



Cyber-shot



LITHIUM ION TYPE

– ENGLISH –

SPECIFICATIONS

Camera

[System]
Image device: 7.76 mm (1/2.3 type)
color CCD, Primary color filter
Total pixel number of camera:
Approx. 14.5 Megapixels
Effective pixel number of camera:
Approx. 14.1 Megapixels
Lens: Carl Zeiss Vario-Tessar 4× zoom
lens
f= 4.7 mm – 18.8 mm (26 mm –
105 mm (35 mm film equivalent))
F2.7 (W) – F5.7 (T)
While shooting movies (16:9):
30 mm – 122 mm
While shooting movies (4:3):
37 mm – 149 mm
Exposure control: Automatic exposure,
Scene Selection (10 modes)
White balance: Automatic, Daylight,
Cloudy, Fluorescent 1/2/3,
Incandescent, Flash, One Push
Underwater White Balance: Auto,
Underwater 1/2, One Push
Recording interval for Burst mode:
Approx. 0.7 second
File format:
Still images: JPEG (DCF Ver. 2.0,
Exif Ver. 2.21, MPF Baseline)
compliant, DPOF compatible
Movies: MPEG-4 Visual
Recording media: Internal Memory
(Approx. 45 MB), “Memory Stick
Duo” media, SD memory cards,
SDHC memory cards (Class 4, 6,10)
Flash: Flash range (ISO sensitivity
(Recommended Exposure Index)
set to Auto):
Approx. 0.2 m to 3.8 m (W)
(7 7/8 inches to 12 feet 5 5/8 inches)
Approx. 0.6 m to 1.9 m (T) (1 foot
11 5/8 inches to 6 feet 2 7/8 inches)

[Input and Output connectors]
Multi use terminal Type3
(AV-out(SD/HD Component)/
USB/DC-in):
Video output
Audio output (Monaural)
USB communication
USB communication: Hi-Speed USB
(USB 2.0 compliant)

[LCD screen]
LCD panel:
6.7 cm (2.7 type) TFT drive
Total number of dots: 230 400 (960 ×
240) dots

[Power, general]
Power: Rechargeable battery pack
NP-BN1, 3.6 V
AC-LS5 AC Adaptor (sold
separately), 4.2 V
Power consumption (during shooting):
1.0 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:
90.7 × 51.5 × 16.7 mm
(3 5/8 × 2 1/8 × 11/16 inches)
(W/H/D, excluding
protrusions)
Mass (including NP-BN1 battery pack,
Memory card):
Approx. 117 g (4.1 oz.)
Microphone: Monaural
Speaker: Monaural
Exif Print: Compatible
PRINT Image Matching III:
Compatible
PictBridge: Compatible

**BC-CSN/BC-CSNB battery
charger**
Power requirements: AC 100 V to
240 V, 50/60 Hz, 2 W
Output voltage: DC 4.2 V, 0.25 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. 55 × 24 × 83 mm
(2 1/4 × 31/32 × 3 3/8 inches)
(W/H/D)
Mass: Approx. 55 g (1.9 oz.)

**Rechargeable battery pack
NP-BN1**
Used battery: 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: 0.9 A
Capacity:
typical: 2.3 Wh (630 mAh)
minimum: 2.2 Wh (600 mAh)

Design and specifications are subject to change
without notice.



Cyber-shot



LITHIUM ION TYPE

– JAPANESE –

概略仕様

本体

[システム]
撮像素子：7.76 mm(1/2.3型)カラー
CCD原色フィルター
総画素数：約1448万画素
カメラ有効画素数：約1414万画素
レンズ：カールツァイスバリオ・テッサー
4倍ズームレンズ
f=4.7 mm ～ 18.8 mm
(26 mm ～ 105 mm(35 mmフィルム換算
値))、F2.7(W)

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.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  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.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  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.

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
 - Keep the temperature of the soldering iron around 270°C during repairing.
 - 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.

Unleaded solder

Boards requiring use of unleaded solder are printed with the leadfree 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

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40°C higher than ordinary solder.
Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
Soldering irons using a temperature regulator should be set to about 350°C.
Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
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.
- Usable with ordinary solder
It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

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。

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個所については，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パ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。</

1-1. PRECAUTION ON REPLACING THE SY-242 BOARD

DESTINATION DATA

When you replace to the repairing board, the written destination data of repairing board also might be changed to original setting. Start the Adjust Manual in the Adjust Station and execute the “DESTINATON 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.

- USB SERIAL No.
- Angular Velocity Sensor
- AWB standard data input & check, Color reproduction check

Note: When you cannot read data from the former replace the same time SY-242 board and lens.

Regarding the PMB Portable

PMB Portable has been written in internal memory.
SY-242 board for service is supplied with written the PMB Portable.

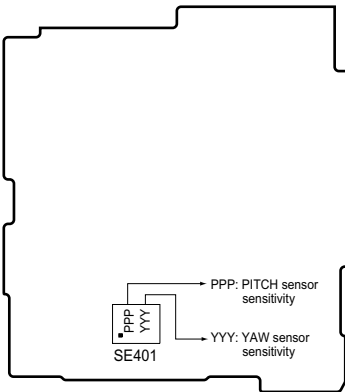
USB SERIAL No.

The set is shipped with a unique ID (USB Serial No.) written in it.
This ID has not been written in a new board for service, and therefore it must be entered after the board replacement.
Start the Adjust Manual in the Adjust Station and execute the “USB SERIAL No. INPUT”.

Angular Velocity Sensor

When you replace to the repairing board, write down the sensitivity displayed on the angular velocity sensor (SE401).
Start the Adjust Manual in the Adjust Station and execute the “Angular velocity sensor sensitivity adj”.

SY-242 BOARD (SIDE B)



Note: The sensor sensitivity of SE401 of SY-242 board is written only repair parts.

1-2. METHOD FOR COPYING OR ERASING THE DATA IN INTERNAL MEMORY

The data can be copied/erased by the operations on the HOME screen. (When erasing the data, execute formatting the internal memory.)

Note 1:When replacing the SY-242 board, erase the data in internal memory of the board before replacement.
Note 2:When replacing the SY-242 board, execute formatting and initialize the internal memory after replacement.

Method for Copying the Data in Internal Memory

Copy

Copies all images in the internal memory to a memory card.

- 1 Insert a memory card with sufficient free capacity into the camera.
- 2 MENU →  (Settings) →  (Memory Card Tool) → [Copy] → [OK] → ● on the control button

Notes

- Use a fully charged battery pack. If you attempt to copy image files using a battery pack with little remaining charge, the battery pack may run out, causing copying to fail or possibly corrupting the data.
- Images cannot be copied individually.
- The original images in the internal memory are retained even after copying. To delete the contents of the internal memory, remove the memory card after copying, then format the internal memory ([Format] in [Internal Memory Tool]).
- A new folder is created on the memory card and all the data will be copied to it. You cannot choose a specific folder and copy images to it.

Method for Formatting the Internal Memory or Memory Card media

Format

Formats the memory card or the internal memory. When you use a memory card with this camera for the first time, it is recommended to format the card using the camera for stable performance of the memory card before shooting. Note that formatting permanently erases all data on the memory card, and is unrecoverable. Save precious data on a computer, etc.

- 1 MENU →  (Settings) →  (Memory Card Tool) or  (Internal Memory Tool) → [Format] → [OK] → ● on the control button

Note

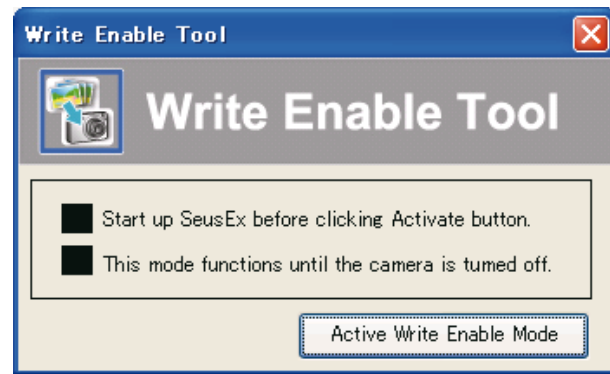
- Note that formatting permanently erases all data including even protected images.

1-3. HOW TO WRITE DATA TO INTERNAL MEMORY

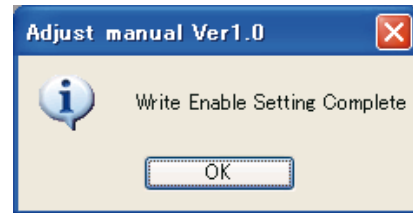
Usually, the camera has been set so as to disable the data writing from the PC to the internal memory of the camera. This setting must be changed temporarily when the data is to be written to the internal memory such as a case after the board replacement. To change settings is enabled with using the writing enabler tool (Write Enable Tool) on the Adjust Manual is activating from the Adjust Station.

Data writing method

- 1) Start the Adjust Manual from the Adjust Station.
- 2) Click  (Write Enable Tool) button.
- 3) Click “Activate Write Enable Mode” button.



- 4) Upon completion of the setting change, the following message will be displayed.



- 5) Return the driver to the original one, and connect the PC to the camera (USB mode: Mass Storage).
- 6) Write the data read out into the PC to the internal memory of the camera.
- 7) Disconnect the PC from the camera, and turn off the camera.

Note: By turning off the camera, the write enable setting is reset.

1-4. SELF-DIAGNOSIS FUNCTION

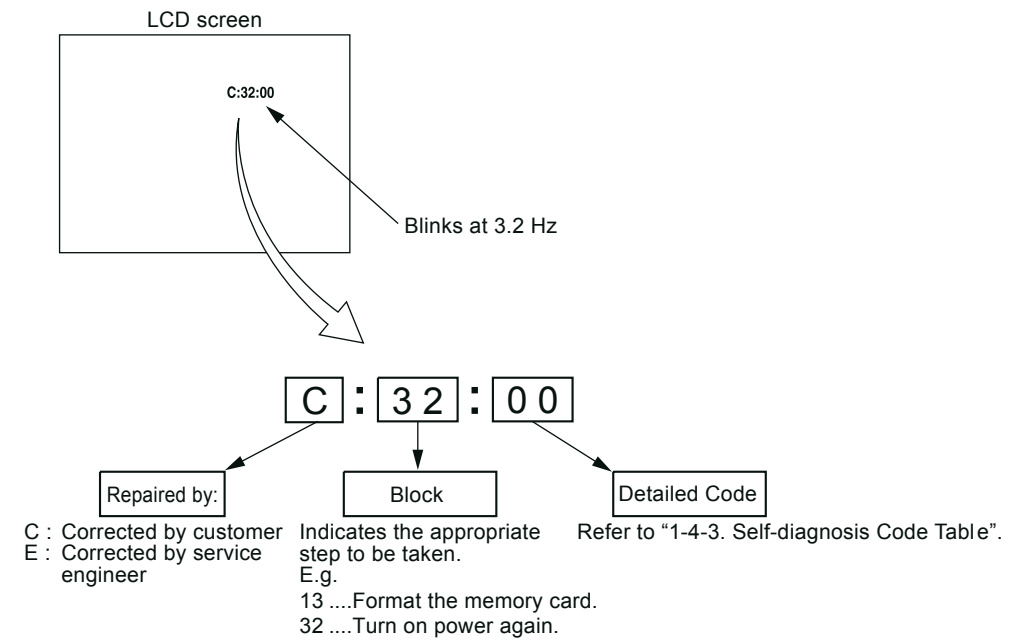
1-4-1. Self-diagnosis Function

When problems occur while the unit is operating, the self-diagnosis function starts working, and displays on the LCD screen what to do.

Details of the self-diagnosis functions are provided in the Instruction manual.

1-4-2. 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.



1-4-3. Self-diagnosis Code Table

Self-diagnosis Code				Symptom/State	Correction
Repaired by:	Block Function	Detailed Code			
C	1 3	0 1	The internal memory has experienced a media error.	Turn the power off and on again.	
			The internal memory has experienced a format error.	Format the internal memory.	
			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	6 1	0 0	Difficult to adjust focus (Cannot initialize focus)	Retry turn the power on by the power switch. If it does not recover, check the focus reset sensor of lens block (pin ㉔ of CN402 on the SY-242 board). If it is OK, check the focus motor drive IC (IC401 on the SY-242 board).	
E	6 1	1 0	Zoom operations fault (Cannot initialize zoom lens.)	Retry turn the power on by the power switch. Check the zoom reset sensor of lens block (pin ㉔ of CN402 on the SY-242 board) when zooming is performed when the zoom button is operated. If it is OK, check the zoom motor drive IC (IC401 on the SY-242 board).	
E	6 2	0 2	Abnormality of IC for steadysHOT.	Check or replacement of the IC for steadysHOT (IC401 on the SY-242 board).	
E	6 2	1 0	Lens initializing failure.	Check or replacement of the IC for steadysHOT (IC401 on the SY-242 board).	
E	6 2	1 1	Lens overheating (PITCH).	Check the HALL element (PITCH) of optical image stabilizer (pin ㉗, ㉘ of CN402 on the SY-242 board). If it is OK, check PITCH angular velocity sensor (SE401 on the SY-242 board) peripheral circuits.	
E	6 2	1 2	Lens overheating (YAW).	Check the HALL element (YAW) of optical image stabilizer (pin ㉙, ㉚ of CN402 on the SY-242 board). If it is OK, check YAW angular velocity sensor (SE401 on the SY-242 board) peripheral circuits.	
E	6 2	2 0	Abnormality of thermistor.	Check the OIS temp sensor of optical image stabilizer (pin ㉛, ㉜ of CN401 on the SY-242 board).	
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	Non-standard battery is used.	Use the compatible battery only.	
E	9 4	0 0	Internal memory fault	Inspect the internal memory (IC201 on the SY-242 board).	

Note: After repair, be sure to perform “1-5. PROCESS AFTER FIXING FLASH ERROR”.

1-5. 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. Flash error code can be initialized by the operations on the HOME screen.

Method for Initializing the Flash Error Code

Initialize

Initializes the setting to the default setting. Even if you execute this function, the images are retained.

1 MENU →  (Settings) →  (Main Settings) → [Initialize] → [OK] → ● on the control button

Note

- Be sure not to turn off the camera while initializing.

1-1. SY-242基板交換時の注意

仕向けデータ

補修用基板と交換する時、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っている場合があります。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。

- USB SERIAL No.
- Angular Velocity Sensor
- AWB standard data input & check, Color reproduction check

Note：交換前の基板よりデータが読み取れない場合は、SY-242基板とレンズを同時に交換する必要があります。

PMB Portableについて

本機の内蔵メモリ内にはPMB Portableが書き込まれています。
補修用SY-242基板は、PMB Portableが書き込まれた状態で供給されます。

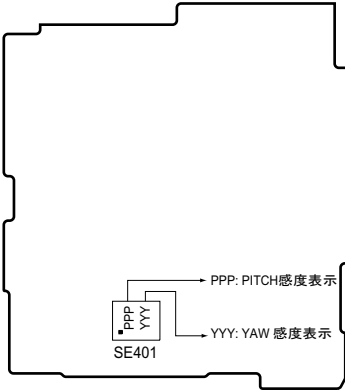
USBシリアルNo.

セットは、1台毎に異なる固有のID(USB Serial No.)を書き込んだ後、出荷されています。
新品の補修用基板には、このIDが書き込まれていないので、基板交換後にIDを入力する必要があります。
Adjust StationからAdjust Manualを起動させて「USB SERIAL No. INPUT」を実行させてください。

角速度センサ

補修用基板と交換する時、角速度センサ(SE401)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。

SY-242 BOARD (SIDE B)



Note：SY-242基板のSE401感度表示は補修用基板にしか記載されておりません。

1-2. 内蔵メモリーのデータコピーおよび消去方法

内蔵メモリーのデータコピーまたは消去はホーム画面の操作から実行可能です。(消去する場合は内蔵メモリーの初期化を行います。)

Note1：SY-242基板交換の際は、基板交換前に内蔵メモリーのデータを消去して下さい。

Note2：SY-242基板交換の際は、基板交換後に内蔵メモリーのフォーマットおよび初期化を実行して下さい。

内蔵メモリーのコピー方法

コピー

内蔵メモリーに記録した画像を、メモリーカードに一括コピーします。

1 十分な空き容量のあるメモリーカードを本機に入れる

2 MENU → (設定) → (メモリーカードツール) → [コピー] → [実行] → コントロールボタン中央の●

ご注意

- 十分に充電したバッテリーをご使用ください。残量の少ないバッテリーを使用して画像ファイルをコピーすると、バッテリー切れのためデータを転送できなかったり、データを破損するおそれがあります。
- 画像ごとのコピーはできません。
- データをコピーしても、内蔵メモリー内のデータは削除されません。内蔵メモリーの内容を消去するには、コピー後にメモリーカードを本体から取りはずし、[内蔵メモリーツール]の[フォーマット]を行ってください。
- データをコピーするとメモリーカード内に新しいフォルダが作成されます。コピー先のフォルダを指定することはできません。

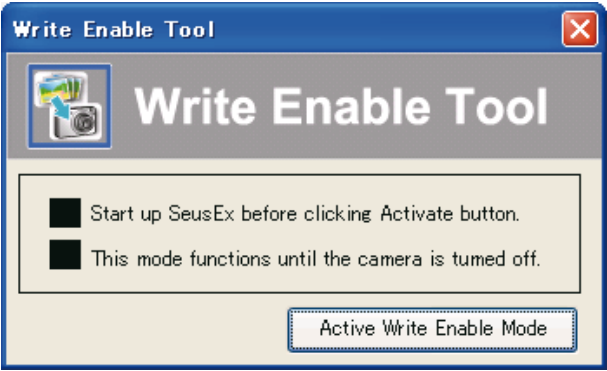
内蔵メモリー、もしくはメモリーカード

1-3. 内蔵メモリーヘデータを書き戻す方法

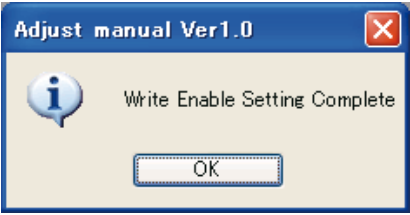
通常は、PCからカメラの内蔵メモリーヘデータを書き込むことはできない設定になっています。基板交換後などに、内蔵メモリーヘデータを書き戻す場合には、この設定を一時的に変更する必要があります。設定の変更は、Adjust StationからAdjust Manualを起動させて書き込み許可ツール(Write Enable Tool)を使用します。

書き戻し方法

- 1) Adjust StationからAdjust Manualを起動する。
- 2)  (Write Enable Tool) ボタンをクリックする。
- 3) “Activate Write Enable Mode” ボタンをクリックする。



- 4) 設定の変更が終了すると、次のメッセージが表示されますので“OK”ボタンをクリックする。



- 5) ドライバを元に戻して、カメラとPCをマストレージ接続する。
- 6) PCに読み出しておいたデータをカメラの内蔵メモリーに書き込む。
- 7) カメラとPCの接続を解除し、カメラの電源をOFFにする。

注意： カメラの電源をOFFにすることにより、書き込み許可の設定が解除されます。

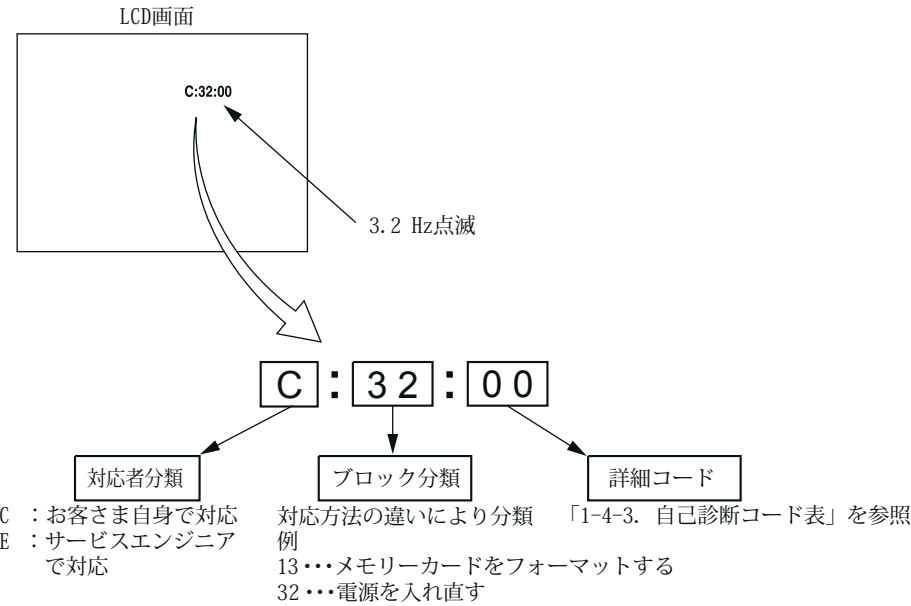
1-4. 自己診断機能

1-4-1. 自己診断機能について

本機の動作に不具合が生じたとき、自己診断機能が働き、LCD画面に、どう処置したらよいか判断できる表示を行います。自己診断機能については取扱説明書にも掲載されています。

1-4-2. 自己診断表示

本機の動作に不具合が生じたとき、LCD画面にアルファベットと4桁の数字が表示され、3.2Hzで点滅します。この5文字の表示によって対応者分類および不具合の生じたブロックの分類、不具合の詳細コードを示します。



1-4-3. 自己診断コード表

自己診断コード				症状／状態	対応／方法
対応者	ブロック機能	詳細コード			
C	1 3	0 1	内蔵メモリーにメディアエラーがあった。	電源を入れ直す。	
			内蔵メモリーにフォーマットエラーがあった。	内蔵メモリーをフォーマットする。	
			フォーマットしていないメモリーカードを入れた。	メモリーカードをフォーマットする。	
			メモリーカードが壊れている。	新しいメモリーカードに交換する。	
			メモリーカードのタイプエラーを検出した。	規格内のメモリーカードを挿入する。	
			メモリーカードが読み／書きできない。	電源の入れ直し、またはメモリーカードの挿し／外しを数回試す。	
C	3 2	0 1	ハードウェアトラブルを検出した。	電源を入れ直す。	
E	6 1	0 0	フォーカスが合いにくい。 (フォーカスの初期化ができない)	操作スイッチの電源を入れ直す。 復帰しない場合はレンズブロックのフォーカスリセットセンサ(SY-242基板CN402 ㊸ピン)を点検する。 異常なければフォーカスマータ駆動IC (SY-242基板IC401)を点検する。	
E	6 1	1 0	ズーム動作の異常。 (ズームレンズの初期化ができない)	操作スイッチの電源を入れ直す。 ズームボタンを操作したときにズーム動作をすればレンズブロックのズームリセットセンサ(SY-242基板CN402 ㊹ピン)を点検する。 異常なければズームモータ駆動IC (SY-242基板IC401)を点検する。	
E	6 2	0 2	手振れ補正用ICの異常。	手振れ補正用IC (SY-242基板IC401)を点検または交換する。	
E	6 2	1 0	手振れ補正用ICの異常。 (レンズ初期化異常)	手振れ補正用IC (SY-242基板IC401)を点検または交換する。	
E	6 2	1 1	レンズオーバーヒート(PITCH)	光学手振れ補正ブロックのホール素子(PITCH) (SY-242基板CN402 ㊿, ㊾ピン)を点検する。 異常なければPITCH角速度センサ(SY-242基板SE401)周辺の回路を点検する。	
E	6 2	1 2	レンズオーバーヒート(YAW)	光学手振れ補正ブロックのホール素子(YAW) (SY-242基板CN402 ㊾, ㊿ピン)を点検する。 異常なければYAW角速度センサ(SY-242基板SE401)周辺の回路を点検する。	
E	6 2	2 0	サーミスタの異常。	光学手振れ補正ブロックの温度センサ(SY-242基板CN401㊿, ㊾ピン)を点検する。	
E	9 1	0 1	フラッシュの充電異常。	フラッシュユニットを点検または交換する。(Note)	
E	9 2	0 0	規定外の充電池が使用された。	規定の充電池を使用する。	
E	9 4	0 0	内蔵メモリーの書き込み/消去動作不良	内蔵メモリー (SY-242基板IC201)を点検する。	

Note：交換後は、必ず「1-5. フラッシュエラー発生時の対処法」を行って下さい。

1-5. 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。エラーの解除はホーム画面から初期化操作を実行することにより行います。

フラッシュエラーの解除方法

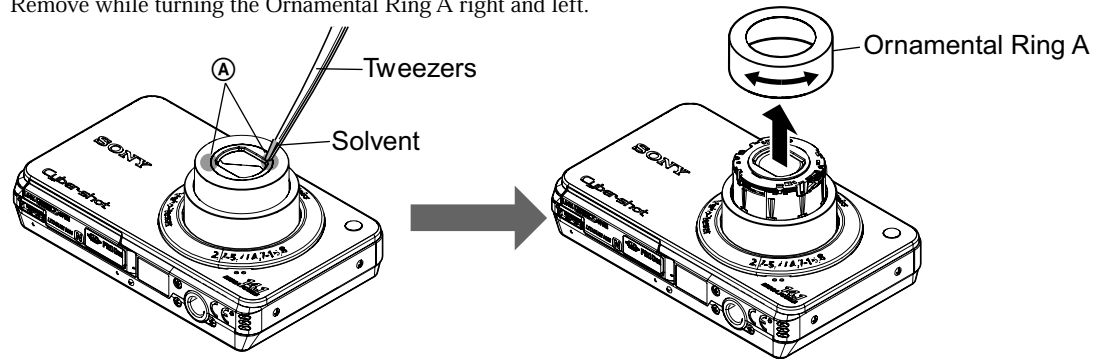
設定リセット

お買い上げ時の設定に戻します。
[設定リセット]を実行しても、画像は削除されません。

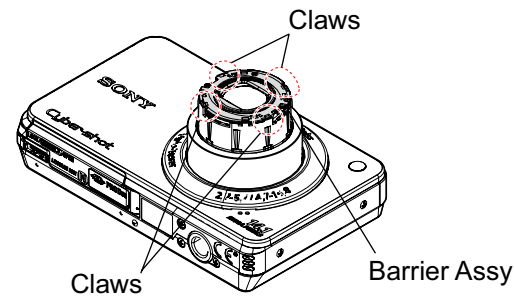
1-6. ORNAMENTAL RING A OR BARRIER ASSY REPLACING METHOD

Removal

- ① Turn on the power switch and extend the lens.
- ② Detach the battery.
- ③ Pour a solvent such as alcohol from two places ① to the tweezers or a needle shown below into a gap of Ornamental Ring A.
- ④ Remove while turning the Ornamental Ring A right and left.

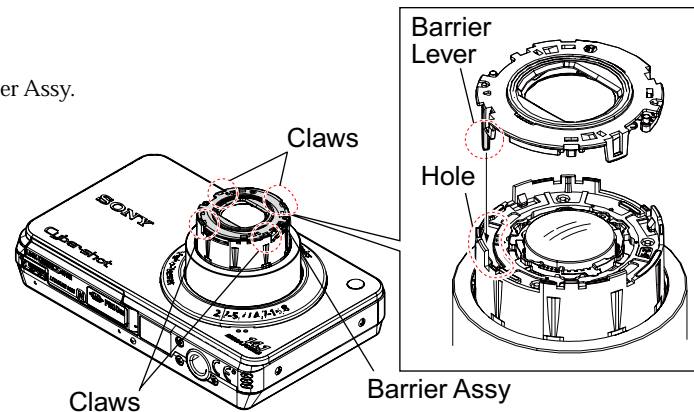
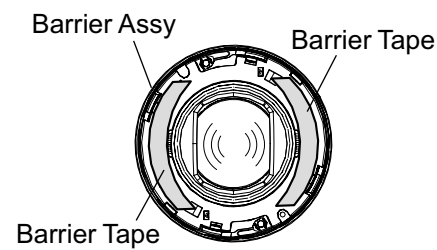


- ⑤ Remove Barrier Assy by disengaging four claws.

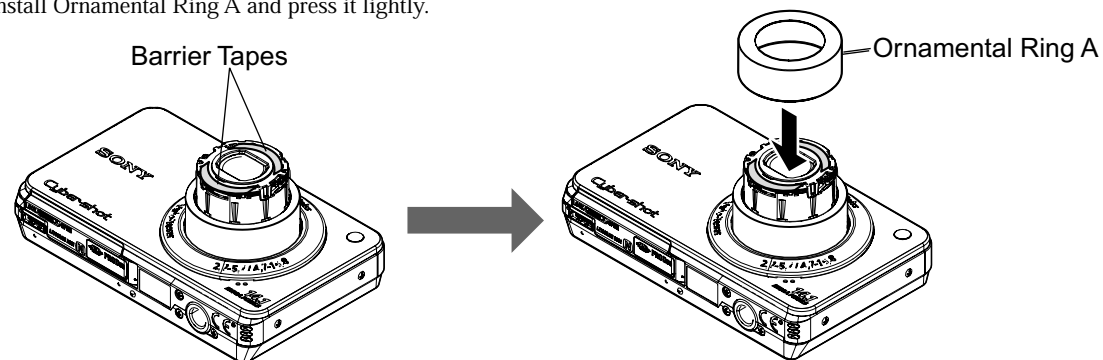


Installation

- ① Affix two Barrier Tapes to Barrier Assy.
Note: The tape must not be wrinkled.
- ② With four claws fitted in position, install the Barrier Assy.



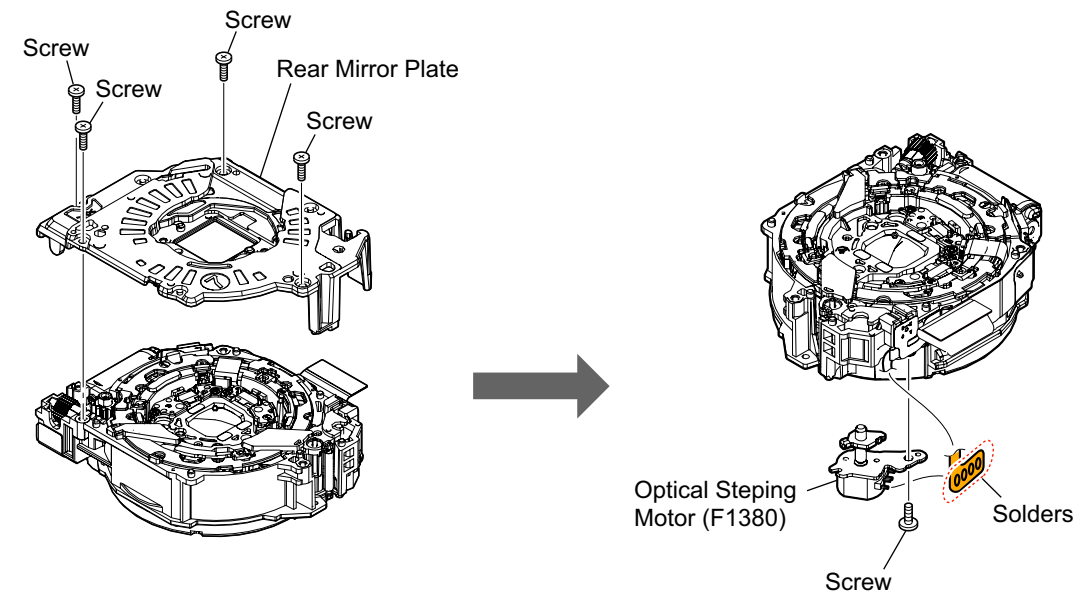
- ③ Peel off release papers of Barrier Tapes.
- ④ Install Ornamental Ring A and press it lightly.



1-7. OPTICAL STEPING MOTOR (F1380) REPLACING METHOD

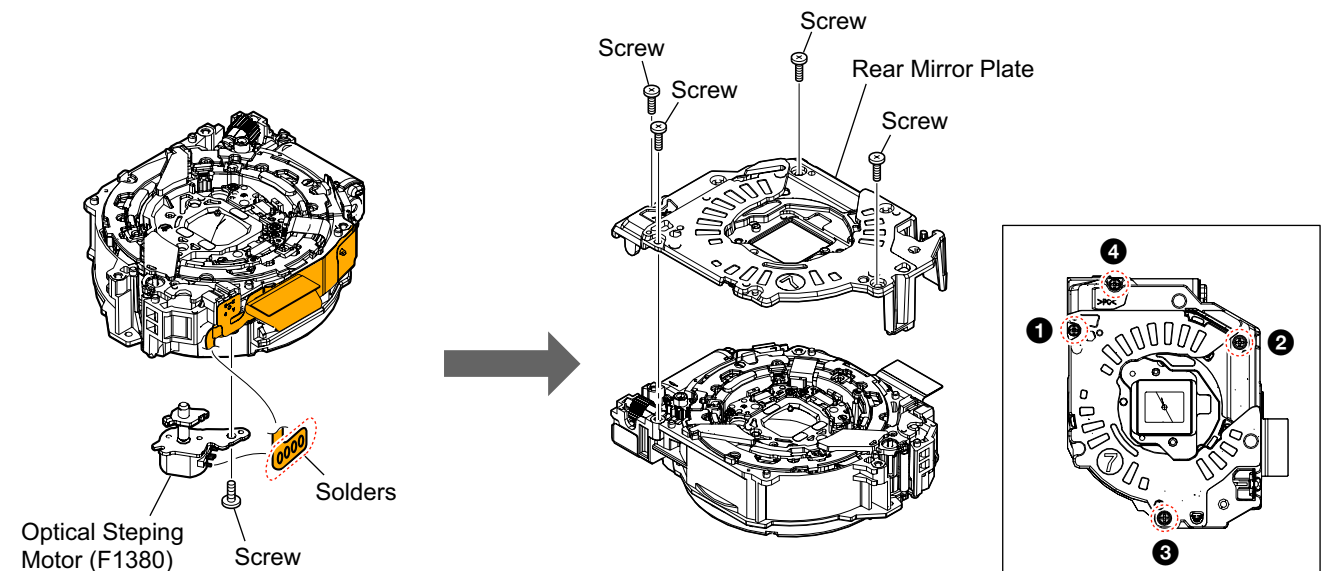
Removal

- ① Remove four screws, and remove the Rear Mirror Plate.
- ② Remove one screw.
- ③ Remove the four soldering, and remove the Optical Stepping Motor (F1380).



Installation

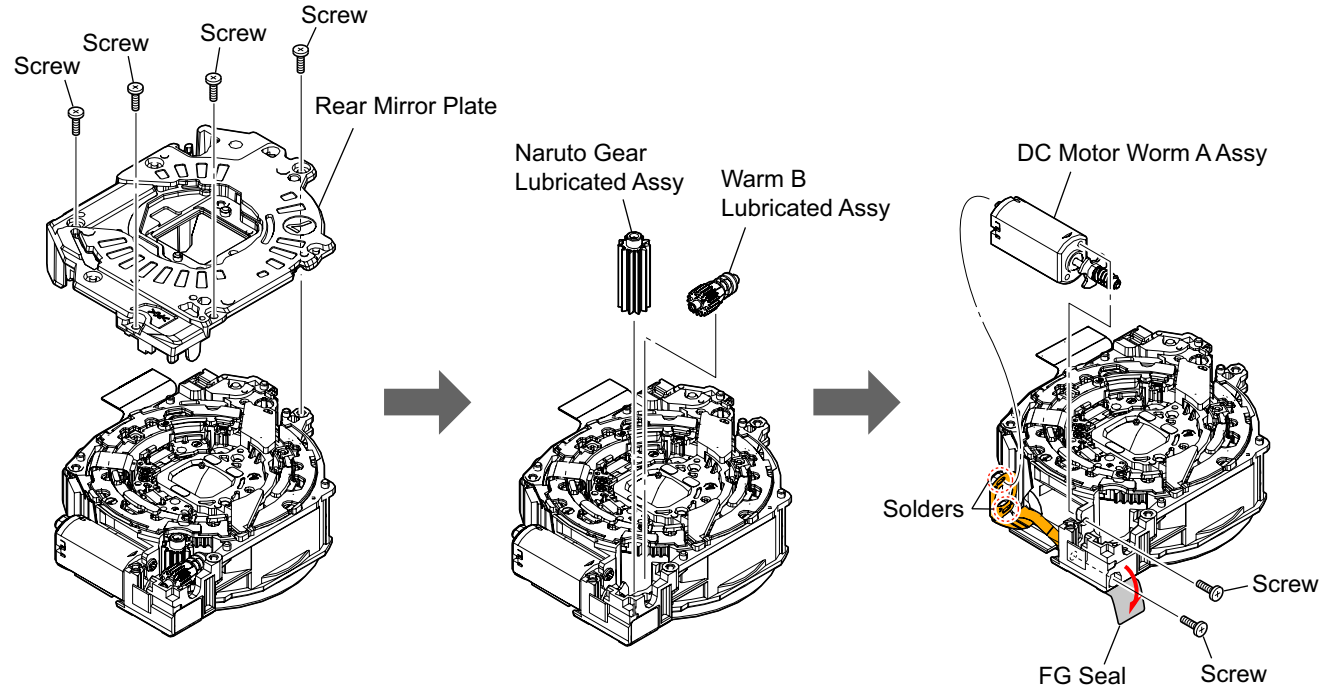
- ① Solder the four locations.
- ② Install the Optical Stepping Motor (F1380) with one screw.
* Tightening torque = $0.049 \pm 0.01 \text{ N} \cdot \text{m}$ ($0.5 \pm 0.1 \text{ kgf} \cdot \text{cm}$)
- ③ Install the Rear Mirror Plate with the four screws in the order of numbers.
* Tightening torque = $0.049 \pm 0.01 \text{ N} \cdot \text{m}$ ($0.5 \pm 0.1 \text{ kgf} \cdot \text{cm}$)



1-8. DC MOTOR WORM A ASSY REPLACING METHOD

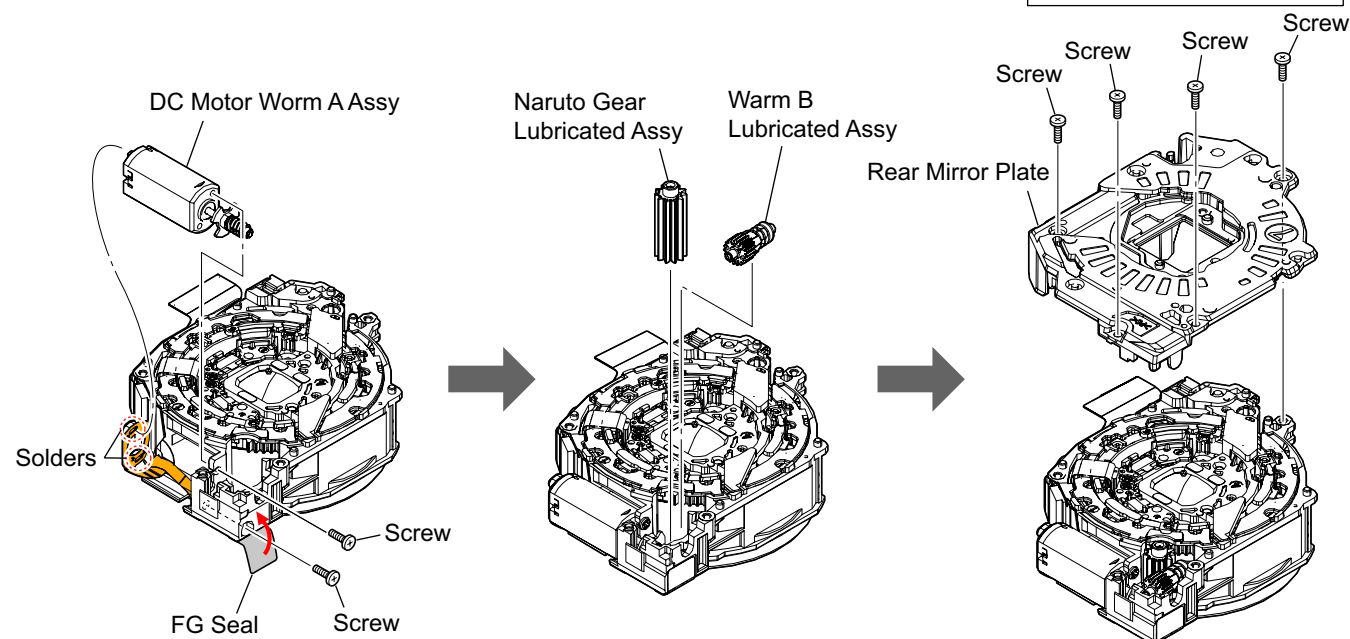
Removal

- ① Remove four screws, and remove the Rear Mirror Plate.
- ② Remove the Naruto Gear Lubricated Assy and Warm B Lubricated Assy.
- ③ Peel off the FG Seal.
- ④ Remove two screws.
- ⑤ Remove the two soldering, and remove the DC Motor Worm A Assy.



Installation

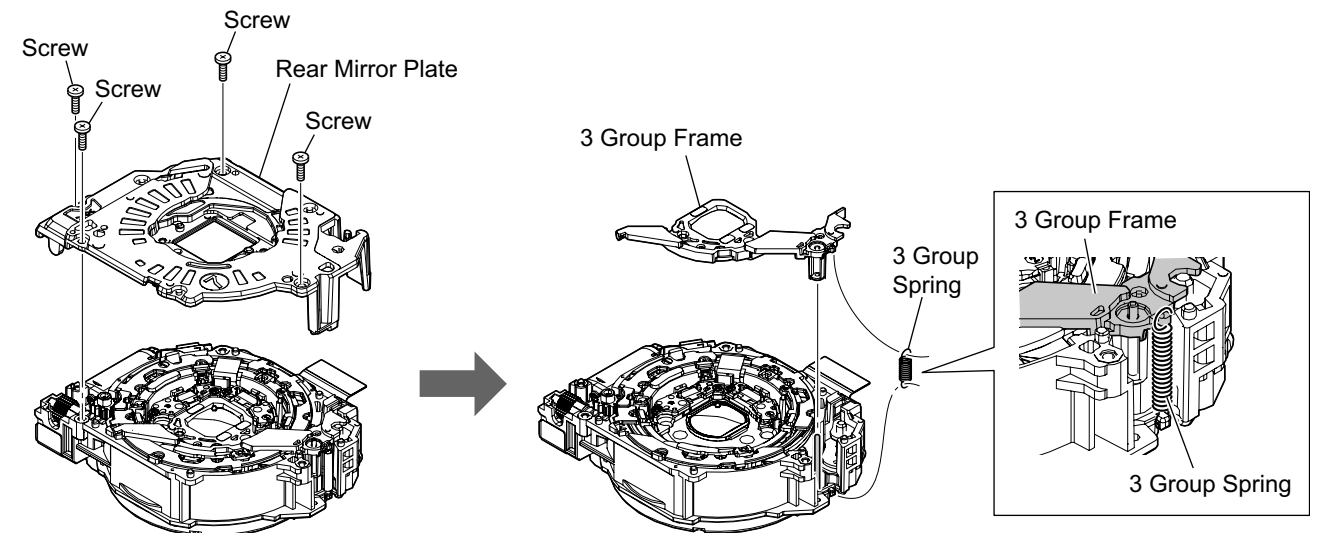
- ① Solder the two locations.
- ② Install the DC Motor Worm A Assy with two screws.
*Tightening torque = $0.049 \pm 0.01\text{N} \cdot \text{m}$ ($0.5 \pm 0.1\text{kgf} \cdot \text{cm}$)
- ③ Put the FG Seal.
- ④ Install the Naruto Gear Lubricated Assy and Warm B Lubricated Assy.
- ⑤ Install the Rear Mirror Plate with the four screws in the order of numbers.
*Tightening torque = $0.049 \pm 0.01\text{N} \cdot \text{m}$ ($0.5 \pm 0.1\text{kgf} \cdot \text{cm}$)



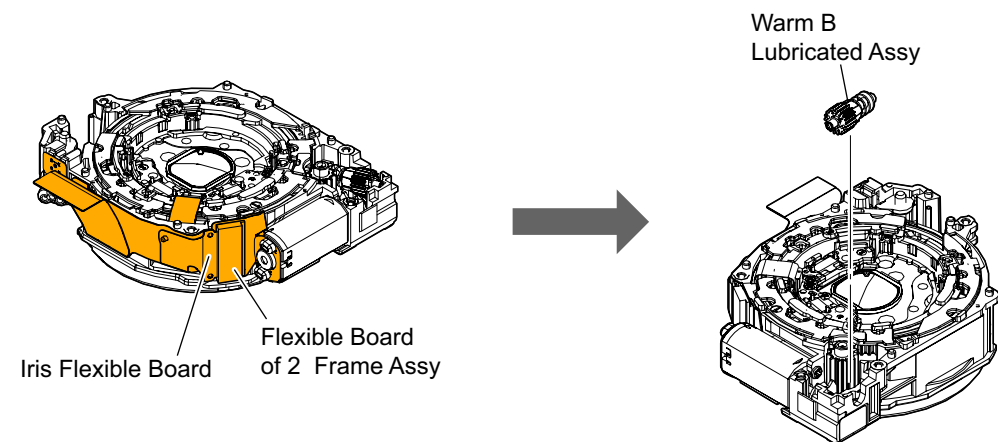
1-9. CAM TUBE BLOCK ASSY AND STRAIGHT TUBE LUBRICATED ASSY AND 1 GROUP FRAME REPLACING METHOD

Removal

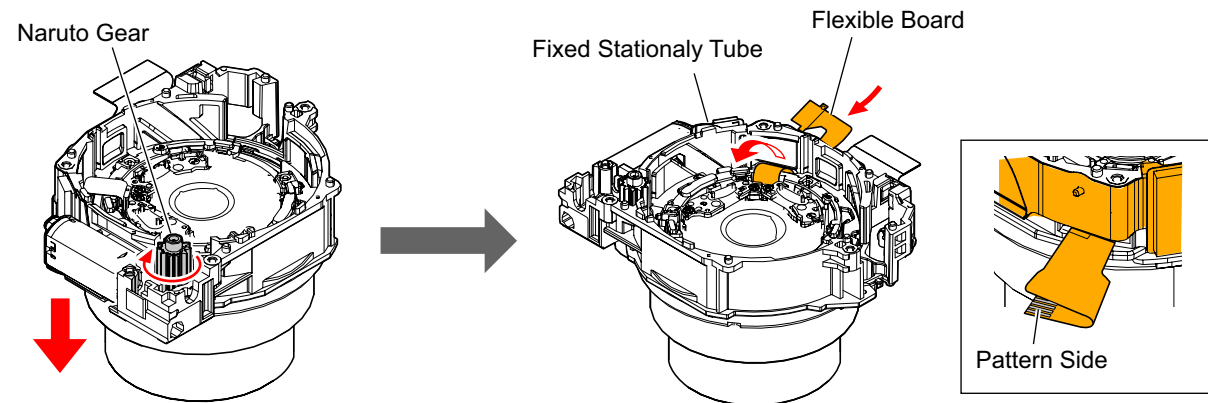
- ① Remove four screws, and remove the Rear Mirror Plate.
- ② Remove the 3 Group Frame.
- ③ Remove the 3 Group Spring.



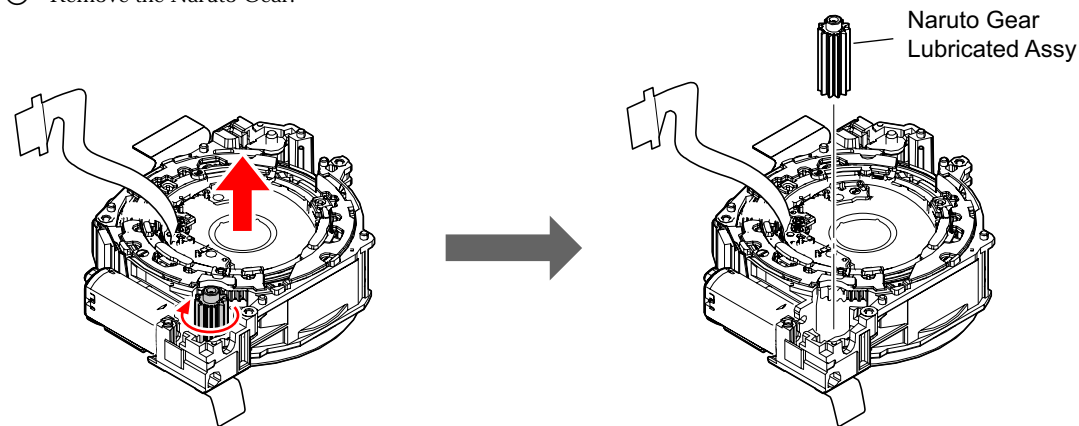
- ④ Disconnect the Iris Flexible Board from connector of 2 Frame Assy.
- ⑤ Remove the Naruto Gear Lubricated Assy.



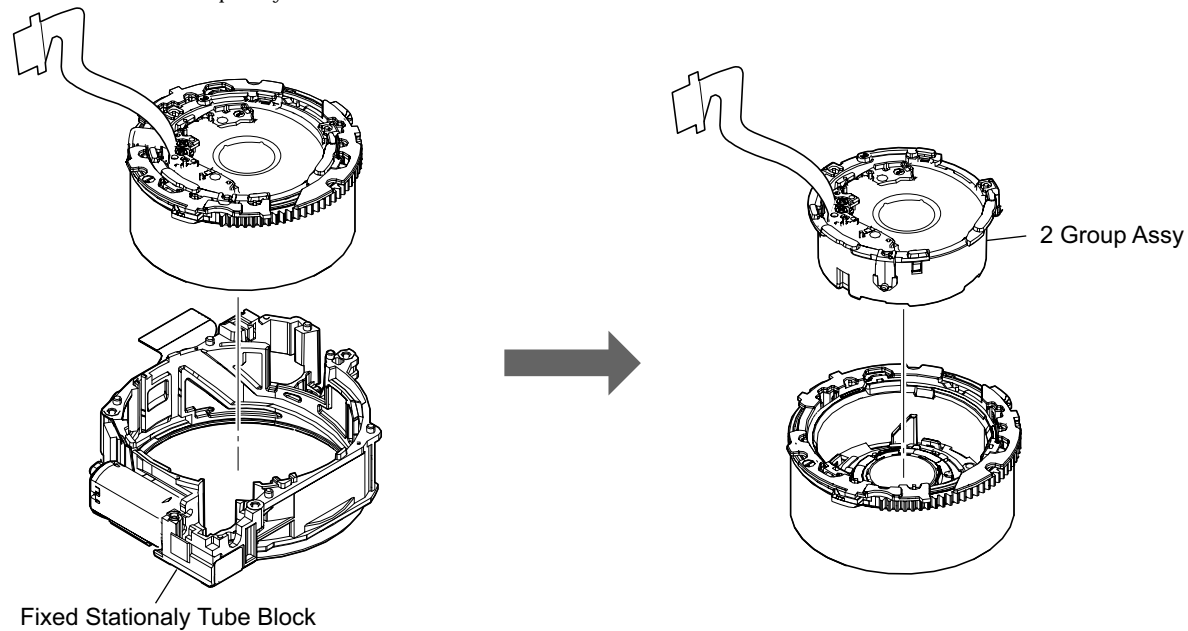
- ⑥ Rotate the Naruto Gear and the lens is drawn out.
 ⑦ Pass the Flexible Board through the hole of the Fixed Stationary Tube.
Note: Fold the Flexible Board so that the pattern side is come to inside.



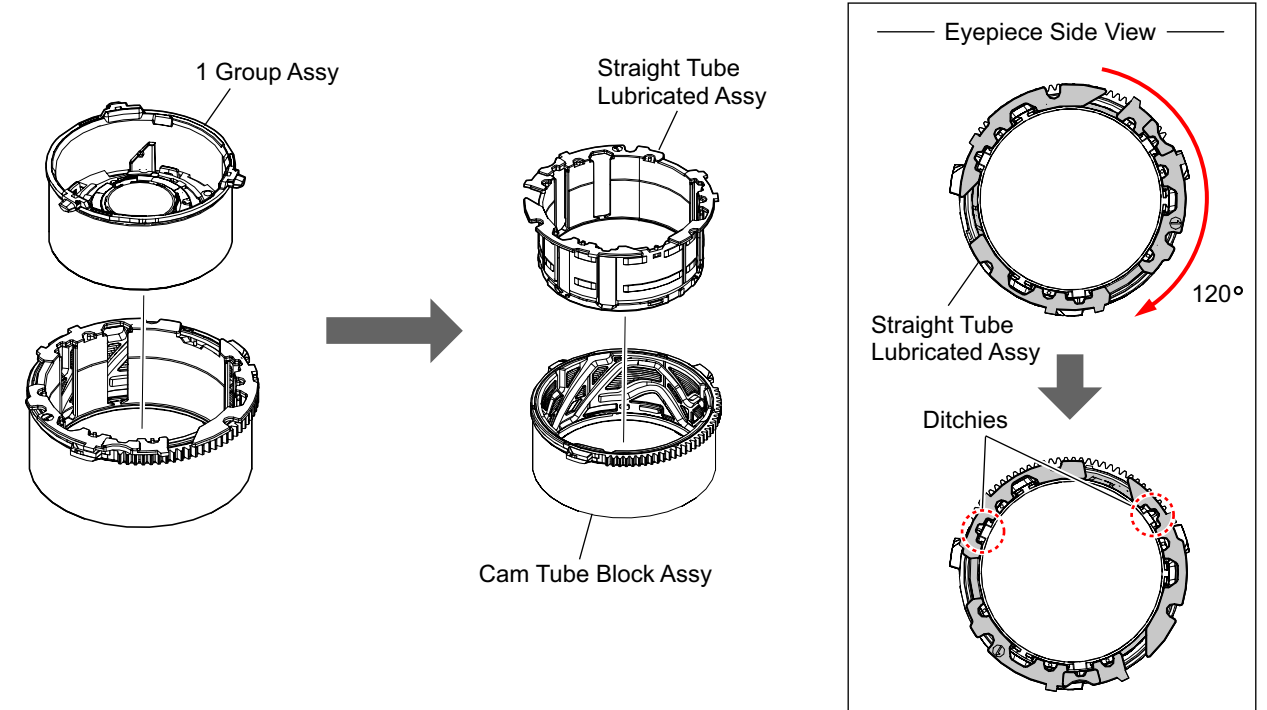
- ⑧ Rotate the Naruto Gear and the lens is retracticl.
 ⑨ Remove the Naruto Gear.



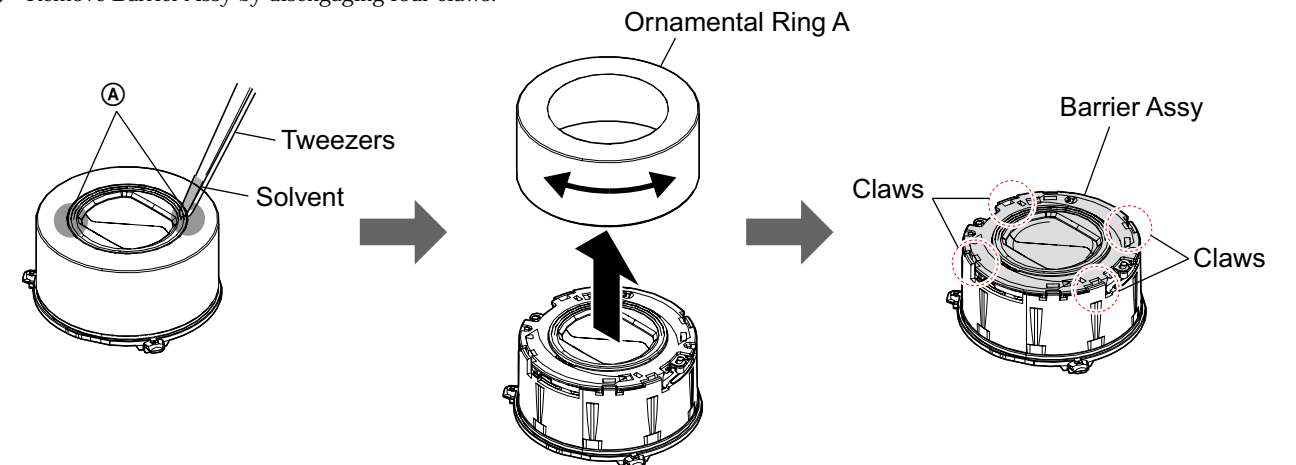
- ⑩ Remove the Fixed Stationary Tube Block.
 ⑪ Remove the 2 Group Assy.



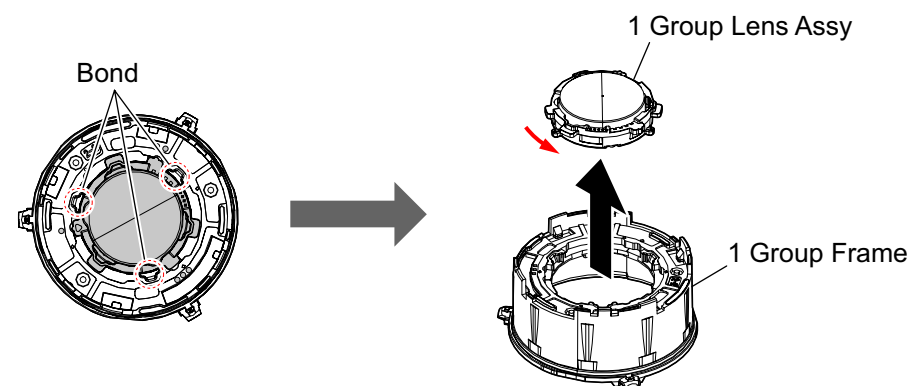
- ⑫ Remove the 1 Group Assy.
 ⑬ Rotate (about 120 degree) Straight Tube Lubricated Assy and align the two points of ditchies of the Straight Tube Lubricated Assy with ditchies of the Cam Tube Block Assy, then remove the Straight Tube Lubricated Assy from the Cam Tube Block Assy.



- ⑭ Pour a solvent such as alcohol from two places.
 ⑮ Remove while turning the Ornamental Ring A right and left.
 ⑯ Remove Barrier Assy by disengaging four claws.

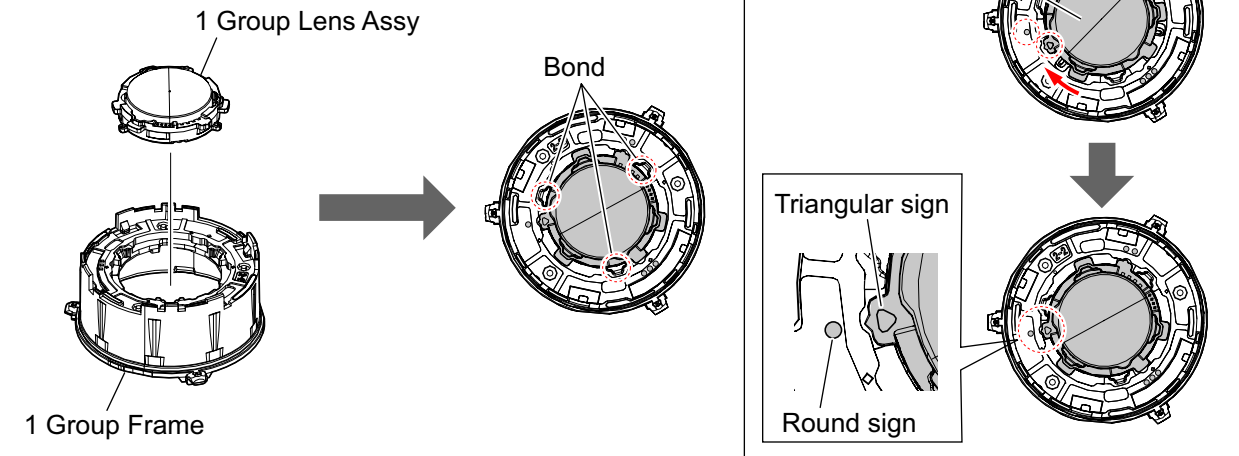


- ⑰ Remove the bond at the three points.
 ⑱ Rotate 1 Group Lens Assy and remove it from the 1 Group Frame.

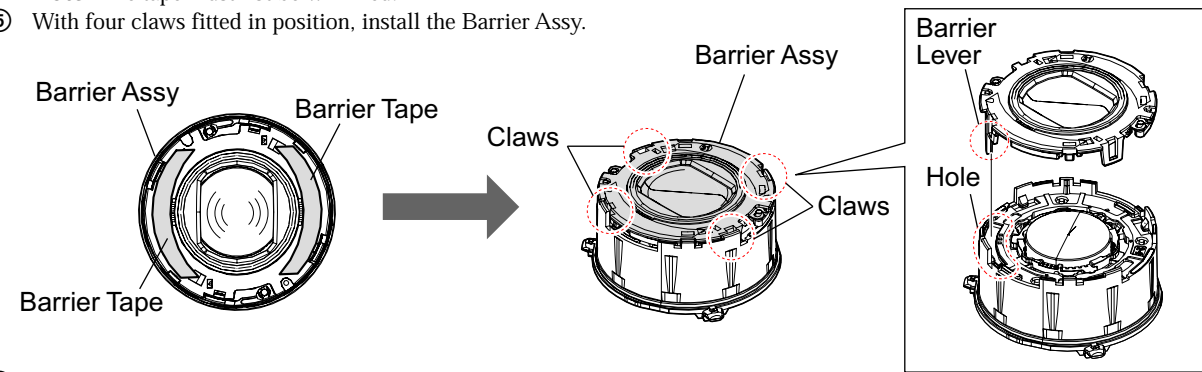


Installation

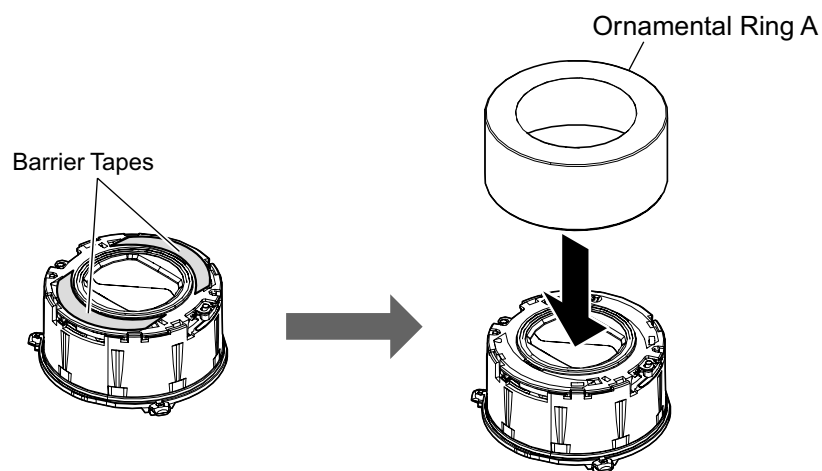
- ① Install the 1 Group Lens Assy to the 1 Group Frame.
- ② Rotate the 1 Group Lens Assy and align triangular sign with round sign.
- ③ Apply the bond at the three points.
Note: Use the Super X or the equivalent



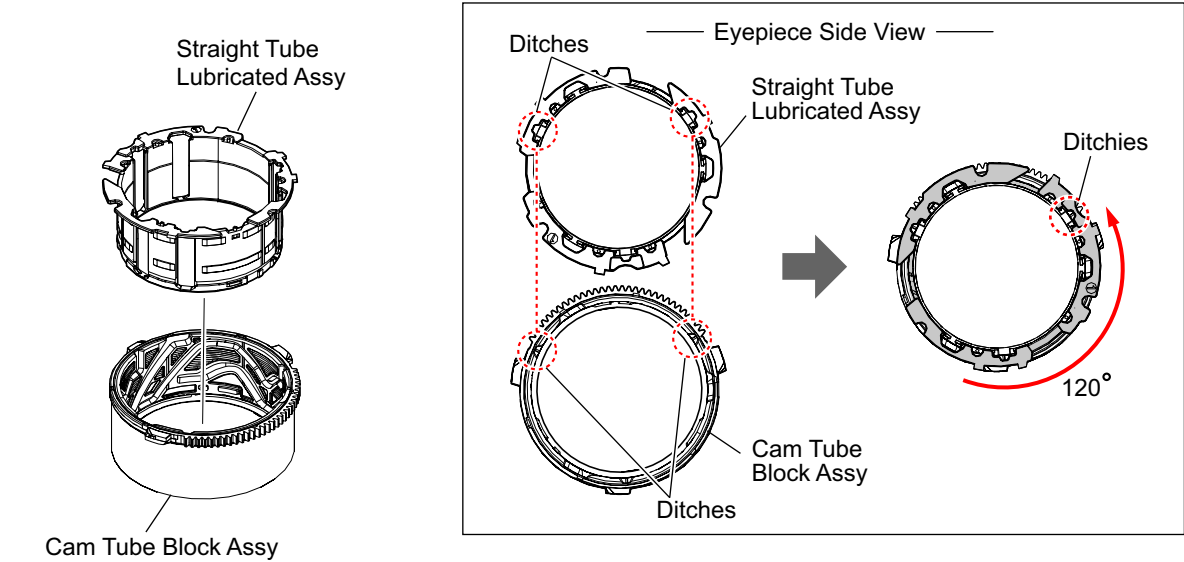
- ④ Affix two Barrier Tapes to Barrier Assy.
Note: The tape must not be wrinkled.
- ⑤ With four claws fitted in position, install the Barrier Assy.



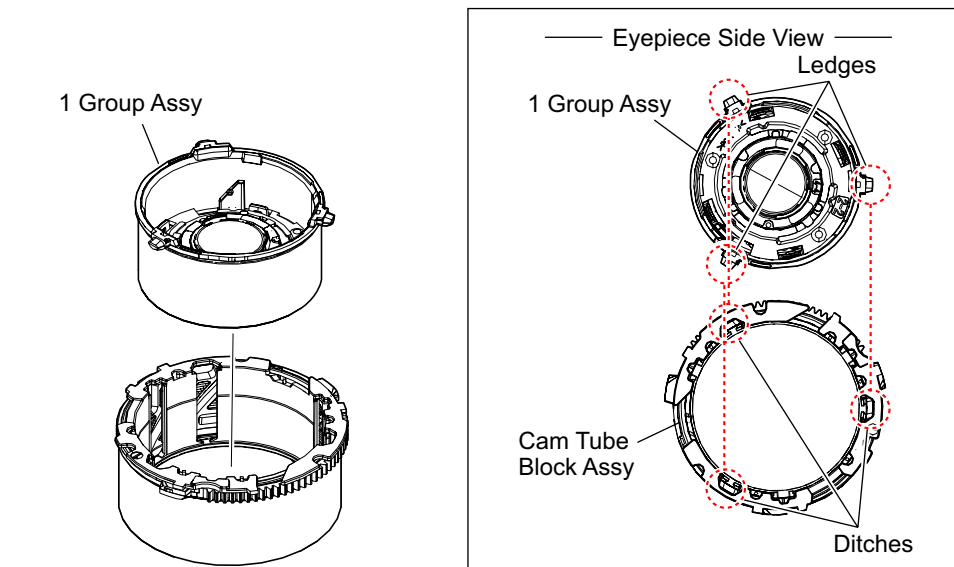
- ⑥ Peel off release papers of Barrier Tapes.
- ⑦ Install Ornamental Ring A and press it lightly.



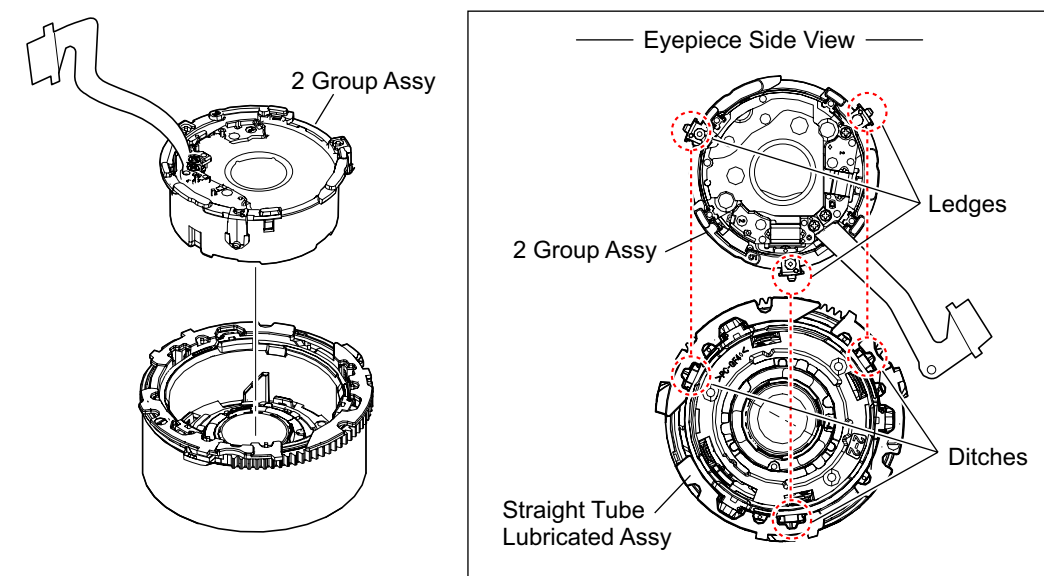
- ⑧ Install the Straight Tube Lubricated Assy to the Cam Tube Block Assy.
- ⑨ Rotate (about 120 degree) Straight Tube Lubricated Assy and align two points of ditches of the Straight Tube Lubricated Assy with ditches of the Cam Tube Block Assy.



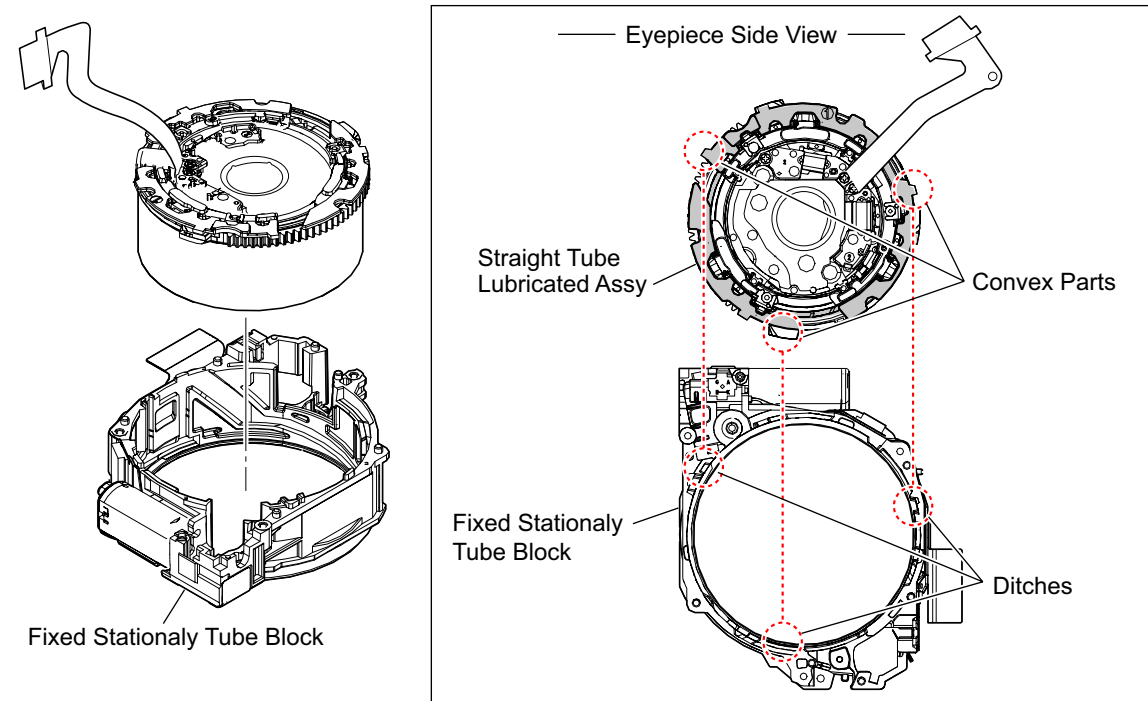
- ⑩ Match three ledges of the 1 Group Assy to three ditches of the Cam Tube Block Assy and install it.



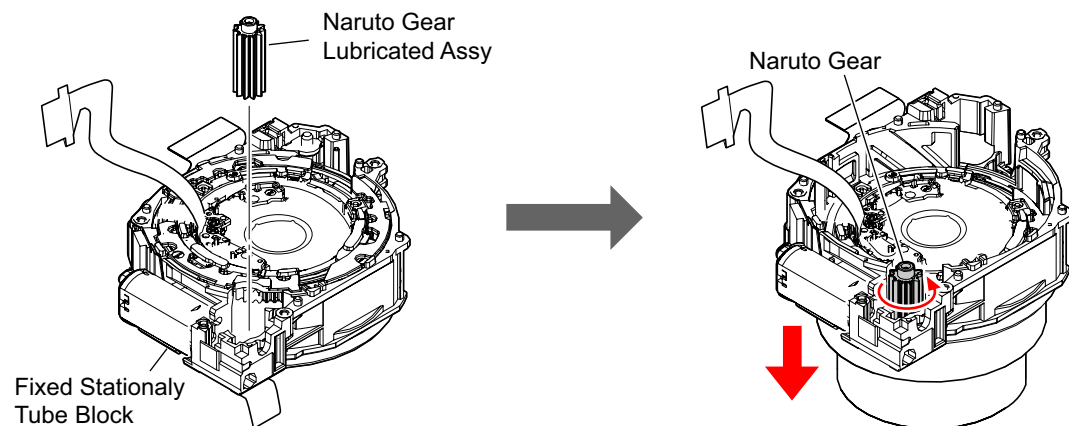
- ⑪ Match three ledges of the 2 Group Assy to three ditches of the Straight Tube Lubricated Assy and install it.



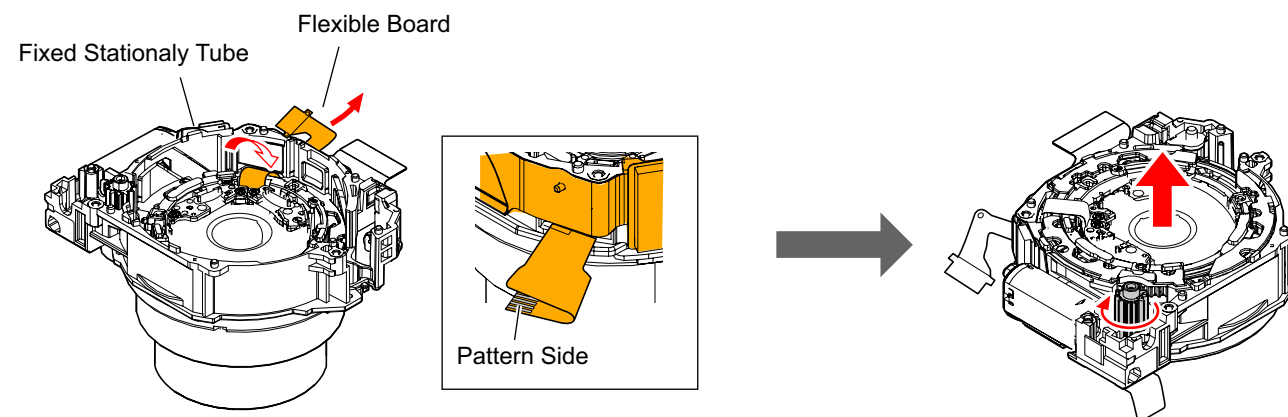
- ⑫ Match three ditches of the Fixed Stationary Tube Block to three convex parts of the Straight Tube Lubricated Assy and install it.



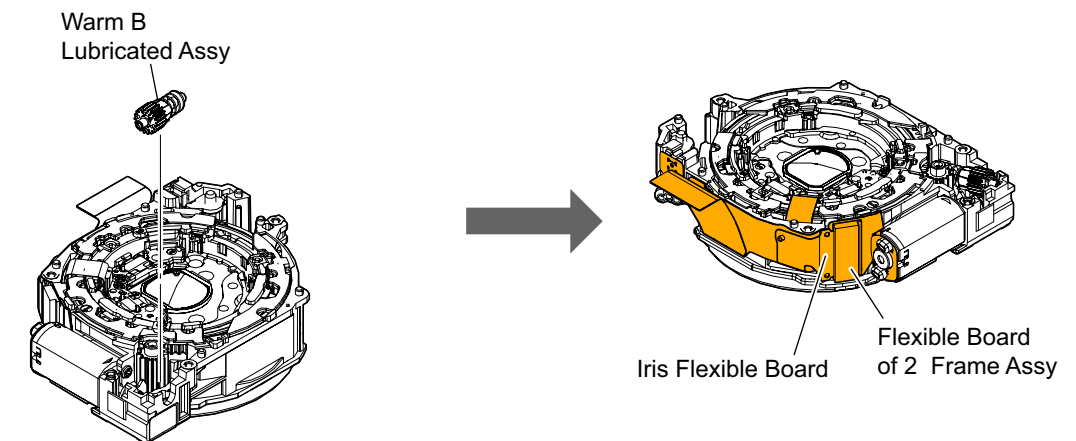
- ⑬ Install the Naruto Gear on the Fixed Stationary Tube Block.
⑭ Rotate the Naruto Gear and the lens is drawn out.



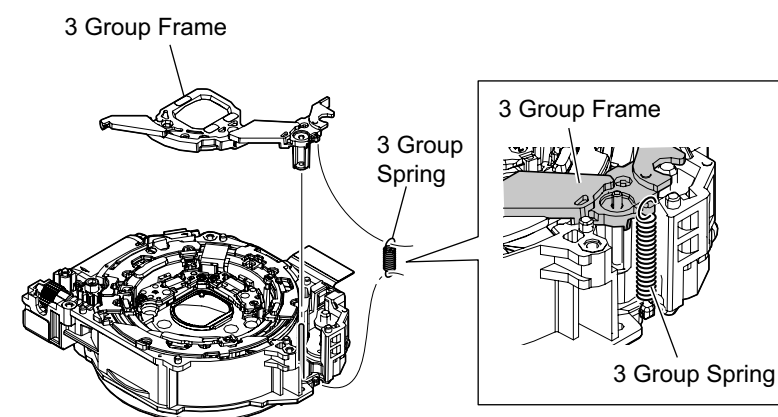
- ⑮ Pass the Flexible Board through the hole of the Fixed Stationary Tube.
Note: Fold the Flexible Board so that the pattern side is come to inside.
⑯ Rotate the Naruto Gear and the lens is retracticl.



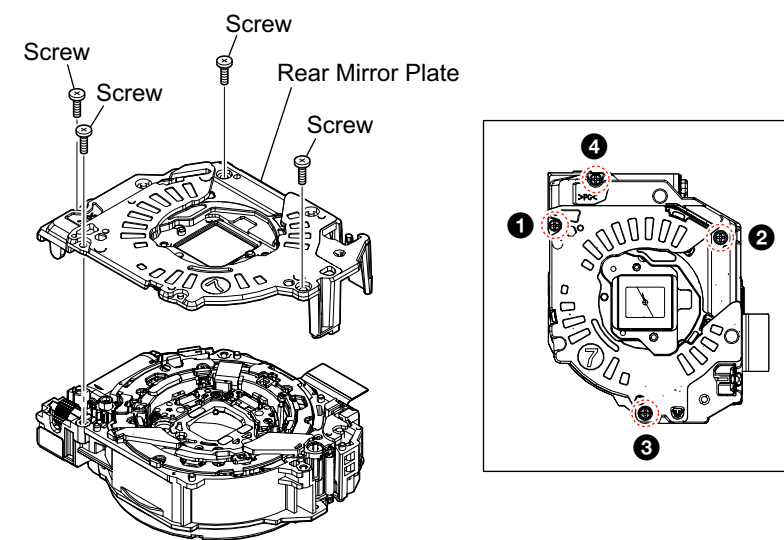
- ⑰ Install the Warm B Lubricated Assy.
⑱ Connect the Iris Flexible Board from connector of 2 Frame Assy.



- ⑲ Install the 3 Group Spring.
⑳ Install the 3 Group Frame.



- ㉑ Install the Rear Mirror Plate with the four screws in the order of numbers.
* Tightening torque = $0.049 \pm 0.01 \text{ N} \cdot \text{m}$ ($0.5 \pm 0.1 \text{ kgf} \cdot \text{cm}$)



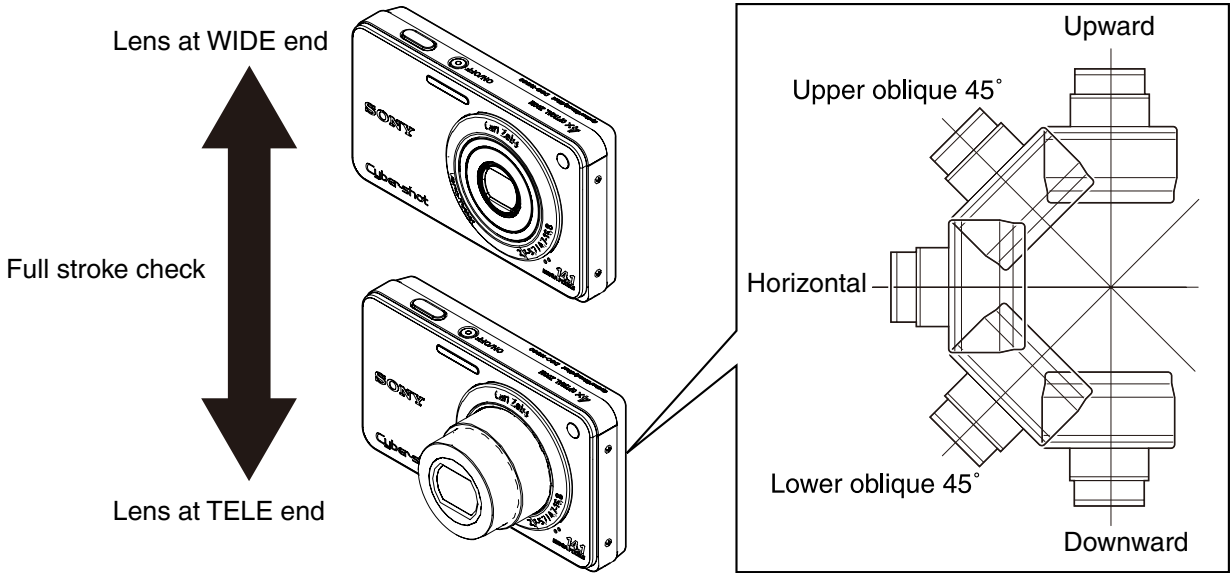
- ㉒ Perform the Flange Back Adjustment after the assembling.

1-10. FINAL INSPECTION

1-10-1. Confirm There Is No Fault In Actual Motion/Actual Screen

Inspect it as follows when you exchange parts in the lens block.

- ① Zoom motion (Check five postures: horizontal, upward/downward, upper/lower oblique 45°)
No abnormal sound or motion must be found over full stroke between TELE end and WIDE end.
- ② Zoom image
No abnormality such as a skipped image or wavy image must be found in the image through LCD or finder over full stroke between TELE end and WIDE end.
- ③ Barrier (Check five postures: horizontal, upward/downward, upper/lower oblique 45°)
The barrier must be opened and closed fully, free from a sticking in the midway.
No abnormal sound must be heard during the operation.
- ④ Appearance condition
Scratches or stains must not be noticeable, except that the customer permits them.
- ⑤ Foreign matters on the lens
The lens condition must not be worse than that when the camera was received from the customer.



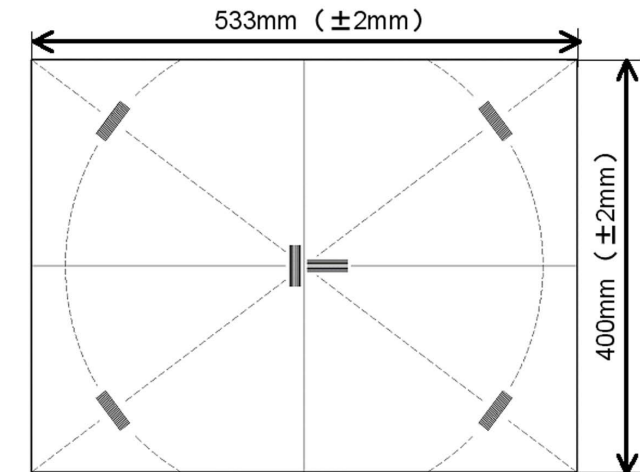
1-10-2. Inspection When Tube (A) Assy Or Cam Tube Is Replaced

Focus check

- ① Preparation
 - Camera installed re-assemble lens.
 - Chart (Printed PDF file at the same magnification) (Refer to <Reference>)
 - Tripod
 - Mirror (ex. CD)
 - Memory card
 - PC
- ② Shoot setting
 - (1) Paste the chart.
 - Chart should be on the flat wall.
 - Illuminance level in the chart should be the same.
 - Make the tripod's height and the center of the chart to the same height.
 - Enough space needed for shooting.
 - (2) Set the camera.
 - Set [P] mode
 - Set [Maximum] size
 - Set ISO lowest level
 - Set Steady Shot [OFF]
 - Set Flash [OFF]
 - (3) Set the camera on a tripod.
 - (4) Adjust the position of the camera and the chart.
 - 1. Set the zoom position of the camera at Wide end.
 - 2. Attach the mirror onto the center of the chart.
 - * The mirror should not tilt on the chart.
 - 3. Set the camera to display the chart on LCD like in the following picture.
 - 4. Adjust the camera position to the center of the chart.
 - * Adjust the tripod height and the position (Lateral direction).
 - 5. Adjust the camera angle to the frame of the chart with tripod.
 - Remove the mirror.
- ③ Shooting
 - (1) Set [Self-Timer]
 - (2) Shot
- ④ Check the shot image.
 - (1) Check the shot image on PC.
 - 100% Display (Display at the same magnification of its Pixel.)
 - Compare the image with the sample you set.
 - No extreme focus blurring
 - It should be distinguished the black and white by the sharpness between them.
 - If it is in NG level, replace the lens unit.

<Reference>

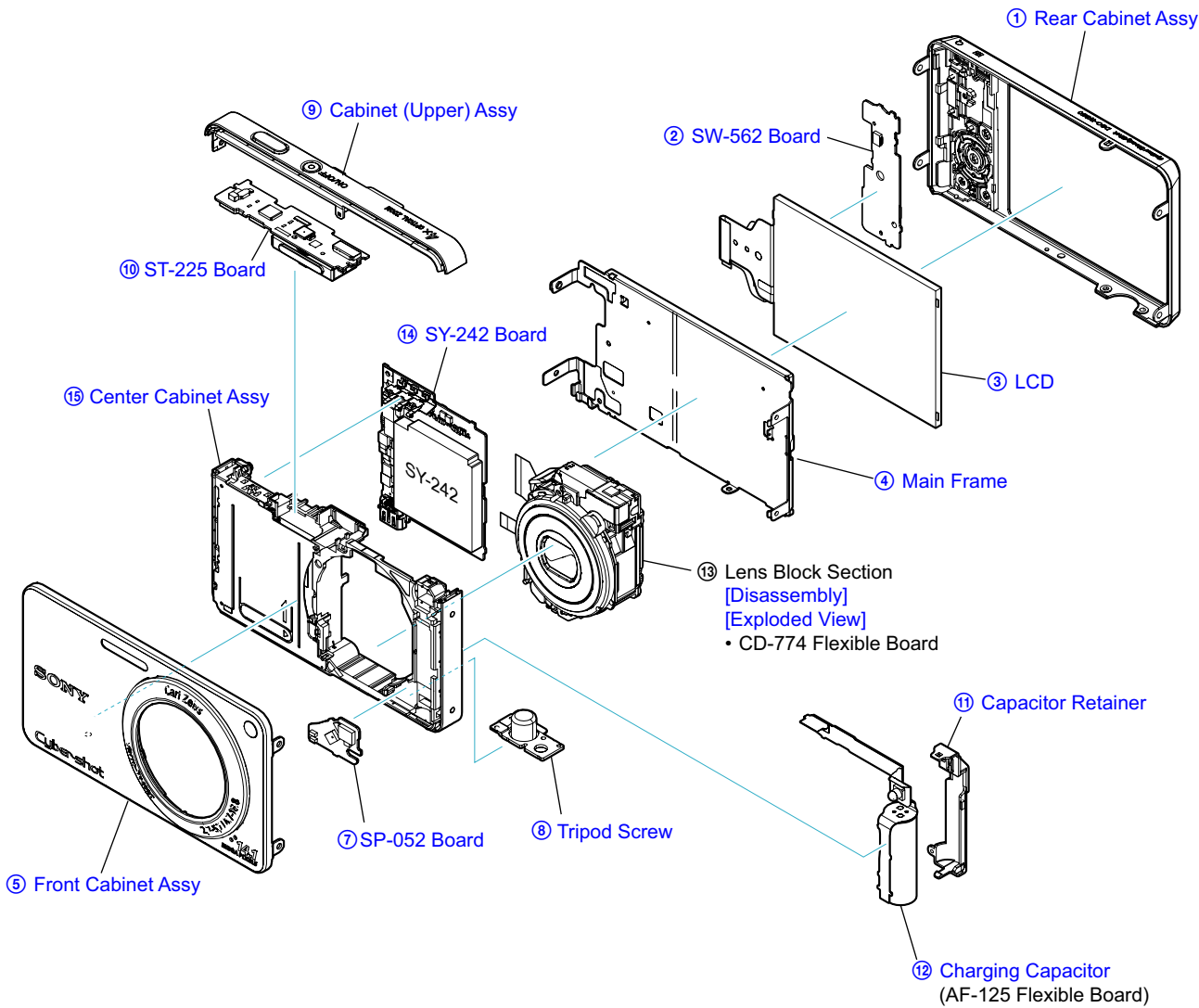
- **How to Print the Chart**
Print "Forcus-Chart_A3.pdf" with printer.
Print at the same magnification (It means 100 % size).
Check the settings of printer to print in proper size.
- **Check of chart size.**
Make charts together and check if the size of charts is the following size.
 - * The chart consists of 2 pcs.



2. REPAIR PARTS LIST

IDENTIFYING PARTS

Follow the disassembly in the numerical order given.



(ENGLISH)

NOTE:

- -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.
- The mechanical parts with no reference number in the exploded views are not supplied.
- 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.
- CAPACITORS:
 - uF: μ F
 - COILS
 - uH: μ H
- RESISTORS
 - All resistors are in ohms.
 - METAL: metal-film resistor
 - METAL OXIDE: Metal Oxide-film resistor
 - F: nonflammable
- SEMICONDUCTORS
 - In each case, u: μ , for example:
 - uA...: μ A..., uPA..., μ PA...,
 - uPB..., μ PB..., μ PC..., μ PC...,
 - uPD..., μ PD...

(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。
- 抵抗の単位 Ω は省略してあります。
- 金 被：金属被膜抵抗。
- サンキン：酸化金属被膜抵抗。
- インダクタの単位でuHは μ Hを示します。
- 半導体の名称でuA..., uPA..., uPB..., uPC..., uPD...等はそれぞれ μ A..., μ PA..., μ PB..., μ PC..., μ PD...を示します。

• Abbreviation

- AR : Argentine model
- AUS : Australian model
- BR : Brazilian model
- CH : Chinese model
- CND : Canadian model
- HK : Hong Kong model
- J : Japanese model
- KR : Korea model
- JE : Tourist model

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

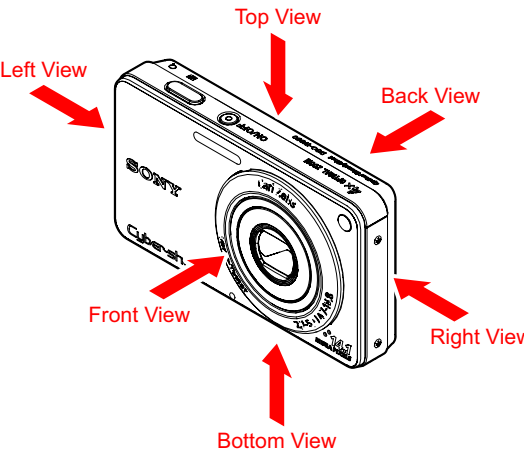
Les composants identifiés par une marque $\triangle$ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

- 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。

- 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。

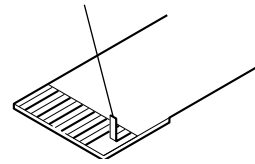
View Position



NOTE FOR REPAIR

- Make sure that the flat cable and flexible board are not cracked or bent at the terminal.
Do not insert the cable insufficiently nor crookedly.
- When remove a connector, don't pull at wire of connector. It is possible that a wire is snapped.
- When installing a connector, don't press down at wire of connector.
It is possible that a wire is snapped.
- Do not apply excessive load 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)

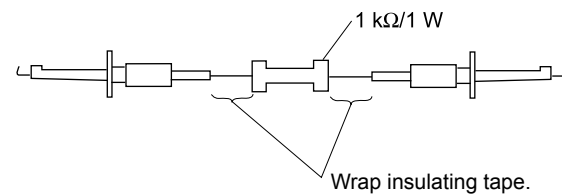


DISCHARGING OF THE CHARGING CAPACITOR (C901)

The charging capacitor (C901) of the AF-125 flexible board is charged up to the maximum 315 V potential.
There is a danger of electric shock by this high voltage when the capacitor is handled by hand. The electric shock is caused by the charged voltage which is kept without discharging when the main power of the unit is simply turned off. Therefore, the remaining voltage must be discharged as described below.

Preparing the Short Jig

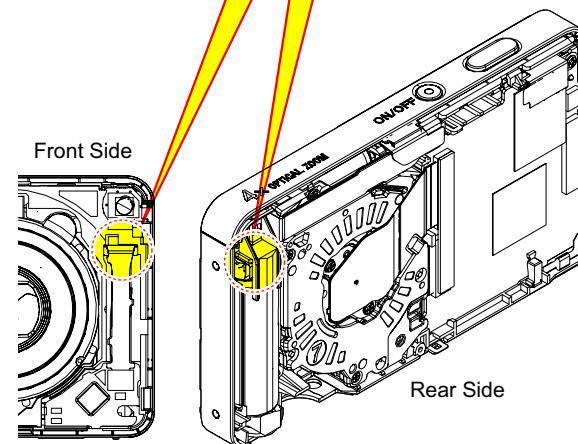
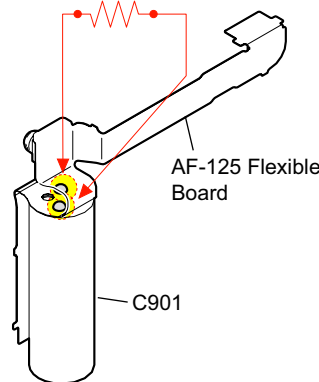
To preparing the short jig, a small clip is attached to each end of a resistor of 1 k Ω /1 W (1-215-869-11).
Wrap insulating tape fully around the leads of the resistor to prevent electrical shock.



Note: High-voltage cautions

Discharging the Capacitor
Short-circuit between two points with the short jig about 10 seconds.

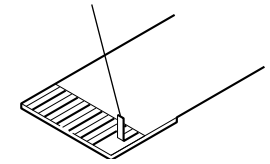
R:1 k Ω /1 W
(Part code: 1-215-869-11)



修理時の注意

- 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する。
また、コネクタへの接続は、差し込み不足や斜め差しにならないように注意する。
- コネクタを取り外す時に、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。
- 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。

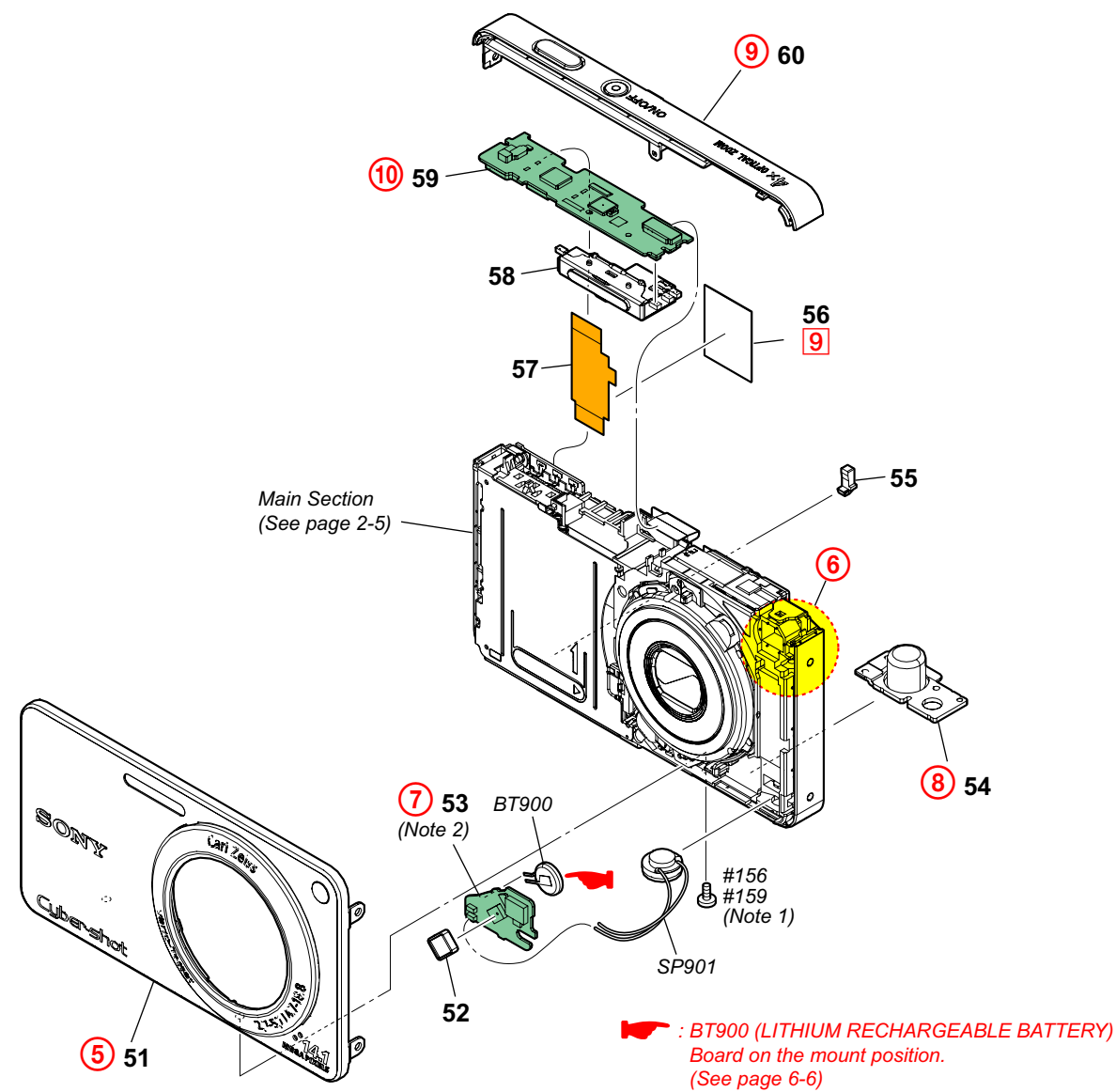
先端の剥がれたメッキ部はカットして除去してください。
(メッキ破片がコネクタ内に残っている場合もあるので注意してください)



ストロボ用充電コンデンサ(C901)の放電

AF-125フレキシブル基板のストロボ用充電コンデンサ(C901)は最大315Vの電圧で充電されています。
この高電圧で充電されたコンデンサに手を触れた場合、電気ショック

2-1-2. FRONT/TOP SECTION



Ref. No.	Part No.	Description
51	X-2541-632-1	CABINET (FRONT) ASSY (640C) (SILVER)
51	X-2541-633-1	CABINET (FRONT) ASSY (640D) (BLACK)
51	X-2541-634-1	CABINET (FRONT) ASSY (640E) (PINK)
51	X-2541-635-1	CABINET (FRONT) ASSY (640F) (GOLD)
51	X-2541-636-1	CABINET (FRONT) ASSY (640G) (BLUE)
52	4-111-391-01	HOLDER, MICROPHONE
53	A-1731-544-A	SP-052 BOARD, COMPLETE (Note 2)
* 54	4-167-574-01	SCREW (640), TRIPOD
55	4-167-564-01	LIGHT (640), MS GUIDE,

Ref. No.	Part No.	Description
* 56	4-168-315-01	TAPE (N5)
57	1-880-206-11	FPC-016 FLEXIBLE BOARD
58	1-487-586-11	FLASH UNIT
59	A-1731-542-A	ST-225 BOARD, COMPLETE
60	X-2541-639-1	CABINET (UPPER) ASSY (640C) (SILVER)
60	X-2541-640-1	CABINET (UPPER) ASSY (640D) (BLACK)
60	X-2541-641-1	CABINET (UPPER) ASSY (640E) (PINK)
60	X-2541-642-1	CABINET (UPPER) ASSY (640F) (GOLD)
60	X-2541-643-1	CABINET (UPPER) ASSY (640G) (BLUE)
△ BT900	1-756-710-12	LITHIUM RECHARGEABLE BATTERY
SP901	1-858-302-11	LOUDSPEAKER (0.8CM)
#156	2-635-591-61	SCREW (M1.4), NEW TRUSTAR P2 (Note 1)
#159	2-662-396-51	SCREW (M1.4), NEW, TRUSTAR, P2 (Note 1)

DISASSEMBLY

1. Remove to numerical order (5 to 10) in the left figure.

5 #156 / #159 X 1

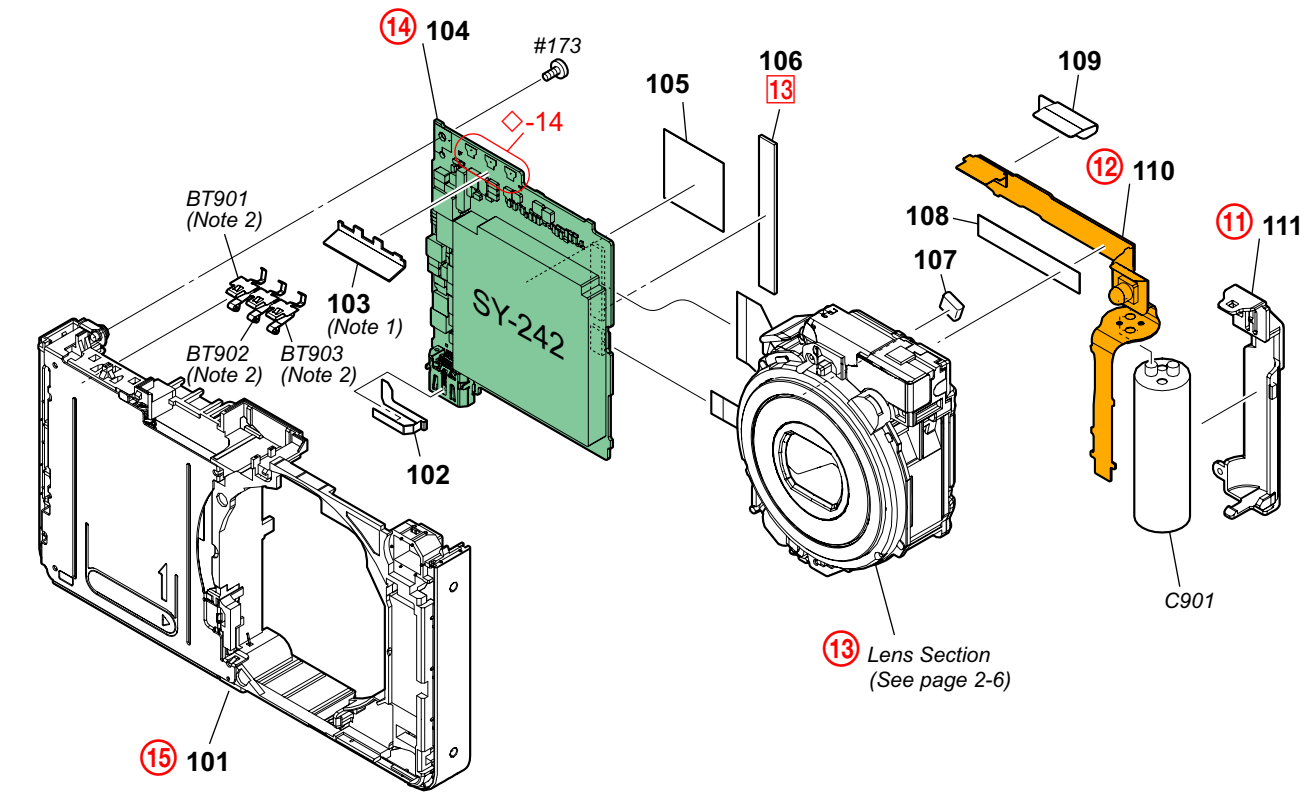
6

DISCHARGING OF THE CHARGING CAPACITOR

ストロボ用充電コンデンサの放電

9 Tape (N5) (9)

2-1-3. MAIN SECTION



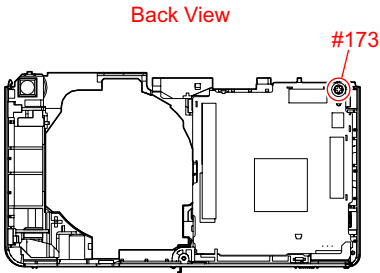
Ref. No.	Part No.	Description
101	X-2541-625-1	CABINET ASSY (640C), CENTER (SILVER)
101	X-2541-626-1	CABINET ASSY (640D), CENTER (BLACK)
101	X-2541-627-1	CABINET ASSY (640E), CENTER (PINK)
101	X-2541-628-1	CABINET ASSY (640F), CENTER (GOLD)
101	X-2541-629-1	CABINET ASSY (640G), CENTER (BLUE)
102	4-167-571-01	SHEET, MULTI RADIATION
103	4-168-198-01	INSULATING SHEET (670) (Note 1)
104	A-1752-374-A	SY-242 BOARD, COMPLETE (SERVICE)
* 105	4-167-589-01	SHEET, SY RADIATION

Ref. No.	Part No.	Description
* 106	4-172-609-01	SHEET, LCD REINFORCEMENT
* 107	3-289-764-01	GASKET (280)
108	4-172-234-01	TAPE (4X23), DOUBLE STICK
* 109	4-167-565-01	TAPE (AF)
110	A-1731-548-A	AF-125 FLEXIBLE BOARD, COMPLETE
* 111	4-167-573-01	RETAINER (640), CAPACITOR
△*BT901	1-780-835-11	TERMINAL BOARD BATTERY (Note 2)
△*BT902	1-780-835-11	TERMINAL BOARD BATTERY (Note 2)
△*BT903	1-780-835-11	TERMINAL BOARD BATTERY (Note 2)
△ C901	1-116-439-11	CAP, ELECT 56uF 315V
#173	4-167-570-01	SCREW (M1.4 (ECOLOGY)), 2 MAIN

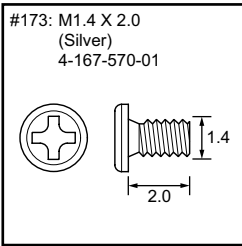
DISASSEMBLY

1. Remove to numerical order (11 to 15) in the left figure.
2. The meaning of the sign in left figure is as follows. Be careful when it removes.
◇-X: Solder

14 #173 X 1 → LCD REINFORCEMENT SHEET (13)

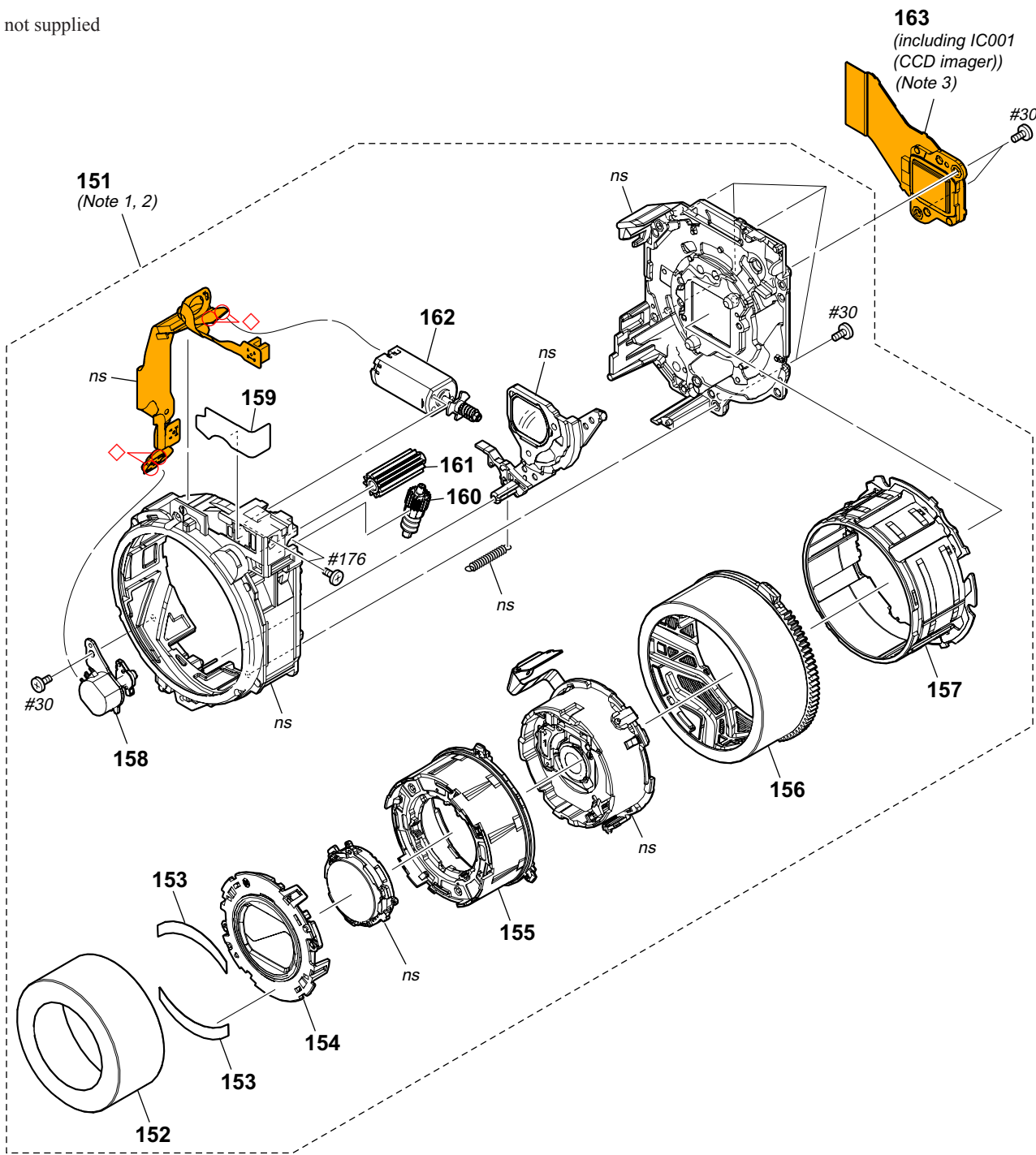


Screw



2-1-4. LENS BLOCK SECTION

ns: not supplied



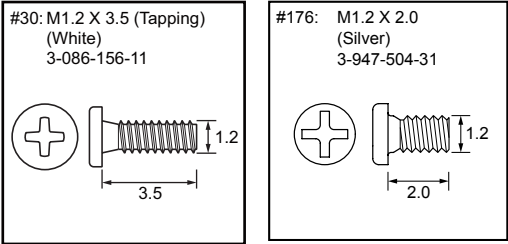
Ref. No.	Part No.	Description
151	8-848-861-01	DEVICE, LENS LSV-1380A (Note 1, 2)
152	4-155-850-01	RING A(S), ORNAMENTAL
153	4-147-109-01	TAPE, BARRIER
154	A-1743-714-A	BARRIER ASSY
155	4-147-091-01	FRAME, 1 GROUP
156	A-1743-728-A	CAM TUBE BLOCK ASSY
157	A-1743-727-A	STRAIGHT TUBE LUBRICATED ASSY
158	1-787-874-11	STEPPING MOTOR, OPTICAL(F1380)
159	4-147-113-01	SEAL, FG
160	A-1743-730-A	WORM B LUBRICATED ASSY

Ref. No.	Part No.	Description
161	A-1743-731-A	NARUTO GEAR LUBRICATED ASSY
162	A-1743-725-A	DC MOTOR WORM A ASSY
163	A-1731-547-A	CD-774 BOARD, COMPLETE (including IC001 (CCD imager)) (Note 3)
#30	3-086-156-11	SCREW B1.2
#176	3-947-504-31	SCREW (M1.2)

DISASSEMBLY

1. The meaning of the sign in left figure is as follows. Be careful when it removes.
◇: Solder

Screw

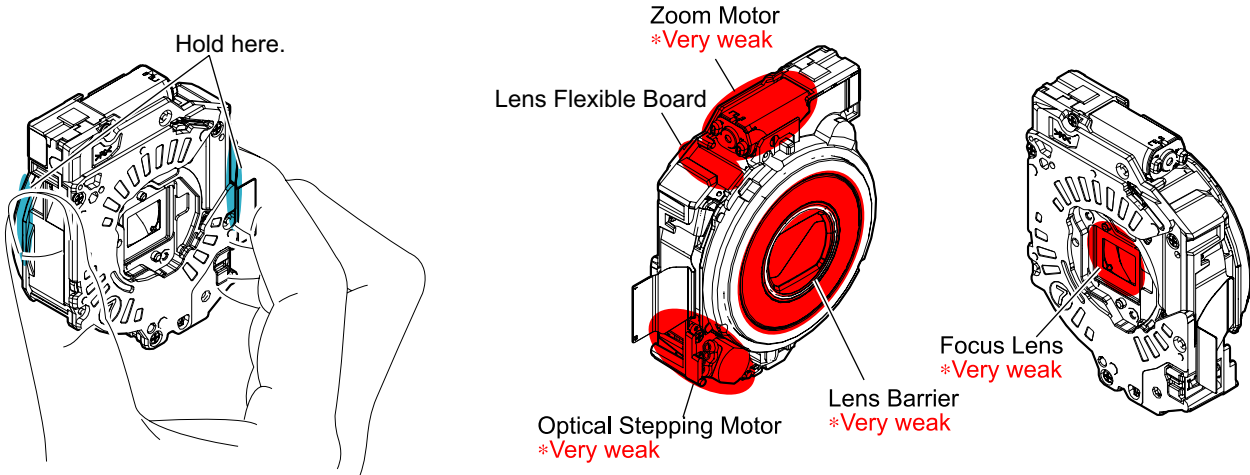


Note

Note 1

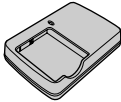
PRECAUTIONS WHEN HOLDING THE LENS BLOCK

- Hold the Lens Block at the center of both sides.
- Do not hold the following part.

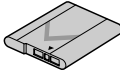


Checking supplied accessories.

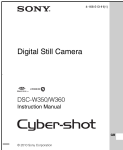
Note: This item is supplied with the unit as an accessory, but is not prepared as a service part.



Battery charger
(BC-CSN/BC-CSNB)
⚠ 1-487-523-21 (US, CND)
⚠ 1-487-523-31 (CH)
⚠ 1-487-523-51 (J)
⚠ 1-487-523-61
(EXCEPT US, CND, J, CH)



Rechargeable battery pack
(NP-BN1)
(Note)



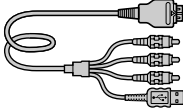
Instruction Manual
(Only for destination Japanese model)
日本語、英語、韓国語、中国語のみ部品供給可能です。



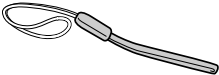
Power cord (mains lead)
(EXCEPT US, CND, J, CH, BR)
⚠ 1-837-420-11 (AR)
⚠ 1-837-421-11 (UK, HK)
⚠ 1-837-422-11 (JE)
⚠ 1-837-427-11 (AEP, E)
⚠ 1-837-428-11 (KR)
⚠ 1-837-429-11 (AUS)



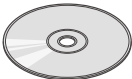
Conversion (2P) Adaptor
⚠ 1-569-007-12 (JE)
⚠ 1-569-008-33
(E (Latin America))



USB, A/V cable for
multi-use terminal
1-837-299-11



Wrist strap
2-050-981-01 (Gray) (SILVER, PINK, GOLD)
2-050-981-11 (Black) (BLACK, BLUE)



CD-ROM
(Cyber-shot application software /
"Cyber-shot Handbook" /
"Cyber-shot Step-up Guide")
4-162-396-01



Cyber-shot Handbook (PDF)

The CD-ROM supplied contains all of language version of the Instruction Manual in pdf (Cyber-shot Handbook.pdf) for printing.

- The printed matter is not supplied. If required, please order it with the part number below.
- (Only for destination Japanese model)
日本国内については日本語のみが印刷での部品供給可能です。

4-162-397-01 (JAPANESE)
* 4-162-397-11 (ENGLISH)
* 4-162-397-21 (FRENCH)
* 4-162-397-31 (ITALIAN)
* 4-162-397-41 (SPANISH)
* 4-162-397-51 (PORTUGUESE)
* 4-162-397-61 (GERMAN)
* 4-162-397-71 (DUTCH)
* 4-162-397-81 (TRADITIONAL CHINESE)
* 4-162-397-91 (SIMPLIFIED CHINESE)
* 4-162-398-11 (RUSSIAN)
* 4-162-398-21 (ARABIC)
* 4-162-398-31 (PERSIAN)
* 4-162-398-41 (KOREAN)
* 4-162-398-51 (POLISH)

4-166-512-01 (JAPANESE)
4-166-512-11 (SIMPLIFIED CHINESE)
4-166-513-11 (ENGLISH)
* 4-166-513-21 (ENGLISH, SPANISH)
* 4-166-513-31 (ENGLISH, FRENCH)
* 4-166-513-41 (ENGLISH, RUSSIAN, UKRAINIAN)
* 4-166-513-51 (ENGLISH, FRENCH, ITALIAN, SPANISH, PORTUGUESE, GERMAN, DUTCH, TURKISH, GREEK, POLISH, CZECH, HUNGARIAN, SLOVAK, SWEDISH, FINNISH, NORWEGIAN, DANISH, CROATIAN, ROMANIAN)
* 4-166-513-61 (ENGLISH, TRADITIONAL CHINESE, SIMPLIFIED CHINESE, MALAY, INDONESIAN, THAI, ARABIC, PERSIAN)
* 4-166-513-71 (ENGLISH, SPANISH, PORTUGUESE)
* 4-166-513-81 (ENGLISH, TRADITIONAL CHINESE, SIMPLIFIED CHINESE, INDONESIAN, ARABIC, PERSIAN)
* 4-166-5

2-2. ELECTRICAL PARTS LIST

Ref. No.	Part No.	Description
	A-1731-548-A	AF-125 FLEXIBLE BOARD, COMPLETE *****
(D202 is not supplied, but this is included in AF-125 flexible complete board.)		
		< DIODE >
D202	(Not supplied)	DIODE SCM-J14DTT96 (D202 is supplied including in AF-125 flexible complete board.)
	1-880-206-11	FPC-016 FLEXIBLE BOARD *****
	1-880-209-11	FPC-019 FLEXIBLE BOARD *****
	A-1731-544-A	SP-052 BOARD, COMPLETE *****
(BT900 (LITHIUM BATTERY) is not included in SP-052 complete board.)		
		< BATTERY >
△ BT900	1-756-710-12	LITHIUM RECHARGEABLE BATTERY
		< CAPACITOR >
C001	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
		< CONNECTOR >
CN002	1-816-654-61	FFC/FPC CONNECTOR (LIF) 6P
		< MICROPHONE >
MIC001	1-542-756-21	MICROPHONE
		< RESISTOR >
R003	1-218-945-11	METAL CHIP 220 5% 1/16W
	A-1731-542-A	ST-225 BOARD, COMPLETE *****
		< CAPACITOR >
* C002	1-112-746-11	CERAMIC CHIP 4.7uF 10% 6.3V
C003	1-100-611-91	CERAMIC CHIP 22uF 20% 6.3V
△* C005	1-116-456-11	CERAMIC CHIP 0.047uF 10% 350V
C006	1-164-850-11	CERAMIC CHIP 10pF 0.5pF 50V
△ C008	1-100-761-21	CERAMIC CHIP 0.01uF 10% 250V
		< CONNECTOR >
* CN001	1-817-828-81	CONNECTOR, FPC (ZIF) 25P
* CN001	1-817-828-81	CONNECTOR, FPC (ZIF) 25P
* CN006	1-822-914-11	CONNECTOR, FPC (LIF (NON-ZIF))
* CN006	1-8	

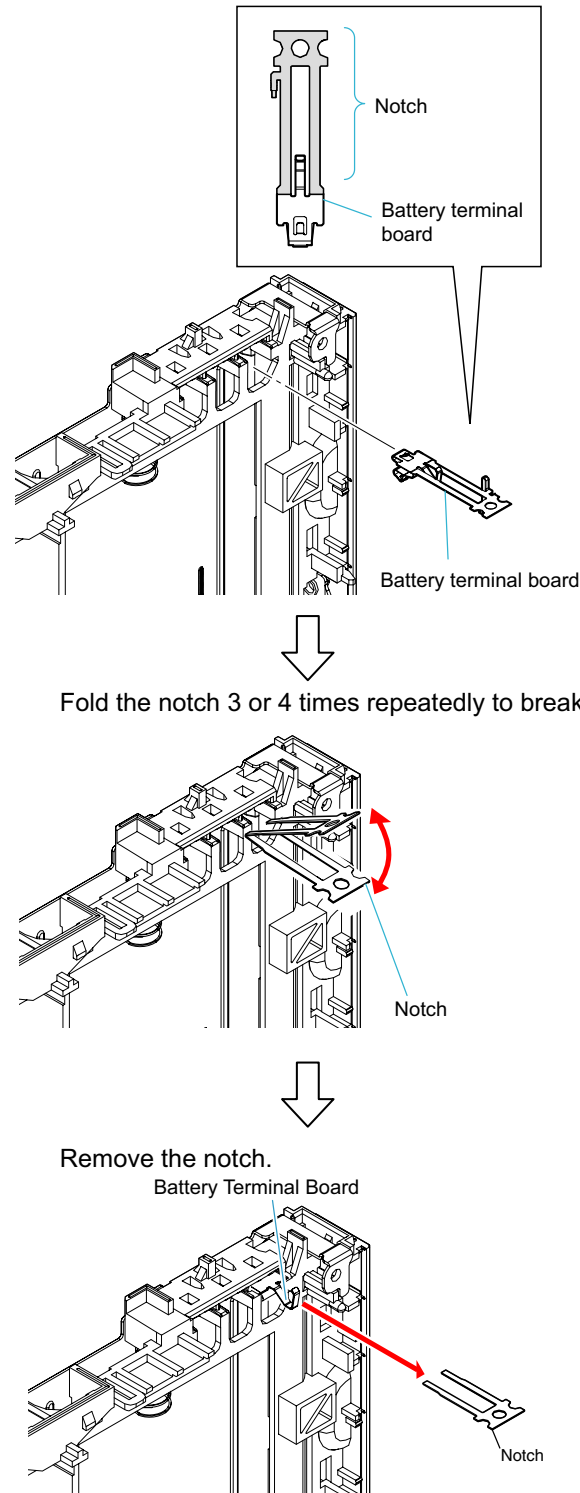
3. ASSEMBLY

Assembly-1: Installation Method of Battery Terminal Board

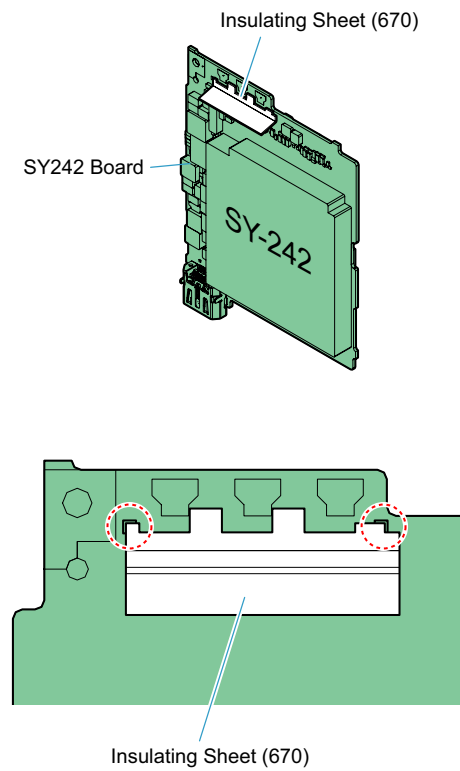
Remove the battery terminal board by bending the claw of rock portion.
When assembling the battery terminal board, replace it with new one because battery terminal board will be bent.

Insert the battery terminal board into a slit in BT holder to install.

* Battery terminal board is attached with notch for installation.

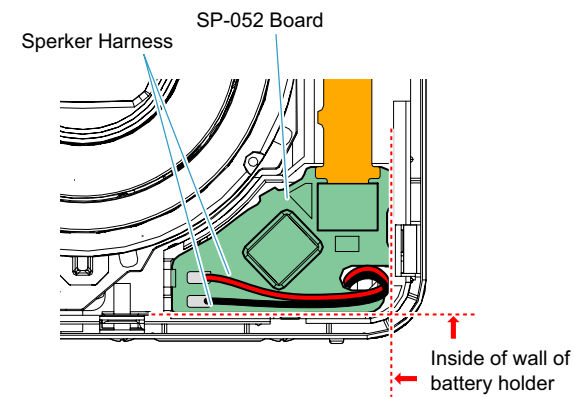


Assembly-2: Insulating Sheet (670) Putting Position

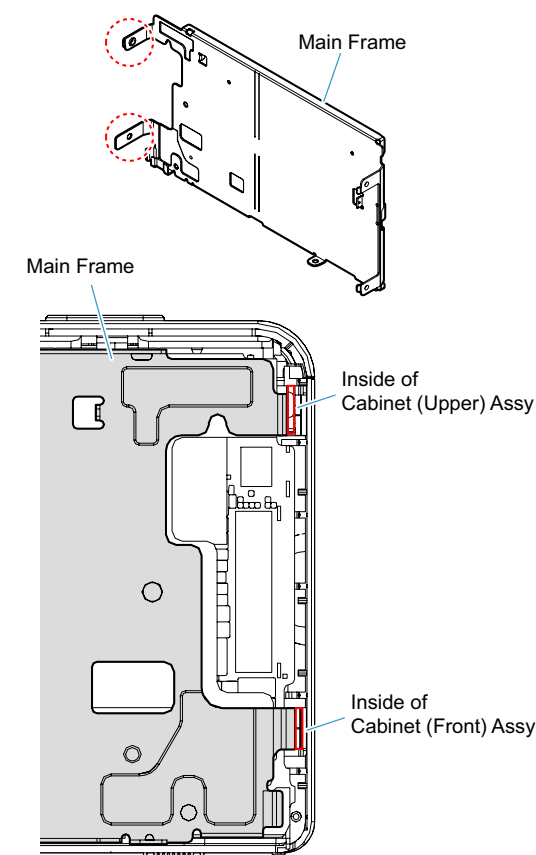


Assembly-3: Precaution During SP-052 Board Installation.

Route the speaker harness as shown below.

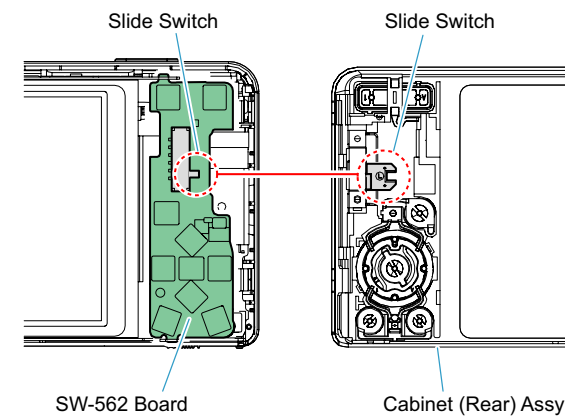


Assembly-4: Precaution During Main Frame Installation.



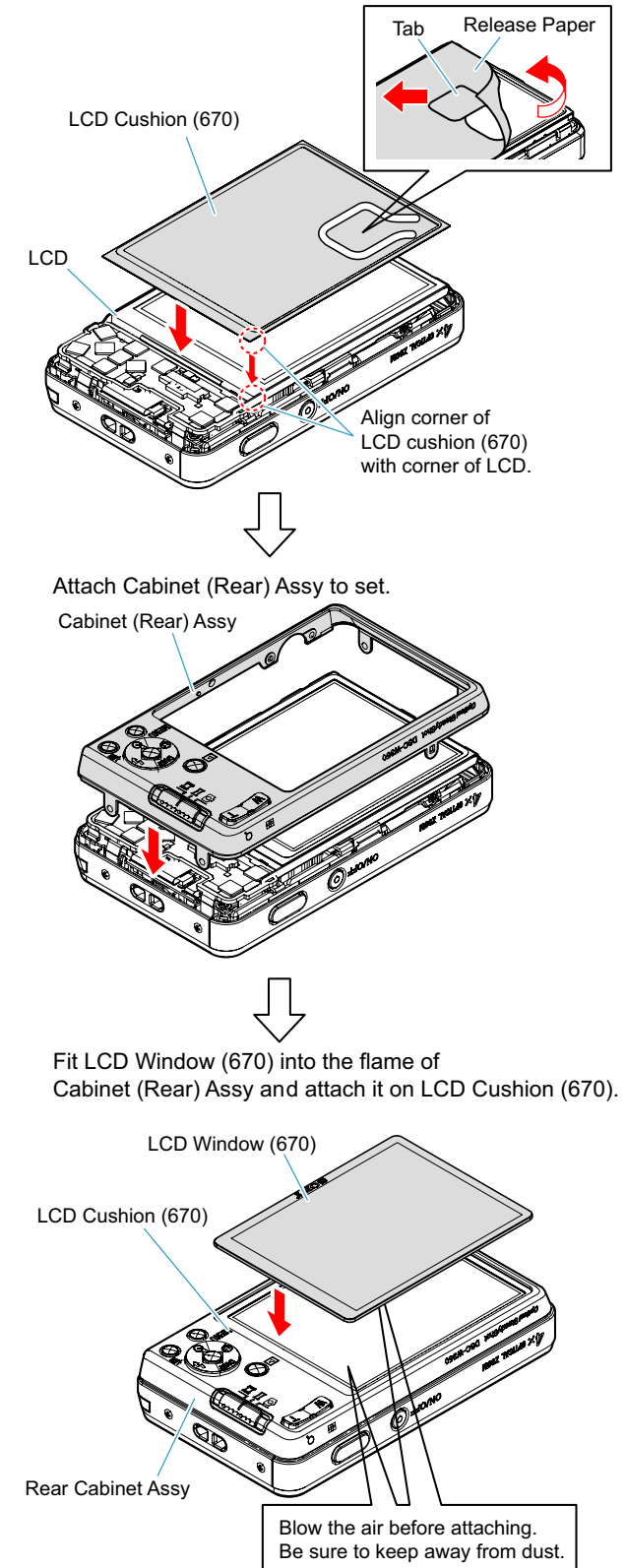
Assembly-5: Precaution During Cabinet (Rear) Assy Installation.

Align the slide switch of Cabinet (Rear) Assy with the slide switch of SW-562 Board.



Assembly-6: Attaching Method of LCD Cushion (670), LCD Window (670)

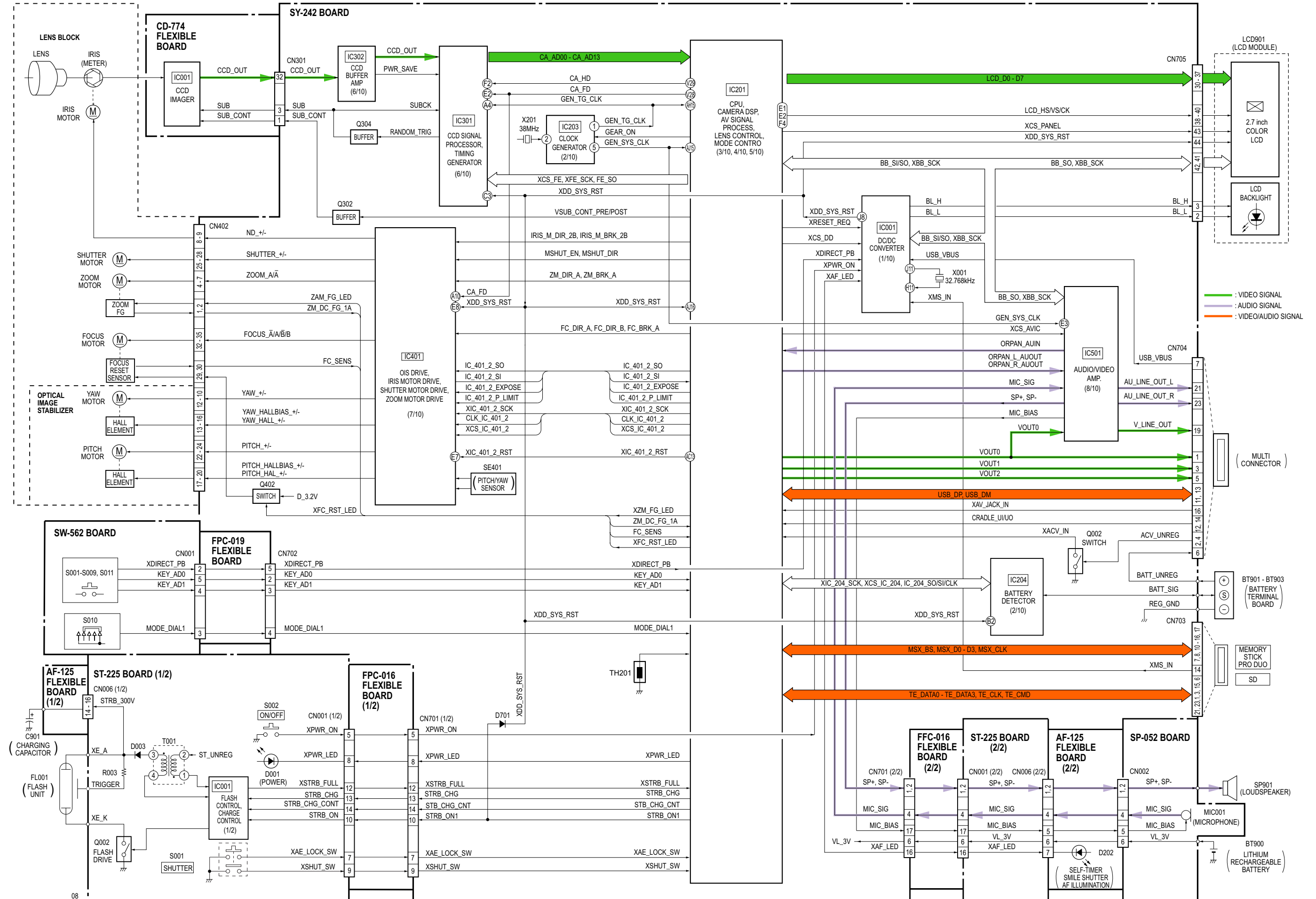
Apply LCD cushion (670).
And have the Tab of the Release Paper and peel it off.



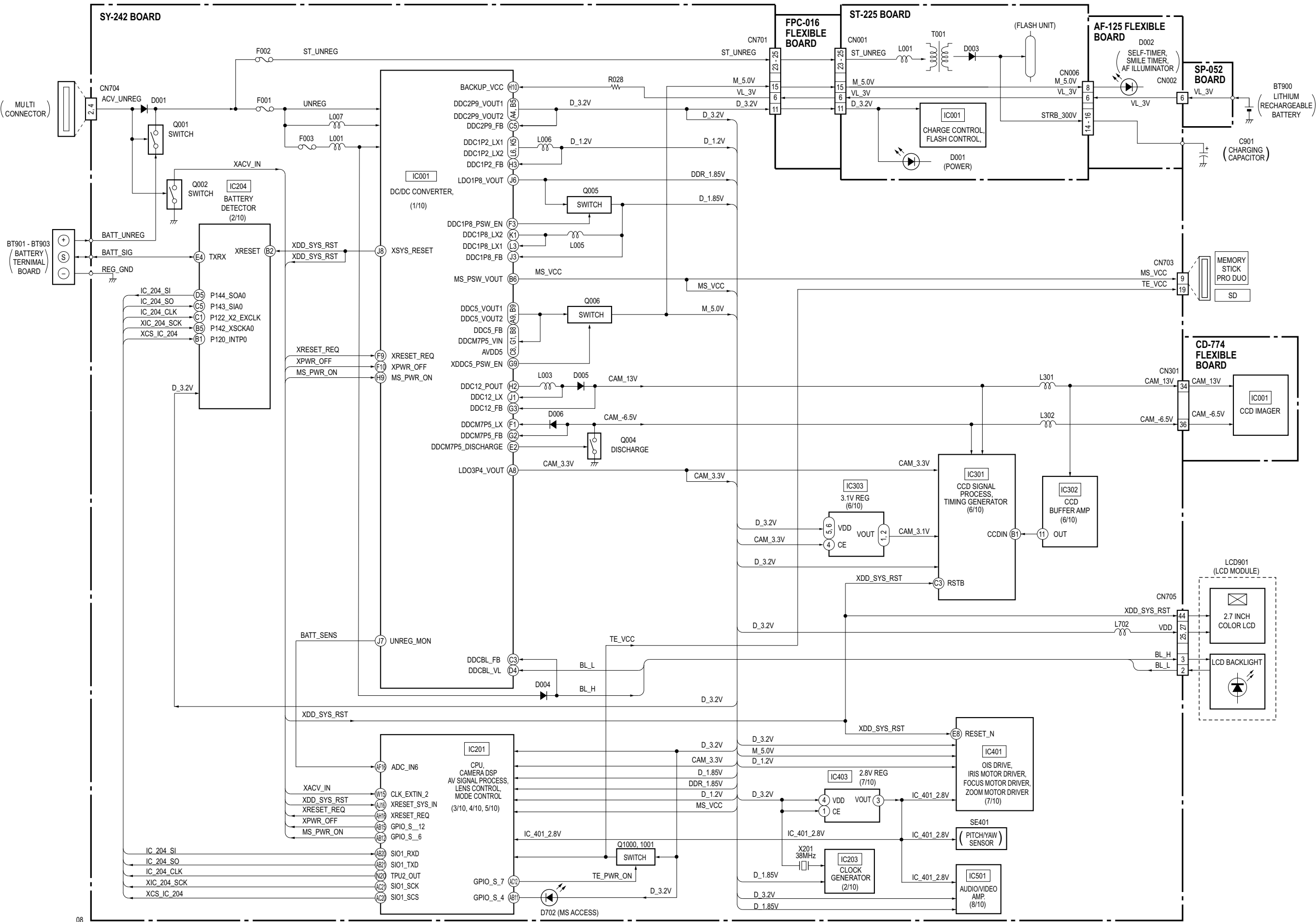
4. BLOCK DIAGRAMS

4-1. OVERALL BLOCK DIAGRAM

() : Number in parenthesis () indicates the division number of schematic diagram where the component is located.



4-2. POWER BLOCK DIAGRAM () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.



6. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

– ENGLISH –

THIS NOTE IS COMMON FOR SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS.
(In addition to this, the necessary note is printed in each block.)

For Schematic Diagrams

- All capacitors are in μF unless otherwise noted. pF : μF . 50 V or less are not indicated except for electrolytics and tantalums.
- Chip resistors are 1/10 W unless otherwise noted. $\text{k}\Omega=1000\ \Omega$, $\text{M}\Omega=1000\ \text{k}\Omega$.
- Caution when replacing chip parts.
New parts must be attached after removal of chip.
Be careful not to heat the minus side of tantalum capacitor, Because it is damaged by the heat.
- Some chip part will be indicated as follows.

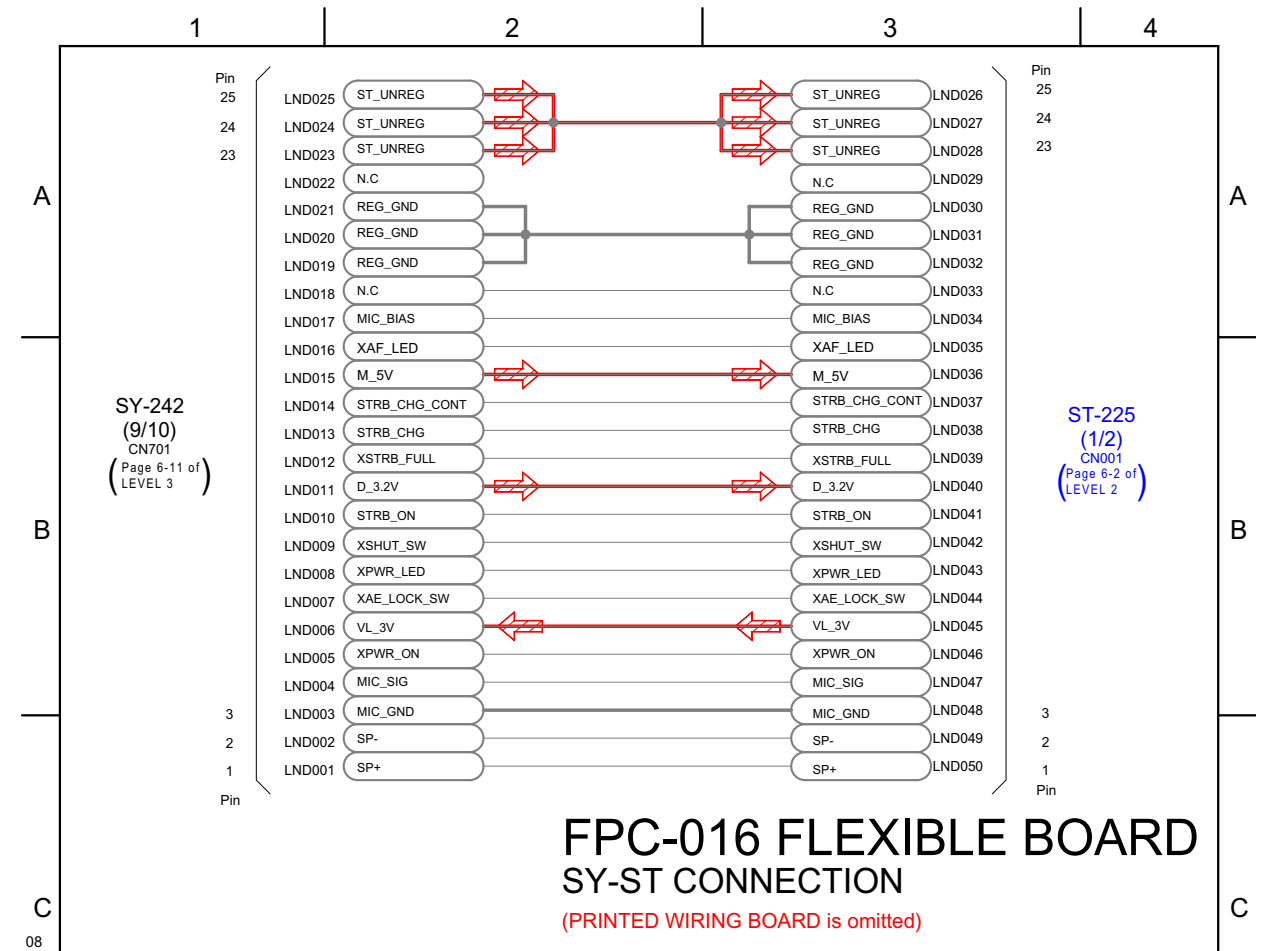
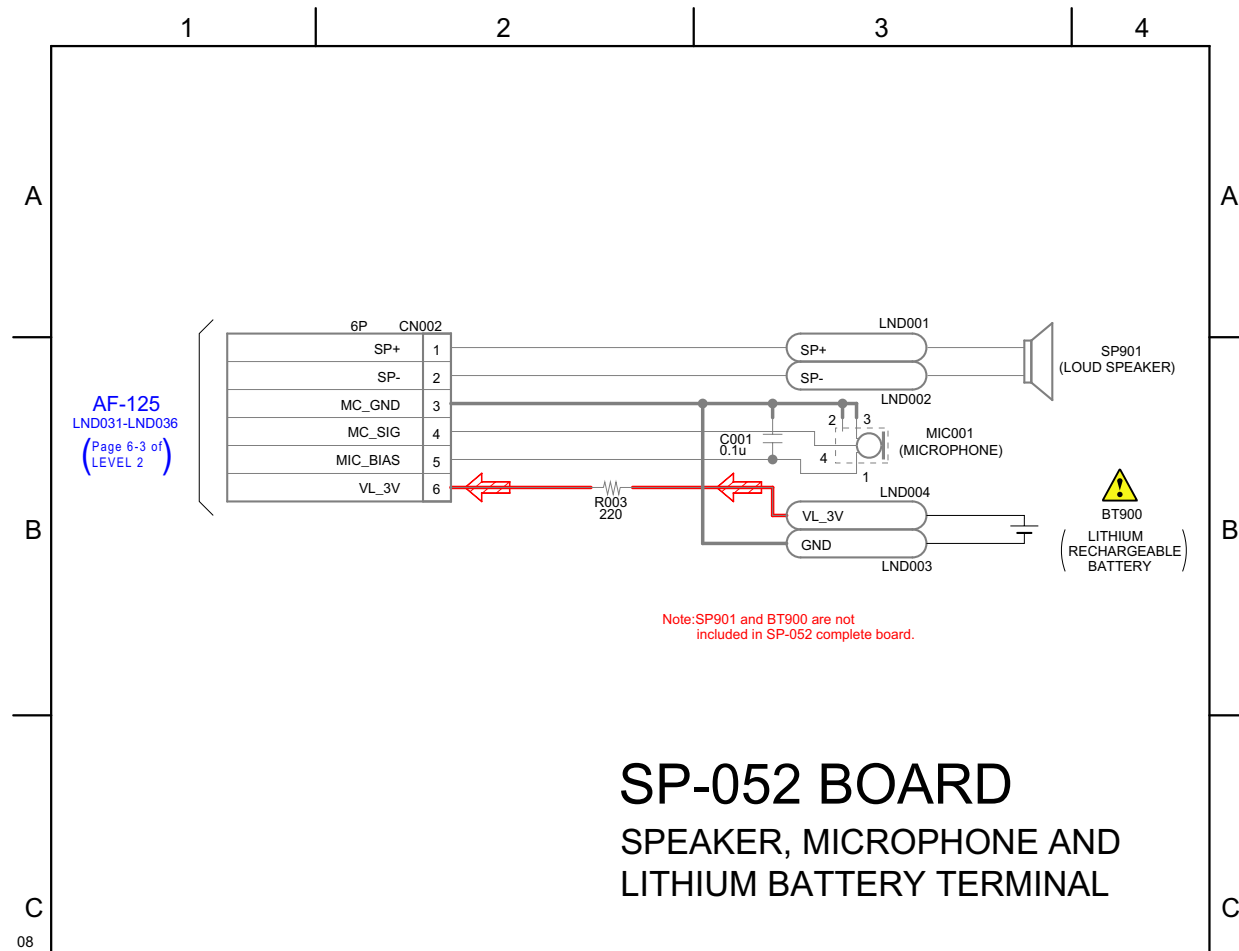
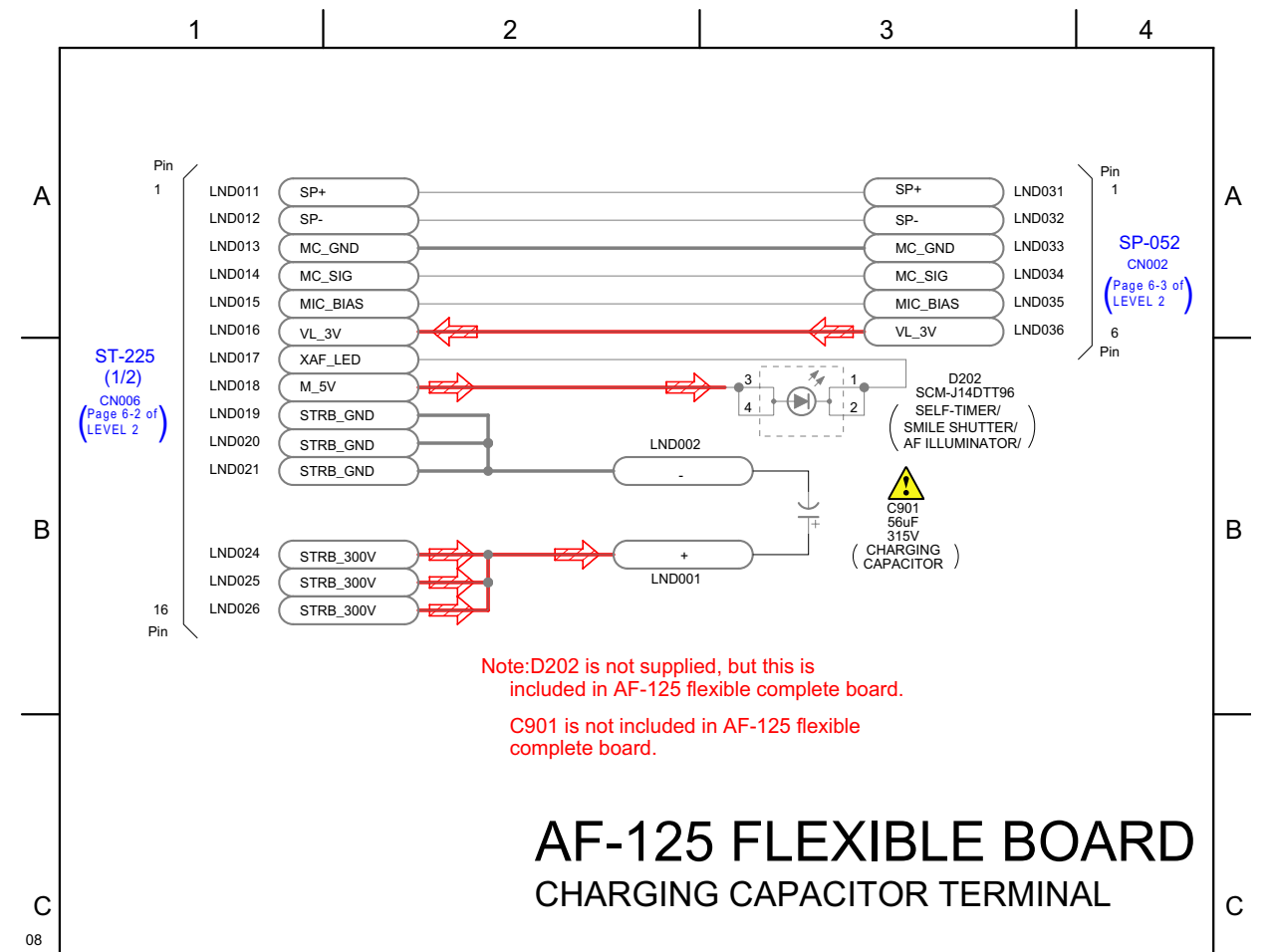
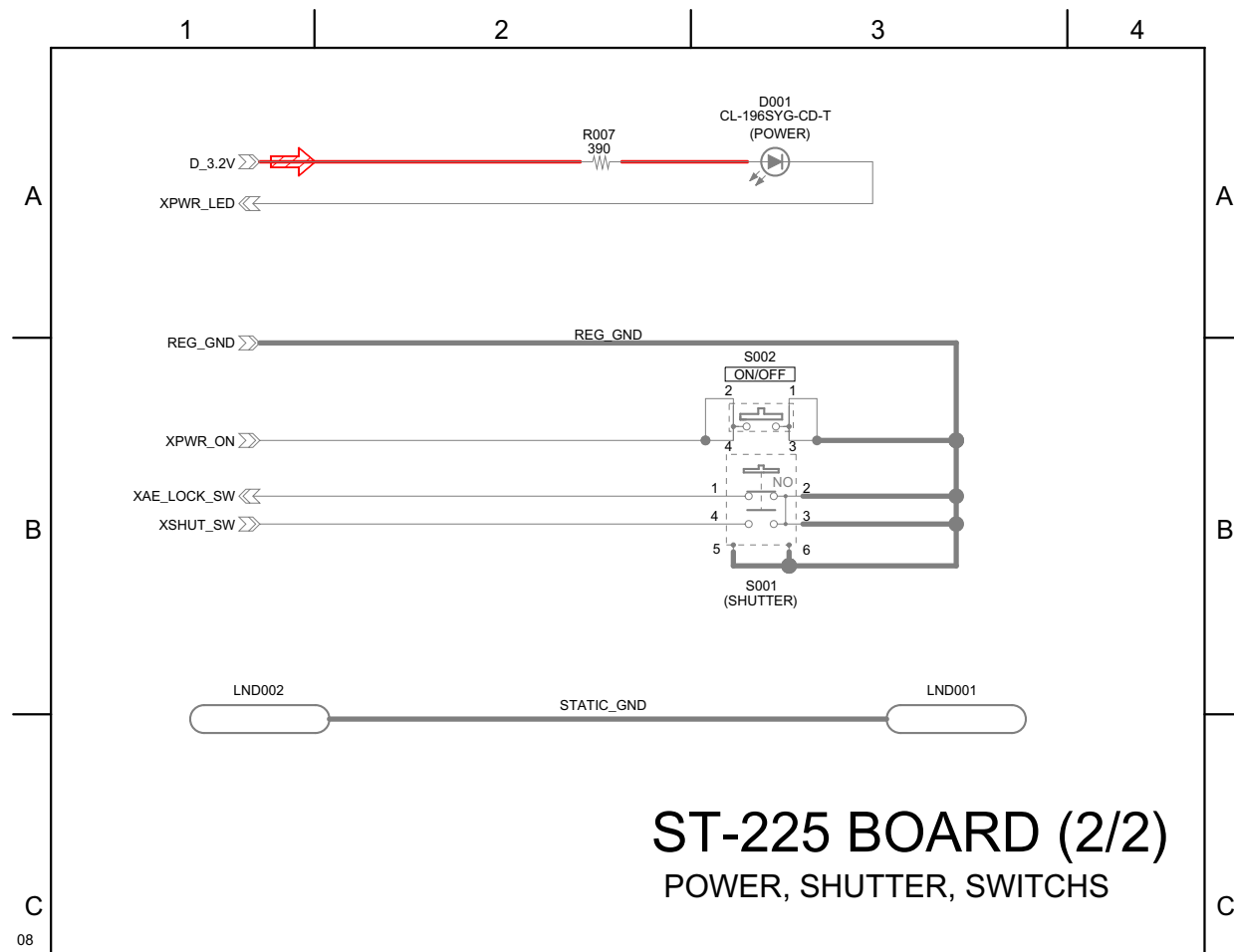
Example C541 L452
 22U 10UH
 TA A 2520

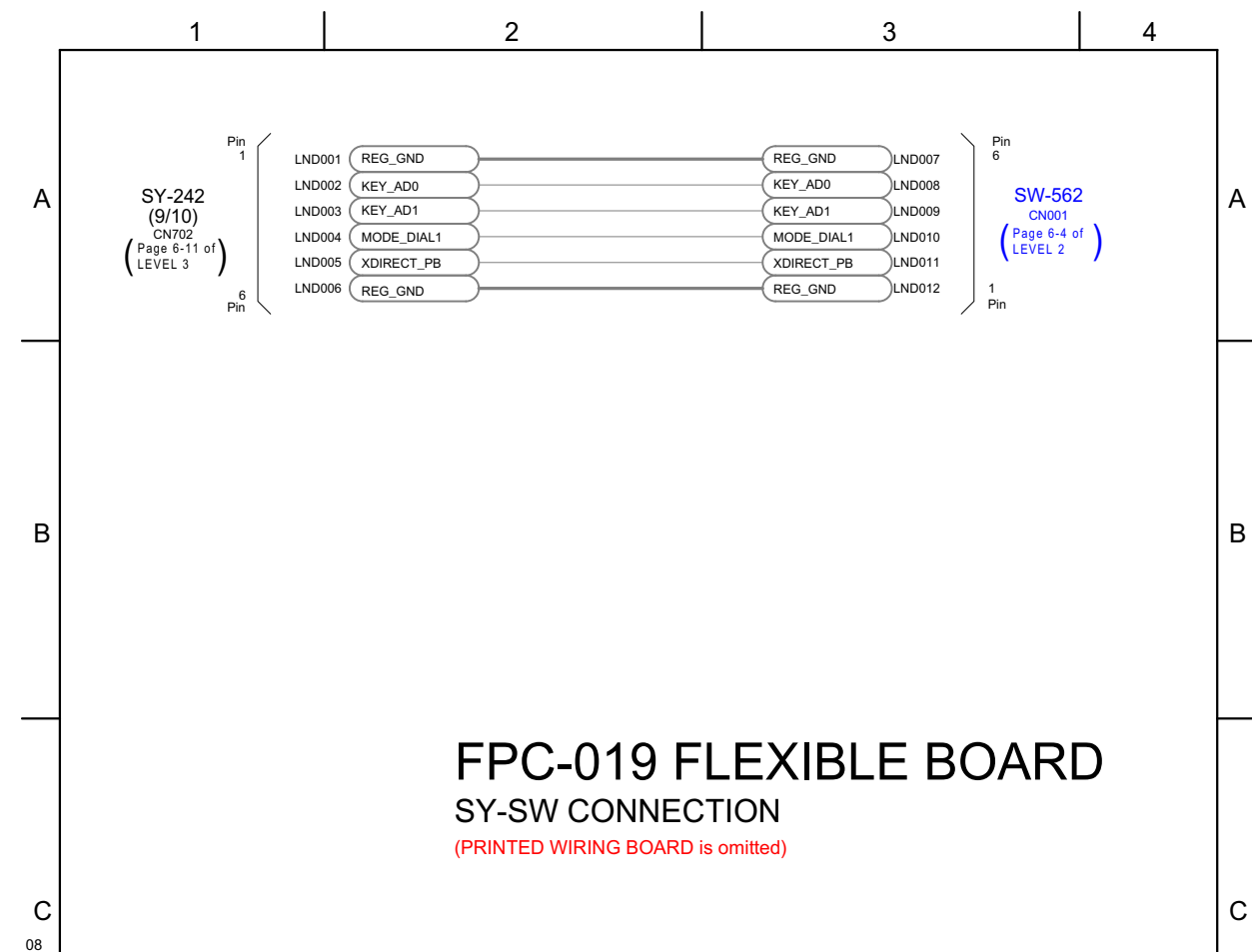
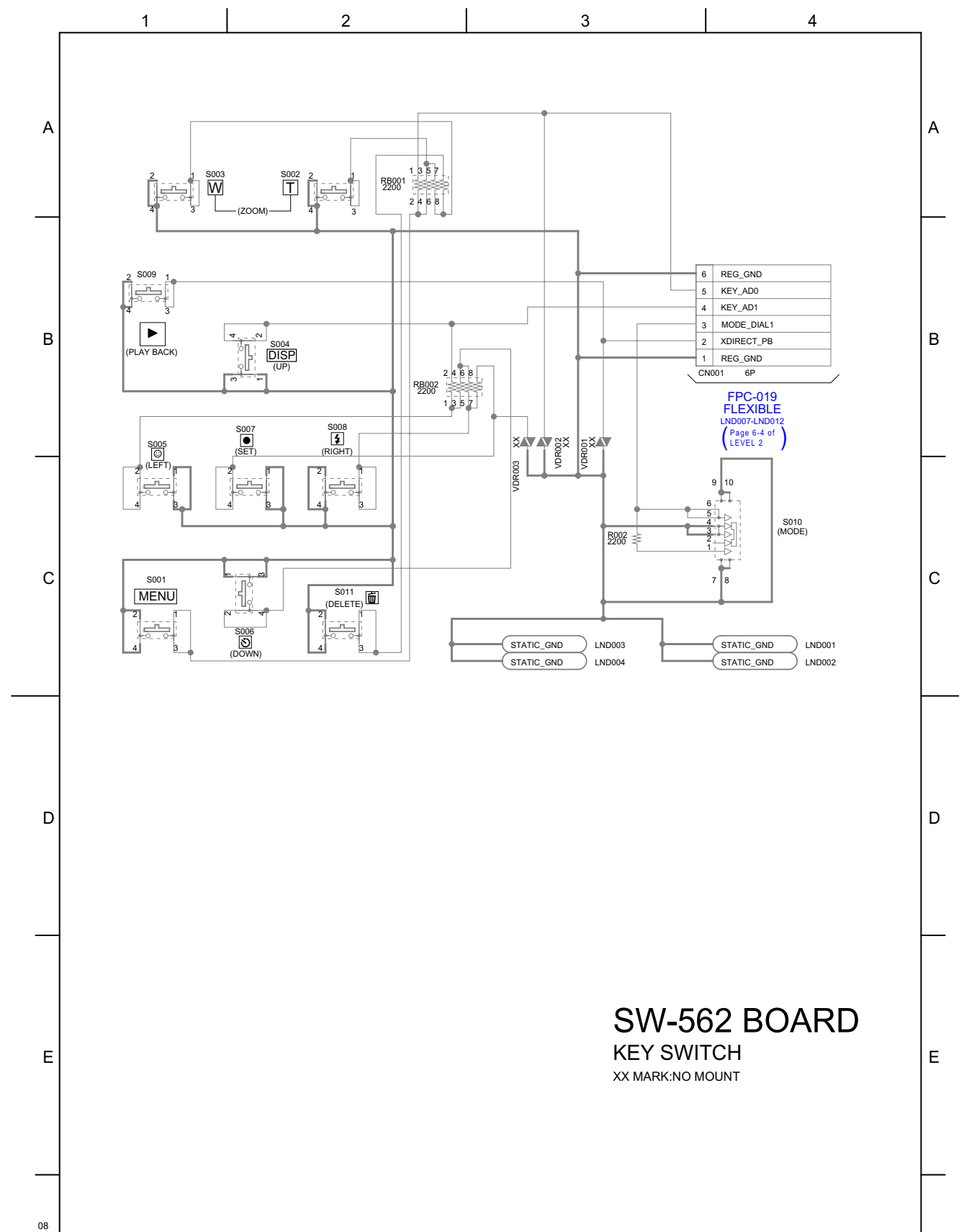
Kinds of capacitor External dimensions (mm)
Case size

- Constants of resistors, capacitors, ICs and etc with XX indicate that they are not used.
In such cases, the unused circuits may be indicated.
- Parts with ★ differ according to the model/destination.
Refer to the mount table for each function.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Signal name
XEDIT → EDIT PB/XREC → PB/REC
- : non flammable resistor
- : fusible resistor
- : panel designation
- : B+ Line
- : B- Line
- : IN/OUT direction of (+, -) B LINE.
- : adjustment for repair.

Precautions for Replacement of Imager

- If the imager has been replaced, carry out all the adjustments for the camera section.
- As the imager may be damaged by static electricity from its structure, handle it carefully like for the MOS IC.
In addition, ensure that the receiver is not covered with dusts nor exposed

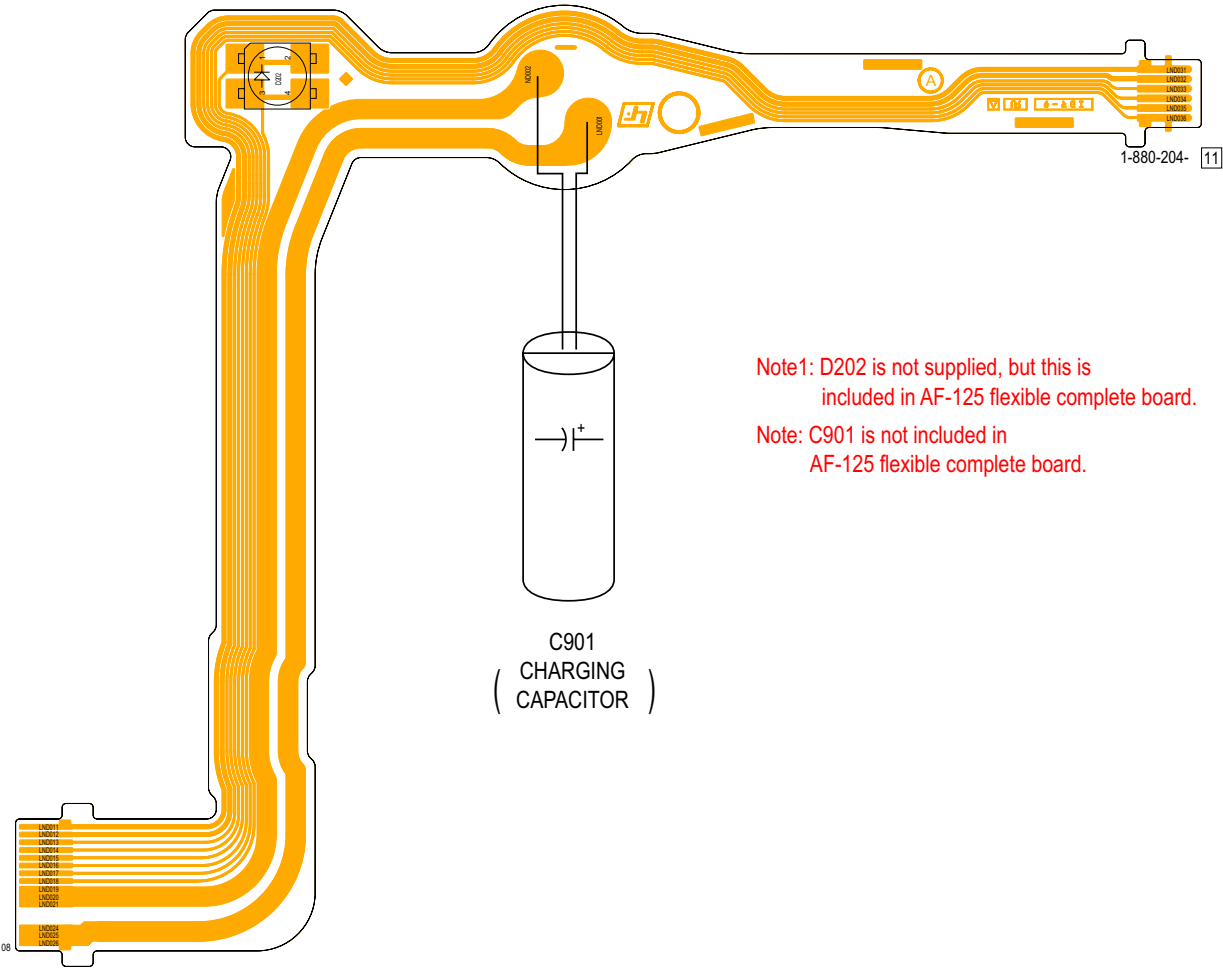




Caution :
 Danger of explosion if battery is incorrectly replaced.
 Replace only with the same or equivalent type.
 Dispose of used batteries according to the instructions.

注意 :
 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。

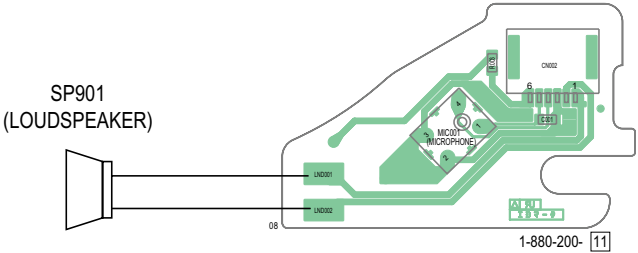
AF-125 FLEXIBLE BOARD



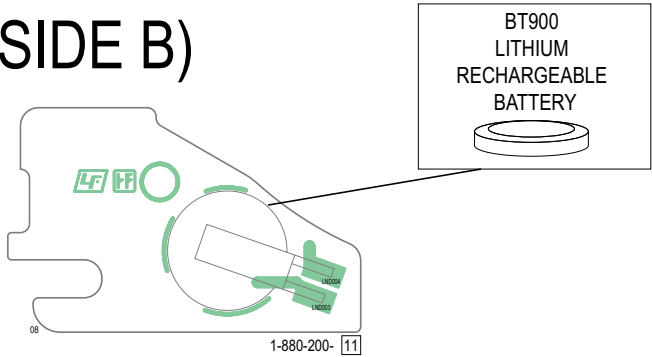
Note1: D202 is not supplied, but this is included in AF-125 flexible complete board.
 Note: C901 is not included in AF-125 flexible complete board.

C901
 CHARGING
 CAPACITOR)

SP-052 BOARD (SIDE A)



SP-052 BOARD (SIDE B)



Note: SP901 and BT900 are not included in SP-052 complete board.

ST-225 BOARD (SIDE A)

