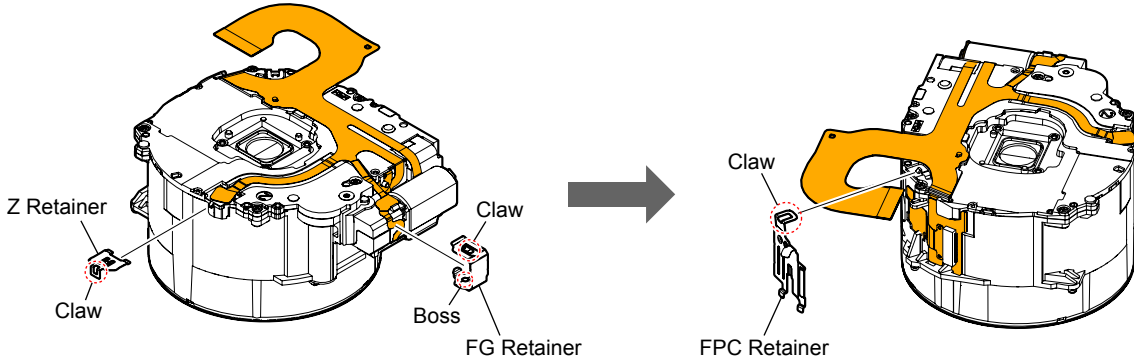
3. Attach the Ornamental Ring A and push it gently.



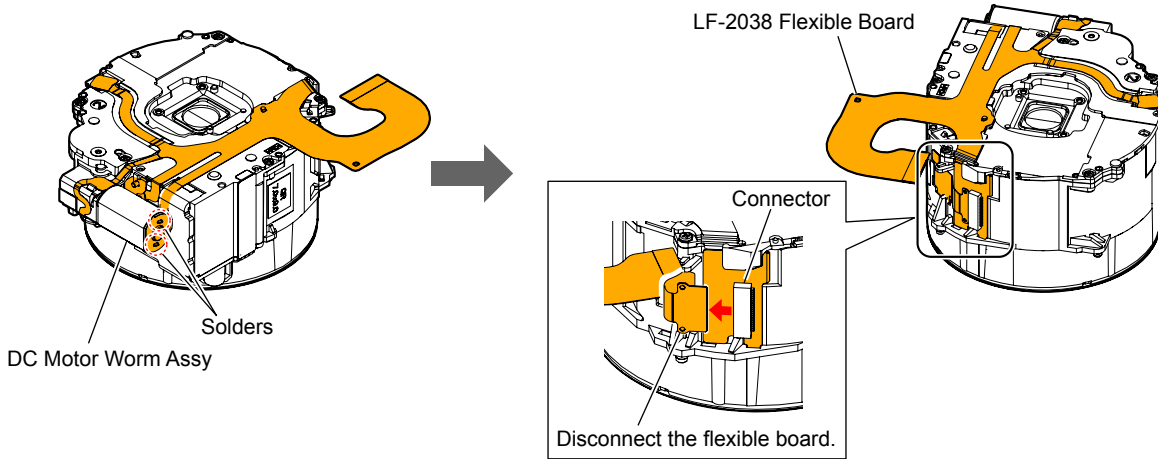
(2) 2 Group Frame Block Assy Replacing Method

Removal

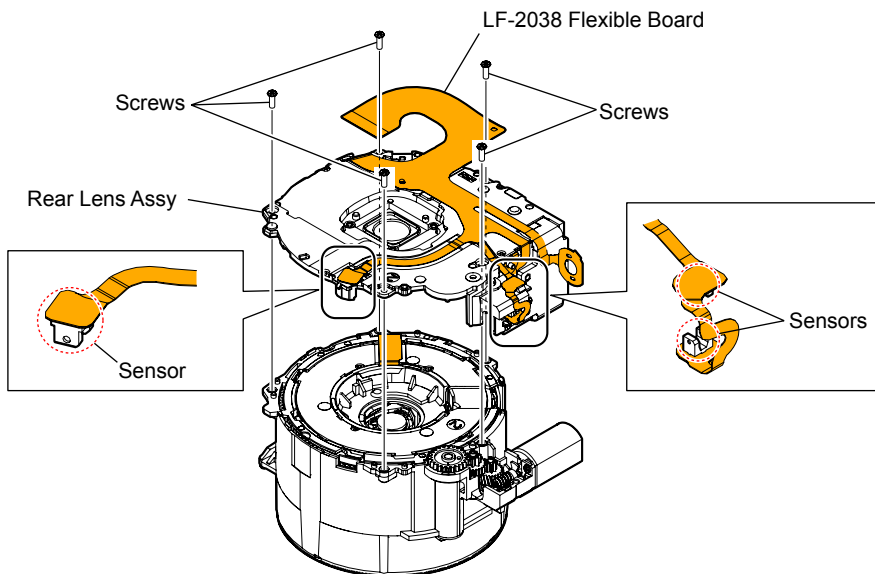
1. Release the claw to detach the Z Retainer.
2. Release the boss and the claw to detach the FG Retainer.
3. Release the claw to detach the FPC Retainer.



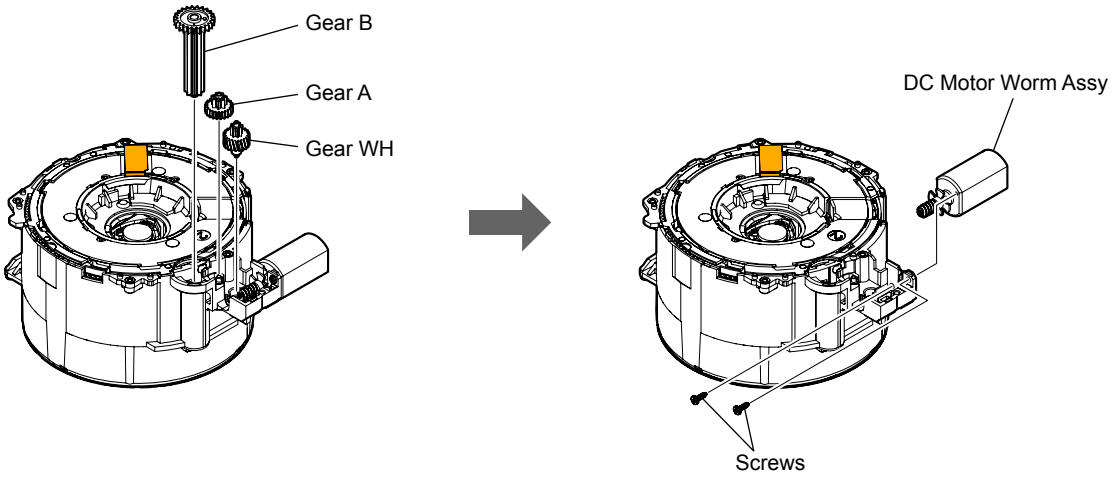
4. Unsolder the DC Motor Worm Assy at two locations shown below.
5. Disconnect the flexible board from the connector on the LF-2038 Flexible Board.



6. Disconnect the three sensors on the LF-2038 Flexible Board.
7. Remove the five screws to detach the Rear Lens Assy.

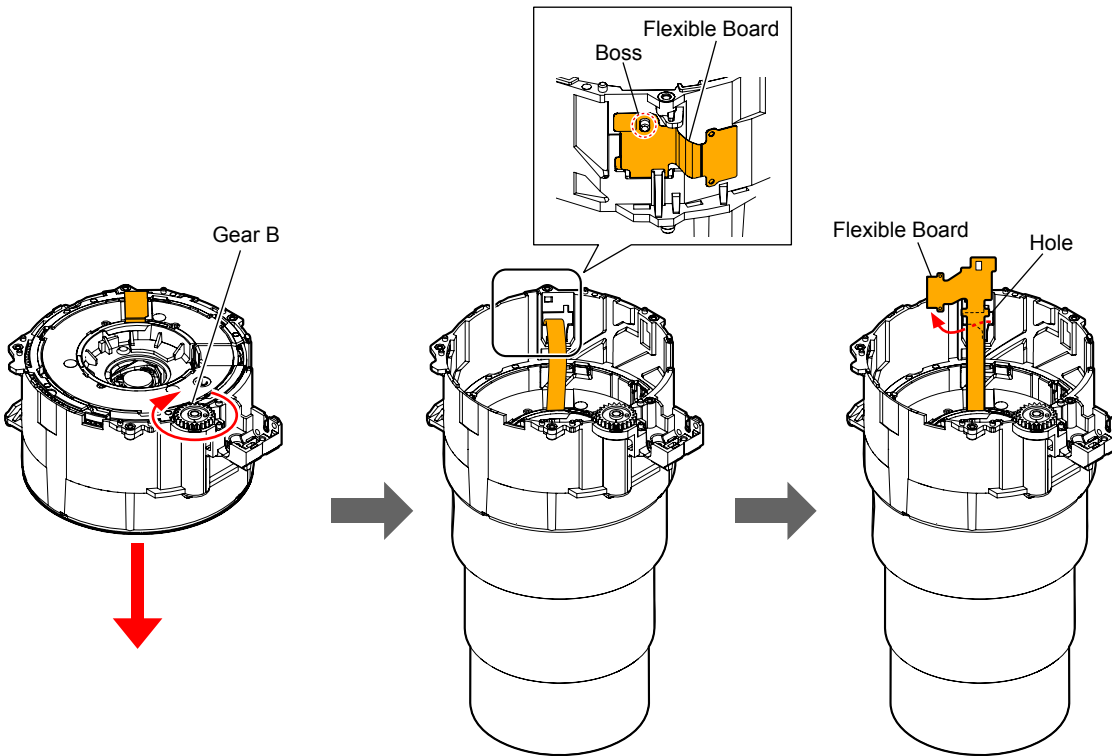


8. Remove the Gear B.
9. Remove the Gear A.
10. Remove the Gear WH.
11. Remove the two screws to detach the DC Motor Worm Assy.

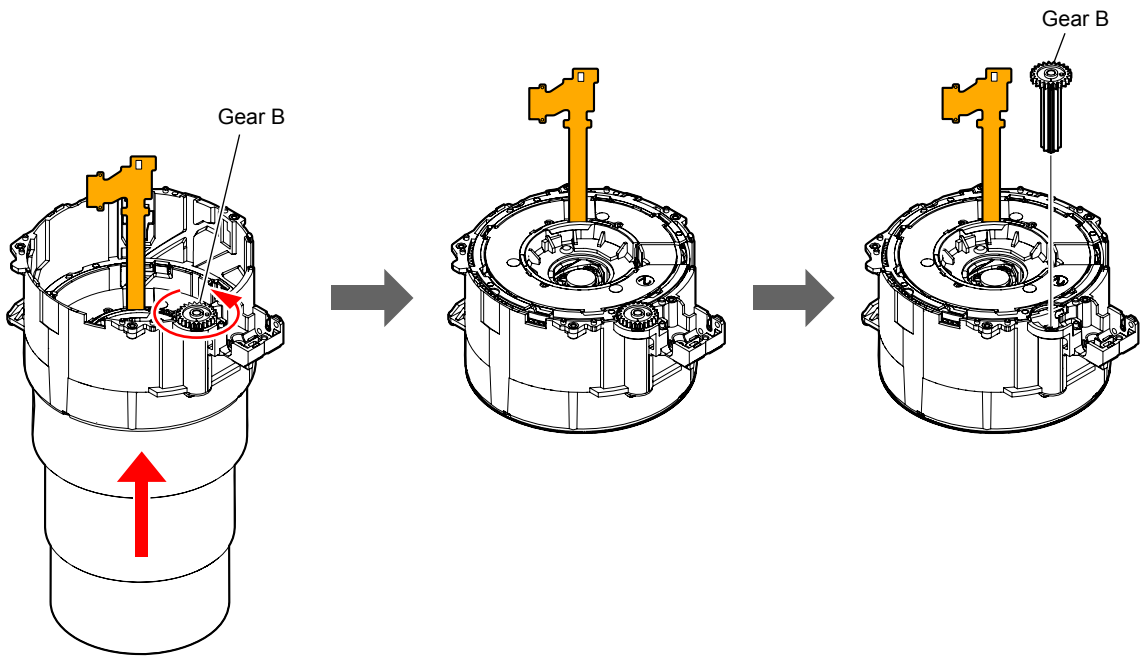


12. Insert the Gear B and turn it clockwise to set the lens unit in the TELE end state.
Note: Turn the Gear B to the maximum.

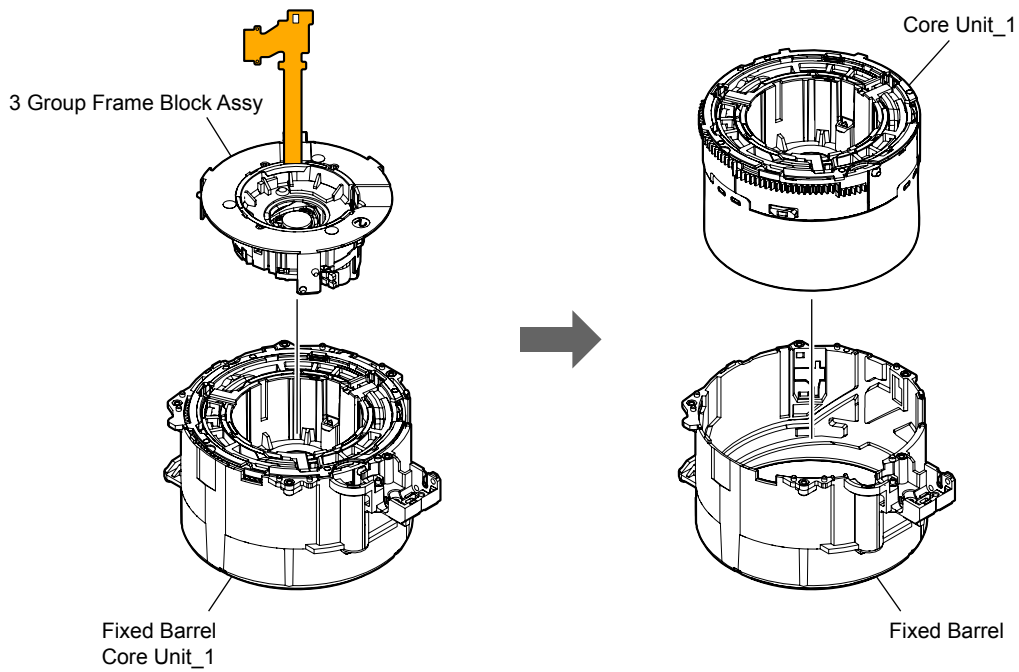
13. Release the flexible board from the boss and pull the Flexible Board out of the hole.



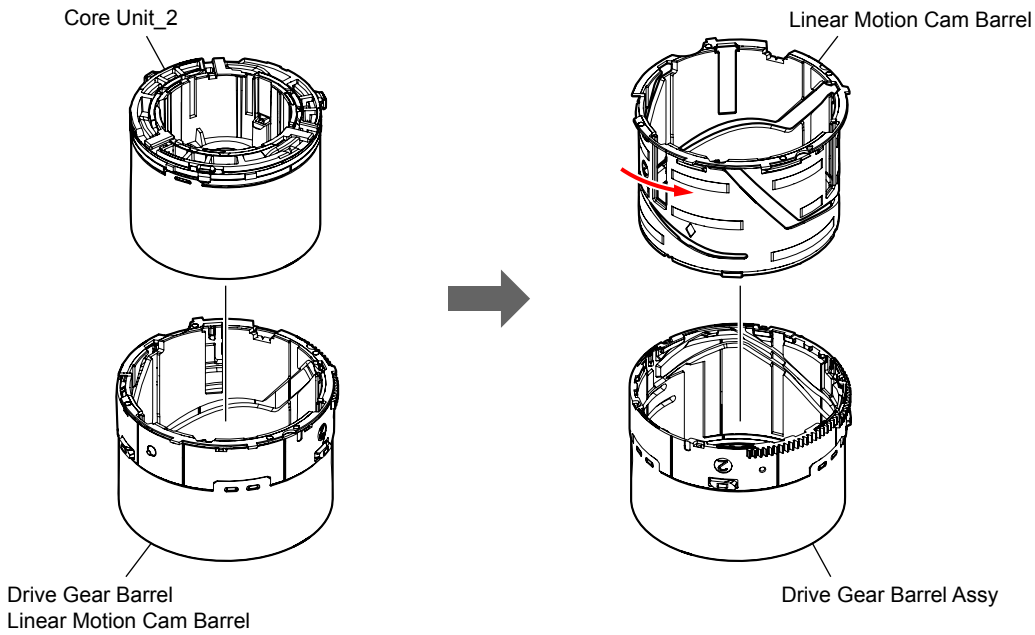
14. Turn the Gear B counterclockwise to set the lens unit in the retracted state, and then remove the Gear B.
Note: Turn the Gear B to the maximum.



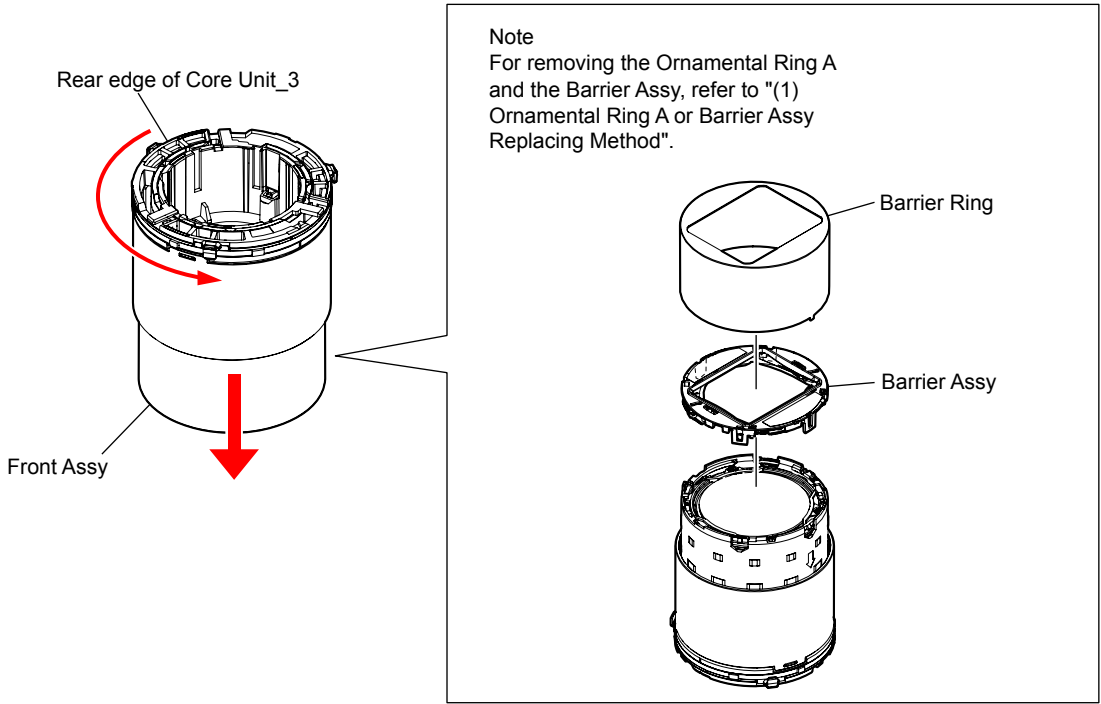
15. Remove the 3 Group Frame Block Assy and the Core Unit_1 from the Fixed Barrel.



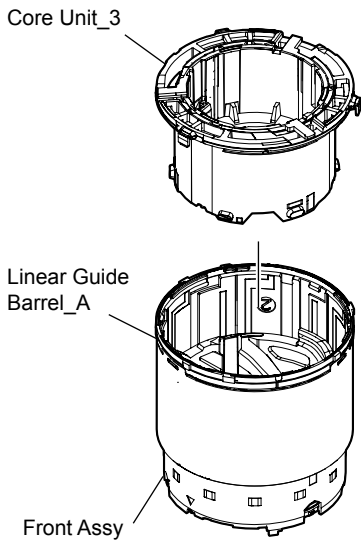
- 16. Remove the Core Unit_2 from the Drive Gear Barrel and Linear Motion Cam Barrel.
- 17. Turn the Linear Motion Cam Barrel to remove it from the Drive Gear Barrel Assy.



- 18. Turn the rear edge of Core Unit_3 counterclockwise to extend the Front Assy.
- Note:** For removing the Barrier Assy, refer to "(1) Ornamental Ring A or Barrier Assy Replacing Method".

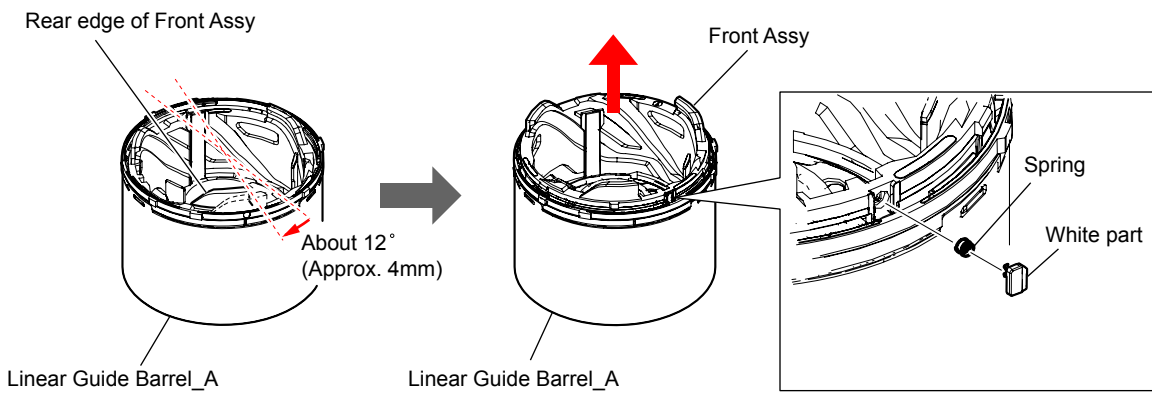


19. Remove the Core Unit_3 from the Front Assy and Linear Guide Barrel_A.

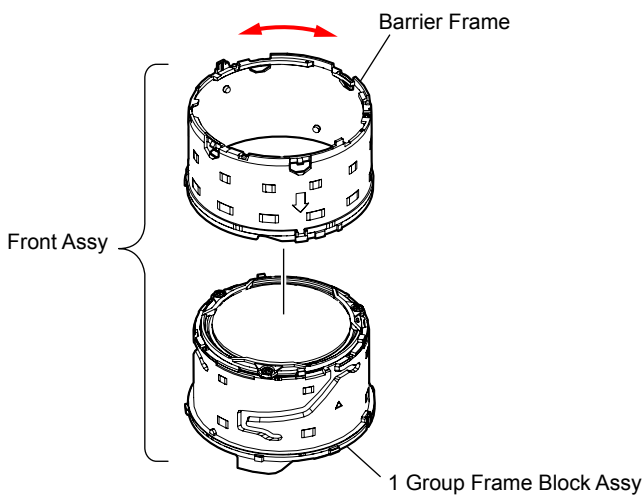


20. Return the Linear Guide Barrel_A to the retracted end.

21. Turn the rear edge of Front Assy about 12 degrees in the direction of arrow to detach the Front Assy from the Linear Guide Barrel_A.
Note: When detaching the Front Assy, do not stimulate the white part shown below. If it is stimulated, it may pop out by the action of the spring.

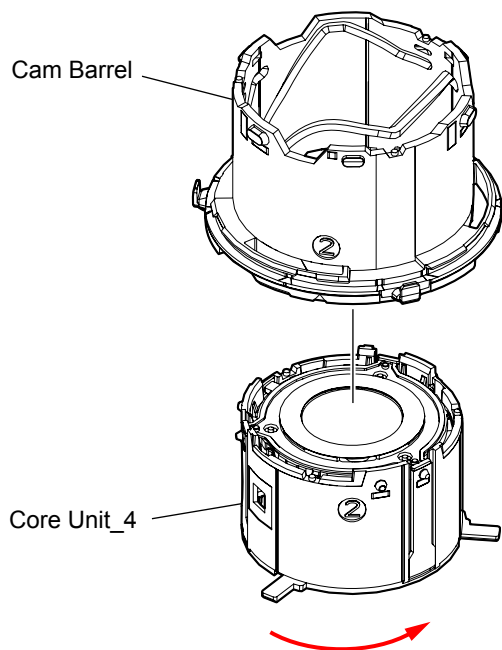


22. Turn the Barrier Frame to remove it from the 1 Group Frame Block Assy.

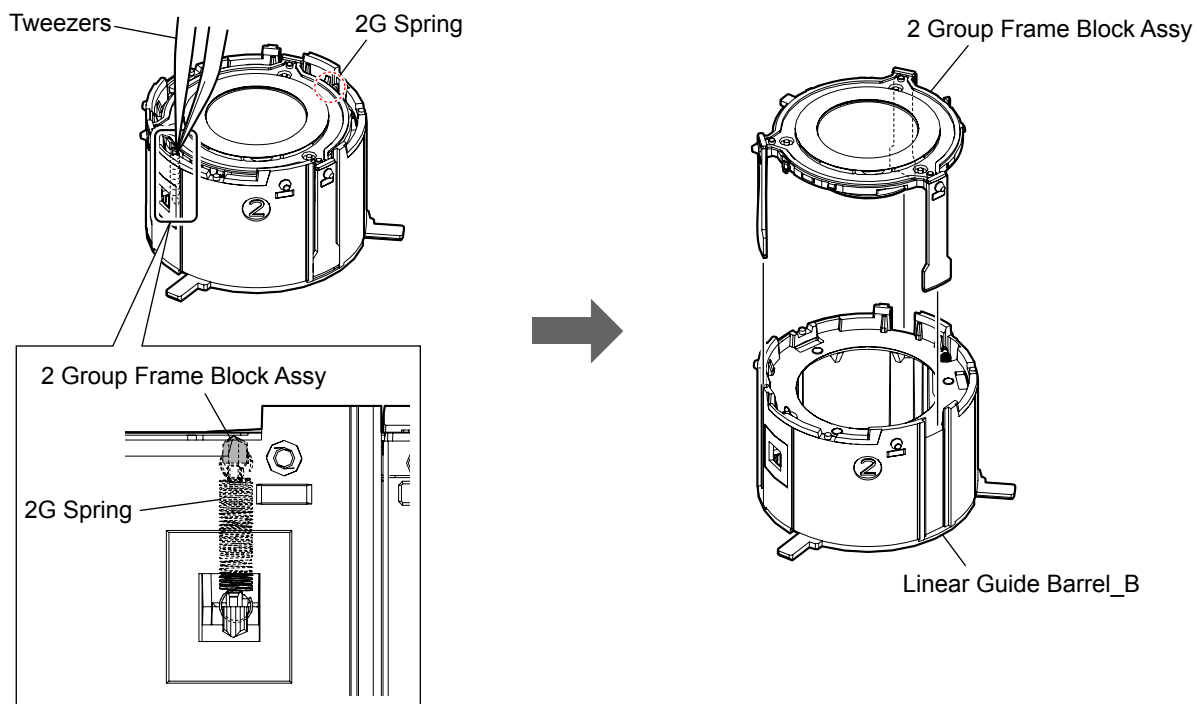


23. Turn the Core Unit_4 in the direction of arrow to detach it.

Note: Though the Core Unit_4 has resistance due to the spring tension, it can be detached by turning it overcoming the resistance.

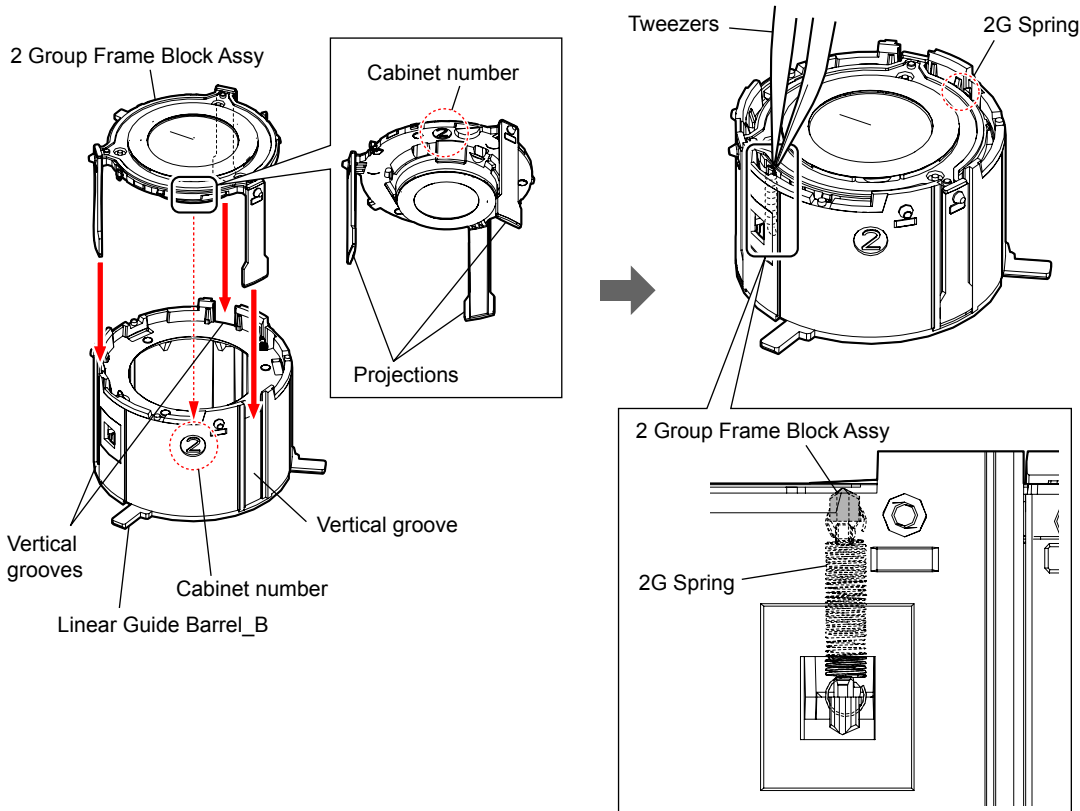


24. Unhook the 2G Spring at two locations and remove the 2 Group Frame Block Assy from the Linear Guide Barrel_B.

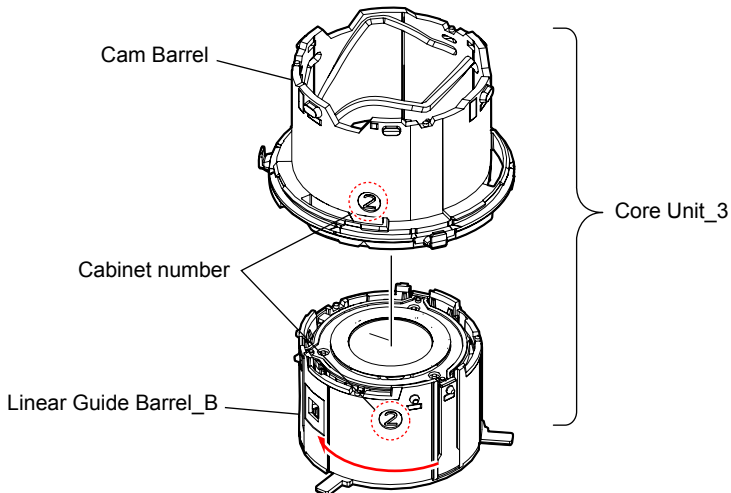


Installation

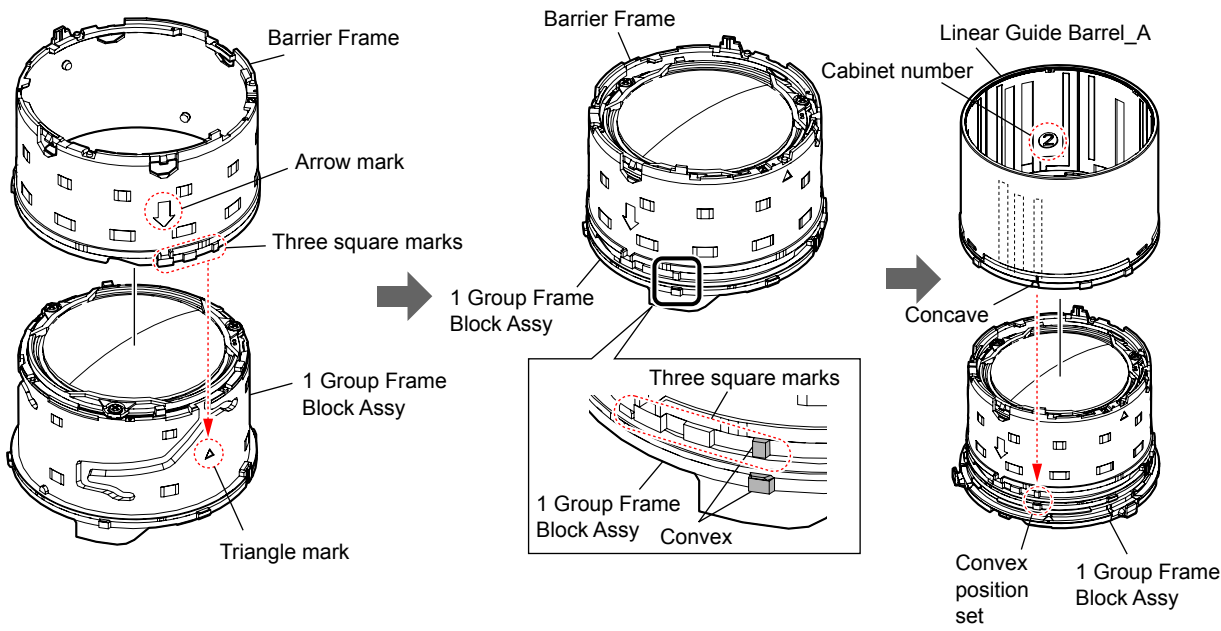
1. While matching the cabinet numbers of the Linear Guide Barrel_B and the 2 Group Frame Block Assy, insert the three projections of the 2 Group Frame Block Assy into the three vertical grooves of the Linear Guide Barrel_B.
2. Pull out the two hooks of the 2G Spring with tweezers and hook them to the 2 Group Frame Block Assy.



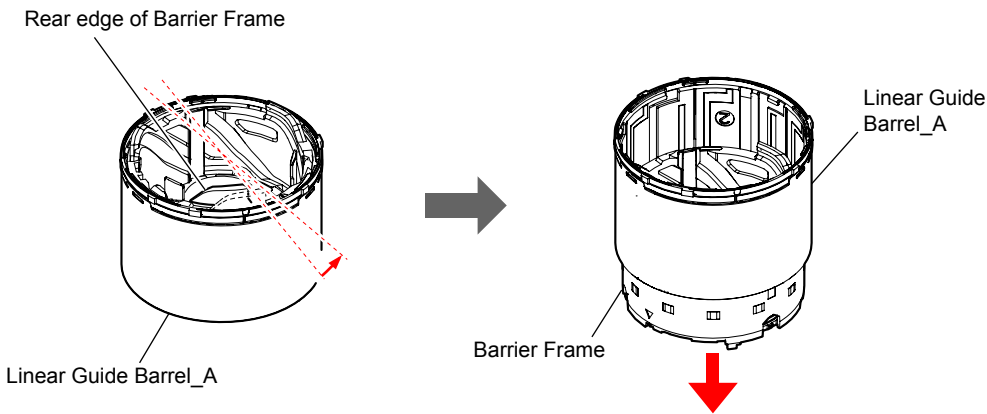
3. While matching the cabinet numbers of the Cam Barrel and the Linear Guide Barrel_B, insert the Linear Guide Barrel_B into the Cam Barrel turning the Linear Guide Barrel_B in the direction of arrow.



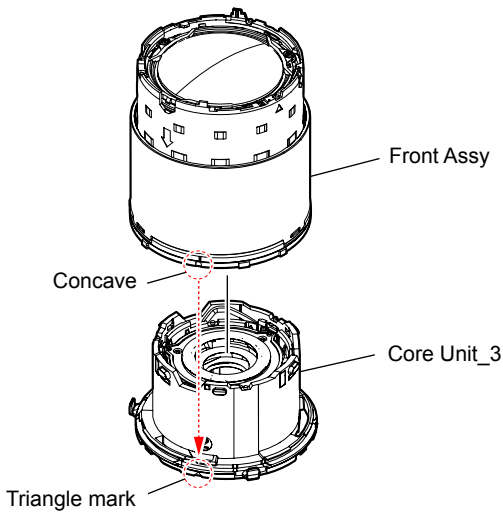
4. While matching the triangle mark on the 1 Group Frame Block Assy with the three square marks on the Barrier Frame, insert the 1 Group Frame Block Assy into the Barrier Frame.
5. Turn the 1 Group Frame Block Assy to match the rightmost convex on the Barrier Frame with the convex on the 1 Group Frame Block Assy.
6. While matching the convex position set in step 5 with the concave of the Linear Guide Barrel_A, insert the 1 Group Frame Block Assy into the Linear Guide Barrel_A.



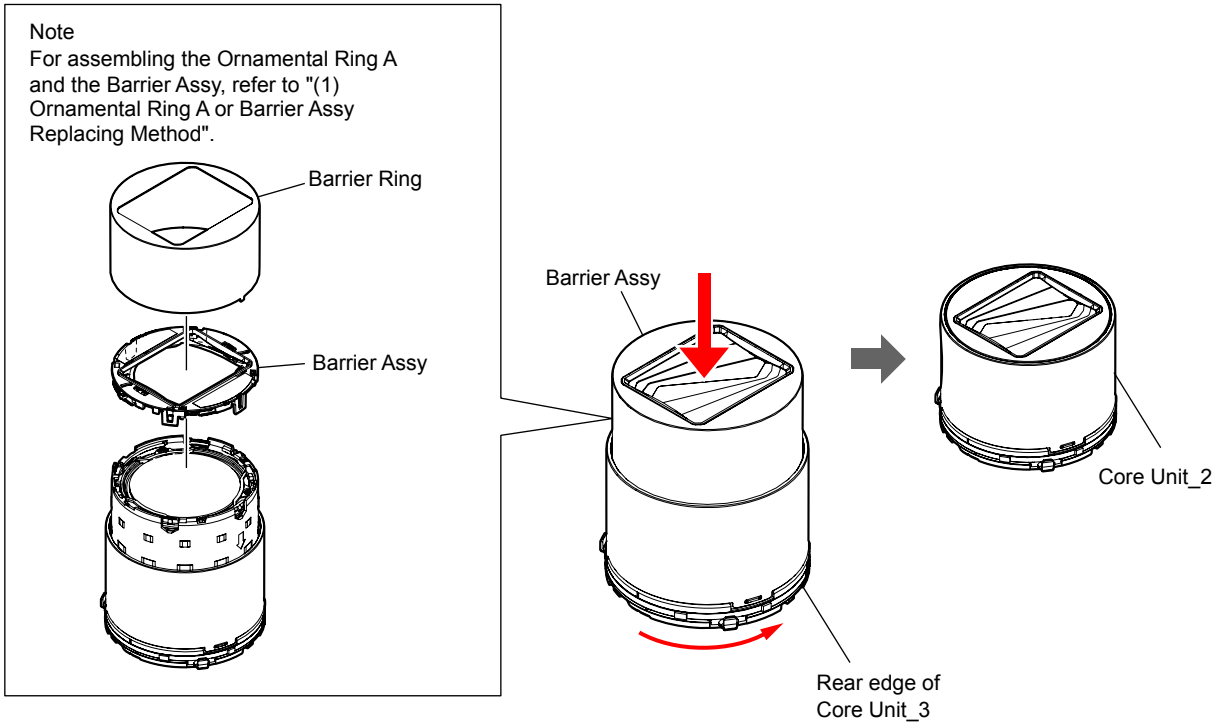
7. Slightly turn the rear edge of Barrier Frame in the direction of arrow to extend the Barrier Frame.



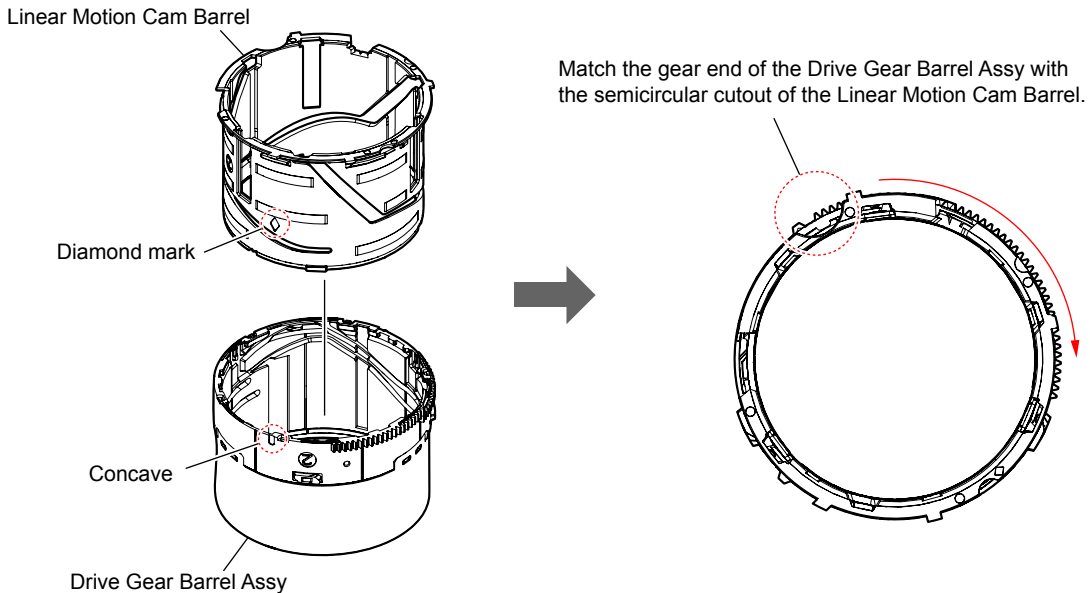
8. While matching the concave of the Front Assy with the triangle mark on the Core Unit_3, insert the Core Unit_3 into the Front Assy.



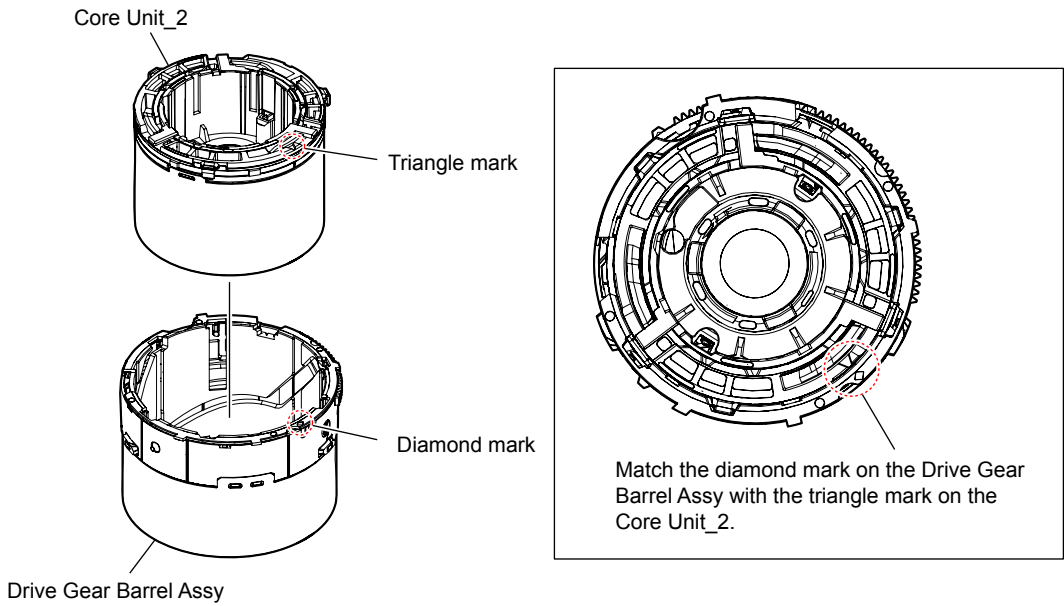
9. Install the Barrier Assy.
Note: For assembling the Barrier Assy, refer to “(1) Ornamental Ring A or Barrier Assy Replacing Method”.
10. Turn the rear edge of Core Unit_3 counterclockwise to set the Core Unit_2 in the retracted state.



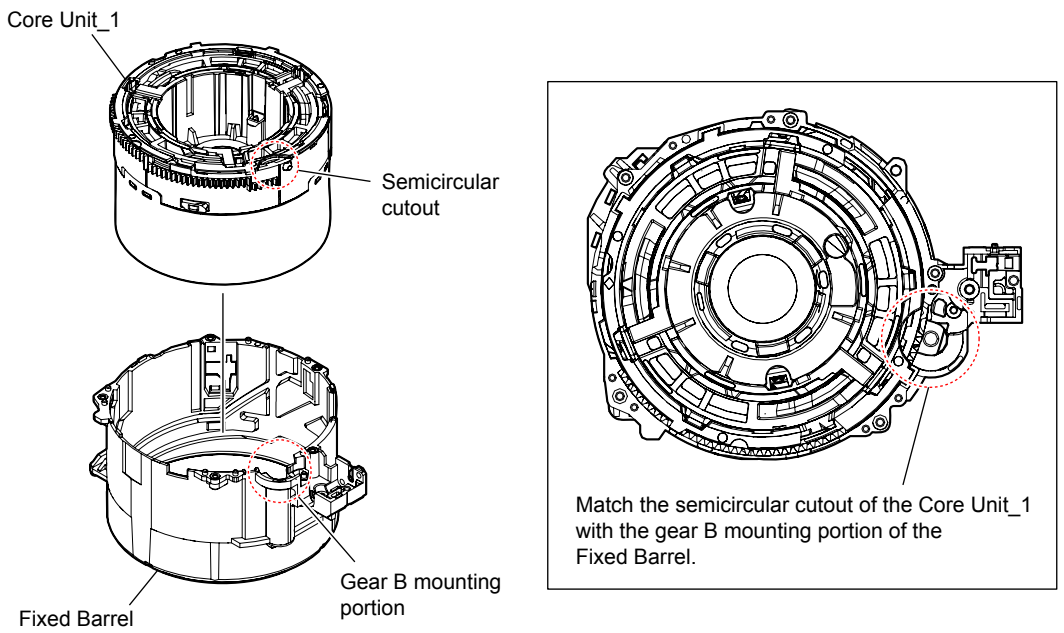
11. While matching the concave of the Drive Gear Barrel Assy with the diamond mark on the Linear Motion Cam Barrel, insert the Linear Motion Cam Barrel into the Drive Gear Barrel Assy.
12. Turn the Linear Motion Cam Barrel until the gear end of the Drive Gear Barrel Assy and the semicircular cutout of the Linear Motion Cam Barrel come to the position shown below.



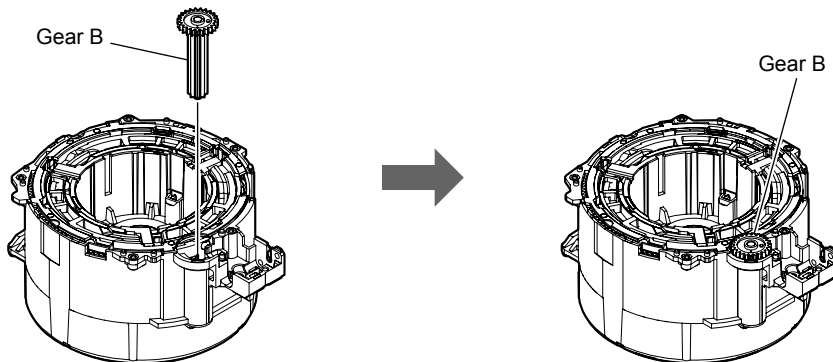
13. While matching the diamond mark on the Drive Gear Barrel Assy with the triangle mark on the Core Unit_2, insert the Core Unit_2 into the Drive Gear Barrel Assy.



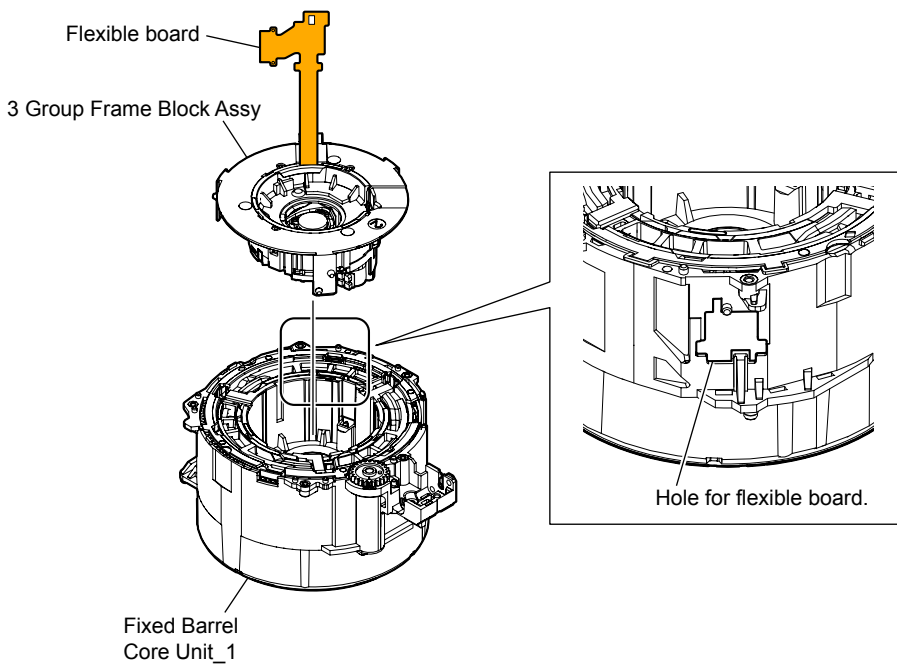
14. While matching the semicircular cutout of the Core Unit_1 with the gear B mounting portion of the Fixed Barrel, insert the Core Unit_1 into the Fixed Barrel.



15. Insert the Gear B.

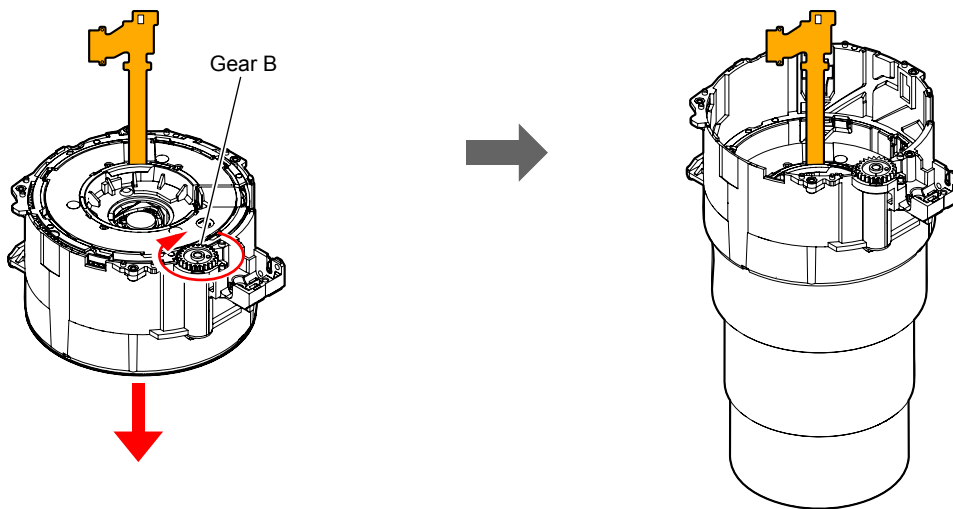


16. While matching the hole in the Fixed Barrel with the flexible board, install the 3 Group Frame Block Assy.

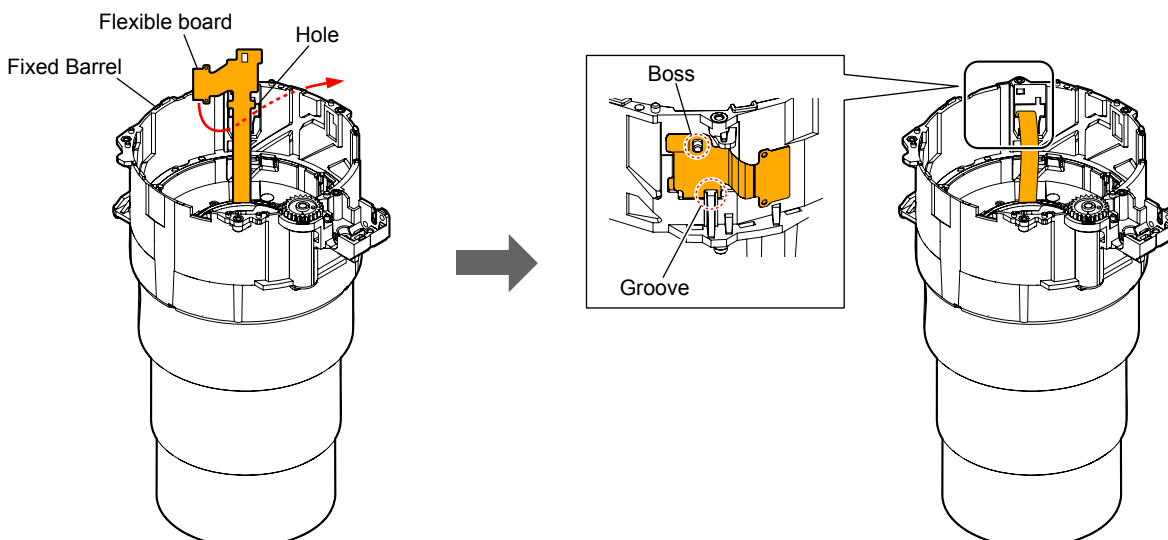


17. Turn the Gear B clockwise to set the lens unit in the TELE end state.

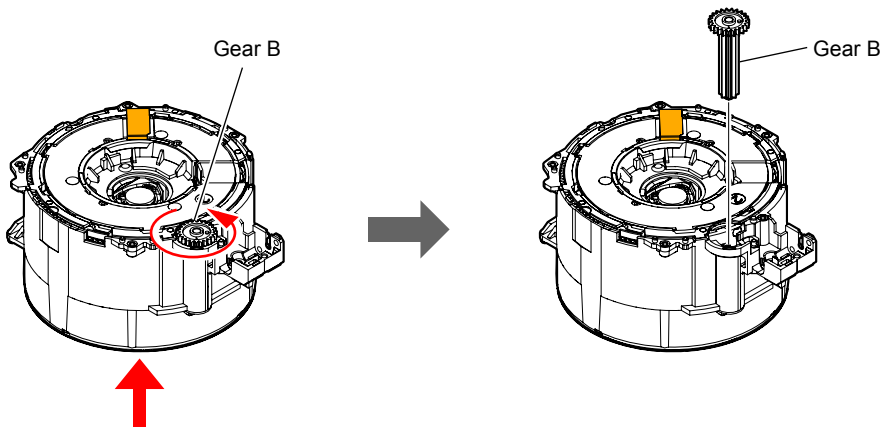
Note: Turn the Gear B to the maximum.



18. Pass the flexible board through the hole in the Fixed Barrel and fix the flexible board to the groove and the boss.

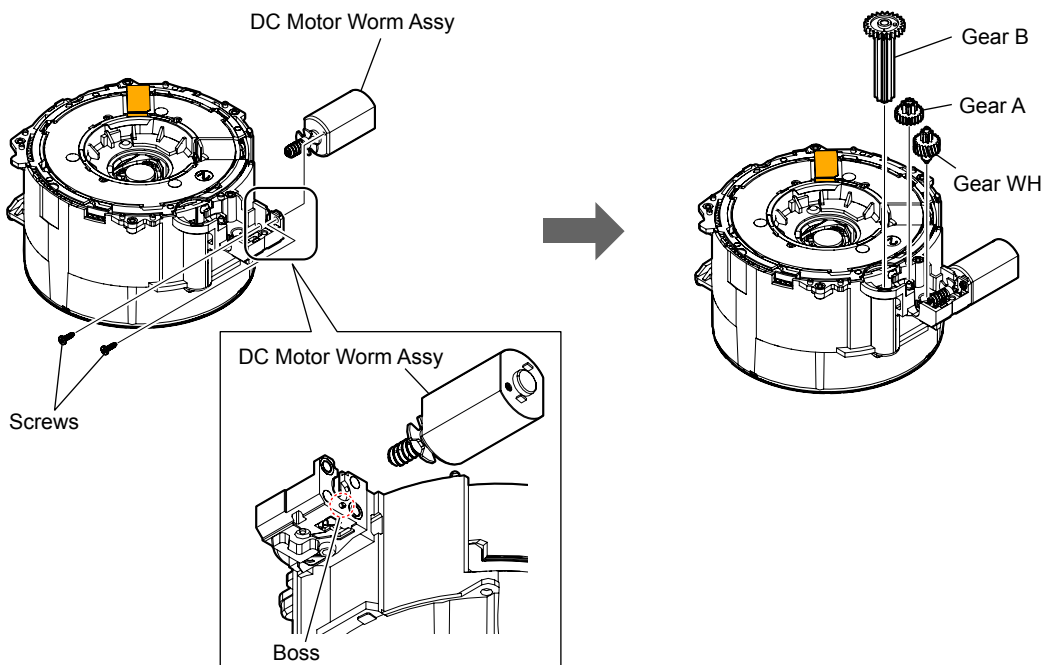


19. Turn the Gear B counterclockwise to set the lens unit in the retracted state, and then remove the Gear B.



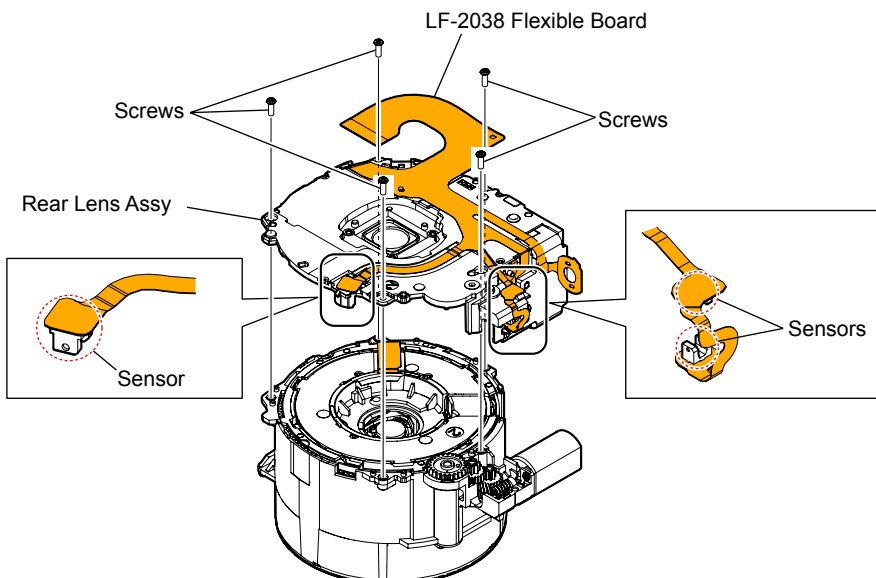
20. Fit the DC Motor Worm Assy with the boss and secure it with two screws.

21. Install Gear WH, Gear A, and then Gear B.

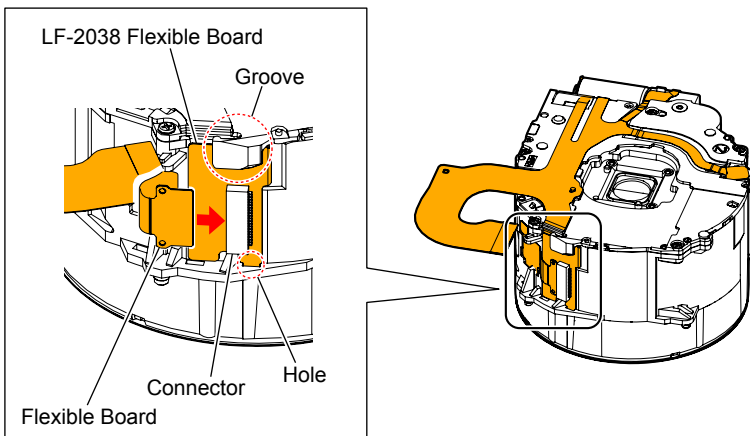


22. Secure the Rear Lens Assy with five screws.

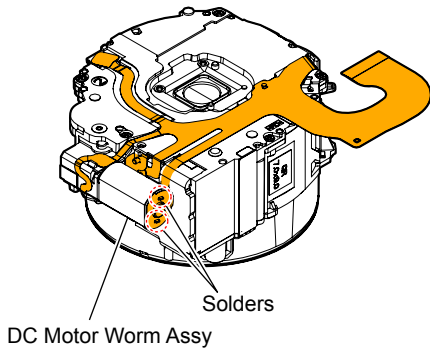
23. Connect the three sensors on the LF-2038 Flexible Board.



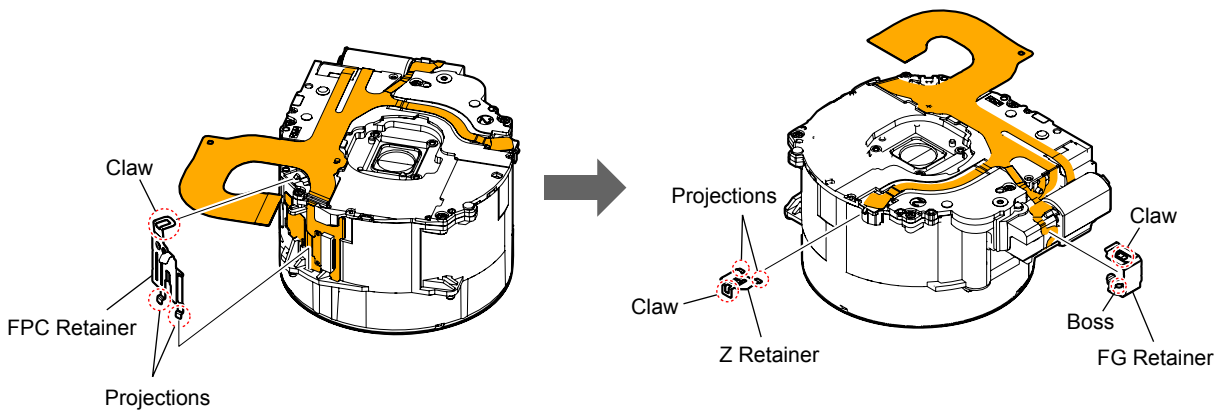
24. Fix the LF-2038 Flexible Board to the groove and the hole.
25. Connect the flexible board to the connector on the LF-2038 Flexible Board.



26. Solder the DC Motor Worm Assy at two locations shown below to secure the LF-2038 Flexible Board to the DC Motor Worm Assy.



27. Fix the FPC Retainer to the two projections and then to the claw.
28. Fix the FG Retainer to the boss and then to the claw.
29. Fix the Z Retainer to the two projections and then to the claw.



30. Perform the Flange Back Adjustment after the assembling.

5. ADJUSTMENT

(ENGLISH)

For adjusting these models, the Adjust manual and the Adjust station are required.

Adjust station

It is the software to start up Adjust manual for each model.

The installer of the Adjust station and the installation manual are attached, be sure to confirm the contents of them.

Adjust manual

It is the software to adjust and check digital cameras and camcorders for service.

The installer of the Adjust manual and the installation manual are attached, be sure to confirm the contents of them.

Note 1: Be sure to install Adjust station first.

Note 2: To perform Destination Data Write for this model, the Adjust manual of the DSC-WX50 series must have been installed.
Install the Adjust manual of the DSC-WX50 series in advance.

(JAPANESE)

これらの機種で調整を行なうには、アジャストマニュアルとアジャストステーションが必要です。

アジャストステーションとは

機種別のアジャストマニュアルを起動するためのソフトウェアです。

アジャストステーションのインストーラと一緒に、インストレーションマニュアルが付いていますので、内容を必ず確認してください。

アジャストマニュアルとは

デジタルカメラ及びカムコーダのサービス用の調整ソフトウェアで、調整及び各種動作確認を行うことが可能です。

アジャストマニュアルのインストーラと一緒に、インストレーションマニュアルが付いていますので、内容を必ず確認してください。

注意1： インストールは必ず Adjust station を先に行なってください。

注意2： この機種で仕向け設定を行うには、DSC-WX50シリーズの Adjust manual がインストールされている必要があります。
先に DSC-WX50 シリーズの Adjust manual をインストールしてください。

Revision History

Ver.	Date	History	Contents	S.M. Rev. issued
1.0	2014.02	Official Release	—	—