

DCR-DVD403/DVD403E/ DVD803/DVD803E RMT-835

SERVICE MANUAL

LEVEL 2

Ver 1.0 2005.02

Revision History

**How to use
Acrobat Reader**



Photo : DCR-DVD403E

DCR-DVD403

*US Model
Canadian Model
Japanese Model*

DCR-DVD403E

*AEP Model
UK Model
North European Model*

DCR-DVD803E

*Australian Model
Hong Kong Model*

DCR-DVD803

Korea Model

**DCR-DVD403/DVD803/
DVD803E**

E Model

DCR-DVD803/DVD803E

Tourist Model

Link

SPECIFICATIONS	BLOCK DIAGRAMS	REPAIR PARTS LIST
SERVICE NOTE	SCHEMATIC DIAGRAMS	
DISASSEMBLY	PRINTED WIRING BOARDS	

- For ADJUSTMENTS (SECTION 6), refer to SERVICE MANUAL, ADJ (9-876-867-51).
- For INSTRUCTION MANUAL, refer to SERVICE MANUAL, LEVEL 1 (9-876-867-41). (EXCEPT J MODEL)
- **Reference number search on printed wiring boards is available.**
- **TO TAKE OUT A DISC WHEN DISC COVER DOES NOT OPEN (FORCE OPEN)**

On the CD-565, MA-439, VF-168, MD-114 and VC-397 board

This service manual provides the information that is premised the circuit board replacement service and not intended repair inside the CD-565, MA-439, VF-168, MD-114 and VC-397 board.

Therefore, schematic diagram, printed wiring board, waveforms, mounted parts location and electrical parts list of the CD-565, MA-439, VF-168, MD-114 and VC-397 board are not shown.

The following pages are not shown.

Schematic diagram	Pages 4-21 to 4-68	Mounted parts location	Pages 4-101 to 4-103
Printed wiring board	Pages 4-83 to 4-96	Electrical parts list	Pages 5-17 to 5-30
Waveforms	Pages 4-98 to 4-99		



DIGITAL VIDEO CAMERA RECORDER

SONY®



SPECIFICATIONS

System

Video compression format	MPEG2/JPEG (Still images)
Audio compression format	Dolby Digital 2/5.1ch Dolby Digital 5.1 Creator
Video signal	NTSC color, EIA standards (DVD403/DVD803) PAL color, CCIR standards (DVD403E/DVD803E)
Usable discs	8cm DVD-R/DVD-RW/ DVD+RW
Recording format	Movie DVD-R: DVD-VIDEO DVD-RW: DVD-VIDEO (VIDEO mode), DVD-VideoRecording (VR mode) DVD+RW: DVD+RW Video
	Still image Exif ¹ Ver.2.2
Recording/playback time	HQ: Approx. 20 min SP: Approx. 30 min LP: Approx. 60 min
Viewfinder	Electric viewfinder color
Image device	5.9 mm (1/3 type) CCD (Charge Coupled Device) Gross: Approx. 3 310 000 pixels Effective (Movie): Approx. 2 048 000 pixels Effective (Still): Approx. 3 048 000 pixels
Lens	Carl Zeiss Vario-Sonnar T [*] Filter diameter: 30mm (1 3/16 in.) Optical: 10, Digital: 20, 1200 F=1.8-2.9
Focal length	5.1 - 51mm (7/32 - 2 1/8 in.) When converted to a 35 mm still camera For movies: 42.8 - 495mm (1 11/16 - 19 1/2 in.) (16:9 mode) ² 45 - 450mm (1 13/16 - 17 3/4 in.) (4:3 mode) For still images: 37 - 370mm (1 1/2 - 14 5/8 in.)
Color temperature	[AUTO], [ONE PUSH], [INDOOR] (3 200 K), [OUTDOOR] (5 800 K)
Minimum illumination	5 lx (lux) (F1.8) 0 lx (lux) (in the NightShot function) ³

¹“Exif” is a file format for still images, established by the JEITA (Japan Electronics and Information Technology Industries Association). Files in this format can have additional information such as your camcorder's setting information at the time of recording.

²In 16:9 mode, the focal length figures are actual figures resulting from wide angle pixel readout.

³Objects unable to be seen due to the dark can be shot with infrared lighting.

• Manufactured under license from Dolby Laboratories.

Input/Output connectors

Audio/Video input/output	10 pin connector Input/Output auto switch Video signal: 1 Vp-p, 75 Ω (ohms), unbalanced Luminance signal: 1 Vp-p, 75 Ω (ohms), unbalanced Chrominance signal: 0.286 Vp-p (DVD403/DVD803) 0.3 Vp-p (DVD403E/DVD803E) 75 Ω (ohms), unbalanced Audio signal: 327 mV (at Load impedance 47 kΩ (kilohms)), Input impedance more than 47 kΩ (kilohms), Output impedance less than 2.2 kΩ (kilohms)
USB jack	mini-B
REMOTE jack	Stereo mini-minijack (Ø 2.5 mm)

LCD screen

Picture	6.9 cm (2.7 type, aspect ratio 16:9)
Total number of pixels	123 200 (560 × 220)

General

Power requirements	7.2 V (battery pack) 8.4 V (AC adaptor)
Average power consumption (when using the battery pack)	During camera recording using LCD 4.9W Viewfinder 4.5W
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.)	62 × 93 × 133mm (2 1/2 × 3 3/4 × 5 1/4 in.) (whd)
Mass (Approx.)	520 g (1 lb 2 oz) main unit only 620 g (1 lb 5 oz) including the NP-FP70 rechargeable battery pack and disc
Supplied accessories	See page 5-12.

AC Adaptor AC-L25A/L25B

Power requirements	AC 100 - 240 V, 50/60 Hz
Current consumption	0.35 - 0.18 A
Power consumption	18W
Output voltage	DC 8.4V [*]
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.)	56 31 100 mm (2 1/4 × 1 1/4 × 4 in.) (w×h×d) excluding the projecting parts
Mass (Approx.)	190 g (6.7 oz) excluding the power cord

^{*} See at the label of AC adaptor for other specifications.

Rechargeable battery pack NP-FP70

Maximum output voltage	DC 8.4V
Output voltage	DC 7.2V
Capacity	9.8 wh (1360 mAh)
Dimensions (Approx.)	31.8 × 33.3 × 45.0 mm (1 5/16 × 1 5/16 × 1 13/16 in.) (w×h×d)
Mass (Approx.)	85 g (2 oz)
Operating temperature	0°C to + 40°C (32°F to 104°F)
Type	Li-ion

Design and specifications are subject to change without notice.

Table for difference of function

Model	DCR-DVD403	DCR-DVD403E	DCR-DVD803	DCR-DVD803E
Destination	US, CND ,E	AEP, UK, NE	E, KR, JE	E, HK, AUS, JE
Color System	NTSC	PAL	NTSC	PAL

• Abbreviation

CND	: Canadian model
NE	: North European model
AUS	: Australian model
HK	: Hong Kong model
KR	: Korea model
JE	: Tourist model



HANDYCAM



概略仕様

システム

映像圧縮方式	MPEG2/JPEG (静止画)
音声圧縮方式	Dolby Digital2/5.1ch ドルビーデジタル5.1クリ エーター搭載
記録 フォーマット	動画 DVD-R: DVD-VIDEO DVD-RW: DVD-VIDEO (VIDEOモード) DVD-VideoRecording (VRモード) DVD+RW: DVD+RW Video
映像信号	静止画 Exif *1 Ver.2.2
使用可能 ディスク	NTSCカラー、EIA標準方式 8cmのDVD-R/DVD-RW/ DVD+RW
録画/再生時間	HQ: 約20分 SP: 約30分 LP: 約60分
ファインダー	電子ファインダー: カラー
撮像素子	5.9mm (1/3型) CCD 固体撮 像素子 総画素数: 約331万画素 静止画時有効画素数: 約 304.8万画素 動画時有効画素数: 約204.8 万画素
レンズ	カール ツァイス バリオゾ ナー T* 10倍(光学)、20倍、120倍(デ ジタル) フィルター径30mm F値= 1.8-2.9 f (焦点距離): 5.1-51mm 35mmカメラ換算: 動画撮影時 42.8-495mm (16:9) *2 45-450mm (4:3) 静止画撮影時 37-370mm (4:3)
色温度切り換え	[オート]、[ワンプッシュ]、 [屋内] (3200K)、 [屋外] (5800K)
最低被写体照度	11 lx (ルクス) (F1.8) 0 lx (ルクス) (NightShot時) *3

*1 (社)電子情報技術産業協会(JEITA)にて制定
された、撮影情報などの付帯情報を追加するこ
とができる静止画用のファイルフォーマット

*2 広角画素読み出しによる実動作値

*3 明るさが足りないために視認できない被写体
を、赤外線ライトを使用して撮影可能にする
こと

•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。

入/出力端子

A/V 端子	10ピン特殊コネクター 入力/出力自動切り換え 映像: 1 Vp-p、75 Ω不平衡 Y出力 1Vp-p、75 Ω不平衡 C出力 0.286Vp-p、75 Ω不 平衡 音声: 327mV (47 kΩ負荷 時)、入力インピーダンス 47 kΩ以上、出力インピーダンス 2.2 kΩ以下
USB 端子	mini-B
REMOTE (リモート) 端子	ステレオミニミニジャック (Ø2.5mm)

液晶画面

画面サイズ	6.9cm (2.7型 アスペクト比 16:9)
総ドット数	123200 ドット 横560×縦220

電源部、その他

電源電圧	バッテリー端子入力7.2V DC端子入力8.4V
消費電力 (バッテリー 使用時)	液晶画面使用時: 4.9W ファインダー使用時: 4.5W
動作温度	0℃～+40℃
保存温度	－20℃～+60℃
外形寸法	62×93×133mm (最大突起部を除く)(幅×高 さ×奥行き)
本体質量	約 520g (本体のみ) 約 620g (バッテリーパック、 ディスクを含む)
付属品	5-13 ページをご覧ください。

ACアダプター AC-L25A/L25B

電源	AC100～240V、50/60Hz
消費電力	18W
定格出力	DC8.4V*
動作温度	0℃～+40℃
保存温度	－20℃～+60℃
外形寸法	約56×31×100mm (最大突起部をのぞく)(幅× 高さ×奥行き)
質量	約190g (本体のみ)

* その他の仕様についてはACアダプターのラ
ベルをご覧ください。

リチャージャブルバッテリーパック
NP-FP70

最大電圧	DC8.4V
公称電圧	DC7.2V
容量	9.8wh (1360mAh)
最大外形寸法	約31.8×33.3×45.0mm (幅×高さ×奥行き)
質量	約85g
使用温度	0℃～+40℃
使用電池	Li-ion

本機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。

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 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

Unleaded solder has the following characteristics.

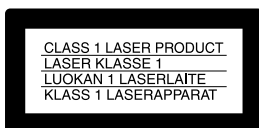
- Unleaded solder melts at a temperature about 40°C higher than ordinary solder.
Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
Soldering irons using a temperature regulator should be set to about 350°C.
Caution: The printed pattern (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.

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.



WARNING!!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION, BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30 cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.

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.

CAUTION:

The use of optical instrument with this product will increase eye hazard.

CAUTION

Use of controls or adjustments or performance procedures other than those specified herein may result in hazardous radiation exposure.

サービス、点検時には次のことにご注意下さい。

1. 注意事項をお守り下さい。

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。これらの注意書きおよ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

- ・取り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について

- ・コテ先温度を270℃前後にして行なって下さい。
- ・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

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て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

無鉛半田には、以下の特性があります。

- ・融点が従来の半田よりも約40℃高い。
従来の半田こてをそのまま使用することは可能ですが、少し長めにこてを当てる必要があります。
温度調節機能のついた半田こてを使用する場合、約350℃に設定して下さい。
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、注意して下さい。
- ・粘性が強い
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下さい。
- ・従来の半田と混ぜて使用可能
無鉛半田には無鉛半田を追加するのが最適ですが、従来の半田を追加しても構いません。

注 意

電池の交換は、正しく行わないと破裂する可能性があります。
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。

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Schematic diagram of the CD-565, MA-439, VF-168, MD-114 and VC-397 board are not shown.
Pages from 4-21 to 4-68 are not shown.

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Printed wiring board of the CD-565, MA-439, VF-168, MD-114 and VC-397 board are not shown.
Pages from 4-83 to 4-96 are not shown.

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Waveforms of the CD-565, VF-168, MD-114 and VC-397 board are not shown.
Pages from 4-98 to 4-99 are not shown.

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Mounted parts location of the CD-565, MA-439, VF-168, MD-114 and VC-397 board are not shown.
Pages from 4-101 to 4-103 are not shown.

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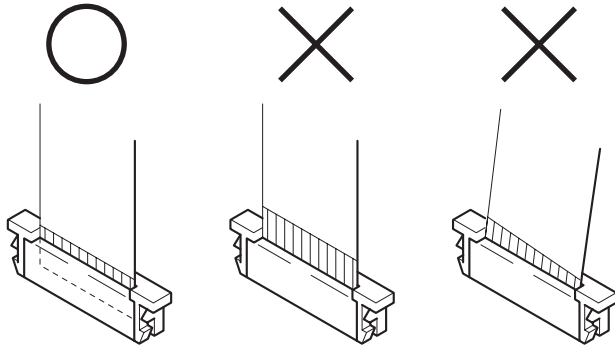
Electrical parts list of the CD-565, MA-439, VF-168, MD-114 and VC-397 board are not shown.
Pages from 5-17 to 5-30 are not shown.

1-1. SERVICE NOTE

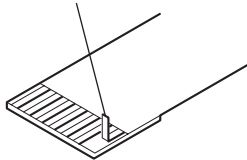
1. NOTE FOR REPAIR

Make sure that the flat cable and flexible board are not cracked or bent at the terminal.

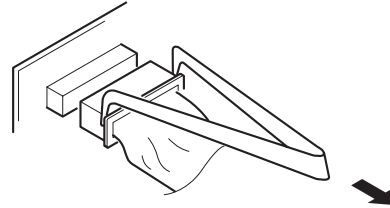
Do not insert the cable insufficiently nor crookedly.



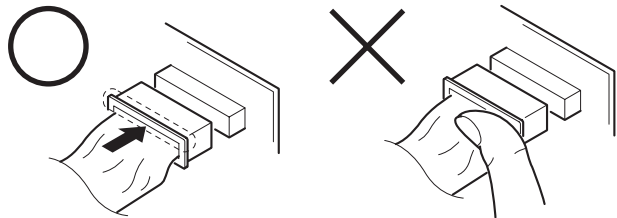
Cut and remove the part of gilt which comes off at the point.
(Take care that there are some pieces of gilt left inside)



When remove a connector, don't pull at wire of connector.
Be in danger of the snapping of a wire.



When installing a connector, don't press down at wire of connector.
Be in danger of the snapping of a wire.



2. POWER SUPPLY DURING REPAIRS

In this unit, about 10 seconds after power is supplied to the battery terminal using the regulated power supply (8.4V), the power is shut off so that the unit cannot operate.

This following two methods are available to prevent this. Take note of which to use during repairs.

Method 1.

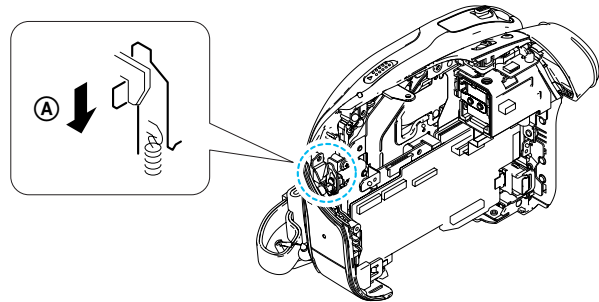
Use the AC power adaptor.

Method 2.

Connect the servicing remote commander RM-95 (J-6082-053-B) to the LANC jack, and set the commander switch to the "ADJ" side.

3. TO TAKE OUT A DISC WHEN DISC COVER DOES NOT OPEN (FORCE OPEN)

- ① Remove the cabinet (R) assembly.
- ② Remove the ST-118 board, ST holder, etc.
- ③ Remove the heat sink (450), VC radiation sheet, etc.
- ④ Remove the lens section.
- ⑤ Push the portion ① in the direction of the arrow and open the disc cover.



4. NOTES ON HANDLING THE OPTICAL PICK-UP

The laser diode may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

The flexible board is easily damaged and should be handled with care.

5. PRECAUTION FOR CHECKING EMISSION OF LASER DIODE

Laser light of the equipment is focused by the object lens in the optical pick-up so that the light focuses on the reflection surface of the disc. Therefore, be sure to keep your eyes more than 30 cm apart from the object lens when you check the emission of laser diode.

6. DISCHARGING OF THE FLASHLIGHT POWER SUPPLY CAPACITOR

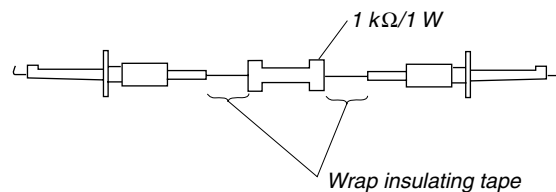
The power supply capacitor (ST-118 board JL6501, JL6502) of the flash are charged up to the maximum 300V potential.

There is a danger of electric shock by this high voltage when the capacitors are 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.

6-1. PREPARING THE SHORT JIG

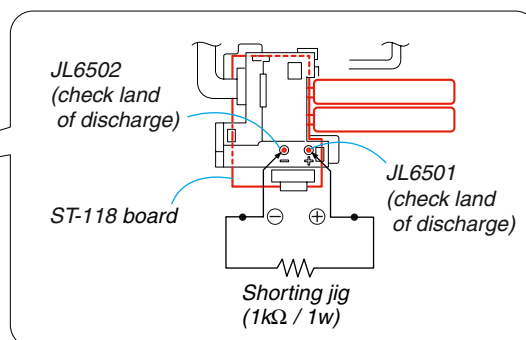
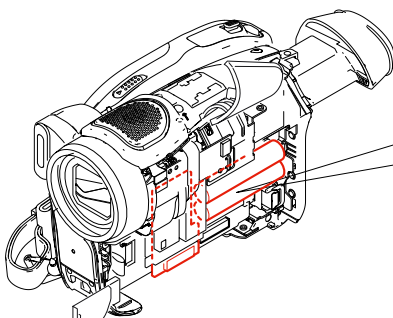
To preparing the short jig, a small clip is attached to each end of a resistor of 1k Ω /1W (1-215-869-11)

Wrap insulating tape fully around the reads of the resistor to prevent electric shock.



6-2. DISCHARGING THE CAPACITOR

- ① Remove the cabinet (R) section.
- ② Connect the JL6501 (Check land of discharge) on the ST-118 board and the JL6502 (Check land of discharge) by using the short jig for about 10 seconds.



1-2. SELF-DIAGNOSIS FUNCTION

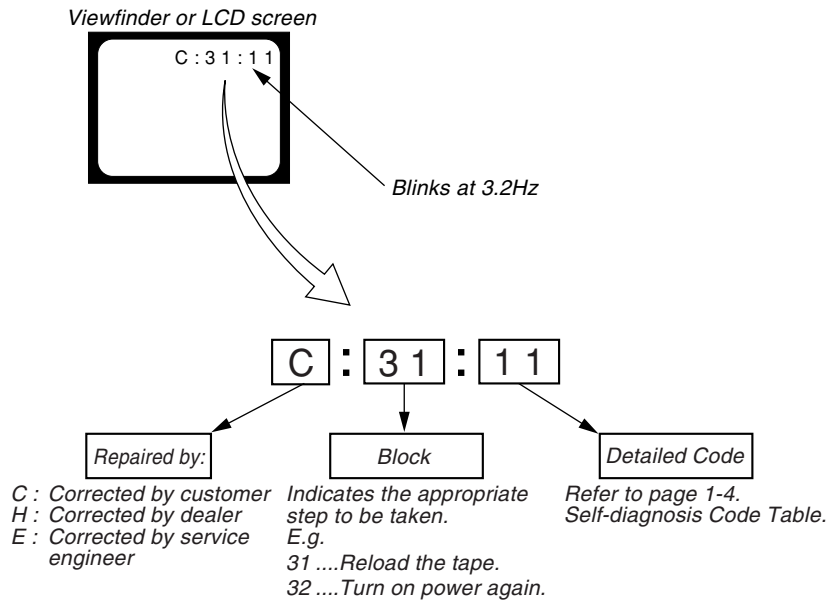
1. SELF-DIAGNOSIS FUNCTION

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

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

2. SELF-DIAGNOSIS DISPLAY

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



Note: The self-diagnosis display data will be kept even if the lithium battery (BT7301 of CK-148) is removed.

3. SELF-DIAGNOSIS CODE TABLE

Self-diagnosis Code			Symptom/State	Correction
Repaired by:	Block Function	Detailed Code		
C	0 4	0 0	Non-standard battery is used.	Use the InfoLITHIUM battery.
C	1 3	0 0	Faulty disc is used.	Use a compatible disc with the camcorder.
C	1 3	0 2	Disc access error	Clean the disc with the supplied cleaning cloth Use a compatible disc with the camcorder
C	2 1	0 0	Condensation.	Remove the disc, and insert it again after one hour.
C	3 2	5 0	Codec IC dose not return are reply	Remove the power source. Reconnect it again and operate your camcorder again
E	2 0	0 0	EEPROM data are rewritten.	Make EEPROM data correct value. (Note)
E	3 1	0 0	Drive fault	Inspect or replacement of the mechanism deck, IC (IC4501 of MD-114 board) and drive block
E	4 0	0 0	Codec IC fault	Inspect or replacement of the codec IC (IC2101 of VC-397 board) peripheral circuits
E	4 1	0 0	Audio Codec IC fault	Inspect or replacement of the Audio Codec IC (IC2901 of VC-397 board) peripheral circuits
E	6 1	0 0	Difficult to adjust focus (Cannot initialize focus.)	Inspect the lens block focus MR sensor (Pin ①⑨, ②① of CN1701 of VC-397 board) when focusing is performed when the focus buttons of the touch panel are pressed in the focus manual mode, and the focus motor drive circuit (IC1701 of VC-397 board) when the focusing is not performed.
E	6 1	1 0	Zoom operations fault (Cannot initialize zoom lens.)	Inspect the lens block zoom MR sensor (Pin ①⑩, ①⑨ of CN1701 of VC-397 board) when zooming is performed when the zoom lever is operated, and the zoom motor drive circuit (IC1701 of VC-397 board) when zooming is not performed.
E	6 1	1 1	The abnormalities in initialization of the focus lens and the abnormalities in initialization of the zoom lens occurred simultaneously.	Check whether the flexible board of the lens is broken, and check whether it is inserted imperfectly. If there is no problem in the flexible board, inspect the focus/zoom motor drive circuit (IC1701 of VC-397 board).
E	6 2	0 0	Handshake correction function does not work well. (With PITCH angular velocity sensor output stopped.)	Inspect PITCH angular velocity sensors (SE7104 of CD-565 board) peripheral circuits.
E	6 2	0 1	Handshake correction function does not work well. (With YAW angular velocity sensor output stopped.)	Inspect YAW angular velocity sensors (SE7103 of CD-565 board) peripheral circuits.
E	9 1	0 1	Abnormality when the power supply capacitor of the flash unit is being charge.	Checking or replacement of the flash unit (ST-118 board).
E	9 4	0 0	Fault of writing to or erasing the flash memory	Inspect the flash memory (VC-397 board IC2401) (Note)
E	9 4	0 1	Fault of writing to or erasing EEPROM	Inspect the EEPROM (VC-397 board IC2002)

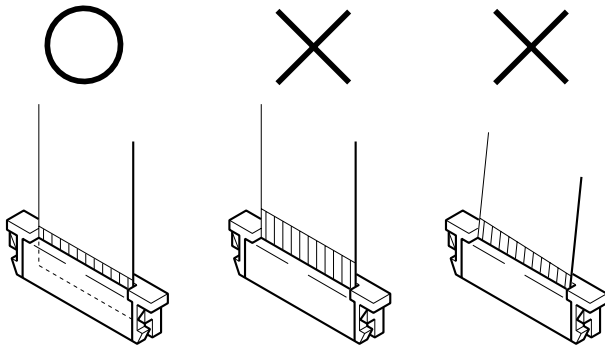
Note: Refer to “9-2. Record of Self-diagnosis check” of “3-4. SERVICE MODE”, ADJ (987686751.pdf).

1-1. サービスノート

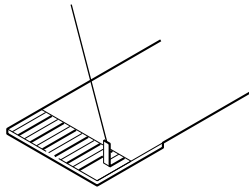
1. 修理時の注意

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。

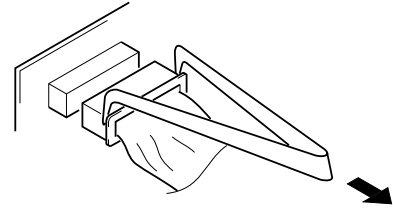
また、コネクタへの接続は、差し込み不足や斜め差しにならないように注意する。



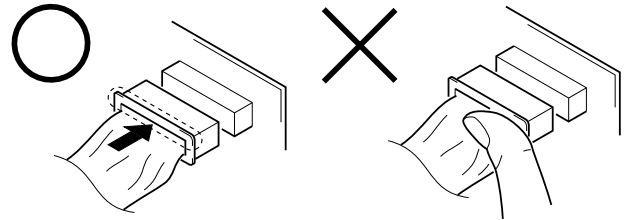
先端の剥がれたメッキ部はカットして除去する。
(メッキ破片がコネクタ内に残っている場合もあるので注意)



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下さい。



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下さい。



2. 修理／調整時の電源供給について

本機では、安定化電源（8.4Vdc）からバッテリー端子に電源を供給した場合、約10秒後にシャットオフし、動作しなくなります。これを避けるため、下記のいずれかの方法を用いてください。

方法1：

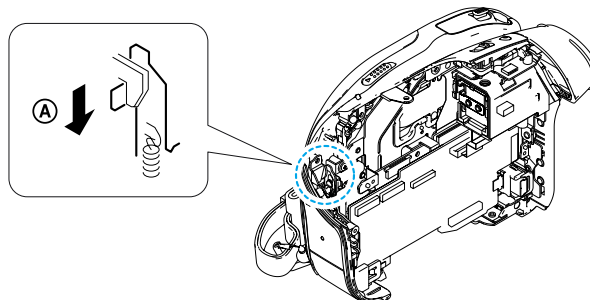
ACアダプタを使用する。

方法2：

調整リモコンRM-95（J-6082-053-B）を本機のLANCジャックに接続し、HOLDスイッチをADJ側にする。

3. ディスク蓋が開かない時のディスク取出し方法（強制オープン）

- ① キャビネット（R）組立を外す。
- ② ST-118基板、STホルダー等を外す。
- ③ ヒートシンク（450）、VC放熱シート等を外す。
- ④ レンズ部を外す。
- ⑤ ④部を矢印方向に押しディスク蓋を開く。



4. 光ピックアップ取扱時の注意

光ピックアップ内のレーザダイオードは、衣服や人体に帯電した静電荷等で電位差を生じることにより、静電破壊することがあります。

修理時においては、静電破壊に対して十分に注意し、補修用の部品に同封されている印刷物の内容と同等の作業方法で行って下さい。また、フレキシブル基板は切れやすいので、取扱いには十分注意して下さい。

5. レーザダイオードの発光確認時の注意

本機のレーザ光は、光ピックアップ内の対物レンズによってディスクの反射面上の焦点を結ぶように集光されています。したがって、レーザダイオードの発光を確認するときは、対物レンズより30cm以上目を離して下さい。

6. フラッシュ電源コンデンサの放電

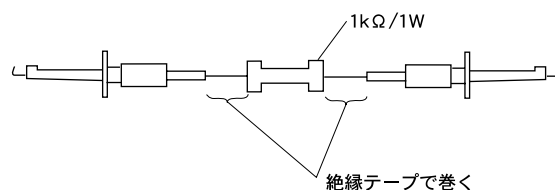
フラッシュの電源コンデンサ(ST-118基板 JL6501, JL6502)は最大300Vの電圧で充電されています。

この高電圧で充電されたコンデンサに手を触れた場合、電気ショックを受けます。この高電圧は単にセットの電源を切っただけでは放電されず、残留しています。このため、下記の方法で、残留電圧を放電してください。

6-1. ショート治具の準備

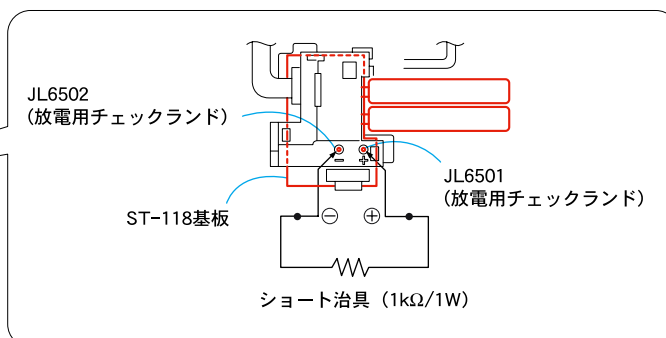
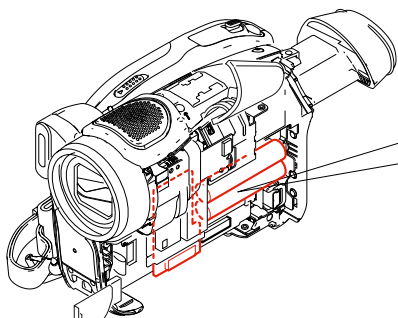
ショート治具は1kΩ/1W抵抗（1-215-869-11）の両端に小型のクリップを接続して作成します。

抵抗器は絶縁テープで完全に覆い電気ショックを受けないようにしてください。



6-2. コンデンサの放電

- ① キャビネット（R）部を外す。
- ② ST-118基板のJL6501（放電用チェックランド）とJL6502（放電用チェックランド）とをショート治具で約10秒間接続する。



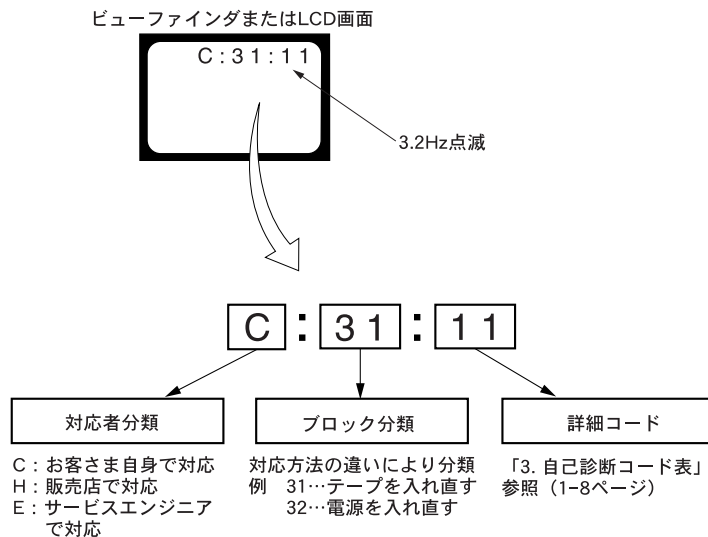
1-2. 自己診断機能

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、ビューファインダまたはLCD画面に、どう処置したらよいか判断できる表示を行ないます。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。

2. 自己診断表示

本機の動作に不具合が生じたとき、ビューファインダまたはLCD画面のカウンタ表示部分がアルファベットと数字の4桁表示になり、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。



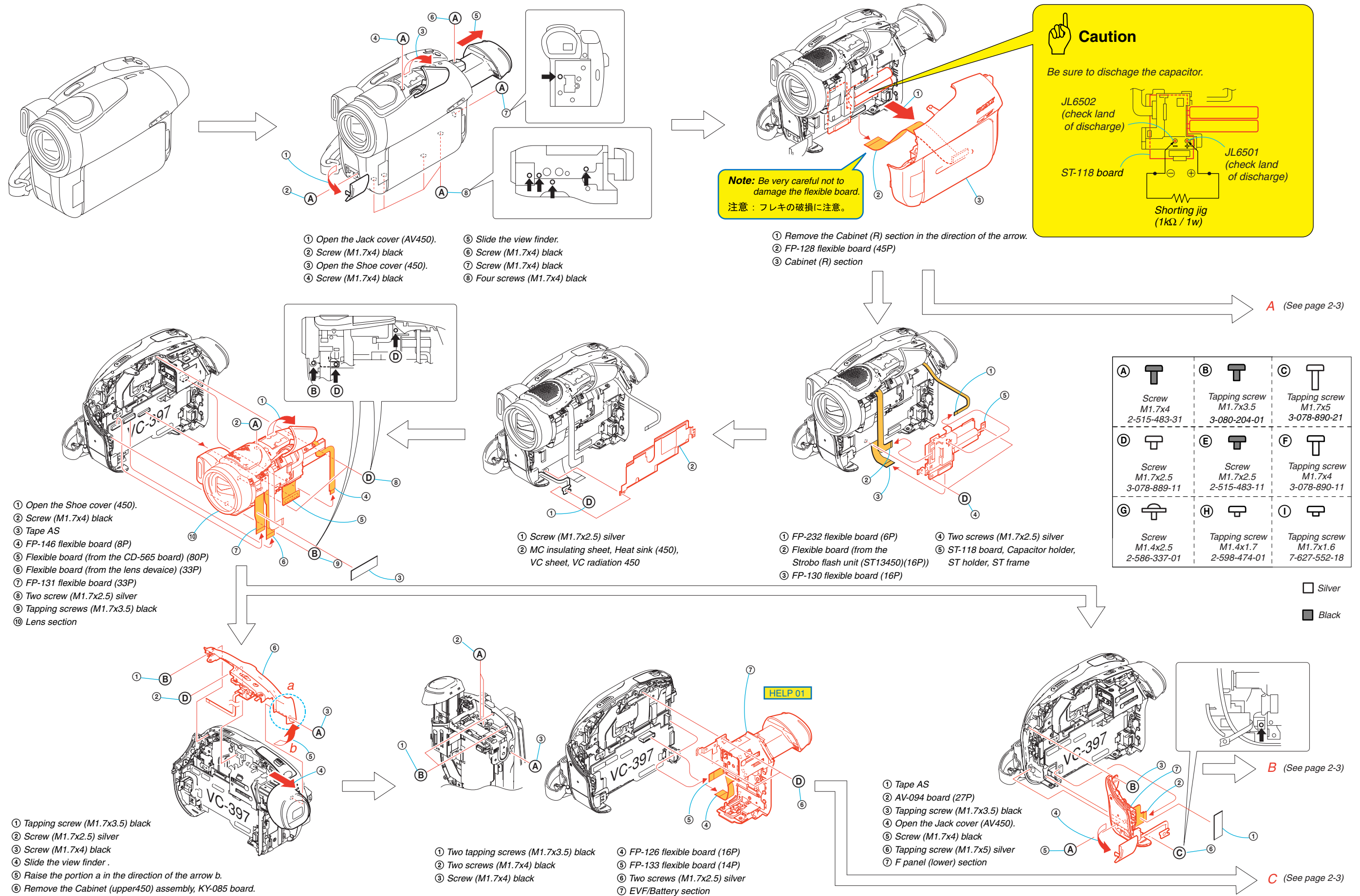
注意: 「自己診断表示」データはリチウム電池 (CK-148基板 (BT7301)) を外しても消えません。

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	0 4	0 0		標準でないバッテリーを使用している	InfoLITHIUMバッテリーを使用する
C	1 3	0 0		ディスクの不良	本機に対応したディスクを使用する
C	1 3	0 2		アクセスエラー	DISCの交換, ディスクの面拭き 本機に対応したディスクを使用する
C	2 1	0 0		結露している	ディスクを取出して, 約1時間してからもう一度入れ直す
C	3 2	5 0		Codec IC 応答せず	DISCの交換, ディスクの面拭き
E	2 0	0 0		EEPROMデータが書き換えられている	EEPROMデータを元の値に戻す (注)
E	3 1	0 0		Drive不良	メカ機構部, IC (MD-114基板 IC4501), ドライブブロックの点検／交換
E	4 0	0 0		Codec IC不良	Codec IC (VC-397基板 IC2101) 周辺の点検／交換
E	4 1	0 0		Audio Codic IC 不良	Audio Codic IC (VC-397基板 IC2901) 周辺の点検／交換
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)	タッチパネルでフォーカス操作をした時, フォーカス動作をすればレンズブロックのフォーカスMRセンサ (VC-397基板 CN1701 ⑲, ㉑ピン) を点検。フォーカス動作をしなければフォーカスモータドライブ回路 (VC-397基板 IC1701) を点検
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)	ズームレバーを操作した時, ズーム動作をすればレンズブロックのズームMRセンサ (VC-397基板 CN1701 ⑲, ⑳ピン) を点検。ズーム動作をしなければズームモータドライブ回路 (VC-397基板 IC1701) を点検。
E	6 1	1 1		フォーカス, ズーム異常	フレキ切れ, 半挿しを点検。問題なければフォーカス, ズームモータドライブ回路 (VC-397基板 IC1701) を点検。
E	6 2	0 0		手振れ補正が効きにくい (PITCH角速度センサ出力張り付き)	PITCH角速度センサ (CD-565基板 SE7104) 周辺回路点検
E	6 2	0 1		手振れ補正が効きにくい (YAW角速度センサ出力張り付き)	YAW角速度センサ (CD-565基板 SE7103) 周辺回路点検
E	9 1	0 1		フラッシュ電源コンデンサ充電時に異常	フラッシュユニット (ST-118基板) の点検または交換
E	9 4	0 0		フラッシュメモリの書込み／消去動作不良	フラッシュメモリ (VC-397基板 IC2401) の点検／交換 (注)
E	9 4	0 1		EEPROMの書込み／消去動作不良	EEPROM (VC-397基板 IC2002) の点検／交換 (注)

注: 「3-4. SERVICE MODE」の「9-2. Record of Self-diagnosis check」参照。ADJ (987686751.pdf)

2-1. DISASSEMBLY



2. DISASSEMBLY

(See page 2-2) **A**

① Tape AS
② Two tapping screws (M1.7x3.5) black
③ SP retainer
④ FP-129 flexible board (6P)
⑤ FP-234 flexible board (6P)
⑥ Four tapping screws (M1.7x3.5) black

⑦ FP-136 flexible board (28P)
⑧ CK-148 board, Loud speaker, FP-128 flexible board
⑨ Two tapping screws (M1.7x3.5) black
⑩ Hinge blind

⑪ Two screws (M1.7x4) black
⑫ Two screws (M1.7x4) black
⑬ Six claws
⑭ P cabinet (R450) assembly
⑮ FP-136 flexible board (27P)
⑯ Tape AS
⑰ Control key block (SB9000) (6P)

⑱ Three tapping screws (M1.7x3.5) black
⑲ Cushion panel
⑳ P cabinet assembly (L), Control key block (SB9000)
㉑ PD-250 board, Light guide plate block, TP block assembly, Panel frame
㉒ Two tapping screws (M1.7x5) silver
㉓ Hinge assembly, Hinge cover (O450), Hinge cover (U), FP-136 flexible board

① Screw (M1.7x2.5) black
② Four claws
③ Hinge cover (O450)
④ FP-234 flexible board
⑤ Hinge cover (U)
⑥ Hinge assembly, FP-136 board

(See page 2-2) **B**

① Pull out the portion a of the grip belt.
② Tapping screw (M1.7x4) silver
③ Grip belt sheet metal (R)
④ Grip belt

① Two tapping screws (M1.7x5) silver
② Control switch block (PS13300)

① Tapping screw (M1.7x5) silver
② Screw (M1.7x2.5) silver
③ Peel off the portion a.
④ D blind plate assembly

① Two tapping screws (M1.7x5) silver
② Screw (M1.7x2.5) silver
③ MD block assembly

(See page 2-2) **C**

① Screw (M1.7x2.5) silver
② FP-135 flexible board (8P)
③ Square type (USB 5P) connector, USB holder (450), FP-135 flexible board.
④ Three screws (M1.7x2.5) silver

⑤ Board to board (CN4001, CN1107) (100P)
⑥ VC-397 board
⑦ VM heat sink (450), VM radiation sheet, VM insulating sheet

① SPD sub sheet (S)
② Flexible board (from Mechanism deck) (10P)
③ Flexible board (from Mechanism deck) (51P)
④ FP-211 flexible board (6P)
⑤ FP-132 flexible board (10P)

⑥ Three screws (M1.7x2.5) silver
⑦ Control switch block (PS13300) (51P)
⑧ FP-130 flexible board (16P)
⑨ MD-114 board

① Screw (M1.7x1.6) silver
② Screw (M1.4x1.7) silver
③ FK spring
④ Screw (M1.7x1.6) silver
⑤ Screw (M1.4x1.7) silver
⑥ FK spring

⑦ Peel off the portion a.
⑧ MD screw (M1.4x2.5) silver
⑨ MD frame assembly, FP-211 flexible board, etc.
⑩ DDX-C1000

A	B	C
Screw M1.7x4 2-515-483-31	Tapping screw M1.7x3.5 3-080-204-01	Tapping screw M1.7x5 3-078-890-21
D	E	F
Screw M1.7x2.5 3-078-889-11	Screw M1.7x2.5 2-515-483-11	Tapping screw M1.7x4 3-078-890-11
G	H	I
Screw M1.4x2.5 2-586-337-01	Tapping screw M1.4x1.7 2-598-474-01	Tapping screw M1.7x1.6 7-627-552-18

□ Silver
■ Black

Caution

Precautions during handling

- Be sure to place the DVD drive with its optical pickup facing upward.
- Do not touch the optical pickup surface.
- 光学ピックアップを、上方に向けた状態でDVDドライブ置いてください。
- 光学のピックアップ表面に触れないでください。

Use the adjustable wrist strap (J-2501-162-A) as the preventive measure for static electricity when the removing and installing the MD black assembly because the MD black assembly of this mechanism deck is easily affected by the static electricity.

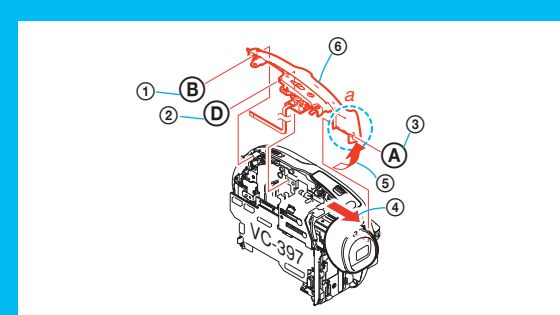
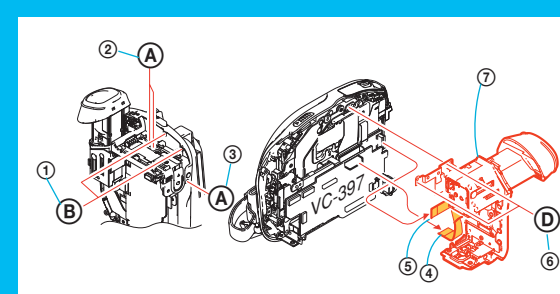
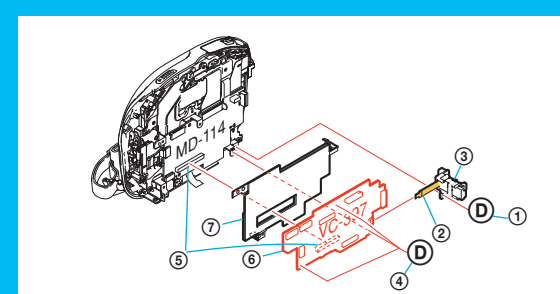
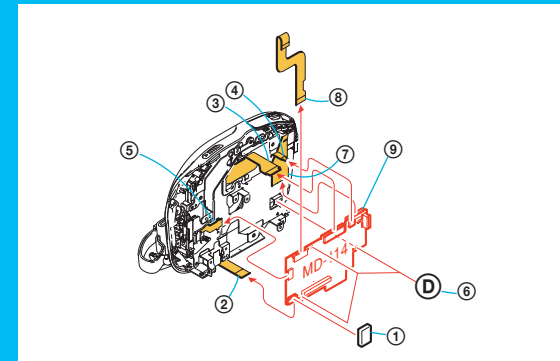
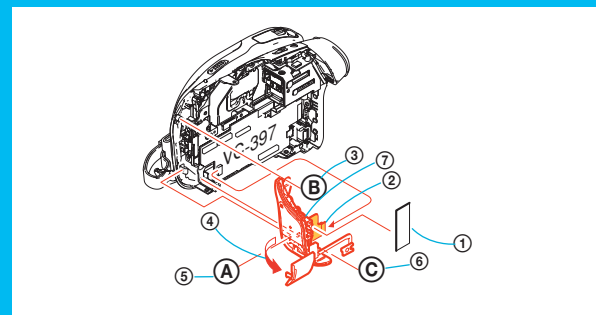
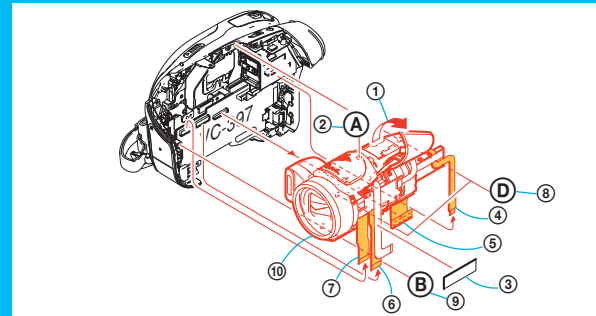
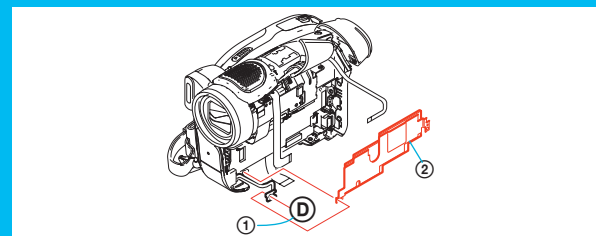
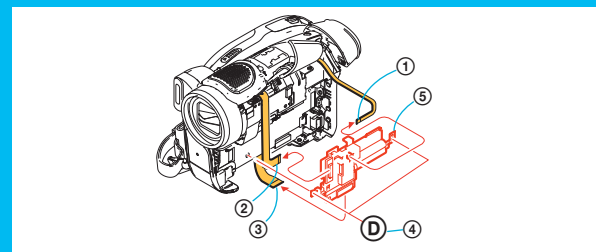
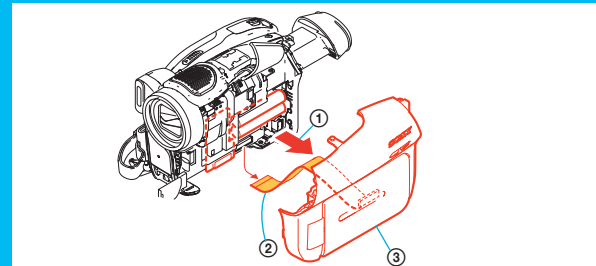
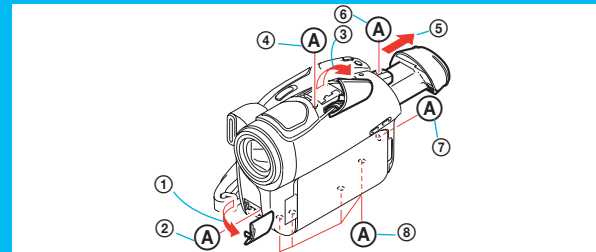
メカデッキのMDブロック組立は、静電気の影響を受け易いのでMDブロック組立の取り外し、取り付けには静電気対策のために、アジャスタブルリストストラップ (J-2501-162-A) を使用して下さい。

Optical pickup

(J-2501-162-A)

2. DISASSEMBLY

2-2. SERVICE POSITION



[SERVICE POSITION TO CHECK THE DVD DRIVE SECTION]

Connection to Check the DVD drive section

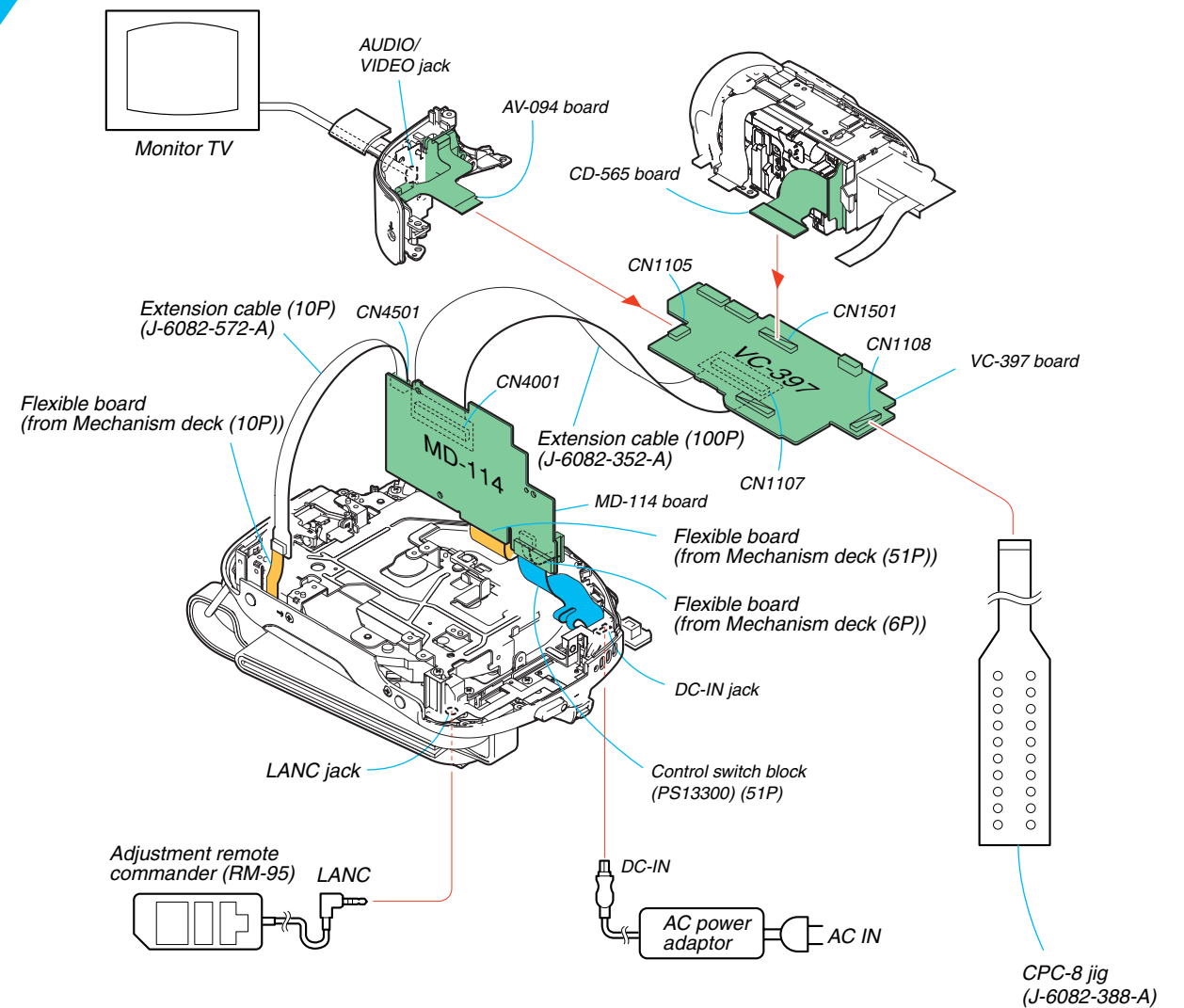
To check the DVD drive section, set the DVD drive to PLAY mode. (Set the mode dial to PLAY position, or set forced PLAY mode by using the adjustment remote commander.)
Operate the DVD drive using the adjustment remote commander (with the HOLD switch set in the OFF position).
Note: Removing the control switch block (PS13300) means removing the LID OPEN switch. Therefore the DVD drive section will not move even if the forced PLAY mode is set up.

Setting the forced PLAY mode

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 0, address: 10, and set data: 00.
- 3) Select page: A, address: 10, set data: 02, and press the PAUSE button of the adjustment remote commander.

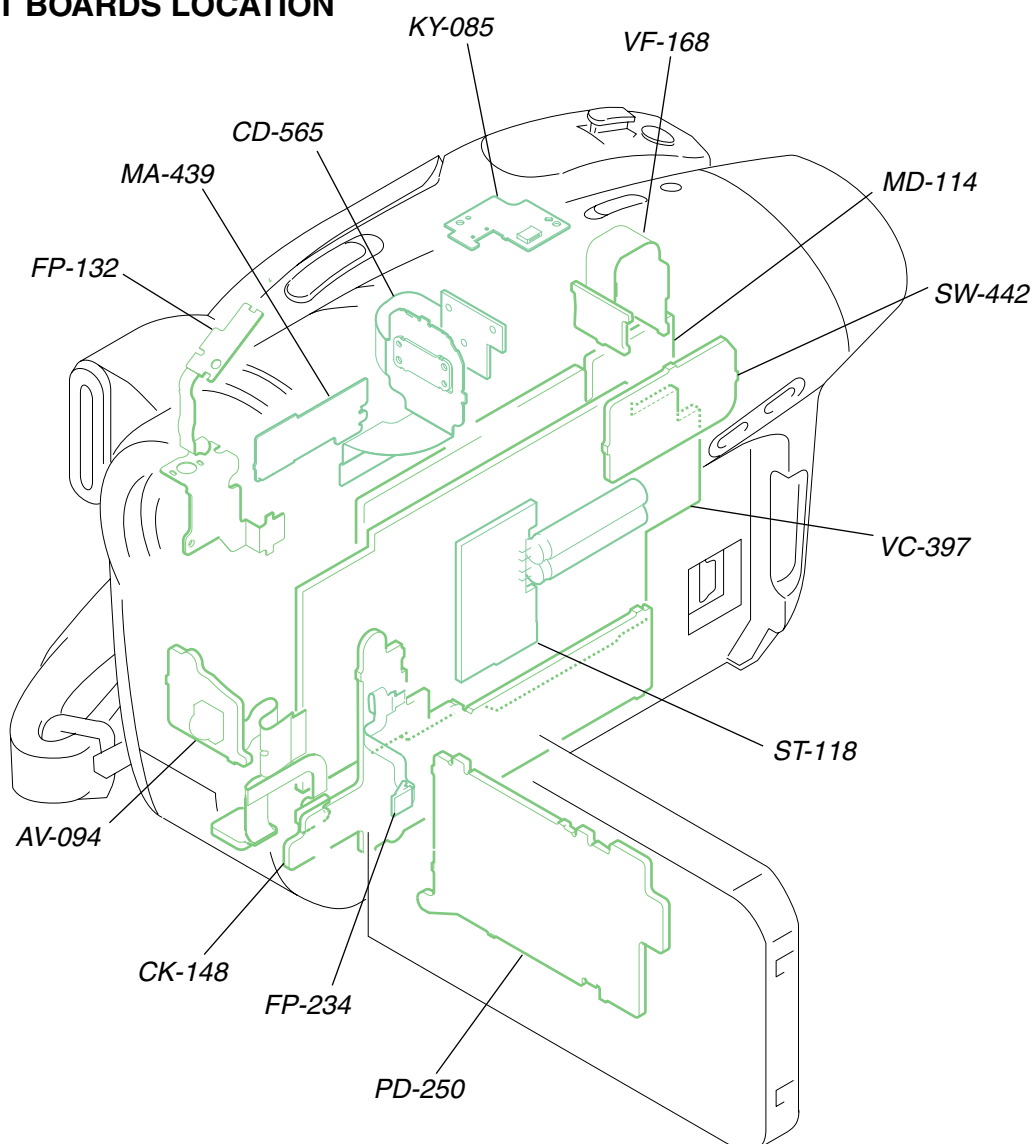
Exiting the forced PLAY mode

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 0, address: 10, and set data: 00.
- 3) Select page: A, address: 10, set data: 00, and press the PAUSE button of the adjustment remote commander.
- 4) Select page: 0, address: 01, and set data: 00.



2. DISASSEMBLY

2-3. CIRCUIT BOARDS LOCATION

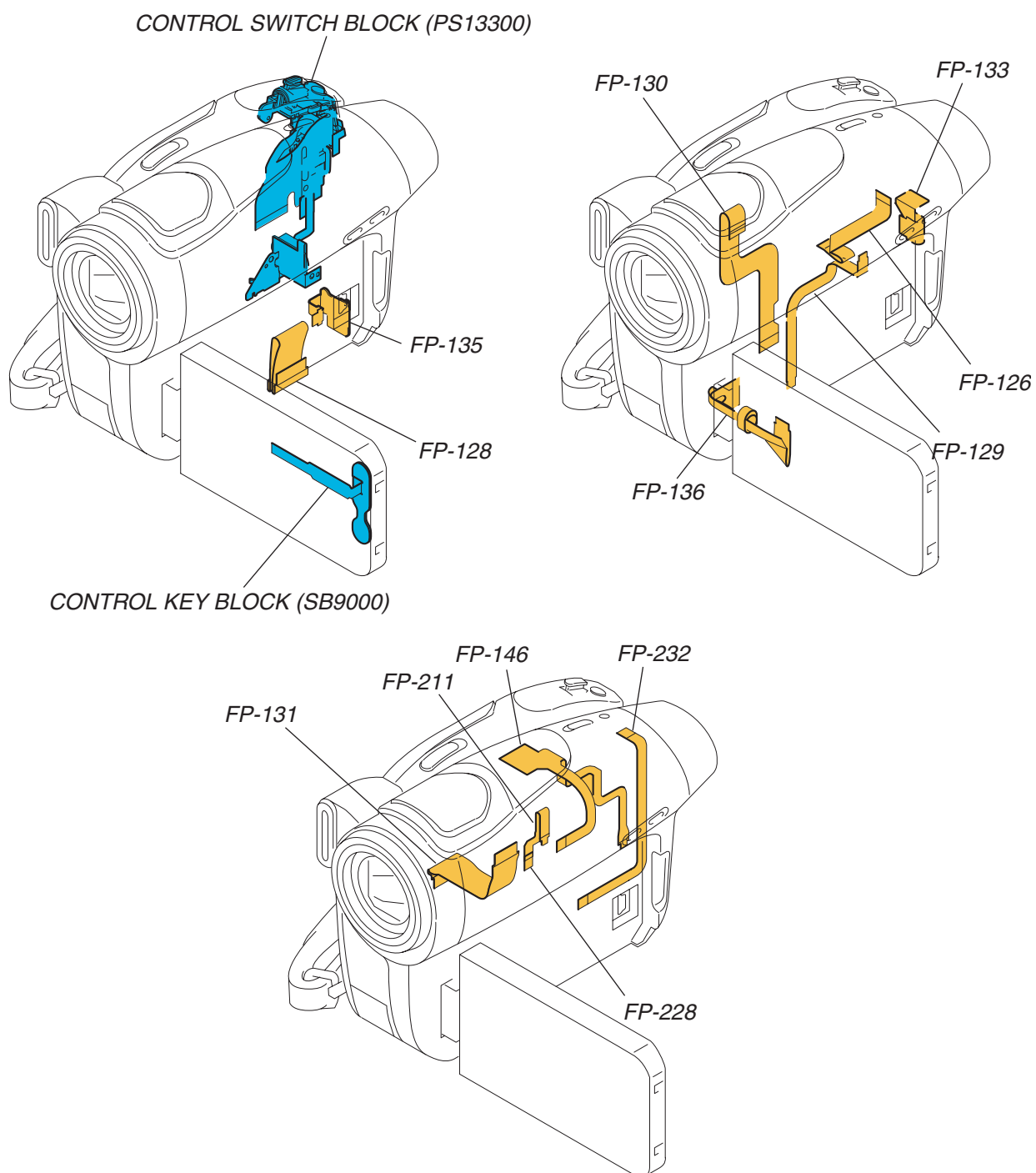


NAME	FUNCTION
AV-094	AV MULTI CONN., SIRCS
CD-565	CCD IMAGER, TG, PITCH/YAW SENSOR AMP
CK-148	FUNCTION KEY, RELAY
FP-132	EJECT
FP-234	PANEL REVERSE
KY-085	NIGHTSHOT, FLASH SW
MA-439	MIC AMP
MD-114	BATTERY IN, CHARGE, DC/DC CONVERTER, HI CONTROL, REC/PB RF AMP, DSP, SHOCK SENSOR AMP, SDRAM, MECHA CONTROL CPU, 16MBIT FLASH MEMORY, MECHA DRIVE, CONNECTOR
PD-250	LCD DRIVER
ST-118	FLASH DRIVE
SW-442	FUNCTION KEY
VC-397	A/D CONVERTER, LENS MOTOR DRIVE, CAMERA PROCESS, SDRAM, CAMERA CONTROL, VIDEO/AUDIO SIGNAL PROCESSOR, VIDEO & AUDIO I/O, A/D CONV. & D/A CONV., DVD SYSTEM CONTROL, FLASH MEMORY, SDRAM, 16:9 WIDE PROCES, AUDIO DSP, MIC AMP, CONNECTOR-1, CONNECTOR-2
VF-168	EVF DRIVER

2. DISASSEMBLY

2-4. FLEXIBLE BOARDS LOCATION

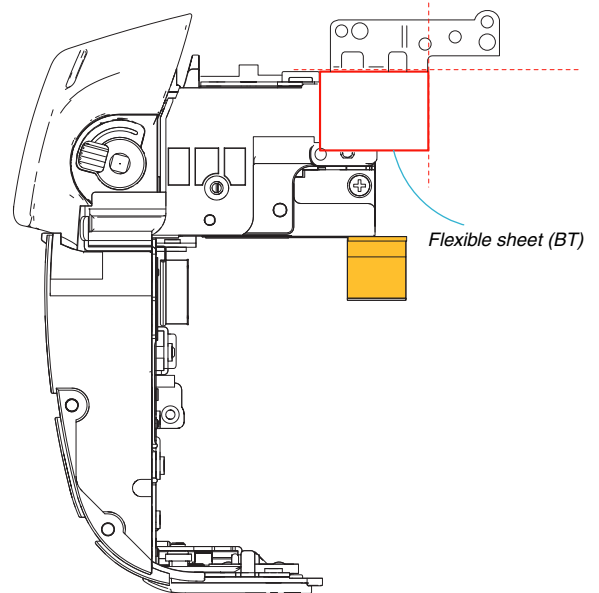
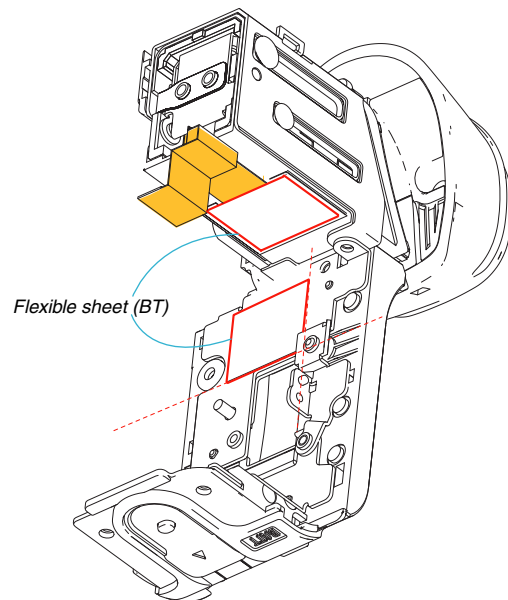
The flexible boards contained in the mechanism deck, lens block and strobo flash unit (ST13450) are not shown.

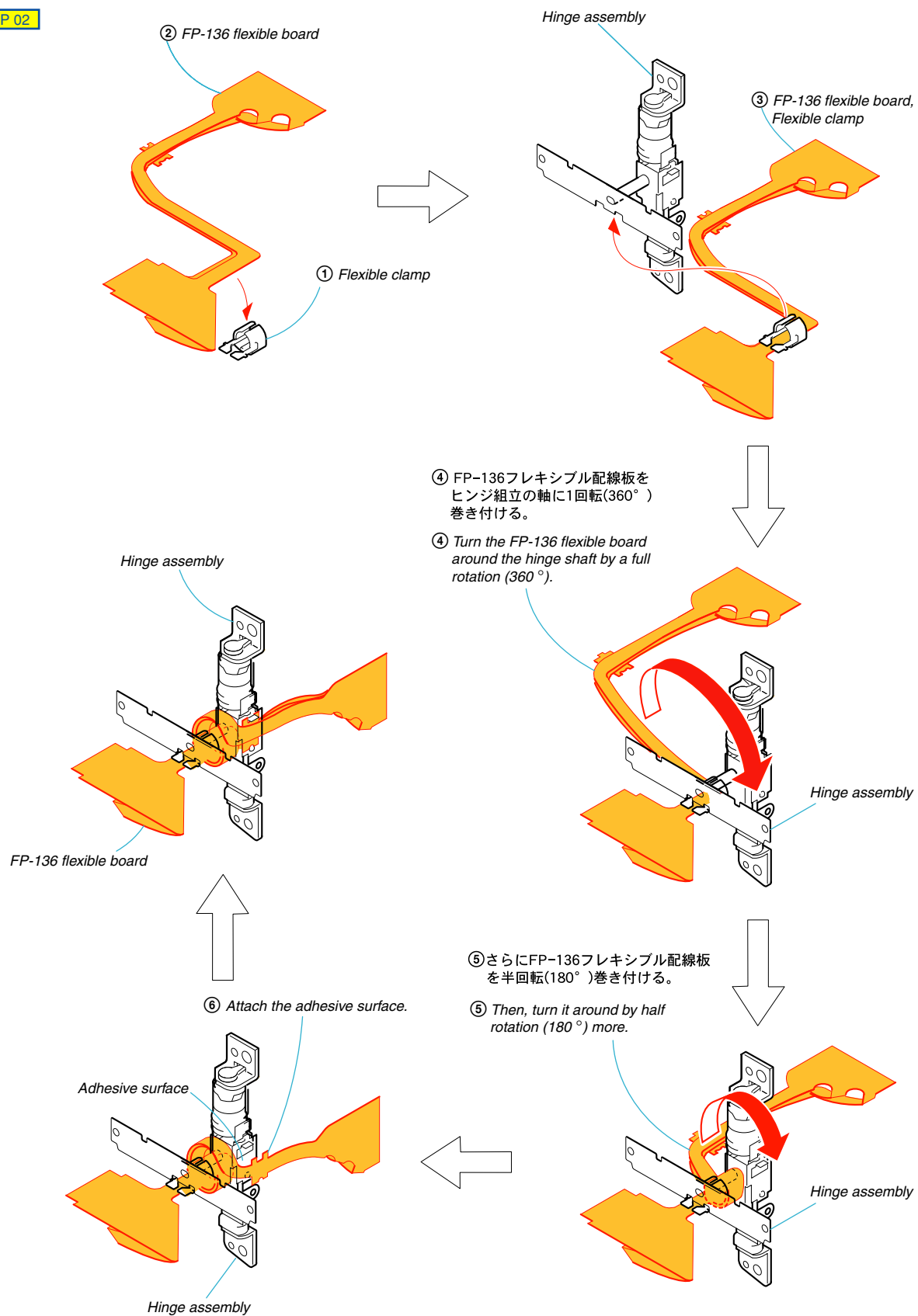


HELP

Sheet attachment positions and procedures of processing the flexible boards/harnesses are shown.

HELP 01





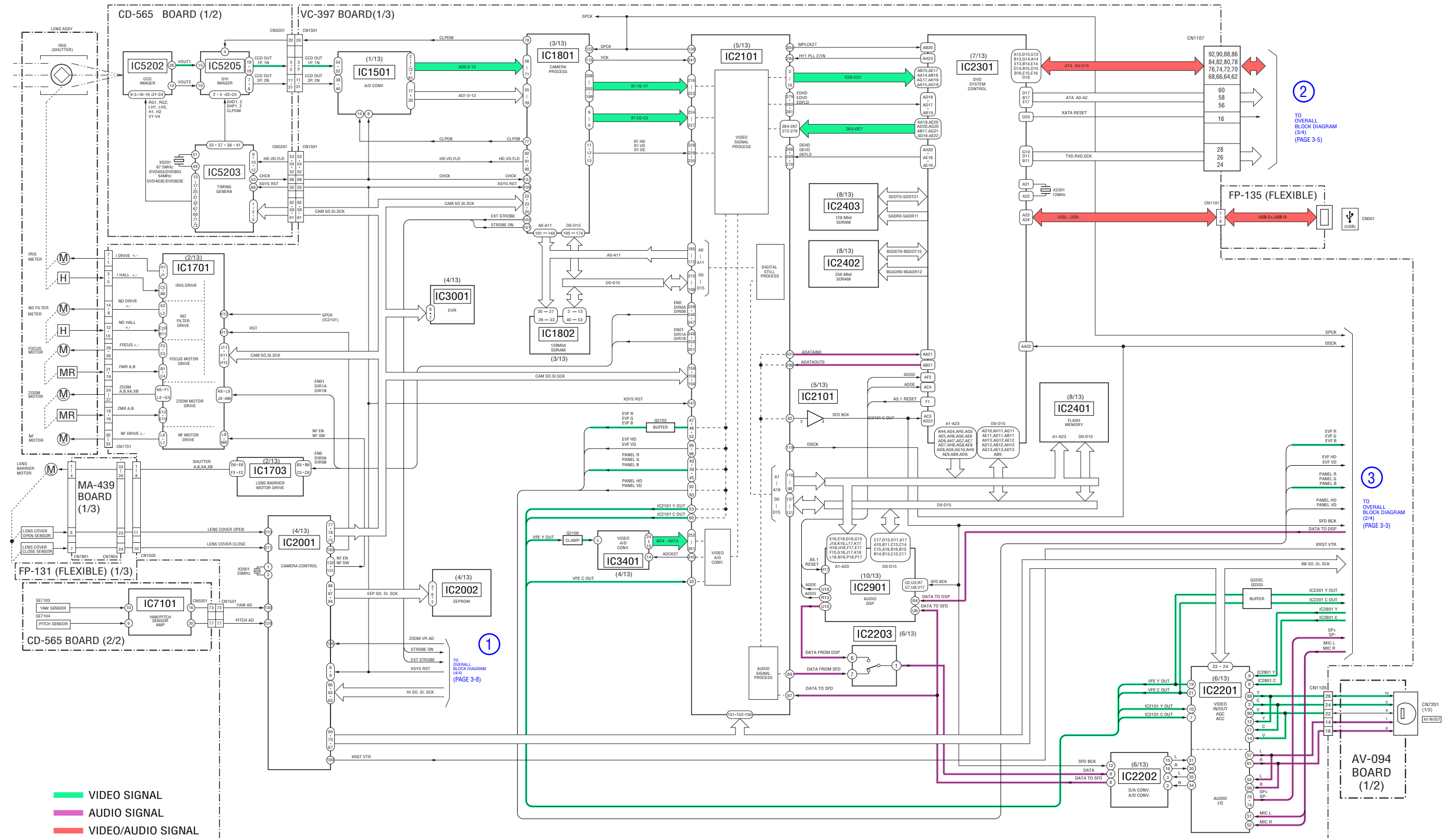
3. BLOCK DIAGRAMS

Link

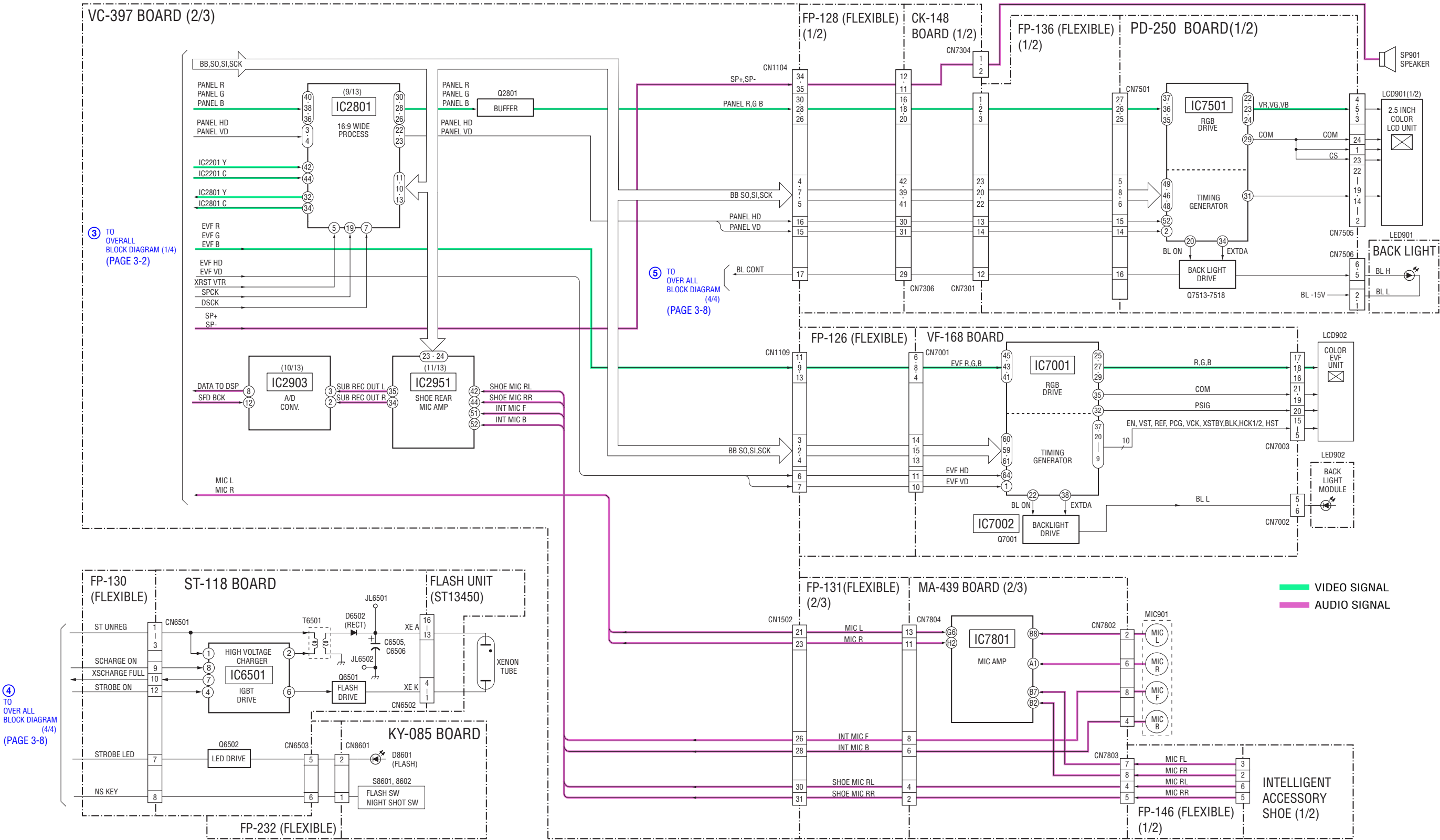
OVERALL BLOCK DIAGRAM (1/4)	POWER BLOCK DIAGRAM (1/3)
OVERALL BLOCK DIAGRAM (2/4)	POWER BLOCK DIAGRAM (2/3)
OVERALL BLOCK DIAGRAM (3/4)	POWER BLOCK DIAGRAM (3/3)
OVERALL BLOCK DIAGRAM (4/4)	

3. BLOCK DIAGRAMS

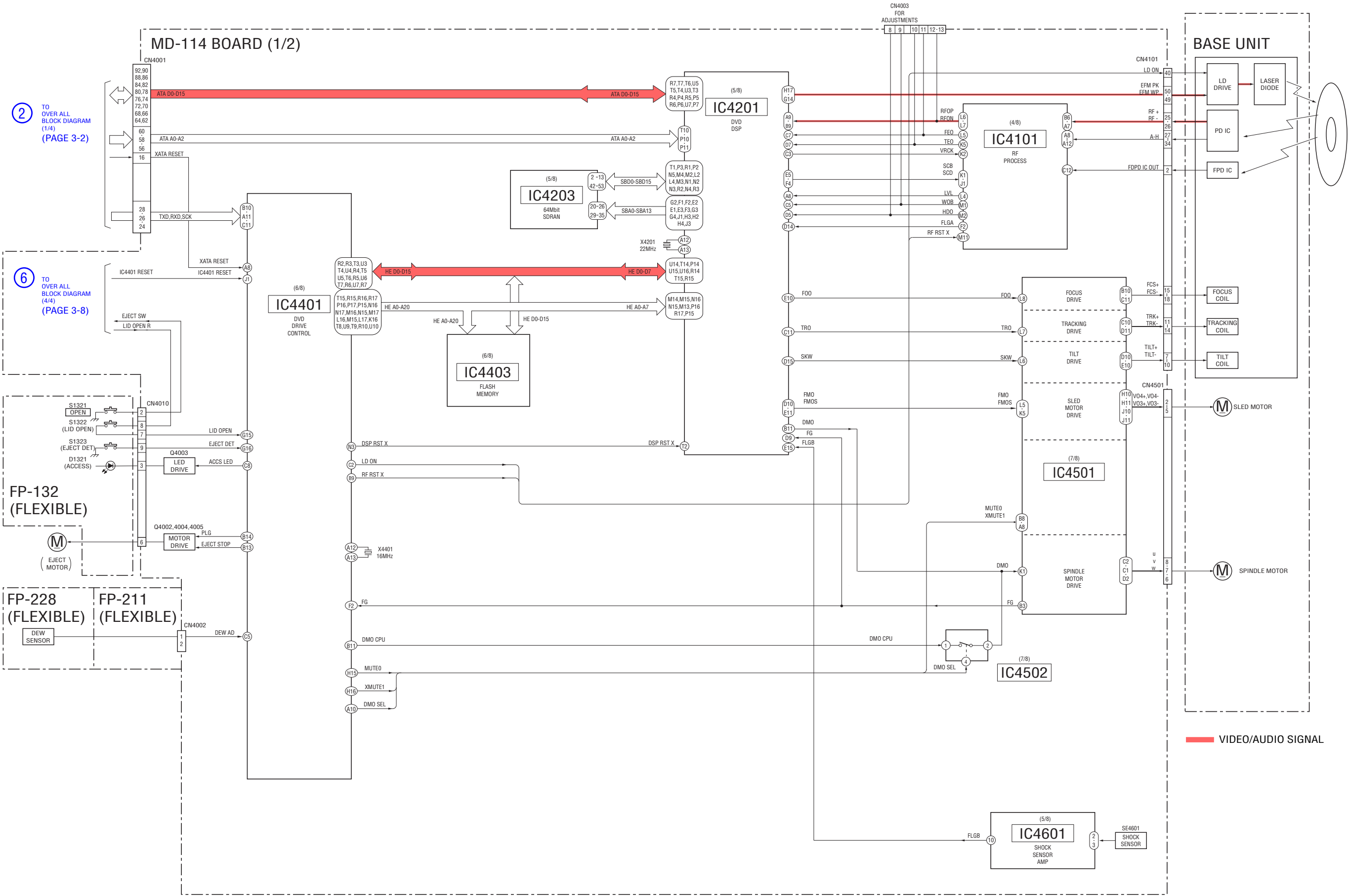
3-1. OVERALL BLOCK DIAGRAM (1/4) () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.



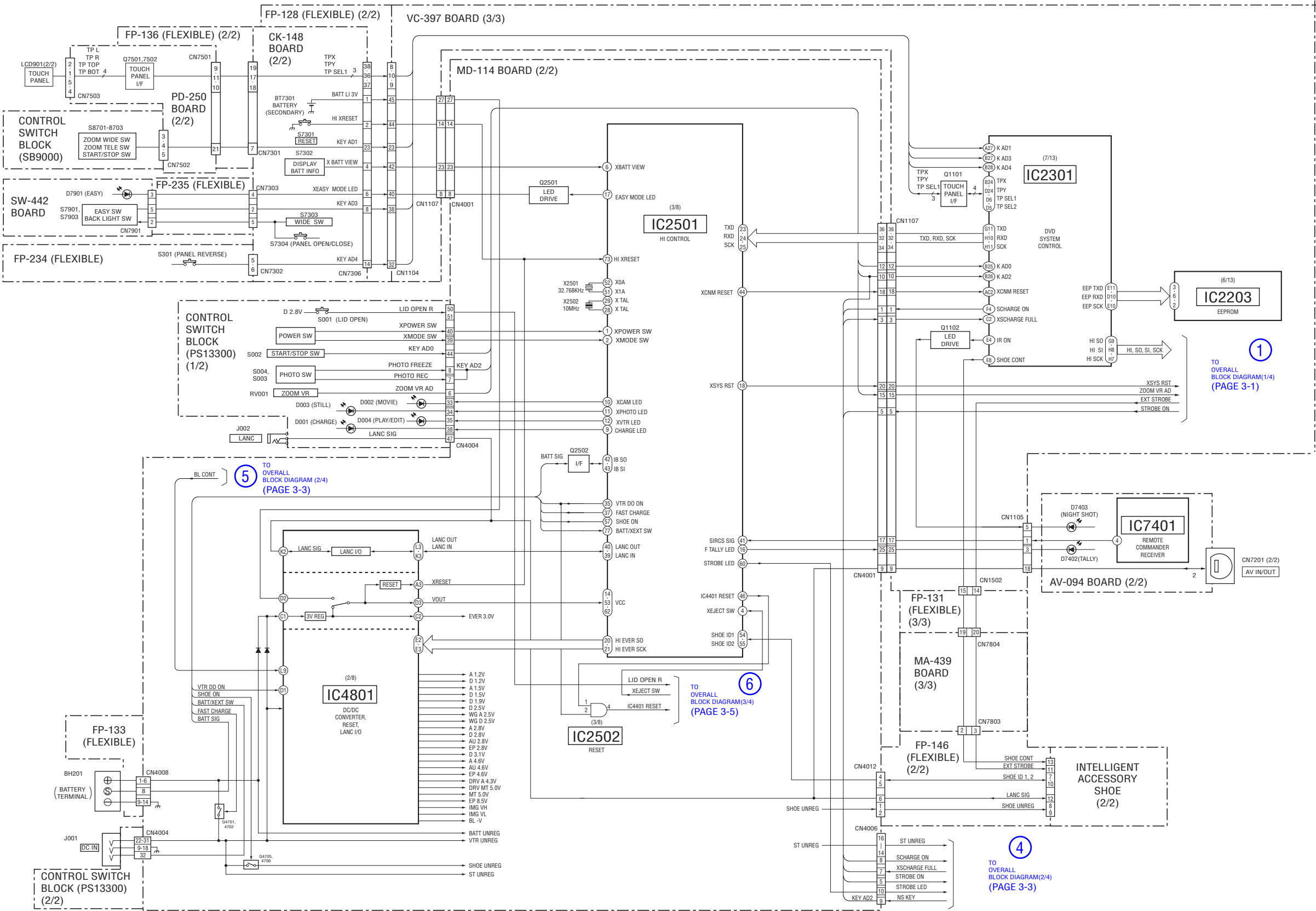
3-2. OVERALL BLOCK DIAGRAM (2/4) () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.



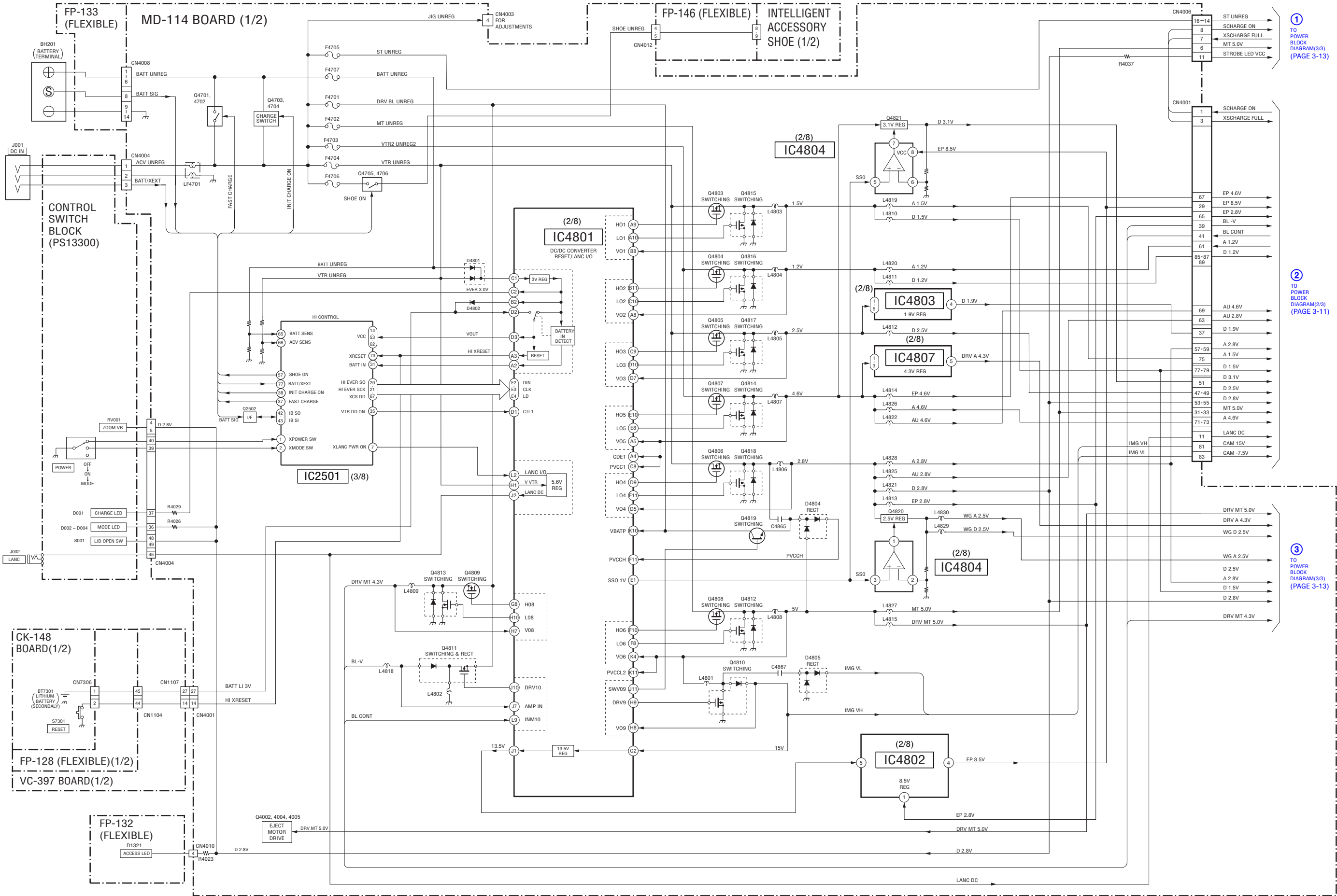
3-3. OVERALL BLOCK DIAGRAM (3/4) () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.



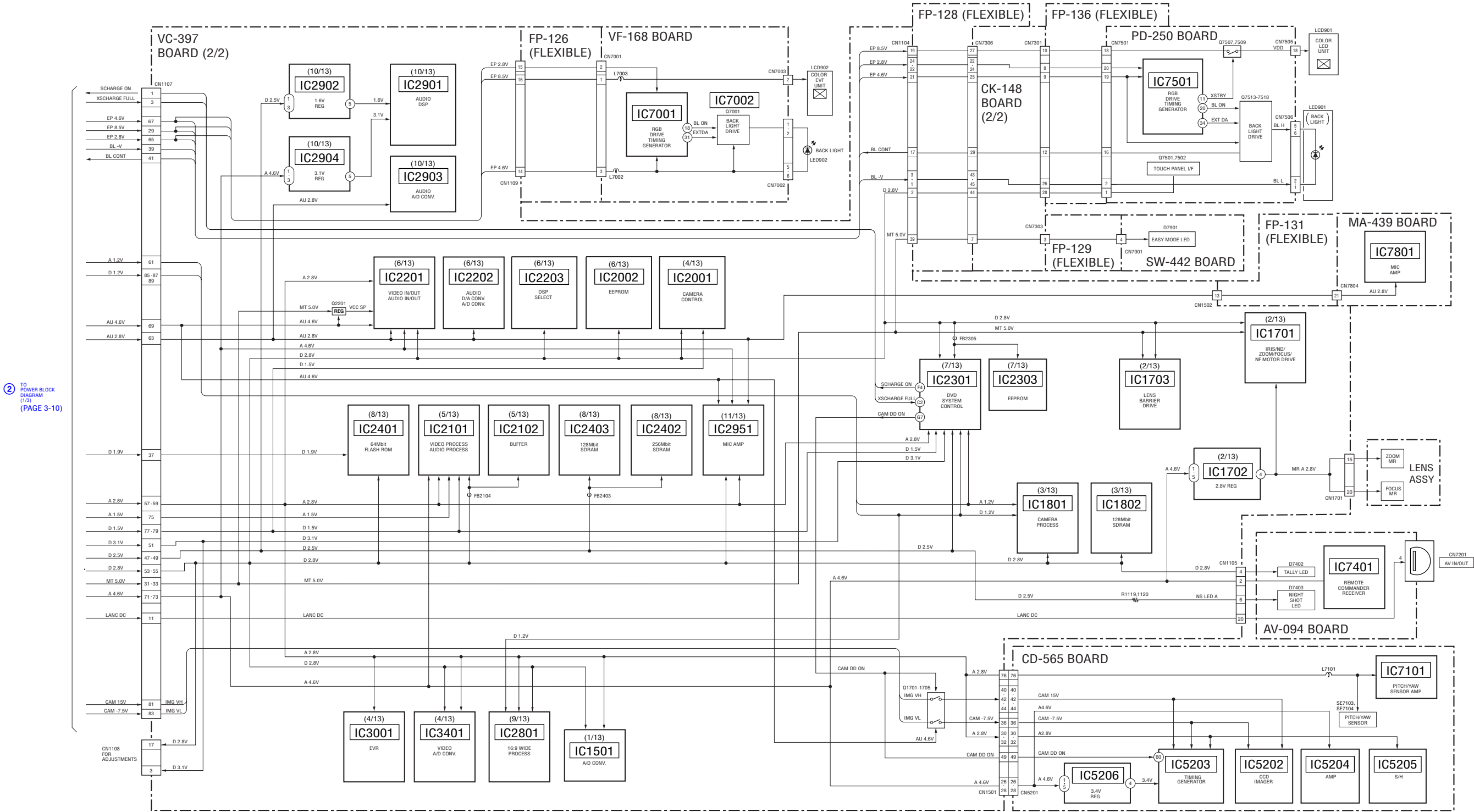
3-4. OVERALL BLOCK DIAGRAM (4/4) () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.



3-5. POWER BLOCK DIAGRAM (1/3) () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.

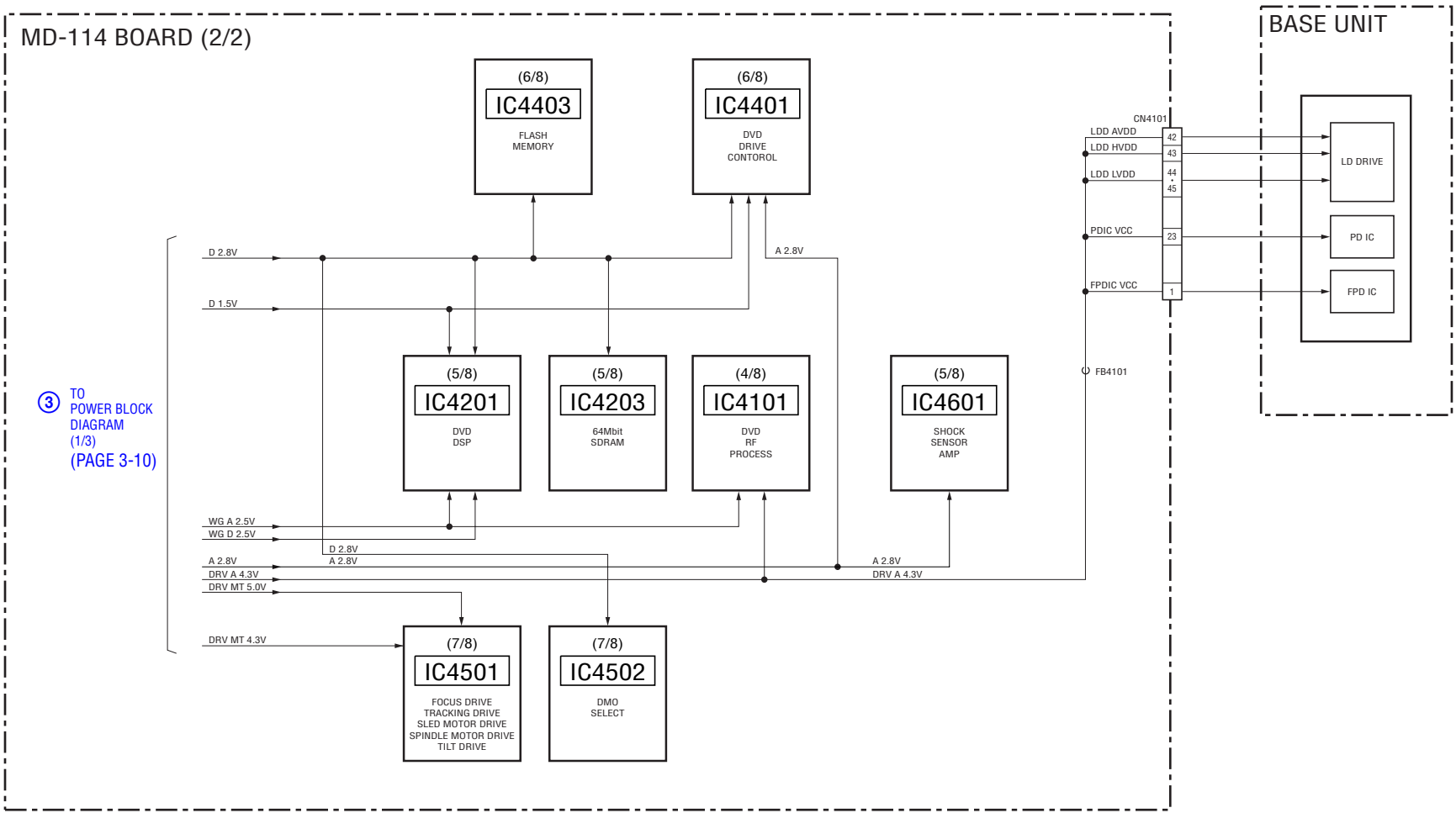
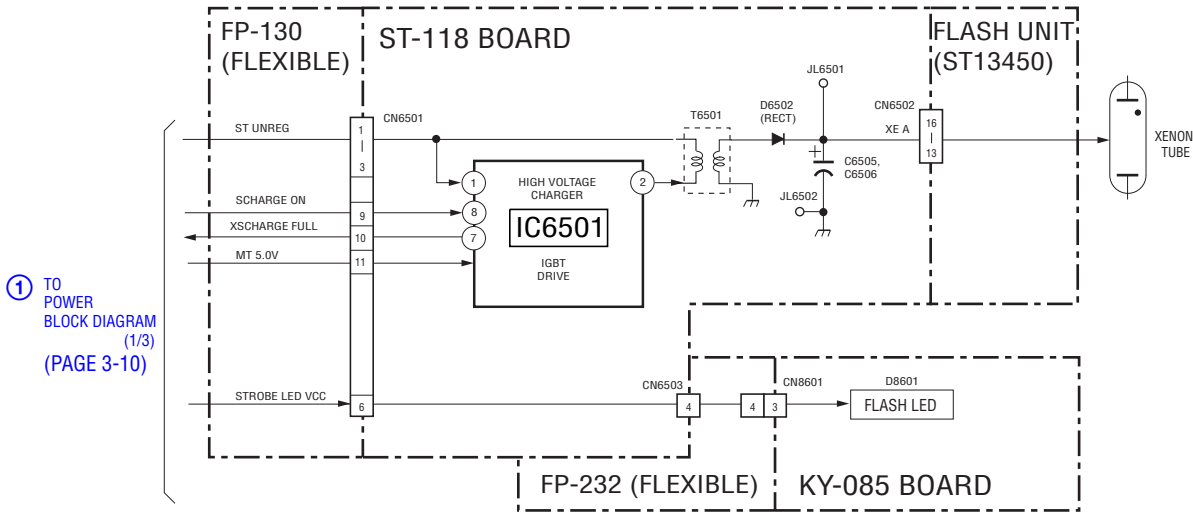


3-6. POWER BLOCK DIAGRAM (2/3) () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.



② TO POWER BLOCK
DIAGRAM
(1/3)
(PAGE 3-10)

3-7. POWER BLOCK DIAGRAM (1/3) () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.



4-1. SCHEMATIC DIAGRAMS

Link

• AV-094 BOARD (AV MULTI CONN., SIRCS)	• FP-232 FLEXIBLE BOARD (RELAY)
• CK-148 BOARD (FUNCTION KEY, RELAY)	• PD-250 BOARD (LCD DRIVER)
• FP-128 FLEXIBLE BOARD (RELAY)	• ST-118 BOARD (FLASH DRIVE)
• FP-136 FLEXIBLE BOARD (RELAY)	• FLASH UNIT (ST13450)
• FP-234 FLEXIBLE BOARD (PANEL REVERSE)	• FP-130 FLEXIBLE BOARD (RELAY)
• FP-126 FLEXIBLE BOARD (RELAY)	• SW-442 BOARD (FUNCTION KEY)
• FP-131 FLEXIBLE BOARD (RELAY)	• FP-129 FLEXIBLE BOARD (RELAY)
• FP-132 FLEXIBLE BOARD (EJECT)	• CONTROL SWITCH BLOCK (SB9000) (FUNCTION KEY)
• FP-133 FLEXIBLE BOARD (BATTERY RELAY)	• FP-211 FLEXIBLE BOARD (DEW SENSOR RELAY)
• FP-135 FLEXIBLE BOARD (USB CONNECTOR)	• FP-228 FLEXIBLE BOARD (DEW)
• FP-146 FLEXIBLE BOARD (RELAY)	• CONTROL SWITCH BLOCK (PS13300) (FUNCTION KEY)
• KY-085 BOARD (NIGHTSHOT, FLASH SW)	• MOTOR UNIT (LENS BARRIER)

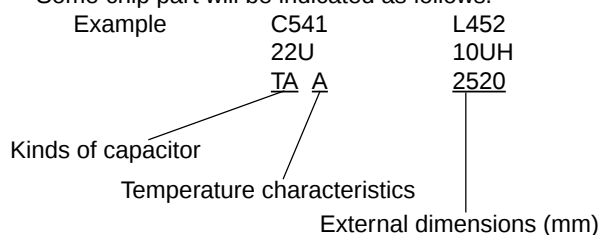
• COMMON NOTE FOR SCHEMATIC DIAGRAMS

• WAVEFORMS

(ENGLISH)

THIS NOTE IS COMMON FOR SCHEMATIC DIAGRAMS
(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.



- 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.
- Circled numbers refer to waveforms.

(Measuring conditions voltage and waveform)

- Voltages and waveforms are measured between the measurement points and ground when camera shoots color bar chart of pattern box. They are reference values and reference waveforms.
(VOM of DC 10 M Ω input impedance is used)
- Voltage values change depending upon input impedance of VOM used.)

Precautions Upon Replacing CCD imager

- The CD-565 board mounted as a repair part is not equipped with a CCD imager.
When replacing this board, remove the CCD imager from the old one and mount it onto the new one.
- If the CCD imager has been replaced, carry out all the adjustments for the camera section.
- As the CCD 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.

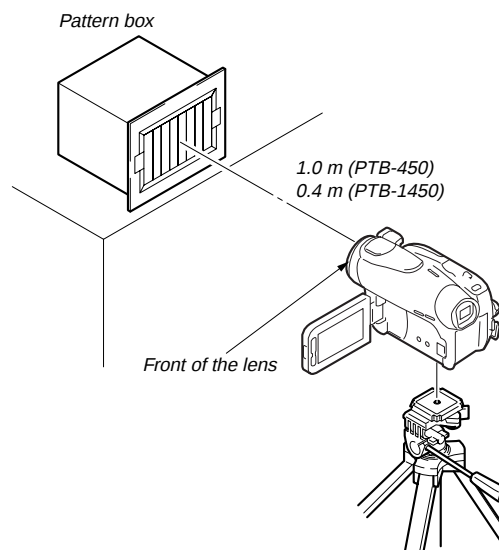
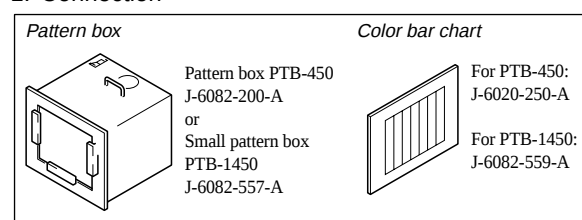
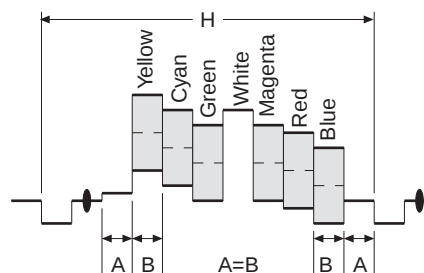
1. Connection**2. Adjust the distance so that the output waveform of Fig. a and the Fig. b can be obtain.**

Fig. a (Video output terminal output waveform)

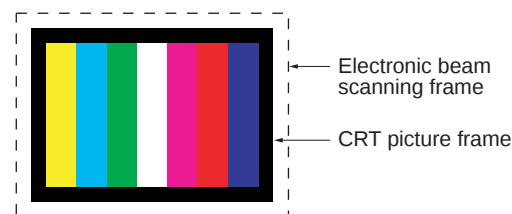


Fig.b (Picture on monitor TV)

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

Note :

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

Note :

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

(JAPANESE)

回路図共通ノート

(他に必要なノートは各ブロックに記載してあります)

【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 μF (pはpF)。
- ・チップ抵抗で指示のないものは、 $1/10\text{W}$ 以下。
 $k\Omega=1000\Omega$, $M\Omega=1000k\Omega$
- ・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	C 541	L 452
	22U	10UH
	TA A	2520
	↑ ↑	↑
	種類 温度特性	外形寸法 (mm)

- ・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 → EDIT PB/XREC → PB/REC
- ・は不燃性抵抗。
- ・はヒューズ抵抗。
- ・はパネル表示名称。
- ・はB+ライン。
- ・はB-ライン。
- ・はBライン (+, -) の入出力方向を示す。
- ・は調整名称。
- ・○番号は、波形図の照合番号。

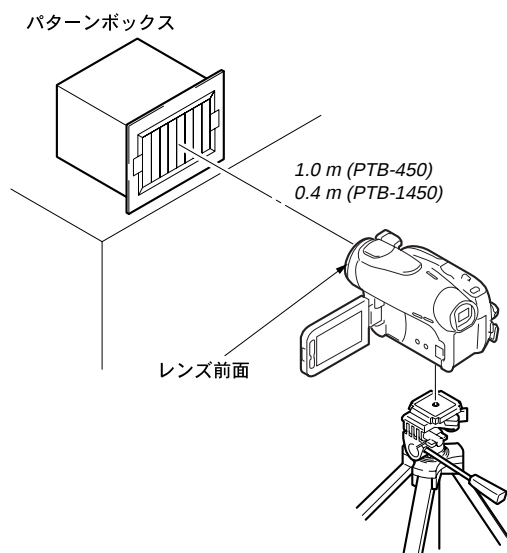
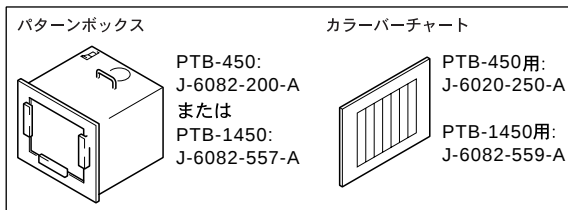
CCDイメージ交換時の注意

- ・補修部品として供給されるCD-565基板には、CCDイメージがマウントされていません。
 CD-565基板を交換する時は、旧基板よりCCDイメージを外し、新基板へ再度取り付けてください。
- ・CCD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。
- ・CCD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いください。
 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。

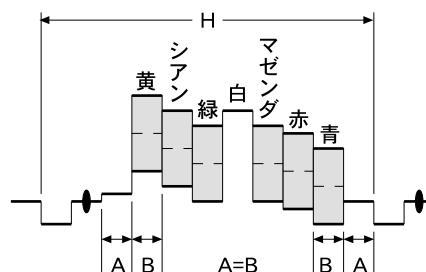
【電圧・波形測定条件ノート】

- ・電圧値及び信号波形はパターンボックスのカラーバーチャートを被写体としたときの測定点对アース間の参考値。
 (デジタルマルチメータ; 入力インピーダンス $DC10M\Omega$ 使用)
- ・使用テストの入力インピーダンスにより電圧値が多少異なります。

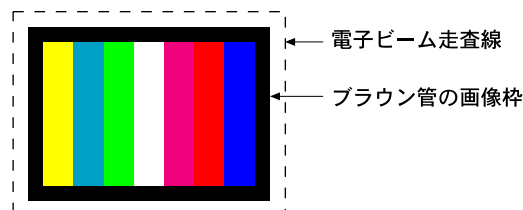
1. 接続図



2. 図a及び図bの波形が得られるように画枠調整して下さい。



図a (映像入出力端子出力波形)



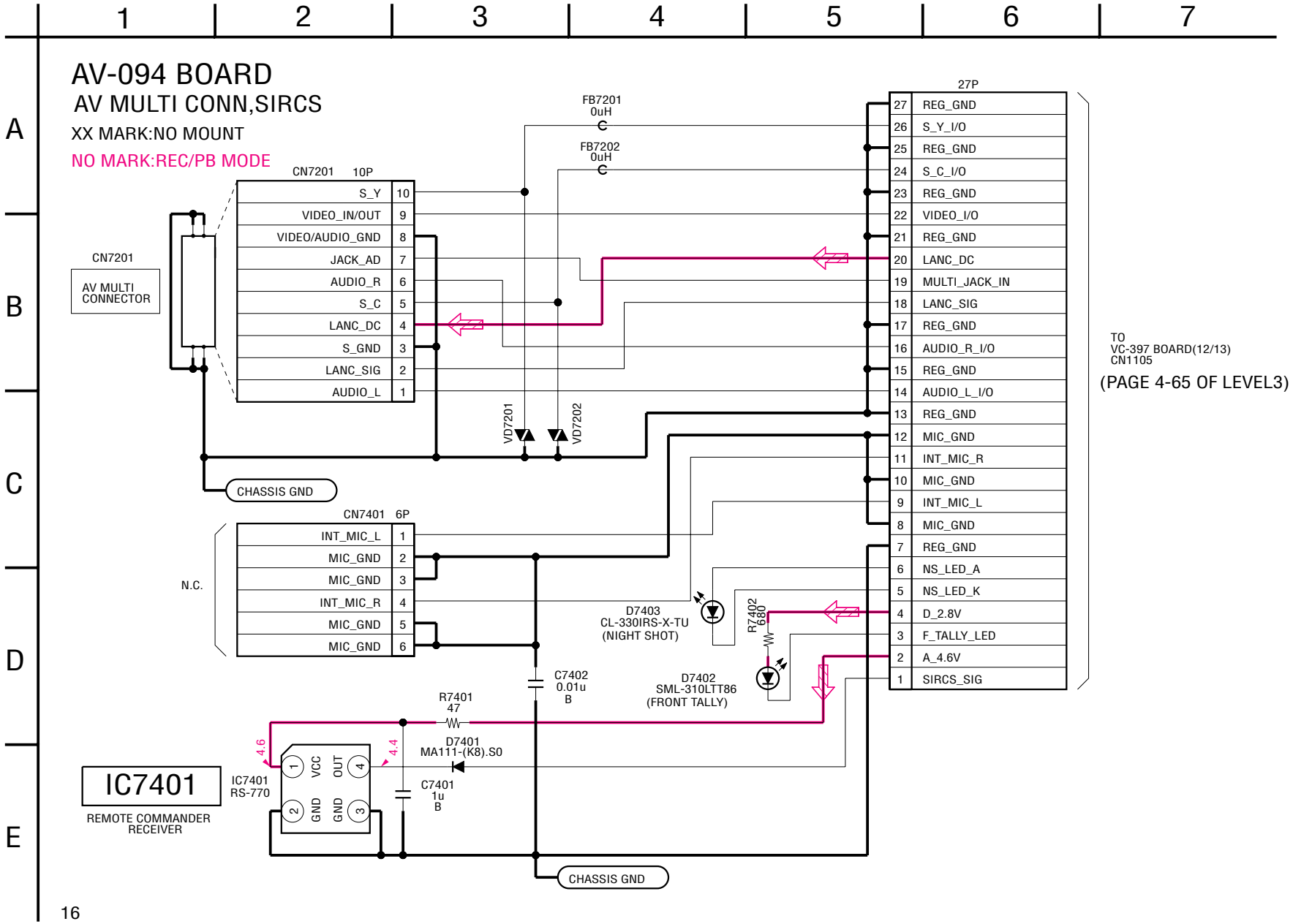
図b (テレビモニタの映像)

△印の部品、または△印付き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下さい。

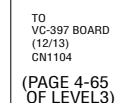
お願い

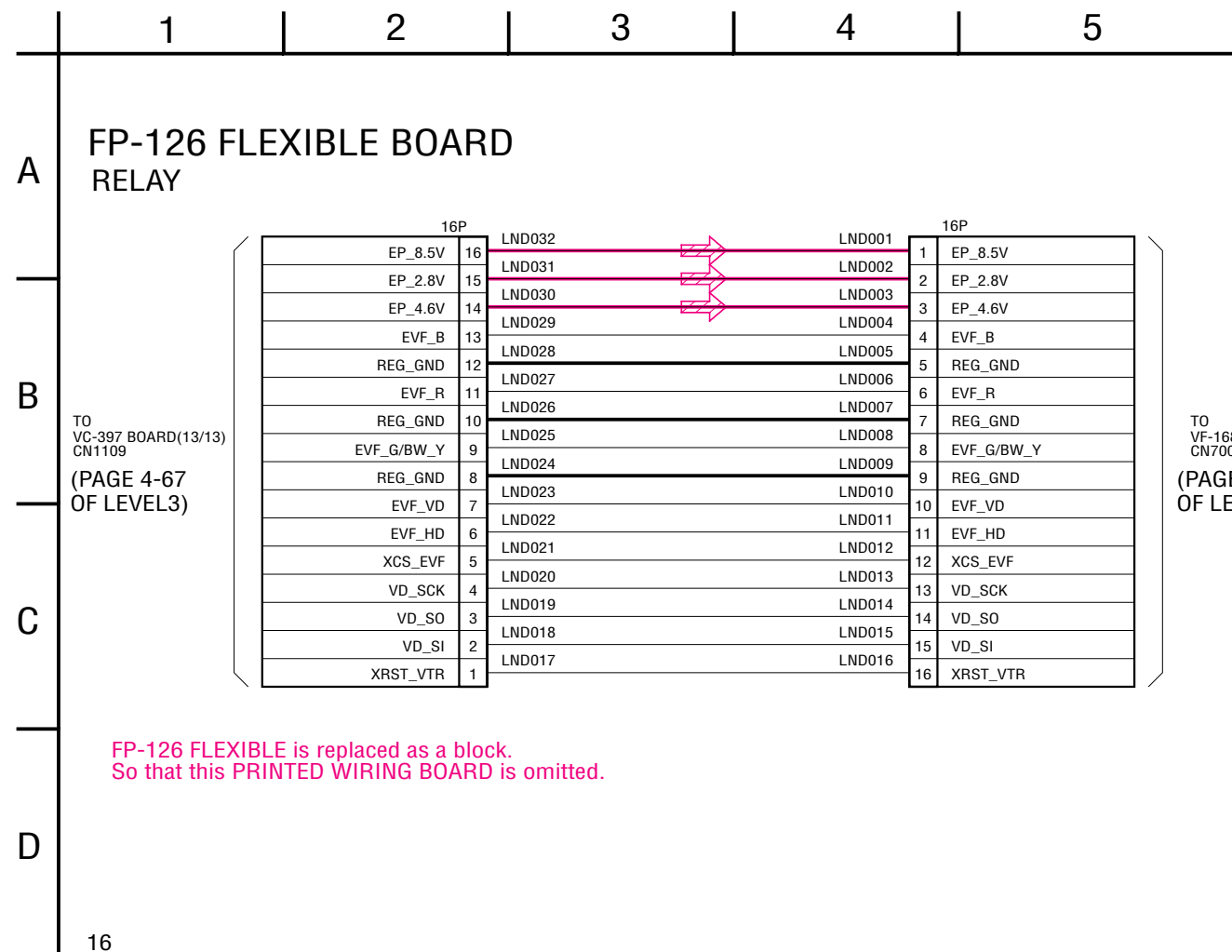
図面番号で部品を指定するときは基板名又はブロックを併せて指定して下さい。

For Schematic Diagram
• Refer to page 4-71 for printed wiring board.

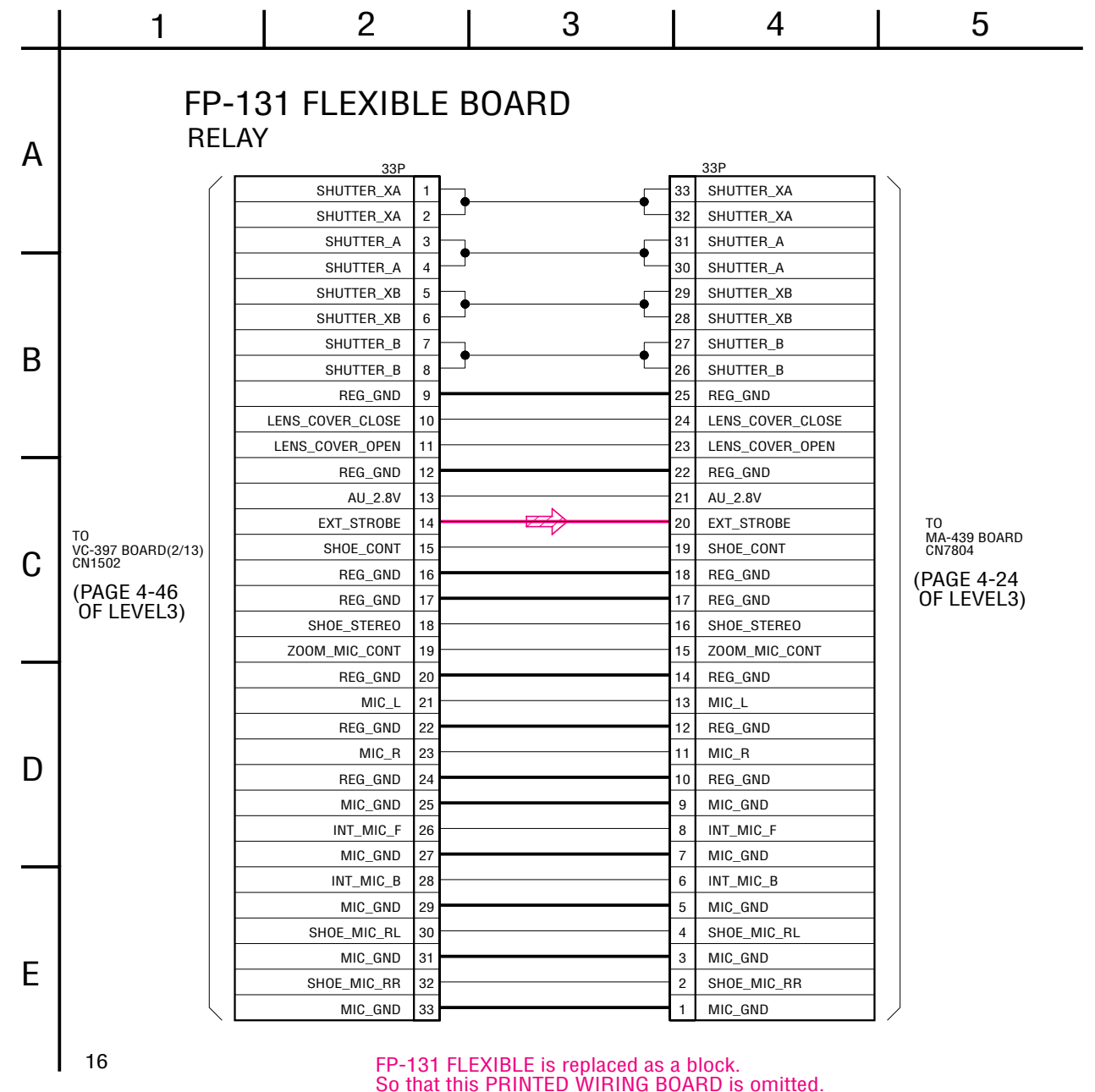
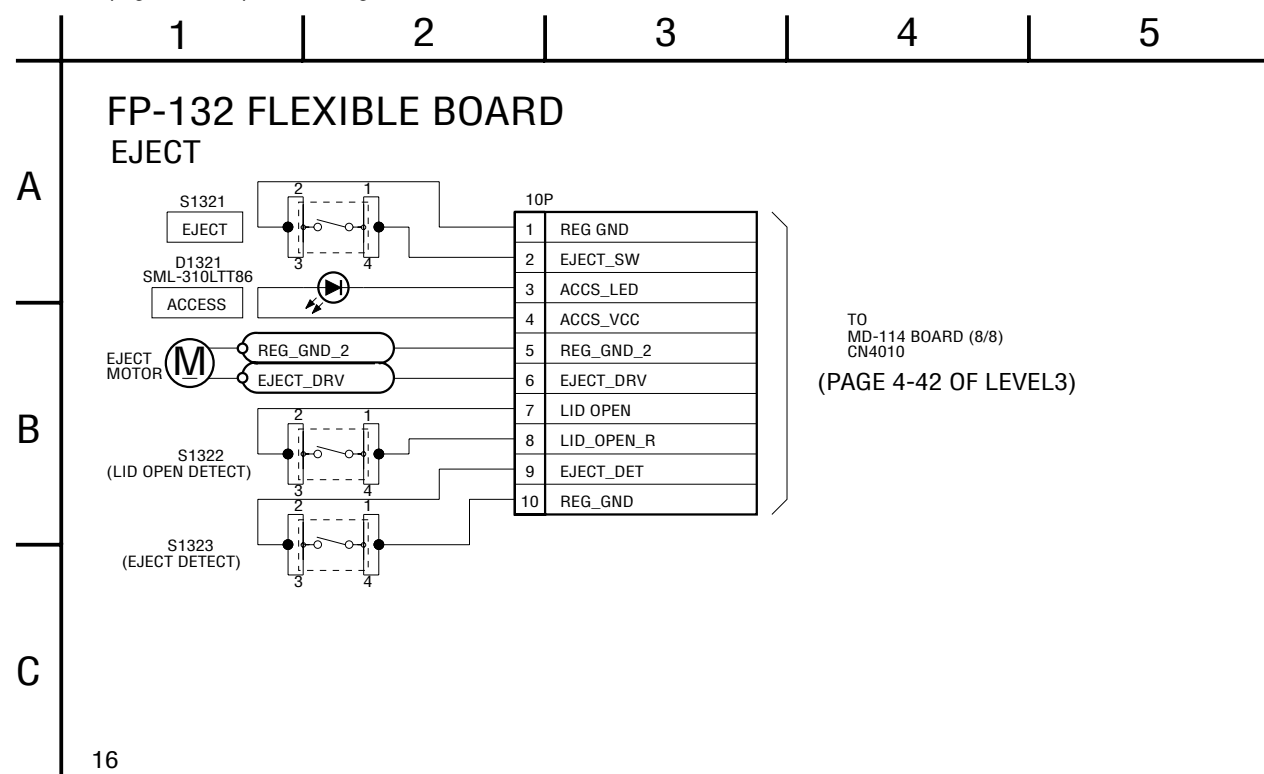


- Refer to page 4-71 for printed wiring board of CK-148.
- Refer to page 4-73 for printed wiring board of FP-128.
- Refer to page 4-76 for printed wiring board of FP-136.
- Refer to page 4-77 for printed wiring board of FP-234.

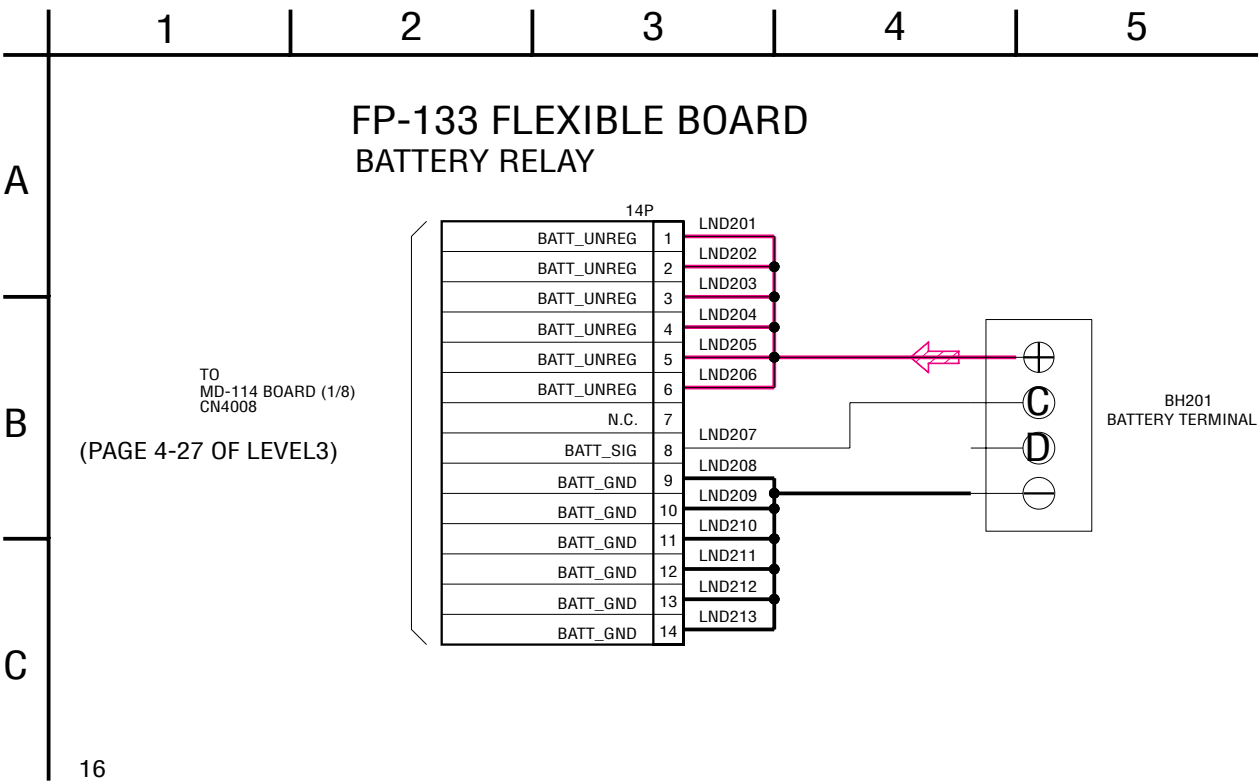




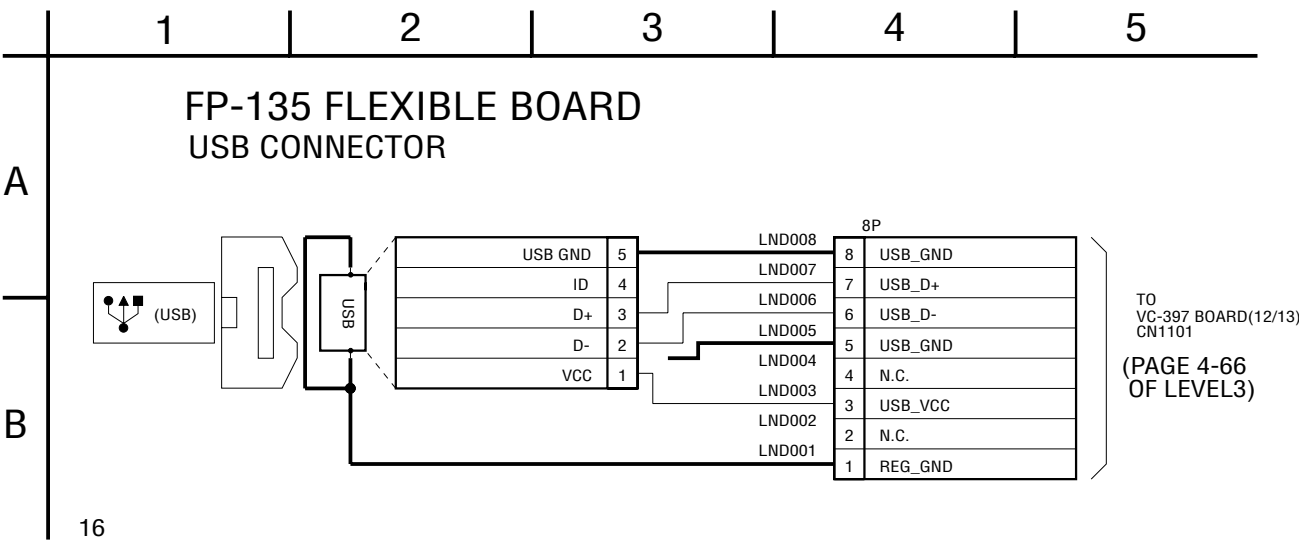
For Schematic Diagram
• Refer to page 4-75 for printed wiring board.



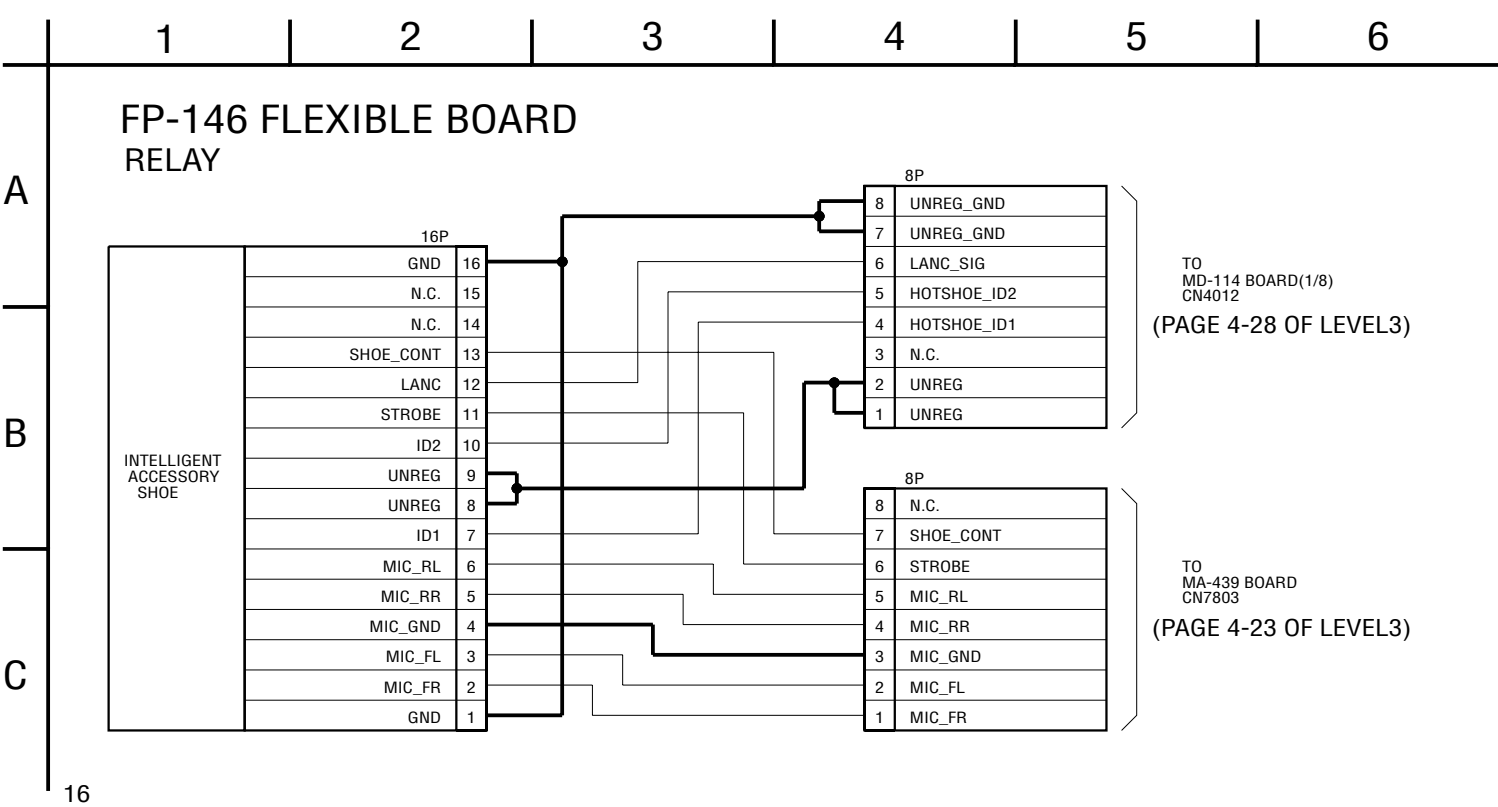
For Schematic Diagram
• Refer to page 4-75 for printed wiring board.



For Schematic Diagram
• Refer to page 4-76 for printed wiring board.

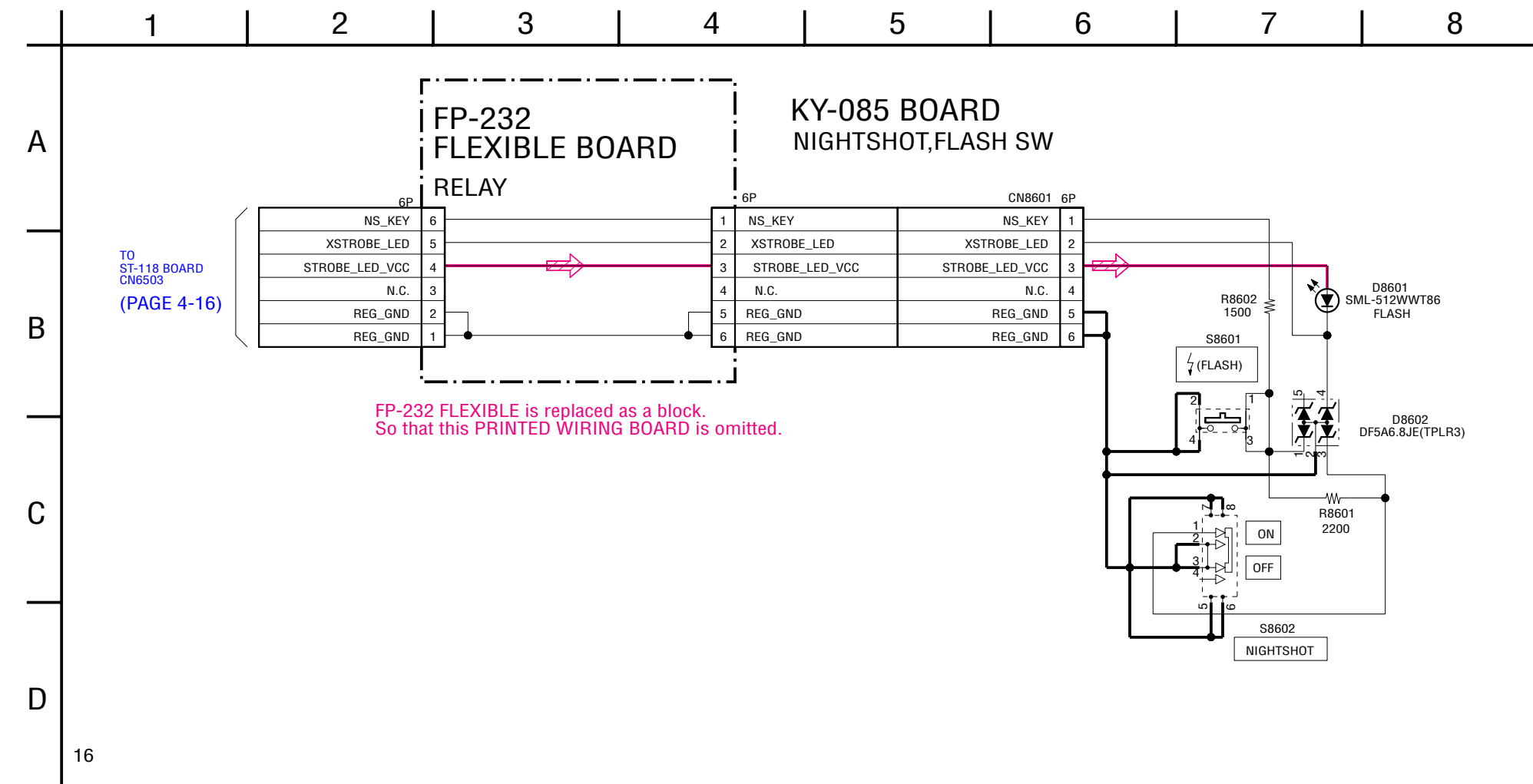


For Schematic Diagram
• Refer to page 4-77 for printed wiring board.



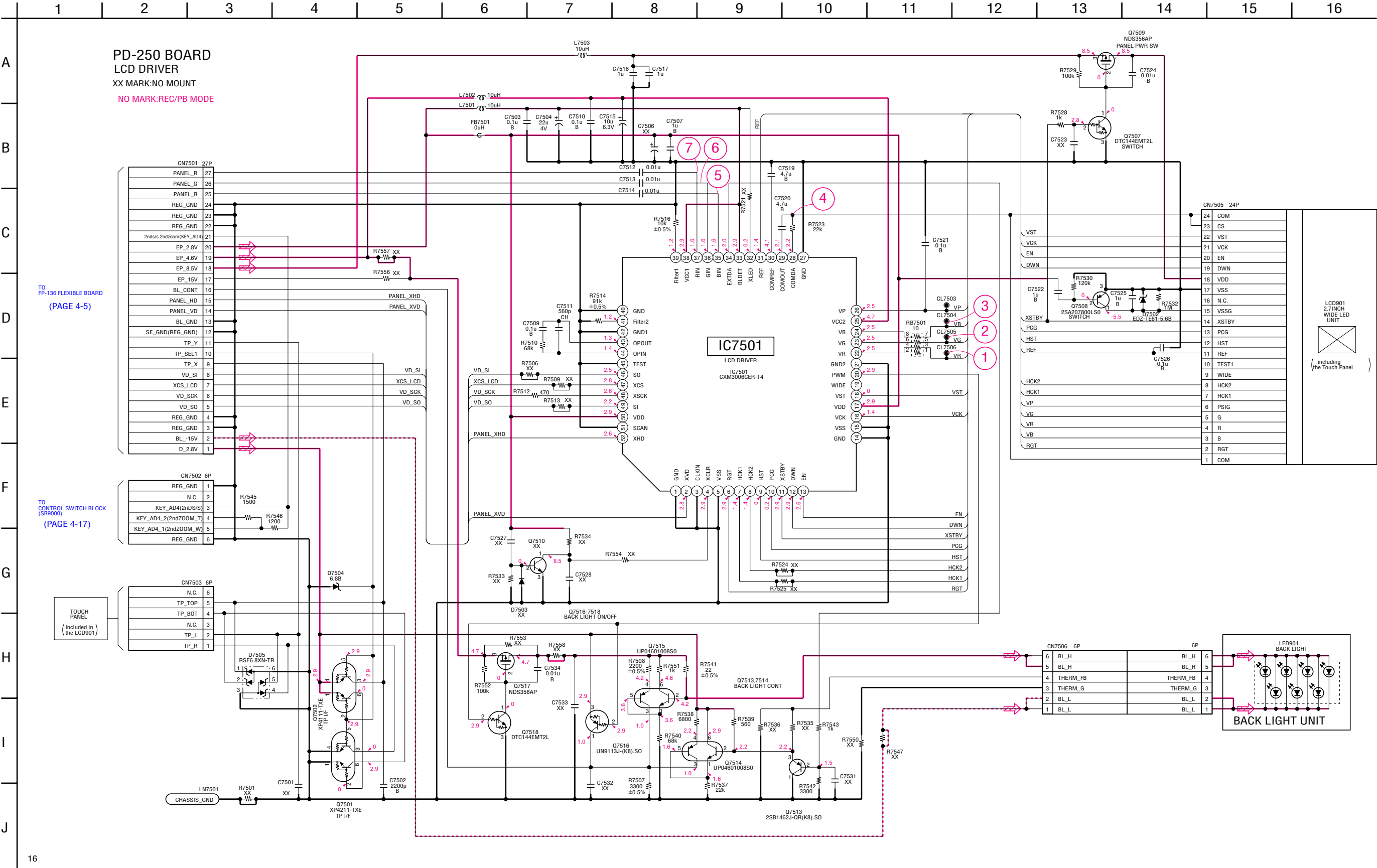
For Schematic Diagram

- Refer to page 4-79 for printed wiring board of KY-085.



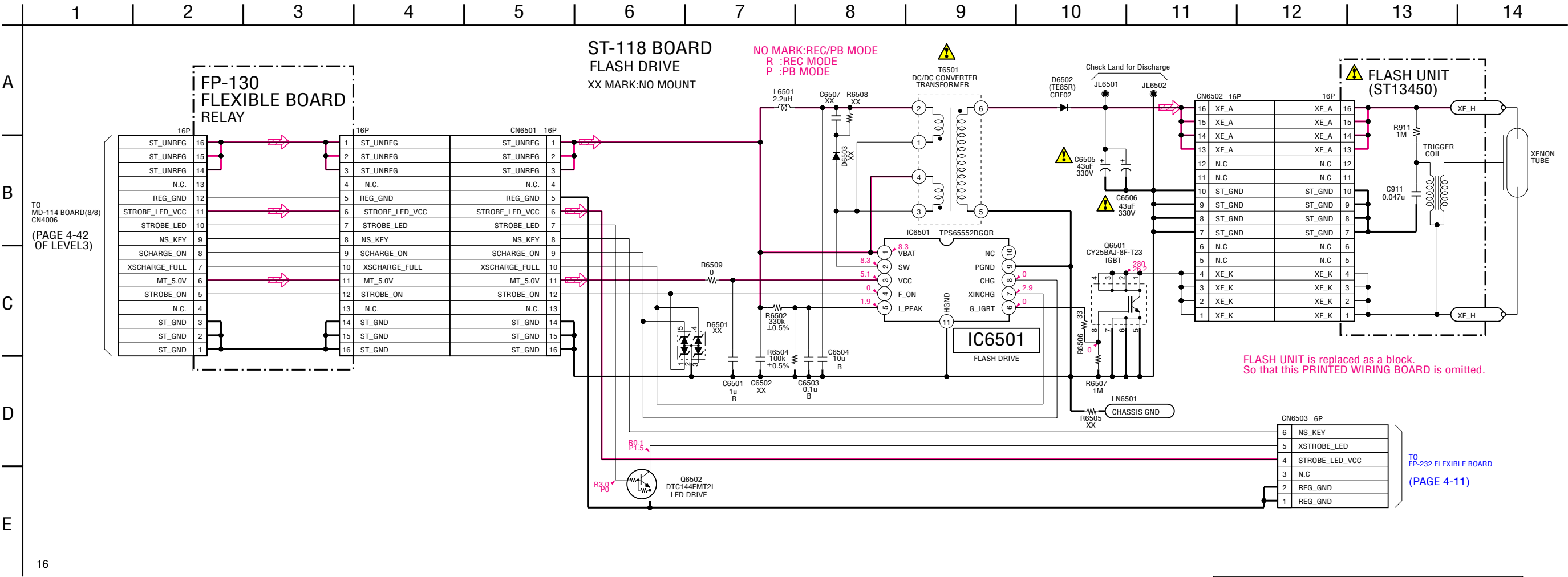
16

For Schematic Diagram
• Refer to page 4-80 for printed wiring board. • Refer to page 4-97 for waveforms.



For Schematic Diagram

- Refer to page 4-81 for printed wiring board of ST-118.
- Refer to page 4-73 for printed wiring board of FP-130.

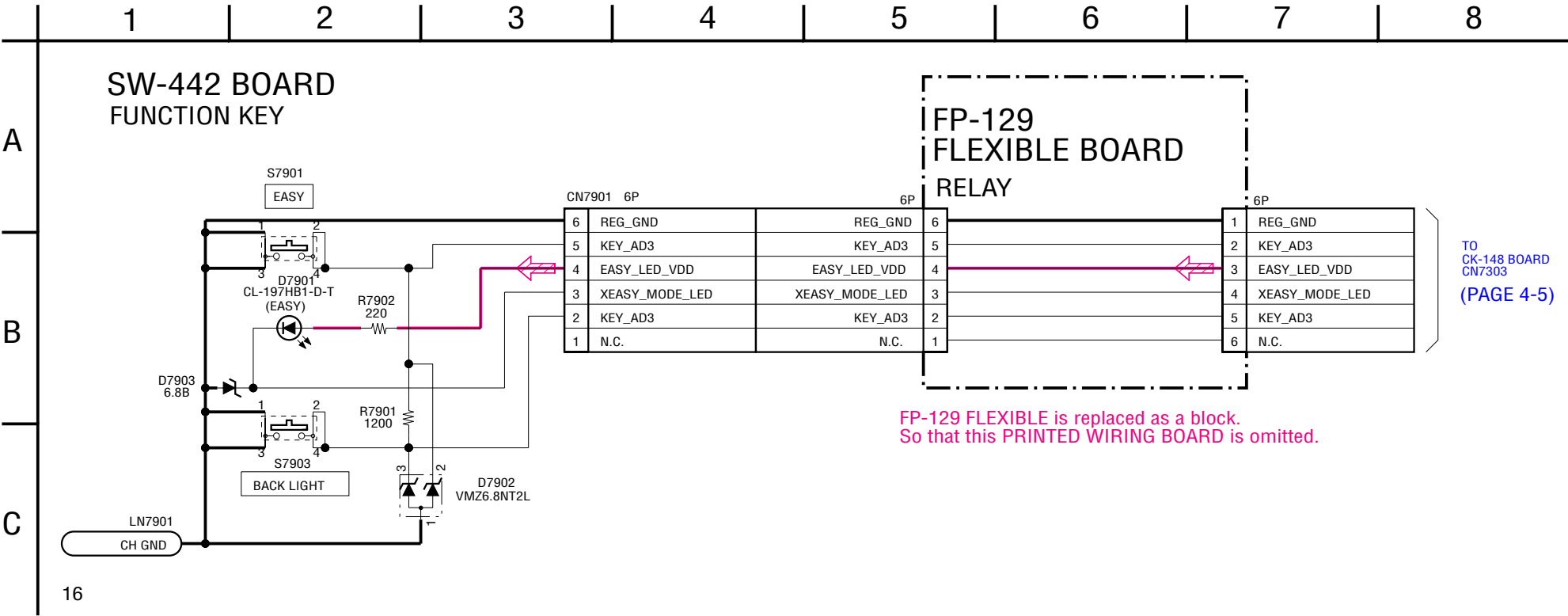


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

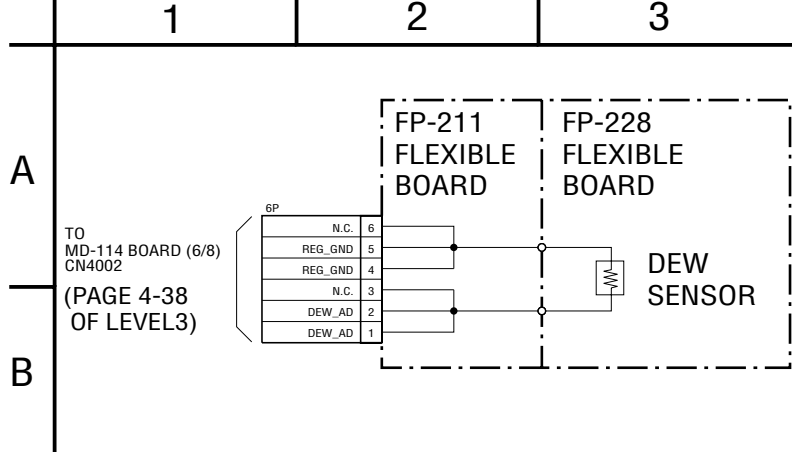
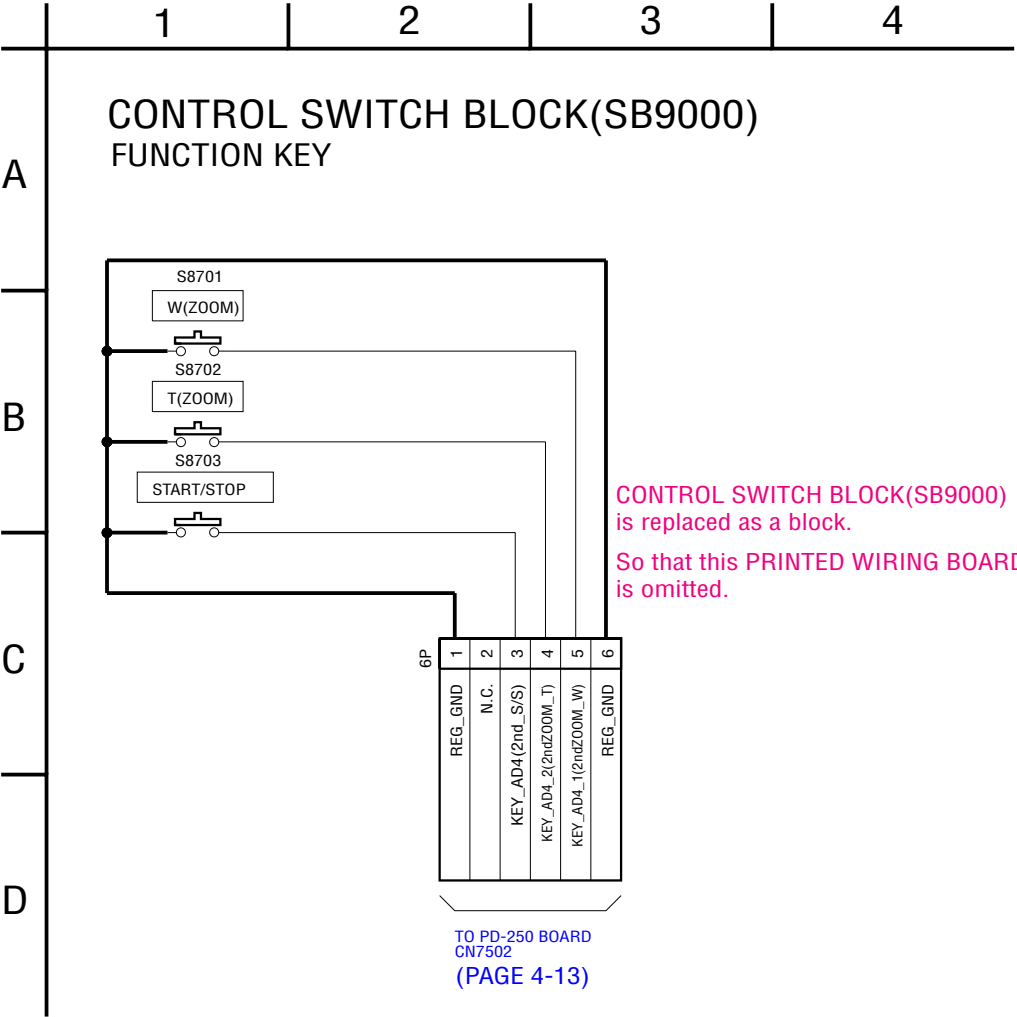
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

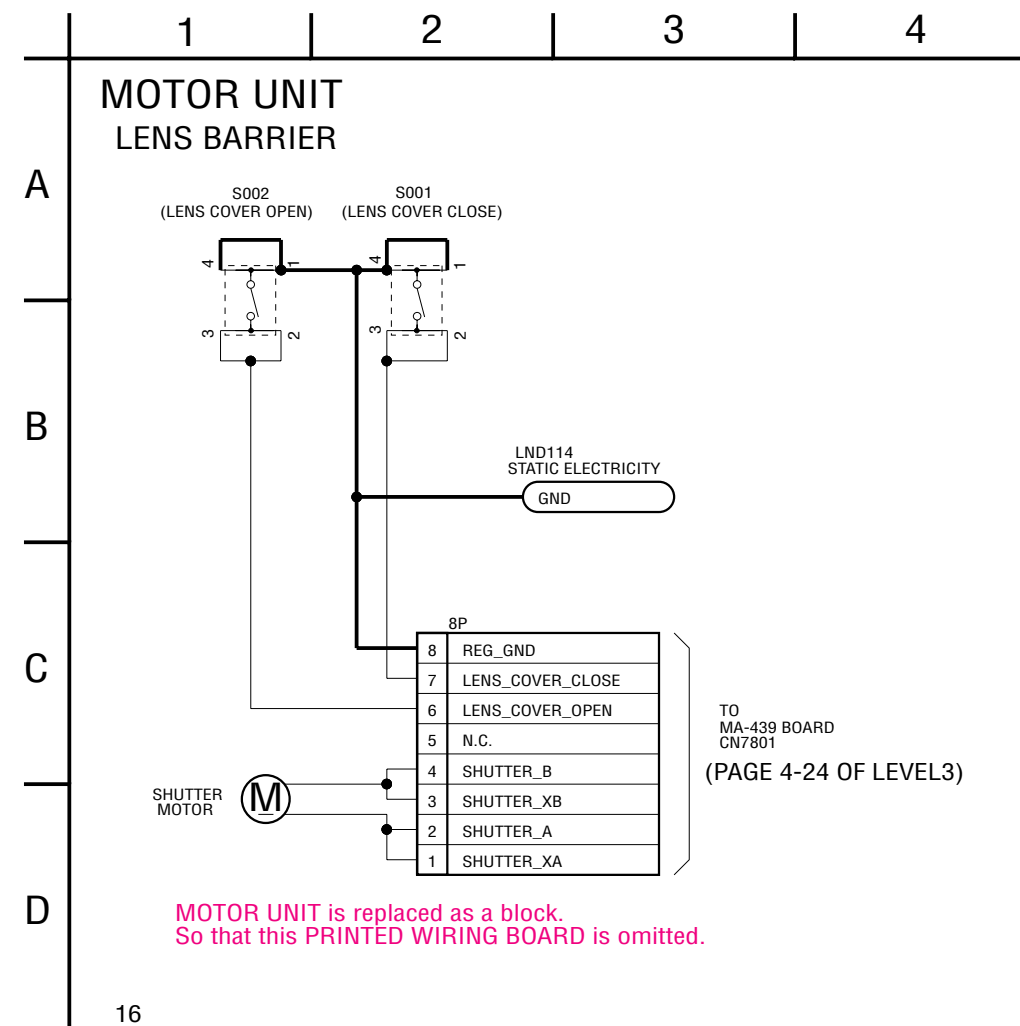
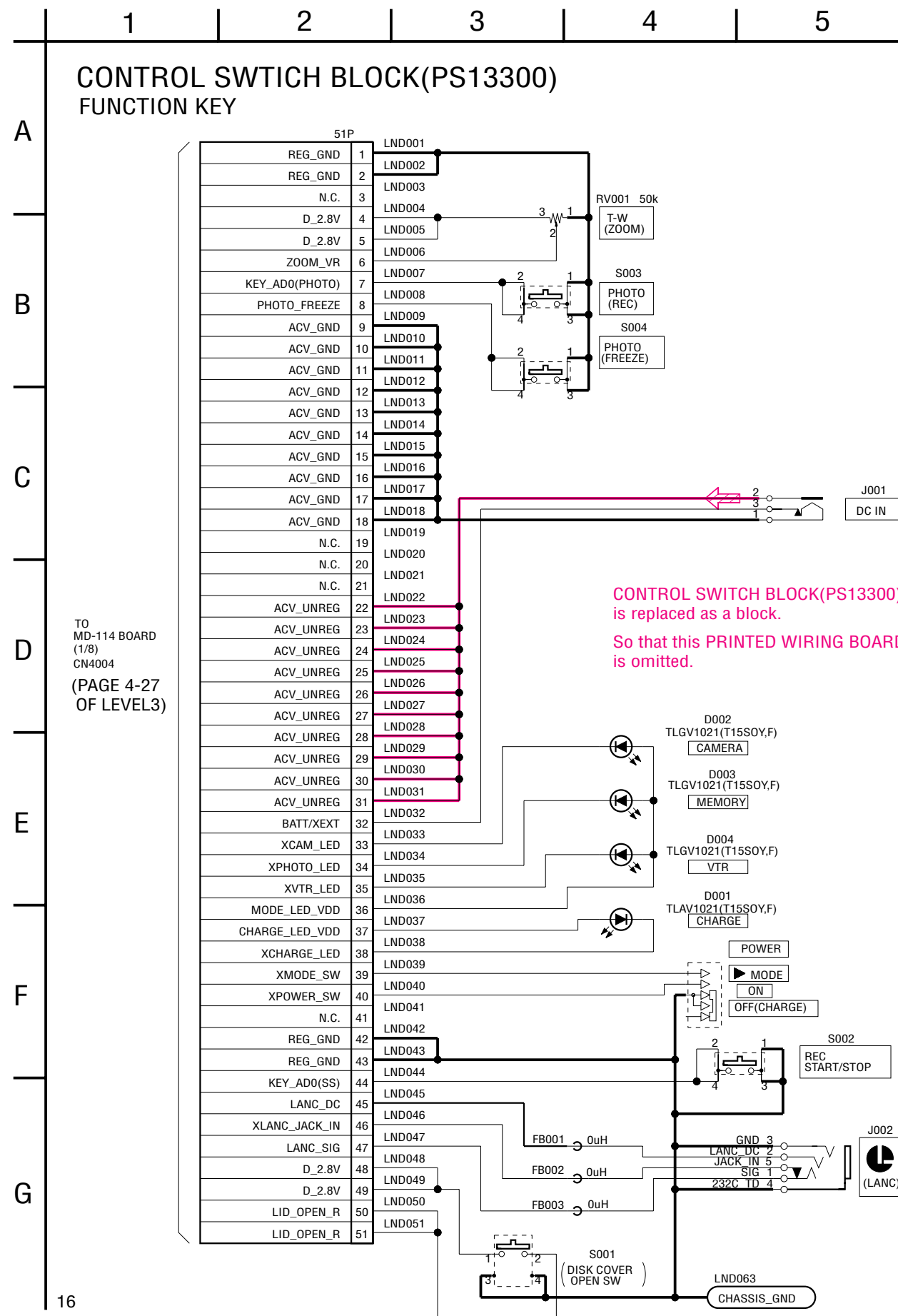
⚠印の部品、または⚠印付の点線で囲まれた部品は、安全性を維持するために、重要な部品です。
従って交換時は、必ず指定の部品を使用してください。

For Schematic Diagram
• Refer to page 4-81 for printed wiring board.



For Schematic Diagram
• Refer to page 4-82 for printed wiring board.





Schematic diagram of the CD-565, MA-439, VF-168, MD-114 and VC-397 board are not shown.
Pages from 4-21 to 4-68 are not shown.

4-2. PRINTED WIRING BOARDS

Link

• AV-094 BOARD	• FP-146 FLEXIBLE BOARD
• CK-148 BOARD	• FP-234 FLEXIBLE BOARD
• FP-128 FLEXIBLE BOARD	• KY-085 BOARD
• FP-130 FLEXIBLE BOARD	• PD-250 BOARD
• FP-132 FLEXIBLE BOARD	• ST-118 BOARD
• FP-133 FLEXIBLE BOARD	• SW-442 BOARD
• FP-135 FLEXIBLE BOARD	• FP-211 FLEXIBLE BOARD
• FP-136 FLEXIBLE BOARD	• FP-228 FLEXIBLE BOARD

• COMMON NOTE FOR PRINTED WIRING BOARDS		• WAVEFORMS
• MOUNTED PARTS LOCATION	• CIRCUIT BOARDS LOCATION	• FLEXIBLE BOARDS LOCATION

NAME	FUNCTION
AV-094	AV MULTI CONN., SIRCS
CD-565	CCD IMAGER, TG, PITCH/YAW SENSOR AMP
CK-148	FUNCTION KEY, RELAY
FP-132	EJECT
FP-234	PANEL REVERSE
KY-085	NIGHTSHOT, FLASH SW
MA-439	MIC AMP
MD-114	BATTERY IN, CHARGE, DC/DC CONVERTER, HI CONTROL, REC/PB RF AMP, DSP, SHOCK SENSOR AMP, SDRAM, MECHA CONTROL CPU, 16MBIT FLASH MEMORY, MECHA DRIVE, CONNECTOR
PD-250	LCD DRIVER
ST-118	FLASH DRIVE
SW-442	FUNCTION KEY
VC-397	A/D CONVERTER, LENS MOTOR DRIVE, CAMERA PROCESS, SDRAM, CAMERA CONTROL, VIDEO/AUDIO SIGNAL PROCESSOR, VIDEO & AUDIO I/O, A/D CONV. & D/A CONV., DVD SYSTEM CONTROL, FLASH MEMORY, SDRAM, 16:9 WIDE PROCES, AUDIO DSP, MIC AMP, CONNECTOR-1, CONNECTOR-2
VF-168	EVF DRIVER

4-2. PRINTED WIRING BOARDS

(ENGLISH)

THIS NOTE IS COMMON FOR WIRING BOARDS

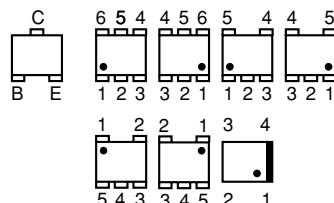
(In addition to this, the necessary note is printed in each block)

(For printed wiring boards)

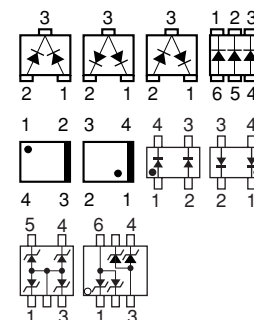
-  : Uses unleaded solder.
-  : Pattern from the side which enables seeing.
(The other layers' patterns are not indicated)
- Through hole is omitted.
- Circled numbers refer to waveforms.
- There are a few cases that the part printed on diagram isn't mounted in this model.
-  : panel designation

• Chip parts

Transistor



Diode



(JAPANESE)

プリント図共通ノート

(他に必要なノートは各ブロックに記載してあります)

【プリント図ノート】

-  : 無鉛半田を使用しています。
-  は見えている面側のパターン。
(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。
- ○番号は波形図の照合番号。
- 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。
-  はパネル表示名称。

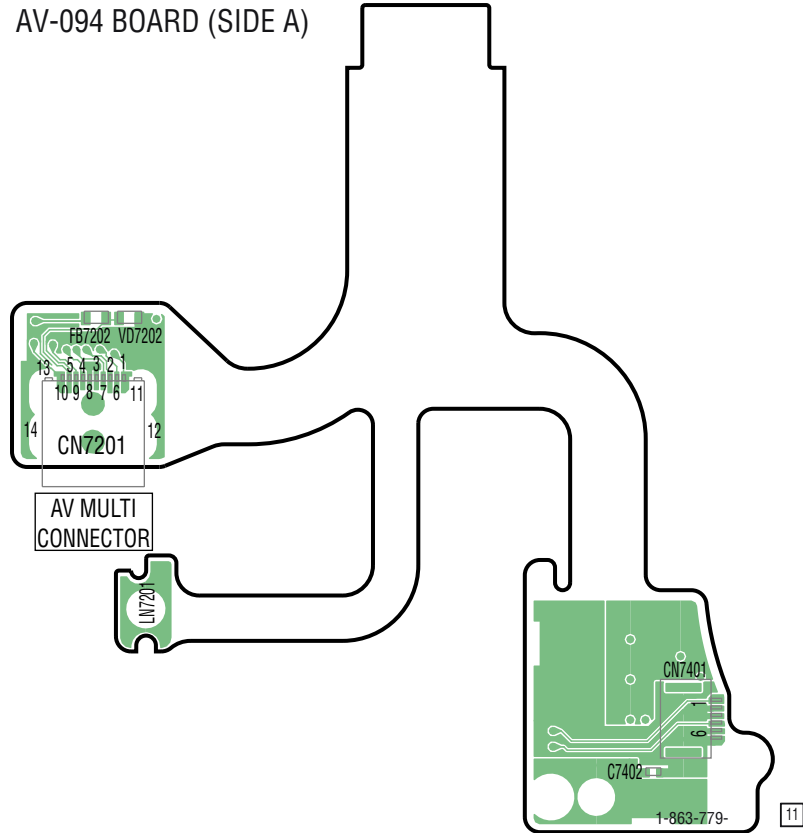
BOARD INFORMATION

board name	waveforms (shown on page)	parts location (shown on page)	pattern	
			number of layers	layers not shown
AV-094	—	—	4	2 to 3
CK-148	—	4-100	2	—
FP-128	—	—	1	—
FP-130	—	—	1	—
FP-132	—	—	1	—
FP-133	—	—	1	—
FP-135	—	—	1	—
FP-136	—	—	1	—
FP-146	—	—	2	2
FP-234	—	—	1	—
KY-085	—	4-100	2	—
PD-250	4-97	4-100	2	—
ST-118	—	4-100	4	2 to 3
SW-442	—	—	2	—
CD-565	4-98	4-101	6	2 to 5
MA-439	—	4-101	4	2 to 3
VF-168	4-98	4-101	6	2 to 5
MD-114	4-99	4-102	8	2 to 7
VC-397	4-99	4-103	8	2 to 7

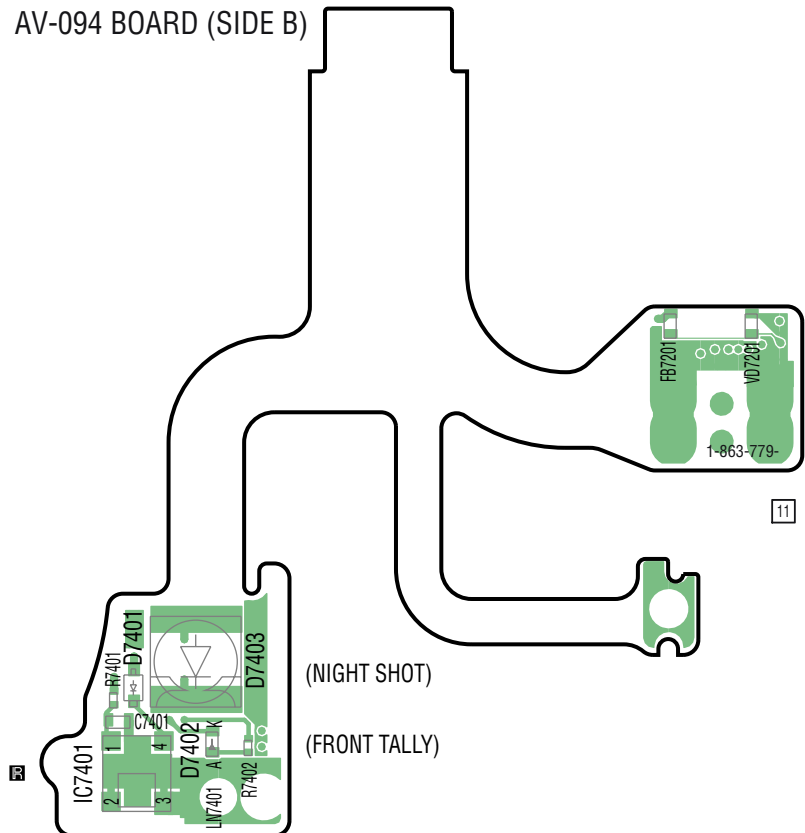
4-2. PRINTED WIRING BOARDS

• Refer to page 4-69 for common note for printed wiring board. •  : Uses unleaded solder.

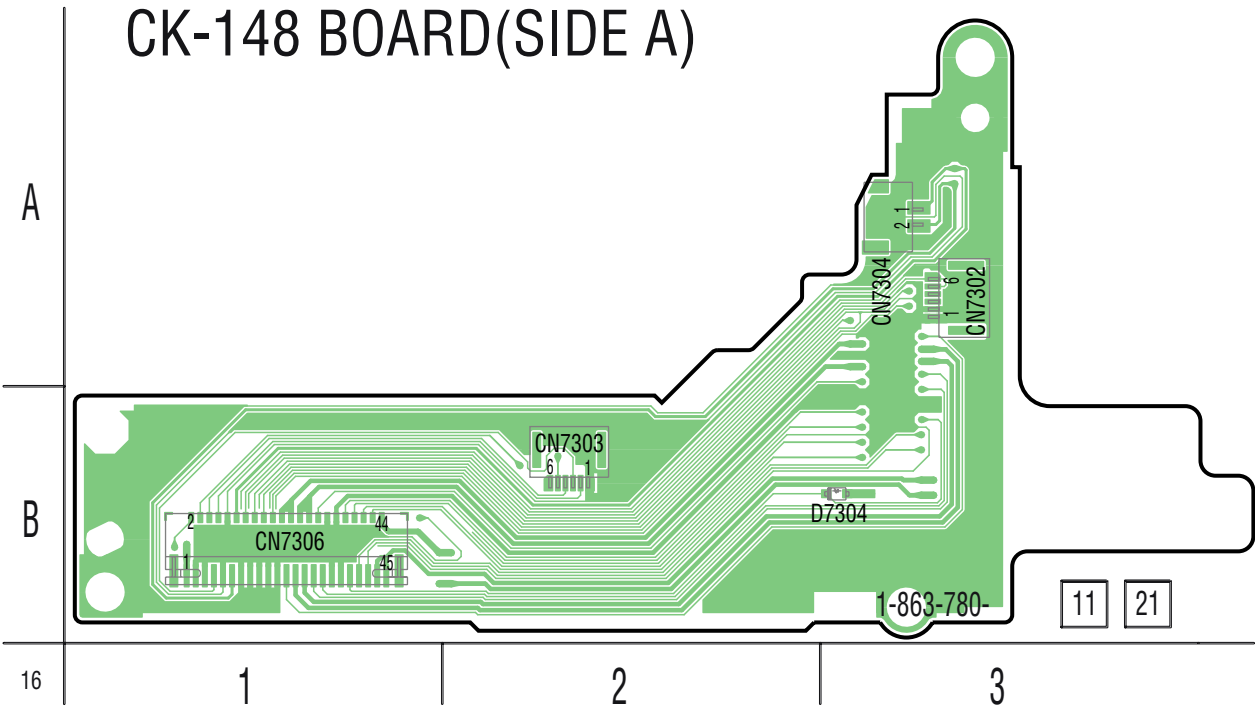
AV-094 BOARD (SIDE A)



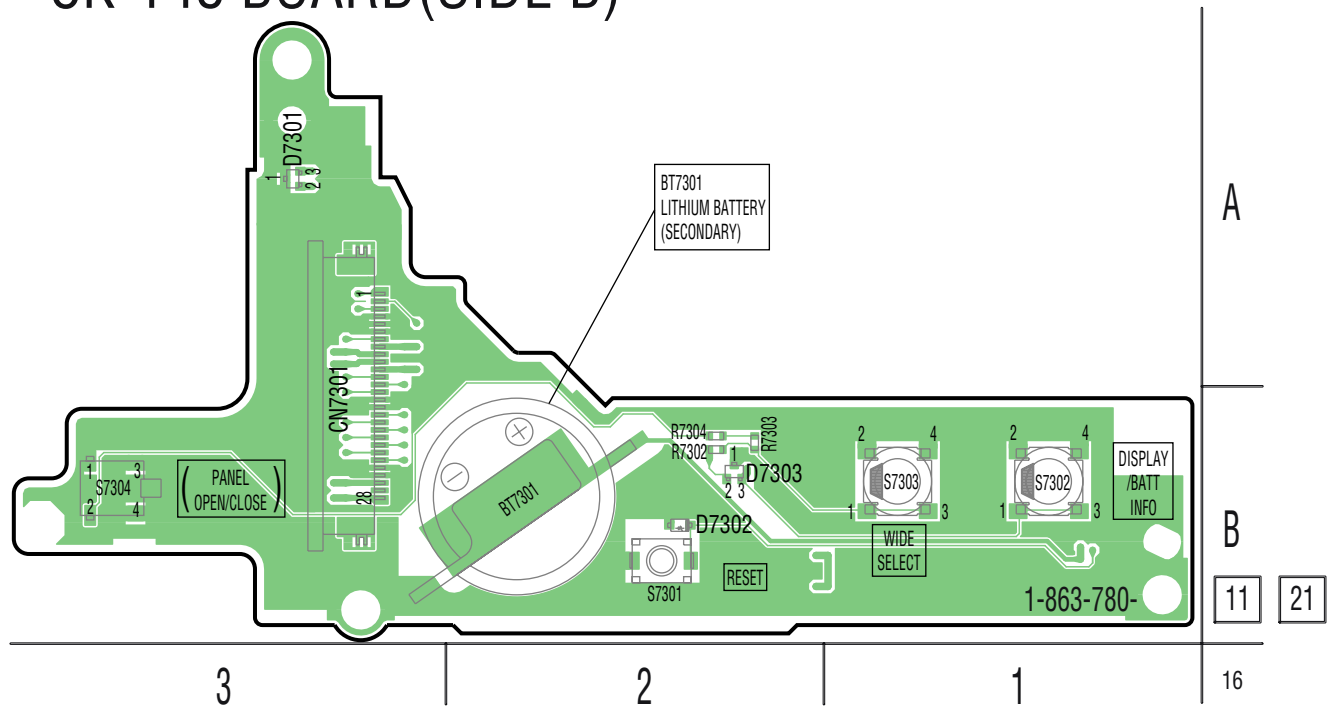
AV-094 BOARD (SIDE B)



CK-148 BOARD(SIDE A)

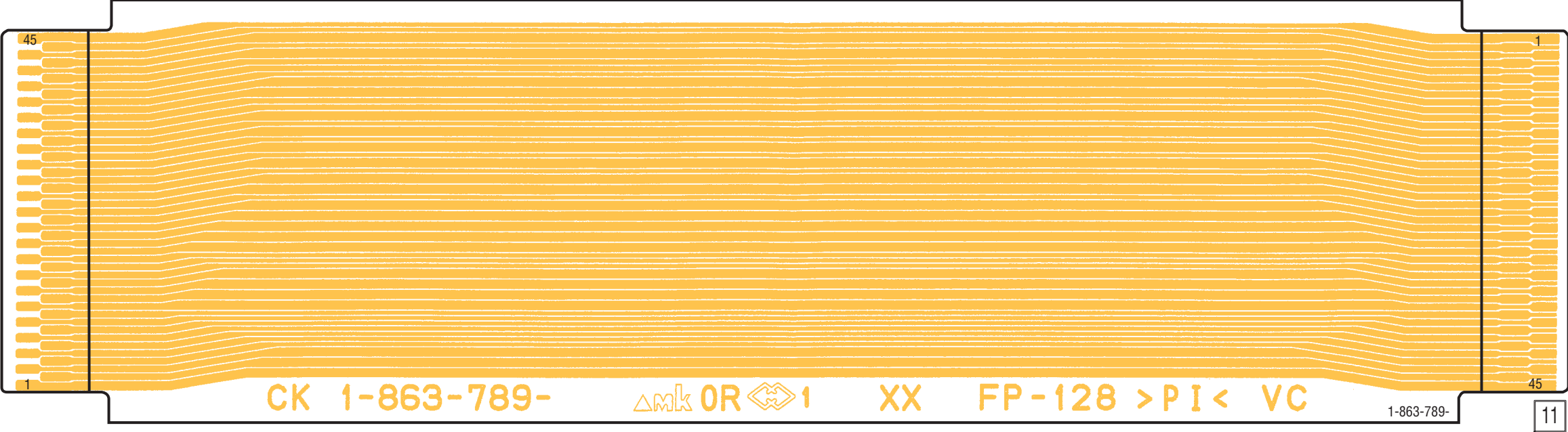


CK-148 BOARD(SIDE B)

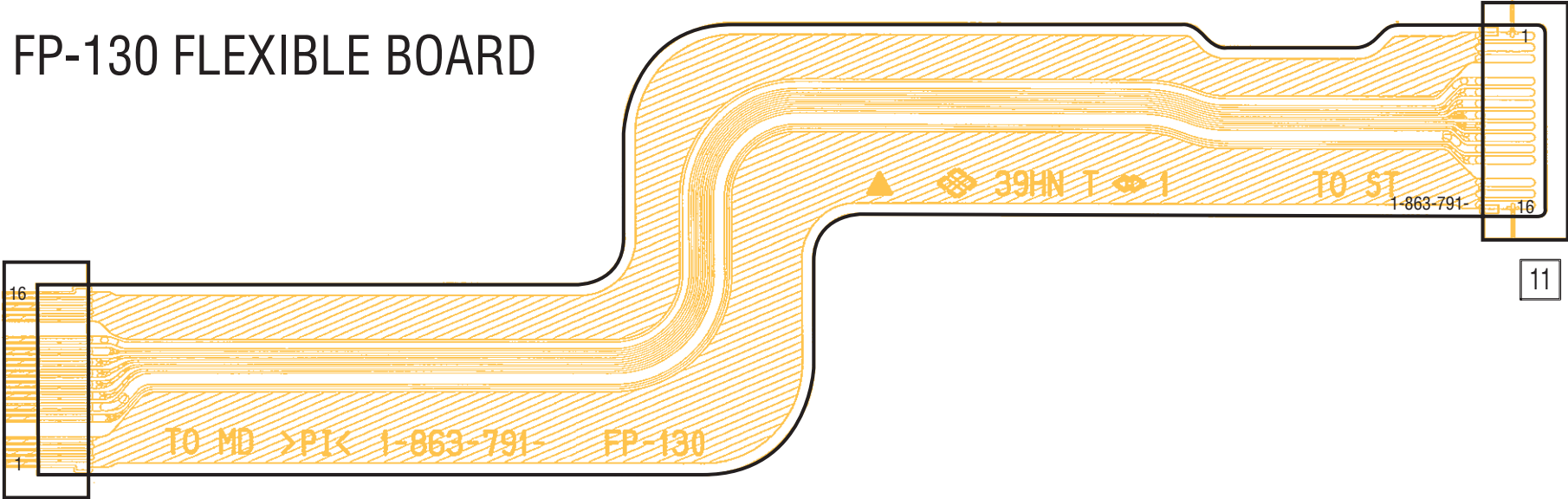


• Refer to page 4-69 for common note for printed wiring board. •  : Uses unleaded solder.

FP-128 FLEXIBLE BOARD

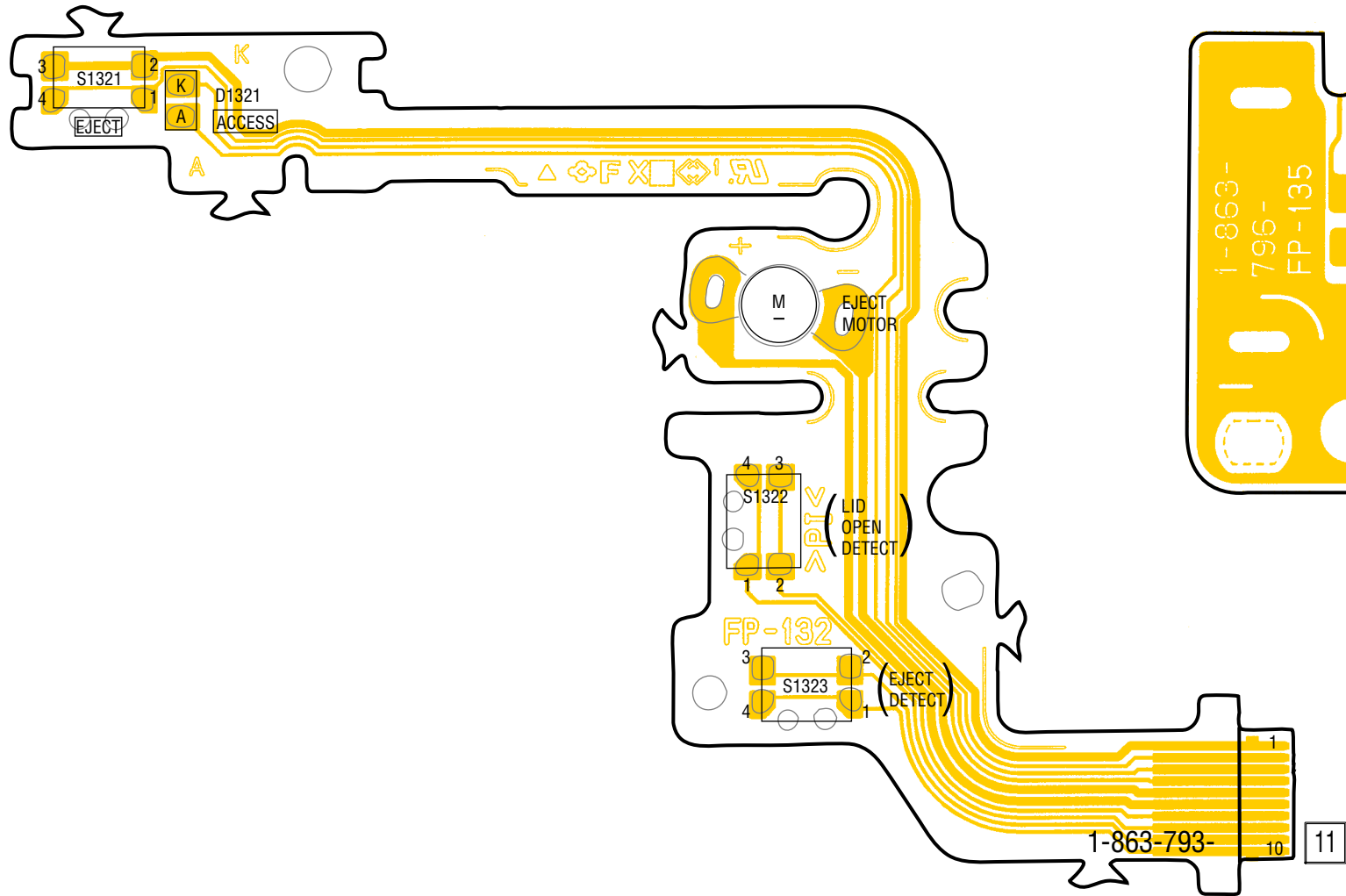


FP-130 FLEXIBLE BOARD

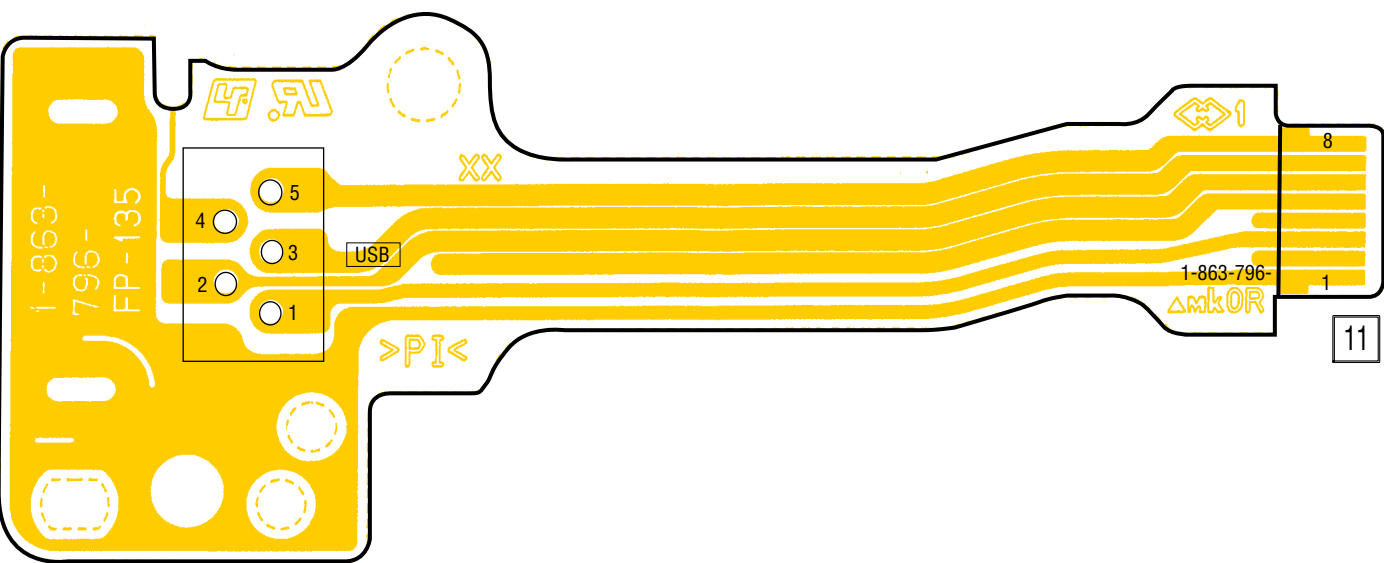


• Refer to page 4-69 for common note for printed wiring board. •  : Uses unleaded solder.

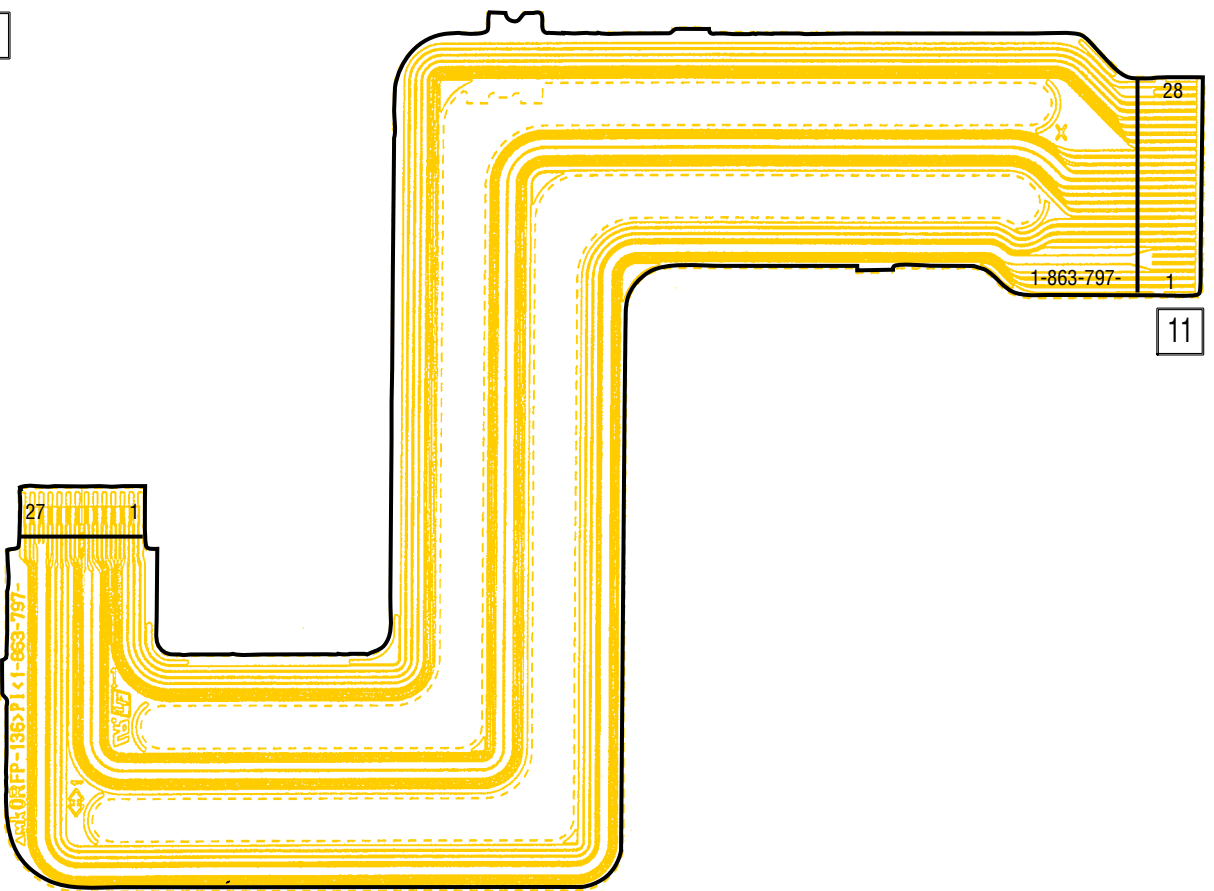
FP-132 FLEXIBLE BOARD



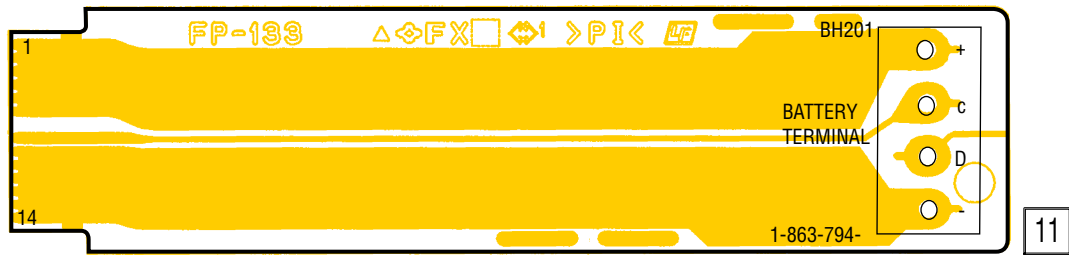
FP-135 FLEXIBLE BOARD



FP-136 FLEXIBLE BOARD

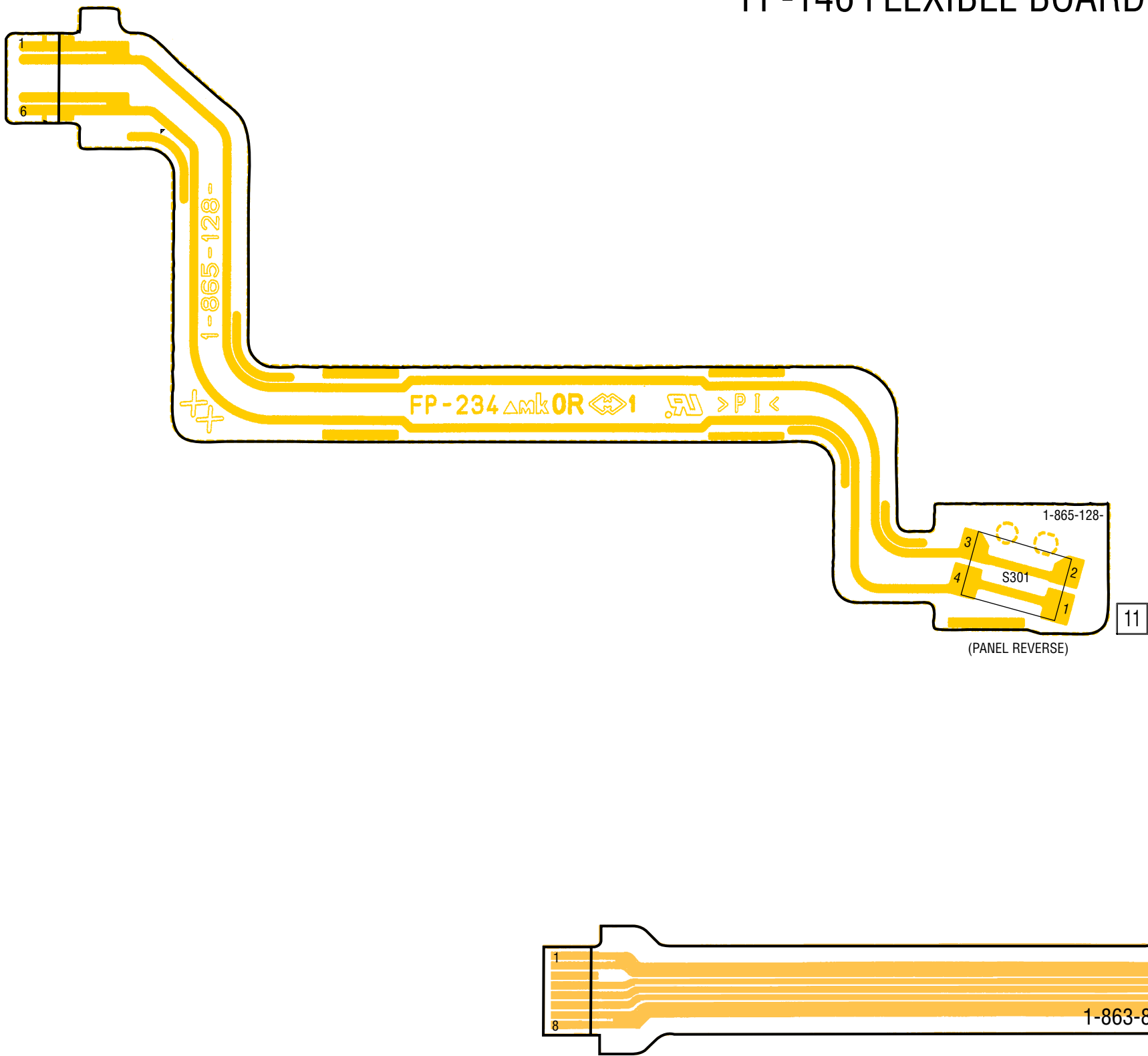


FP-133 FLEXIBLE BOARD

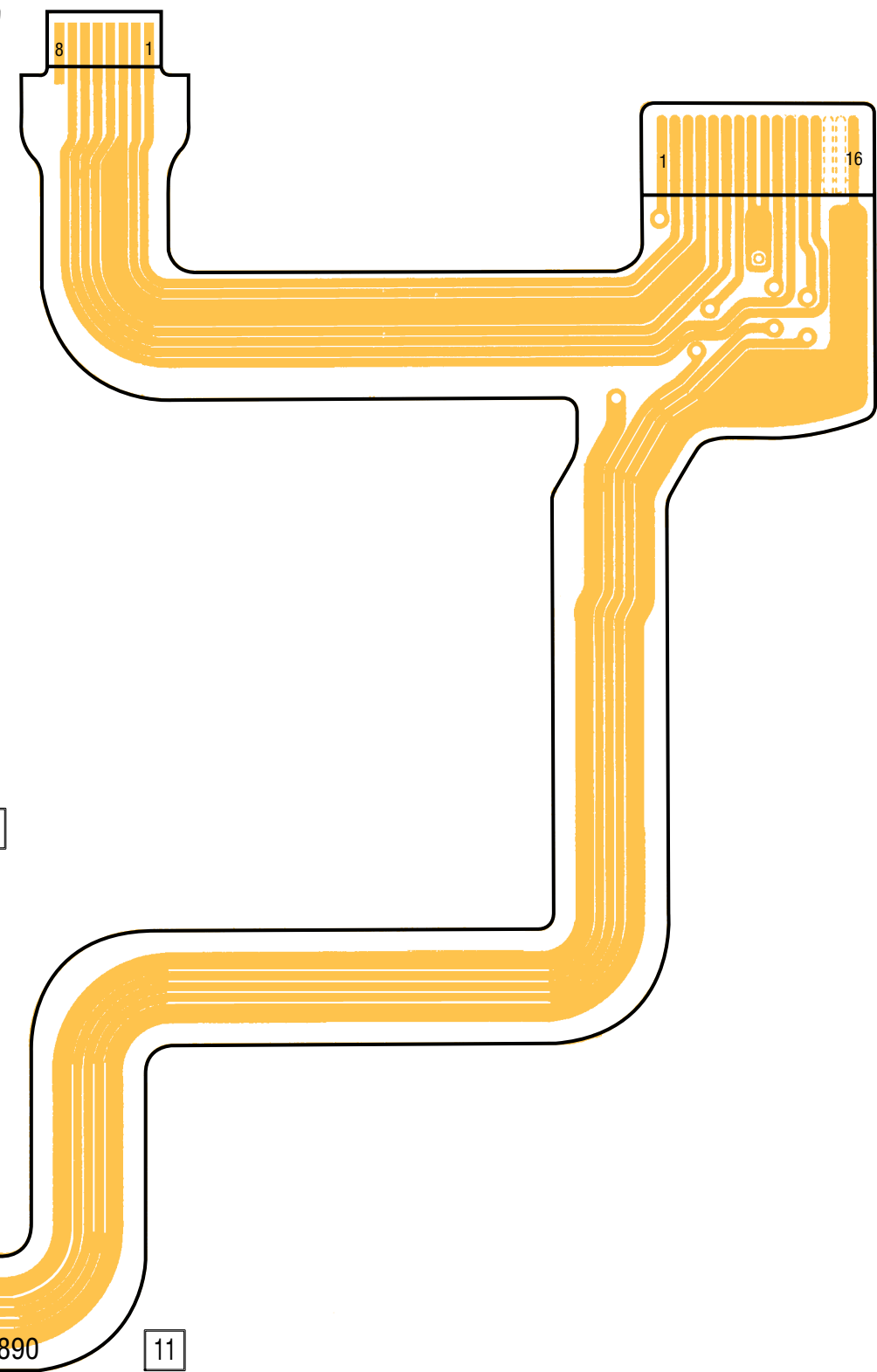


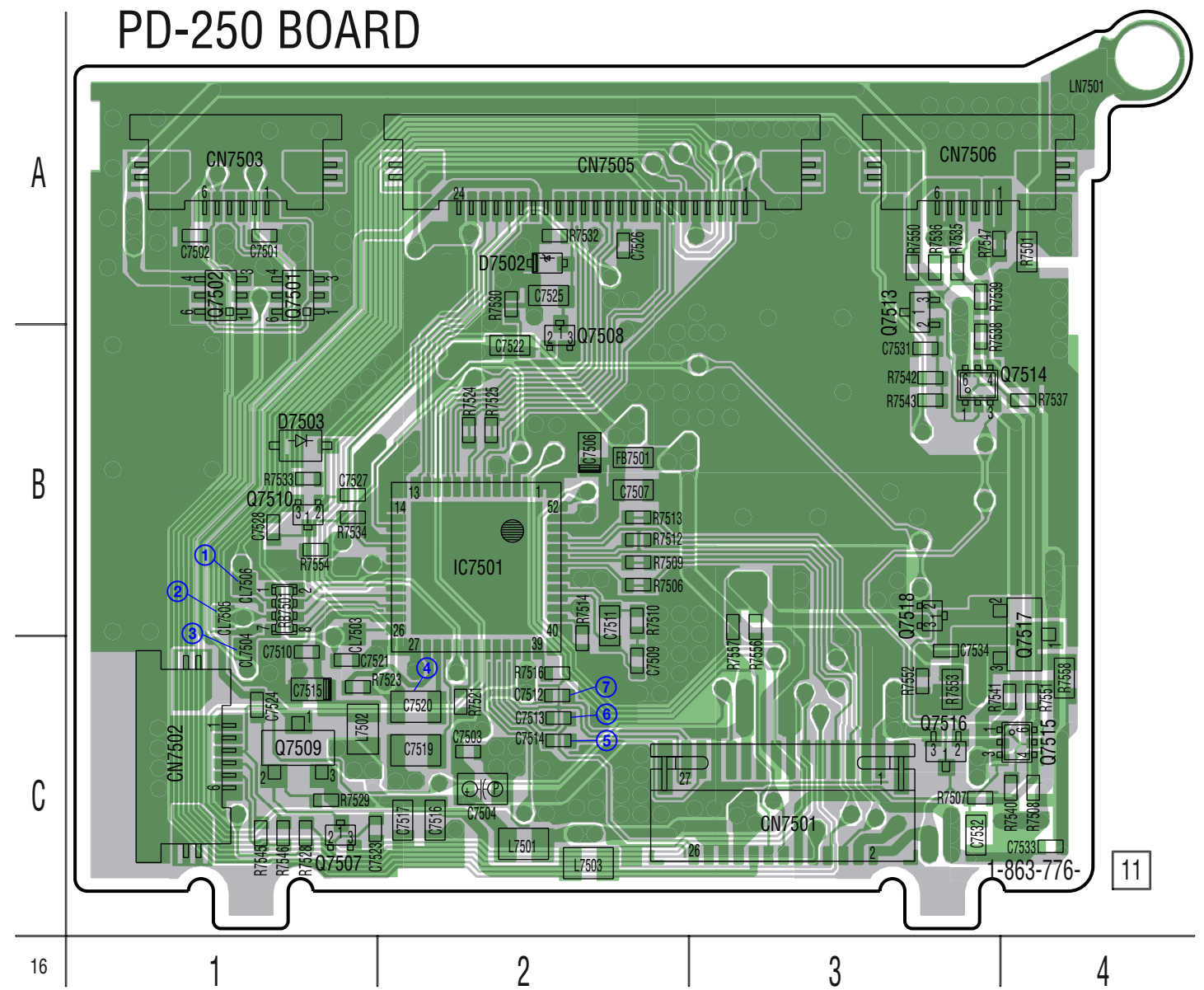
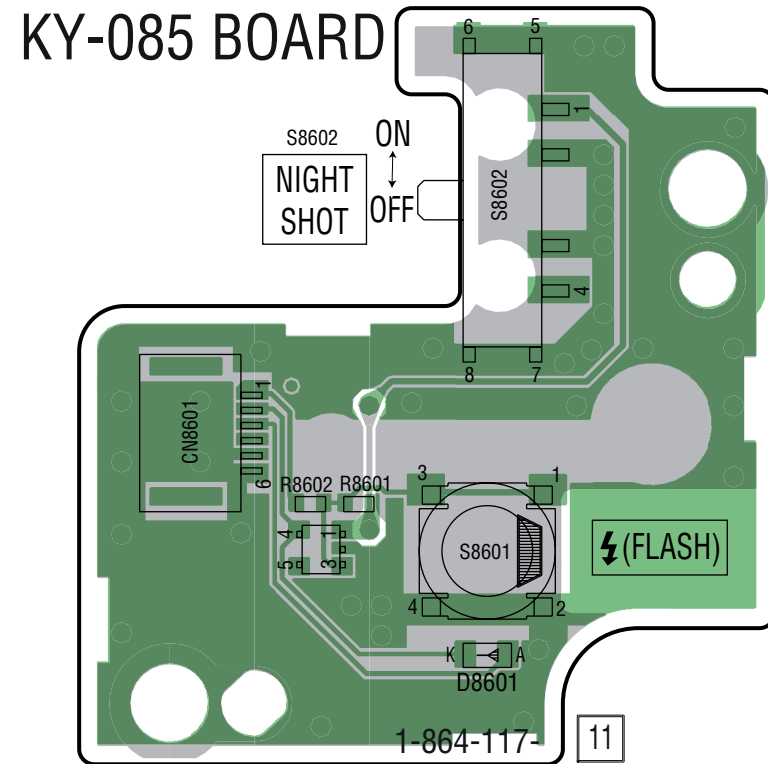
• Refer to page 4-69 for common note for printed wiring board. •  : Uses unleaded solder.

FP-234 FLEXIBLE BOARD



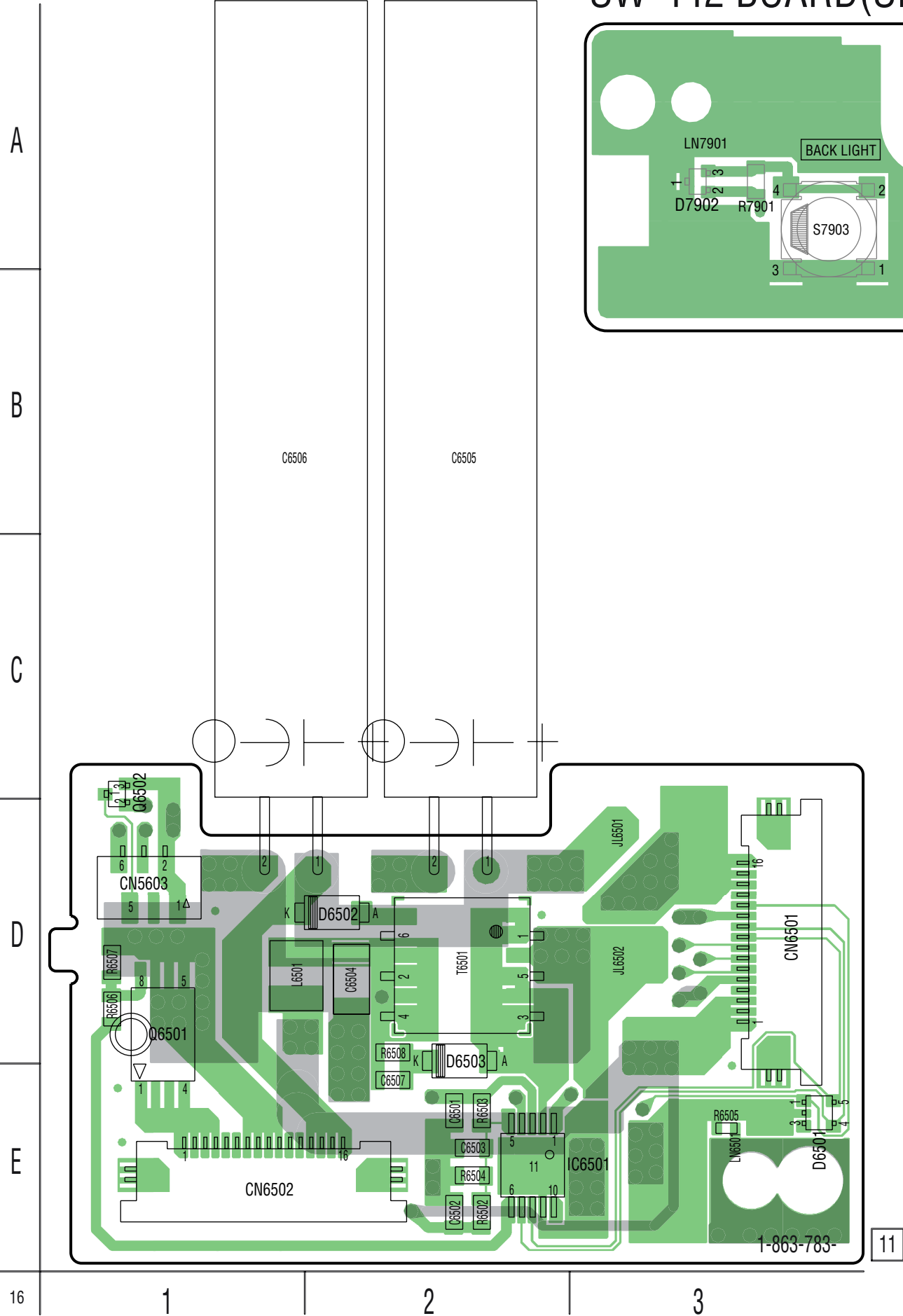
FP-146 FLEXIBLE BOARD



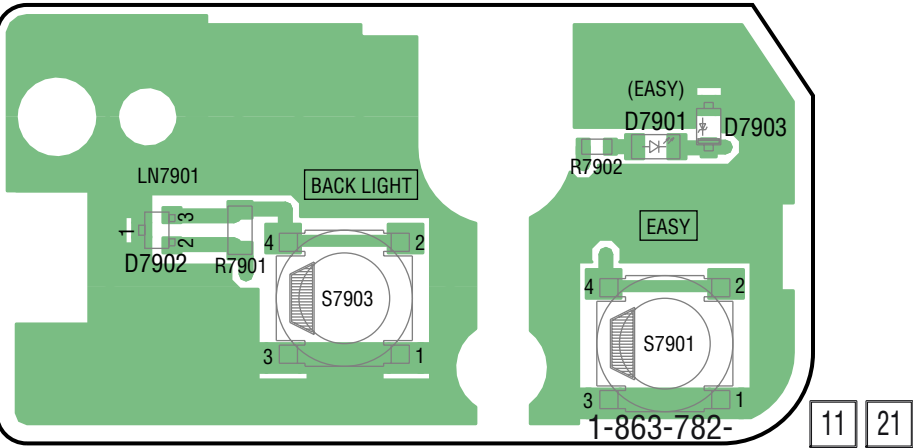


• Refer to page 4-69 for common note for printed wiring board. •  : Uses unleaded solder.

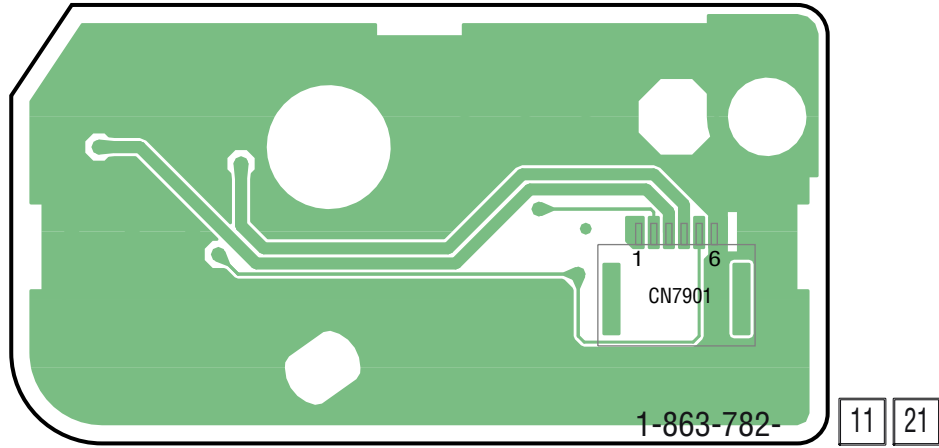
ST-118 BOARD



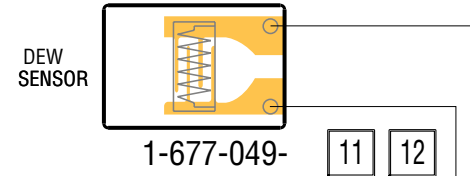
SW-442 BOARD(SIDE A)



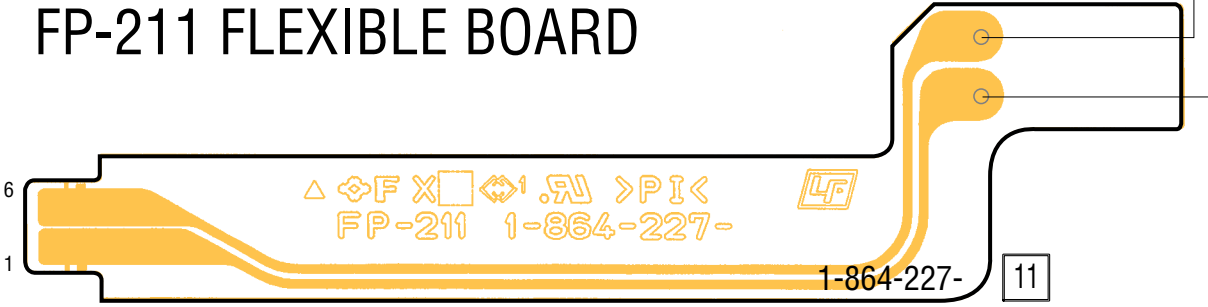
SW-442 BOARD(SIDE B)



FP-228 FLEXIBLE BOARD



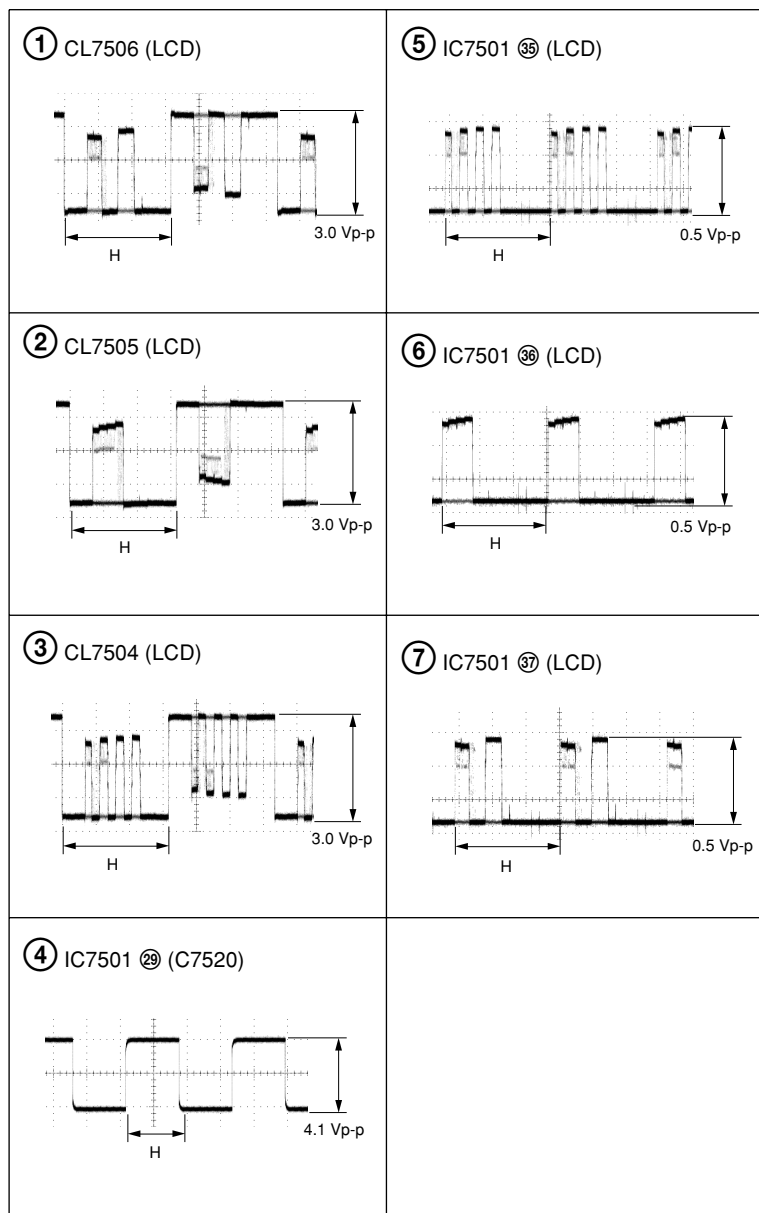
FP-211 FLEXIBLE BOARD



Printed wiring board of the CD-565, MA-439, VF-168, MD-114 and VC-397 board are not shown. Pages from 4-83 to 4-96 are not shown.

4-3. WAVEFORMS

PD-250 BOARD



Waveforms of the CD-565, VF-168, MD-114 and VC-397 board are not shown.
Pages from 4-98 to 4-99 are not shown.

4-2. PRINTED WIRING BOARDS

4-4. MOUNTED PARTS LOCATION

no mark : side A

* mark : side B

CK-148 BOARD

* BT7301 B-2
* CN7301 A-3
CN7302 A-3
CN7303 B-2
CN7304 A-3
CN7306 B-1
* D7301 A-3
* D7302 B-2
* D7303 B-2
D7304 B-3
* R7302 B-2
* R7303 B-2
* R7304 B-2
* S7301 B-2
* S7302 B-1
* S7303 B-1
* S7304 B-3

KY-085 BOARD

CN8601 B-1
D8601 B-2
D8602 B-1
R8601 B-1
R8602 B-1
S8601 B-2
S8602 A-2

PD-250 BOARD

C7503 C-2
C7504 C-2
C7506 B-2
C7507 B-2
C7509 C-2
C7510 C-1
C7511 B-2
C7512 C-2
C7513 C-2
C7514 C-2
C7515 C-1
C7516 C-2
C7517 C-2
C7519 C-2
C7520 C-2
C7521 C-1
C7522 B-2
C7523 C-1
C7524 C-1
C7525 A-2
C7526 A-2
C7527 B-1
C7528 B-1
C7531 B-3
C7532 C-3
C7533 C-4
C7534 C-3
CL7503 C-1
CL7504 C-1
CL7505 B-1
CL7506 B-1
CN7501 C-3
CN7502 C-1
CN7503 A-1
CN7505 A-2
CN7506 A-3
D7502 A-2
D7503 B-1
FB7501 B-2
IC7501 B-2
L7501 C-2
L7502 C-1
L7503 C-2
LN7501 A-4
Q7501 A-1
Q7502 A-1

Q7507 C-1
Q7508 B-2
Q7509 C-1
Q7510 B-1
Q7513 A-3
Q7514 B-4
Q7515 C-4
Q7516 C-3
Q7517 C-4
Q7518 B-3
R7501 A-4
R7506 B-2
R7507 C-3
R7508 C-4
R7509 B-2
R7510 B-2
R7512 B-2
R7513 B-2
R7514 B-2
R7516 C-2
R7521 C-2
R7523 C-1
R7524 B-2
R7525 B-2
R7528 C-1
R7529 C-1
R7530 A-2
R7532 A-2
R7533 B-1
R7534 B-1
R7535 A-3
R7536 A-3
R7537 B-4
R7538 B-3
R7539 A-3
R7540 C-4
R7541 C-3
R7542 B-3
R7543 B-3
R7545 C-1
R7546 C-1
R7547 A-3
R7550 A-3
R7551 C-4
R7552 C-3
R7553 C-3
R7554 B-1
R7556 C-3
R7557 C-3
R7558 C-4
RB7501 B-1

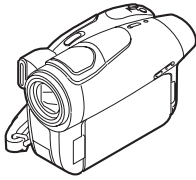
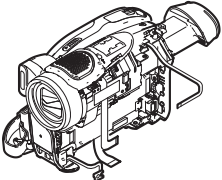
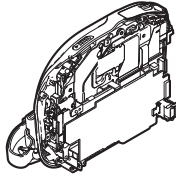
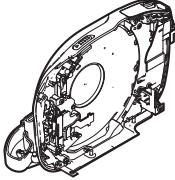
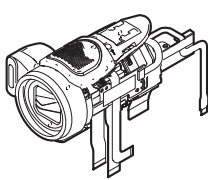
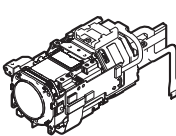
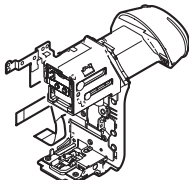
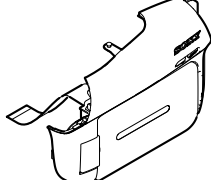
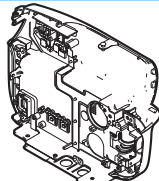
ST-118 BOARD

C6501 E-2
C6502 E-2
C6503 E-2
C6504 D-2
C6505 B-2
C6506 B-1
C6507 E-2
CN5603 D-1
CN6501 D-3
CN6502 E-1
D6501 E-3
D6502 D-2
D6503 D-2
IC6501 E-3
JL6501 D-3
JL6502 D-3
L6501 D-1
LN6501 E-3
Q6501 D-1
Q6502 C-1
R6502 E-2
R6503 E-2
R6504 E-2
R6505 E-3
R6506 D-1
R6507 D-1
R6508 D-2
T6501 D-2

Mounted parts location of the CD-535, MA-439, VF-168, MD-114 and VC-397 board are not shown. Pages from 4-101 to 4-103 are not shown.

5. REPAIR PARTS LIST

NOTE: Characters **A** to **Z** of the electrical parts list indicate location of exploded views in which the desired part is shown.

Link	EXPLODED VIEWS			
 A	 B C	 D E	 F	
OVERALL SECTION	CABINET (L) SECTION-1	MD SECTION	CABINET (L) SECTION-2	
 G H	 G H	 I	 J K	
LENS SECTION-1	LENS SECTION-2	EVF/BATTERY SECTION	CABINET (R) SECTION-1	
 L M				
CABINET (R) SECTION-2				

Link	ELECTRICAL PARTS LIST		ACCESSORIES
• AV-094 BOARD C	• PD-250 BOARD M	• MA-439 BOARD H	
• CK-148 BOARD K	• ST-118 BOARD A	• VF-168 BOARD I	
• FP-132 FLEXIBLE BOARD F	• SW-442 BOARD J	• MD-114 BOARD D	
• FP-234 FLEXIBLE BOARD L	• CD-565 BOARD G	• VC-397 BOARD E	
• KY-085 BOARD B			

5. REPAIR PARTS LIST

(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..., uPC..., μ PC...,
uPD..., μ PD...

(JAPANESE)

【使用上の注意】

- *印の部品は常備在庫しておりません。
- 分解図中の機構部品で、図面番号のない部品は供給しません。
- -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。
- 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。
- 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..., μ PA..., uPB..., μ PC..., uPD...等はそれぞれA..., μ PA..., μ PB..., μ PC..., μ PD...を示します。

(ENGLISH)

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

(JAPANESE)

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。

(ENGLISH/FRENCH)

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.

(JAPANESE)

$\triangle$ 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。

• Abbreviation

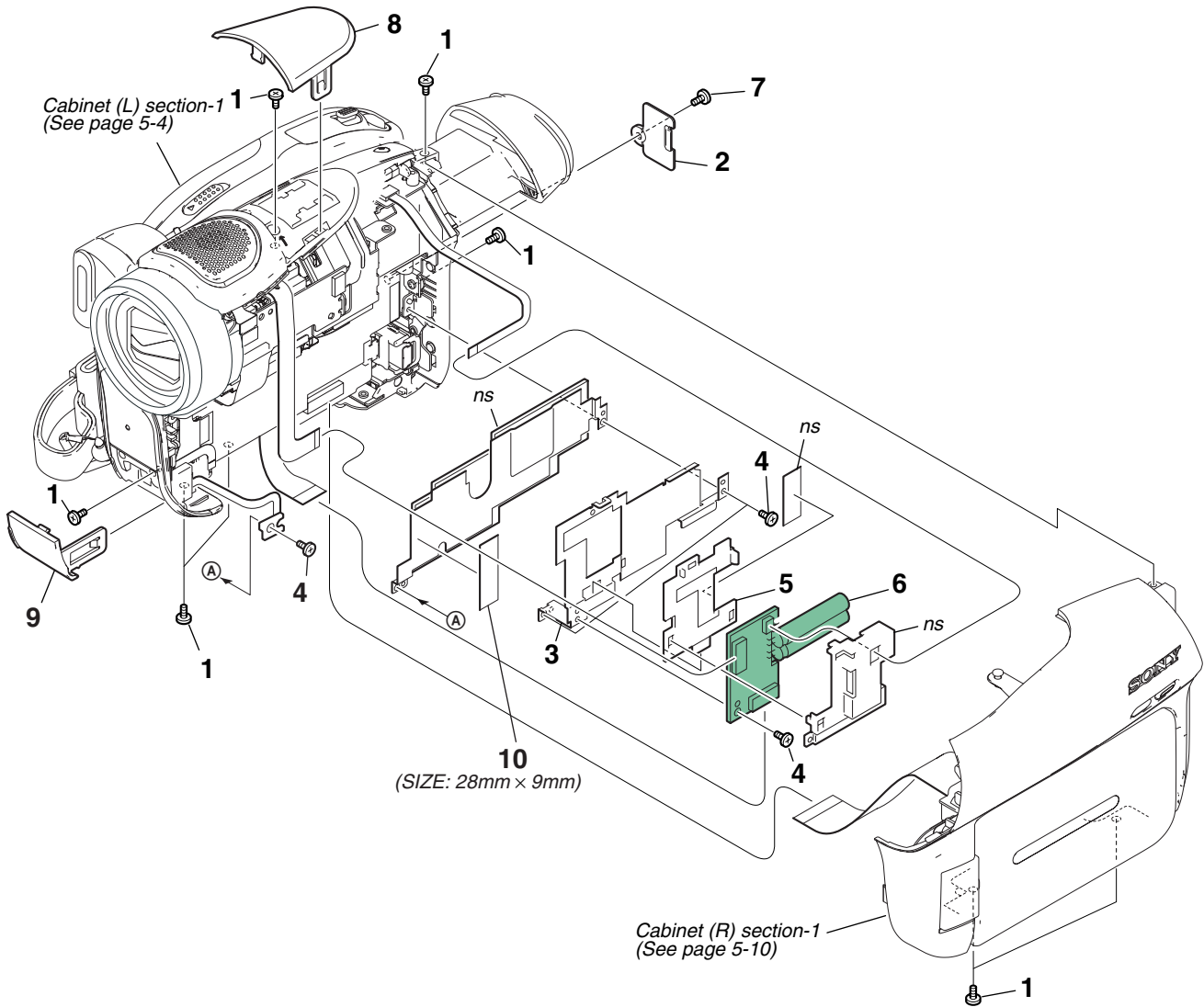
CND : Canadian model
HK : Hong Kong model
AUS : Australian model
NE : North European model
KR : Korea model
JE : Tourist model

5. REPAIR PARTS LIST

5-1. EXPLODED VIEWS

5-1-1. OVERALL SECTION

ns : not supplied



Ref. No.	Part No.	Description
1	2-515-483-31	SCREW (M1.7), LOCK ACE, P2
2	2-586-360-01	LID, CPC
3	2-586-406-01	FRAME, ST
4	3-078-889-11	SCREW (M1.7)
5	2-586-405-01	HOLDER, ST

Ref. No.	Part No.	Description
6	A-1104-152-A	ST-118 BOARD, COMPLETE
7	2-515-483-11	SCREW (M1.7), LOCK ACE, P2
8	2-586-393-01	COVER (450), SHOE
9	2-586-392-01	COVER (AV450), JACK
* 10	CAUTION	TAPE AS

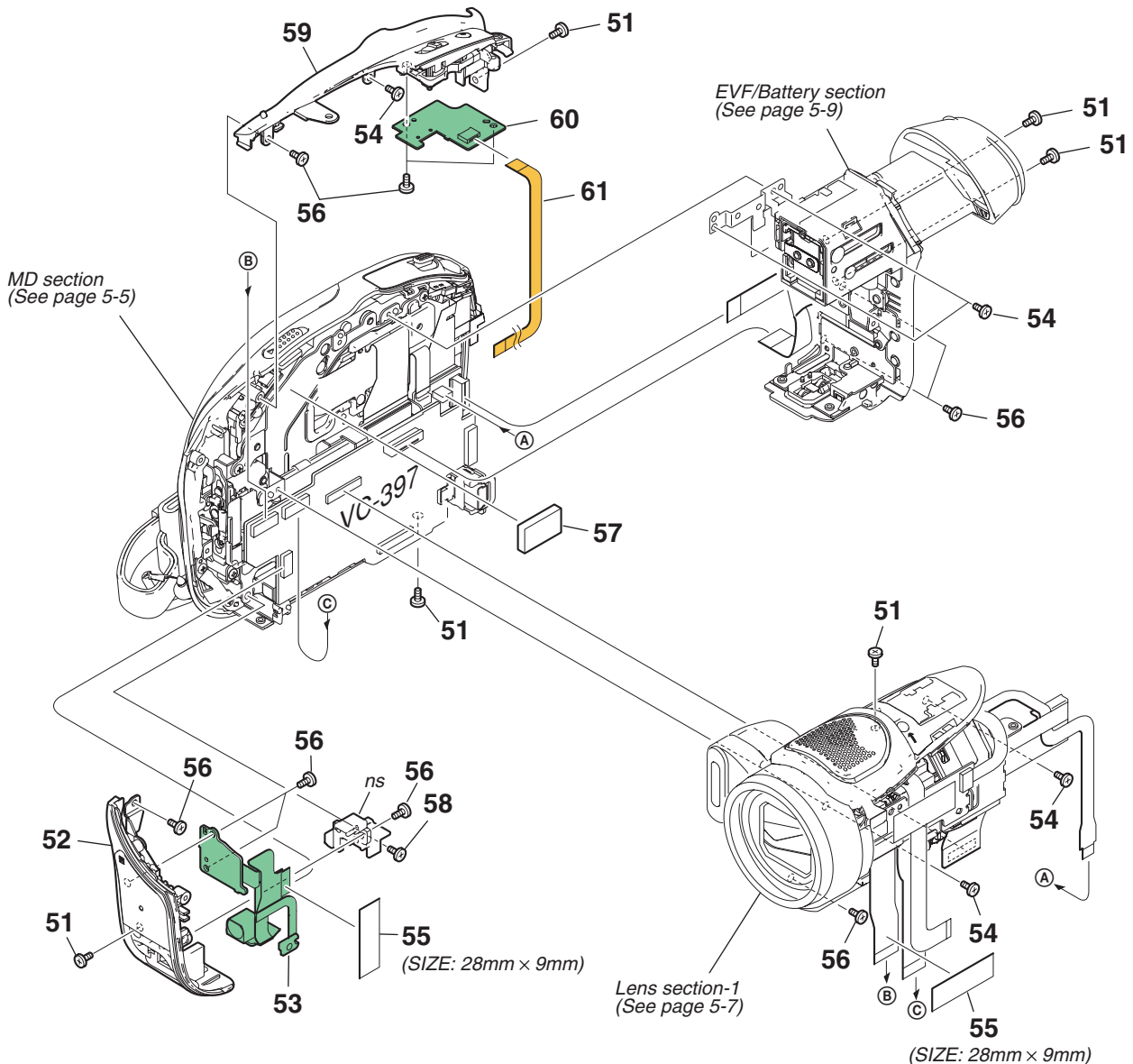
CAUTION :
For the part of 10: TAPE AS (3-079-115-01) ,
cut SHEET, LENS FLEXIBLE (3-052-196-01)
into the desired length and use it.

注意 :
10: テープAS (3-079-115-01)は、レンズフレキ
シート (3-052-196-01) を切って使用。

5. REPAIR PARTS LIST

5-1-2. CABINET (L) SECTION-1

ns : not supplied



Ref. No.	Part No.	Description
51	2-515-483-31	SCREW (M1.7), LOCK ACE, P2
52	X-2050-460-1	PANEL (LOWER 450) ASSY, F
53	A-1104-110-A	AV-094 BOARD, COMPLETE
54	3-078-889-11	SCREW (M1.7)
* 55	CAUTION	TAPE AS
56	3-080-204-01	SCREW, TAPPING, P2
57	2-598-304-01	GASKET (LE)
58	3-078-890-21	SCREW, TAPPING
59	X-2050-438-1	CABINET (UPPER 450) ASSY (GRAY)

(DVD403:J)

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
59	X-2050-661-1	CABINET (UPPER 450) ASSY (E) (GRAY) (DVD403:E, US, CND/DVD403E/DVD803/ DVD803E:E, HK, AUS, JE)
59	X-2050-662-1	CABINET (UPPER 450) ASSY (S) (SILVER) (DVD403:J)
59	X-2050-663-1	CABINET (UPPER 450) ASSY (SE) (SILVER) (DVD803E:JE)
60	A-1104-151-A	KY-085 BOARD, COMPLETE
61	1-865-285-11	FP-232 FLEXIBLE BOARD

CAUTION :

For the part of 55: TAPE AS (3-079-115-01) , cut SHEET, LENS FLEXIBLE (3-052-196-01) into the desired length and use it.

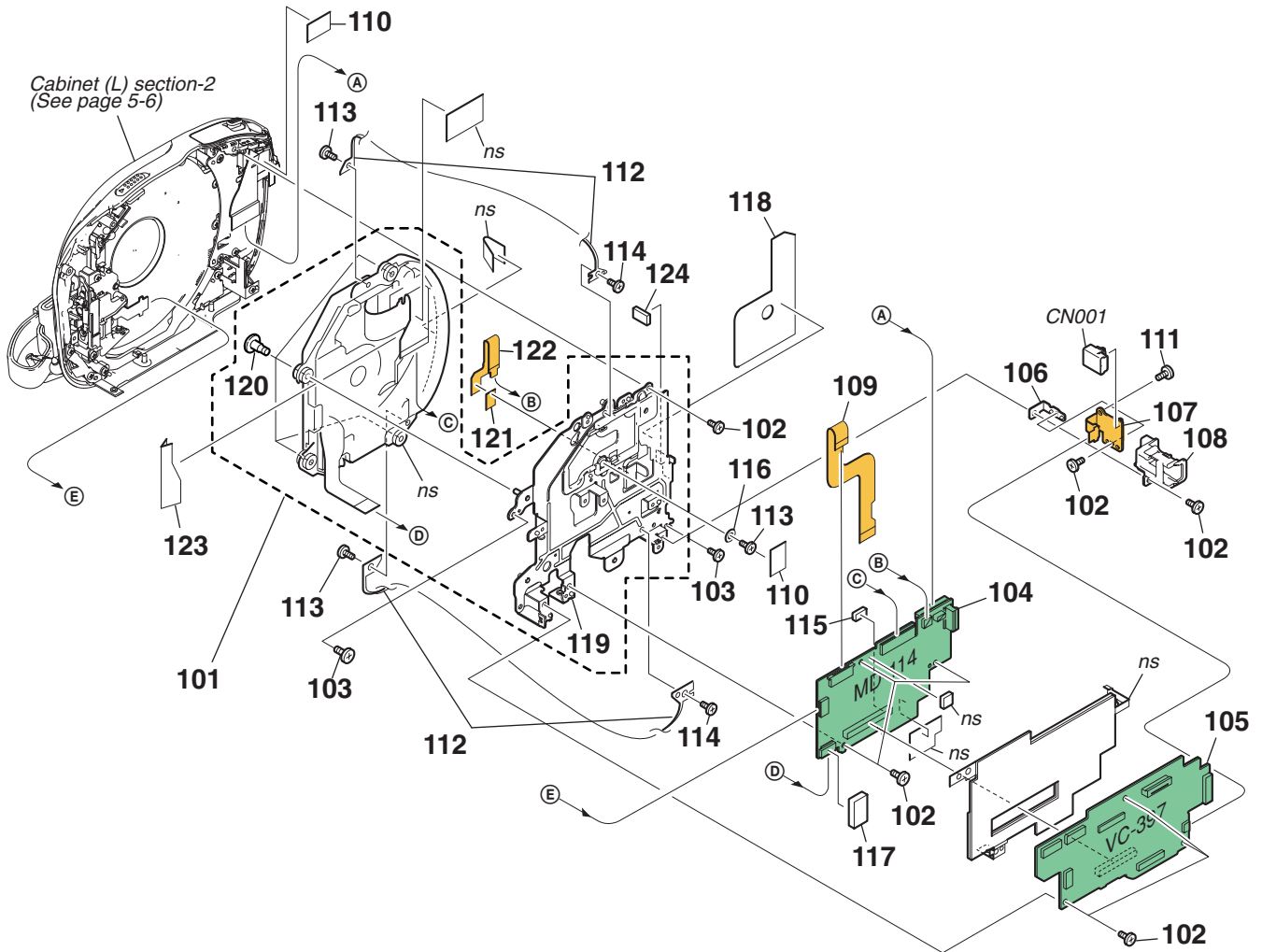
注意：

55: テープAS (3-079-115-01)は、レンズフレキシシート (3-052-196-01) を切って使用。

5. REPAIR PARTS LIST

5-1-3. MD SECTION

ns : not supplied



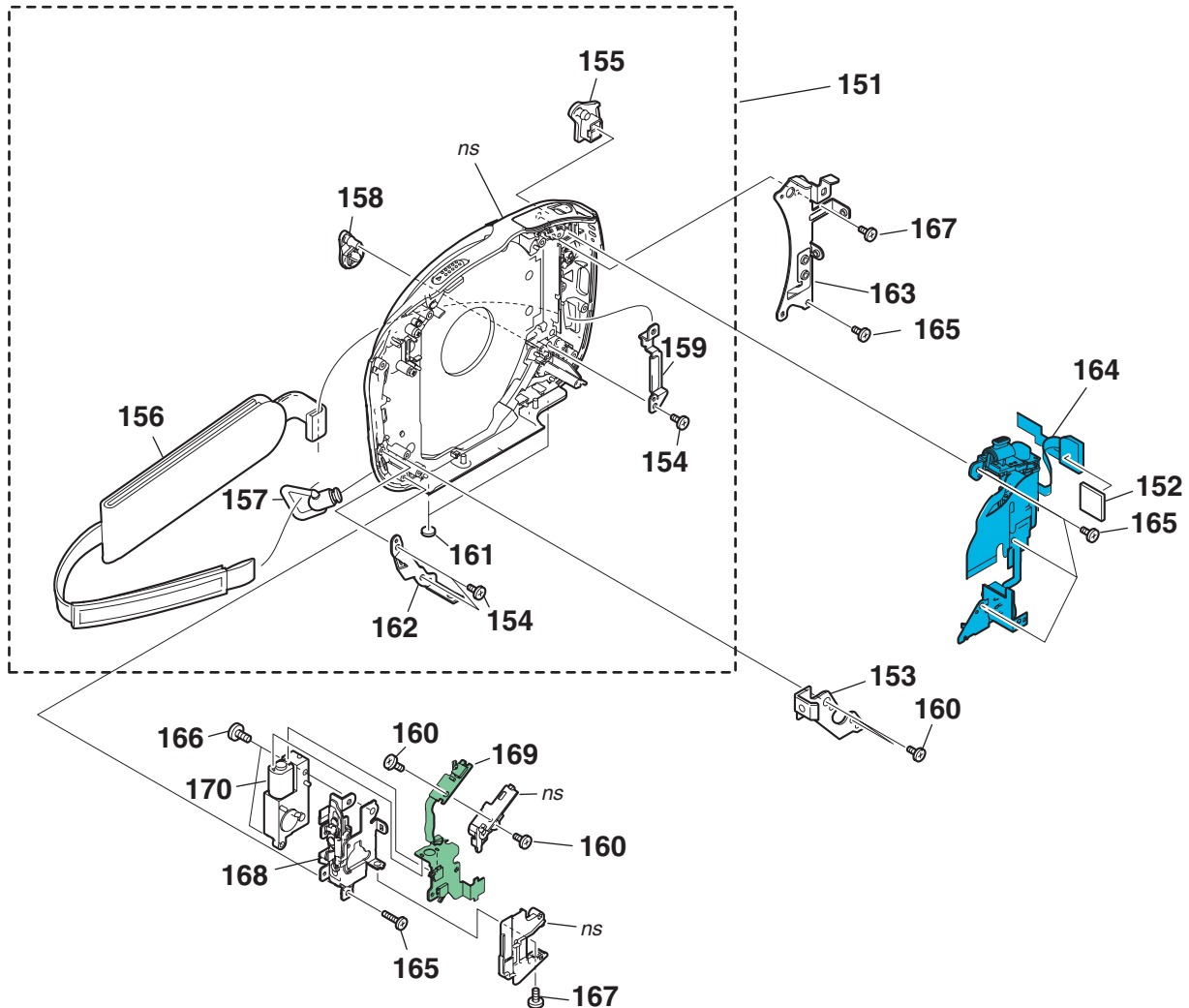
Ref. No.	Part No.	Description
101	A-1110-090-A	DDX-C1000 SERVICE ASSY (SERVICE)
102	3-078-889-11	SCREW (M1.7)
103	3-078-890-21	SCREW, TAPPING
104	A-1110-081-A	MD-114 BOARD, COMPLETE (SERVICE)
105	A-1110-087-A	VC-397 BOARD, COMPLETE (SERVICE)
106	2-586-402-01	FRAME (450), USB
107	1-863-796-11	FP-135 FLEXIBLE BOARD
108	2-586-401-01	HOLDER (450), USB
109	1-863-791-11	FP-130 FLEXIBLE BOARD
110	2-590-635-01	TAPE (AS 1/2)
111	3-080-204-01	SCREW, TAPPING, P2
112	2-595-197-01	SPRING, FK
113	2-598-474-01	SCREW (M1.4), SPECIAL HEAD

Ref. No.	Part No.	Description
114	7-627-552-18	SCREW,PRECISION +P 1.7X1.6
115	2-586-336-01	SPACER (BTO), MD
116	2-596-964-01	SHEET (OP), SCREW
117	2-597-845-01	SHEET (S), SPD SUB
118	2-586-297-01	SHEET, MD BLIND
119	X-2050-456-1	FRAME ASSY, MD
120	2-586-337-01	SCREW, MD
121	1-677-049-11	FP-228 FLEXIBLE BOARD (DEW SENSOR)
122	1-864-227-11	FP-211 FLEXIBLE BOARD
123	2-596-927-01	SHEET (B), OP SUB
124	2-596-924-01	GASKET (MD)
CN001	1-794-962-11	CONNECTOR, SQUARE TYPE (USB 5P)

5. REPAIR PARTS LIST

5-1-4. CABINET (L) SECTION-2

ns : not supplied

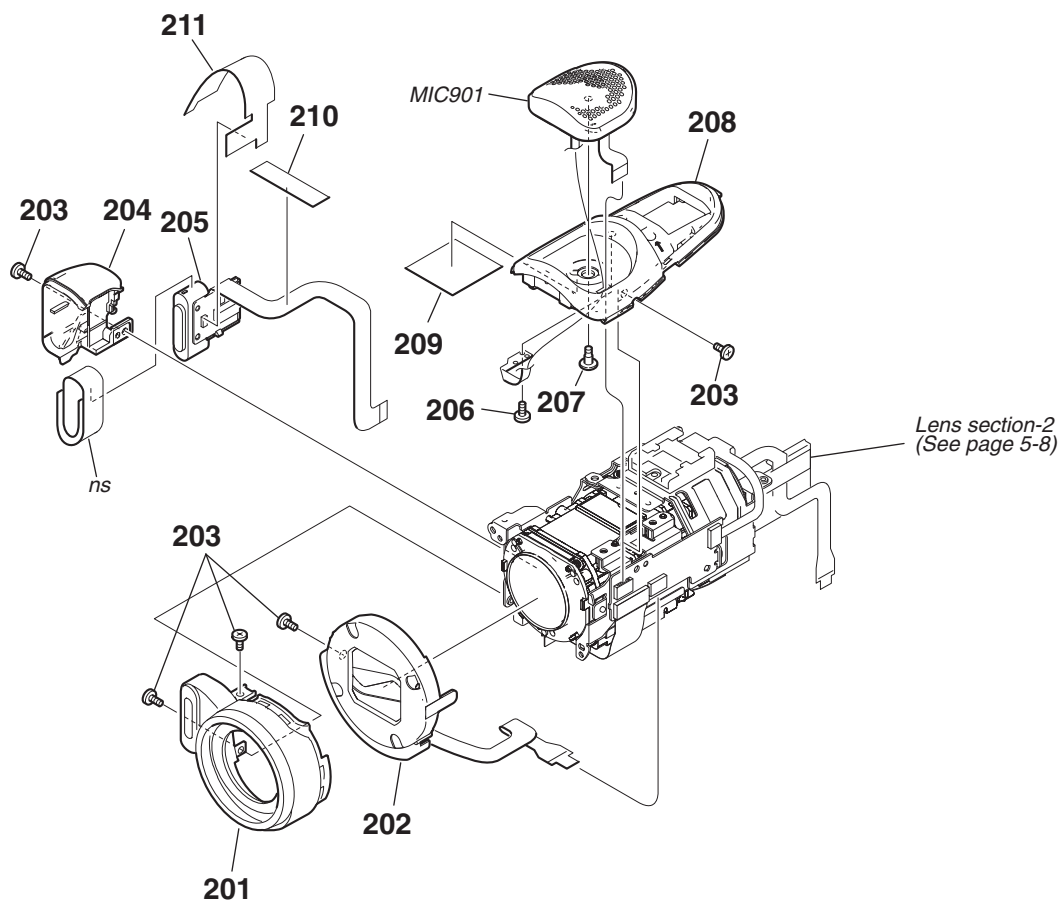


Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
151	X-2050-711-1	CABINET (L) ASSY (E) (EXCEPT DVD403:J)	161	2-589-376-01	FOOT (395), RUBBER
151	X-2050-449-1	CABINET (L) ASSY (DVD403:J)	162	2-586-262-01	SHEET METAL, STRAP SHAFT
152	2-593-897-01	SPACER, LED	163	X-2050-462-1	PLATE ASSY, D BLIND
153	2-586-411-01	FRAME (LOWER), FL	164	1-478-974-11	SWITCH BLOCK, CONTROL (PS13300)
154	3-078-890-11	SCREW, TAPPING	165	3-078-890-21	SCREW, TAPPING
155	2-586-256-01	DC, JACK COVER	166	2-515-483-31	SCREW (M1.7), LOCK ACE, P2
156	2-597-646-01	BELT, GRIP	167	3-078-889-11	SCREW (M1.7)
157	3-090-616-01	SHAFT (F), STRAP	168	X-2050-461-1	FRAME ASSY, EJECT
158	2-586-263-01	COVER (LANC), JACK	169	A-1104-304-A	FP-132 FLEXIBLE BOARD, COMPLETE
159	2-586-264-01	SHEET METAL (R), GRIP BELT	170	1-787-237-11	MOTOR UNIT (GEARD MOTOR)
160	3-080-204-01	SCREW, TAPPING, P2			

5. REPAIR PARTS LIST

5-1-5. LENS SECTION-1

ns : not supplied



Ref. No.	Part No.	Description
201	X-2050-458-1	PANEL (UPPER 450) ASSY, F
202	1-787-238-11	MOTOR UNIT (LENS BARRIER)
203	3-078-889-11	SCREW (M1.7)
204	2-586-403-01	CABINET (REAR), ST
△ 205	1-479-080-11	STROBO FLASH UNIT (ST13450)
206	3-080-204-01	SCREW, TAPPING, P2

Ref. No.	Part No.	Description
207	2-586-389-01	SCREW, MIC
208	X-2050-455-1	CABINET (450) ASSY, MIC
209	2-586-410-01	SHEET (450), MIC
210	2-597-499-01	TAPE (ASX2)
211	2-594-265-01	SHEET, ST ELECTROSTATICS
MIC901	1-542-608-11	MIC UNIT

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

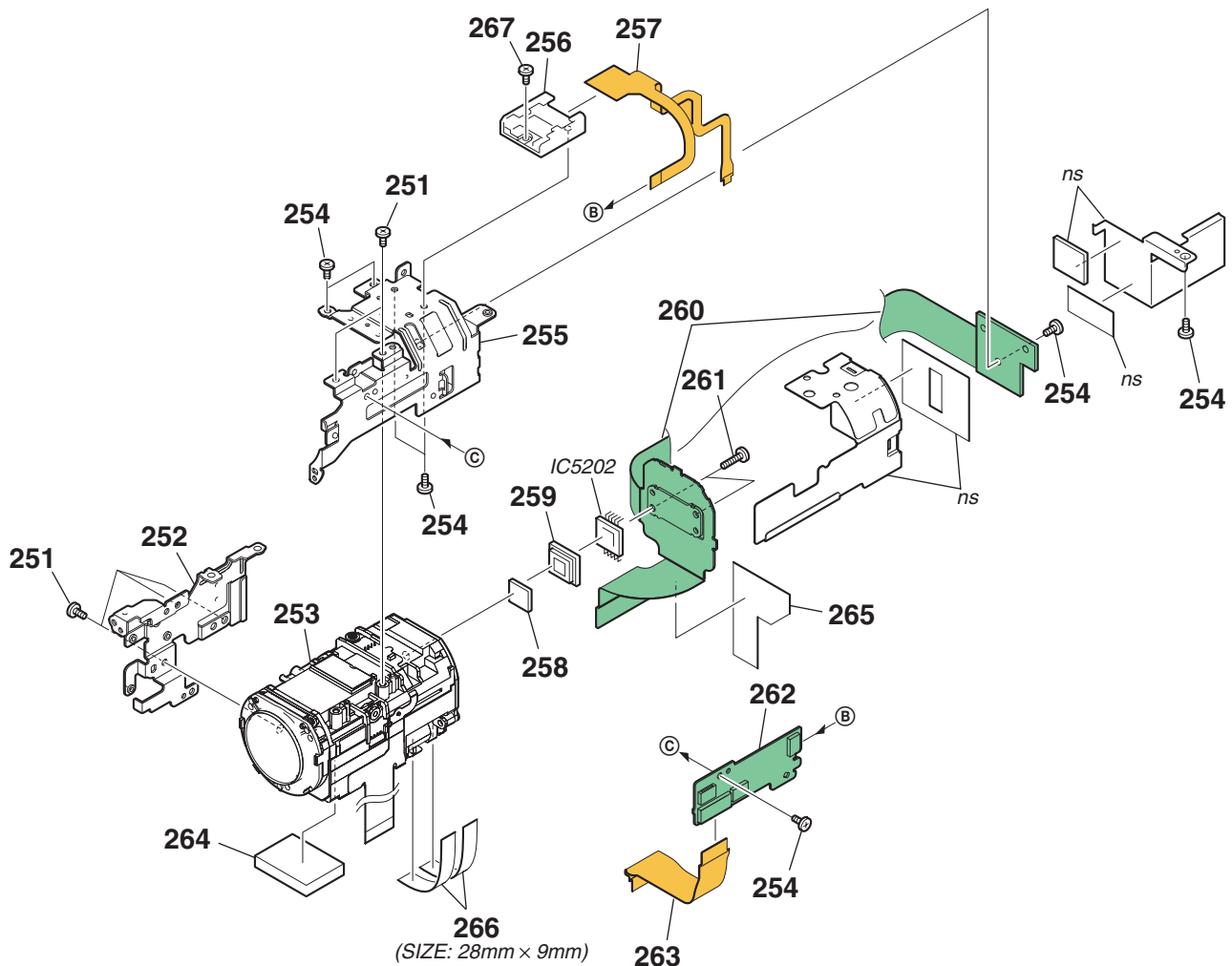
Les composants identifiés par une marque △ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

△印の部品、または△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。

5. REPAIR PARTS LIST

5-1-6. LENS SECTION-2

ns : not supplied



Ref. No.	Part No.	Description
251	3-080-204-01	SCREW, TAPPING, P2
252	2-586-066-01	FRAME (L450), LENS
253	8-848-792-01	DEVICE, LENS LSV-942A
254	3-078-889-11	SCREW (M1.7)
255	2-586-396-01	FRAME (R450), LENS
256	1-818-890-11	CONNECTOR, EXTERNAL (HOT SHOE)
257	1-863-890-11	FP-146 FLEXIBLE BOARD
258	1-758-992-11	OPTICAL FILTER BLOCK
259	3-085-457-01	RUBBER (870), SEAL
260	A-1104-145-A	CD-565 BOARD, COMPLETE (DVD403/DVD803) (IC5202 is not included in this complete board.)

CAUTION :

For the part of 266: TAPE AS (3-079-115-01) , cut SHEET, LENS FLEXIBLE (3-052-196-01) into the desired length and use it.

注意 :

266: テープAS (3-079-115-01) は、レンズフレキシシート (3-052-196-01) を切って使用。

Ref. No.	Part No.	Description
260	A-1104-147-A	CD-565 BOARD, COMPLETE (DVD403E/DVD803E) (IC5202 is not included in this complete board.)
261	3-078-890-21	SCREW, TAPPING
262	A-1104-144-A	MA-439 BOARD, COMPLETE
263	1-863-792-11	FP-131 FLEXIBLE BOARD
264	2-594-264-01	CUSHION (LE LOWER)
265	2-586-386-01	SHEET(CD450(A)), RADIATION
* 266	CAUTION	TAPE AS
267	2-515-483-11	SCREW (M1.7), LOCK ACE, P2
IC5202	A-1089-147-A	CCD BLOCK ASSY (CCD IMAGER) (IC5202 is not included in the COMPLETE of CD-565 board.)

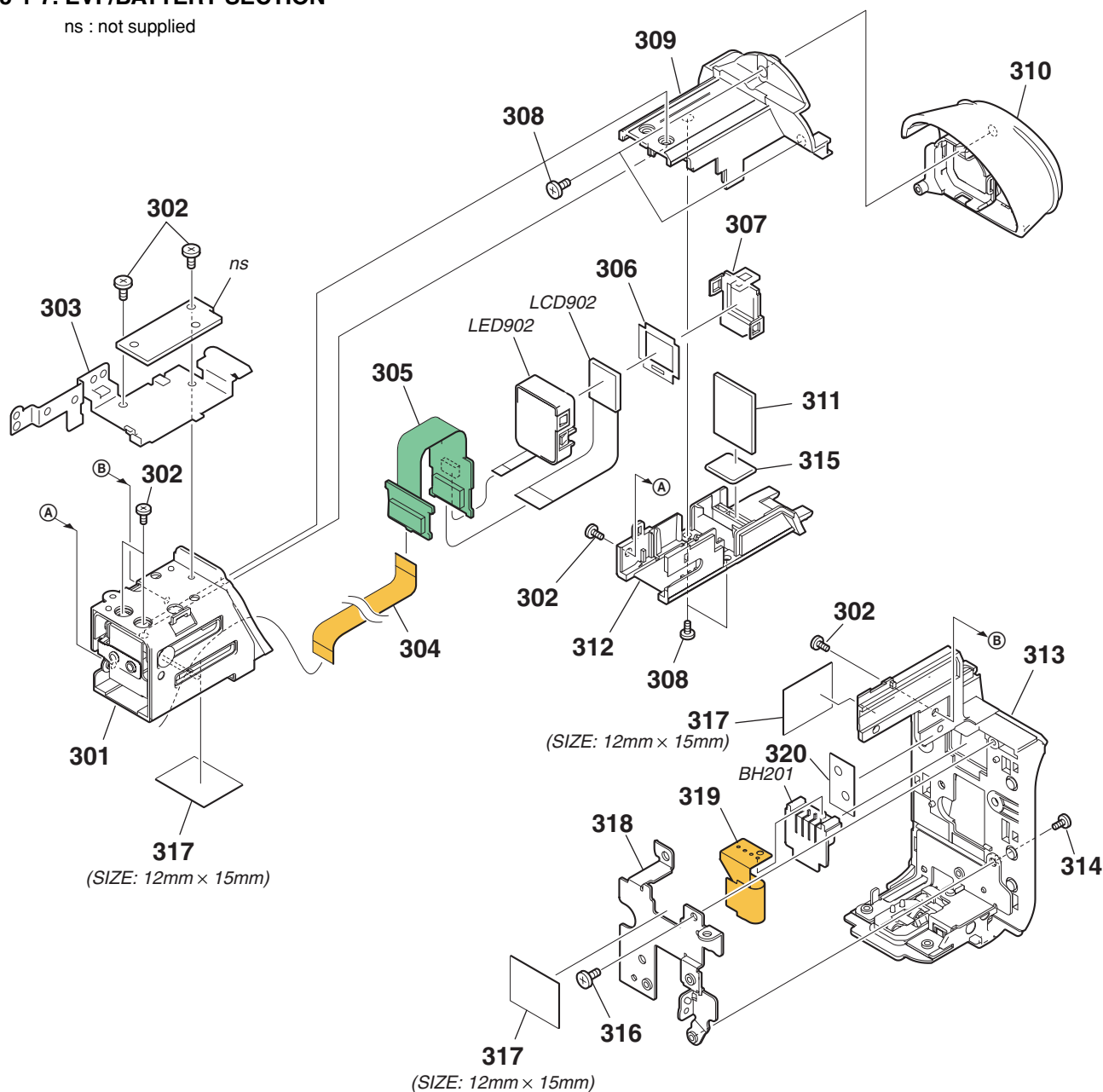
Be sure to read "Precautions upon replacing CCD imager" on page 4-1 when changing the CCD imager.

CCDイメージャの交換時はサービスマニュアル 4-2 ページの "CCDイメージャ交換時の注意" を必ずお読みください。

5. REPAIR PARTS LIST

5-1-7. EVF/BATTERY SECTION

ns : not supplied



Ref. No.	Part No.	Description
301	X-2050-452-1	SLIDE ASSY, VF
302	3-078-889-11	SCREW (M1.7)
303	2-586-395-01	FRAME (450), VF
304	1-863-787-11	FP-126 FLEXIBLE BOARD
305	A-1103-978-A	VF-168 BOARD, COMPLETE
306	2-560-810-01	CUSHION (2), LCD
307	2-549-194-01	COVER, LCD
308	3-080-204-21	SCREW, TAPPING, P2
309	X-2050-454-1	CABINET (UPPER 450) ASSY, VF
310	X-2050-451-1	EYE CUP (450) ASSY
311	2-586-338-01	PLATE, DEFLECTION
312	2-586-357-01	CABINET (LOWER), VF

Ref. No.	Part No.	Description
313	X-2050-468-1	PANEL ASSY, BT
314	2-515-483-31	SCREW (M1.7), LOCK ACE, P2
315	2-589-378-01	SHEET, VF
316	3-080-204-01	SCREW, TAPPING, P2
317	CAUTION	SHEET (BT), FLEXIBLE
318	2-586-394-01	RETAINER (450), TERMINAL BOARD
319	1-863-794-11	FP-133 FLEXIBLE BOARD
320	2-596-851-02	SHEET (BT), RADIATION
BH201	1-780-064-21	BATTERY TERMINAL BOARD
LCD902	8-753-223-02	LCX059AKE-1
LED902	1-478-911-11	BLOCK, LIGHT GUIDE PLATE (0.3)

CAUTION :

For the part of 317: SHEET (BT), FLEXIBLE (2-586-359-01), cut WOVEN (T0.25), FABRIC NON (3-076-631-01) into the desired length and use it.

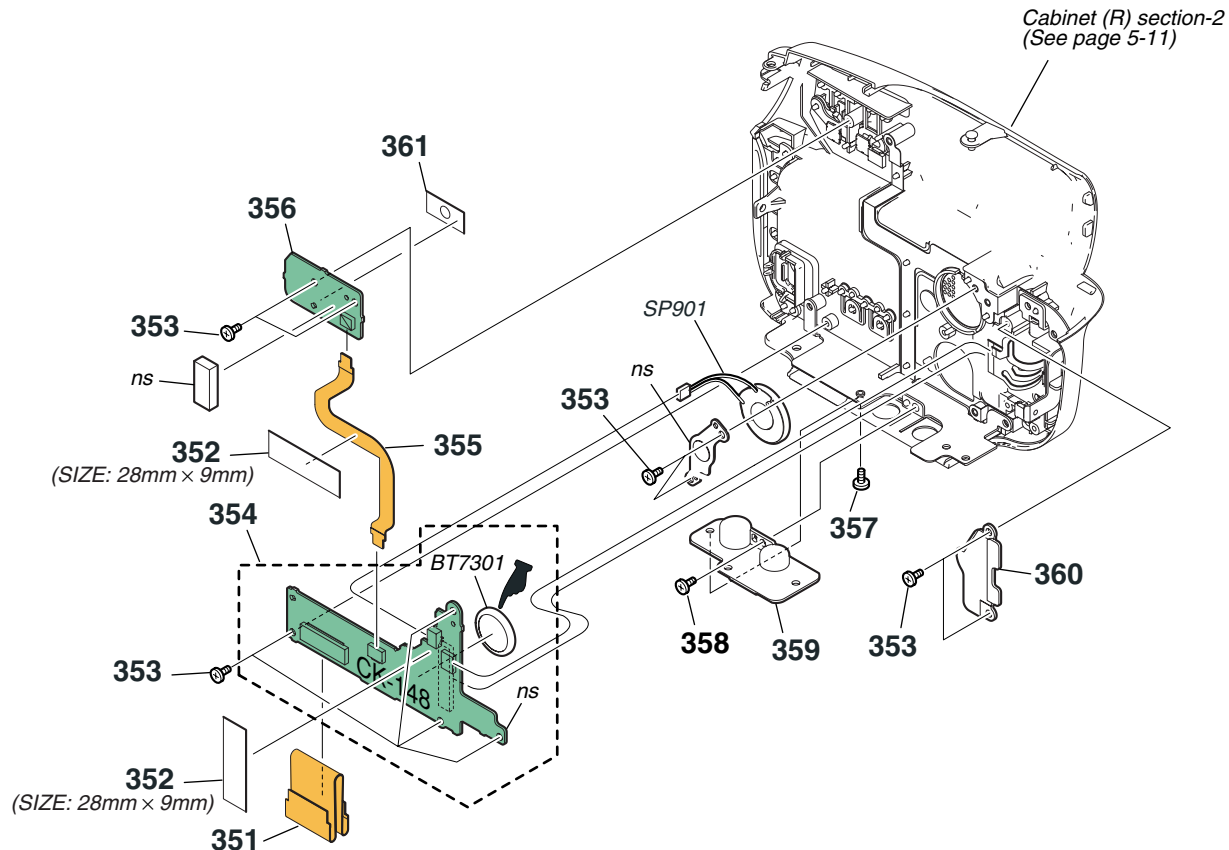
注意 :

317: フレキシシート (BT) (2-586-359-01) は、T0.25ヒメロン (3-076-631-01) を切って使用。

5. REPAIR PARTS LIST

5-1-8. CABINET (R) SECTION-1

ns : not supplied



: BT7301 (Lithium battery) CK-148 board on the mount position. (See page 4-72)

Ref. No.	Part No.	Description
351	1-863-789-11	FP-128 FLEXIBLE BOARD
* 352	CAUTION 2	TAPE AS
353	3-080-204-01	SCREW, TAPPING, P2
354	A-1104-069-A	CK-148 BOARD, COMPLETE
355	1-863-790-11	FP-129 FLEXIBLE BOARD
356	A-1104-071-A	SW-442 BOARD, COMPLETE
357	2-515-483-31	SCREW (M1.7), LOCK ACE, P2

Ref. No.	Part No.	Description
358	3-078-889-11	SCREW (M1.7)
359	2-586-348-01	TRIPOD
360	2-586-347-01	BLIND, HINGE
361	2-589-772-01	SHEET, MUFFLE
△ BT7301	1-756-128-11	BATTERY, LITHIUM (SECONDARY)
SP901	1-825-260-21	LOUD SPEAKER (1.6CM)

CAUTION 1:

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.

注意 1 :

電池の交換は、正しく行わないと破裂する可能性があります。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。

CAUTION 2:

For the part of 352: TAPE AS (3-079-115-01) ,
cut SHEET, LENS FLEXIBLE (3-052-196-01)
into the desired length and use it.

注意 2 :

352: テープAS (3-079-115-01)は、レンズフレキシ
シート (3-052-196-01) を切って使用。

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

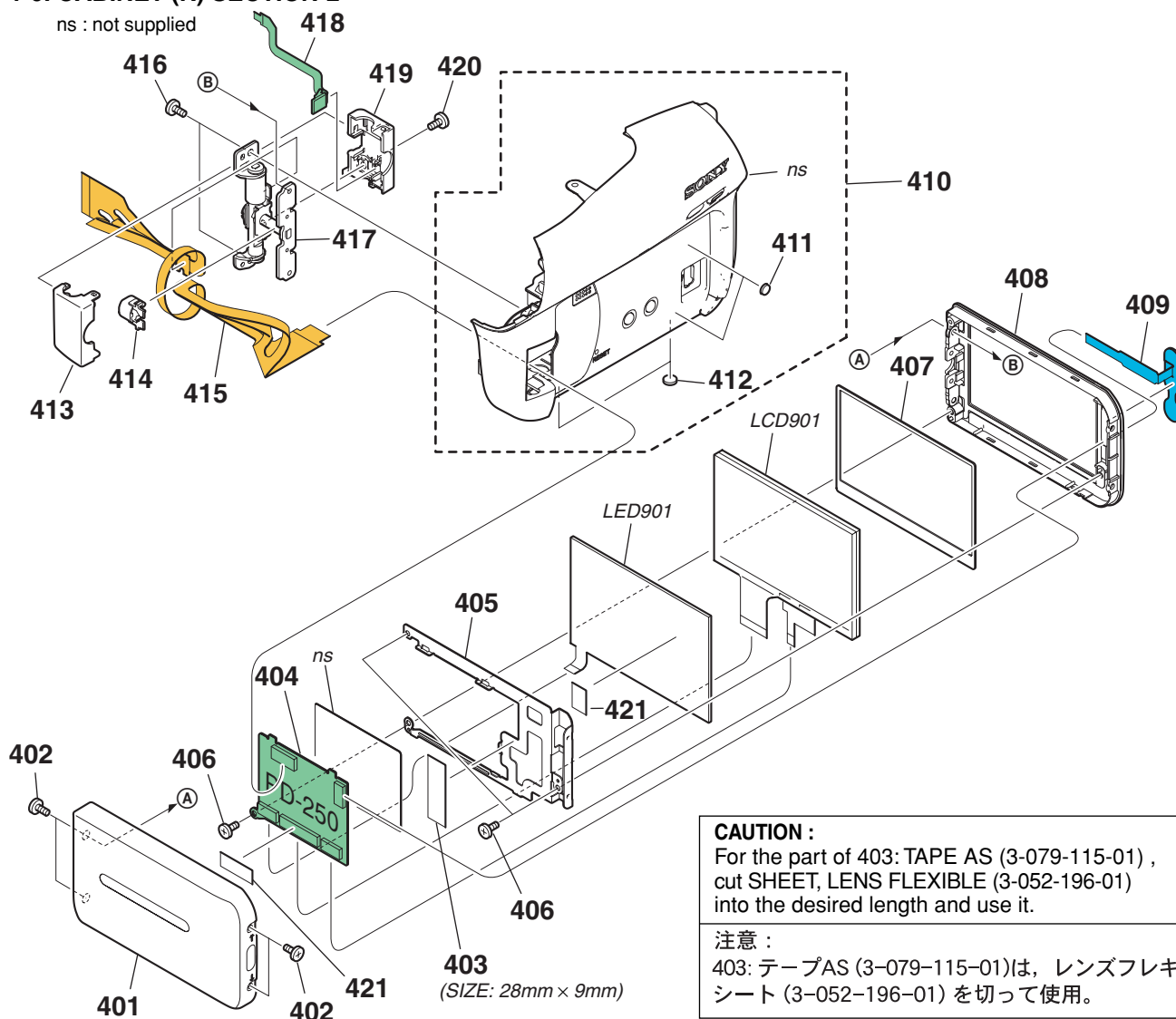
Les composants identifiés par une marque △ sont critiques pour
la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

△印の部品、または△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。

5. REPAIR PARTS LIST

5-1-9. CABINET (R) SECTION-2

ns : not supplied



CAUTION :

For the part of 403: TAPE AS (3-079-115-01) , cut SHEET, LENS FLEXIBLE (3-052-196-01) into the desired length and use it.

注意 :

403: テープAS (3-079-115-01)は、レンズフレキシシート (3-052-196-01) を切って使用。

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
401	X-2050-672-1	CABINET (R R450) ASSY (S), P (SILVER) (DVD403:J)	410	X-2050-669-1	CABINET (R 450) ASSY (S) (SILVER) (DVD403:J)
401	X-2055-445-1	CABINET (R450) ASSY (E32), P (GRAY) (DVD803)	410	X-2050-670-1	CABINET (R 450) ASSY (SE) (SILVER) (DVD803E:JE)
401	X-2055-446-1	CABINET (R450) ASSY (E35), P (GRAY) (DVD803E: E, JE, HK, AUS)	410	X-2050-441-1	CABINET (R450) ASSY (GRAY) (DVD403:J)
401	X-2050-943-1	CABINET (R450) ASSY (P), P (GRAY)(DVD403E)	411	3-090-599-01	CUSHION, PANEL
401	X-2050-877-1	CABINET (R450) ASSY (SP), P (SILVER) (DVD803E:JE)	412	2-589-376-01	FOOT (395), RUBBER
401	X-2050-444-1	CABINET (R450) ASSY, P (GRAY) (DVD403: US, CND, E, J)	413	2-586-390-01	COVER (Q450), HINGE (GRAY) (DVD403:E, US, CND, J/DVD403E/DVD803/ DVD803E:E, HK, AUS, JE)
402	2-515-483-31	SCREW (M1.7), LOCK ACE, P2	413	2-586-390-11	COVER (Q450), HINGE (SILVER) (DVD403:J/DVD803E:JE)
* 403	CAUTION	TAPE AS	414	2-586-343-01	CLAMP, FLEXIBLE
404	A-1104-091-A	PD-250 BOARD, COMPLETE	415	1-863-797-11	FP-136 FLEXIBLE BOARD
405	2-586-377-01	FRAME, PANEL	416	3-078-890-21	SCREW, TAPPING
406	3-080-204-01	SCREW, TAPPING, P2	417	X-2050-436-1	HINGE ASSY
407	2-586-379-01	CUSHION, PANEL	418	A-1104-305-A	FP-234 FLEXIBLE BOARD, COMPLETE
408	X-2050-710-1	CABINET (L) ASSY (E), P (EXCEPT DVD403:J)	419	2-586-346-01	COVER (U), HINGE
408	X-2050-446-1	CABINET ASSY, P (DVD403:J)	420	2-515-483-11	SCREW (M1.7), LOCK ACE, P2
409	1-479-063-21	KEY BLOCK, CONTROL (SB9000)	421	2-595-689-01	SHEET (105)
410	X-2050-668-1	CABINET (R 450) ASSY (E) (GRAY) (DVD403:E, US, CND/DVD403E/DVD803/ DVD803E:E, JE, HK, AUS)	LCD901	A-1083-763-A	TP BLOCK ASSY 27STGU (SERVICE)
			LED901	1-478-929-11	BLOCK, LIGHT GUIDE PLATE (2.7)

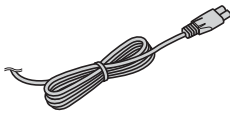
5. REPAIR PARTS LIST

• EXCEPT J MODEL

Checking supplied accessories.

to J MODEL

Make sure that the following accessories are supplied with your camcorder.



Power cord (Main lead)(1)
(AEP, E, NE model)

△ 1-769-608-31

Power cord (Main lead)(1)
(AUS model)

△ 1-827-945-12

Power cord (Main lead)(1)
(KR model)

△ 1-823-947-12

Power cord (Main lead)(1)
(UK, HK model)

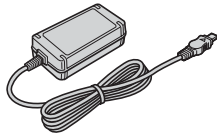
△ 1-783-374-12

Power cord (Main lead)(1)
(US, CND model)

△ 1-790-107-41

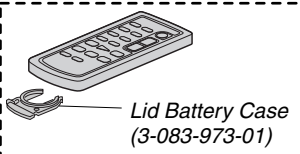
Power cord (Main lead)(1)
(JE model)

△ 1-790-732-71



AC power adaptor (1)
(AC-L25A/L25B)

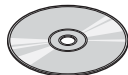
△ 1-477-534-11



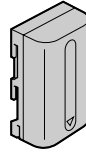
Lid Battery Case
(3-083-973-01)

Wireless Remote Commander (1)
(RMT-835)

1-478-496-21



CD-ROM
(SPVD-014 USB Driver) (1)
2-320-261-01



NP-FP70 battery pack (1)
(not supplied)



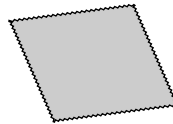
A/V connecting cable
(1.5m) (1)
1-823-156-91



USB cable (1)
1-829-868-41



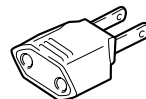
DVD-R (DMR30) (1)
(not supplied)



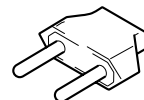
Cleaning cloth (1)
3-073-861-01



Shoulder strap (1)
2-176-235-11



2-pin conversion adaptor (1)
(E, HK model)
1-569-008-12



2-pin conversion adaptor (1)
(JE model)
1-569-007-12

• Abbreviation

- CND : Canadian model
- HK : Hong Kong model
- AUS : Australian model
- NE : North European model
- KR : Korea model
- JE : Tourist model

Other accessories

- 2-587-622-11 MANUAL, INSTRUCTION (ENGLISH)
(DVD403:US,CND/DVD803:E,JE)
- 2-587-622-21 MANUAL, INSTRUCTION (FRENCH)(DVD403:CND)
- 2-587-622-31 MANUAL, INSTRUCTION (SPANISH)
(DVD403:E/DVD803:JE)
- 2-587-622-41 MANUAL, INSTRUCTION (PORTUGUESE)
(DVD403:E/DVD803:JE)
- 2-587-622-51 MANUAL, INSTRUCTION (TRADITIONAL CHINESE)
(DVD803:E)
- 2-587-622-61 MANUAL, INSTRUCTION (KOREAN)(DVD803:KR,JE)
- 2-587-623-11 MANUAL, INSTRUCTION (ENGLISH)
(DVD403E:AEP,UK/DVD803E:E,JE,HK,AUS)
- 2-587-623-21 MANUAL, INSTRUCTION (FRENCH)
(DVD403E:AEP/DVD803E:E)
- 2-587-623-31 MANUAL, INSTRUCTION (SPANISH/PORTUGUESE)
(DVD403E:AEP)
- 2-587-623-41 MANUAL, INSTRUCTION (ITALIAN/GREEK)
(DVD403E:AEP)

- 2-587-623-51 MANUAL, INSTRUCTION (GERMAN/DUTCH)
(DVD403E:AEP)
- 2-587-623-61 MANUAL, INSTRUCTION (SWEDISH/RUSSIAN)
(DVD403E:AEP/DVD803E:JE)
- 2-587-623-71 MANUAL, INSTRUCTION (DANISH/FINNISH)
(DVD403E:NE)
- 2-587-623-81 MANUAL, INSTRUCTION (ARABIC/PERSIAN))
(DVD803E:E)
- 2-587-623-91 MANUAL, INSTRUCTION (SIMPLIFIED CHINESE)
(DVD803E:E,JE)
- 2-593-028-11 MANUAL, INSTRUCTION (TRADITIONAL CHINESE)
(DVD803E:HK)

Note :

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

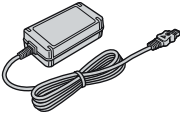
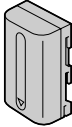
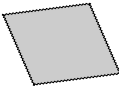
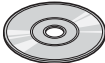
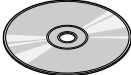
Note :

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

5. REPAIR PARTS LIST

• J MODEL

付属品

 電源コード (1) △ 1-790-732-71	 AC アダプター (1) (AC-L25A/L25B) △ 1-477-534-11	 リチャージャブル バッテリーパック (1) (NP-FP70) (供給せず)	 リモコン電池蓋 (3-083-973-01) ワイヤレスリモコン (1) (RMT-835) 1-478-496-11
 AV接続ケーブル (1) 1-823-156-91	 USBケーブル (1) 1-829-868-41	 クリーニングクロス (1) 3-073-861-01	
 8cm DVD-R DMR30 (1) (供給せず)	 CD-ROM「SPVD-011 (I) USBドライバ」 (1) 2-320-261-01		
図面 番号 部品コード 部 品 名 2-587-622-01 取扱説明書	△印の部品、または△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。		

5-2. ELECTRICAL PARTS LIST

Ref. No.	Part No.	Description
	A-1104-110-A	AV-094 BOARD, COMPLETE *****
		< CAPACITOR >
C7401	1-125-837-91	CERAMIC CHIP 1uF 10% 6.3V
C7402	1-164-943-11	CERAMIC CHIP 0.01uF 10% 16V
		< CONNECTOR >
CN7201	1-815-794-21	CONNECTOR (MULTIPLE) (AV)
CN7401	1-816-654-31	FFC/FPC CONNECTOR (LIF) 6P
		< DIODE >
D7401	8-719-073-01	DIODE MA111-(K8).S0
D7402	8-719-064-07	DIODE SML-310LTT86 (FRONT TALLY)
D7403	6-500-512-01	DIODE CL-330IRS-X-TU (NIGHT SHOT)
		< FERRITE BEAD >
FB7201	1-500-444-11	FERRITE, EMI (SMD) (1608)
FB7202	1-500-444-11	FERRITE, EMI (SMD) (1608)
		< IC >
IC7401	6-600-163-01	IC RS-770
		< RESISTOR >
R7401	1-218-937-11	RES-CHIP 47 5% 1/16W
R7402	1-218-951-11	RES-CHIP 680 5% 1/16W
		< VARISTOR >
VD7201	1-803-974-21	VARISTOR, CHIP (1608)
VD7202	1-803-974-21	VARISTOR, CHIP (1608)

	A-1104-069-A	CK-148 BOARD, COMPLETE *****
		< BATTERY >
△BT7301	1-756-128-11	BATTERY, LITHIUM (SECONDARY)
		< CONNECTOR >
CN7301	1-691-366-11	CONNECTOR, FFC/FPC (ZIF) 28P
CN7302	1-816-654-31	FFC/FPC CONNECTOR (LIF) 6P
CN7303	1-816-654-31	FFC/FPC CONNECTOR (LIF) 6P
CN7304	1-778-506-21	PIN, CONNECTOR (PC BOARD) 2P
CN7306	1-817-623-41	CONNECTOR, FPC (ZIF) 45P
		< DIODE >
D7301	6-500-776-01	DIODE MAZW068H0LS0
D7302	8-719-083-91	DIODE EDZ TE61 6.8B
D7303	6-500-776-01	DIODE MAZW068H0LS0
D7304	8-719-083-91	DIODE EDZ TE61 6.8B

Ref. No.	Part No.	Description
		< RESISTOR >
R7302	1-218-955-11	RES-CHIP 1.5K 5% 1/16W
R7303	1-218-957-11	RES-CHIP 2.2K 5% 1/16W
R7304	1-218-960-11	RES-CHIP 3.9K 5% 1/16W
		< SWITCH >
S7301	1-786-515-21	SWITCH, TACTILE (RESET)
S7302	1-771-138-82	SWITCH, KEY BOARD (DISPLAY/BATT INFO)
S7303	1-771-138-82	SWITCH, KEY BOARD (WIDE SELECT)
S7304	1-786-148-11	SWITCH, PUSH (1 KEY) (PANEL OPEN/CLOSE)

	A-1104-304-A	FP-132 FLEXIBLE BOARD, COMPLETE *****
		< DIODE >
D1321	8-719-064-07	DIODE SML-310LTT86 (ACCESS)
		< SWITCH >
S1321	1-786-707-11	SWITCH, DETECTION (SMD) (EJECT)
S1322	1-786-707-11	SWITCH, DETECTION (SMD) (LID OPEN DETECT)
S1323	1-786-707-11	SWITCH, DETECTION (SMD) (EJECT DETECT)

	A-1104-305-A	FP-234 FLEXIBLE BOARD, COMPLETE *****
		< SWITCH >
S301	1-786-680-21	SWITCH, DETECTION (SMD) (PANEL REVERSE)

	A-1104-151-A	KY-085 BOARD, COMPLETE *****
		< CONNECTOR >
CN8601	1-816-654-31	FFC/FPC CONNECTOR (LIF) 6P
		< DIODE >
D8601	6-500-252-01	DIODE SML-512WWT86
D8602	6-500-240-01	DIODE DF5A6.8JE (TPLR3)
		< RESISTOR >
R8601	1-218-957-11	RES-CHIP 2.2K 5% 1/16W
R8602	1-218-955-11	RES-CHIP 1.5K 5% 1/16W
		< SWITCH >
S8601	1-771-138-82	SWITCH, KEY BOARD (FLASH)
S8602	1-771-731-21	SWITCH, SLIDE (NIGHT SHOT)

CAUTION :

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.

注 意

電池の交換は、正しく行わないと破裂する可能性があります。
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。

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

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

△印の部品、または△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。

Ref. No.	Part No.	Description
	A-1104-091-A	PD-250 BOARD, COMPLETE *****
		< CAPACITOR >
C7502	1-164-939-11	CERAMIC CHIP 0.0022uF 10% 50V
C7503	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C7504	1-127-895-91	TANTAL. CHIP 22uF 20% 4V
C7507	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
C7509	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C7510	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C7511	1-164-739-11	CERAMIC CHIP 560PF 5% 50V
C7512	1-164-943-11	CERAMIC CHIP 0.01uF 10% 16V
C7513	1-164-943-11	CERAMIC CHIP 0.01uF 10% 16V
C7514	1-164-943-11	CERAMIC CHIP 0.01uF 10% 16V
C7515	1-137-700-11	TANTAL. CHIP 10uF 20% 6.3V
C7516	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
C7517	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
C7519	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V
C7520	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V
C7521	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C7522	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
C7524	1-164-943-11	CERAMIC CHIP 0.01uF 10% 16V
C7525	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
C7526	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C7534	1-164-943-11	CERAMIC CHIP 0.01uF 10% 16V
		< CONNECTOR >
CN7501	1-794-410-11	CONNECTOR, FPC (ZIF) 27P
CN7502	1-794-322-11	CONNECTOR, FFC/FPC (ZIF) 6P
CN7503	1-794-322-11	CONNECTOR, FFC/FPC (ZIF) 6P
CN7505	1-785-905-11	CONNECTOR, FFC/FPC (ZIF) 24P
CN7506	1-794-322-11	CONNECTOR, FFC/FPC (ZIF) 6P
		< DIODE >
D7502	8-719-074-67	DIODE EDZ-TE61-5.6B
D7504	8-719-083-91	DIODE EDZ TE61 6.8B
D7505	6-500-044-01	DIODE DF6A6.8FU (TE85R)
		< FERRITE BEAD >
FB7501	1-414-760-21	FERRITE, EMI (SMD) (1608)
		< IC >
IC7501	8-753-229-95	IC CXM3006CER-T4
		< COIL >
L7501	1-400-588-11	INDUCTOR, LAMINATE CHIP 10uH
L7502	1-400-588-11	INDUCTOR, LAMINATE CHIP 10uH
L7503	1-400-588-11	INDUCTOR, LAMINATE CHIP 10uH
		< TRANSISTOR >
Q7501	8-729-427-52	TRANSISTOR XP4216
Q7502	8-729-427-23	TRANSISTOR XP4116-TXE
Q7507	6-550-119-01	TRANSISTOR DTC144EMT2L
Q7508	6-550-232-01	TRANSISTOR 2SA2029T2LQ/R
Q7509	8-729-041-23	TRANSISTOR NDS356AP

Ref. No.	Part No.	Description
Q7513	8-729-042-26	TRANSISTOR 2SB1462J-QR (K8).SO
Q7514	8-759-054-48	IC C010-PW2000SV-V110
Q7515	8-759-054-48	IC C010-PW2000SV-V110
Q7516	8-729-037-61	TRANSISTOR UN9113J-(TX).SO
Q7517	8-729-041-23	TRANSISTOR NDS356AP
Q7518	6-550-119-01	TRANSISTOR DTC144EMT2L
		< RESISTOR >
R7507	1-208-695-11	METAL CHIP 3.3K 0.5% 1/16W
R7508	1-208-691-11	METAL CHIP 2.2K 0.5% 1/16W
R7510	1-218-975-11	RES-CHIP 68K 5% 1/16W
R7512	1-218-949-11	RES-CHIP 470 5% 1/16W
R7514	1-208-934-11	METAL CHIP 91K 0.5% 1/16W
R7516	1-208-911-11	METAL CHIP 10K 0.5% 1/16W
R7523	1-218-969-11	RES-CHIP 22K 5% 1/16W
R7528	1-218-953-11	RES-CHIP 1K 5% 1/16W
R7529	1-218-977-11	RES-CHIP 100K 5% 1/16W
R7530	1-218-978-11	RES-CHIP 120K 5% 1/16W
R7532	1-218-989-11	RES-CHIP 1M 5% 1/16W
R7537	1-218-969-11	RES-CHIP 22K 5% 1/16W
R7538	1-218-963-11	RES-CHIP 6.8K 5% 1/16W
R7539	1-218-950-11	RES-CHIP 560 5% 1/16W
R7540	1-218-975-11	RES-CHIP 68K 5% 1/16W
R7541	1-208-643-11	METAL CHIP 22 0.5% 1/16W
R7542	1-218-959-11	RES-CHIP 3.3K 5% 1/16W
R7543	1-218-953-11	RES-CHIP 1K 5% 1/16W
R7545	1-218-955-11	RES-CHIP 1.5K 5% 1/16W
R7546	1-218-954-11	RES-CHIP 1.2K 5% 1/16W
R7551	1-218-953-11	RES-CHIP 1K 5% 1/16W
R7552	1-218-977-11	RES-CHIP 100K 5% 1/16W
		< COMPOSITION CIRCUIT BLOCK >
RB7501	1-234-369-21	RES, NETWORK 10 (1005X4)

A-1104-152-A ST-118 BOARD, COMPLETE

		< CAPACITOR >
C6501	1-109-982-11	CERAMIC CHIP 1uF 10% 10V
C6503	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V
C6504	1-165-875-11	CERAMIC CHIP 10uF 10% 10V
△ C6505	1-112-189-11	ELECT 43uF 99% 330V
△ C6506	1-112-189-11	ELECT 43uF 99% 330V
		< CONNECTOR >
CN6501	1-794-323-11	CONNECTOR, FFC/FPC (ZIF) 16P
CN6502	1-794-323-11	CONNECTOR, FFC/FPC (ZIF) 16P
CN6503	1-779-327-11	CONNECTOR, FFC/FPC 6P
		< DIODE >
D6502	6-501-096-01	DIODE CRF02 (TE85R)

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

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

△印の部品、または△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。

ST-118

SW-442

CD-565

MA-439

VF-168

MD-114

VC-397

Ref. No.	Part No.	Description
< IC >		
IC6501	6-707-554-01	IC TPS65552DGQR
< COIL >		
L6501	1-412-027-11	INDUCTOR 2.2uH
< TRANSISTOR >		
Q6501	6-550-656-01	TRANSISTOR CY25BAJ-8F-T23
Q6502	6-550-119-01	TRANSISTOR DTC144EMT2L
< RESISTOR >		
R6502	1-218-907-11	METAL CHIP 330K 0.5% 1/10W
R6504	1-218-895-11	METAL CHIP 100K 0.5% 1/10W
R6506	1-216-803-11	METAL CHIP 33 5% 1/10W
R6507	1-216-857-11	METAL CHIP 1M 5% 1/10W
R6509	1-218-990-11	SHORT CHIP 0
< TRANSFORMER >		
△ T6501	1-443-568-21	TRANSFORMER, D.C.-D.C.CONVERTER
A-1104-071-A SW-442 BOARD, COMPLETE		
< CONNECTOR >		
CN7901	1-816-654-31	FFC/FPC CONNECTOR (LIF) 6P
< DIODE >		
D7901	6-501-052-02	DIODE CL-197HB1-D-T (EASY)
D7902	6-500-776-01	DIODE MAZW068H0LS0
D7903	8-719-083-91	DIODE EDZ TE61 6.8B
< RESISTOR >		
R7901	1-216-822-11	METAL CHIP 1.2K 5% 1/10W
R7902	1-218-945-11	RES-CHIP 220 5% 1/16W
< SWITCH >		
S7901	1-771-138-82	SWITCH, KEY BOARD (EASY)
S7903	1-771-138-82	SWITCH, KEY BOARD (BACK LIGHT)

Ref. No.	Part No.	Description
CD-565 BOARD, COMPLETE		
MA-439 BOARD, COMPLETE		
VF-168 BOARD, COMPLETE		
MD-114 BOARD, COMPLETE		
VC-397 BOARD, COMPLETE		

Electrical parts list of the CD-565, MA-439, VF-168, MD-114 and VC-397 board are not shown. Pages from 5-17 to 5-30 are not shown.

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

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

△印の部品、または△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。

[Description of main button functions on toolbar of the Adobe Acrobat Reader Ver5.0 (for Windows)]



Printing a text

1. Click the Print button .
2. Specify a printer, print range, number of copies, and other options, and then click [OK].

Application of printing:

To set a range to be printed within a page, select the graphic selection tool  and drag on the page to enclose a range to be printed, and then click the Print button.

Reversing the screens displayed once

- To reverse the previous screens (operation) one by one, click the .
- To advance the reversed screens (operation) one by one, click the .

Application to the Service Manual:

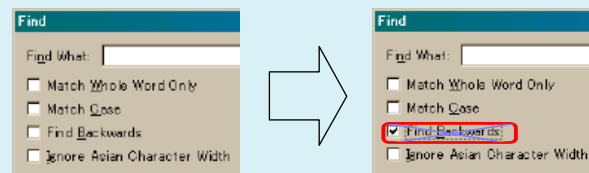
This function allows you to go and back between circuit diagram and printed circuit board diagram, and accordingly it will be convenient for the voltage check.

Finding a text

1. Click the Find button .
2. Enter a character string to be found into a text box, and click the [Find]. (Specify the find options as necessary)

Application to the Service Manual:

To execute "find" from current page toward the previous pages, select the check box "Find Backward" and then click the "Find".



3. Open the find dialog box again, and click the [Find Again] and you can find the matched character strings displayed next. (Character strings entered previously are displayed as they are in the text box.)

Application to the Service Manual:

The parts on the drawing pages (block diagrams, circuit diagrams, printed circuit boards) and parts list pages in a text can be found using this find function. For example, find a Ref. No. of IC on the block diagram, and click the [Find Again] continuously, so that you can move to the Ref. No. of IC on the circuit diagram or printed circuit board diagram successively.

Note: The find function may not be applied to the Service Manual depending on the date of issue.

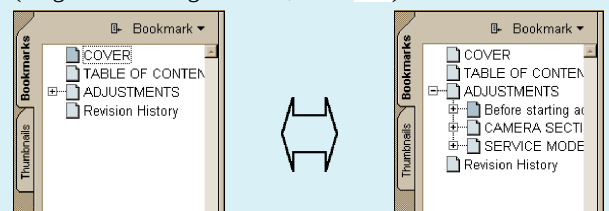
Moving with link

1. Select either palm tool , zoom tool , text selection tool , or graphic selection tool .
2. Place the pointer in the position in a text where the link exists (such as a button on cover and the table of contents page, or blue characters on the removal flowchart page or drawing page), and the pointer will change to the forefinger form .
3. Then, click the link. (You will go to the link destination.)

Moving with bookmark:

Click an item (text) on the bookmark pallet, and you can move to the link destination. Also, clicking  can display the hidden items.

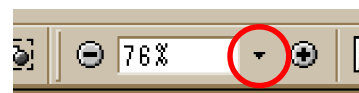
(To go back to original state, click )



Zooming or rotating the screen display

"Zoom in/out"

- Click the triangle button in the zoom control box to select the display magnification. Or, you may click  or  for zooming in or out.



"Rotate"

- Click rotate tool , and the page then rotates 90 degrees each.

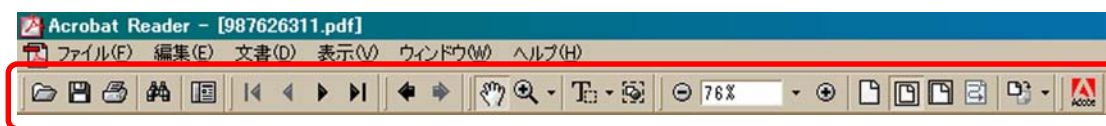
Application to the Service Manual:

The printed circuit board diagram you see now can be changed to the same direction as the set.

Switching a page

- To move to the first page, click the .
- To move to the last page, click the .
- To move to the previous page, click the .
- To move to the next page, click the .

【Adobe Acrobat Reader Ver 5.0(for Windows) ツールバー内にある主なボタンの機能説明】



文章を印刷する

1. 印刷ボタン をクリックする。
2. プリンター、印刷範囲、印刷部数、および他のオプションを指定して「OK」をクリックする。

印刷の応用：

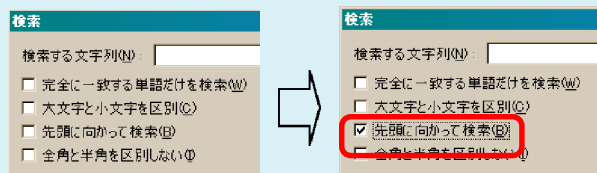
ページ内で印刷したい範囲を設定するには、グラフィック選択ツール を選択し、ページ上をドラッグして印刷したい範囲を囲ってから印刷ボタンをクリックする。

文章内を検索する

1. 検索ボタン をクリックする。
2. 検索したい文字列をテキストボックスに入力して「検索」をクリックする。(必要に応じて検索オプションを指定する)

サービスマニュアルへの応用：

現在のページから前ページに向かって検索する場合は「先頭に向かって検索」のチェックボックスを選択してから「検索」をクリックする。



3. 検索ダイアログボックスをもう一度開き、「次を検索」をクリックすると次に出てくる一致文字列を検索することができる。(前回入力した文字列が、テキストボックスにそのまま表示されている)

サービスマニュアルへの応用：

文章内にある図面ページ(ブロックダイアグラム、回路図、プリント図)および部品表ページなどは、この検索機能を使って部品検索することができる。例えば、ブロックダイアグラム上でICのRef. No.を検索し、「次を検索」を続けることによって回路図、プリント図上にあるICのRef. No.へ次々と移動する。

注意：発行年月日によって検索できない場合もあります。

ページを切り換える

- ・ 最初のページに移動する場合、 をクリックする。
- ・ 最後のページに移動する場合、 をクリックする。
- ・ 前のページに移動する場合、 をクリックする。
- ・ 次のページに移動する場合、 をクリックする。

一度表示した画面へ逆戻りする

- ・ 前の画面(操作)へ1つずつ逆戻りする場合、 をクリックする。
- ・ 戻した画面(操作)を1つずつ前に進める場合、 をクリックする。

サービスマニュアルへの応用：

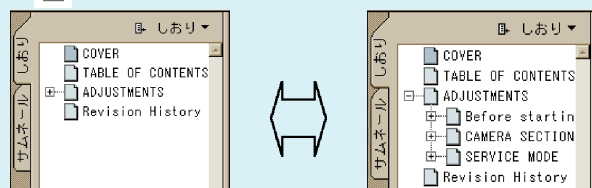
回路図とプリント図を行き来できるので電圧チェックに便利です。

リンクを使用して移動する

1. 手のひらツール 、ズームツール 、テキスト選択ツール 、グラフィック選択ツール のいずれかを選択する。
2. 文章内のリンクのある場所(表紙および章目次ページのボタン、外し方のフローページ、図面ページでは文字が青色になっているところなど)にポインタを置くと、ポインタが人差し指の形 に変わる。
3. そのままリンクをクリックする。(リンク先へ移動する)

しおりを利用して移動する：

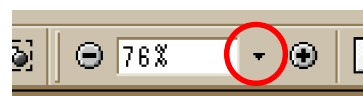
しおりパレット上の項目(テキスト)をクリックするとリンク先へ移動することができる。また、「+」をクリックすると隠れている項目を表示することができる。
(「-」をクリックすると元に戻る)



画面の表示を拡大、縮小または回転させる

「拡大/縮小」

- ・ 倍率ボックスの三角矢印ボタンをクリックし、表示倍率を選択する。または 、 をクリックしても使えます。



「回転」

- ・ 回転ツール をクリックすると、ページが90度ずつ回転する。

サービスマニュアルへの応用：

見ているプリント図をセットと同じ向きに変えられます。

Revision History

Ver.	Date	History	Contents	S.M. Rev. issued
1.0	2005.02	Official Release	—	—