

# DSC-HX9/HX9V

## SERVICE MANUAL

Ver. 1.1 2011.07



Photo: DSC-HX9V/Black

### LEVEL 3

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

Check the SERVICE NOTE (LEVEL 2) before the service.

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

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

DSC-HX9/HX9V\_L3  
9-834-574-12

DIGITAL STILL CAMERA  
**SONY**<sup>®</sup>

Sony Corporation

## Revision History

\*: S.M. revised only top cover.

Ver.	Date	History	Contents	S.M. Rev. issued
1.0	2011.02	Official Release	—	—
1.1	2011.07	Supplement-1 (S1 11-154)	<ul style="list-style-type: none"> <li>• Change of PRINTED WIRING BOARDS</li> <li>• Change of SCHEMATIC DIAGRAMS</li> <li>• Change of RL-109 Board Part Number Suffix <math>\overline{11}</math> to <math>\overline{21}</math></li> </ul>	Yes*

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**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  $\Delta$  OR DOTTED LINE WITH MARK  $\Delta$  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  $\Delta$  SUR LES DIAGRAMMES SCHEMATIQUES 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
  - 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.

**UNLEADED SOLDER**

This unit uses unleaded solder. Boards requiring use of unleaded solder are printed with the lead free mark (L.F) 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.)

**L.F: 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.

**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、またサービスした箇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
  - 半田こてのごて先温度は約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)

**L.F: 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。

- 半田こてのごて先温度は約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。
- 半田こてのごて先は、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。

## 2. REPAIR PARTS LIST

AF-137 BT-070 CD-813 MS-461 RL-109 RL-115 ST-262 FL-208 SY-286

### (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:  $\mu$ F  
COILS  
uH:  $\mu$ H
- RESISTORS**  
All resistors are in ohms.  
METAL: metal-film resistor  
METAL OXIDE: Metal Oxide-film resistor  
F: nonflammable
- SEMICONDUCTORS**  
In each case, u,  $\mu$ , for example:  
uA...,  $\mu$ A..., uPA...,  $\mu$ PA...,  
uPB...,  $\mu$ PB..., uPC...,  $\mu$ PC...,  
uPD...,  $\mu$ PD...

When indicating parts by reference number, please include the board name.

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

Les composants identifiés par une marque  $\Delta$  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.

**Note 1:** Be sure to read "Precautions for Replacement of Imager" on page 6-1.

### (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いません。
- コンデンサの単位でuFは $\mu$ Fを示します。
- 抵抗の単位 $\Omega$ は省略してあります。
- 金 鍍: 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 $\mu$ Hを示します。
- 半導体の名称でuA...,  $\mu$ PA..., uPB...,  $\mu$ PC..., uPD...,  $\mu$ PD...を示します。

お願い  
図面番号で部品を指定するときは基板名又はブロックを併せて指定してください。

$\Delta$ 印の部品、または $\Delta$ 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。

**Note 1:** イメージャの交換時は6-1ページのイメージャ交換時の注意を必ずお読みください。

### 2-2. ELECTRICAL PARTS LIST

Ref. No.	Part No.	Description
	A-1818-411-A	AF-137 BOARD, COMPLETE *****
	1-883-056-11	BT-070 FLEXIBLE BOARD *****
(BT901 is not included in BT-070 FLEXIBLE BOARD.)		
< BATTERY TERMINAL BOARD >		
$\Delta$ BT901	1-780-764-11	TERMINAL BOARD, BATTERY
	A-1818-412-A	CD-813 BOARD, COMPLETE *****
(All mounted parts are not supplied, but they are included in CD-813 COMPLETE BOARD.)		
	1-542-862-41	MICROPHONE UNIT *****
	A-1818-410-A	MS-461 BOARD, COMPLETE *****
(BT001 is not included in MS-461 COMPLETE BOARD.)		
< BATTERY >		
$\Delta$ BT001	1-756-813-11	LITHIUM RECHARGEABLE BATTERY
< CAPACITOR >		
* C002	1-112-716-11	CERAMIC CHIP 0.1uF 10% 6.3V
* C003	1-112-716-11	CERAMIC CHIP 0.1uF 10% 6.3V
C007	1-128-623-91	CERAMIC CHIP 220PF 10% 16V
C008	1-128-625-91	CERAMIC CHIP 470PF 10% 16V
< CONNECTOR >		
* CN001	1-821-502-11	CONNECTOR, FPC (ZIF) 29P
CN002	1-822-837-21	CARD CONNECTOR
< RESISTOR >		
R001	1-240-687-91	METAL CHIP 220 5% 1/20W
R005	1-240-681-91	METAL CHIP 68 5% 1/20W
R007	1-240-679-91	METAL CHIP 47 5% 1/20W
< THERMISTOR >		
TH001	1-805-194-21	THERMISTOR, NTC (SMD)

Ref. No.	Part No.	Description
	A-1818-408-A	RL-109 BOARD, COMPLETE (HX9V)
	A-1818-409-A	RL-109 BOARD, COMPLETE (HX9) *****
(All mounted parts are not supplied, but they are included in RL-109 COMPLETE BOARD.)		
	1-884-119-11	RL-115 FLEXIBLE BOARD *****
	A-1817-110-A	STROBOSCOPE BLOCK ASSY (950) (Not supplied)
	(Not supplied)	ST-262 BOARD, COMPLETE
	(Not supplied)	FL-208 FLEXIBLE BOARD *****
(All mounted parts, ST-262 COMPLETE BOARD and FL-208 FLEXIBLE BOARD are not supplied, but they are included in STROBOSCOPE BLOCK ASSY (950).)		
$\Delta$	(Not supplied)	FLASH UNIT
	A-1818-414-A	SY-286 BOARD, COMPLETE (SERVICE) *****
(C202 is not supplied, but this is included in SY-286 COMPLETE BOARD (SERVICE).)		
< CAPACITOR >		
C001	1-100-611-91	CERAMIC CHIP 22uF 20% 6.3V
C002	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V
C003	1-100-611-91	CERAMIC CHIP 22uF 20% 6.3V
C004	1-100-611-91	CERAMIC CHIP 22uF 20% 6.3V
C005	1-100-611-91	CERAMIC CHIP 22uF 20% 6.3V
C006	1-112-717-91	CERAMIC CHIP 1uF 10% 6.3V
* C007	1-114-582-11	CERAMIC CHIP 0.1uF 10% 16V
* C008	1-114-582-11	CERAMIC CHIP 0.1uF 10% 16V
* C009	1-114-582-11	CERAMIC CHIP 0.1uF 10% 16V
C010	1-100-611-91	CERAMIC CHIP 22uF 20% 6.3V
C011	1-100-611-91	CERAMIC CHIP 22uF 20% 6.3V
C012	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V
* C013	1-114-582-11	CERAMIC CHIP 0.1uF 10% 16V
C014	1-100-671-11	CERAMIC CHIP 4.7uF 20% 25V
C020	1-112-717-91	CERAMIC CHIP 1uF 10% 6.3V
C022	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
* C026	1-112-716-11	CERAMIC CHIP 0.1uF 10% 6.3V
* C027	1-112-716-11	CERAMIC CHIP 0.1uF 10% 6.3V
* C028	1-112-716-11	CERAMIC CHIP 0.1uF 10% 6.3V
* C029	1-112-716-11	CERAMIC CHIP 0.1uF 10% 6.3V
C054	1-131-664-91	CERAMIC CHIP 0.15uF 10% 10V
C056	1-114-246-11	CERAMIC CHIP 1uF 20% 25V
* C058	1-114-582-11	CERAMIC CHIP 0.1uF 10% 16V
* C060	1-112-746-11	CERAMIC CHIP 4.7uF 10% 6.3V
C061	1-112-717-91	CERAMIC CHIP 1uF 10% 6.3V
C062	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V
* C064	1-114-582-11	CERAMIC CHIP 0.1uF 10% 16V
C065	1-112-300-91	CERAMIC CHIP 4.7uF 10% 10V
C071	1-112-717-91	CERAMIC CHIP 1uF 10% 6.3V
* C072	1-114-582-11	CERAMIC CHIP 0.1uF 10% 16V

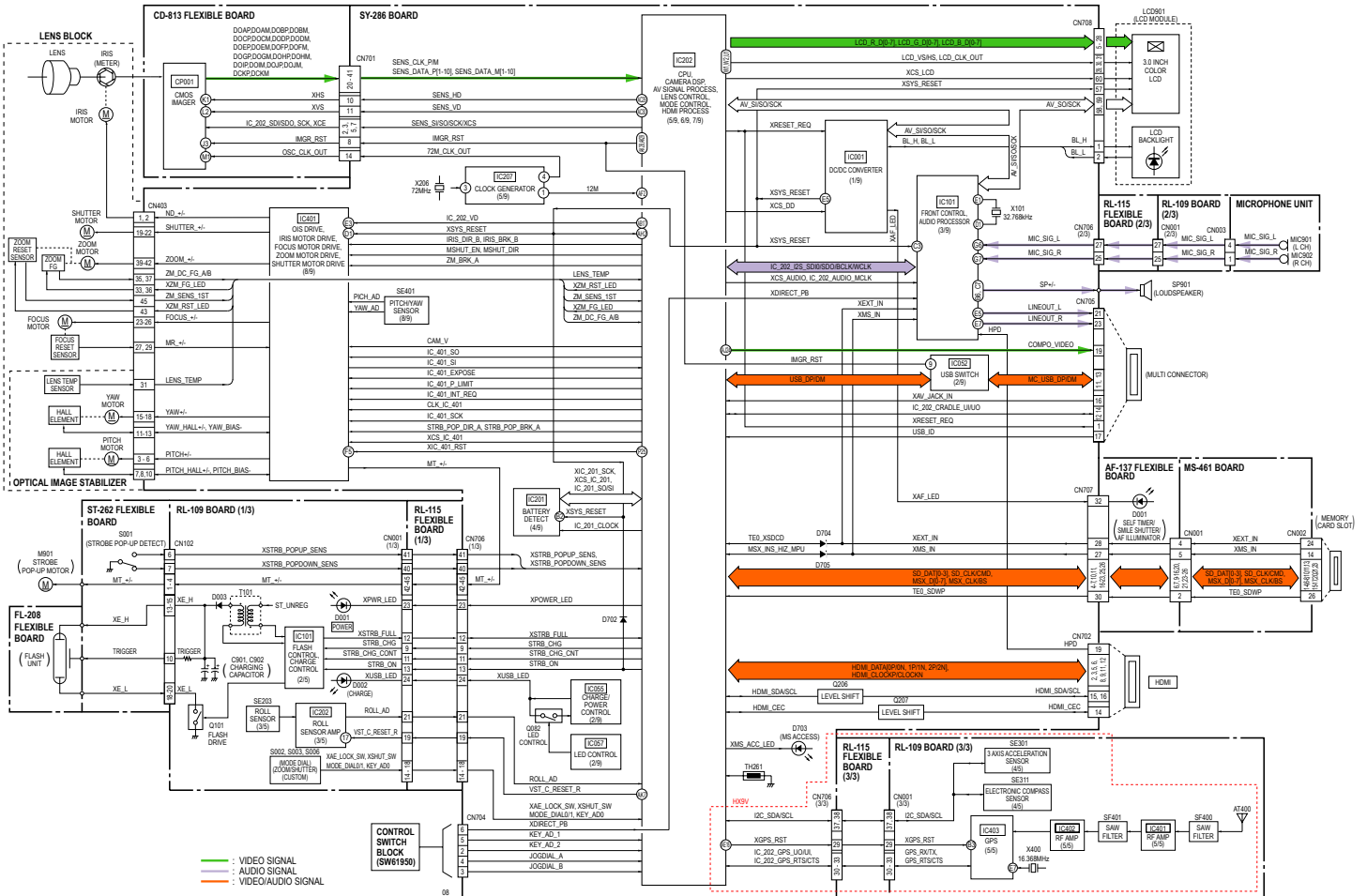
Ref.No.	Part.No.	Description	Ref.No.	Part.No.	Description	Ref.No.	Part.No.	Description	Ref.No.	Part.No.	Description
C074	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	* C268	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C076	1-128-632-91	CERAMIC CHIP	0.01uF	10%	6.3V	* C270	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C102	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	* C271	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C103	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	* C272	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C104	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	* C273	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C105	1-100-415-91	CERAMIC CHIP	0.47uF	10%	6.3V	* C274	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C106	1-100-415-91	CERAMIC CHIP	0.47uF	10%	6.3V	* C275	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C107	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V	* C276	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C108	1-114-582-11	CERAMIC CHIP	0.1uF	10%	16V	* C277	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C109	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V	* C278	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C110	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	* C279	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C111	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	* C280	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C112	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	* C281	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C113	1-114-582-11	CERAMIC CHIP	0.1uF	10%	16V	* C282	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C114	1-164-852-11	CERAMIC CHIP	12PF	5%	50V	* C283	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C115	1-164-852-11	CERAMIC CHIP	12PF	5%	50V	* C284	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
* C116	1-112-746-11	CERAMIC CHIP	4.7uF	10%	6.3V	* C285	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
* C118	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	* C286	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
* C119	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	* C287	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C202	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	* C288	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
* C206	1-112-815-91	CERAMIC CHIP	10uF	20%	6.3V	* C289	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
* C207	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	* C290	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
* C208	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C361	1-100-611-91	CERAMIC CHIP	22uF	20%	6.3V
* C209	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	* C362	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
* C211	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	* C363	1-112-746-11	CERAMIC CHIP	4.7uF	10%	6.3V
* C212	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	* C365	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
* C213	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	* C366	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
* C215	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	* C368	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
* C216	1-116-403-91	CERAMIC CHIP	10uF	10%	6.3V	* C369	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
* C217	1-112-746-11	CERAMIC CHIP	4.7uF	10%	6.3V	* C370	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
* C218	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	* C371	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
* C219	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C372	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
* C220	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C375	1-100-611-91	CERAMIC CHIP	22uF	20%	6.3V
* C221	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C376	1-100-611-91	CERAMIC CHIP	22uF	20%	6.3V
C223	1-116-403-91	CERAMIC CHIP	10uF	10%	6.3V	* C377	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
* C224	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C378	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V
* C225	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C379	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V
* C226	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	* C380	1-112-746-11	CERAMIC CHIP	4.7uF	10%	6.3V
* C227	1-114-582-11	CERAMIC CHIP	0.1uF	10%	16V	* C381	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
* C229	1-114-582-11	CERAMIC CHIP	0.1uF	10%	16V	* C382	1-112-746-11	CERAMIC CHIP	4.7uF	10%	6.3V
* C230	1-114-582-11	CERAMIC CHIP	0.1uF	10%	16V	C383	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V
* C232	1-114-582-11	CERAMIC CHIP	0.1uF	10%	16V	* C384	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C233	1-128-632-91	CERAMIC CHIP	0.01uF	10%	6.3V	* C385	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
* C234	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	* C386	1-114-582-11	CERAMIC CHIP	0.1uF	10%	16V
* C235	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	* C387	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
* C236	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	* C388	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
* C237	1-112-746-11	CERAMIC CHIP	4.7uF	10%	6.3V	* C404	1-114-872-91	TANTAL CHIP	47uF	20%	10V
* C238	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	* C405	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C241	1-100-611-91	CERAMIC CHIP	22uF	20%	6.3V	* C406	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C242	1-100-611-91	CERAMIC CHIP	22uF	20%	6.3V	* C407	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C248	1-116-403-91	CERAMIC CHIP	10uF	10%	6.3V	* C408	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C249	1-116-403-91	CERAMIC CHIP	10uF	10%	6.3V	C413	1-165-887-91	CERAMIC CHIP	0.22uF	10%	6.3V
* C261	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C414	1-165-887-91	CERAMIC CHIP	0.22uF	10%	6.3V
* C262	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C415	1-165-887-91	CERAMIC CHIP	0.22uF	10%	6.3V
* C263	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C416	1-165-887-91	CERAMIC CHIP	0.22uF	10%	6.3V
* C264	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	* C420	1-114-582-11	CERAMIC CHIP	0.1uF	10%	16V
* C265	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	* C429	1-114-582-11	CERAMIC CHIP	0.1uF	10%	16V
* C266	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C430	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
* C267	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	* C431	1-114-582-11	CERAMIC CHIP	0.1uF	10%	16V
						* C432	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
						* C434	1-114-582-11	CERAMIC CHIP	0.1uF	10%	16V
						* C436	1-114-582-11	CERAMIC CHIP	0.1uF	10%	16V
						* C437	1-128-628-91	CERAMIC CHIP	0.0022uF	10%	6.3V
						C438	1-128-628-91	CERAMIC CHIP	0.0022uF	10%	6.3V
						C439	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
						C440	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
						* C441	1-114-582-11	CERAMIC CHIP	0.1uF	10%	16V
						C442	1-128-632-91	CERAMIC CHIP	0.01uF	10%	6.3V
						C443	1-128-632-91	CERAMIC CHIP	0.01uF	10%	6.3V
						C444	1-100-965-91	CERAMIC CHIP	0.047uF	10%	6.3V
						C445	1-100-965-91	CERAMIC CHIP	0.047uF	10%	6.3V
						C446	1-100-965-91	CERAMIC CHIP	0.047uF	10%	6.3V
						* C701	1-112-692-11	CERAMIC CHIP	1000PF	5%	50V
						* C702	1-112-746-11	CERAMIC CHIP	4.7uF	10%	6.3V
						C703	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
						C705	1-114-983-91	CERAMIC CHIP	2.2uF	10%	16V
						* C706	1-112-746-11	CERAMIC CHIP	4.7uF	10%	6.3V
						C707	1-112-300-91	CERAMIC CHIP	4.7uF	10%	10V
						C709	1-100-415-91	CERAMIC CHIP	0.47uF	10%	6.3V
						C710	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
						* C711	1-112-300-91	CERAMIC CHIP	4.7uF	10%	10V
						* C712	1-112-746-11	CERAMIC CHIP	4.7uF	10%	6.3V
						C713	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
						C714	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
						C715	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
						C716	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
						C717	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
						* C718	1-114-582-11	CERAMIC CHIP	0.1uF	10%	16V
						* C719	1-114-582-11	CERAMIC CHIP	0.1uF	10%	16V
						C720	1-164-933-11	CERAMIC CHIP	220PF	10%	50V
								< CONNECTOR >			
						CN403	1-821-500-21	CONNECTOR, FPC (ZIF) 45P			
						* CN701	1-821-501-11	CONNECTOR, FPC (ZIF) 51P			
						* CN702	1-842-602-11	CONNECTOR, HDMI			
						* CN703	1-820-634-51	CONNECTOR, FPC (LIF (NON-ZIF)) 10P			
						* CN704	1-816-655-51	FFC/CONNECTOR, FPC (LIF) 8P			
						CN705	1-822-970-11	MULTI CONNECTOR (REC)			
						CN706	1-821-500-21	CONNECTOR, FPC (ZIF) 45P			
		</									

Ref.No.	Part No.	Description			
		< RESISTOR >			
R011	1-220-872-81	METAL CHIP	12	0.5%	1/16W
R042	1-240-718-91	METAL CHIP	100K	5%	1/20W
R043	1-240-729-91	METAL CHIP	1M	5%	1/20W
R044	1-240-731-91	METAL CHIP	1.5M	5%	1/20W
R051	1-240-729-91	METAL CHIP	1M	5%	1/20W
R056	1-208-911-11	METAL CHIP	10K	0.5%	1/16W
R064	1-218-955-11	METAL CHIP	1.5K	5%	1/16W
R068	1-240-830-11	METAL CHIP	100K	0.5%	1/20W
R087	1-240-733-91	METAL CHIP	2.2M	5%	1/20W
R088	1-240-695-91	METAL CHIP	1K	5%	1/20W
R093	1-240-718-91	METAL CHIP	100K	5%	1/20W
R095	1-240-695-91	METAL CHIP	1K	5%	1/20W
R096	1-240-726-91	METAL CHIP	470K	5%	1/20W
R097	1-240-726-91	METAL CHIP	470K	5%	1/20W
R098	1-240-672-11	METAL CHIP	10	5%	1/20W
R099	1-240-726-91	METAL CHIP	470K	5%	1/20W
R115	1-208-691-11	METAL CHIP	2.2K	0.5%	1/16W
R116	1-208-691-11	METAL CHIP	2.2K	0.5%	1/16W
R117	1-218-953-11	METAL CHIP	1K	5%	1/16W
R118	1-218-953-11	METAL CHIP	1K	5%	1/16W
R205	1-240-695-91	METAL CHIP	1K	5%	1/20W
R212	1-208-869-11	METAL CHIP	180	0.5%	1/16W
R215	1-218-867-11	METAL CHIP	6.8K	0.5%	1/16W
R216	1-208-861-81	METAL CHIP	82	0.5%	1/16W
R217	1-240-707-91	METAL CHIP	10K	5%	1/20W
R218	1-240-703-91	METAL CHIP	4.7K	5%	1/20W
R219	1-240-695-91	METAL CHIP	1K	5%	1/20W
R220	1-208-873-81	METAL CHIP	270	0.5%	1/16W
R221	1-240-703-91	METAL CHIP	4.7K	5%	1/20W
R222	1-240-712-91	METAL CHIP	27K	5%	1/20W
R227	1-218-935-11	METAL CHIP	33	5%	1/16W
R229	1-240-698-91	METAL CHIP	1.8K	5%	1/20W
R230	1-240-698-91	METAL CHIP	1.8K	5%	1/20W
R264	1-240-695-91	METAL CHIP	1K	5%	1/20W
R265	1-240-695-91	METAL CHIP	1K	5%	1/20W
R266	1-218-935-11	METAL CHIP	33	5%	1/16W
R272	1-240-681-91	METAL CHIP	68	5%	1/20W
R273	1-240-683-91	METAL CHIP	100	5%	1/20W
R279	1-240-679-91	METAL CHIP	47	5%	1/20W
R284	1-208-935-11	METAL CHIP	100K	0.5%	1/16W
R285	1-240-707-91	METAL CHIP	10K	5%	1/20W
R287	1-240-707-91	METAL CHIP	10K	5%	1/20W
R288	1-240-707-91	METAL CHIP	10K	5%	1/20W
R289	1-218-935-11	METAL CHIP	33	5%	1/16W
R290	1-240-714-91	METAL CHIP	47K	5%	1/20W
R291	1-208-943-11	METAL CHIP	220K	0.5%	1/16W
R292	1-208-943-11	METAL CHIP	220K	0.5%	1/16W
R294	1-218-935-11	METAL CHIP	33	5%	1/16W
R297	1-218-935-11	METAL CHIP	33	5%	1/16W
R298	1-218-935-11	METAL CHIP	33	5%	1/16W
R299	1-218-935-11	METAL CHIP	33	5%	1/16W
R300	1-218-935-11	METAL CHIP	33	5%	1/16W
R301	1-218-935-11	METAL CHIP	33	5%	1/16W
R302	1-218-945-11	METAL CHIP	220	5%	1/16W
R303	1-218-945-11	METAL CHIP	220	5%	1/16W
R305	1-218-945-11	METAL CHIP	220	5%	1/16W
R306	1-218-945-11	METAL CHIP	220	5%	1/16W

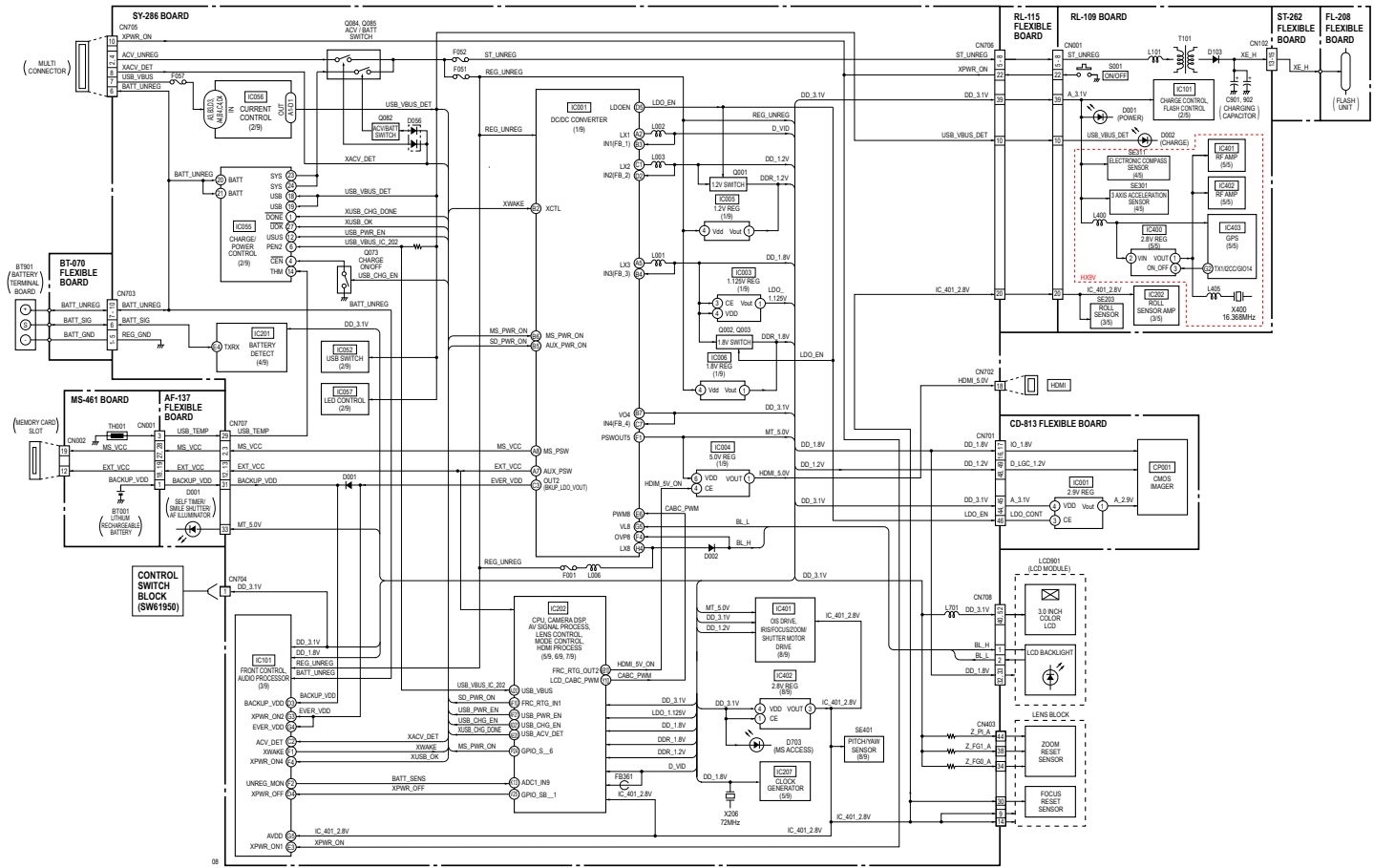
Ref.No.	Part No.	Description			
R309	1-240-703-91	METAL CHIP	4.7K	5%	1/20W
R310	1-240-703-91	METAL CHIP	4.7K	5%	1/20W
R374	1-208-668-11	METAL CHIP	240	0.5%	1/16W
* R408	1-248-350-11	RES-CHIP	1.5	1%	1/3W
R418	1-208-711-11	METAL CHIP	15K	0.5%	1/16W
R423	1-240-808-11	METAL CHIP	10K	0.5%	1/20W
R424	1-240-808-11	METAL CHIP	10K	0.5%	1/20W
R425	1-240-808-11	METAL CHIP	10K	0.5%	1/20W
R426	1-240-808-11	METAL CHIP	10K	0.5%	1/20W
R427	1-240-808-11	METAL CHIP	10K	0.5%	1/20W
R428	1-240-808-11	METAL CHIP	10K	0.5%	1/20W
R431	1-218-946-11	METAL CHIP	270	5%	1/16W
R438	1-218-946-11	METAL CHIP	270	5%	1/16W
R439	1-218-946-11	METAL CHIP	270	5%	1/16W
R457	1-240-707-91	METAL CHIP	10K	5%	1/20W
R458	1-240-711-91	METAL CHIP	22K	5%	1/20W
R460	1-240-707-91	METAL CHIP	10K	5%	1/20W
R461	1-240-711-91	METAL CHIP	22K	5%	1/20W
* R463	1-245-671-11	METAL CHIP	39K	0.5%	1/20W
* R464	1-245-671-11	METAL CHIP	39K	0.5%	1/20W
R465	1-240-794-11	METAL CHIP	2.7K	0.5%	1/20W
R466	1-240-794-11	METAL CHIP	2.7K	0.5%	1/20W
R467	1-240-804-11	METAL CHIP	6.8K	0.5%	1/20W
R468	1-240-804-11	METAL CHIP	6.8K	0.5%	1/20W
R471	1-240-808-11	METAL CHIP	10K	0.5%	1/20W
R472	1-208-889-11	METAL CHIP	1.2K	0.5%	1/16W
R473	1-218-973-11	METAL CHIP	47K	5%	1/16W
R709	1-240-687-91	METAL CHIP	220	5%	1/20W
R715	1-240-695-91	METAL CHIP	1K	5%	1/20W
		< COMPOSITION CIRCUIT BLOCK >			
RB001	1-234-381-11	RES. NETWORK	100K (1005X4)		
RB701	1-234-376-11	RES. NETWORK	2.2K (1005X4)		
		< SENSOR >			
* SE401	1-489-735-11	SENSOR, ANGULAR VELOCITY (PITCH/YAW)			
		< THERMISTOR >			
TH261	1-805-194-21	THERMISTOR, NTC (SMD)			
		< VIBRATOR >			
X101	1-781-525-11	VIBRATOR, CRYSTAL (32.768KHz)			
* X206	1-487-897-21	SILICON OSCILLATOR (72MHZ)			
		1-489-492-11	SWITCH BLOCK CONTROL (SW61950)		

## 4. BLOCK DIAGRAMS

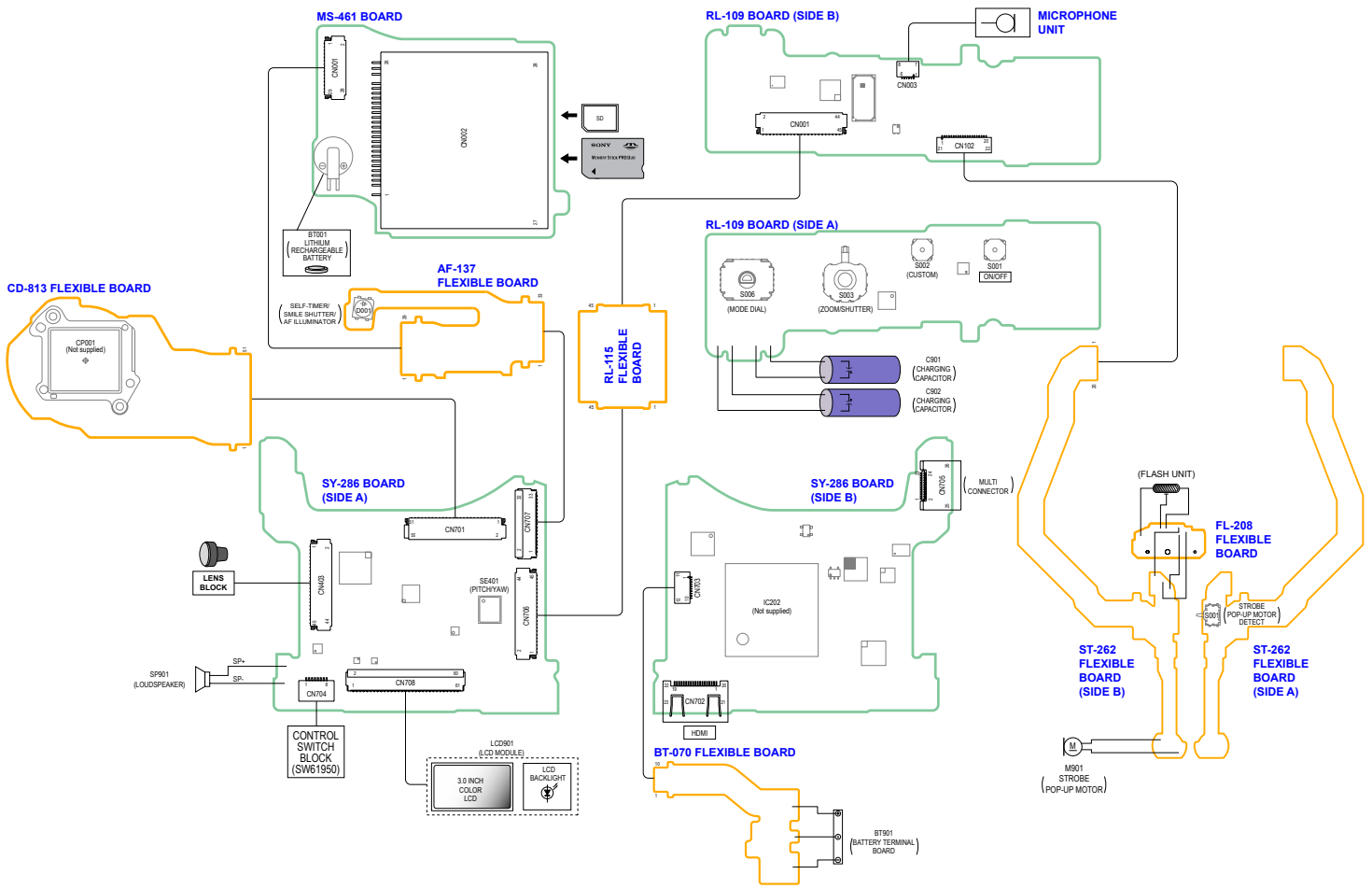
4-1. OVERALL BLOCK DIAGRAM ( ) : Number in parenthesis ( ) indicates the division number of schematic diagram where the component is located.



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



## 5. FRAME SCHEMATIC DIAGRAMS





## 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  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$ , 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 $\Delta$	2520
- Constants of resistors, capacitors, ICs and etc with XX indicate that they are not used.
- 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  $\rightarrow$  EDIT      PB/XREC  $\rightarrow$  PB/REC  
 - : non flammable resistor  
 - : fusible resistor  
 - : panel designation  
 - : B+ Line  
 - : B- Line  
 - : IN/OUT direction of (+, -) B LINE.  
 - : adjustment for repair.

### For Printed Wiring Boards

- : Uses unleaded solder.
  - : Circuit board
  - : Flexible board
  - Pattern from the side which enables seeing.
  - : pattern of the rear side (The other layers' patterns are not indicated)
  - Through hole is omitted.
  - There are a few cases that the part printed on diagram isn't mounted in this model.
  - : panel designation
- Chip parts
- Transistor
- Diode
- 

**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 to strong light.

When indicating parts by reference number, please include the board name.

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

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

- JAPANESE -

**回路図、プリント図共通ノート**  
(他に必要なノートは各セクションに記載しています)

### 回路図ノート

- ケミコン、タンタルを除くコンデンサで、耐圧50V以下のものはその耐圧を省略。単位はすべて  $\mu\text{F}$  (pはpF)。
- チップ抵抗で指示のないものは、1/10W以下。  
 $\text{k}\Omega=1000\Omega$ ,  $\text{M}\Omega=1000\text{k}\Omega$
- チップ部品交換時の注意  
取り外した部品は再使用せず、未使用の部品をご使用ください。
- タンタルコンデンサのマイナス側は熱に弱いため注意してください。
- チップ部品には下記のように表示したものがあります。  
例  

C541	L452
22U	10UH
TA $\Delta$	2520
- ケースサイズ
- 抵抗、コンデンサ、ICなど定数にXXがあるものは、使用していない事を示しています。このため、使用していない回路が記載されている事があります。
- ★印のある部品は、機種などにより異なりますので機能別マウント一覧表を参照してください。
- 可変抵抗と半固定抵抗で、B特性の表示を省略。
- 信号名表記について、下記のような場合があります。  
 XEDIT  $\rightarrow$  EDIT      PB/XREC  $\rightarrow$  PB/REC  
 - : 不燃性抵抗  
 - : ヒューズ抵抗  
 - : バネ表示名称。  
 - : B+ライン。  
 - : B-ライン。  
 - : Bライン(+, -)の入出力方向を示す。  
 - : 調整名称。

### プリント図ノート

- : 無鉛半田を使用しています。
  - : 基板
  - : フレキシブル配線板
  - 見ている面側のパターン
  - : 裏側のパターン (他のパターンについては表示されていません)
  - スルーホールは省略。
  - プリント図には、本機で使用していない部品が記載されている場合があります。
  - : バネ表示名称。
- Chip parts
- Transistor
- Diode
- 

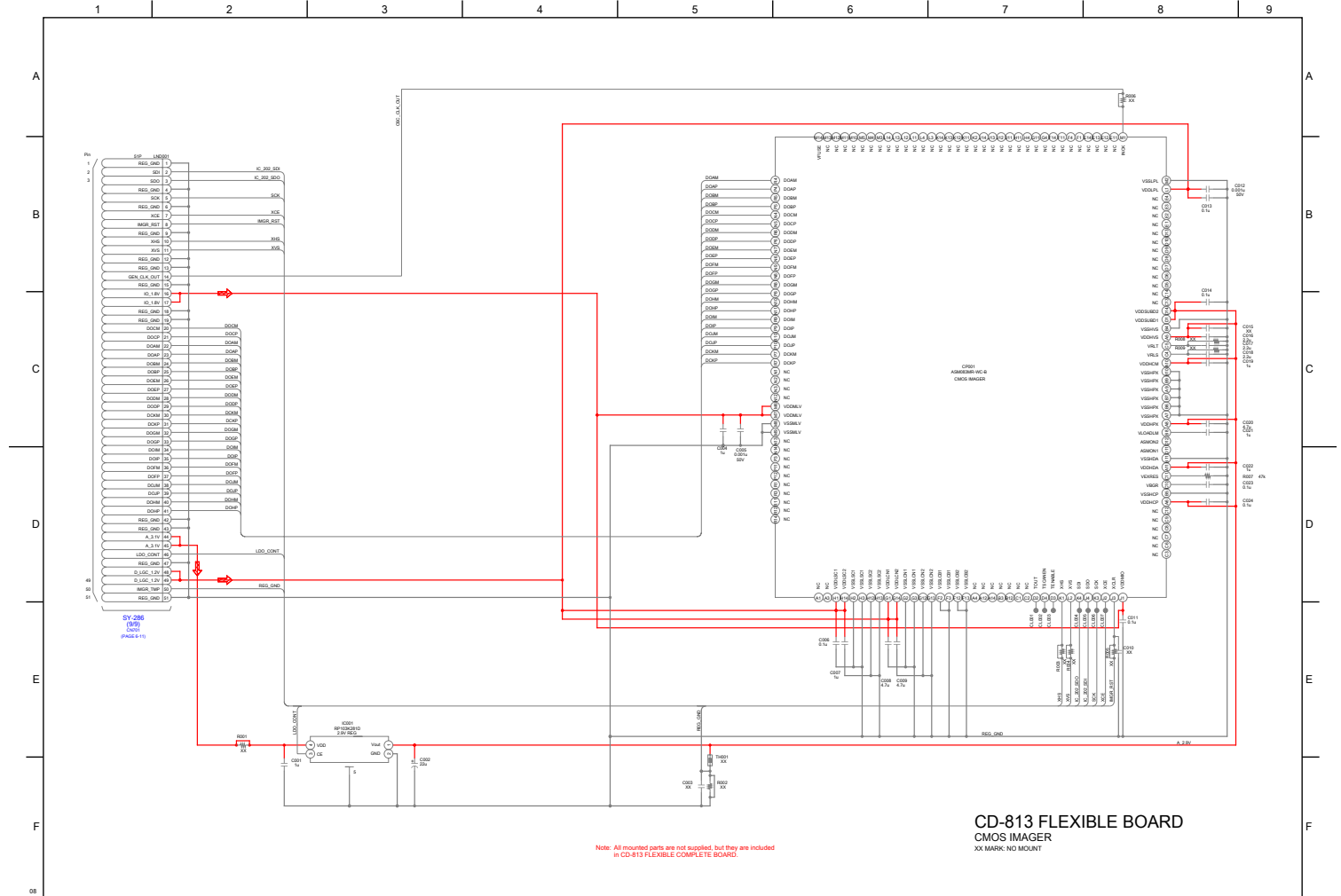
**イメージ交換時の注意**

- イメージを交換した場合は、カメラ部の全調整を行ってください。
- イメージは構造上、静電気により破壊される恐れがあるため、MOS ICと同様に注意して取り扱ってください。また、受光部にはゴミの付着、および強い光がはいることのないように注意してください。

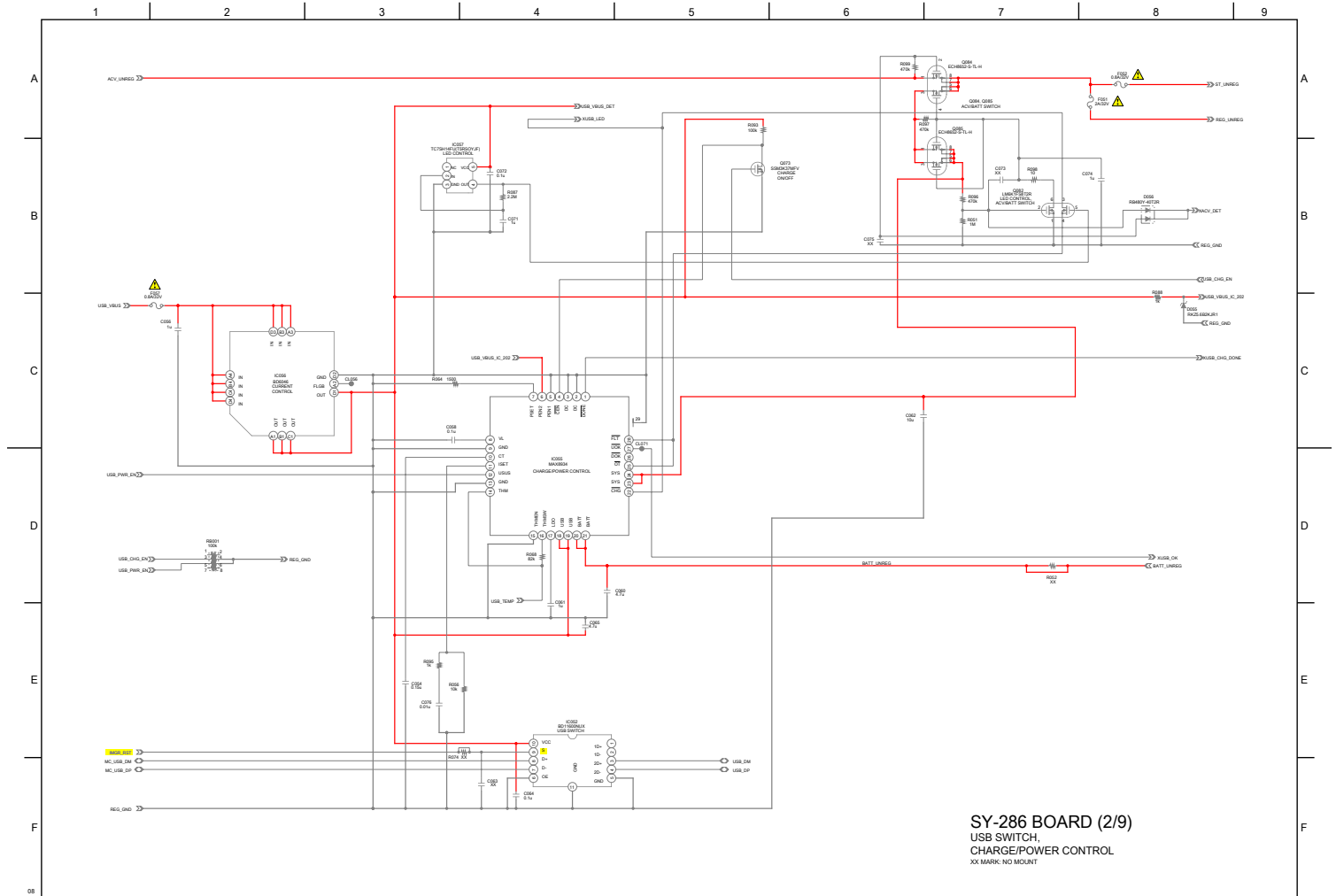
お願い  
図面番号で部品を指定するときは基板名又はブロックを併せて指定してください。

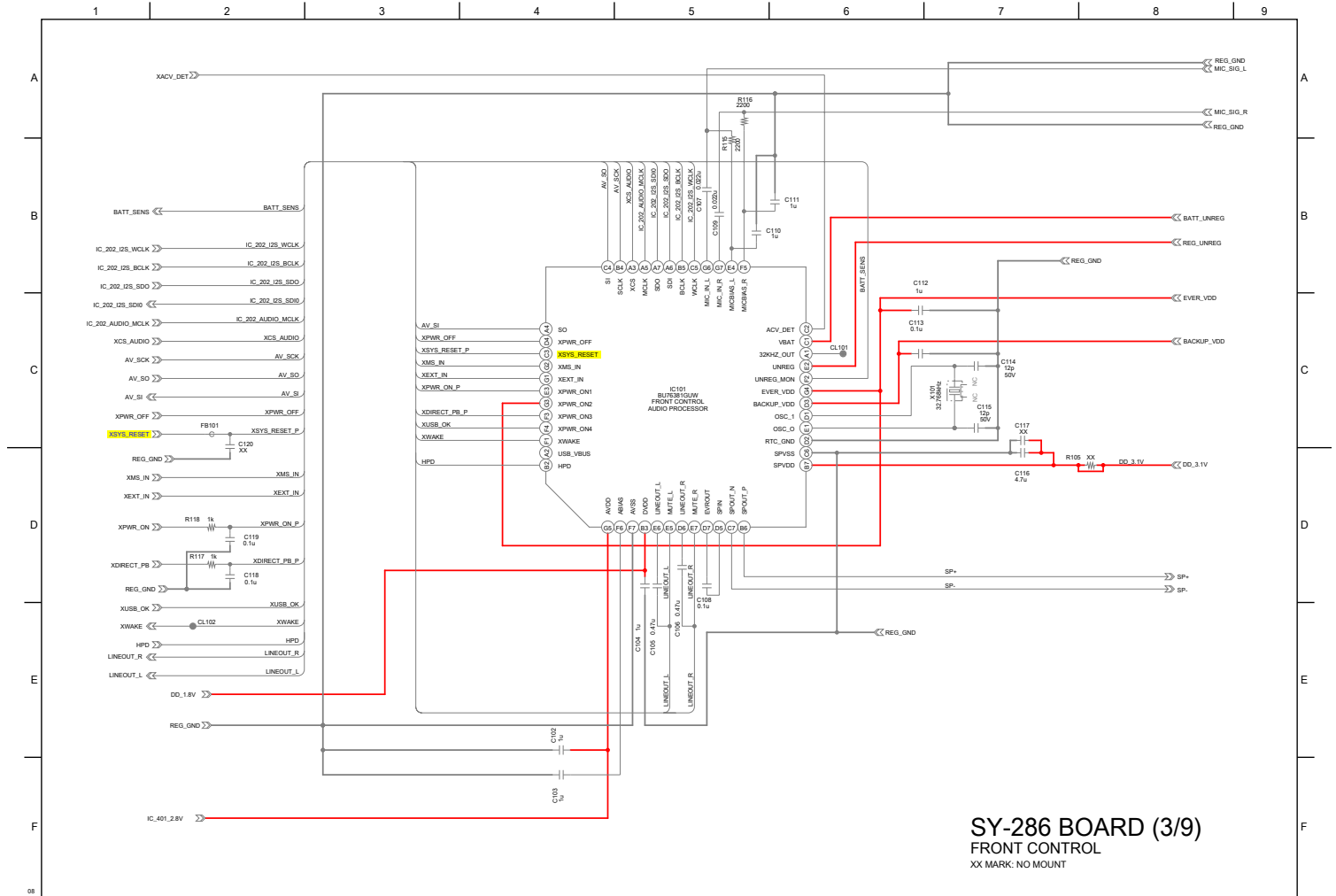
$\Delta$ 印の部品、または $\Delta$ 印付の点線で囲まれた部品は、安全性を維持するために、重要な部品です。従って交換時は、必ず指定の部品を使用してください。

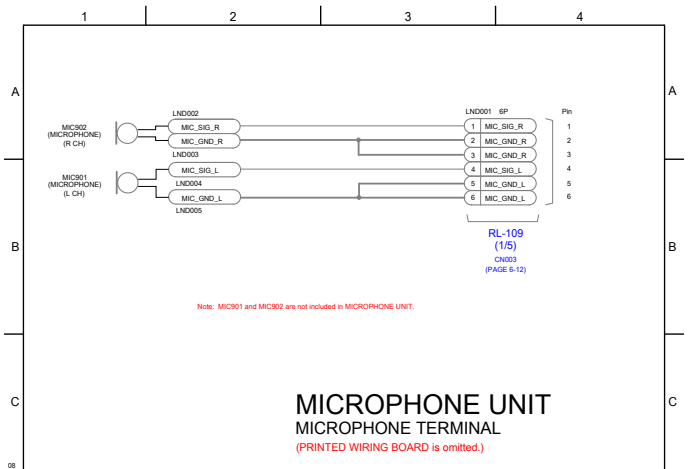
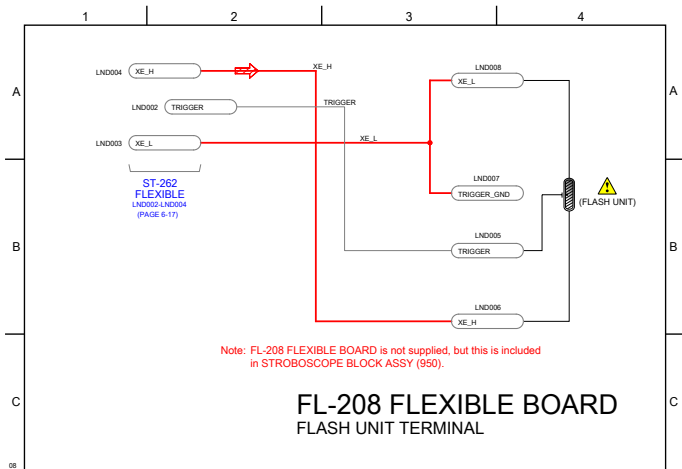
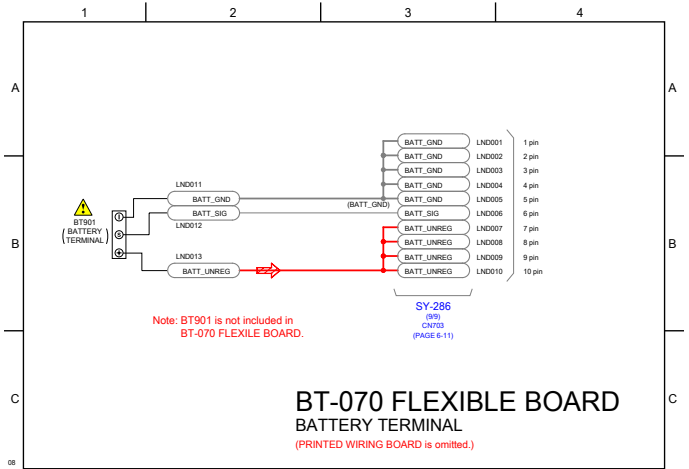
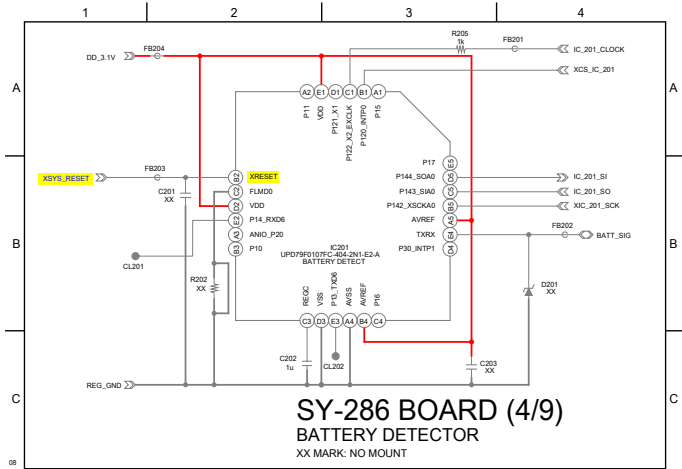
6-1. SCHEMATIC DIAGRAMS

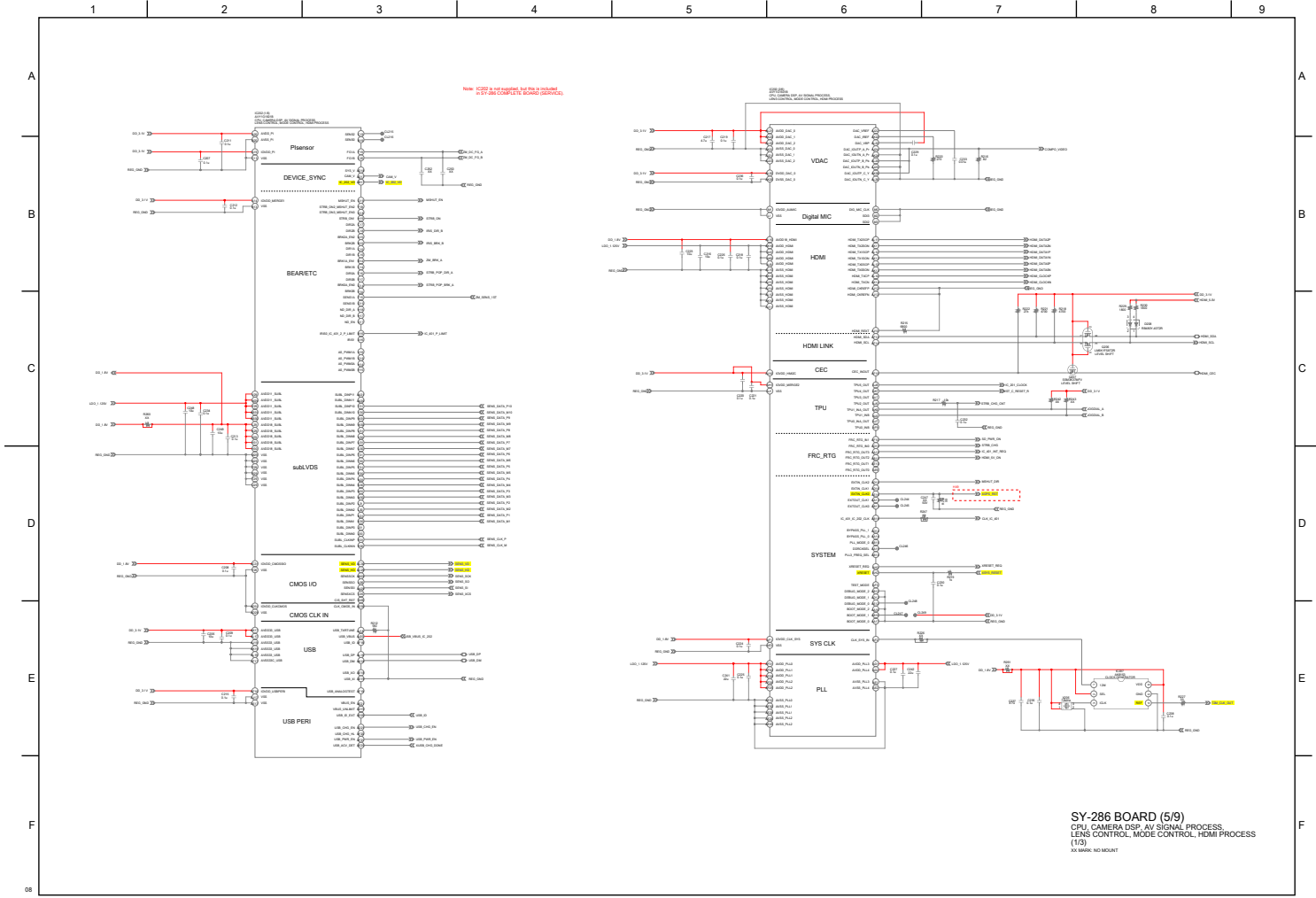


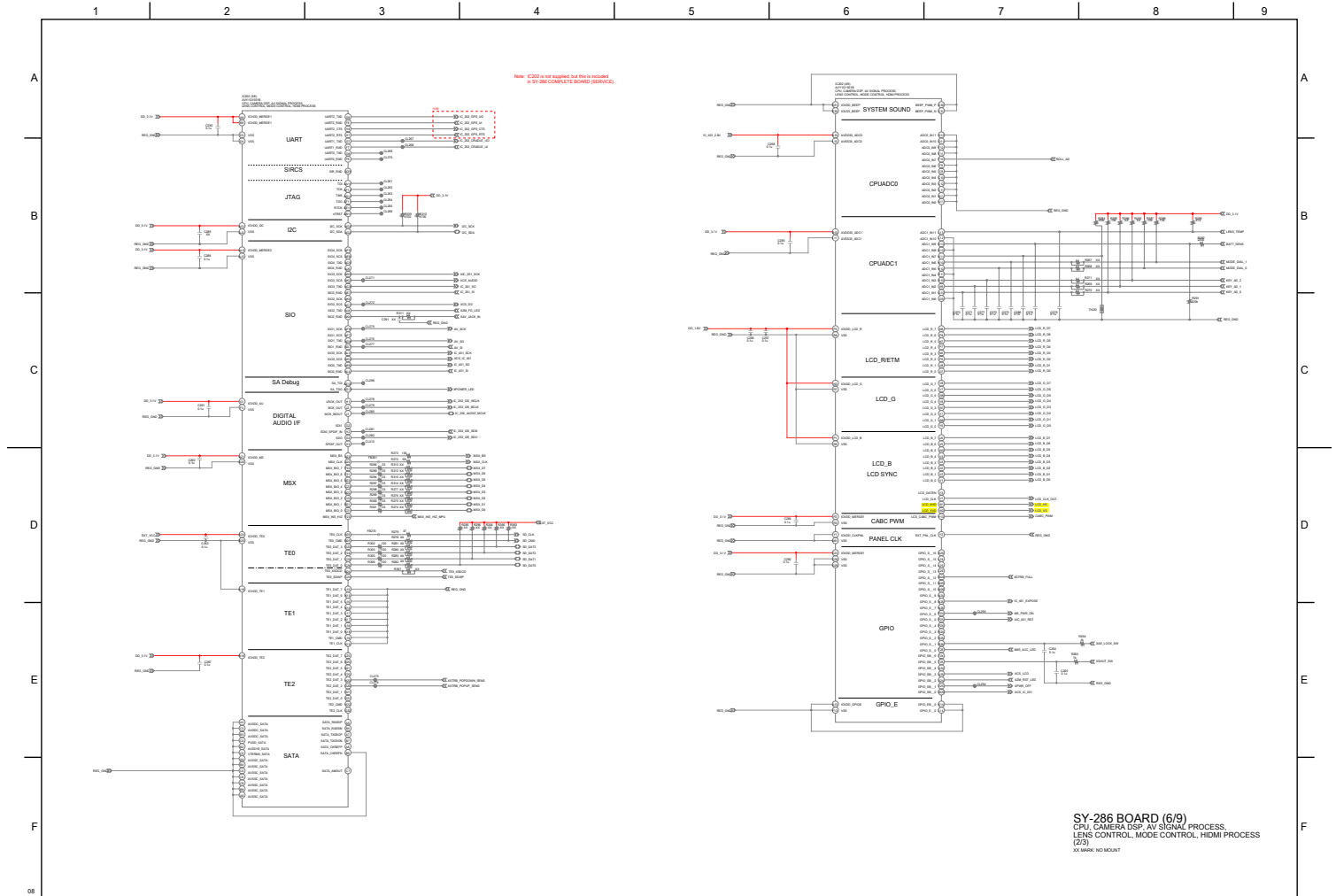




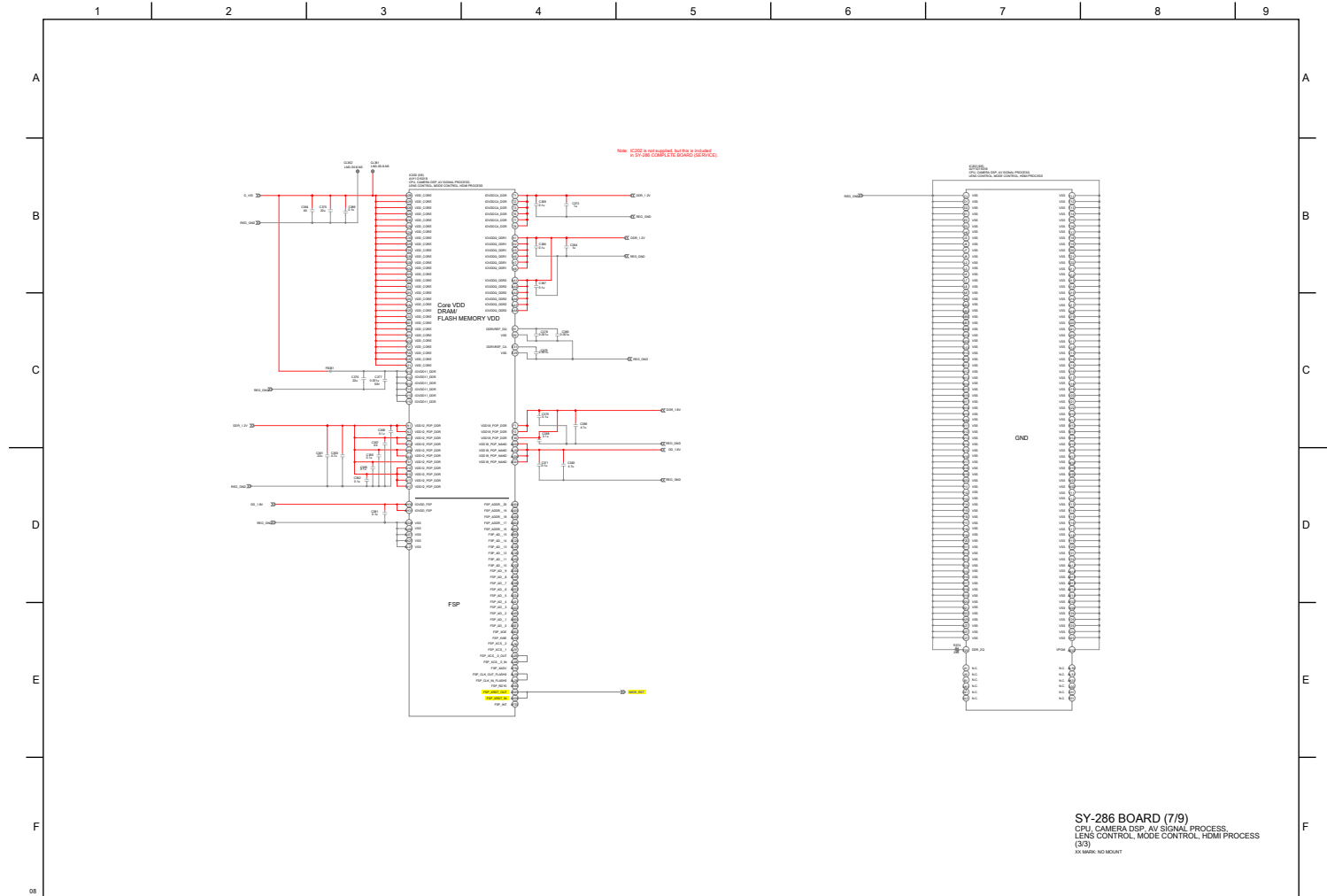


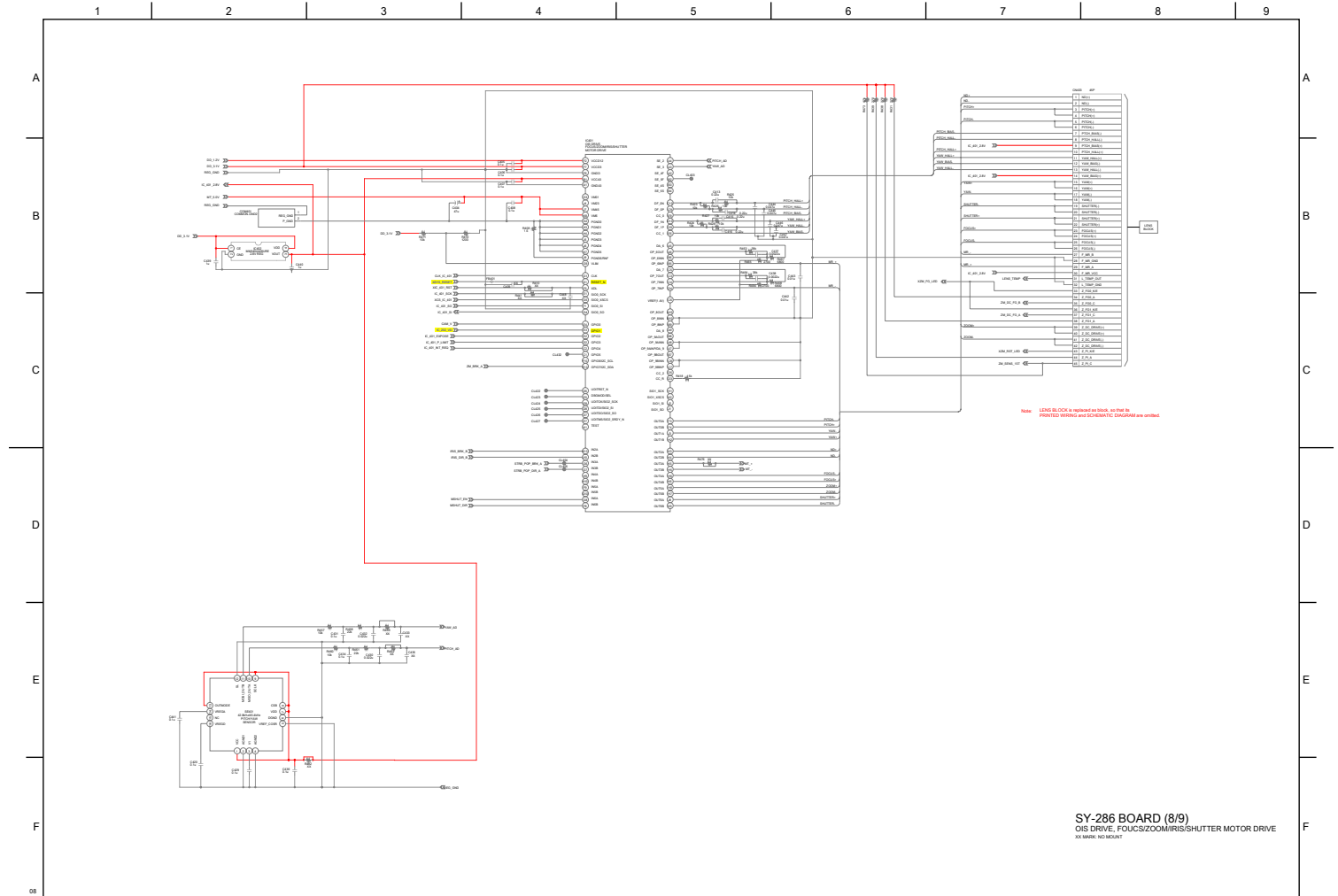


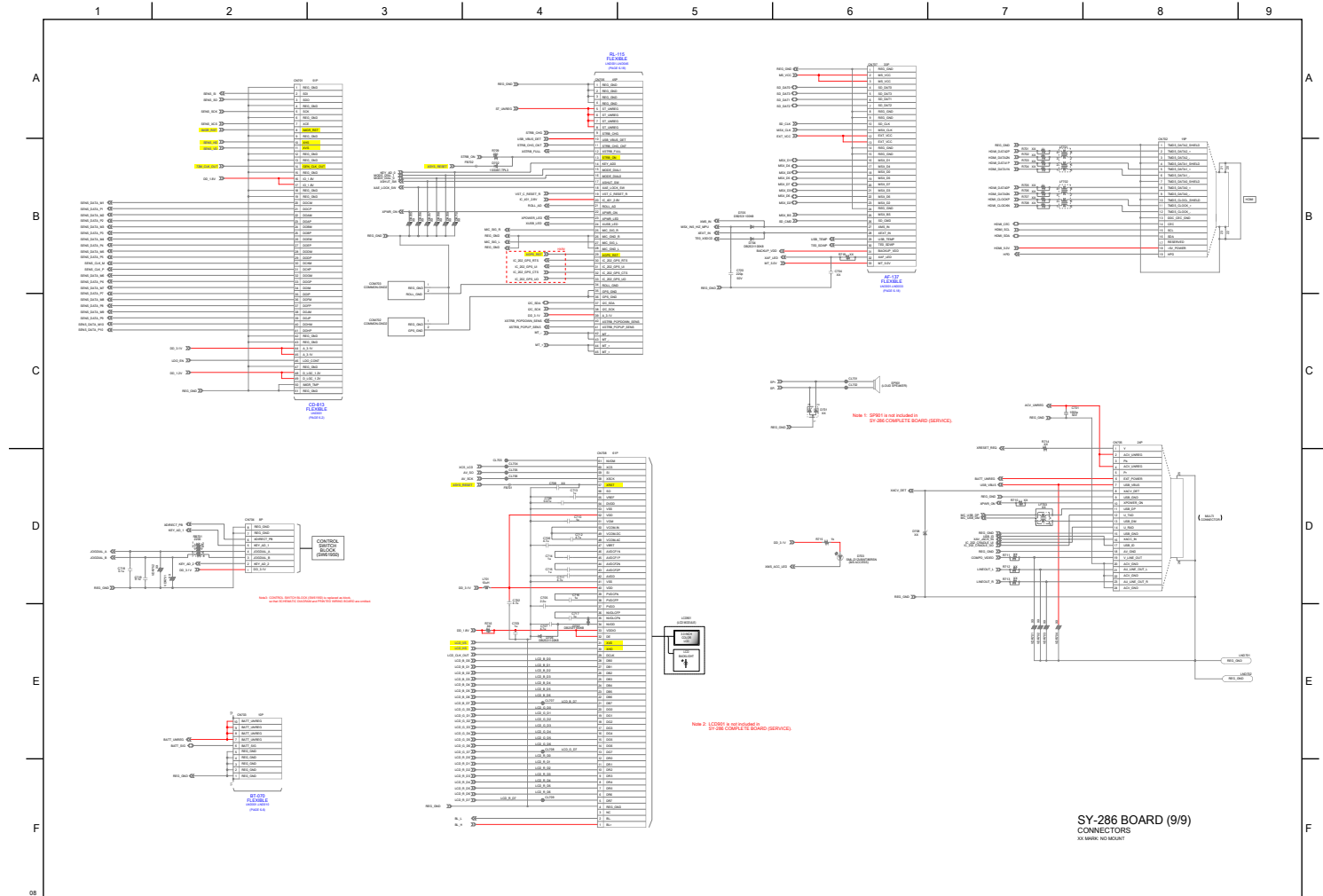


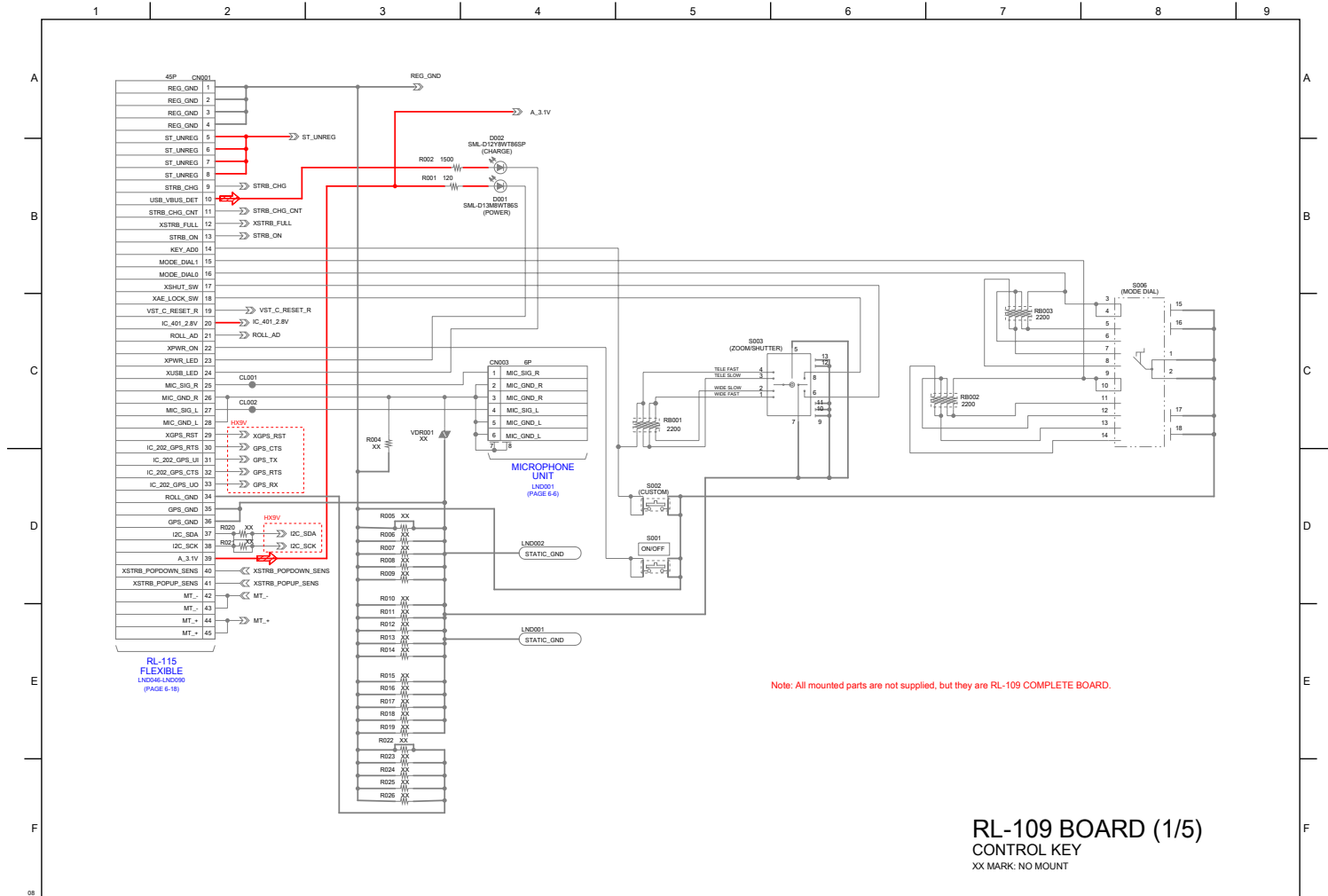


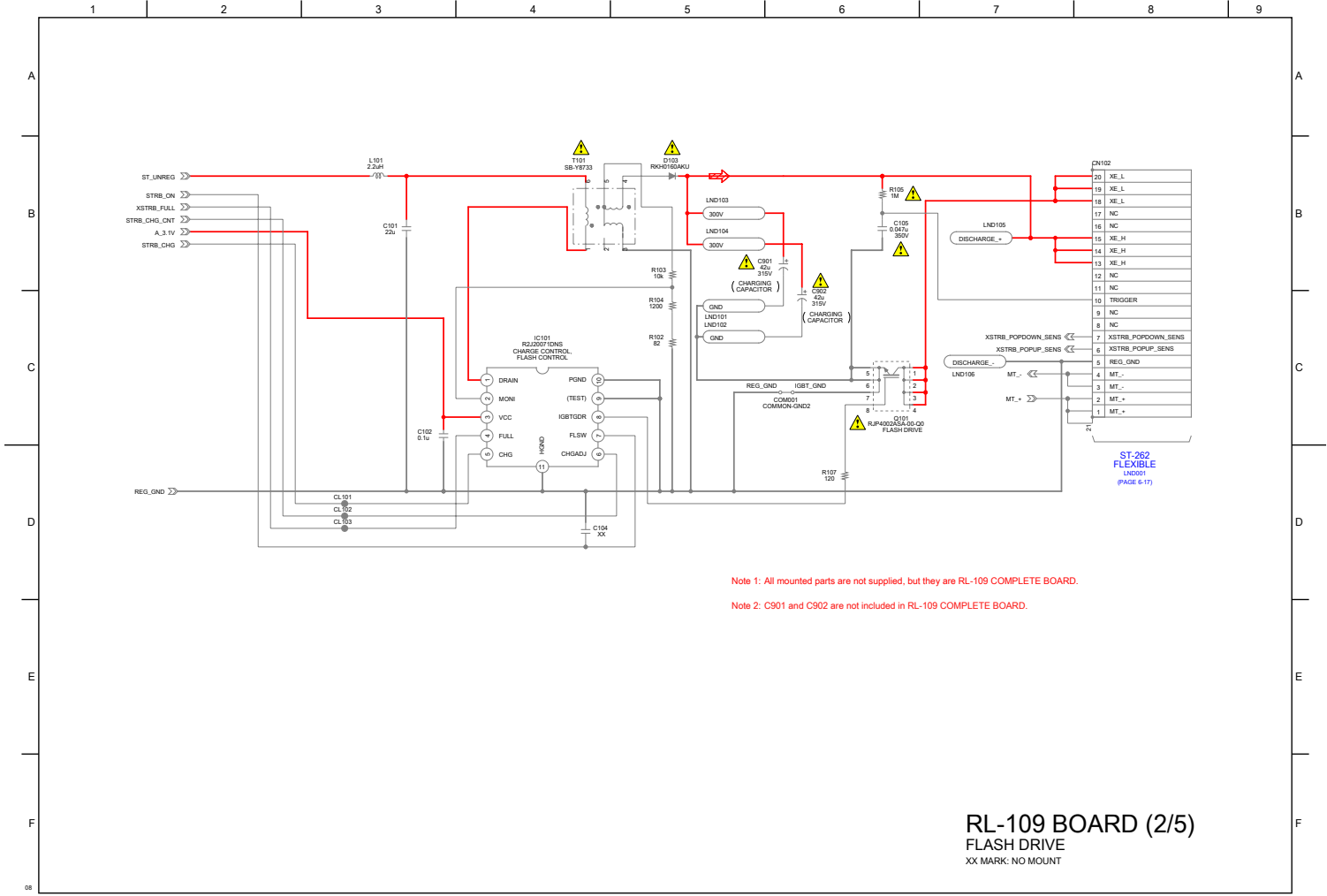






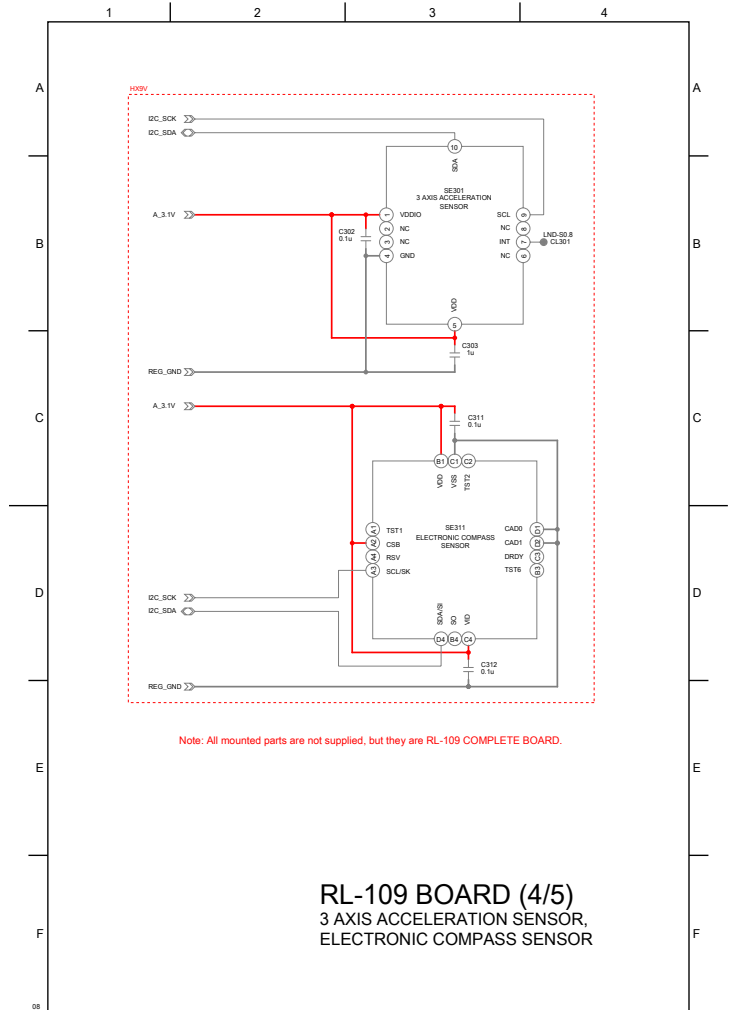
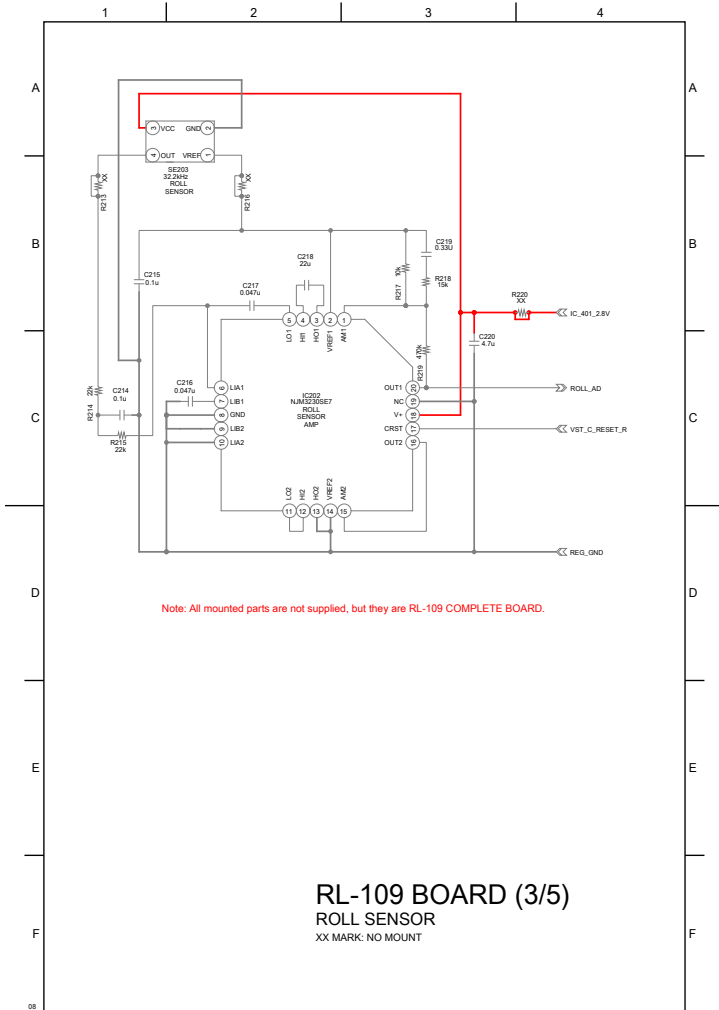


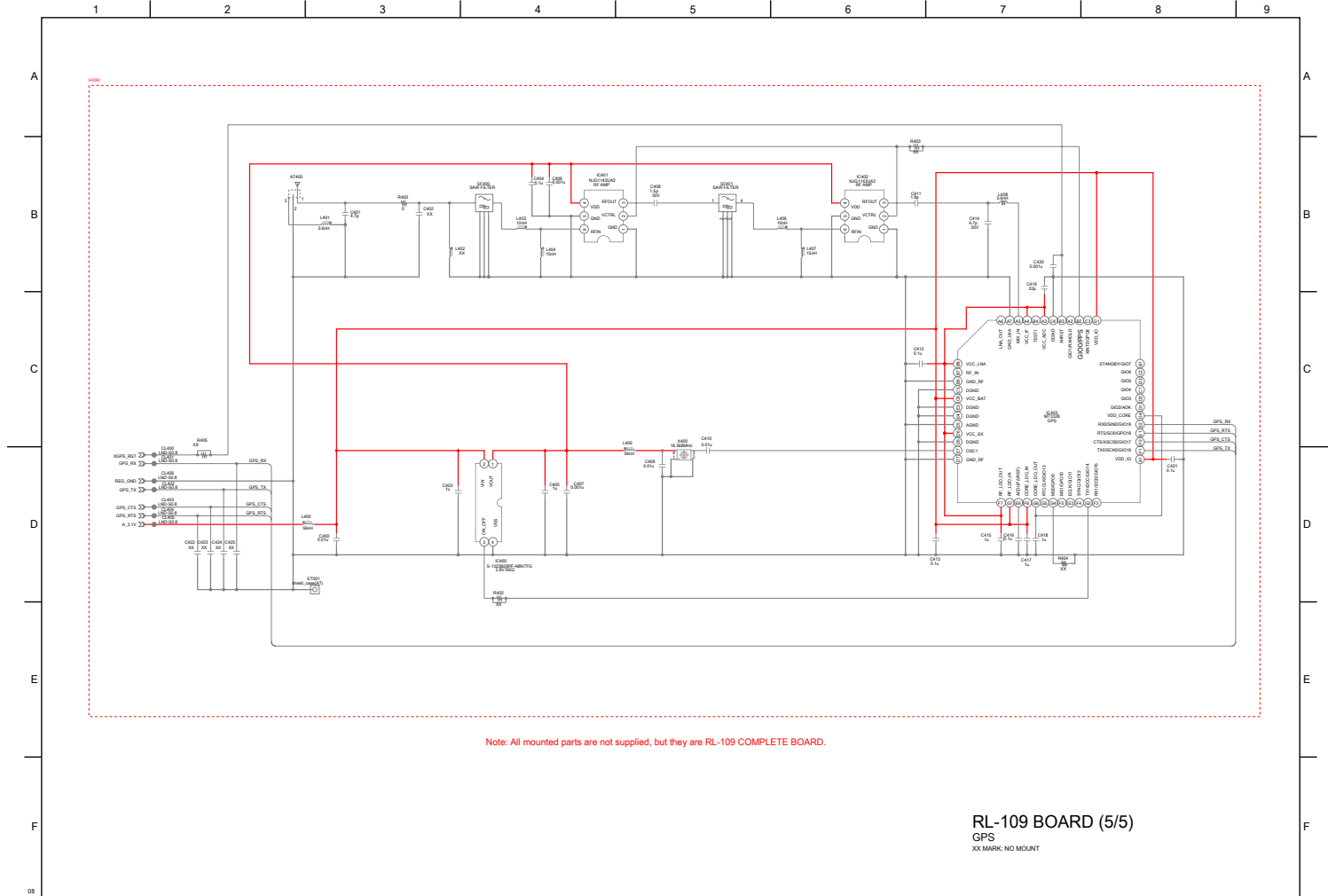


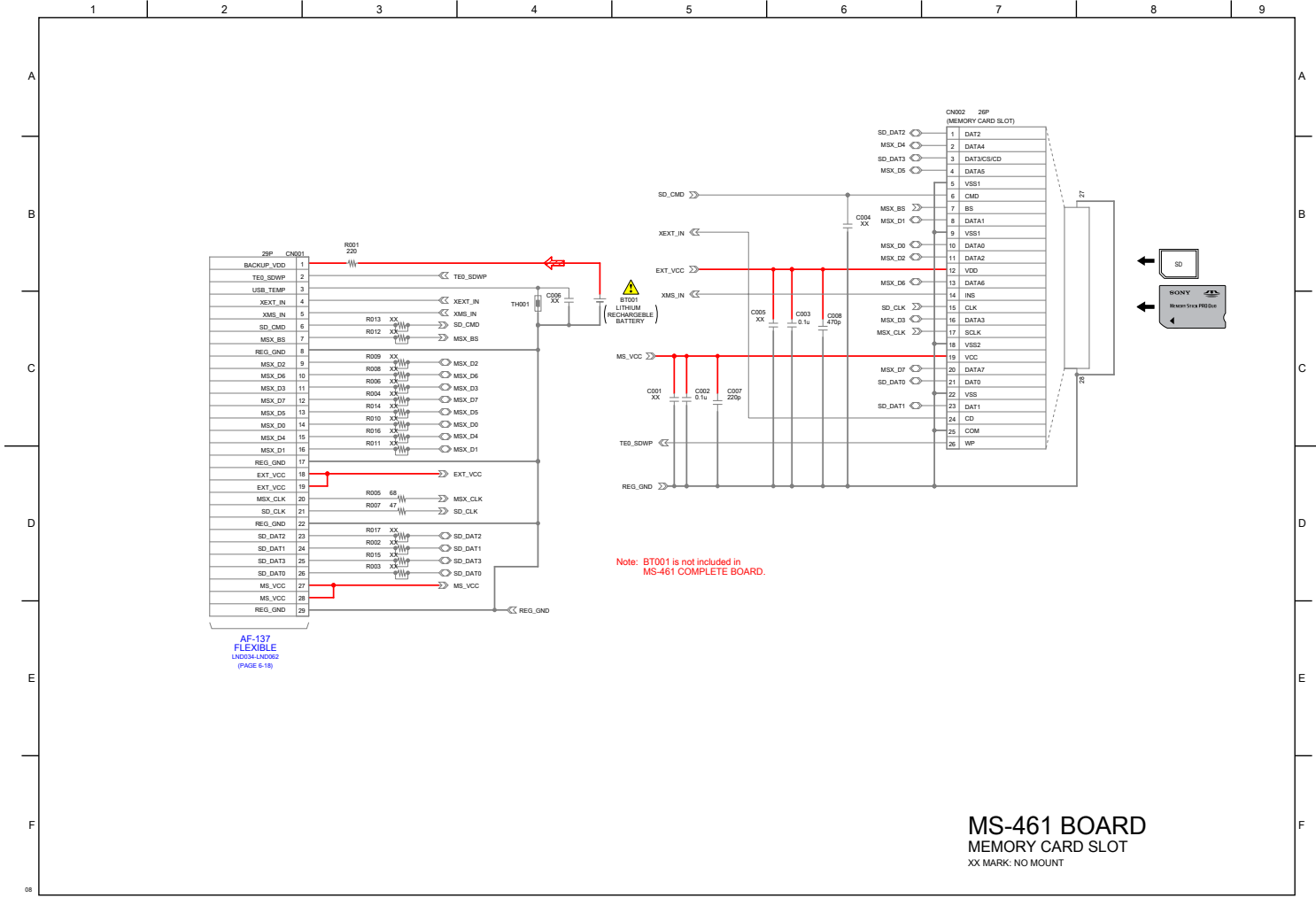


Note 1: All mounted parts are not supplied, but they are RL-109 COMPLETE BOARD.  
 Note 2: C901 and C902 are not included in RL-109 COMPLETE BOARD.

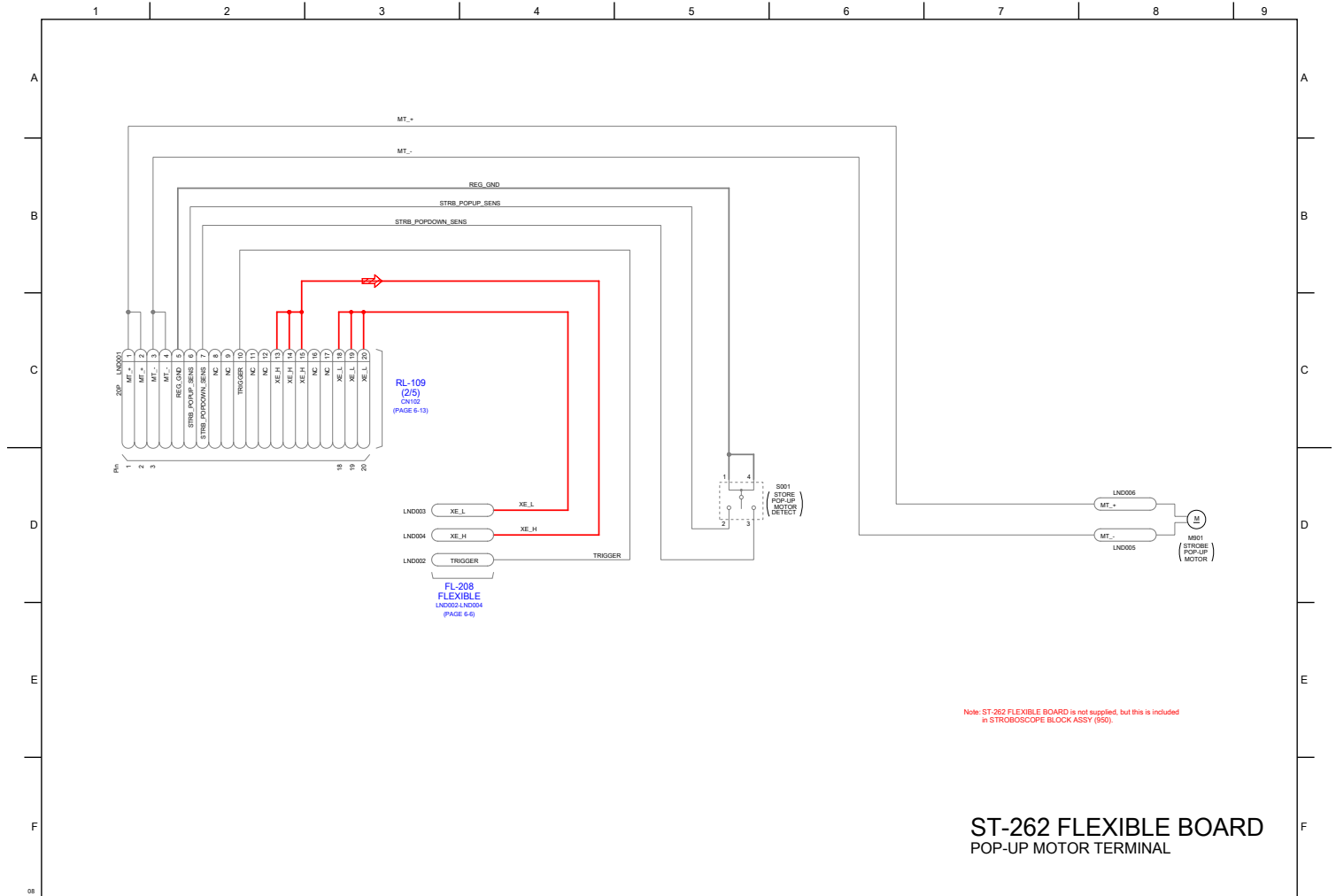
**RL-109 BOARD (2/5)**  
**FLASH DRIVE**  
 XX MARK: NO MOUNT

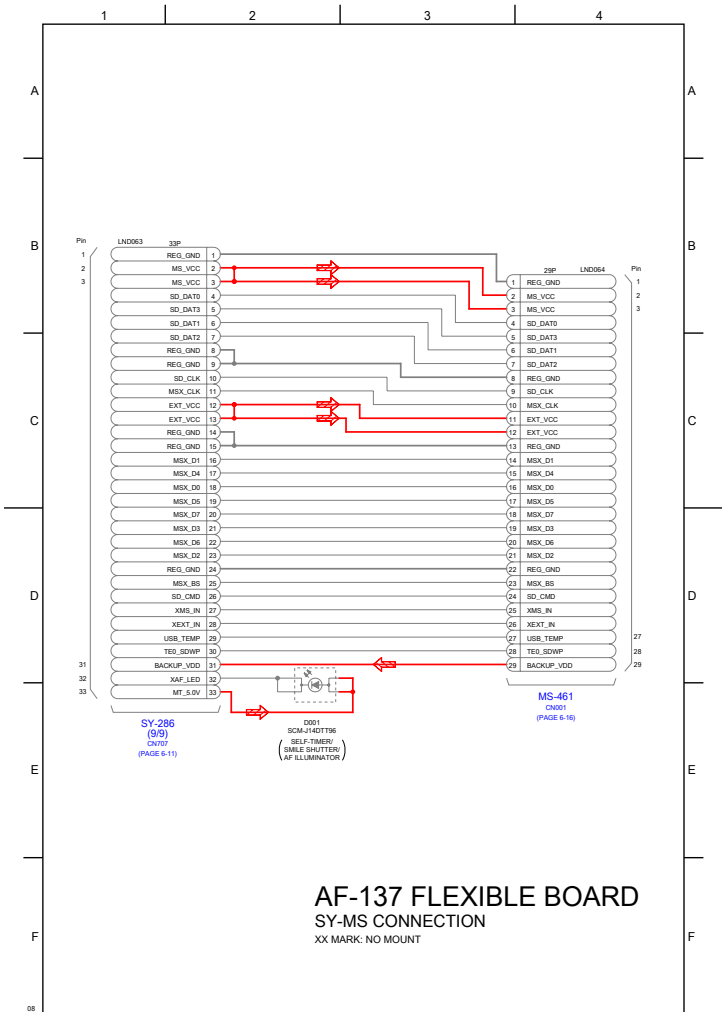
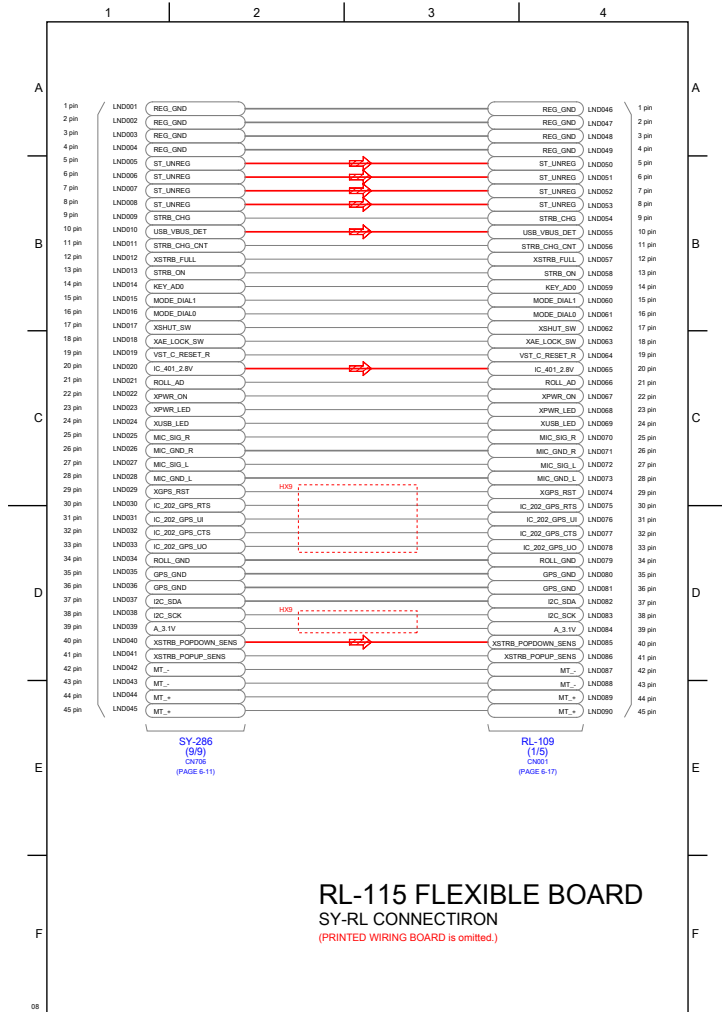






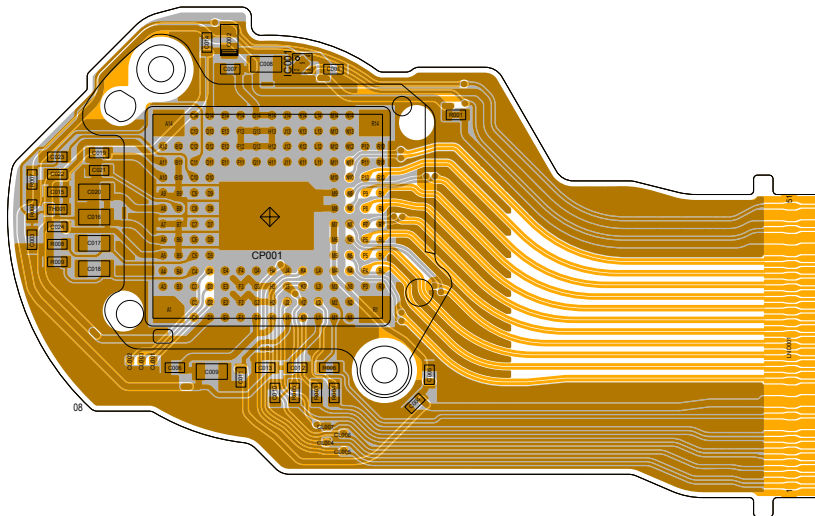






6-2. PRINTED WIRING BOARDS

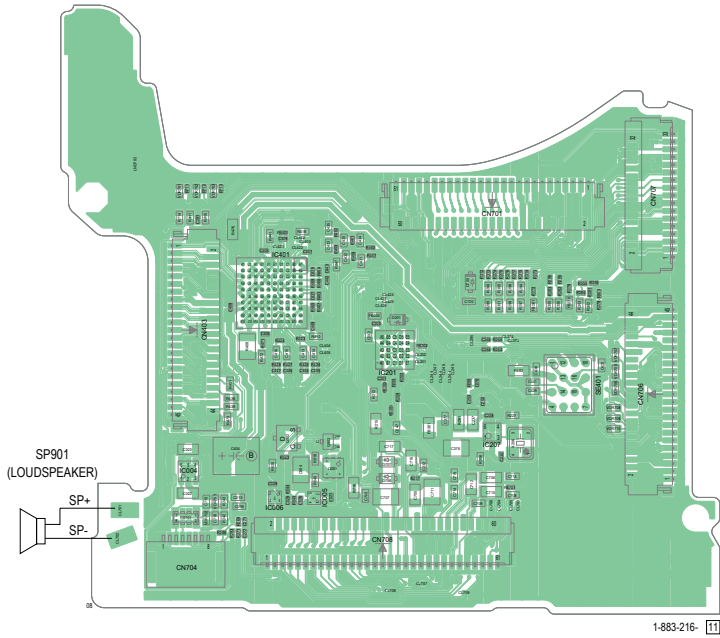
CD-813 FLEXIBLE BOARD



Note: All mounted parts are not supplied, but they are included in CD-813 FLEXIBLE COMPLETE BOARD.

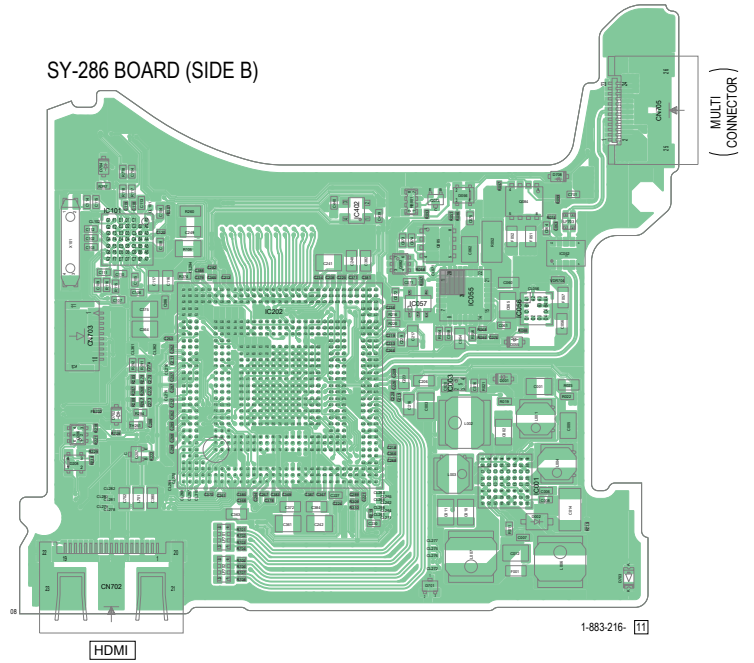
1-882-804- 11

SY-286 BOARD (SIDE A)



Note: SP901 is not included in SY-286 COMPLETE BOARD.

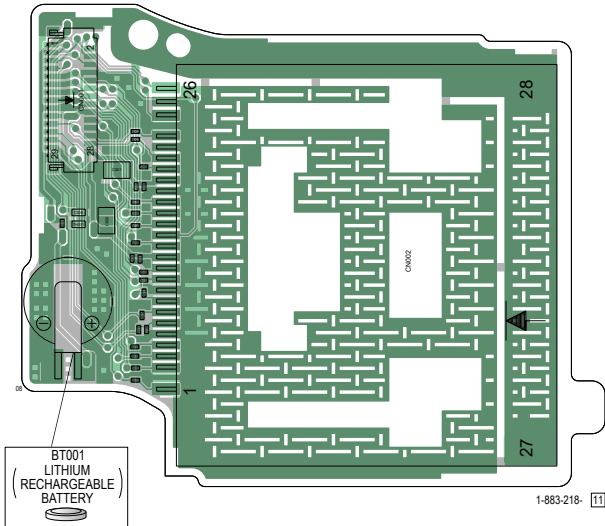
SY-286 BOARD (SIDE B)



Note: IC202 is not supplied, but this is included in SY-286 COMPLETE BOARD.



MS-461 BOARD

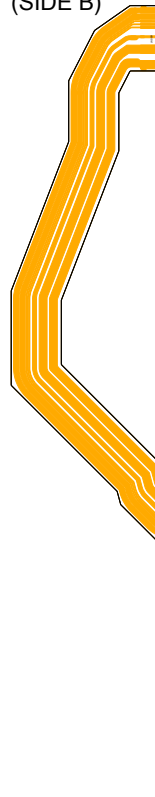


Note: BT001 is not included in MS-461 COMPLETE BOARD.

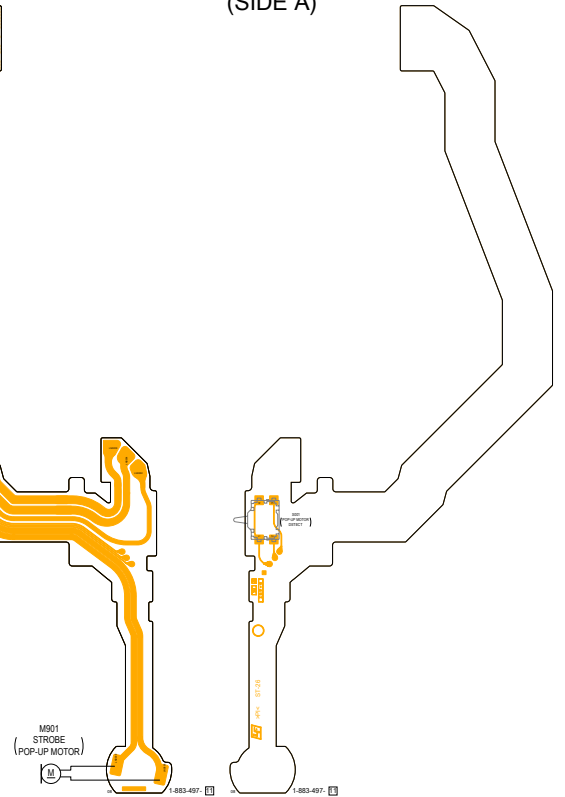
**Caution**  
 Danger of explosion if battery is incorrectly replaced.  
 Replace only with the same or equivalent type.  
 Dispose of used batteries according to the instructions.

**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。

ST-262 FLEXIBLE BOARD  
 (SIDE B)



ST-262 FLEXIBLE BOARD  
 (SIDE A)



Note: ST-262 FLEXIBLE BOARD is not supplied, but this is included in STROBOSCOPE BLOCK Assy (BS).

# DSC-HX9/HX9V

SONY

## SERVICE MANUAL

Ver. 1.1 2011.07

### SUPPLEMENT-1

File this supplement with the service manual.  
(11-154)

- Change of PRINTED WIRING BOARDS
- Change of SCHEMATIC DIAGRAMS
- Change of RL-109 Board Part Number Suffix **11** to **21**

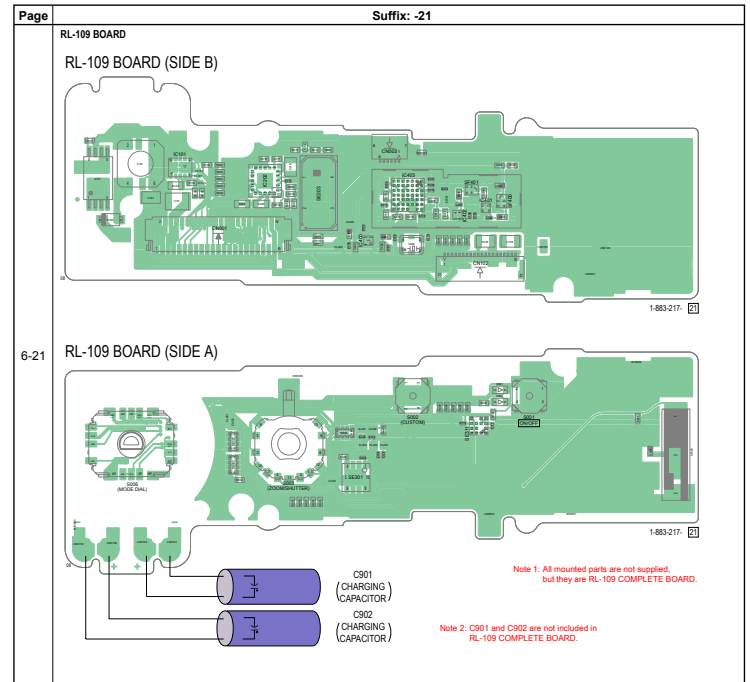
- Part number suffix of RL-109 board has been changed.  
So Suffix No. of part number for RL-109 board has been changed from **11** to **21**.  
This SUPPLEMENT-1 describes Suffix No. **21**.  
For Suffix No. **11**, refer to ORIGINAL SERVICE MANUAL.

### LEVEL 3

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

## 6. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

### 6-2. PRINTED WIRING BOARDS



6-1. SCHEMATIC DIAGRAMS

